

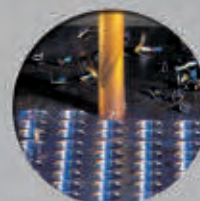
THE TOOLING PROGRAM AS **VERSATILE** AS YOUR JOB SHOP!



TURNING



MILLING



HOLEMAKING



TOOLING SYSTEMS

CUTTING TOOLS

K **KENNAMETAL®**
ENGINEERING YOUR COMPETITIVE EDGE

**KENNA UNIVERSAL™
TOOLING**



Catalog 5090
INCH & METRIC



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Turning Products



A1

Holemaking Products



B1

Milling Products



C1

Tooling Systems Products



D1



Engineering
Your
Competitive
Edge

KENNA UNIVERSAL

VERSATILITY — only 6 grades needed for virtually all your machining requirements!

QUALITY — from the world's premier tooling solutions supplier!

VALUE — decrease your inventory costs by up to 50%!

INTRODUCING

Kennametal's KENNA UNIVERSAL™ Tooling — brought to you by Kennametal and your local authorized Kennametal distributor...

...specifically designed to enable job shops to grow business, increase profitability, and reduce everyday production worries!



**TOOLING
SYSTEMS**

MILLING

LATHE

HOLEMAKING

IN JOB SHOPS



LATHE

- **3 brand-new grades** for maximum versatility in all general lathe applications:
 - **KU10T** – for medium to finish machining of steels, stainless steels, cast irons, non-ferrous materials, and superalloys
 - **KU25T** – for threading and cut-off work in virtually all workpiece materials
 - **KU30T** – for most roughing through semi-finishing cuts
- A complete product range: turning, boring, grooving, threading, and cut-off!
- Plus, our **A4 Turn & Groove System** – and so much more!



MILLING

- **2 brand-new grades** for outstanding results in all general milling applications:
 - **KUC20M** – for face-milling of steels, stainless steels, cast irons, non-ferrous materials, and superalloys
 - **KUC30M** – for even the toughest workpiece challenges
- A **KSSM Face-Milling** platform where one insert style works in three different cutters (face, slotting, helical)!
- Plus, a wide variety of inch and metric **Solid Carbide End Mills**!



HOLEMAKING

- **A brand-new grade** for superior drilling productivity:
 - **KU40D** – for general-purpose holemaking tasks
- Just the right combination of Solid Carbide, QPV Spade Blade, and Indexable-Insert Drills – in inch and metric!



TOOLING SYSTEMS

- Unsurpassed global standard **Toolholding Systems**!
- Plus, **KM25™** — our latest quick-change offering that replaces conventional 1" (or 25mm) square-shank tooling — no machine modifications required!

Kennametal understands the unique business needs of today's global job shops.

Let us prove it.

Call us or your local authorized Kennametal distributor for full program details!

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ENGINEERING YOUR COMPETITIVE EDGE
www.kennametal.com



GRADE SELECTION

Available for turning, holmaking, and milling operations in six highly versatile grades –

KU10T, KU25T, and KU30T for turning; **KU40D** for holmaking; and **KUC20M** and **KUC30M** for milling.

	(P) STEEL	(M) STAINLESS STEEL	(K) CAST IRON	(N) NON- FERROUS	(S) HIGH-TEMP ALLOY	(H) HARDENED MATERIALS
TURNING	KU10T	KU10T	KU10T	KU10T	KU10T	KU10T
	KU25T	KU25T	KU25T	KU25T	KU25T	KU25T
	KU30T	KU30T	KU30T		KU30T	
MILLING	KUC20M	KUC20M	KUC20M	KUC20M	KUC20M	
	KUC30M	KUC30M			KUC30M	
HOLEMAKING	KU40D	KU40D	KU40D	KU40D	KU40D	

Grade Naming

by Grade...

KU(C)10T

1 2 3

- 1 KU – KENNA UNIVERSAL Turning and Holmaking Grade
KUC – KENNA UNIVERSAL Milling Grade

- 2 WEAR/TOUGHNESS
ISO RANGE:
0 = Highly Wear Resistant
to
50 = Extremely Tough

- 3 T - Turning
M- Milling
D - Drilling

Turning Products

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Engineering Your Competitive Edge IN JOB SHOPS



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KENNA UNIVERSAL

TOOLING SYSTEMS

MILLING

LATHE

HOLEMAKING



LATHE

- **3 brand-new grades** for exceptional performance in all general lathe applications:
 - KU10T
 - KU25T
 - KU30T
- A complete product range: turning, boring, grooving, threading, and cut-off!
- Plus, our **A4 Turn & Groove System** – and so much more!

KENNAMETAL®
ENGINEERING YOUR COMPETITIVE EDGE
www.kennametal.com

The only universal products engineered to meet the specific needs of job shops!

KENNA UNIVERSAL

Program Content

- KENLOC Inserts
- SCREW-ON Inserts
- TOP NOTCH Grooving with Chip Control
- TOP NOTCH Threading with Chip Control
- LT Threading Inserts with Chip Control
- A4 Groove & Turn Inserts
- A2 Cut-Off Inserts

Three New Universal Turning Grades!



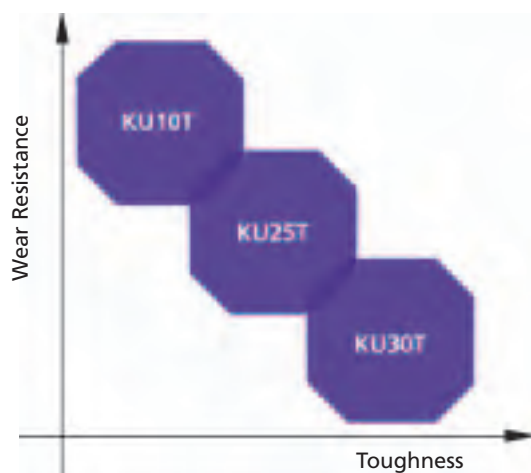
KU10T – PVD-coated grade for finishing and medium machining operations



KU25T – Tough PVD-coated grade for finishing and medium machining in threading and cut-off operations



KU30T – CVD-coated grade for roughing and medium machining operations



Apply on:

UNIVERSAL	P	Steel
	M	Stainless Steel
	K	Cast Iron
	N	Non-Ferrous
	S	High-Temp Alloys
	H	Hardened Materials

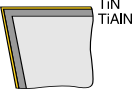
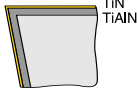
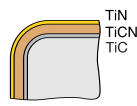


KENLOC INSERTS
SCREW-ON INSERTS
TOOL HOLDERS
BORING BARS
TOP NOTCH GROOVING
TURNING PRODUCTS
TOP NOTCH HOLDERS
IT THREADING
TOP NOTCH THREADING

KENNA UNIVERSAL – Turning Grades



Grade Selection Table

Type	Grade	Coating	Composition and Application	Standard designation	Area of use									
		C-Class			Wear resistance ←→ Toughness									
PVD-Coated Carbide Grades	KU10T NEW!		composition: An advanced PVD coating over a highly deformation-resistant carbide substrate. application: KU10T is an ideal general machining grade designed for medium to finishing operations. KU10T is excellent when machining most steels, stainless steels, cast irons, non-ferrous materials, and superalloys under stable conditions. KU10T is also effective when machining hardened and short-chipping materials.	P										
				M										
				K										
	KU25T NEW!			P										
				M										
				K										
CVD-Coated Carbide Grades	KU30T NEW!		composition: A tough cobalt-enriched substrate with a multilayered CVD coating. application: KU30T is a new grade designed specifically for the job shop industry where a wide range of workpiece materials is employed. With its tough cobalt-enriched substrate, KU30T performs very effectively in roughing and medium machining operations. The post-coat grinding of the insert permits stable insert seating while the post-coat treatment resists workpiece build-up and microchipping. For roughing steels, cast irons, and stainless steels, your first choices are the -RN, -MN, and the -RP geometries. For medium machining (and finishing), the -MP geometry with a positive rake is suggested.	P										
				M										
				K										
				N										
				S										
				H										

Geometries for Steel, Stainless Steel, Cast Iron, Non-Ferrous, High-Temp Alloys, and Hardened Materials

1st Step – Select the Insert Geometry

Negative Inserts

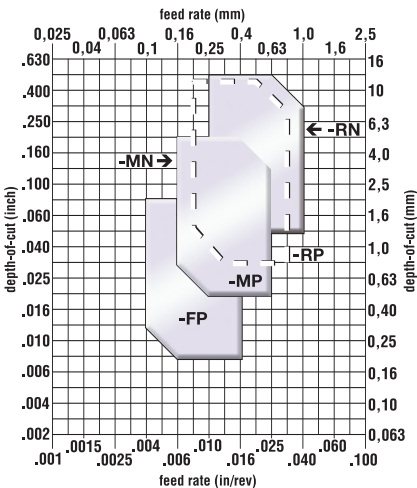
▼ Roughing



▼ Medium Machining



▼ Finishing



Positive Inserts

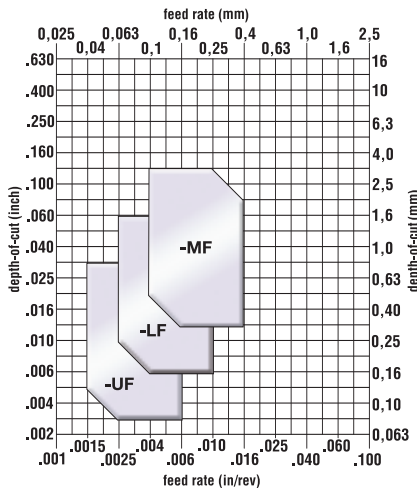
▼ Medium Machining



▼ Finishing



▼ Fine Finishing



2nd Step – Select the Grade

Cutting Condition	Negative Insert Geometry					Positive Insert Geometry		
	-FP ▼▼▼	-MP ▼▼	-MN ▼▼	-RN ▼	-RP ▼	-UF ▼▼▼▼	-LF ▼▼▼	-MF ▼▼
heavily interrupted cut		—	KU30T	KU30T	KU30T	—	KU30T	KU30T
lightly interrupted cut		KU10T	KU30T	KU30T	KU30T	KU10T	KU30T	KU30T
varying depth of cut, casting or forging skin		KU10T	KU10T	KU30T	KU30T	KU10T	KU10T	KU30T
smooth cut, pre-turned surface		KU10T	KU10T	KU30T	KU30T	KU10T	KU10T	KU30T

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.



3rd Step – Select the Cutting Speed

Plain Carbon and Alloy Steels, Ferritic and Martensitic and PH Stainless Steels

Material Group	grade	Speed - sfm (m/min)							Starting Conditions	
		170 (50)	330 (100)	490 (150)	655 (200)	820 (250)	980 (300)	1150 (350)	sfm	m/min
P	KU10T								650	200
	KU30T								500	150

Austenitic and Stainless Steels

Material Group	grade	Speed - sfm (m/min)							Starting Conditions	
		170 (50)	330 (100)	490 (150)	655 (200)	820 (250)	980 (300)	1150 (350)	sfm	m/min
M	KU10T								600	180
	KU30T								450	140

Gray and Ductile Cast Irons

Material Group	grade	Speed - sfm (m/min)							Starting Conditions	
		170 (50)	330 (100)	490 (150)	655 (200)	820 (250)	980 (300)	1150 (350)	sfm	m/min
K	KU10T								800	240
	KU30T								650	200

Non-Ferrous Metals: Low-silicon aluminum alloys (<12%) and magnesium alloys

Material Group	grade	Speed - sfm (m/min)							Starting Conditions	
		800 (240)	1200 (360)	1600 (490)	2000 (610)	2400 (730)	2800 (855)	3200 (975)	sfm	m/min
N	KU10T								1500	460

High-Temp Alloys

Material Group	grade	Speed - sfm (m/min)							Starting Conditions	
		170 (50)	330 (100)	490 (150)	655 (200)	820 (250)	980 (300)	1150 (350)	sfm	m/min
S	KU10T								220	65
	KU30T								150	45

Hardened Materials (>48 HRC)

Material Group	grade	Speed - sfm (m/min)							Starting Conditions	
		170 (50)	330 (100)	490 (150)	655 (200)	820 (250)	980 (300)	1150 (350)	sfm	m/min
H	KU10T								200	60

Represents the recommended starting conditions. Optimize for your specific application.

P	Steel
M	Stainless Steel
K	Cast Iron
N	Non-Ferrous
S	High-Temp Alloys
H	Hardened Materials

KENNA UNIVERSAL Chip Control Geometries



Kennametal Clamping System

Chip Control Geometry Designation

example: MG-MP = CNMG-432MP

Feed Rate Range

(for best results, use the center 60% of the range)

	operation	insert style application	insert geometry	profile	feed rate – inches											
					.0015 .0025 .004 .006 .010 .016 .025 .040 .060 .100 .200											
					.004 .006 .010 .016 .025 .040 .060 .100 .160 .250 .500											
					depth of cut – inches											
Kenloc Inserts	medium machining ▽▽	MG-MP 														
.006 - .020 (0,2 - 0,5)																
.030 - .200 (0,8 - 5,1)																
					feed rate – (mm)											
					0,04 0,063 0,01 0,16 0,25 0,4 0,63 1,0 1,6 2,5 5,0											
					0,1 0,16 0,25 0,4 0,63 1,0 1,6 2,5 4,0 6,3 10,0											
					depth of cut – (mm)											

Depth of Cut Range

(for all inserts in the program, select smaller inserts for lighter cuts and larger inserts for heavy cuts)

Chipbreaker Geometry

(section is through nose radius of insert)

Pictorial View of Insert

Primary Workpiece Material Group

- | | |
|---|--|
|  steel |  non-ferrous |
|  stainless steel |  high-temp alloys |
|  cast iron |  hardened materials |

Machining Operation

(what the insert geometry is designed for)

- ▼▼▼▼ – fine finishing
- ▼▼▼ – finishing
- ▼▼ – medium machining
- ▼ – roughing



KENNA UNIVERSAL Chip Control Geometries

	operation	insert style application	insert geometry	profile	feed rate – inches															
					.0015	.0025	.004	.006	.010	.016	.025	.040	.060	.100	.200	depth of cut – inches				
Kenloc Inserts	finishing	MG-FP																		
	medium machining	MG-MP																		
	medium machining	MG-MN																		
Screw-On Inserts	roughing	MG-RP																		
	roughing	MG-RN																		
	fine finishing	MT-UF																		
Screw-On Inserts	finishing	MT-LF																		
	medium machining	MT-MF																		
					feed rate – (mm)															
					0,04	0,063	0,01	0,16	0,25	0,4	0,63	1,0	1,6	2,5	5,0	depth of cut – (mm)				
					0,1	0,16	0,25	0,4	0,63	1,0	1,6	2,5	4,0	6,3	10,0					

Insert Identification System



symbol shape	insert	shape	nose angle (degree)	symbol	hole	shape of hole	chipbreaker	shape of insert's section	alternate symbols ordinary system	"D" less than 1/4"*
S		square	90	N	without		without		N	E
T		triangular	60	R			single sided		R	
C			80	F			double sided		F	
D		rhombic (diamond)	55	A		cylindrical hole	without		A	D
E			75	M,P,S			single sided		M	
F			50	G,P,Z			double sided		G	
M			86	W			without		A	
V			35	T	with	partly cylindrical hole, 40-60° countersink	single sided		M	
W		trigon	80	Q			without		A	
H		hexagonal	120	U		partly cylindrical hole, 40-60° double countersink	double sided		G	
O		octagonal	135	B			without		A	
P		pentagonal	108	H		partly cylindrical hole, 70-90° countersink	single sided		M	
L		rectangular	90	C			without		A	
A		parallelo-gram-shaped	85	J		partly cylindrical hole, 70-90° double countersink	double sided		G	
B			82	X			special		X	
N/K			55							
R		round	–							

*Inch system only.

1. Shape

4. Insert Type

Example:

INCH

METRIC

C

N

M

G

4

C

N

M

G

12

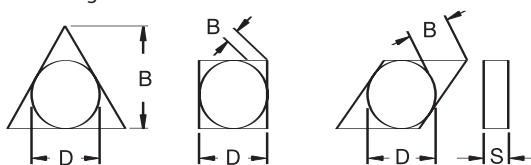
2. Relief Angle

3. Tolerance

5. Size

N – 0°
A – 3°
B – 5°
C – 7°
P – 11°
D – 15°
E – 20°
F – 25°
G – 30°

tolerances: apply prior to edge prep and coating
D: theoretical diameter of the insert inscribed circle
S: thickness
B: See figures below.



tolerance class	tolerance on "D"		tolerance on "B"		tolerance on "S"	
	inch	mm	inch	mm	inch	mm
C	±0.0010	±0,025	±0.0005	±0,013	±0.001	±0,025
H	±0.0005	±0,013	±0.0005	±0,013	±0.001	±0,025
E	±0.0010	±0,025	±0.0010	±0,025	±0.001	±0,025
G	±0.0010	±0,025	±0.0010	±0,025	±0.005	±0,13
M	See tables at right.				±0.005	±0,13
U	See tables at right.				±0.005	±0,13

inch	"D"		Code for metric cutting edge length "L10"							
	inch	mm	C	D	R	S	T	V	W	
1.2 (5)	5/32	3,97	S4	04	03	03	06	–	–	
1.5 (6)	3/16	4,76	04	05	04	04	08	08	S3	
1.8 (7)	7/32	5,56	05	06	05	05	09	09	03	
–	.236	6,00	–	–	06	–	–	–	–	
2	1/4	6,35	06	07	06	06	11	11	04	
2.5	5/16	7,94	08	09	07	07	13	13	05	
–	.315	8,00	–	–	08	–	–	–	–	
3	3/8	9,52	09	11	09	09	16	16	06	
–	.394	10,00	–	–	10	–	–	–	–	
3.5	7/16	11,11	11	13	11	11	19	19	07	
–	.472	12,00	–	–	12	–	–	–	–	
4	1/2	12,70	12	15	12	12	22	22	08	
4.5	9/16	14,29	14	17	14	14	24	24	09	
5	5/8	15,88	16	19	15	15	27	27	10	
–	.630	16,00	–	–	16	–	–	–	–	
5.5	11/16	17,46	17	21	17	17	30	30	11	
6	3/4	19,05	19	23	19	19	33	33	13	
–	.787	20,00	–	–	20	–	–	–	–	
7	7/8	22,22	22	27	22	22	38	38	15	
–	.984	25,00	–	–	25	–	–	–	–	
8	1	25,40	25	31	25	25	44	44	17	
10	1 1/4	31,75	32	38	31	31	54	54	21	
–	1.260	32,00	–	–	32	–	–	–	–	

NOTE: Inch sizes in parenthesis for "alternate symbols" D or E (under 1/4 inch "D").



symbol		thickness	
inch	mm	inch	mm
.5 (1)	–	1/32	0,79
.6	T0	.040	1,00
1 (2)	01	1/16	1,59
1.2	T1	5.64	1,98
1.5 (3)	02	3/32	2,38
2	03	1/8	3,18
2.5	T3	5/32	3,97
3	04	3/16	4,76
3.5	05	7/32	5,56
4	06	1/4	6,35
5	07	5/16	7,94
6	09	3/8	9,52
7	11	7/16	11,11
8	12	1/2	12,70

NOTE:
Inch sizes in parentheses
for "alternate symbols"
D or E (under 1/4 inch "D").

3. Tolerance Explanation																			
“D”		± Tolerance on “D”								“D”		± Tolerance on “B”							
		Class M-tolerance				Class U-tolerance						Class M-tolerance				Class U-tolerance			
		Shapes S, T, C, R & W		Shape D		Shape V		Shapes S, T & C				Shapes S, T, C, R & W		Shape D		Shape V		Shapes S, T & C	
inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
5/32	3,97	.002	0,05	–	–	–	–	–	–	5/32	3,97	.003	0,06	–	–	–	–	–	–
3/16	4,76			–	–	–	–	.003	0,06	–	–			–	–	.005	0,13		
7/32	5,56			.002	0,05	.002	0,05			–	–								
1/4	6,35									–	–								
5/16	7,94									–	–								
3/8	9,52									.007	0,18								
7/16	11,11	.003	0,06	.003	0,06	.003	0,06	.005	0,13	7/16	11,11	.005	0,13	.006	0,15	–	–	–	–
1/2	12,70									1/2	12,70					.010	0,25	.008	0,20
9/16	14,29									9/16	14,29					–	–	–	–
5/8	15,88	.004	0,10	.004	0,10	.004	0,10	.007	0,18	5/8	15,88	.006	0,15	.007	0,18	–	–	.011	0,27
11/16	17,46									11/16	17,46					–	–		
3/4	19,05									3/4	19,05					–	–		
7/8	22,22	.005	0,13	–	–	–	–	.010	0,25	7/8	22,22	–	–	–	–	.015	0,38		
1	25,40			–	–	–	–			1	25,40	.007	0,18	–	–				
1 1/4	31,75			.006	0,15	–	–			–	–	1 1/4	31,75	.008	0,20			–	–

6. Thickness "S"

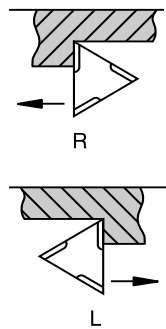
3
04

2
08

7. Corner Radius "RE"

symbol		corner radius	
inch	mm	inch	mm
X0	X0	.0015	.04
0	01	.004	0,1
.5	02	.008	0,2
1	04	1/64	0,4
2	08	1/32	0,8
3	12	3/64	1,2
4	16	1/16	1,6
5	20	5/64	2,0
6	24	3/32	2,4
7	28	7/64	2,8
8	32	1/8	3,2
–	00	round insert (inch)	
–	M0	round insert (mm)	

8. Hand of Insert (optional)



9./10. Cutting Edge Condition or Chip Control Features (optional)

F	sharp
FF	fine finishing
FN	finishing
MN	medium negative
RN	roughing negative
UN	universal negative
FP	finishing positive
MP	medium positive
RP	roughing positive
RM	roughing medium
RH	roughing heavy
FW	finishing wiper
MW	medium wiper
FS	finishing sharp
MS	medium sharp
RW	roughing wiper
HP	high positive
-11	fine finishing
K	light feed chip control
UF	ultra-fine finishing
LF	light finishing
MF	medium finishing
E	hone only
T	negative land
S	negative land plus hone
MP-K	medium positive
MG-P	medium positive

14./15. T-land Angle (optional)

symbol	size
10	10°
15	15°
20	20°
25	25°
30	30°

16. Tip Style (optional)

symbol	usage
D	two-sided
M	mini tip
MT	multi tip

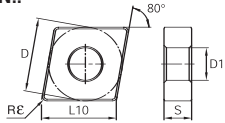
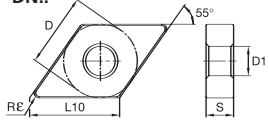
11./12./13. T-land Width (optional)

symbol		size	
ANSI	ISO	inch	mm
04	010	.004	0,01
08	020	.008	0,02

Kenloc Inserts

Dimensions and Grade Selection



CN..		DN..		Dimensions								KENNA UNIVERSA			
															
ANSI catalog number		ISO catalog number		D		L10		S		Rε		D1		KU10T	KU30T
				inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		
CNMG431FP CNMG432FP	CNMG120404FP CNMG120408FP	1/2 1/2	12,70 12,70	.51 .51	12,90 12,90	3/16 3/16	4,76 4,76	1/64 1/32	0,4 0,8	.203 .203	5,16 5,16	● ●			
CNMG431MN CNMG432MN CNMG433MN	CNMG120404MN CNMG120408MN CNMG120412MN	1/2 1/2 1/2	12,70 12,70 12,70	.51 .51 .51	12,90 12,90 12,90	3/16 3/16 3/16	4,76 4,76 4,76	1/64 1/32 3/64	0,4 0,8 1,2	.203 .203 .203	5,16 5,16 5,16	● ● ●			
CNMG431MP CNMG432MP CNMG433MP	CNMG120404MP CNMG120408MP CNMG120412MP	1/2 1/2 1/2	12,70 12,70 12,70	.51 .51 .51	12,90 12,90 12,90	3/16 3/16 3/16	4,76 4,76 4,76	1/64 1/32 3/64	0,4 0,8 1,2	.203 .203 .203	5,16 5,16 5,16	● ● ●	● ● ●		
CNMG432RN CNMG433RN CNMG434RN	CNMG120408RN CNMG120412RN CNMG120416RN	1/2 1/2 1/2	12,70 12,70 12,70	.51 .51 .51	12,90 12,90 12,90	3/16 3/16 3/16	4,76 4,76 4,76	1/32 3/64 1/16	0,8 1,2 1,6	.203 .203 .203	5,16 5,16 5,16	● ● ●	● ● ●		
CNMG543RN CNMG544RN CNMG643RN CNMG644RN	CNMG160612RN CNMG160616RN CNMG190612RN CNMG190616RN	5/8 5/8 3/4 3/4	15,88 15,88 19,05 19,05	.63 .63 .76 .76	16,12 16,12 19,34 19,34	1/4 1/4 1/4 1/4	6,35 6,35 6,35 6,35	3/64 1/16 3/64 1/16	1,2 1,6 1,2 1,6	.250 .250 .313 .313	6,35 6,35 7,93 7,93	● ● ● ●	● ● ● ●		
CNMG432RP CNMG433RP CNMG434RP	CNMG120408RP CNMG120412RP CNMG120416RP	1/2 1/2 1/2	12,70 12,70 12,70	.51 .51 .51	12,90 12,90 12,90	3/16 3/16 3/16	4,76 4,76 4,76	1/32 3/64 1/16	0,8 1,2 1,6	.203 .203 .203	5,16 5,16 5,16	● ● ●	● ● ●		
CNMG543RP CNMG544RP CNMG643RP CNMG644RP	CNMG160612RP CNMG160616RP CNMG190612RP CNMG190616RP	5/8 5/8 3/4 3/4	15,88 15,88 19,05 19,05	.63 .63 .76 .76	16,12 16,12 19,34 19,34	1/4 1/4 1/4 1/4	6,35 6,35 6,35 6,35	3/64 1/16 3/64 1/16	1,2 1,6 1,2 1,6	.250 .250 .313 .313	6,35 6,35 7,93 7,93	● ● ● ●	● ● ● ●		
DNMG331FP DNMG332FP DNMG431FP DNMG432FP DNMG441FP DNMG442FP	DNMG110404FP DNMG110408FP DNMG150404FP DNMG150408FP DNMG150604FP DNMG150608FP	3/8 3/8 1/2 1/2 1/2 1/2	9,53 9,53 12,70 12,70 12,70 12,70	.46 .46 .61 .61 .61 .61	11,63 11,63 15,50 15,50 15,50 15,50	3/16 3/16 3/16 3/16 1/4 1/4	4,76 4,76 4,76 4,76 6,35 6,35	1/64 1/32 1/64 1/32 1/64 1/32	0,4 0,8 0,4 0,8 0,4 0,8	.150 .150 .203 .203 .203 .203	3,81 3,81 5,16 5,16 5,16 5,16	● ● ● ● ● ●	● ● ● ● ● ●		

Order example:

ANSI catalog number: **CNMG431FP**Insert grade: **KU10T**ISO catalog number: **CNMG120404FP**Insert grade: **KU10T**

A10

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

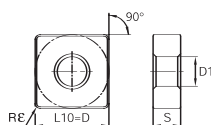


	DN..	RN..	Dimensions										KENNA UNIVERSAL	
			D		L10		S		Rε		D1		KU10T	KU30T
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		
	ANSI catalog number	ISO catalog number												
	DNMG331MN	DNMG110404MN	3/8	9,53	.46	11,63	3/16	4,76	1/64	0,4	.150	3,81	●	●
	DNMG332MN	DNMG110408MN	3/8	9,53	.46	11,63	3/16	4,76	1/32	0,8	.150	3,81	●	●
	DNMG333MN	DNMG110412MN	3/8	9,53	.46	11,63	3/16	4,76	3/64	1,2	.150	3,81	●	●
	DNMG431MN	DNMG150404MN	1/2	12,70	.61	15,50	3/16	4,76	1/64	0,4	.203	5,16	●	●
	DNMG432MN	DNMG150408MN	1/2	12,70	.61	15,50	3/16	4,76	1/32	0,8	.203	5,16	●	●
	DNMG433MN	DNMG150412MN	1/2	12,70	.61	15,50	3/16	4,76	3/64	1,2	.203	5,16	●	●
	DNMG441MN	DNMG150604MN	1/2	12,70	.61	15,50	1/4	6,35	1/64	0,4	.203	5,16	●	●
	DNMG442MN	DNMG150608MN	1/2	12,70	.61	15,50	1/4	6,35	1/32	0,8	.203	5,16	●	●
DNMG443MN	DNMG150612MN	1/2	12,70	.61	15,50	1/4	6,35	3/64	1,2	.203	5,16	●	●	
	DNMG332MP	DNMG110408MP	3/8	9,53	.46	11,63	3/16	4,76	1/32	0,8	.150	3,81	●	●
	DNMG333MP	DNMG110412MP	3/8	9,53	.46	11,63	3/16	4,76	3/64	1,2	.150	3,81	●	●
	DNMG431MP	DNMG150404MP	1/2	12,70	.61	15,50	3/16	4,76	1/64	0,4	.203	5,16	●	●
	DNMG432MP	DNMG150408MP	1/2	12,70	.61	15,50	3/16	4,76	1/32	0,8	.203	5,16	●	●
	DNMG433MP	DNMG150412MP	1/2	12,70	.61	15,50	3/16	4,76	3/64	1,2	.203	5,16	●	●
	DNMG441MP	DNMG150604MP	1/2	12,70	.61	15,50	1/4	6,35	1/64	0,4	.203	5,16	●	●
	DNMG442MP	DNMG150608MP	1/2	12,70	.61	15,50	1/4	6,35	1/32	0,8	.203	5,16	●	●
	DNMG443MP	DNMG150612MP	1/2	12,70	.61	15,50	1/4	6,35	3/64	1,2	.203	5,16	●	●
	DNMG432RN	DNMG150408RN	1/2	12,70	.61	15,50	3/16	4,76	1/32	0,8	.203	5,16	●	●
	DNMG442RN	DNMG150608RN	1/2	12,70	.61	15,50	1/4	6,35	1/32	0,8	.203	5,16	●	●
	DNMG543RN	DNMG190612RN	5/8	15,88	.76	19,38	1/4	6,35	3/64	1,2	.250	6,35	●	●
	DNMG332RP	DNMG110408RP	3/8	9,53	.46	11,63	3/16	4,76	1/32	0,8	.150	3,81	●	●
	DNMG333RP	DNMG110412RP	3/8	9,53	.46	11,63	3/16	4,76	3/64	1,2	.150	3,81	●	●
	DNMG432RP	DNMG150408RP	1/2	12,70	.61	15,50	3/16	4,76	1/32	0,8	.203	5,16	●	●
	DNMG433RP	DNMG150412RP	1/2	12,70	.61	15,50	3/16	4,76	3/64	1,2	.203	5,16	●	●
	DNMG434RP	DNMG150416RP	1/2	12,70	.61	15,50	3/16	4,76	1/16	1,6	.203	5,16	●	●
	DNMG442RP	DNMG150608RP	1/2	12,70	.61	15,50	1/4	6,35	1/32	0,8	.203	5,16	●	●
	DNMG443RP	DNMG150612RP	1/2	12,70	.61	15,50	1/4	6,35	3/64	1,2	.203	5,16	●	●
	DNMG444RP	DNMG150616RP	1/2	12,70	.61	15,50	1/4	6,35	1/16	1,6	.203	5,16	●	●
	RNMG32RN	RNMG090300RN	3/8	9,53	-	-	1/8	3,18	-	-	.150	3,81	●	●
	RNMG43RN	RNMG120400RN	1/2	12,70	-	-	3/16	4,76	-	-	.203	5,16	●	●

Order example:

ANSI catalog number: **DNMG331MN**ISO catalog number: **DNMG110404MN**Insert grade: **KU30T**Insert grade: **KU30T**To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

SN..



Dimensions

KENNA
UNIVERSAL

ANSI catalog number

ISO catalog number

D

L10

S

Re

D1

inch

mm

inch

mm

inch

mm

inch

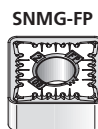
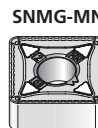
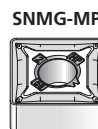
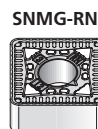
mm

inch

mm

KU10T

KU30T

SNMG431FP
SNMG432FPSNMG120404FP
SNMG120408FP1/2
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12,70.50
.5012,70
12,703/16
3/164,76
4,761/64
1/320,4
0,8.203
.2035,16
5,16●
●SNMG431MN
SNMG432MN
SNMG433MN
SNMG434MNSNMG120404MN
SNMG120408MN
SNMG120412MN
SNMG120416MN1/2
1/2
1/2
1/212,70
12,70
12,70
12,70.50
.50
.50
.5012,70
12,70
12,70
12,703/16
3/16
3/16
3/164,76
4,76
4,76
4,761/64
1/32
3/64
1/160,4
0,8
1,2
1,6.203
.203
.203
.2035,16
5,16
5,16
5,16●
●
●
●SNMG432MP
SNMG433MP
SNMG434MPSNMG120408MP
SNMG120412MP
SNMG120416MP1/2
1/2
1/212,70
12,70
12,70.50
.50
.5012,70
12,70
12,703/16
3/16
3/164,76
4,76
4,761/32
3/64
1/160,8
1,2
1,6.203
.203
.2035,16
5,16
5,16●
●
●SNMG432RN
SNMG433RN
SNMG434RN
SNMG544RN
SNMG642RN
SNMG643RN
SNMG644RNSNMG120408RN
SNMG120412RN
SNMG120416RN
SNMG150616RN
SNMG190608RN
SNMG190612RN
SNMG190616RN1/2
1/2
1/212,70
12,70
12,70.50
.50
.5012,70
12,70
12,703/16
3/16
3/164,76
4,76
4,761/32
3/64
1/160,8
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1,6.203
.203
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5,16
5,16●
●
●

5/8

15,88

.63

15,88

1/4

6,35

1/16

1,6

.250

6,35

●

3/4

19,05

.75

19,05

1/4

6,35

1/32

0,8

.313

7,93

●

3/4

19,05

.75

19,05

1/4

6,35

3/64

1,2

.313

7,93

●

3/4

19,05

.75

19,05

1/4

6,35

1/16

1,6

.313

7,93

●

SNMG432RP
SNMG433RP
SNMG543RP
SNMG544RP
SNMG643RP
SNMG644RPSNMG120408RP
SNMG120412RP
SNMG150612RP
SNMG150616RP
SNMG190612RP
SNMG190616RP1/2
1/212,70
12,70.50
.5012,70
12,703/16
3/164,76
4,761/32
3/640,8
1,2.203
.2035,16
5,16●
●

5/8

15,88

.63

15,88

1/4

6,35

3/64

1,2

.250

6,35

●

5/8

15,88

.63

15,88

1/4

6,35

1/16

1,6

.250

6,35

●

3/4

19,05

.75

19,05

1/4

6,35

3/64

1,2

.313

7,93

●

3/4

19,05

.75

19,05

1/4

6,35

1/16

1,6

.313

7,93

●

Order example:

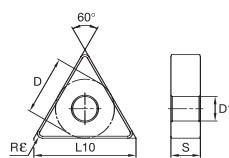
ANSI catalog number: SNMG431FP

ISO catalog number: SNMG120404FP

Insert grade: KU10T

Insert grade: KU10T

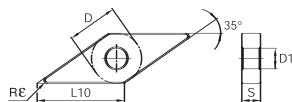


	TN..		Dimensions										KENNA UNIVERSAL	
			D		L10		S		Rε		D1		KU10T	KU30T
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		
	ANSI catalog number	ISO catalog number												
	TNMG331FP	TNMG160404FP	3/8	9,53	.65	16,50	3/16	4,76	1/64	0,4	.150	3,81	●	
	TNMG332FP	TNMG160408FP	3/8	9,53	.65	16,50	3/16	4,76	1/32	0,8	.150	3,81	●	
	TNMG431FP	TNMG220404FP	1/2	12,70	.87	22,00	3/16	4,76	1/64	0,4	.203	5,16	●	
	TNMG432FP	TNMG220408FP	1/2	12,70	.87	22,00	3/16	4,76	1/32	0,8	.203	5,16	●	
	TNMG331MN	TNMG160404MN	3/8	9,53	.65	16,50	3/16	4,76	1/64	0,4	.150	3,81	●	
	TNMG332MN	TNMG160408MN	3/8	9,53	.65	16,50	3/16	4,76	1/32	0,8	.150	3,81	●	
	TNMG333MN	TNMG160412MN	3/8	9,53	.65	16,50	3/16	4,76	3/64	1,2	.150	3,81	●	
	TNMG431MN	TNMG220404MN	1/2	12,70	.87	22,00	3/16	4,76	1/64	0,4	.203	5,16	●	
	TNMG432MN	TNMG220408MN	1/2	12,70	.87	22,00	3/16	4,76	1/32	0,8	.203	5,16	●	
	TNMG433MN	TNMG220412MN	1/2	12,70	.87	22,00	3/16	4,76	3/64	1,2	.203	5,16	●	
	TNMG331MP	TNMG160404MP	3/8	9,53	.65	16,50	3/16	4,76	1/64	0,4	.150	3,81	●	●
	TNMG332MP	TNMG160408MP	3/8	9,53	.65	16,50	3/16	4,76	1/32	0,8	.150	3,81	●	●
	TNMG333MP	TNMG160412MP	3/8	9,53	.65	16,50	3/16	4,76	3/64	1,2	.150	3,81	●	●
	TNMG432MP	TNMG220408MP	1/2	12,70	.87	22,00	3/16	4,76	1/32	0,8	.203	5,16	●	●
	TNMG433MP	TNMG220412MP	1/2	12,70	.87	22,00	3/16	4,76	3/64	1,2	.203	5,16	●	●
	TNMG332RN	TNMG160408RN	3/8	9,53	.65	16,50	3/16	4,76	1/32	0,8	.150	3,81	●	
	TNMG432RN	TNMG220408RN	1/2	12,70	.87	22,00	3/16	4,76	1/32	0,8	.203	5,16	●	
	TNMG433RN	TNMG220412RN	1/2	12,70	.87	22,00	3/16	4,76	3/64	1,2	.203	5,16	●	
	TNMG542RN	TNMG270608RN	5/8	15,88	1.08	27,50	1/4	6,35	1/32	0,8	.250	6,35	●	
	TNMG544RN	TNMG270616RN	5/8	15,88	1.08	27,50	1/4	6,35	1/16	1,6	.250	6,35	●	
	TNMG666RN	TNMG330924RN	3/4	19,05	1.30	33,00	3/8	9,53	3/32	2,4	.313	7,93	●	
	TNMG332RP	TNMG160408RP	3/8	9,53	.65	16,50	3/16	4,76	1/32	0,8	.150	3,81	●	
	TNMG333RP	TNMG160412RP	3/8	9,53	.65	16,50	3/16	4,76	3/64	1,2	.150	3,81	●	
	TNMG334RP	TNMG160416RP	3/8	9,53	.65	16,50	3/16	4,76	1/16	1,6	.150	3,81	●	
	TNMG432RP	TNMG220408RP	1/2	12,70	.87	22,00	3/16	4,76	1/32	0,8	.203	5,16	●	
	TNMG433RP	TNMG220412RP	1/2	12,70	.87	22,00	3/16	4,76	3/64	1,2	.203	5,16	●	
	TNMG434RP	TNMG220416RP	1/2	12,70	.87	22,00	3/16	4,76	1/16	1,6	.203	5,16	●	

Order example:

ANSI catalog number: **TNMG331FP**
Insert grade: **KU10T**ISO catalog number: **TNMG160404FP**
Insert grade: **KU10T**

VN..



Dimensions

KENNA
UNIVERSAL

ANSI catalog number

ISO catalog number

D

L10

S

Re

D1

inch

mm

inch

mm

inch

mm

inch

mm

inch

mm

KU10T

KU30T

VNMG331FP
VNMG332FPVNMG160404FP
VNMG160408FP3/8
3/89,53
9,53.65
.6516,61
16,613/16
3/164,76
4,761/64
1/320,4
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.1503,81
3,81●
●VNMG331MN
VNMG332MN
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VNMG160408MN
VNMG160412MN3/8
3/8
3/89,53
9,53
9,53.65
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3/16
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4,76
4,761/64
1/32
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.1503,81
3,81
3,81●
●
●VNMG331MP
VNMG332MP
VNMG333MPVNMG160404MP
VNMG160408MP
VNMG160412MP3/8
3/8
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16,61
16,613/16
3/16
3/164,76
4,76
4,761/64
1/32
3/640,4
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3,81
3,81●
●
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VNMG432RNVNMG160408RN
VNMG220408RN3/8
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22,143/16
3/164,76
4,761/32
1/320,8
0,8.150
.2033,81
5,16●
●VNMG332RP
VNMG333RPVNMG160408RP
VNMG160412RP3/8
3/89,53
9,53.65
.6516,61
16,613/16
3/164,76
4,761/32
3/640,8
1,2.150
.1503,81
3,81●
●

Order example:

ANSI catalog number: **VNMG331FP**
Insert grade: **KU10T**ISO catalog number: **VNMG160404FP**
Insert grade: **KU10T**



	WN..		Dimensions										KENNA UNIVERSAL	
			D		L10		S		Rε		D1			
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		
	WNMG-FP													
	WNSG331FP	WNSG060404FP	3/8	9,53	.26	6,52	3/16	4,76	1/64	0,4	.150	3,81	●	●
	WNSG332FP	WNSG060408FP	3/8	9,53	.26	6,52	3/16	4,76	1/32	0,8	.150	3,81	●	●
	WNSG431FP	WNSG080404FP	1/2	12,70	.34	8,69	3/16	4,76	1/64	0,4	.203	5,16	●	●
	WNMG-MN													
	WNSG331MN	WNSG060404MN	3/8	9,53	.26	6,52	3/16	4,76	1/64	0,4	.150	3,81	●	●
	WNSG332MN	WNSG060408MN	3/8	9,53	.26	6,52	3/16	4,76	1/32	0,8	.150	3,81	●	●
	WNSG333MN	WNSG060412MN	3/8	9,53	.26	6,52	3/16	4,76	3/64	1,2	.150	3,81	●	●
	WNMG-MP													
	WNSG432MP	WNSG080408MP	1/2	12,70	.34	8,69	3/16	4,76	1/32	0,8	.203	5,16	●	●
	WNSG433MP	WNSG080412MP	1/2	12,70	.34	8,69	3/16	4,76	3/64	1,2	.203	5,16	●	●
	WNSG433MP	WNSG080412MP	1/2	12,70	.34	8,69	3/16	4,76	3/64	1,2	.203	5,16	●	●
	WNMG-RN													
	WNSG332RN	WNSG060408RN	3/8	9,53	.26	6,52	3/16	4,76	1/32	0,8	.150	3,81	●	●
	WNSG333RN	WNSG060412RN	3/8	9,53	.26	6,52	3/16	4,76	3/64	1,2	.150	3,81	●	●
	WNSG432RN	WNSG080408RN	1/2	12,70	.34	8,69	3/16	4,76	1/32	0,8	.203	5,16	●	●
	WNMG-RP													
	WNSG433RP	WNSG080412RP	1/2	12,70	.34	8,69	3/16	4,76	3/64	1,2	.203	5,16	●	●
	WNSG434RP	WNSG080416RP	1/2	12,70	.34	8,69	3/16	4,76	1/16	1,6	.203	5,16	●	●
	WNSG434RP	WNSG080416RP	1/2	12,70	.34	8,69	3/16	4,76	1/16	1,6	.203	5,16	●	●

Order example:

ANSI catalog number: WNSG331FP

ISO catalog number: WNSG060404FP

Insert grade: KU10T

Insert grade: KU10T

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Screw-On Inserts

Dimensions and Grade Selection



	CC..		CP..		Dimensions								KENNA UNIVERSAL	
					D		L10		S		Re		D1	
	ANSI catalog number		ISO catalog number		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
	CCMT21505LF		CCMT060202LF		1/4	6,35	.254	6,45	3/32	2,38	.008	0,2	.110	2,80
	CCMT2151LF		CCMT060204LF		1/4	6,35	.254	6,45	3/32	2,38	1/64	0,4	.110	2,80
	CCMT2152LF		CCMT060208LF		1/4	6,35	.254	6,45	3/32	2,38	1/32	0,8	.110	2,80
	CCMT3251LF		CCMT09T304LF		3/8	9,53	.381	9,67	5/32	3,97	1/64	0,4	.173	4,40
	CCMT3252LF		CCMT09T308LF		3/8	9,53	.381	9,67	5/32	3,97	1/32	0,8	.173	4,40
	CCMT431LF		CCMT120404LF		1/2	12,70	.508	12,90	3/16	4,76	1/64	0,4	.217	5,50
	CCMT2151MF		CCMT060204MF		1/4	6,35	.254	6,45	3/32	2,38	1/64	0,4	.110	2,80
	CCMT3251MF		CCMT09T304MF		3/8	9,53	.381	9,67	5/32	3,97	1/64	0,4	.173	4,40
	CCMT3252MF		CCMT09T308MF		3/8	9,53	.381	9,67	5/32	3,97	1/32	0,8	.173	4,40
	CCMT432MF		CCMT120408MF		1/2	12,70	.508	12,90	3/16	4,76	1/32	0,8	.217	5,50
	CCMT2151UF		CCMT060204UF		1/4	6,35	.254	6,45	3/32	2,38	1/64	0,4	.110	2,80
	CCMT3251UF		CCMT09T304UF		3/8	9,53	.381	9,67	5/32	3,97	1/64	0,4	.173	4,40
	CCMT3252UF		CCMT09T308UF		3/8	9,53	.381	9,67	5/32	3,97	1/32	0,8	.173	4,40
	CPMT2151LF		CPMT060204LF		1/4	6,35	.254	6,45	3/32	2,38	1/64	0,4	.110	2,80
	CPMT2152LF		CPMT060208LF		1/4	6,35	.254	6,45	3/32	2,38	1/32	0,8	.110	2,80
	CPMT3251LF		CPMT09T304LF		3/8	9,53	.381	9,67	5/32	3,97	1/64	0,4	.173	4,40
	CPMT3252LF		CPMT09T308LF		3/8	9,53	.381	9,67	5/32	3,97	1/32	0,8	.173	4,40
	CPMT2152MF		CPMT060208MF		1/4	6,35	.254	6,45	3/32	2,38	1/32	0,8	.110	2,80
	CPMT3252MF		CPMT09T308MF		3/8	9,53	.381	9,67	5/32	3,97	1/32	0,8	.173	4,40
	CPMT2151UF		CPMT060204UF		1/4	6,35	.254	6,45	3/32	2,38	1/64	0,4	.110	2,80
	CPMT3251UF		CPMT09T304UF		3/8	9,53	.381	9,67	5/32	3,97	1/64	0,4	.173	4,40

Order example:

ANSI catalog number: CCMT21505LF

ISO catalog number: CCMT060202LF

Insert grade: KU10T

Insert grade: KU10T



	DC..	DP..	Dimensions										KENNA UNIVERSAL	
			D		L10		S		Re		D1		KU10T	KU30T
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		
	ANSI catalog number	ISO catalog number												
	DCMT2151LF	DCMT070204LF	1/4	6,35	.305	7,75	3/32	2,38	1/64	0,4	.110	2,80	●	●
	DCMT3251LF	DCMT11T304LF	3/8	9,53	.458	11,63	5/32	3,97	1/64	0,4	.173	4,40	●	●
	DCMT3252LF	DCMT11T308LF	3/8	9,53	.458	11,63	5/32	3,97	1/32	0,8	.173	4,40	●	●
	DCMT3253LF	DCMT11T312LF	3/8	9,53	.458	11,63	5/32	3,97	3/64	1,2	.173	4,40	●	●
	DCMT432LF	DCMT150408LF	1/2	12,70	.610	15,50	3/16	4,76	1/32	0,8	.217	5,50	●	●
	DCMT3251MF	DCMT11T304MF	3/8	9,53	.458	11,63	5/32	3,97	1/64	0,4	.173	4,40	●	●
	DCMT3252MF	DCMT11T308MF	3/8	9,53	.458	11,63	5/32	3,97	1/32	0,8	.173	4,40	●	●
	DCMT3253MF	DCMT11T312MF	3/8	9,53	.458	11,63	5/32	3,97	3/64	1,2	.173	4,40	●	●
	DCMT2151UF	DCMT070204UF	1/4	6,35	.305	7,75	3/32	2,38	1/64	0,4	.110	2,80	●	●
	DCMT32505UF	DCMT11T302UF	3/8	9,53	.458	11,63	5/32	3,97	.008	0,2	.173	4,40	●	●
	DCMT3251UF	DCMT11T304UF	3/8	9,53	.458	11,63	5/32	3,97	1/64	0,4	.173	4,40	●	●
	DCMT3252UF	DCMT11T308UF	3/8	9,53	.458	11,63	5/32	3,97	1/32	0,8	.173	4,40	●	●
	DPMT3251LF	DPMT11T304LF	3/8	9,53	.458	11,63	5/32	3,97	1/64	0,4	.173	4,40	●	●
	DPMT3252LF	DPMT11T308LF	3/8	9,53	.458	11,63	5/32	3,97	1/32	0,8	.173	4,40	●	●
	DPMT3252MF	DPMT11T308MF	3/8	9,53	.458	11,63	5/32	3,97	1/32	0,8	.173	4,40	●	●
	DPMT2151UF	DPMT070204UF	1/4	6,35	.305	7,75	3/32	2,38	1/64	0,4	.110	2,80	●	●
	DPMT3251UF	DPMT11T304UF	3/8	9,53	.458	11,63	5/32	3,97	1/64	0,4	.173	4,40	●	●
	DPMT3252UF	DPMT11T308UF	3/8	9,53	.458	11,63	5/32	3,97	1/32	0,8	.173	4,40	●	●

Order example:

ANSI catalog number: DCMT2151LF

Insert grade:

KU10T

ISO catalog number: DCMT070204LF

Insert grade:

KU10T

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Screw-On Inserts

Dimensions and Grade Selection



	SC..	SP..	Dimensions										KENNA UNIVERSAL	
			D		L10		S		Re		D1		KU10T	KU30T
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm		
	 ANSI catalog number	 ISO catalog number												
 SCMT-LF	SCMT3251LF	SCMT09T304LF	3/8	9,53	.375	9,53	5/32	3,97	1/64	0,4	.173	4,40	●	
	SCMT3252LF	SCMT09T308LF	3/8	9,53	.375	9,53	5/32	3,97	1/32	0,8	.173	4,40	●	●
	SCMT431LF	SCMT120404LF	1/2	12,70	.500	12,70	3/16	4,76	1/64	0,4	.217	5,50	●	●
	SCMT432LF	SCMT120408LF	1/2	12,70	.500	12,70	3/16	4,76	1/32	0,8	.217	5,50	●	●
	SCMT433LF	SCMT120412LF	1/2	12,70	.500	12,70	3/16	4,76	3/64	1,2	.217	5,50	●	
 SCMT-MF	SCMT3252MF	SCMT09T308MF	3/8	9,53	.375	9,53	5/32	3,97	1/32	0,8	.173	4,40	●	
	SCMT432MF	SCMT120408MF	1/2	12,70	.500	12,70	3/16	4,76	1/32	0,8	.217	5,50	●	●
	SCMT433MF	SCMT120412MF	1/2	12,70	.500	12,70	3/16	4,76	3/64	1,2	.217	5,50	●	
 SCMT-UF	SCMT3252UF	SCMT09T308UF	3/8	9,53	.375	9,53	5/32	3,97	1/32	0,8	.173	4,40	●	
 SPMT-LF	SPMT3252LF	SPMT09T308LF	3/8	9,53	.375	9,53	5/32	3,97	1/32	0,8	.173	4,40	●	
 SPMT-MF	SPMT3252MF	SPMT09T308MF	3/8	9,53	.375	9,53	5/32	3,97	1/32	0,8	.173	4,40	●	●
	SPMT432MF	SPMT120408MF	1/2	12,70	.500	12,70	3/16	4,76	1/32	0,8	.217	5,50	●	●
 SPMT-UF	SPMT3251UF	SPMT09T304UF	3/8	9,53	.375	9,53	5/32	3,97	1/64	0,4	.173	4,40	●	

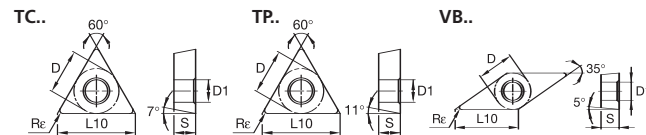
Order example:

ANSI catalog number: SCMT3251LF

Insert grade: KU10T

ISO catalog number: SCMT09T304LF

Insert grade: KU10T



	ANSI catalog number	ISO catalog number	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	KU10	KU30
	TCMT2151LF	TCMT110204LF	1/4	6,35	.433	11,00	3/32	2,38	1/64	0,4	.110	2,80	●	●
	TCMT2152LF	TCMT110208LF	1/4	6,35	.433	11,00	3/32	2,38	1/32	0,8	.110	2,80	●	●
	TCMT3251LF	TCMT16T304LF	3/8	9,53	.650	16,50	5/32	3,97	1/64	0,4	.173	4,40	●	●
	TCMT3252LF	TCMT16T308LF	3/8	9,53	.650	16,50	5/32	3,97	1/32	0,8	.173	4,40	●	●
	TCMT3253LF	TCMT16T312LF	3/8	9,53	.650	16,50	5/32	3,97	3/64	1,2	.173	4,40	●	●
	TCMT2152MF	TCMT110208MF	1/4	6,35	.433	11,00	3/32	2,38	1/32	0,8	.110	2,80	●	●
	TCMT3252MF	TCMT16T308MF	3/8	9,53	.650	16,50	5/32	3,97	1/32	0,8	.173	4,40	●	●
	TCMT3253MF	TCMT16T312MF	3/8	9,53	.650	16,50	5/32	3,97	3/64	1,2	.173	4,40	●	●
	TCMT2151UF	TCMT110204UF	1/4	6,35	.433	11,00	3/32	2,38	1/64	0,4	.110	2,80	●	●
	TCMT2152UF	TCMT110208UF	1/4	6,35	.433	11,00	3/32	2,38	1/32	0,8	.110	2,80	●	●
	TCMT3252UF	TCMT16T308UF	3/8	9,53	.650	16,50	5/32	3,97	1/32	0,8	.173	4,40	●	●
	TPMT2151LF	TPMT110204LF	1/4	6,35	.433	11,00	3/32	2,38	1/64	0,4	.110	2,80	●	●
	TPMT2152LF	TPMT110208LF	1/4	6,35	.433	11,00	3/32	2,38	1/32	0,8	.110	2,80	●	●
	TPMT3251LF	TPMT16T304LF	3/8	9,53	.650	16,50	5/32	3,97	1/64	0,4	.173	4,40	●	●
	TPMT3252LF	TPMT16T308LF	3/8	9,53	.650	16,50	5/32	3,97	1/32	0,8	.173	4,40	●	●
	TPMT3252MF	TPMT16T308MF	3/8	9,53	.650	16,50	5/32	3,97	1/32	0,8	.173	4,40	●	●
	TPMT2151UF	TPMT110204UF	1/4	6,35	.433	11,00	3/32	2,38	1/64	0,4	.110	2,80	●	●
	VBMT221LF	VBMT110304LF	1/4	6,35	.436	11,07	1/8	3,18	1/64	0,4	.110	2,80	●	●
	VBMT222LF	VBMT110308LF	1/4	6,35	.436	11,07	1/8	3,18	1/32	0,8	.110	2,80	●	●
	VBMT331LF	VBMT160404LF	3/8	9,53	.654	16,61	3/16	4,76	1/64	0,4	.173	4,40	●	●
	VBMT332LF	VBMT160408LF	3/8	9,53	.654	16,61	3/16	4,76	1/32	0,8	.173	4,40	●	●

Order example:

ANSI catalog number: TCMT2151LF
Insert grade: KU10TISO catalog number: TCMT110204LF
Insert grade: KU10TTo place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Toolholder Identification System



D*
KENCLAMP

S
SCREW-ON

*Kennametal only

1. Insert Holding Method

Example:

D

C

L

C 	D 	K/N
L 	R 	S
T 	V 	W

2. Insert Shape

D

C

L

R

L

N

5. Hand of Tool

R

6. Additional Information

P polycrystalline insert

C deep pocket for ceramic insert

S single pocket locating wall

F straight shank, no offset

3. Tool Style or Lead Angle

A 	B 	C 	D 	E
F 	G 	H 	J 	K
L 	M 	P 	Q 	R
S 	U 	V 	Y 	

4. Insert Clearance Angle

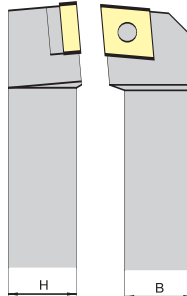
N 	D
B 	E
C 	F
P 	



Inch

The seventh and eighth positions shall be a significant two-digit number that indicates the holder cross section. For shanks 5/8" square and over, the number will represent the number of sixteenths of width and height. For shanks under 5/8" square, the number of sixteenths of cross section will be preceded by a zero.

For rectangular holders, the first digit represents the number of eighths of width "B" and the second digit the number of quarters of height "H", except for a toolholder 1 1/4" x 1 1/2" which is given the number 91.



Metric

The seventh and eighth position shall be a significant two-digit number which indicates the holder cross section. If the dimension for the width "B" or the height "H" is represented by a one-digit number, a 0 (zero) will be used in front of it. Example: 8 mm = 08

Inch
Insert IC
Number of
1/8ths of "D"

Inch

A – qualified back and end, 4" long
B – qualified back and end, 4.5" long
C – qualified back and end, 5" long
D – qualified back and end, 6" long
E – qualified back and end, 7" long
F – qualified back and end, 8" long
G* – qualified back and end, 5.5" long
H* – qualified back and end, 5.625" long
I* – qualified back and end, 3" long
J* – qualified back and end, 5.3" long
K* – qualified back and end, 14" long
L* – qualified back and end, 6.8" long
M – qualified front and end, 4" long
N – qualified front and end, 4.5" long
P – qualified front and end, 5" long
R – qualified front and end, 6" long
S – qualified front and end, 7" long
T – qualified front and end, 8" long
U* – qualified front and end, 5.5" long
V* – qualified back and end, 3.5" long
W* – qualified front and end, 3.5" long
Y* – qualified back and end, 3.75" long
Z* – qualified back and end, 3.250" long
*Kennametal standard only.

7./8. Shank Dimensions

1

6

4

D

KC

3

25

25

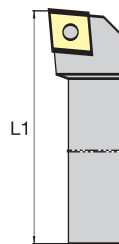
M

09

KC

04

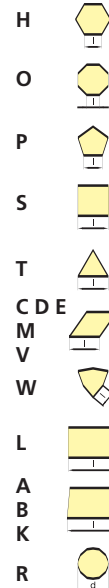
9. Tool Length



Metric	
L1	ISO
32	A
40	B
50	C
60	D
70	E
80	F
90	G
100	H
110	J
125	K
140	L
150	M
160	N
170	P
180	Q
200	R
250	S
300	T
350	U
400	V
450	W
500	Y
Special length	X

10. Insert Size

Metric Cutting Edge Length L10



11. Additional Information

KC – Kenclamp

12. Insert Thickness (optional)

Inch
3 – .188"
4 – .250"

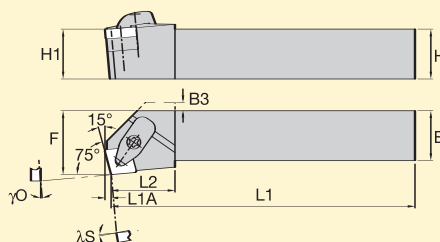
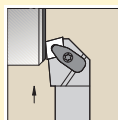
Metric
04 – 4,76 mm
06 – 6,35 mm

KENCLAMP Toolholders

KENLOC Inserts

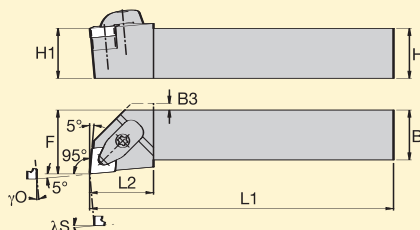
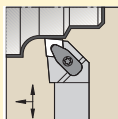


DCKN-KC



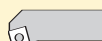
Catalog number Right hand/Left hand	H = H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DCKN R/L 124BKC3	.75	.75	1.000	4.50	1.25	-	.122	.22	-5.0	-5.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCKN R/L 164CKC3	1.00	1.00	1.250	5.00	1.25	-	.122	-	-5.0	-5.0	CN..432	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCKN R/L 164DKC3	1.00	1.00	1.250	6.00	1.25	-	.122	-	-5.0	-5.0	CN..432	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCKN R/L 204DKC3	1.25	1.25	1.500	6.00	1.25	-	.122	-	-5.0	-5.0	CN..432	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCKN R/L 205DKC4	1.25	1.25	1.500	6.00	1.25	-	.150	-	-5.0	-5.0	CN..543	ICSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DCKN R/L 206DKC4	1.25	1.25	1.500	6.00	1.50	-	.183	-	-5.0	-5.0	CN..643	ICSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP
Metric																		
DCKN R/L 2020K12KC04	20	20	25,0	125	32,0	-	3,1	6,0	-5,0	-5,0	CN..120408	ICSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCKN R/L 2525M12KC04	25	25	32,0	150	32,0	-	3,1	-	-5,0	-5,0	CN..120408	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCKN R/L 3225P12KC04	32	25	32,0	170	32,0	-	3,1	-	-5,0	-5,0	CN..120408	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCKN R/L 3232P16KC06	32	32	40,0	170	32,0	-	3,8	-	-5,0	-5,0	CN..160612	ICSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DCKN R/L 3232P19KC06	32	32	40,0	170	38,0	-	4,6	-	-5,0	-5,0	CN..190612	ICSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP

DCLN-KC

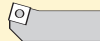


Catalog number Right hand/Left hand	H = H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DCLN R/L 124BKC3	.75	.75	1.000	4.50	1.25	-	-	.15	-5.0	-5.0	CN..432	ICSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCLN R/L 164DKC3	1.00	1.00	1.250	6.00	1.25	-	-	-	-5.0	-5.0	CN..432	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCLN R/L 204DKC3	1.25	1.25	1.500	6.00	1.25	-	-	-	-5.0	-5.0	CN..432	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCLN R/L 165DKC4	1.00	1.00	1.250	6.00	1.38	-	-	-	-5.0	-5.0	CN..543	ICSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DCLN R/L 205DKC4	1.25	1.25	1.500	6.00	1.38	-	-	-	-5.0	-5.0	CN..543	ICSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DCLN R/L 206DKC4	1.25	1.25	1.500	6.00	1.62	-	-	-	-5.0	-5.0	CN..643	ICSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP
DCLN R/L 246DKC4	1.50	1.50	2.000	6.00	1.62	-	-	-	-5.0	-5.0	CN..643	ICSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP
Metric																		
DCLN R/L 2020K12KC04	20	20	25,0	125	32,0	-	-	4,0	-5,0	-5,0	CN..120408	ICSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCLN R/L 2525M12KC04	25	25	32,0	150	32,0	-	-	-	-5,0	-5,0	CN..120408	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCLN R/L 2525M16KC06	25	25	32,0	150	33,0	-	-	-	-5,0	-5,0	CN..160612	ICSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DCLN R/L 3225P16KC06	32	25	32,0	170	33,0	-	-	-	-5,0	-5,0	CN..160612	ICSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DCLN R/L 3232P16KC06	32	32	40,0	170	33,0	-	-	-	-5,0	-5,0	CN..160612	ICSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DCLN R/L 3232P19KC06	32	32	40,0	170	40,0	-	-	-	-5,0	-5,0	CN..190612	ICSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP
DCLN R/L 4040S19KC06	40	40	50,0	250	40,0	-	-	-	-5,0	-5,0	CN..190612	ICSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP

Order example:
ANSI Right hand: DCKNR124BKC3
ISO Right hand: DCKNR2020K12KC04

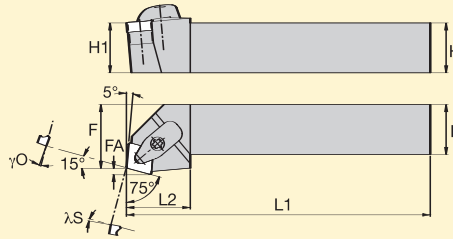
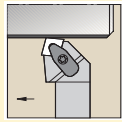


ANSI Left hand: DCKNL124BKC3
ISO Left hand: DCKNL2020K12KC04



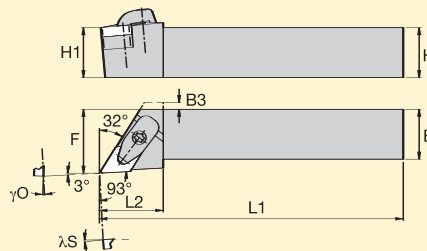
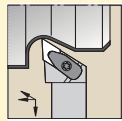


DCRN-KC



Catalog number Right hand/Left hand	H = H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DCRN R/L 164DKC3	1.00	1.00	1.128	6.00	1.25	.12	-	-	-5.0	-5.0	CN..432	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCRN R/L 204DKC3	1.25	1.25	1.378	6.00	1.25	.12	-	-	-5.0	-5.0	CN..432	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCRN R/L 245DKC4	1.50	1.50	1.851	6.00	1.38	.15	-	-	-5.0	-5.0	CN..543	ICSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DCRN R/L 206DKC4	1.25	1.25	1.501	6.00	1.38	.18	-	-	-5.0	-5.0	CN..643	ICSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP
Metric																		
DCRN R/L 2020K12KC04	20	20	25,0	125	32,0	3,1	-	-	-5.0	-5.0	CN..120406	ICSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCRN R/L 2525M12KC04	25	25	32,0	150	32,0	3,1	-	-	-5.0	-5.0	CN..120406	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DCRN R/L 3232P16KC06	32	32	40,0	170	38,0	3,8	-	-	-5.0	-5.0	CN..160612	ICSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DCRN R/L 3232P19KC06	32	32	40,0	170	38,0	4,6	-	-	-5.0	-5.0	CN..190612	ICSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP

DDJN-KC



Catalog number Right hand/Left hand	H = H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DDJN R/L 123BKC3	.75	.75	1.000	4.50	1.25	-	-	.06	-5.0	-5.0	DN..332	IDSN322	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DDJN R/L 163DKC3	1.00	1.00	1.250	6.00	1.25	-	-	-	-5.0	-5.0	DN..332	IDSN322	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DDJN R/L 164DKC3	1.00	1.00	1.250	6.00	1.25	-	-	-	-5.0	-5.0	DN..432	IDSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DDJN R/L 204DKC3	1.25	1.25	1.250	6.00	1.25	-	-	-	-5.0	-5.0	DN..432	IDSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DDJN R/L 205DKC4	1.25	1.25	1.500	6.00	1.38	-	-	-	-5.0	-5.0	DN..543	IDSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DDJN R/L 245DKC4	1.50	1.50	2.000	6.00	1.38	-	-	-	-5.0	-5.0	DN..543	IDSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
Metric																		
DDJN R/L 2020K11KC04	20	20	25,0	125	30,0	-	-	2,0	-5,0	-5,0	DN..110408	IDSN322	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DDJN R/L 2525M11KC04	25	25	32,0	150	30,0	-	-	-	-5,0	-5,0	DN..110408	IDSN322	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DDJN R/L 2020K15KC06	20	20	25,0	125	32,0	-	-	4,0	-5,0	-5,0	DN..150608	IDSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DDJN R/L 2525M15KC06	25	25	32,0	150	32,0	-	-	-	-5,0	-5,0	DN..150608	IDSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DDJN R/L 3225P15KC06	32	25	32,0	170	32,0	-	-	-	-5,0	-5,0	DN..150608	IDSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DDJN R/L 3232P15KC06	32	32	40,0	170	32,0	-	-	-	-5,0	-5,0	DN..150608	IDSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP

Order example:
ANSI Right hand: DCRNR164DKC3
ISO Right hand: DCRNR2020K12KC04



ANSI Left hand: DCRNL164DKC3
ISO Left hand: DCRNL2020K12KC04

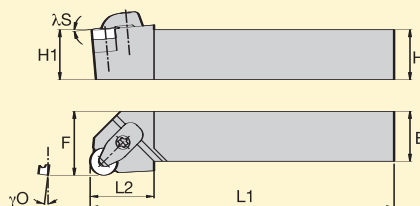


KENCLAMP Toolholders



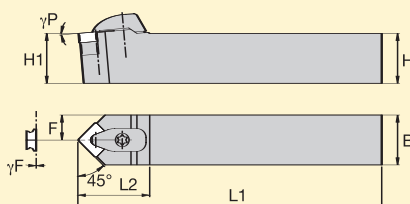
KENLOC Inserts

DRGN-KC



Catalog number	H =																	
Right hand/Left hand	H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DRGN R/L 124BKC3	.75	.75	1.000	4.50	1.25	-	-	-	-5.0	-5.0	RN..43	IRSN43	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DRGN R/L 164DKC3	1.00	1.00	1.250	6.00	1.25	-	-	-	-5.0	-5.0	RN..43	IRSN44	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DRGN R/L 204DKC3	1.25	1.25	1.500	6.00	1.25	-	-	-	-5.0	-5.0	RN..43	IRSN44	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
Metric																		
DRGN R/L 2525M12KC04	25	25	32,0	150	32,0	-	-	-	-5,0	-5,0	RN..120400	IRSN44	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DRGN R/L 3225P12KC04	32	25	32,0	170	32,0	-	-	-	-5,0	-5,0	RN..120400	IRSN44	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP

DSDN-KC



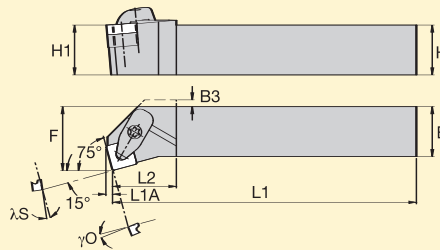
Catalog number	H =																	
Right hand/Left hand	H1	B	F	L1	L2	FA	L1A	B3	γF°	γP°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DSDNN124KC3	.75	.75	.365	4.50	1.44	-	-	-	0.0	-7.0	SN..432	ISSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSDNN164KC3	1.00	1.00	.500	6.00	1.44	-	-	-	0.0	-7.0	SN..432	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSDNN204KC3	1.25	1.25	.625	6.00	1.44	-	-	-	0.0	-7.0	SN..432	ICSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSDNN206KC4	1.25	1.25	.615	6.00	1.75	-	-	-	0.0	-7.0	SN..643	ISSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP
DSDNN246KC4	1.50	1.50	.615	6.00	1.75	-	-	-	0.0	-7.0	SN..643	ISSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP
Metric																		
DSDNN2020K12KC04	20	20	10,0	125	36,0	-	-	-	0,0	-7,0	SN..120408	ISSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSDNN2525M12KC04	25	25	12,5	150	36,0	-	-	-	0,0	-7,0	SN..120408	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSDNN3225P12KC04	32	25	12,0	170	36,0	-	-	-	0,0	-7,0	SN..120408	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSDNN2525M15KC06	25	25	12,5	150	42,0	-	-	-	0,0	-7,0	SN..150612	ISSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DSDNN3232P15KC06	32	32	15,5	170	42,0	-	-	-	0,0	-7,0	SN..150612	ISSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DSDNN3232P19KC06	32	32	15,5	170	44,0	-	-	-	0,0	-7,0	SN..190612	ISSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP

Order example:
ANSI Right hand: DRGNR124BKC3
ISO Right hand: DRGNR2525M12KC04

ANSI Left hand: DRGNL124BKC3
ISO Left hand: DRGNL2525M12KC04

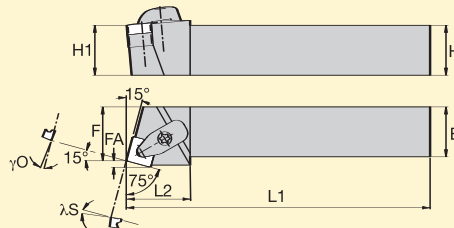
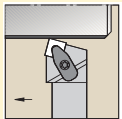


DSKN-KC



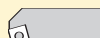
																		
Catalog number	H =										Gage	Shim	Shim	Torx	Clamp	Slotted	Clamp	Torx
Right hand/Left hand	H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Insert	Shim	Screw	plus	Clamp	Pin	Screw	plus
Inch																		
DSKN R/L 124BKC3	.75	.75	1.000	4.50	1.25	-	.12	.30	-5.0	-5.0	SN..432	ISSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSKN R/L 164DKC3	1.00	1.00	1.250	6.00	1.25	-	.12	.12	-5.0	-5.0	SN..432	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSKN R/L 204DKC3	1.25	1.25	1.500	6.00	1.25	-	.12	.12	-5.0	-5.0	SN..432	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSKN R/L 206DKC4	1.25	1.25	1.500	6.00	1.50	-	.18	.12	-5.0	-5.0	SN..643	ISSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP
Metric																		
DSKN R/L 2020K12KC04	20	20	25,0	125	32,0	-	3,1	8,0	-5,0	-5,0	SN..120408	ISSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSKN R/L 2525M12KC04	25	25	32,0	150	32,0	-	3,1	4,0	-5,0	-5,0	SN..120408	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSKN R/L 3225P12KC04	32	25	32,0	170	32,0	-	3,1	-	-5,0	-5,0	SN..120408	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSKN R/L 3232P15KC06	32	32	40,0	170	32,0	-	3,8	-	-5,0	-5,0	SN..150612	ISSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DSKN R/L 3232P19KC06	32	32	40,0	170	38,0	-	4,6	-	-5,0	-5,0	SN..190612	ISSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP

DSRN-KC



Catalog number	H =																	
Right hand/Left hand	H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DSRN R/L 124BKC3	.75	.75	.880	4.50	1.25	.12	-	-	-5.0	-5.0	SN..432	ISSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSRN R/L 164DKC3	1.00	1.00	1.130	6.00	1.25	.12	-	-	-5.0	-5.0	SN..432	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSRN R/L 204DKC3	1.25	1.25	1.380	6.00	1.25	.12	-	-	-5.0	-5.0	SN..432	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSRN R/L 165DKC4	1.00	1.00	1.103	6.00	1.50	.15	-	-	-5.0	-5.0	SN..543	ISSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DSRN R/L 205DKC4	1.25	1.25	1.353	6.00	1.50	.15	-	-	-5.0	-5.0	SN..543	ISSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DSRN R/L 206DKC4	1.25	1.25	1.321	6.00	1.50	.18	-	-	-5.0	-5.0	SN..643	ISSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP
DSRN R/L 246DKC4	1.50	1.50	1.821	6.00	1.50	.18	-	-	-5.0	-5.0	SN..643	ISSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP
Metric																		
DSRN R/L 2020K12KC04	20	20	22,0	125	32,0	3,1	-	-	-5,0	-5,0	SN..120408	ISSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSRN R/L 2525M12KC04	25	25	27,0	150	32,0	3,1	-	-	-5,0	-5,0	SN..120408	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSRN R/L 3225P12KC04	25	32	27,0	170	32,0	3,1	-	-	-5,0	-5,0	SN..120408	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSRN R/L 3232P15KC06	32	32	35,0	170	38,0	3,8	-	-	-5,0	-5,0	SN..150612	ISSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DSRN R/L 3232P19KC06	32	32	35,0	170	42,0	4,6	-	-	-5,0	-5,0	SN..190612	ISSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP

Order example:
ANSI Right hand: DSKNR124BKC3
ISO Right hand: DSKNR2020K12KC04



ANSI Left hand: DSKNL124BKC3
ISO Left hand: DSKNL2020K12KC04

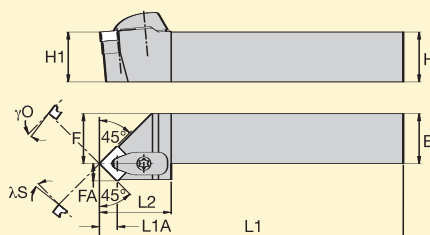


KENCLAMP Toolholders



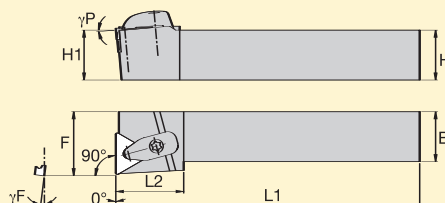
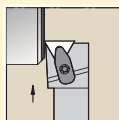
KENLOC Inserts

DSSN-KC



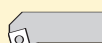
Catalog number	H =											Gage						
Right hand/Left hand	H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Insert	Shim	Shim	Torx	Clamp	Slotted	Clamp	Torx
													Screw	plus		Pin	Screw	plus
Inch																		
DSSN R/L 164DKC3	1.00	1.00	.912	6.00	1.50	.34	.33	-	-5.5	-8.4	SN..432	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
Metric																		
DSSN R/L 2020K12KC04	20	20	25,0	125	36,0	8,7	8,7	-	0,0	-8,0	SN..120408	ISSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSSN R/L 2525M12KC04	25	25	32,0	150	36,0	8,7	8,7	-	0,0	-8,0	SN..120408	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSSN R/L 3225P12KC04	32	25	32,0	170	35,4	8,7	8,7	-	0,0	-8,0	SN..120408	ISSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DSSN R/L 2525M15KC06	25	25	32,0	150	42,0	10,7	10,7	-	0,0	-8,0	SN..150612	ISSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DSSN R/L 3232P15KC06	32	32	40,0	170	40,3	10,7	10,7	-	0,0	-8,0	SN..150612	ISSN543	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DSSN R/L 3232P19KC06	32	32	40,0	170	44,0	10,7	10,7	-	0,0	-8,0	SN..190612	ISSN643	KMSP625IP	25 IP	CM210	SSP025016M	STCM425IP	25 IP

DTFN-KC

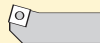


Catalog number	H =											Gage						
Right hand/Left hand	H1	B	F	L1	L2	FA	L1A	B3	γF°	γP°	Insert	Shim	Shim	Torx	Clamp	Slotted	Clamp	Torx
													Screw	plus		Pin	Screw	plus
Inch																		
DTFN R/L 123BKC3	.75	.75	1.000	4.50	1.25	-	-	-	-5.0	-5.0	TN..332	ITSN323	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTFN R/L 163DKC3	1.00	1.00	1.250	6.00	1.25	-	-	-	-5.0	-5.0	TN..332	ITSN323	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTFN R/L 164DKC3	1.00	1.00	1.250	6.00	1.38	-	-	-	-5.0	-5.0	TN..432	ITSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTFN R/L 165CKC4	1.00	1.00	1.250	5.00	1.50	-	-	-	-5.0	-5.0	TN..543	ITSN534	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DTFN R/L 205DKC4	1.25	1.25	1.500	6.00	1.50	-	-	-	-5.0	-5.0	TN..543	ITSN534	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
Metric																		
DTFN R/L 2020K16KC04	20	20	25,0	125	32,0	-	-	-	-5,0	-5,0	TN..160408	ITSN323	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTFN R/L 2525M16KC04	25	25	32,0	150	32,0	-	-	-	-5,0	-5,0	TN..160408	ITSN323	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTFN R/L 3225P16KC04	32	25	32,0	170	32,0	-	-	-	-5,0	-5,0	TN..160408	ITSN323	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTFN R/L 2525M22KC04	25	25	32,0	150	34,0	-	-	-	-5,0	-5,0	TN..220408	ITSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTFN R/L 3225P22KC04	32	25	32,0	170	34,0	-	-	-	-5,0	-5,0	TN..220408	ITSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTFN R/L 3232P27KC06	32	32	40,0	170	38,0	-	-	-	-5,0	-5,0	TN..270612	ITSN534	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP

Order example:
ANSI Right hand: **DSSNR164DKC3**
ISO Right hand: **DSSNR2020K12KC04**

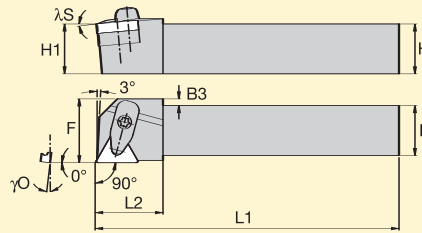
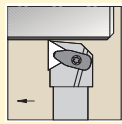


ANSI Left hand: **DSSNL164DKC3**
ISO Left hand: **DSSNL2020K12KC04**



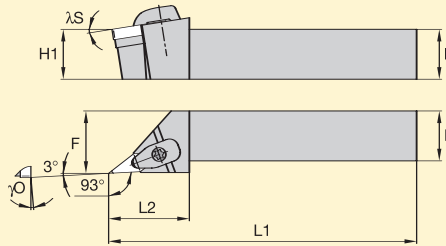
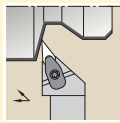


DTGN-KC



Catalog number Right hand/Left hand	H = H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DTGN R/L 123BKC3	.75	.75	1.000	4.50	1.12	-	-	.25	-5.0	-5.0	TN..332	ITSN323	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTGN R/L 163DKC3	1.00	1.00	1.250	6.00	1.12	-	-	-	-5.0	-5.0	TN..332	ITSN323	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTGN R/L 164DKC3	1.00	1.00	1.250	6.00	1.25	-	-	.09	-5.0	-5.0	TN..432	ITSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTGN R/L 165CKC4	1.00	1.00	1.250	5.00	1.50	-	-	.25	-5.0	-5.0	TN..543	ITSN534	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
DTGN R/L 205DKC4	1.25	1.25	1.500	6.00	1.50	-	-	-	-5.0	-5.0	TN..543	ITSN534	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP
Metric																		
DTGN R/L 2020K16KC04	20	20	25,0	125	25,0	-	-	6,5	-5,0	-5,0	TN..160408	ITSN323	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTGN R/L 2525M16KC04	25	25	32,0	150	25,0	-	-	-	-5,0	-5,0	TN..160408	ITSN323	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTGN R/L 3225P16KC04	32	25	32,0	170	25,0	-	-	-	-5,0	-5,0	TN..160408	ITSN323	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTGN R/L 2525M22KC04	25	25	32,0	150	32,0	-	-	3,0	-5,0	-5,0	TN..220408	ITSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTGN R/L 3225P22KC04	32	25	32,0	170	32,0	-	-	3,0	-5,0	-5,0	TN..220408	ITSN443	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP
DTGN R/L 3232P27KC06	32	32	40,0	170	32,0	-	-	-	-5,0	-5,0	TN..270612	ITSN534	KMSP515IP	15 IP	CM209	SSP025016M	STCM1115IP	15 IP

DVJN-KC



Catalog number Right hand/Left hand	H = H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DVJN R/L 123CKC3	.75	.75	1.000	5.00	1.44	-	-	-	-9.0	-5.0	VN..332	IVSN322	KMSP315IP	15 IP	CM215	SSP025016M	STCM1115IP	15 IP
DVJN R/L 163DKC3	1.00	1.00	1.250	6.00	1.44	-	-	-	-9.0	-5.0	VN..332	IVSN322	KMSP315IP	15 IP	CM215	SSP025016M	STCM1115IP	15 IP
DVJN R/L 853DKC3	1.25	1.00	1.250	6.00	1.44	-	-	-	-9.0	-5.0	VN..332	IVSN322	KMSP315IP	15 IP	CM215	SSP025016M	STCM1115IP	15 IP
DVJN R/L 164DKC3	1.00	1.00	1.250	6.00	2.00	-	-	-	-9.0	-5.0	VN..432	IVSN432	KMSP415IP	15 IP	CM235	SSP025016M	STCM1115IP	15 IP
DVJN R/L 854DKC3	1.25	1.00	1.250	6.00	2.00	-	-	-	-9.0	-5.0	VN..432	IVSN432	KMSP415IP	15 IP	CM235	SSP025016M	STCM1115IP	15 IP
Metric																		
DVJN R/L 2020K16KC04	20	20	25,0	125	46,0	-	-	-	-9,0	-5,0	VN..160408	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVJN R/L 2525M16KC04	25	25	32,0	150	46,0	-	-	-	-9,0	-5,0	VN..160408	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVJN R/L 3225P16KC04	32	25	32,0	170	46,0	-	-	-	-9,0	-5,0	VN..160408	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVJN R/L 2525M22KC04	25	25	32,0	150	55,0	-	-	-	-9,0	-5,0	VN..220408	IVSN432	KMSP415IP	15IP	CM235	SSP025016M	STCM1115IP	15IP
DVJN R/L 3225P22KC04	32	25	32,0	170	55,0	-	-	-	-9,0	-5,0	VN..220408	IVSN432	KMSP415IP	15IP	CM235	SSP025016M	STCM1115IP	15IP

Order example:

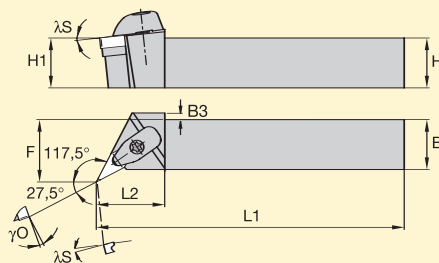
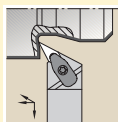
ANSI Right hand: DTG NR123BKC3
ISO Right hand: DTG NR2020K16KC04ANSI Left hand: DTG NL123BKC3
ISO Left hand: DTG NL2020K16KC04

KENCLAMP Toolholders



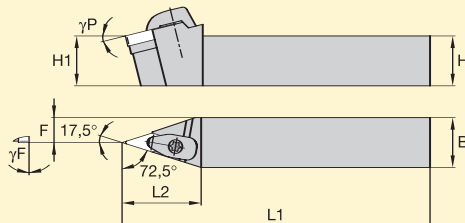
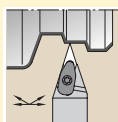
KENLOC Inserts

DVON-KC



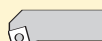
Catalog number	H =																	
Right hand/Left hand	H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DVON R/L 123CKC3	.75	.75	1.000	5.00	1.50	-	-	.25	-6.38	-6.38	VN..332	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVON R/L 163DKC3	1.00	1.00	1.250	6.00	1.47	-	-	-	-6.38	-6.38	VN..332	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVON R/L 853DKC3	1.25	1.00	1.250	6.00	1.47	-	-	-	-6.38	-6.38	VN..332	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
Metric																		
DVON R/L 2020K16KC04	20	20	27,0	125	38,0	-	-	5,0	-6,4	-6,4	VN..160408	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVON R/L 2525M16KC04	25	25	32,0	150	38,0	-	-	-	-6,4	-6,4	VN..160408	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVON R/L 3225P16KC04	32	25	32,0	170	38,0	-	-	-	-6,4	-6,4	VN..160408	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP

DVVN-KC



Catalog number	H =																	
Right hand/Left hand	H1	B	F	L1	L2	FA	L1A	B3	γF°	γP°	Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Inch																		
DVVNN123CKC3	.75	.75	.371	5.00	1.94	-	-	-	0.0	-14.0	VN..332	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVVNN163DKC3	1.00	1.00	.496	6.00	1.97	-	-	-	0.0	-14.0	VN..332	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVVNN853DKC3	1.25	1.00	.496	6.00	1.88	-	-	-	0.0	-14.0	VN..332	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVVNN164DKC3	1.00	1.00	.496	6.00	2.28	-	-	-	0.0	-14.0	VN..432	IVSN432	KMSP415IP	15IP	CM235	SSP025016M	STCM1115IP	15IP
DVVNN854DKC3	1.25	1.00	.496	6.00	2.28	-	-	-	0.0	-14.0	VN..432	IVSN432	KMSP415IP	15IP	CM235	SSP025016M	STCM1115IP	15IP
Metric																		
DVVNN2020K16KC04	20	20	9,5	125	48,0	-	-	-	0,0	-14,0	VN..160408	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVVNN2525M16KC04	25	25	12,0	150	48,0	-	-	-	0,0	-14,0	VN..160408	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVVNN3225P16KC04	32	25	12,0	170	48,0	-	-	-	0,0	-14,0	VN..160408	IVSN322	KMSP315IP	15IP	CM215	SSP025016M	STCM1115IP	15IP
DVVNN2525M22KC04	25	25	12,0	150	57,0	-	-	-	0,0	-14,0	VN..220408	IVSN432	KMSP415IP	15IP	CM235	SSP025016M	STCM1115IP	15IP
DVVNN3225P22KC04	32	25	12,0	170	57,0	-	-	-	0,0	-14,0	VN..220408	IVSN432	KMSP415IP	15IP	CM235	SSP025016M	STCM1115IP	15IP

Order example:
ANSI Right hand: DVONR123CKC3
ISO Right hand: DVONR2020K16KC04

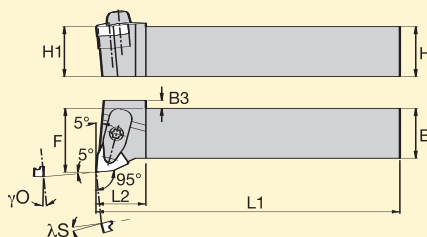
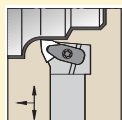


ANSI Left hand: DVONL123CKC3
ISO Left hand: DVONL2020K16KC04





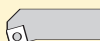
DWLN-KC



																			
Catalog number	H =										Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus	
Right hand/Left hand	H1	B	F	L1	L2	FA	L1A	B3	λS°	γO°									
Inch																			
DWLN R/L 123BKC3	.75	.75	1.000	4.50	1.00	-	-	.28	-5.0	-5.0	WN..332	IWSN322	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 163CKC3	1.00	1.00	1.250	5.00	1.00	-	-	.06	-5.0	-5.0	WN..332	IWSN322	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 163DKC3	1.00	1.00	1.250	6.00	1.00	-	-	.06	-5.0	-5.0	WN..332	IWSN322	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 164CKC3	1.00	1.00	1.250	5.00	1.00	-	-	-	-5.0	-5.0	WN..432	IWSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 164DKC3	1.00	1.00	1.250	6.00	1.00	-	-	-	-5.0	-5.0	WN..432	IWSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 204DKC3	1.25	1.25	1.500	6.00	1.00	-	-	-	-5.0	-5.0	WN..432	IWSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
Metric																			
DWLN R/L 2020K06KC04	20	20	25,0	125	25,0	-	-	7,5	-5,0	-5,0	WN..060408	IWSN322	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 2525M06KC04	25	25	32,0	150	25,0	-	-	-	-5,0	-5,0	WN..060408	IWSN322	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 3225P06KC04	32	25	32,0	170	25,0	-	-	-	-5,0	-5,0	WN..060408	IWSN322	KMSP315IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 2020K08KC04	20	20	25,0	125	25,0	-	-	9,5	-5,0	-5,0	WN..080408	IWSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 2525M08KC04	25	25	32,0	150	25,0	-	-	4,0	-5,0	-5,0	WN..080408	IWSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 3225P08KC04	32	25	32,0	170	25,0	-	-	4,0	-5,0	-5,0	WN..080408	IWSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	
DWLN R/L 3232P08KC04	32	32	40,0	170	25,0	-	-	-	-5,0	-5,0	WN..080408	IWSN433	KMSP415IP	15 IP	CM234	SSP025016M	STCM1115IP	15 IP	

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
ANSI Right hand: DWLNR123BKC3
ISO Right hand: DWLNR2020K06KC04



ANSI Left hand: DWLNL123BKC3
ISO Left hand: DWLNL2020K06KC04

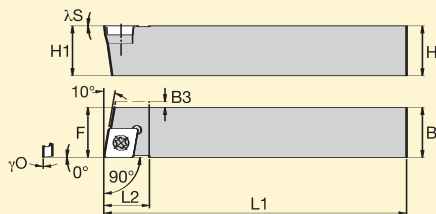
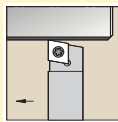


SCREW-ON Toolholders

SCREW-ON Inserts

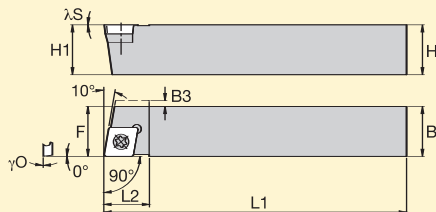
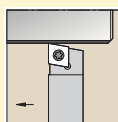


SCAC

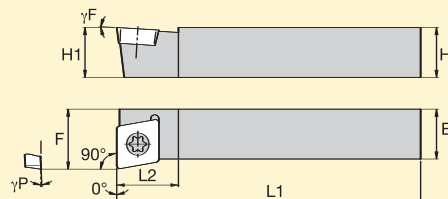
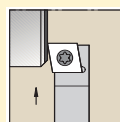


																		
Catalog number	H =												Gage Insert	Shim	Shim Screw	Hex (mm)	Insert Screw	Torx
Right hand/Left hand	H1	B	F	L1	L2	CD	FA	L1A	B3	λS°	γO°							
Inch																		
SCAC R/L 062D	.375	.375	.375	6.00	.44	-	-	-	-	0.0	0.0	CC..2151	-	-	-	MS1153	T7	
SCAC R/L 083D	.500	.500	.500	6.00	.62	-	-	-	-	0.0	0.0	CC..3252	-	-	-	MS1155	T15	
SCAC R/L 523Z	.500	.625	.625	3.25	.62	-	-	-	-	0.0	0.0	CC..3252	-	-	-	MS1155	T15	
SCAC R/L 103B	.625	.625	.625	4.50	.62	-	-	-	-	0.0	0.0	CC..3252	SKCP343	SRS3	3,5	MS1156	T15	
Metric																		
SCAC R/L 1010M06Q	10	10	10,0	150	11,0	-	-	-	-	0,0	0,0	CC..060204	-	-	-	MS1153	T7	
SCAC R/L 1212M06Q	12	12	12,0	150	11,0	-	-	-	-	0,0	0,0	CC..060204	-	-	-	MS1153	T7	
SCAC R/L 1216F09Q	12	16	16,0	82	16,0	-	-	-	-	0,0	0,0	CC..09T308	-	-	-	MS1155	T15	
SCAC R/L 1616K09Q	16	16	16,0	125	16,0	-	-	-	-	0,0	0,0	CC..09T308	SKCP343	SRS3	3,5	MS1156	T15	

SCAP



SCFP



																		
Catalog number	H =												Gage Insert	Shim	Shim Screw	Hex (mm)	Insert Screw	Torx
Right hand/Left hand	H1	B	F	L1	L2	CD	FA	L1A	B3	λS°	γO°							
Inch																		
SCAP R/L 0452D	.281	.281	.281	6.00	.44	-	-	-	.09	3.5	3.5		CP.2151	-	-	-	MS1153	T7
SCAP R/L 052D	.313	.313	.312	6.00	.44	-	-	-	.06	3.5	3.5		CP.2151	-	-	-	MS1153	T7
SCAP R/L 062D	.375	.375	.375	6.00	.44	-	-	-	-	3.5	3.5		CP.2151	-	-	-	MS1153	T7
SCAP R/L 083D	.500	.500	.500	6.00	.62	-	-	-	-	4.0	3.0		CP.3252	-	-	-	MS1027	T9
												γF°	γP°					
Inch																		
SCFP R/L 062*	.375	.375	.500	2.50	.44	-	-	-	-	3.5	3.5		CP.2151*	-	-	-	MS1153	T7

*NOTE: ANSI/ISO compatible 60° countersunk hole insert. This tool will also accept CPMT/CPGM/CPGT/CPGW-21.5_ inserts.

Order example:
ANSI Right hand: SCACR062D
ISO Right hand: SCACR1010M06Q

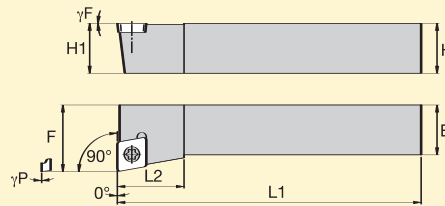


ANSI Left hand: SCACL062D
ISO Left hand: SCACL1010M06Q



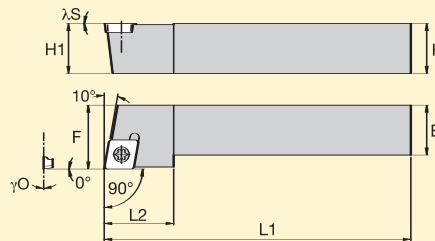
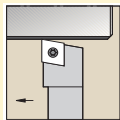


SCFC



Catalog number Right hand/Left hand	H = H1	B	F	L1	L2	CD	FA	L1A	B3	γF°	γP°	Gage Insert	Shim	Shim Screw	Hex (mm)	Insert Screw	Torx
Inch																	
SCFC R/L 062	.375	.375	.500	2.50	.50	-	-	-	-	0.0	0.0	CC..2151	-	-	-	MS1153	T7
SCFC R/L 082	.500	.500	.625	3.50	.50	-	-	-	-	0.0	0.0	CC..2151	-	-	-	MS1153	T7
SCFC R/L 102	.625	.625	.750	4.00	.50	-	-	-	-	0.0	0.0	CC..2151	-	-	-	MS1153	T7
SCFC R/L 103	.625	.625	.750	4.00	.62	-	-	-	-	0.0	0.0	CC..3252	SKCP343	SRS3	3,5	MS1156	T15
SCFC R/L 123	.750	.750	1.000	4.50	.62	-	-	-	-	0.0	0.0	CC..3252	SKCP343	SRS3	3,5	MS1156	T15
SCFC R/L 163	1.000	1.000	1.250	6.00	.62	-	-	-	-	0.0	0.0	CC..3252	SKCP343	SRS3	3,5	MS1156	T15
Metric																	
SCFC R/L 1010M06	10	10	12,0	150	11,0	-	-	-	-	0,0	0,0	CC..060204	-	-	-	MS1153	T7
SCFC R/L 1212N09	12	12	16,0	160	16,0	-	-	-	-	0,0	0,0	CC..09T308	-	-	-	MS1155	T15

SCGC



Catalog number Right hand/Left hand	H = H1	B	F	L1	L2	CD	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Hex (mm)	Insert Screw	Torx
Inch																	
SCGC R/L 062	.375	.375	.500	2.50	.50	-	-	-	-	0.0	0.0	CC..2151	-	-	-	MS1153	T7
SCGC R/L 082	.500	.500	.625	3.50	.50	-	-	-	-	0.0	0.0	CC..2151	-	-	-	MS1153	T7
SCGC R/L 102	.625	.625	.750	4.00	.50	-	-	-	-	0.0	0.0	CC..2151	-	-	-	MS1153	T7
SCGC R/L 103	.625	.625	.750	4.00	.62	-	-	-	-	0.0	0.0	CC..3252	SKCP343	SRS3	3,5	MS1156	T15
SCGC R/L 123	.750	.750	1.000	4.50	.62	-	-	-	-	0.0	0.0	CC..3252	SKCP343	SRS3	3,5	MS1156	T15
SCGC R/L 163	1.000	1.000	1.250	6.00	.62	-	-	-	-	0.0	0.0	CC..3252	SKCP343	SRS3	3,5	MS1156	T15
Metric																	
SCGC R/L 0808L06	8	8	10,0	140	11,0	-	-	-	-	0,0	0,0	CC..060204	-	-	-	MS1153	T7
SCGC R/L 1010M06	10	10	12,0	150	11,0	-	-	-	-	0,0	0,0	CC..060204	-	-	-	MS1153	T7
SCGC R/L 1212N09	12	12	16,0	160	16,0	-	-	-	-	0,0	0,0	CC..09T308	-	-	-	MS1155	T15

Order example:
ANSI Right hand: SCFCR062
ISO Right hand: SCFCR1010M06



ANSI Left hand: SCFCL062
ISO Left hand: SCFCL1010M06

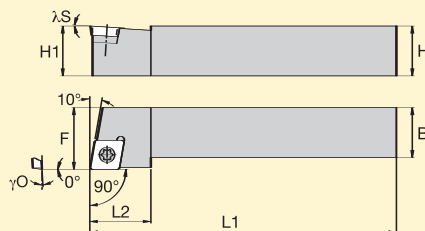
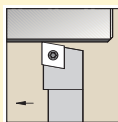


SCREW-ON Toolholders

SCREW-ON Inserts



SCGP



Catalog number
Right hand/Left hand

H =

H1

B

F

L1

L2

CD

FA

L1A

B3

λS°

γO°

Gage
Insert

Shim

Shim
Screw

Hex
(mm)

Insert
Screw

Torx

Inch

SCGP R/L 062*

.375

.375

.500

2.50

.44

-

-

-

-

3.5

3.5

CP.2151*

-

-

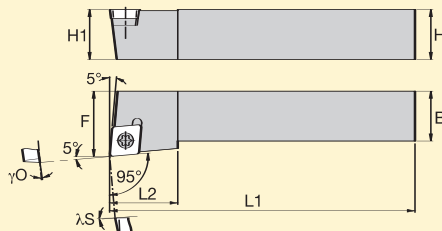
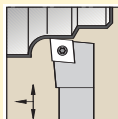
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MS1153

T7

*NOTE: ANSI/ISO compatible 60° countersunk hole insert. This tool will also accept CPMT/CPGM/CPGT/CPGW-21.5_ inserts.

SCLC



Catalog number
Right hand/Left hand

H =

H1

B

F

L1

L2

CD

FA

L1A

B3

λS°

γO°

Gage
Insert

Shim

Shim
Screw

Hex
(mm)

Insert
Screw

Torx

Inch

SCLC R/L 062

.375

.375

.500

2.50

.50

-

-

-

-

0.0

0.0

CC..2151

-

-

-

MS1153

T7

SCLC R/L 082

.500

.500

.625

3.50

.50

-

-

-

-

0.0

0.0

CC..2151

-

-

-

MS1153

T7

SCLC R/L 103

.625

.625

.750

4.00

.62

-

-

-

-

0.0

0.0

CC..3252

SKCP343

SR53

3,5

MS1156

T15

SCLC R/L 123

.750

.750

1.000

4.50

.62

-

-

-

-

0.0

0.0

CC..3252

SKCP343

SR53

3,5

MS1156

T15

SCLC R/L 163

1.000

1.000

1.250

6.00

.62

-

-

-

-

0.0

0.0

CC..3252

SKCP343

SR53

3,5

MS1156

T15

SCLC R/L 164D

1.000

1.000

1.250

6.00

.75

-

-

-

-

0.0

0.0

CC..432

SKCP453

SR54

4,0

MS1158

T15

SCLC R/L 204D

1.250

1.250

1.500

6.00

.75

-

-

-

-

0.0

0.0

CC..432

SKCP453

SR54

4,0

MS1158

T15

Metric

SCLC R/L 1010M06

10

10

12,0

150

12,0

-

-

-

-

0,0

0,0

CC..060204

-

-

-

MS1153

T7

SCLC R/L 1212N09

12

12

16,0

160

16,0

-

-

-

-

0,0

0,0

CC..09T308

-

-

-

MS1155

T15

SCLC R/L 1616H09

16

16

20,0

100

16,0

-

-

-

-

0,0

0,0

CC..09T308

SKCP343

SR53

3,5

MS1156

T15

SCLC R/L 2020K09

20

20

25,0

125

16,0

-

-

-

-

0,0

0,0

CC..09T308

SKCP343

SR53

3,5

MS1156

T15

SCLC R/L 2525M09

25

25

32,0

150

16,0

-

-

-

-

0,0

0,0

CC..09T308

SKCP343

SR53

3,5

MS1156

T15

SCLC R/L 2020K12

20

20

25,0

125

20,0

-

-

-

-

0,0

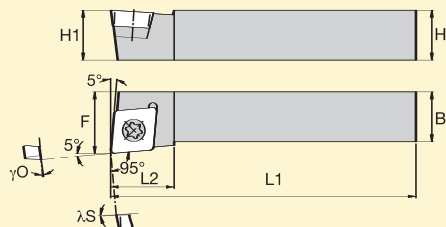
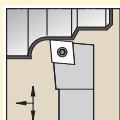
0,0

CC..120408

SKCP453

SR54

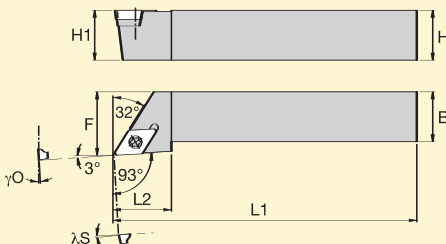
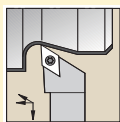
SCLP



																				
Catalog number	H =												Gage	Shim	Shim	Hex	Insert	Torx		
Right hand/Left hand	H1	B	F	L1	L2	CD	FA	L1A	B3	λS°	γO°	Insert	Shim	Screw	(mm)	Screw				
Inch																				
SCLP R/L 062*	.375	.375	.500	2.50	.44	-	-	-	-	3.5	3.5	CP.2151*	-	-	-	MS1153	T7			
Metric																				
SCLP R/L 0808M06	8	8	9,0	150	11,4	-	-	-	-	0,0	0,0	CP.060203	-	-	-	MS1153	T7			
SCLP R/L 1010M06	10	10	11,0	150	11,4	-	-	-	-	0,0	0,0	CP.060203	-	-	-	MS1153	T7			
SCLP R/L 1212M06	12	12	13,0	150	11,4	-	-	-	-	0,0	0,0	CP.060203	-	-	-	MS1153	T7			

*NOTE: ANSI/ISO compatible 60° countersunk hole insert. This tool will also accept CPMT/CPGM/CPGT/CPGW-21.5 inserts.

SDJC



																		
Catalog number	H =												Gage Insert	Shim	Shim Screw	Hex (mm)	Insert Screw	Torx
Right hand/Left hand	H1	B	F	L1	L2	CD	FA	L1A	B3	λS°	γO°							
Inch																		
SDJC R/L 062	.375	.375	.500	2.50	.62	-	-	-	-	0.0	0.0		DC..2151	-	-	-	MS1153	T7
SDJC R/L 082	.500	.500	.625	3.50	.62	-	-	-	-	0.0	0.0		DC..2151	-	-	-	MS1153	T7
SDJC R/L 102	.625	.625	.750	4.00	.62	-	-	-	-	0.0	0.0		DC..2151	-	-	-	MS1153	T7
SDJC R/L 083	.500	.500	.625	3.50	.88	-	-	-	-	0.0	0.0		DC..3252	-	-	-	MS1155	T15
SDJC R/L 103	.625	.625	.750	4.00	.88	-	-	-	-	0.0	0.0		DC..3252	SKDP343	SRS3	3,5	MS1156	T15
SDJC R/L 123	.750	.750	1.000	4.50	.88	-	-	-	-	0.0	0.0		DC..3252	SKDP343	SRS3	3,5	MS1156	T15
SDJC R/L 163	1.000	1.000	1.250	6.00	.88	-	-	-	-	0.0	0.0		DC..3252	SKDP343	SRS3	3,5	MS1156	T15
Metric																		
SDJC R/L 1010M07	10	10	12,0	150	16,0	-	-	-	-	0,0	0,0		DC..070204	-	-	-	MS1153	T7
SDJC R/L 1212N07	12	12	16,0	160	16,0	-	-	-	-	0,0	0,0		DC..070204	-	-	-	MS1153	T7
SDJC R/L 1616H07	16	16	20,0	100	16,0	-	-	-	-	0,0	0,0		DC..070204	-	-	-	MS1153	T7
SDJC R/L 2020K07	20	20	25,0	125	16,0	-	-	-	-	0,0	0,0		DC..070204	-	-	-	MS1153	T7
SDJC R/L 1212N11	12	12	16,0	160	22,0	-	-	-	-	0,0	0,0		DC..11T308	-	-	-	MS1155	T15
SDJC R/L 1616H11	16	16	20,0	100	22,0	-	-	-	-	0,0	0,0		DC..11T308	SKDP343	SRS3	3,5	MS1156	T15
SDJC R/L 2020K11	20	20	25,0	125	22,0	-	-	-	-	0,0	0,0		DC..11T308	SKDP343	SRS3	3,5	MS1156	T15
SDJC R/L 2525M11	25	25	32,0	150	22,0	-	-	-	-	0,0	0,0		DC..11T308	SKDP343	SRS3	3,5	MS1156	T15
SDJC R/L 2020K15	20	20	25,0	125	32,0	-	-	-	-	0,0	0,0		DC..150408	SKDP453	SRS4	4,0	MS1158	T15
SDJC R/L 2525M15	25	25	32,0	150	32,0	-	-	-	-	0,0	0,0		DC..150408	SKDP453	SRS4	4,0	MS1158	T15

Order example:
ANSI Right hand: **SCLPR062**
ISO Right hand: **SCLPR0808M06**



ANSI Left hand: **SCLPL062**
ISO Left hand: **SCLPL0808M06**

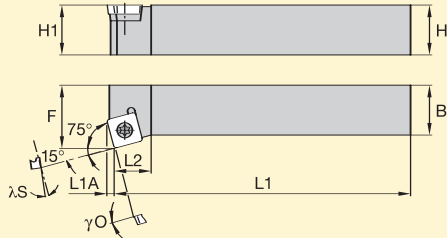
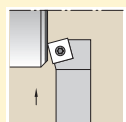


SCREW-ON Toolholders

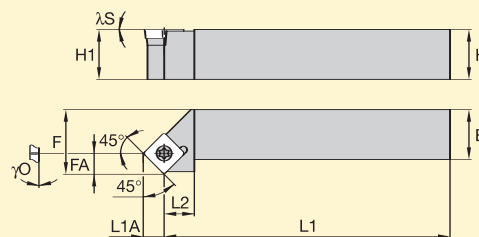
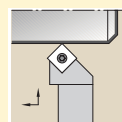
SCREW-ON Inserts



SSKC

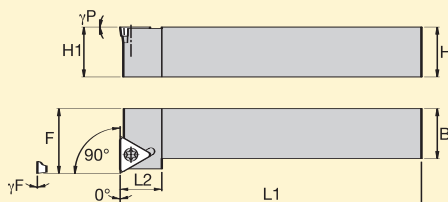
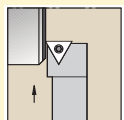


SSSC



Catalog number	H =																		
Right hand/Left hand	H1	B	F	L1	L2	FA	L1A	B3	CD	λS°	γO°	Gage Insert	Shim	Shim Screw	Hex (mm)	Insert Screw	Torx		
Metric																			
SSKC R/L 1212N09	12	12	16,0	160	16,0	-	2,2	-	-	0,0	0,0	SC..09T308	-	-	-	MS1155	T15		
SSKCR1616H09	16	16	20,0	100	16,0	-	2,2	-	-	0,0	0,0	SC..09T308	SKSP343	SRS3	3,5	MS1156	T15		
SSKC R/L 2020K12	20	20	25,0	125	22,0	-	3,1	-	-	0,0	0,0	SC..120408	SKSP453	SRS4	4,0	MS1158	T15		
SSKC R/L 2525M12	25	25	32,0	150	22,0	-	3,1	-	-	0,0	0,0	SC..120408	SKSP453	SRS4	4,0	MS1158	T15		
Metric																			
SSSC R/L 1212N09	12	12	16,0	160	18,0	6,1	6,1	-	-	0,0	0,0	SC..09T308	-	-	-	MS1155	T15		
SSSC R/L 1616H09	16	16	20,0	100	18,0	6,1	6,1	-	-	0,0	0,0	SC..09T308	SKSP343	SRS3	3,5	MS1156	T15		
SSSC R/L 1616H12	16	16	20,0	100	25,0	8,3	8,3	-	-	0,0	0,0	SC..120408	SKSP453	SRS4	4,0	MS1158	T15		
SSSC R/L 2020K12	20	20	25,0	125	25,0	8,3	8,3	-	-	0,0	0,0	SC..120408	SKSP453	SRS4	4,0	MS1158	T15		
SSSC R/L 2525M12	25	25	32,0	150	25,0	8,3	8,3	-	-	0,0	0,0	SC..120408	SKSP453	SRS4	4,0	MS1158	T15		

STFC



Catalog number	H =																		
Right hand/Left hand	H1	B	F	L1	L2	CD	FA	L1A	B3	γF°	γP°	Gage Insert	Shim	Shim Screw	Hex (mm)	Insert Screw	Torx		
Inch																			
STFC R/L 062	.375	.375	.500	2.50	.62	-	-	-	-	0.0	0.0	TC..2151	-	-	-	MS1153	T7		
STFC R/L 082	.500	.500	.625	3.50	.62	-	-	-	-	0.0	0.0	TC..2151	-	-	-	MS1153	T7		
STFC R/L 102	.625	.625	.750	4.00	.62	-	-	-	-	0.0	0.0	TC..2151	-	-	-	MS1153	T7		
STFC R/L 103	.625	.625	.750	4.00	.75	-	-	-	-	0.0	0.0	TC..3252	SKTP343	SRS3	3,5	MS1156	T15		
STFC R/L 123	.750	.750	1.000	4.50	.75	-	-	-	-	0.0	0.0	TC..3252	SKTP343	SRS3	3,5	MS1156	T15		
STFC R/L 163	1.000	1.000	1.250	6.00	.75	-	-	-	-	0.0	0.0	TC..3252	SKTP343	SRS3	3,5	MS1156	T15		
Metric																			
STFC R/L 1010M11	10	10	12,0	150	13,0	-	-	-	-	0,0	0,0	TC..110204	-	-	-	MS1153	T7		
STFC R/L 1212N11	12	12	16,0	160	13,0	-	-	-	-	0,0	0,0	TC..110204	-	-	-	MS1153	T7		
STFC R/L 1616H11	16	16	20,0	100	16,0	-	-	-	-	0,0	0,0	TC..110204	-	-	-	MS1153	T7		
STFC R/L 1616H16	16	16	20,0	100	20,0	-	-	-	-	0,0	0,0	TC..16T308	SKTP343	SRS3	3,5	MS1156	T15		
STFC R/L 2020K16	20	20	25,0	125	20,0	-	-	-	-	0,0	0,0	TC..16T308	SKTP343	SRS3	3,5	MS1156	T15		
STFC R/L 2525M16	25	25	32,0	150	20,0	-	-	-	-	0,0	0,0	TC..16T308	SKTP343	SRS3	3,5	MS1156	T15		

Order example:
ANSI Right hand: **STFCR062**
ISO Right hand: **STFCR1010M11**

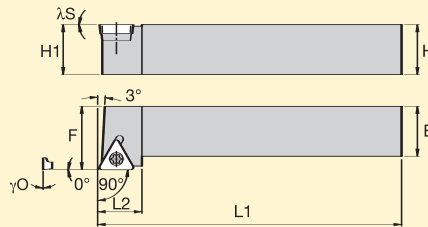
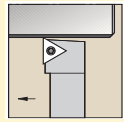


ANSI Left hand: **STFCL062**
ISO Left hand: **STFCL1010M11**



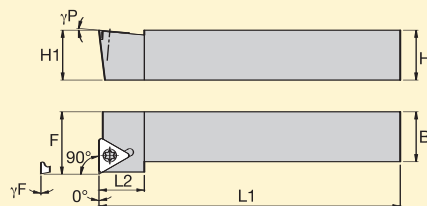
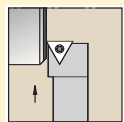


STGC

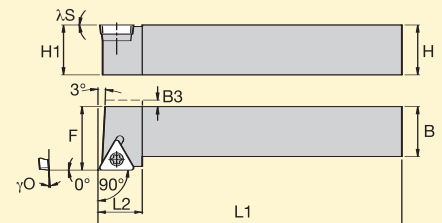
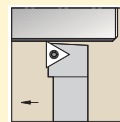


Catalog number Right hand/Left hand	H = H1	B	F	L1	L2	CD	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Hex (mm)	Insert Screw	Torx
Inch																	
STGC R/L 062	.375	.375	.500	2.50	.62	-	-	-	-	0.0	0.0	TC..2151	-	-	-	MS1153	T7
STGC R/L 082	.500	.500	.625	3.50	.62	-	-	-	-	0.0	0.0	TC..2151	-	-	-	MS1153	T7
STGC R/L 102	.625	.625	.750	4.00	.62	-	-	-	-	0.0	0.0	TC..2151	-	-	-	MS1153	T7
STGC R/L 103	.625	.625	.750	4.00	.75	-	-	-	-	0.0	0.0	TC..3252	SKTP343	SRS3	3,5	MS1156	T15
STGC R/L 123	.750	.750	1.000	4.50	.75	-	-	-	-	0.0	0.0	TC..3252	SKTP343	SRS3	3,5	MS1156	T15
STGC R/L 163	1.000	1.000	1.250	6.00	.75	-	-	-	-	0.0	0.0	TC..3252	SKTP343	SRS3	3,5	MS1156	T15
Metric																	
STGC R/L 1010M11	10	10	12,0	150	16,0	-	-	-	-	0,0	0,0	TC..110204	-	-	-	MS1153	T7
STGC R/L 1212N11	12	12	16,0	160	16,0	-	-	-	-	0,0	0,0	TC..110204	-	-	-	MS1153	T7
STGC R/L 1616H11	16	16	20,0	100	20,0	-	-	-	-	0,0	0,0	TC..110204	-	-	-	MS1153	T7
STGC R/L 1616H16	16	16	20,0	100	20,0	-	-	-	-	0,0	0,0	TC..16T308	SKTP343	SRS3	3,5	MS1156	T15
STGC R/L 2020K16	20	20	25,0	125	20,0	-	-	-	-	0,0	0,0	TC..16T308	SKTP343	SRS3	3,5	MS1156	T15
STGC R/L 2525M16	25	25	32,0	150	20,0	-	-	-	-	0,0	0,0	TC..16T308	SKTP343	SRS3	3,5	MS1156	T15

STFP



STGP



																		
Catalog number	H =											Gage Insert	Shim	Shim Screw	Hex (mm)	Insert Screw	Torx	
Right hand/Left hand	H1	B	F	L1	L2	CD	FA	L1A	B3	γF°	γP°							
Inch																		
STFP R/L 062*	.375	.375	.500	2.50	.44	-	-	-	-	0.0	5.0	TP.2151*	-	-	-	MS1153	T7	
STFP R/L 082V*	.500	.500	.625	3.50	.44	-	-	-	-	0.0	5.0	TP.2151*	-	-	-	MS1153	T7	
												λS°	γO°					
Inch																		
STGP R/L 0518*	.313	.313	.375	2.50	.50	-	-	-	.09	0.0	5.0	TP.18151*	-	-	-	MS1152	T7	
STGP R/L 062*	.375	.375	.500	2.50	.56	-	-	-	-	0.0	5.0	TP.2151*	-	-	-	MS1153	T7	
STGP R/L 082V*	.500	.500	.625	3.50	.56	-	-	-	-	0.0	5.0	TP.2151*	-	-	-	MS1153	T7	

*NOTE: ANSI/ISO compatible 60° countersunk hole insert. This tool will also accept TPMT/TPGM/TPGT/TPGW-21.5_ inserts.

Order example:
ANSI Right hand: STGCR062
ISO Right hand: STGCR1010M11



ANSI Left hand: STGCL062
ISO Left hand: STGCL1010M11

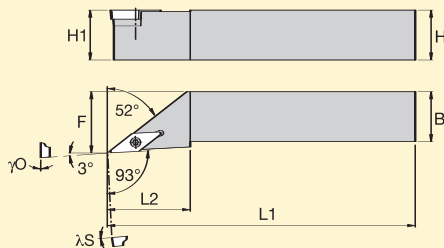
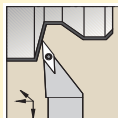


SCREW-ON Toolholders



SCREW-ON Inserts

SVJB



Catalog number Right hand/Left hand	H = H1	B	F	L1	L2	CD	FA	L1A	B3	λS°	γO°	Gage Insert	Shim	Shim Screw	Hex (mm)	Insert Screw	Torx
Inch																	
SVJB R/L 062	.375	.375	.500	2.50	.88	-	-	-	-	0.0	0.0	VB..221	-	-	-	MS1153	T7
SVJB R/L 082	.500	.500	.625	3.50	.88	-	-	-	-	0.0	0.0	VB..221	-	-	-	MS1153	T7
SVJB R/L 102	.625	.625	.750	4.00	.88	-	-	-	-	0.0	0.0	VB..221	-	-	-	MS1153	T7
SVJB R/L 123	.750	.750	1.000	4.50	1.38	-	-	-	-	0.0	0.0	VB..332	SKVN343	SRS3	3,5	MS1156	T15
SVJB R/L 163	1.000	1.000	1.250	6.00	1.38	-	-	-	-	0.0	0.0	VB..332	SKVN343	SRS3	3,5	MS1156	T15
Metric																	
SVJB R/L 1212N11	12	12	16,0	160	22,0	-	-	-	-	0,0	0,0	VB..110304	-	-	-	MS1153	T7
SVJB R/L 1616H11	16	16	20,0	100	22,0	-	-	-	-	0,0	0,0	VB..110304	-	-	-	MS1153	T7
SVJB R/L 2020K11	20	20	25,0	125	26,0	-	-	-	-	0,0	0,0	VB..110304	-	-	-	MS1153	T7
SVJB R/L 1616H16	16	16	20,0	100	35,0	-	-	-	-	0,0	0,0	VB..160408	SKVN343	SRS3	3,5	MS1156	T15
SVJB R/L 2020K16	20	20	25,0	125	35,0	-	-	-	-	0,0	0,0	VB..160408	SKVN343	SRS3	3,5	MS1156	T15
SVJB R/L 2525M16	25	25	32,0	150	35,0	-	-	-	-	0,0	0,0	VB..160408	SKVN343	SRS3	3,5	MS1156	T15
SVJB R/L 3225P16	32	25	32,0	170	35,0	-	-	-	-	0,0	0,0	VB..160408	SKVN343	SRS3	3,5	MS1156	T15



Order example:
ANSI Right hand: **SVJBR062**
ISO Right hand: **SVJBR1212N11**



ANSI Left hand: **SVJBL062**
ISO Left hand: **SVJBL1212N11**



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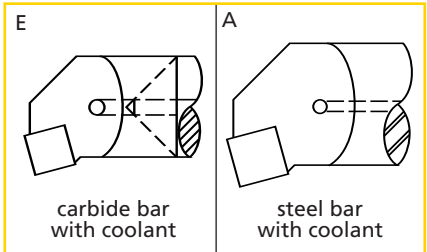
order number 3050

HOLEMAKING TOOLING

order number 3070

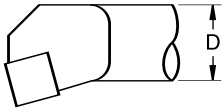
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Boring Bar Identification System



Inch:
A two-digit number that indicates the bar diameter in 1/16-inch increments.

Metric:
A two-digit number which indicates the bar diameter in mm. If the dimension for the diameter is represented by a one-digit number, a 0 (zero) will be used in front of it. Example: 8 mm = 08



1. Bar Type

Example:

2. Bar Diameter

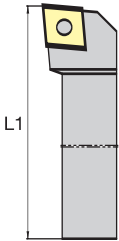
A 32

3. Bar Length**

Inch

3	-	F
3.5	-	G
4	-	H
4.5	-	J
5	-	K
5.5	-	L
6	-	M
6.5	-	N
6.75	-	P
7	-	Q
8	-	R
10	-	S
12	-	T
14	-	U
16	-	V
18	-	W
20	-	Y

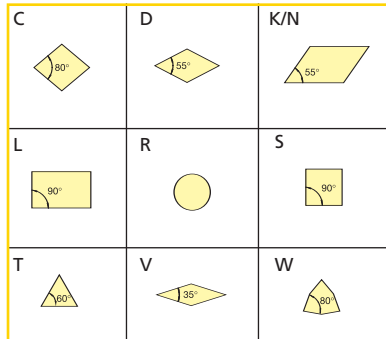
** Used only when more than one length is available or a special length is required.



Metric

L1	ISO
32	A
40	B
50	C
60	D
70	E
80	F
90	G
100	H
110	J
125	K
140	L
150	M
160	N
170	P
180	Q
200	R
250	S
300	T
350	U
400	V
450	W
500	Y
Special length	X

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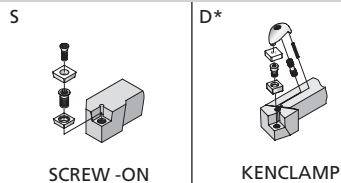


5. Insert Shape

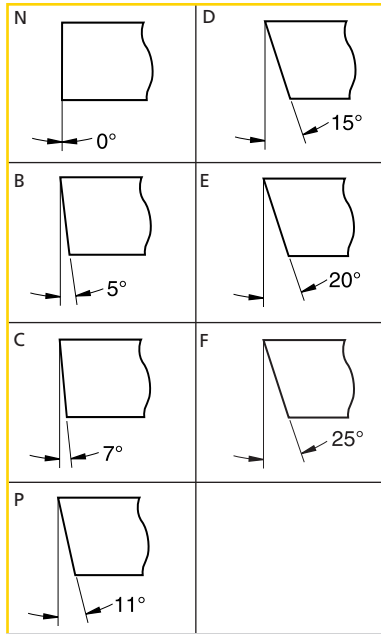
D

S

4. Insert Holding Method



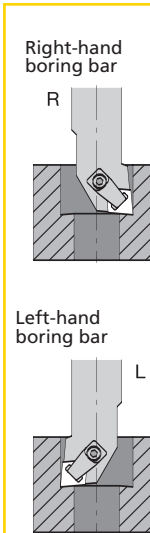
*Kennametal standard only



7. Insert Clearance Angle

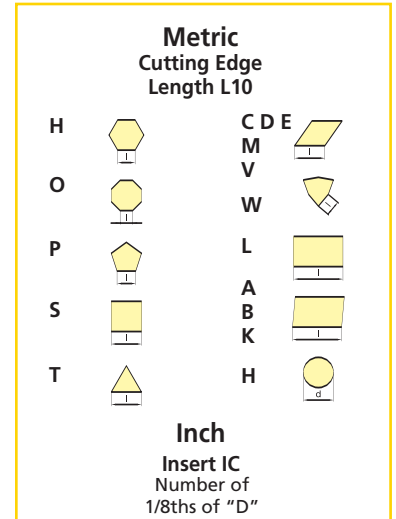
K

N



8. Hand of Tool

R

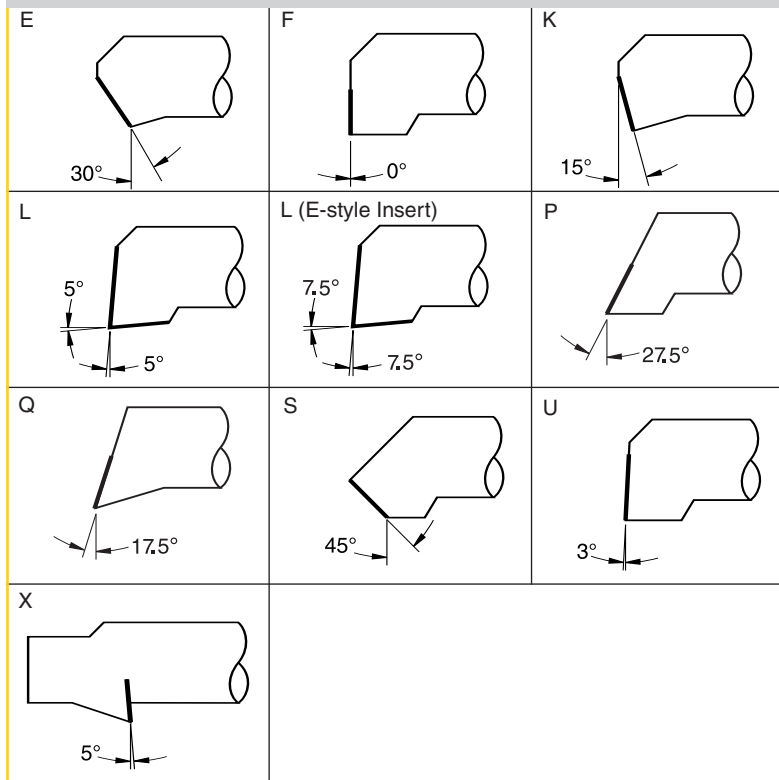


9. Insert Size

4

KC

6. Bar Style or Lead Angle



10. Additional Information

KC - KENCLAMP + insert thickness

Inch:
3 - .188
4 - .250

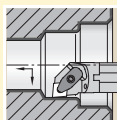
Metric:
04 - 4,76 mm
06 - 6,35 mm

KENCLAMP Boring Bars

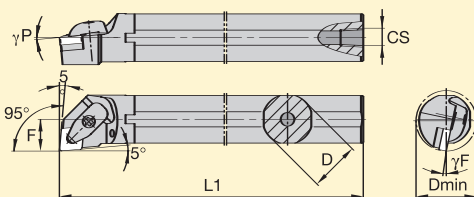
KENLOC Inserts



A-DCLN-KC

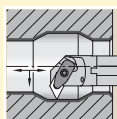


Steel shank with through coolant

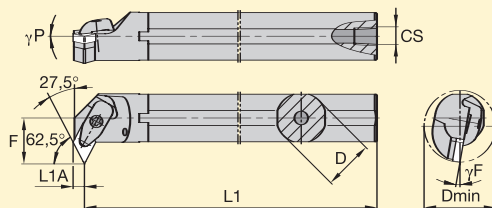


Catalog number Right hand/Left hand	D	Dmin	F	L1	L2	L1A	CS	γF°	γP°	Gage Insert	Shim	Shim Screw	Torx Plus	Clamp	Slotted Pin	Clamp Screw	Torx Plus
Inch																	
A16TDCLN R/L 4KC3	1.000	1.200	.640	12.00	-	-	1/4-18 NPT	-12.0	-5.0	CN..432	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A20UDCLN R/L 4KC3	1.250	1.470	.765	14.00	-	-	1/4-18 NPT	-12.0	-5.0	CN..432	ICSN433	KMSP4S15IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A24UDCLN R/L 4KC3	1.500	1.760	.890	14.00	-	-	1/4-18 NPT	-12.0	-5.0	CN..432	ICSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A24UDCLN R/L 5KC4	1.500	1.760	.890	14.00	-	-	1/4-18 NPT	-14.0	-5.0	CN..543	ICSN533	KMSP5S15IP	15IP	CM209	SSP025018M	STCM1115IP	15IP
A28UDCLN R/L 4KC3	1.750	2.010	1.015	14.00	-	-	1/4-18 NPT	-12.0	-5.0	CN..432	ICSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A32VDCLN R/L 4KC3	2.000	2.400	1.281	16.00	-	-	1/4-18 NPT	-12.0	-5.0	CN..432	ICSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A32VDCLN R/L 5KC4	2.000	2.400	1.281	16.00	-	-	1/4-18 NPT	-12.0	-5.0	CN..543	ICSN533	KMSP515IP	15IP	CM209	SSP025018M	STCM1115IP	15IP
A32VDCLN R/L 6KC4	2.000	2.400	1.281	16.00	-	-	1/4-18 NPT	-12.0	-5.0	CN..643	ICSN633	KMSP625IP	25IP	CM210	SSP025018M	STCM425IP	25IP
A40VDCLN R/L 4KC3	2.500	3.030	1.531	16.00	-	-	1/4-18 NPT	-8.0	-5.0	CN..432	ICSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40VDCLN R/L 6KC4	2.500	3.030	1.531	16.00	-	-	1/4-18 NPT	-10.0	-5.0	CN..643	ICSN633	KMSP625IP	25IP	CM210	SSP025018M	STCM425IP	25IP
Metric																	
A25RDCLN R/L 12KC04	25	32	17,0	200	-	-	1/4-18 NPT	-12,0	-5,0	CN..120408	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A32SDCLN R/L 12KC04	32	40	22,0	250	-	-	1/4-18 NPT	-12,0	-5,0	CN..120408	ICSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40TDCLN R/L 12KC04	40	50	27,0	300	-	-	1/4-18 NPT	-9,0	-5,0	CN..120408	ICSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40TDCLN R/L 16KC06	40	50	27,0	300	-	-	1/4-18 NPT	-12,0	-5,0	CN..160612	ICSN533	KMSP515IP	15IP	CM209	SSP025016M	STCM1115IP	15IP

A-DDPN-KC



Steel shank with through coolant



Catalog number Right hand/Left hand	D	Dmin	F	L1	L2	L1A	CS	γF°	γP°	Gage Insert	Shim	Shim Screw	Torx Plus	Clamp	Slotted Pin	Clamp Screw	Torx Plus
Inch																	
A20UDDPN R/L 4KC3	1.250	1.705	1.000	14.00	-	.256	1/4-18 NPT	-13.0	0.0	DN.432	IDSN443	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A24UDDPN R/L 4KC3	1.500	2.000	1.125	14.00	-	.259	1/4-18 NPT	-10.0	0.0	DN.432	IDSN443	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
Metric																	
A25RDDPN R/L 11KC04	25	37	22,0	200	-	4,8	1/4-18 NPT	-10,0	0,0	DN..110408	IDSN322	KMSP315IP	15IP	CM234	SSP025016M	STCM119IP	15IP
A32SDDPN R/L 15KC06	32	45	27,0	250	-	6,5	1/4-18 NPT	-12,0	0,0	DN..150608	IDSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40TDDPN R/L 15KC06	40	52	30,0	300	-	6,5	1/4-18 NPT	-10,0	0,0	DN..150608	IDSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP

Order example:

ANSI Right hand: A16TDCLNR4KC3
ISO Right hand: A25RDCLNR12KC04

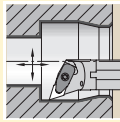


ANSI Left hand: A16TDCLNL4KC3
ISO Left hand: A25RDCLNL12KC04

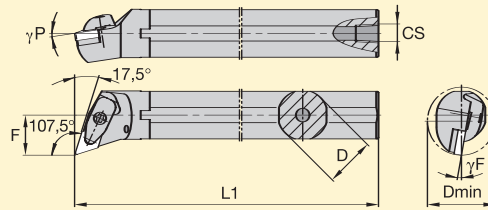




A-DDQN-KC

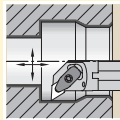


Steel shank with through coolant

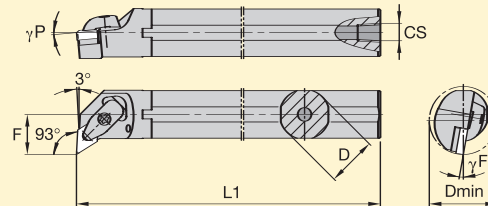


																										
Catalog number										Gage Insert	Shim	Shim Screw	Torx Plus	Clamp	Slotted Pin	Clamp Screw	Torx Plus									
Right hand/Left hand										D	Dmin	F	L1	L2	L1A	CS	γF°	γP°								
Inch																										
A20UDDQN R/L 4KC3										1.250	1.705	1.000	14.00	-	-	1/4-18 NPT	-10.0	-12.0	DN.432	IDSN443	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A24UDDQN R/L 4KC3										1.500	2.000	1.125	14.00	-	-	1/4-18 NPT	-8.5	-8.5	DN.432	IDSN443	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
Metric																										
A25RDDQN R/L 11KC04										25	32	17,0	200	-	-	1/4-18 NPT	-11,0	-7,0	DN..110408	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A32SDDQN R/L 15KC06										32	40	22,0	250	-	-	1/4-18 NPT	-12,0	-10,0	DN..150608	IDSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40TDDQN R/L 15KC06										40	50	27,0	300	-	-	1/4-18 NPT	-10,0	-10,0	DN..150608	IDSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP

A-DDUN-KC



Steel shank with through coolant



																	
Catalog number										Gage Insert	Shim	Shim Screw	Torx Plus	Clamp	Slotted Pin	Clamp Screw	Torx Plus
Right hand/Left hand																	
Inch																	
A16TDDUN R/L 3KC3	1.000	1.300	.750	12.00	-	-	1/4-18 NPT	-12.0	-5.0	DN..332	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A20UDDUN R/L 3KC3	1.250	1.705	1.000	14.00	-	-	1/4-18 NPT	-10.0	-5.0	DN..332	IDSN322	KMSP315IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A20UDDUN R/L 4KC3	1.250	1.705	1.000	14.00	-	-	1/4-18 NPT	-12.0	-5.0	DN..432	IDSN443	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A24UDDUN R/L 4KC3	1.500	2.000	1.125	14.00	-	-	1/4-18 NPT	-10.0	-5.0	DN..432	IDSN443	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A28UDDUN R/L 4KC3	1.750	2.250	1.250	14.00	-	-	1/4-18 NPT	-10.0	-5.0	DN..432	IDSN443	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A32VDDUN R/L 4KC3	2.000	2.500	1.375	16.00	-	-	1/4-18 NPT	-8.0	-5.0	DN..432	IDSN443	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
Metric																	
A25RDDUN R/L 11KC04	25	32	17,0	200	-	-	1/4-18 NPT	-12,0	-5,0	DN..110408	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A32SDDUN R/L 11KC04	32	40	22,0	250	-	-	1/4-18 NPT	-12,0	-5,0	DN..110408	IDSN322	KMSP315IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A32SDDUN R/L 15KC06	32	40	22,0	250	-	-	1/4-18 NPT	-12,0	-6,0	DN..150608	IDSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40TDDUN R/L 15KC06	40	50	27,0	300	-	-	1/4-18 NPT	-9,0	-5,0	DN..150608	IDSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A50UDDUN R/L 15KC06	50	63	35,0	350	-	-	1/4-18 NPT	-7,0	-5,0	DN..150608	IDSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP

Order example:
 ANSI Right hand: A20UDDQNR4KC3
 ISO Right hand: A25RDDQNR11KC04

ANSI Left hand: A20UDDQNL4KC3
 ISO Left hand: A25RDDQNL11KC04

KENCLAMP Boring Bars

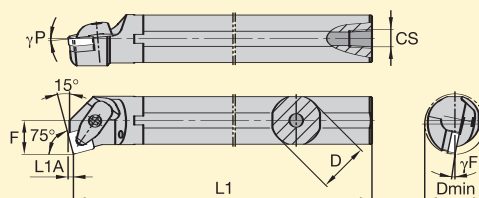
KENLOC Inserts



A-DSKN-KC

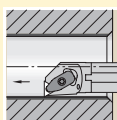


Steel shank with through coolant

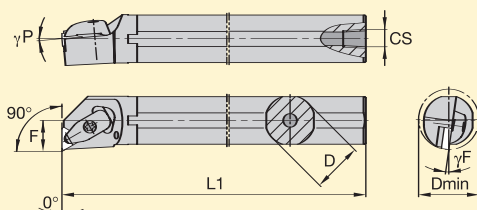


Catalog number Right hand/Left hand	D	Dmin	F	L1	L2	L1A	CS	γF°	γP°	Gage Insert	Shim	Shim Screw	Torx Plus	Clamp	Slotted Pin	Clamp Screw	Torx Plus
Inch																	
A16TDSKN R/L 3KC2	1.000	1.200	.640	12.00	-	.087	1/4-18 NPT	-10.0	-5.0	SN..322	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A20UDSKN R/L 3KC2	1.250	1.470	.765	14.00	-	.087	1/4-18 NPT	-10.0	-5.0	SN..322	ISSN332	KMSP315IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A16TDSKN R/L 4KC3	1.000	1.200	.640	12.00	-	.119	1/4-18 NPT	-12.0	-5.0	SN..432	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A20UDSKN R/L 4KC3	1.250	1.470	.765	14.00	-	.118	1/4-18 NPT	-14.0	-5.0	SN..432	ISSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A24UDSKN R/L 4KC3	1.500	1.470	.890	14.00	-	.119	1/4-18 NPT	-10.0	-5.0	SN..432	ISSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A28UDSKN R/L 4KC3	1.750	2.010	1.015	14.00	-	.119	1/4-18 NPT	-10.0	-5.0	SN..432	ISSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A32VDSKN R/L 6KC4	2.000	2.400	1.281	16.00	-	.178	1/4-18 NPT	-12.0	-5.0	SN..643	ISSN633	KMSP625IP	25IP	CM210	SSP025018M	STCM425IP	25IP
A40VDSKN R/L 6KC4	2.500	3.030	1.531	16.00	-	.179	1/4-18 NPT	-10.0	-5.0	SN..643	ISSN633	KMSP625IP	25IP	CM210	SSP025018M	STCM425IP	25IP
Metric																	
A25RDSKN R/L 12KC04	25	32	17,0	200	-	3,0	1/4-18 NPT	-13,0	-15,0	SN..120408	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A32SDSKN R/L 12KC04	32	40	22,0	250	-	3,0	1/4-18 NPT	-14,0	-5,0	SN..120408	ISSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40TDSKN R/L 12KC04	40	50	27,0	300	-	3,0	1/4-18 NPT	-9,0	-5,0	SN..120408	ISSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40TDSKN R/L 15KC06	40	50	27,0	300	-	3,7	1/4-18 NPT	-12,0	-5,0	SN..150612	ISSN533	KMSP515IP	15IP	CM209	SSP025018M	STCM1115IP	15IP
A50UDSKN R/L 19KC06	50	63	35,0	350	-	4,5	1/4-18 NPT	-8,0	-5,0	SN..190612	ISSN633	KMSP625IP	25IP	CM210	SSP025018M	STCM425IP	25IP

A-DTFN-KC



Steel shank with through coolant



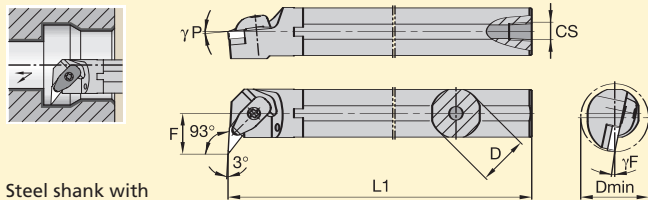
Catalog number Right hand/Left hand	D	Dmin	F	L1	L2	L1A	CS	γF°	γP°	Gage Insert	Shim	Shim Screw	Torx Plus	Clamp	Slotted Pin	Clamp Screw	Torx Plus
Inch																	
A16TDTFN R/L 3KC3	1.000	1.300	.750	12.00	-	-	1/4-18 NPT	-12.0	-5.0	TN..332	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A20UDTFN R/L 3KC3	1.250	1.705	1.000	14.00	-	-	1/4-18 NPT	-12.0	-5.0	TN..332	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A24UDTFN R/L 3KC3	1.500	2.000	1.125	14.00	-	-	1/4-18 NPT	-10.0	-5.0	TN..332	ITSN323	KMSP315IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A28UDTFN R/L 3KC3	1.750	2.250	1.250	14.00	-	-	1/4-18 NPT	-10.0	-5.0	TN..332	ITSN323	KMSP315IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A24UDTFN R/L 4KC3	1.500	2.000	1.125	14.00	-	-	1/4-18 NPT	-10.0	-5.0	TN..432	ITSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A28UDTFN R/L 4KC3	1.750	2.250	1.250	14.00	-	-	1/4-18 NPT	-10.0	-5.0	TN..432	ITSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A32VDTFN R/L 4KC3	2.000	2.500	1.375	16.00	-	-	1/4-18 NPT	-8.0	-5.0	TN..432	ITSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40VDTFN R/L 4KC3	2.500	3.030	1.531	16.00	-	-	1/4-18 NPT	-6.0	-5.0	TN..432	ITSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
Metric																	
A25RDTFN R/L 16KC04	25	32	17,0	200	-	-	1/4-18 NPT	-14,0	-5,0	TN..160408	ITSN323	KMSP315IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A32SDTFN R/L 16KC04	32	40	22,0	250	-	-	1/4-18 NPT	-12,0	-5,0	TN..160408	ITSN323	KMSP315IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40TDTFN R/L 22KC04	40	50	27,0	300	-	-	1/4-18 NPT	-10,0	-5,0	TN..220408	ITSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP

Order example:
ANSI Right hand: A16TDSKNR3KC2
ISO Right hand: A25RDSKNR12KC04

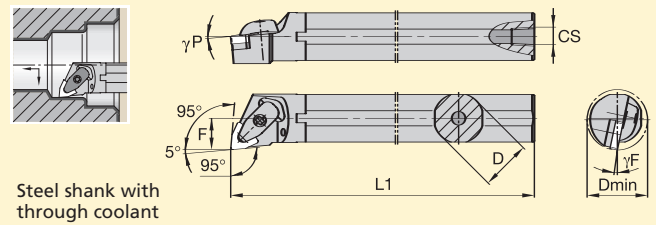
ANSI Left hand: A16TDSKNL3KC2
ISO Left hand: A25RDSKNL12KC04



A-DVUN-KC



A-DWLN-KC



Catalog number																	
Right hand/Left hand	D	Dmin	F	L1	L1A	CS	γF°	γP°		Gage Insert	Shim	Shim Screw	Torx plus	Clamp	Slotted Pin	Clamp Screw	Torx plus
Metric																	
A32SDVUN R/L 16KC04	32	42	22,0	250	-	1/4-18 NPT	-9,0	-5,0		VN..160408	IVSN322	KMSP39IP	9IP	CM215	SSP025016M	STCM1115IP	15IP
A40TDVUN R/L 16KC04	40	50	27,0	300	-	1/4-18 NPT	-8,0	-5,0		VN..160408	IVSN322	KMSP39IP	9IP	CM215	SSP025016M	STCM1115IP	15IP
Metric																	
A25RDWLN R/L 06KC04	25	32	17,0	200	-	1/4-18 NPT	-12,0	-5,0		WN..060408	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A25RDWLN R/L 08KC04	25	32	17,0	200	-	1/4-18 NPT	-12,0	-5,0		WN..080408	-	-	-	CM234	SSP025016M	STCM1115IP	15IP
A32SDWLN R/L 08KC04	32	40	22,0	250	-	1/4-18 NPT	-12,0	-5,0		WN..080408	IWSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP
A40TDWLN R/L 08KC04	40	50	27,0	300	-	1/4-18 NPT	-12,0	-5,0		WN..080408	IWSN433	KMSP415IP	15IP	CM234	SSP025016M	STCM1115IP	15IP



KM25™ Turning System...

...engineered specifically to optimize your machining operations – no matter how challenging your particular application!

- The world's most economical, rigid, and accurate modular quick-change tooling!
- Dramatically reduce your machine downtime... can be fully and easily employed on your lathe or mill-turn machine — with no modifications necessary!
- Ideal for 30HP or less equipment!

Order example:
ISO Right hand: A32SDVUNR16KC04



ISO Left hand: A32SDVUNL16KC04

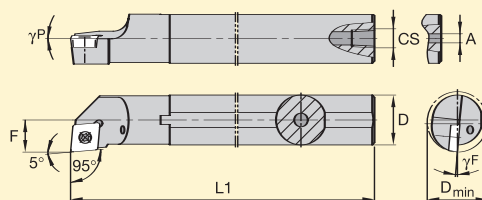
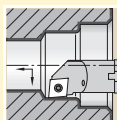


SCREW-ON Boring Bars

KENLOC Inserts



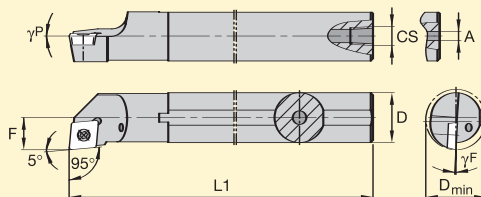
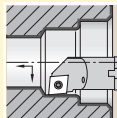
A-SCLC



Steel shank with through coolant

Catalog number	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γF°	γP°	Gage Insert	Insert Screw	Torx
Right hand/Left hand																	
Inch																	
A06SCLC R/L 2	.375	.480	-	.250	6.00	-	-	-	-	.130	-	-	-8.0	0.0	CC..2151	MS1153	T7
A08SCLC R/L 2	.500	.600	-	.312	8.00	-	-	-	-	-	-	1/16-27 NPT	-7.0	0.0	CC..2151	MS1153	T7
A10SCLC R/L 2	.625	.770	-	.406	10.00	-	-	-	-	-	-	1/8-27 NPT	-5.0	0.0	CC..2151	MS1153	T7
A10SCLC R/L 3	.625	.770	-	.406	10.00	-	-	-	-	-	-	1/8-27 NPT	-8.0	0.0	CC..3252	MS1155	T15
A12SCLC R/L 3	.750	.930	-	.500	10.00	-	-	-	-	-	-	1/8-27 NPT	-5.0	0.0	CC..3252	MS1155	T15
A16SCLC R/L 3	1.000	1.200	-	.640	12.00	-	-	-	-	-	-	1/4-18 NPT	-4.0	0.0	CC..3252	MS1155	T15
Metric																	
A08JSCLC R/L 06	8	11,0	-	6,0	110	-	-	-	-	2,4	-	-	8,0	0,0	CC..060204	MS1939	T7
A10KSCLC R/L 06	10	13,0	-	7,0	125	-	-	-	-	3,2	-	-	7,0	0,0	CC..060204	MS1153	T7
A12MSCLC R/L 06	12	16,0	-	9,0	150	-	-	-	-	-	-	1/16-27 NPT	-6,0	0,0	CC..060 204	MS1153	T7
A16RSCLC R/L 09	16	20,0	-	11,0	200	-	-	-	-	-	-	1/8-27 NPT	-7,0	0,0	CC..09T308	MS1155	T15
A20SSCLC R/L 09	20	25,0	-	13,0	250	-	-	-	-	-	-	1/8-27 NPT	-5,0	0,0	CC..09T308	MS1155	T15
A25TSCLC R/L 12	25	32,0	-	17,0	300	-	-	-	-	-	-	1/4-18 NPT	-7,0	0,0	CC..120408	MS1157	T15

A-SCLP



Steel shank with through coolant

Catalog number	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γF°	γP°	Gage Insert	Insert Screw	Torx
Right hand/Left hand																	
Inch																	
A06SCLP R/L 2	.375	.480	-	.250	6.00	-	-	-	-	.125	-	-	-6.0	0.0	CP..2151*	MS1153	T7
A08SCLP R/L 2	.500	.600	-	.312	8.00	-	-	-	-	-	-	1/16-27 NPT	-3.0	0.0	CP..2151*	MS1153	T7
A10SCLP R/L 2	.625	.770	-	.406	10.00	-	-	-	-	-	-	1/8-27 NPT	-2.0	0.0	CP..2151*	MS1153	T7
Metric																	
A08JSCLP R/L 06	8	11,0	-	6,0	110	-	-	-	-	2,4	-	-	-6,0	0,0	CP..060204	MS1939	T7
A10KSCLP R/L 06	10	13,0	-	7,0	125	-	-	-	-	3,2	-	-	-4,0	0,0	CP..060204	MS1153	T7
A12MSCLP R/L 06	12	16,0	-	9,0	150	-	-	-	-	-	-	1/16-27 NPT	-3,0	0,0	CP..060204	MS1153	T7
A16RSCLP R/L 06	16	20,0	-	11,0	200	-	-	-	-	-	-	1/8-27 NPT	-5,0	0,0	CP..060203	MS1153	T7
A20SSCLP R/L 06	20	25,0	-	13,0	250	-	-	-	-	-	-	1/8-27 NPT	-3,0	0,0	CP..060203	MS1153	T7
A16RSCLP R/L 09	16	20,0	-	11,0	200	-	-	-	-	-	-	1/8-27 NPT	-4,0	0,0	CP..09T308	MS1155	T15
A20SSCLP R/L 09	20	25,0	-	13,0	250	-	-	-	-	-	-	1/8-27 NPT	-2,0	0,0	CP..09T308	MS1155	T15

*NOTE: ANSI/ISO compatible 60° countersunk hole insert. This tool will also accept CPGM/CPGT/CPGW-21.5_ inserts.

Order example:
ANSI Right hand: A06SCLCR2
ISO Right hand: A08JSCLCR06

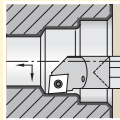


ANSI Left hand: A06SCLCL2
ISO Left hand: A08JSCLCL06

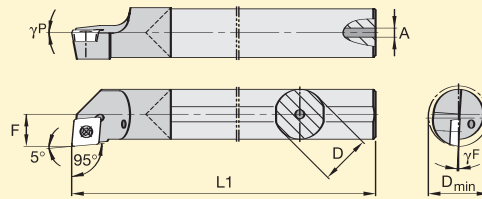




E-SCLP



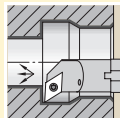
Carbide shank with
through coolant



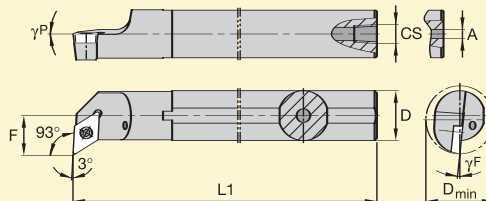
Catalog number Right hand/Left hand	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γF°	γP°	Gage Insert	Insert Screw	Torx
Inch																	
E06SCLP R/L 2	.375	.480	-	.250	6.00	-	-	-	-	.13	-	-	-6.0	0.0	CP..2151*	MS1153	T7
E08SCLP R/L 2	.500	.600	-	.312	8.00	-	-	-	-	.19	-	-	-2.0	0.0	CP..2151*	MS1153	T7
E10SCLP R/L 2	.625	.770	-	.406	10.00	-	-	-	-	.22	-	-	-2.0	0.0	CP..2151*	MS1153	T7
E12SCLP R/L 2	.750	.930	-	.500	10.00	-	-	-	-	.28	-	-	-2.0	0.0	CP..2151*	MS1153	T7
Metric																	
E08KSCLP R/L 06A	8	11,0	-	6,0	122	-	-	-	-	2,4	-	-	-6,0	0,0	CP..060204	MS1939	T7
E10MSCLP R/L 06A	10	13,0	-	7,0	150	-	-	-	-	3,2	-	-	-4,0	0,0	CP..060204	MS1939	T7
E12QSCLP R/L 06	12	16,0	-	9,0	180	-	-	-	-	4,8	-	-	-3,0	0,0	CP..060204	MS1155	T7
E16RSCLP R/L 09	16	20,0	-	11,0	200	-	-	-	-	5,5	-	-	-4,0	0,0	CP..09T308	MS1155	T15
E20SSCLP R/L 09	20	25,0	-	13,0	250	-	-	-	-	7,1	-	-	-2,0	0,0	CP..09T308	MS1155	T15

*NOTE: ANSI/ISO compatible 60° countersunk hole insert.
This tool will also accept CPGM/CPGT/CPGW-21.5_ inserts.

A-SDUC



Steel shank with
through coolant



Catalog number Right hand/Left hand	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γF°	γP°	Gage Insert	Insert Screw	Torx
Inch																	
A06SDUC R/L 2	.375	.600	-	.375	6.00	-	-	-	-	.130	-	-	-7.0	0.0	DC..2151	MS1153	T7
A08SDUC R/L 2	.500	.730	-	.437	8.00	-	-	-	-	-	-	1/16-27 NPT	-5.0	0.0	DC..2151	MS1153	T7
A10SDUC R/L 2	.625	.850	-	.500	10.00	-	-	-	-	-	-	1/8-27 NPT	-4.0	0.0	DC..2151	MS1153	T7
A12SDUC R/L 3	.750	.980	-	.562	10.00	-	-	-	-	-	-	1/8-27 NPT	-5.0	0.0	DC..3252	MS1155	T15
A16SDUC R/L 3	1.000	1.300	-	.750	12.00	-	-	-	-	-	-	1/4-18 NPT	-3.0	0.0	DC..3252	MS1155	T15
Metric																	
A10KSDUC R/L 07	10	13,0	-	7,0	125	-	-	-	-	3,2	-	-	-7,0	0,0	DC..070204	MS1153	T7
A12MSDUC R/L 07	12	16,0	-	9,0	150	-	-	-	-	-	-	1/16-27 NPT	-4,0	0,0	DC..070204	MS1153	T7
A16RSDUC R/L 07	16	20,0	-	11,0	200	-	-	-	-	-	-	1/8-27 NPT	-4,0	0,0	DC..070204	MS1153	T7
A16RSDUC R/L 11	16	20,0	-	11,0	200	-	-	-	-	-	-	1/8-27 NPT	-6,0	0,0	DC..11T308	MS1155	T15
A20SSDUC R/L 11	20	25,0	-	13,0	250	-	-	-	-	-	-	1/8-27 NPT	-5,0	0,0	DC..11T308	MS1155	T15
A25TSDUC R/L 11	25	32,0	-	17,0	300	-	-	-	-	-	-	1/4-18 NPT	-4,0	0,0	DC..11T308	MS1155	T15

Order example:
ANSI Right hand: E06SCLPR2
ISO Right hand: E08KSCLPR06A



ANSI Left hand: E06SCLPL2
ISO Left hand: E08KSCLPL06A

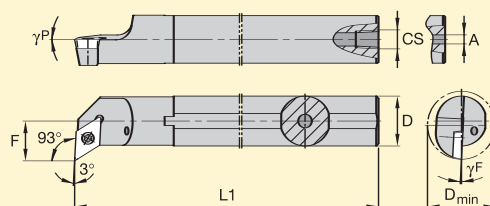
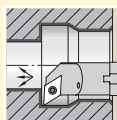


SCREW-ON Boring Bars

SCREW-ON Inserts



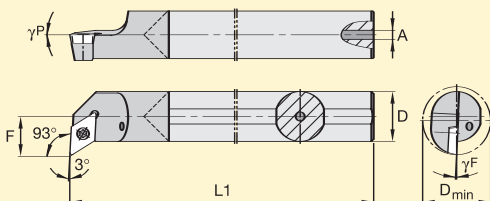
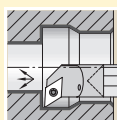
A-SDUP



Steel shank with through coolant

Catalog number Right hand/Left hand	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γF°	γP°	Gage Insert	Insert Screw	Torx
Inch																	
A06SDUP R/L 2	.375	.600	-	.375	6.00	-	-	-	-	.125	-	-	-3.0	0.0	DP.2151	MS1153	T7
A08SDUP R/L 2	.500	.730	-	.437	8.00	-	-	-	-	-	-	1/16-27 NPT	0.0	0.0	DP.2151	MS1153	T7
A10SDUP R/L 2	.625	.850	-	.500	10.00	-	-	-	-	-	-	1/8-27 NPT	0.0	0.0	DP.2151	MS1153	T7
A12SDUP R/L 3	.750	.980	-	.562	10.00	-	-	-	-	-	-	1/8-27 NPT	0.0	0.0	DP.3252	MS1155	T15
A16SDUP R/L 3	1.000	1.300	-	.750	12.00	-	-	-	-	-	-	1/4-18 NPT	0.0	0.0	DP.3252	MS1155	T15
Metric																	
A12MSDUP R/L 07	12	16,0	-	9,0	150	-	-	-	-	-	-	1/16-27 NPT	-2,0	0,0	DP.070204	MS1153	T7
A16RSDUP R/L 07	16	20,0	-	11,0	200	-	-	-	-	-	-	1/8-27 NPT	0,0	0,0	DP.070204	MS1153	T7
A20SSDUP R/L 11	20	25,0	-	13,0	250	-	-	-	-	-	-	1/8-27 NPT	-2,0	0,0	DP.11T308	MS1155	T15
A25TSDUP R/L 11	25	32,0	-	17,0	300	-	-	-	-	-	-	1/4-18 NPT	0,0	0,0	DP.11T308	MS1155	T15

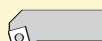
E-SDUP



Carbide shank with through coolant

Catalog number Right hand/Left hand	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γF°	γP°	Gage Insert	Insert Screw	Torx
Inch																	
E06SDUP R/L 2	.375	.600	-	.375	6.00	-	-	-	-	.13	-	-	-2.0	0.0	DP.2151	MS1153	T7
E08SDUP R/L 2	.500	.730	-	.437	8.00	-	-	-	-	.19	-	-	0.0	0.0	DP.2151	MS1153	T7
E10SDUP R/L 2	.625	.850	-	.500	10.00	-	-	-	-	.22	-	-	0.0	0.0	DP.2151	MS1153	T7
E12SDUP R/L 2	.750	.980	-	.562	10.00	-	-	-	-	.28	-	-	0.0	0.0	DP.2151	MS1153	T7
E12SDUP R/L 3	.750	.980	-	.562	10.00	-	-	-	-	.28	-	-	0.0	0.0	DP.3252	MS1155	T15
E16SDUP R/L 3	1.000	1.300	-	.750	12.00	-	-	-	-	.31	-	-	0.0	0.0	DP.3252	MS1155	T15
Metric																	
E12QSDUP R/L 07	12	16,0	-	9,0	180	-	-	-	-	4,8	-	-	-2,0	0,0	DP.070204	MS1153	T7
E16RSDUP R/L 07	16	20,0	-	11,0	200	-	-	-	-	5,5	-	-	0,0	0,0	DP.070204	MS1153	T7
E20SSDUP R/L 11	20	25,0	-	13,0	250	-	-	-	-	7,1	-	-	-2,0	0,0	DP.11T308	MS1155	T15

Order example:
ANSI Right hand: A06SDUPR2
ISO Right hand: A12MSDUPR07

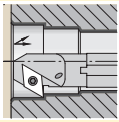


ANSI Left hand: A06SDUPL2
ISO Left hand: A12MSDUPL07

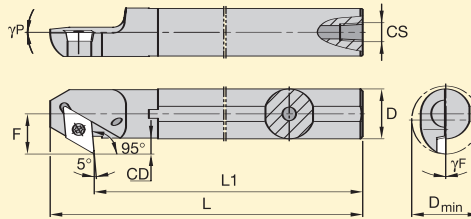




A-SDXP

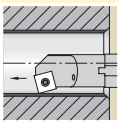


Steel shank with through coolant

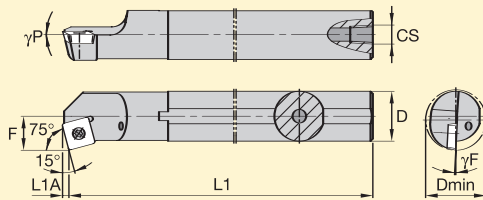


Catalog number	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γ_F°	γ_P°	Gage Insert	Insert Screw	Torx
Inch																	
A08SDXP R/L 2	.500	.730	-	.437	8.00	8.50	-	.187	-	-	-	1/16-27 NP-	0.0	0.0	DP..2151	MS1153	T7
A10SDXP R/L 2	.625	.850	-	.500	10.00	10.50	-	.187	-	-	-	1/8-27 NP-	0.0	0.0	DP..2151	MS1153	T7
A12SDXP R/L 3	.750	.980	-	.562	10.00	10.75	-	.187	-	-	-	1/8-27 NP-	0.0	0.0	DP..3252	MS1155	T15
A16SDXP R/L 3	1.000	1.300	-	.750	12.00	12.75	-	.250	-	-	-	1/4-18 NP-	0.0	0.0	DP..3252	MS1155	T15
Metric																	
A12MSDXP R/L 07	12	16,0	-	9,0	150	162,0	-	3,09	-	-	-	1/16-27 NPT	0,0	0,0	DP..070204	MS1153	T7
A16RSDXP R/L 07	16	20,0	-	11,0	200	212,0	-	3,2	-	-	-	1/8-27 NPT	0,0	0,0	DP..070204	MS1153	T7
A20SSDXP R/L 11	20	25,0	-	13,0	250	270,0	-	4,31	-	-	-	1/8-27 NPT	0,0	0,0	DP..11T308	MS1155	T15

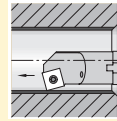
A-SSKC



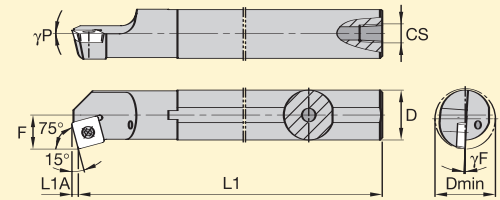
Steel shank with through coolant



A-SSKP



Steel shank with through coolant



Catalog number	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γ_F°	γ_P°	Gage Insert	Insert Screw	Torx
Metric																	
A16RSSKC R/L 09	16	20,0	-	11,0	200	-	-	-	2,2	-	-	1/8-27 NPT	-7,0	0,0	SC..09T308	MS1157	T15
A25TSSKC R/L 12	25	32,0	-	17,0	300	-	-	-	3,2	-	-	1/4-18 NPT	-7,0	0,0	SC..120408	MS1157	T15
Metric																	
A16RSSKP R/L 09	16	20,0	-	11,0	200	-	-	-	2,2	-	-	1/8-27 NPT	-4,0	0,0	SP..09T308	MS1155	T15
A20SSSKP R/L 09	20	25,0	-	13,0	250	-	-	-	2,2	-	-	1/8-27 NPT	-4,0	0,0	SP..09T308	MS1155	T15

Order example:
ANSI Right hand: A08SDXP R2
ISO Right hand: A12MSDXP R07



ANSI Left hand: A08SDXP L2
ISO Left hand: A12MSDXP L07

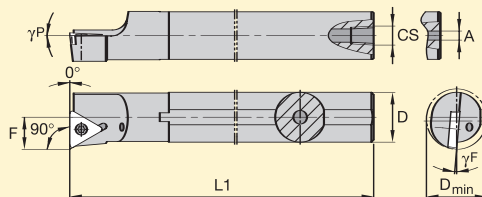
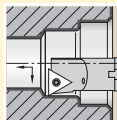


SCREW-ON Boring Bars

SCREW-ON Inserts



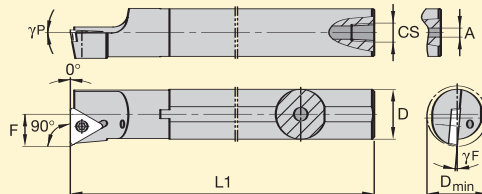
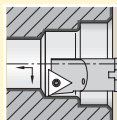
A-STFC



Steel shank with through coolant

Catalog number	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γF°	γP°	Gage Insert	Insert Screw	Torx
Right hand/Left hand																	
Inch																	
A06STFC R/L 2	.375	.480	-	.250	6.00	-	-	-	-	.130	-	-	-8.0	0.0	TC..2151	MS1153	T7
A08STFC R/L 2	.500	.600	-	.312	8.00	-	-	-	-	-	-	1/16-27 NPT	-7.0	0.0	TC..2151	MS1153	T7
A10STFC R/L 2	.625	.770	-	.406	10.00	-	-	-	-	-	-	1/8-27 NPT	-5.0	0.0	TC..2151	MS1153	T7
A12STFC R/L 3	.750	.930	-	.500	10.00	-	-	-	-	-	-	1/8-27 NPT	-5.0	0.0	TC..3252	MS1155	T15
A16STFC R/L 3	1.000	1.200	-	.640	12.00	-	-	-	-	-	-	1/4-18 NPT	-4.0	0.0	TC..3252	MS1155	T15
Metric																	
A10KSTFC R/L 11	10	13,0	-	7,0	125	-	-	-	-	3,2	-	-	-7,0	0,0	TC..110204	MS1153	T7
A12MSTFC R/L 11	12	16,0	-	9,0	150	-	-	-	-	-	-	1/16-27 NPT	-6,0	0,0	TC..110204	MS1153	T7

A-STFP



Steel shank with through coolant

Catalog number	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γF°	γP°	Gage Insert	Insert Screw	Torx
Right hand/Left hand																	
Inch																	
A06STFP R/L 2	.375	.480	-	.250	6.00	-	-	-	-	.125	-	-	-4.0	0.0	TP..2151*	MS1153	T7
A08STFP R/L 2	.500	.600	-	.312	8.00	-	-	-	-	-	-	1/16-27 NPT	-2.0	0.0	TP..2151	MS1153	T7
A10STFP R/L 2	.625	.770	-	.406	10.00	-	-	-	-	-	-	1/8-27 NPT	0.0	0.0	TP..2151	MS1153	T7
A12STFP R/L 3	.750	.930	-	.500	10.00	-	-	-	-	-	-	1/8-27 NPT	-2.0	0.0	TP..3252	MS1155	T15
A16STFP R/L 3	1.000	1.200	-	.640	12.00	-	-	-	-	-	-	1/4-18 NPT	0.0	0.0	TP..3252	MS1155	T15
Metric																	
A10KSTFP R/L 11	10	13,0	-	7,0	125	-	-	-	-	3,2	-	-	-4,0	0,0	TP..110204	MS1153	T7
A12MSTFP R/L 11	12	16,0	-	9,0	150	-	-	-	-	-	-	1/16-27 NPT	-2,0	0,0	TP..110204	MS1153	T7
A16RSTFP R/L 11	16	20,0	-	11,0	200	-	-	-	-	-	-	1/16-27 NPT	0,0	0,0	TP..110204	MS1153	T7
A20SSTFP R/L 16	20	25,0	-	13,0	250	-	-	-	-	-	-	1/8-27 NPT	-2,0	0,0	TP..16T308	MS1155	T15
A25TSTFP R/L 16	25	32,0	-	17,0	300	-	-	-	-	-	-	1/4-18 NPT	0,0	0,0	TP..16T308	MS1155	T15

*NOTE: ANSI/ISO compatible 60° countersunk hole insert.
This tool will also accept TPGM/TPGT/TPGW-21.5_ inserts.

Order example:
ANSI Right hand: A06STFCR2
ISO Right hand: A10KSTFCR11

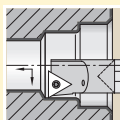


ANSI Left hand: A06STFCL2
ISO Left hand: A10KSTFCL11

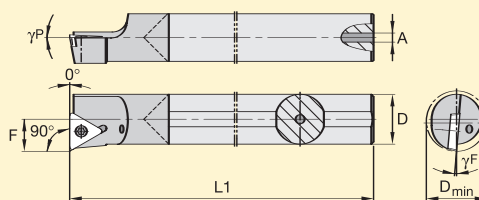




E-STFP



Carbide shank with
through coolant

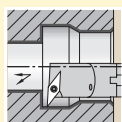


Catalog number Right hand/Left hand	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γF°	γP°	Gage Insert	Insert Screw	Torx
Inch																	
E06STFP R/L 2	.375	.480	-	.250	6.00	-	-	-	-	.13	-	-	-4.0	0.0	TP..2151*	MS1153	T7
E08STFP R/L 2	.500	.600	-	.312	8.00	-	-	-	-	.19	-	-	-2.0	0.0	TP..2151*	MS1153	T7
E10STFP R/L 2	.625	.770	-	.406	10.00	-	-	-	-	.22	-	-	0.0	0.0	TP..2151*	MS1153	T7
E12STFP R/L 3	.750	.930	-	.500	10.00	-	-	-	-	.28	-	-	-2.0	0.0	TP..3252**	MS1155	T15
E16STFP R/L 3	1.000	1.200	-	.640	12.00	-	-	-	-	.31	-	-	0.0	0.0	TP..3252**	MS1155	T15
Metric																	
E10MSTFP R/L 11A	10	13,0	-	7,0	150	-	-	-	-	3,2	-	-	-4,0	0,0	TP..110202	MS1153	T7
E12QSTFP R/L 11	12	16,0	-	9,0	180	-	-	-	-	4,8	-	-	-2,0	0,0	TP..110202	MS1153	T7
E16RSTFP R/L 11	16	20,0	-	11,0	200	-	-	-	-	5,5	-	-	0,0	0,0	TP..110202	MS1153	T7
E20SSTFP R/L 16	20	25,0	-	13,0	250	-	-	-	-	7,1	-	-	-2,0	0,0	TP..16T308	MS1155	T15

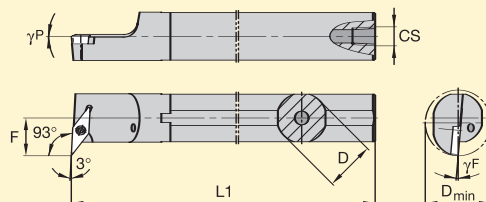
*NOTE: ANSI/ISO compatible 60° countersunk hole insert. This tool will also accept TPGM/TPGT/TPGW-21.5_ inserts.

**NOTE: ANSI/ISO compatible 60° countersunk hole insert (i.e. TPMT/TPGT/TPGW-32.5_). 90° countersunk hole inserts (i.e. TPGM/TPGB-32.5_) do not fit this tool.

A-SVUB



Steel shank with
through coolant



Catalog number Right hand/Left hand	D	Dmin	D2	F	L1	L	L2	CD	L1A	A	A1	CS	γF°	γP°	Gage Insert	Insert Screw	Torx or Hex (inch)
Inch																	
A12SVUB R/L 2	.750	.980	-	.562	10.00	-	-	-	-	-	-	1/8-27 NPT	-6,0	0,0	VB..221	MS1153	T7
A16SVUB R/L 3	1.000	1.300	-	.750	12.00	-	-	-	-	-	-	1/4-18 NPT	-6,0	0,0	VB..332	MS1155	T15
Metric																	
A20SSVUB R/L 11	20	25,0	-	13,0	250	-	-	--	-	-	-	1/8-27 NPT	-6,0	0,0	VB..110304	MS1153	T7
A25TSVUB R/L 16	25	32,0	-	17,0	300	-	-	--	-	-	-	1/4-18 NPT	-6,0	0,0	VB..160408	MS1155	T15

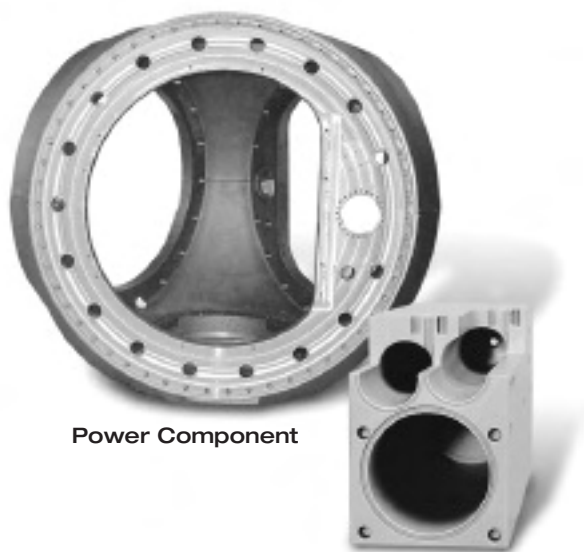
Order example:
ANSI Right hand: E06STFPR2
ISO Right hand: E10MSTFPR11A



ANSI Left hand: E06STFPL2
ISO Left hand: E10MSTFPL11A



Engineering
Your
Competitive
Edge
FOR GENERAL
ENGINEERING



Power Component

Medical
Component

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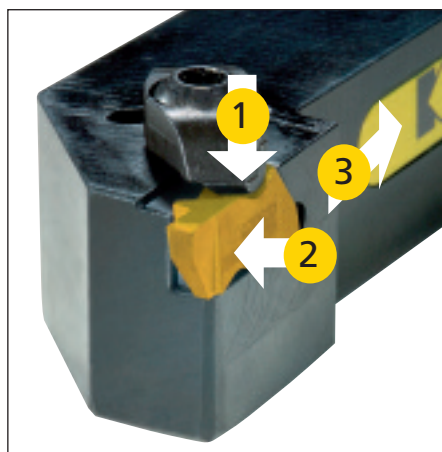
TOP NOTCH Grooving

Versatile Design

- Design versatility means this one system handles operations such as:
O.D. and I.D. grooving
face grooving
back turning
undercutting
...and threading

Chip-Control Inserts

- Enable excellent chip evacuation in grooving operations.
- Provide better control in multi-directional turning.



Rigid Clamping Design

- Locks insert securely in place for zero movement in high-feed-rate applications.
- Achieves outstanding cutting precision through even the toughest cuts.
- Enables excellent surface finish, improved productivity, and superior tool life.
- Promotes perfect concentricity in the application.

The rugged bridge clamp generates locking forces in three directions to provide superior resistance to side thrust and tangential forces!

Chipbreaker and Feed Rates – in/rev (mm/rev)

Workpiece Material and Application		Steel	Stainless Steel	Cast Iron	Non-Ferrous Metals	High-Temp Alloys	Hardened Materials
	First Choice						
	Style	NG-K	NG-K	NG	NG-K	NG-K	NG
	Range	.003 - .011 (0,08 - 0,28)	.0025 - .008 (0,07 - 0,20)	.004 - .012 (0,01 - 0,30)	.003 - .012 (0,08 - 0,30)	.0025 - .008 (0,07 - 0,20)	.002 - .004 (0,05 - 0,10)
	Starting Conditions	.006 (0,15)	.005 (0,13)	.008 (0,20)	.008 (0,20)	.005 (0,13)	.003 (0,08)
	Alternative Choice						
	Style	NG	NG	NG-K	NG	NG	—
	Range	.004 - .012 (0,10 - 0,30)	.004 - .009 (0,10 - 0,23)	.003 - .011 (0,08 - 0,28)	.004 - .012 (0,01 - 0,30)	.004 - .008 (0,10 - 0,20)	—
	Starting Conditions	.007 (0,18)	.006 (0,15)	.007 (0,18)	.008 (0,20)	.006 (0,15)	—

Recommendations for Grade and Speed Selection – sfm (m/min)

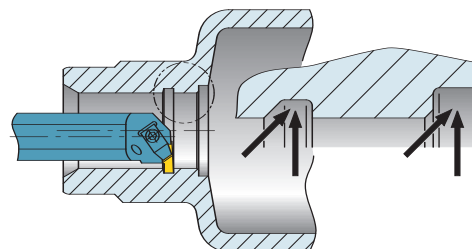
Machining Condition		Workpiece Material					
		Steel	Stainless Steel	Cast Iron	Non-Ferrous Metals	High-Temp Alloys	Hardened Materials
KENNA UNIVERSAL	Grade	KU30T	KU10T	KU30T	KU10T	KU10T	KU10T
	Range	200 - 650 (60 - 200)	150 - 550 (50 - 170)	200 - 650 (60 - 200)	500 - 2400 (150 - 730)	50 - 360 (20 - 110)	50 - 100 (20 - 40)
	Starting Conditions	500 (150)	400 (120)	500 (150)	1500 (450)	200 (60)	70 (20)

Example for TOP NOTCH – Grooving:

material: low-alloyed steel
 groove depth: .079 in. (2 mm)
 groove width: .118 in. (3 mm)
 operation: I.D. cut, limited speed capability, plunge groove and chamfer

Recommendation:

insert: NG2M300RK
 grade: KU30T
 insert width: .118 in. (3 mm)
 insert size: 2
 toolholder: A12NEL2 (inch)
 A20QNN2OL2 (metric)
 gage insert: N.2R



speed: 500 sfm (150 m/min)
 feed: .006 ipr (0,15 mm)

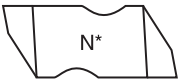
Note: The insert size must match the gage insert size of your toolholder selection.

See page A4 for KU10T, KU25T, and KU30T grade descriptions.

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.



N-Top Notch



1. Type of Insert

N **G**

2. Insert Style

G – grooving
R – full radius

D – deep grooving
□ – (blank) indicates standard grooving

3. Additional Information

D **3**

4. Insert Size

insert size	W1 (in.)	W1 (mm)
2	.150	3,81
3	.195	4,95
4	.255	6,48

M – metric insert groove width
□ – (blank) indicates inch width insert

5. Size Identification

125

6. Groove Size

Position pertains to groove width for G-style inserts; radii for R-style grooving inserts. Dimension in .001 inch or 0,01 mm.
Metric example: 3,50 mm width groove or radius equals "350" catalog position number
Inch example: 1/32" width groove or radius equals "031" catalog position number
Width Tolerance: ± .001 inch (± 0,025 mm) unless otherwise specified

L – left
R – right

7. Hand of Insert

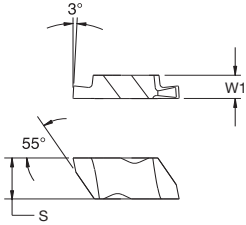
R **K**

8. Chipbreaker Design

K – standard chip control

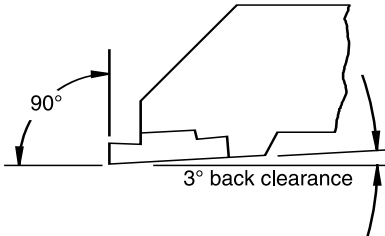
*Kennametal proprietary identification system

TOP NOTCH Threading and Grooving Insert Dimensions



insert size	S		W1	
	inch	mm	inch	mm
2	.219	5,56	.150	3,81
3	.344	8,74	.195	4,95
4	.453	11,51	.255	6,48

TOP NOTCH Holder Design



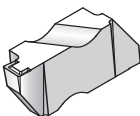
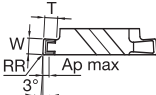
NOTE: Holders are designed to locate insert inclined to 3° to provide back clearance down open side.

Kennametal and Top Notch tooling technology combine to bring you the very best threading and grooving system available in the world today.

TOP NOTCH Grooving Inserts

Dimensions and Grade Selection



	Insert size	W		Catalog number	Dimensions						KENNA UNIVERSAL	
		inch	mm		Ap max.		RR		T		KU10T	KU30T
					inch	mm	inch	mm	inch	mm		
NG-K   	2	.031	0,79	Right hand	.030	0,76	.0035	0,09	.050	1,27	●	●
	2	.039	1,00	NG2M100RK	.030	0,76	.0035	0,09	.050	1,27	●	●
	2	.047	1,19	NG2047RK	.030	0,76	.0035	0,09	.050	1,27	●	●
	2	.047	1,20	NG2M120RK	.030	0,76	.0035	0,09	.050	1,27	●	●
	2	.059	1,50	NG2M150RK	.043	1,09	.0075	0,19	.110	2,79	●	●
	2	.062	1,58	NG2062RK	.043	1,09	.0075	0,19	.110	2,79	●	●
	2	.079	2,00	NG2M200RK	.043	1,09	.0075	0,19	.110	2,79	●	●
	2	.094	2,39	NG2094RK	.043	1,09	.0075	0,19	.110	2,79	●	●
	2	.118	3,00	NG2M300RK	.043	1,09	.0075	0,19	.110	2,79	●	●
	2	.125	3,18	NG2125RK	.043	1,09	.0075	0,19	.110	2,79	●	●
	3	.039	1,00	NG3M100RK	.030	0,76	.0075	0,19	.075	1,91	●	●
	3	.047	1,19	NG3047RK	.030	0,76	.0075	0,19	.075	1,91	●	●
	3	.059	1,50	NG3M150RK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.062	1,58	NG3062RK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.072	1,83	NG3072RK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.078	1,98	NG3078RK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.079	2,00	NG3M200RK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.088	2,25	NG3M225RK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.094	2,39	NG3094RK	.040	1,02	.0075	0,19	.150	3,81	●	●
	3	.098	2,50	NG3M250RK	.040	1,02	.0075	0,19	.150	3,81	●	●
	3	.108	2,75	NG3M275RK	.040	1,02	.0075	0,19	.150	3,81	●	●
	3	.118	3,00	NG3M300RK	.040	1,02	.0075	0,19	.150	3,81	●	●
	3	.125	3,18	NG3125RK	.040	1,02	.0075	0,19	.150	3,81	●	●
	3	.138	3,50	NG3M350RK	.115	2,92	.0125	0,32	.150	3,81	●	●
	3	.156	3,96	NG3156RK	.115	2,92	.0075	0,19	.150	3,81	●	●
	3	.158	4,00	NG3M400RK	.115	2,92	.0125	0,32	.150	3,81	●	●
	3	.189	4,80	NG3189RK	.115	2,92	.0225	0,57	.150	3,81	●	●
	4	.125	3,18	NG4125RK	.040	1,02	.0075	0,19	.150	3,81	●	●
	4	.189	4,80	NG4189RK	.115	2,92	.0225	0,57	.250	6,35	●	●
	4	.250	6,35	NG4250RK	.150	3,81	.0225	0,57	.250	6,35	●	●
	2	.031	0,79	Left hand	.030	0,76	.0035	0,09	.050	1,27	●	●
	2	.039	1,00	NG2031LK	.030	0,76	.0035	0,09	.050	1,27	●	●
	2	.047	1,19	NG2M100LK	.030	0,76	.0035	0,09	.050	1,27	●	●
	2	.047	1,19	NG2047LK	.030	0,76	.0035	0,09	.050	1,27	●	●
	2	.059	1,50	NG2M150LK	.043	1,09	.0075	0,19	.110	2,79	●	●
	2	.062	1,58	NG2062LK	.043	1,09	.0075	0,19	.110	2,79	●	●
	2	.079	2,00	NG2M200LK	.043	1,09	.0075	0,19	.110	2,79	●	●
	2	.094	2,39	NG2094LK	.043	1,09	.0075	0,19	.110	2,79	●	●
	2	.118	3,00	NG2M300LK	.043	1,09	.0075	0,19	.110	2,79	●	●
	2	.125	3,18	NG2125LK	.043	1,09	.0075	0,19	.110	2,79	●	●
	3	.039	1,00	NG3M100LK	.030	0,76	.0075	0,19	.075	1,91	●	●
	3	.047	1,19	NG3047LK	.030	0,76	.0075	0,19	.075	1,91	●	●
	3	.059	1,50	NG3M150LK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.062	1,58	NG3062LK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.072	1,83	NG3072LK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.078	1,98	NG3078LK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.079	2,00	NG3M200LK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.088	2,25	NG3M225LK	.040	1,02	.0075	0,19	.094	2,39	●	●
	3	.094	2,39	NG3094LK	.040	1,02	.0075	0,19	.150	3,81	●	●
	3	.098	2,50	NG3M250LK	.040	1,02	.0075	0,19	.150	3,81	●	●
	3	.108	2,75	NG3M275LK	.040	1,02	.0075	0,19	.150	3,81	●	●
	3	.118	3,00	NG3M300LK	.040	1,02	.0075	0,19	.150	3,81	●	●
	3	.125	3,18	NG3125LK	.040	1,02	.0075	0,19	.150	3,81	●	●
	3	.138	3,50	NG3M350LK	.115	2,92	.0125	0,32	.150	3,81	●	●
	3	.156	3,96	NG3156LK	.115	2,92	.0075	0,19	.150	3,81	●	●
	3	.158	4,00	NG3M400LK	.115	2,92	.0125	0,32	.150	3,81	●	●
	3	.189	4,80	NG3189LK	.115	2,92	.0225	0,57	.150	3,81	●	●
	4	.125	3,18	NG4125LK	.040	1,02	.0075	0,19	.150	3,81	●	●
	4	.189	4,80	NG4189LK	.115	2,92	.0225	0,57	.250	6,35	●	●
4	.250	6,35	NG4250LK	.150	3,81	.0225	0,57	.250	6,35	●	●	

NOTE: Right-hand insert shown; left-hand insert is mirror image.

Order example:
Right Hand: **NG2031RK**
Insert grade: **KU10T**

Left Hand: **NG2031LK**
Insert grade: **KU10T**



TOP NOTCH Grooving Inserts

Dimensions and Grade Selection

KENLOC INSERTS

SCREW-ON INSERTS

TOOL HOLDERS

BORING BARS

TOP NOTCH GROOVING

TURNING PRODUCTS

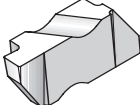
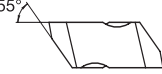
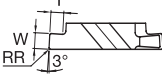
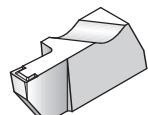
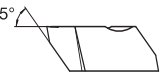
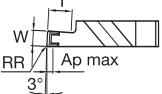
TOP NOTCH HOLDERS

A4

A2

LT THREADING

TOP NOTCH THREADING

				Dimensions						KENNA UNIVERSAL		
				Ap max.		RR		T		KU10T	KU30T	
Insert size	W		Catalog number	inch	mm	inch	mm	inch	mm			
	inch	mm										
NG   	2	.031	0,79	Right hand NG2031R	-	-	.0035	0,09	.050	1,27	●	●
	2	.047	1,19	NG2047R	-	-	.0035	0,09	.050	1,27	●	●
	2	.062	1,58	NG2062R	-	-	.0075	0,19	.110	2,79	●	●
	2	.094	2,39	NG2094R	-	-	.0075	0,19	.110	2,79	●	●
	3	.047	1,19	NG3047R	-	-	.0075	0,19	.075	1,91	●	●
	3	.062	1,58	NG3062R	-	-	.0075	0,19	.094	2,39	●	●
	3	.094	2,39	NG3094R	-	-	.0075	0,19	.150	3,81	●	●
	3	.125	3,18	NG3125R	-	-	.0075	0,19	.150	3,81	●	●
	3	.189	4,80	NG3189R	-	-	.0225	0,57	.150	3,81	●	●
	4	.125	3,18	NG4125R	-	-	.0075	0,19	.150	3,81	●	●
	4	.189	4,80	NG4189R	-	-	.0225	0,57	.250	6,35	●	●
	4	.250	6,35	NG4250R	-	-	.0225	0,57	.250	6,35	●	●
	2	.031	0,79	Left hand NG2031L	-	-	.0035	0,09	.050	1,27	●	●
	2	.047	1,19	NG2047L	-	-	.0035	0,09	.050	1,27	●	●
	2	.062	1,58	NG2062L	-	-	.0075	0,19	.110	2,79	●	●
	2	.094	2,39	NG2094L	-	-	.0075	0,19	.110	2,79	●	●
	3	.047	1,19	NG3047L	-	-	.0075	0,19	.075	1,91	●	●
	3	.062	1,58	NG3062L	-	-	.0075	0,19	.094	2,39	●	●
	3	.094	2,39	NG3094L	-	-	.0075	0,19	.150	3,81	●	●
	3	.125	3,18	NG3125L	-	-	.0075	0,19	.150	3,81	●	●
	3	.189	4,80	NG3189L	-	-	.0225	0,57	.150	3,81	●	●
	4	.125	3,18	NG4125L	-	-	.0075	0,19	.150	3,81	●	●
	4	.189	4,80	NG4189L	-	-	.0225	0,57	.250	6,35	●	●
	4	.250	6,35	NG4250L	-	-	.0225	0,57	.250	6,35	●	●
NGD-K    * these inserts have one cutting edge	3	.062	1,58	Right hand NGD3062RK	.040	1,02	.0075	0,19	.125	3,18	●	●
	3	.094	2,39	NGD3094RK*	.040	1,02	.0075	0,19	.250	6,35	●	●
	3	.125	3,18	NGD3125RK*	.040	1,02	.0075	0,19	.250	6,35	●	●
	3	.189	4,80	NGD3189RK*	.115	2,92	.0225	0,57	.250	6,35	●	●
	3	.062	1,58	Left hand NGD3062LK	.040	1,02	.0075	0,19	.125	3,18	●	●
	3	.094	2,39	NGD3094LK*	.040	1,02	.0075	0,19	.250	6,35	●	●
	3	.125	3,18	NGD3125LK*	.040	1,02	.0075	0,19	.250	6,35	●	●
	3	.189	4,80	NGD3189LK*	.115	2,92	.0225	0,57	.250	6,35	●	●

* these inserts have one cutting edge

NOTE: Right-hand insert shown; left-hand insert is mirror image.

Order example:
Right Hand: NG2031R
Insert grade: KU10T

Left Hand: NG2031L
Insert grade: KU10T

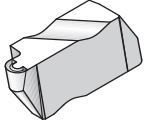
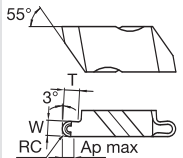
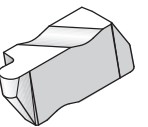
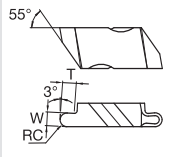
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

A55

TOP NOTCH Grooving Inserts

Dimensions and Grade Selection



	Insert size		W		Catalog number	Dimensions						KENNA UNIVERSAL	
						Ap max.		RC		T		KU10T	KU30T
						inch	mm	inch	mm	inch	mm		
NR-K  	3	.062	1,58	Right hand NR3031RK	.078	1,98	.031	0,79	.094	2,39	●	●	
	3	.094	2,39	NR3047RK	.075	1,91	.047	1,19	.150	3,81	●	●	
	3	.125	3,18	NR3062RK	.115	2,92	.063	1,59	.150	3,81	●	●	
	3	.062	1,58	Left hand NR3031LK	.078	1,98	.031	0,79	.094	2,39	●	●	
	3	.094	2,39	NR3047LK	.075	1,91	.047	1,19	.150	3,81	●	●	
	3	.125	3,18	NR3062LK	.115	2,92	.063	1,59	.150	3,81	●	●	
NR  	3	.062	1,58	Right hand NR3031R	-	-	.031	0,79	.094	2,39	●	●	
	3	.094	2,39	NR3047R	-	-	.047	1,19	.150	3,81	●	●	
	3	.125	3,18	NR3062R	-	-	.063	1,59	.150	3,81	●	●	
	3	.062	1,58	Left hand NR3031L	-	-	.031	0,79	.094	2,39	●	●	
	3	.094	2,39	NR3047L	-	-	.047	1,19	.150	3,81	●	●	
	3	.125	3,18	NR3062L	-	-	.063	1,59	.150	3,81	●	●	

NOTE: Right-hand insert shown; left-hand insert is mirror image.

Order example:

Right Hand: **NGD3062RK**

Insert grade: **KU10T**

Left Hand: **NGD3062LK**

Insert grade: **KU10T**



end side mount, offset

E S

2. Insert Mounting Location

N S

1. Insert Holding Method

N – TOP NOTCH*

DH

4. Drop Head

R

3. Hand of Tool

end mount

side mount

2525M
(metric)

16
(inch)

5. Shank Size

metric:
Shank height and width in mm and holder length according to ISO standard.
inch:
This position will show a significant two-digit number that indicates the holder cross section. For shanks 5/8" square and larger, the number will represent the number of sixteenths of width and height. For shanks under 5/8" square, the number of sixteenths of cross section will be preceded by a zero. For rectangular holders, the first digit represents the number of eighths of width and the second digit the number of quarters of height, except for a toolholder 1 1/4" x 1 1/2", which is given the number 91.

W1 W1

insert size	inch	mm
2	.150	3,81
3	.195	4,95
4	.255	6,98

6. Insert Size

4 D

7. Qualified Surface and Length

A – qualified back and end, 4" long
B – qualified back and end, 4.5" long
C – qualified back and end, 5" long
D – qualified back and end, 6" long
E – qualified back and end, 7" long
V – qualified back and end, 3.5" long*
Q – qualified metric holder

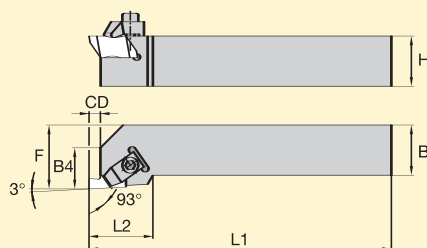
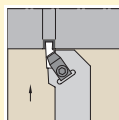
* Kennametal proprietary standard only.

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

TOP NOTCH Threading & Grooving Toolholders



NS



Gage Insert	Catalog number	H	B	F	L1	L2	B4	CD	B3	L3	Shim Shim	Hex Screw (inch)	Clamp	Clamp Screw	Hex (inch)/ Torx/ Torx Plus	Jack Screw (inch)	Hex
Inch	Right hand																
N.2R	NSR122B	.750	.750	1.000	4.50	.75	.35	.138	-	-	-	-	CM74	S310	7/64	-	-
N.2R	NSR162C	1.000	1.000	1.250	5.00	.75	.35	.138	-	-	-	-	CM74	S310	7/64	-	-
N.3R	NSR123A	.750	.750	1.000	4.00	1.25	.50	.210	-	-	-	-	CM72LP	S2112	25IP	-	-
N.3R	NSR123B	.750	.750	1.000	4.50	1.25	.50	.210	-	-	-	-	CM72LP	S2112	25IP	-	-
N.3R	NSR163C	1.000	1.000	1.250	5.00	1.25	.50	.210	-	-	-	-	CM72LP	S2112	25IP	-	-
N.3R	NSR163D	1.000	1.000	1.250	6.00	1.25	.50	.210	-	-	-	-	CM72LP	S2112	25IP	-	-
N.3R	NSR853D	1.250	1.000	1.250	6.00	1.25	.50	.210	-	-	-	-	CM72LP	S2112	25IP	-	-
N.3R	NSR203D	1.250	1.250	1.500	6.00	1.25	.50	.210	-	-	-	-	CM72LP	S2112	25IP	-	-
N.3R	NSR243D	1.500	1.500	2.000	6.00	1.38	.50	.210	-	-	-	-	CM72LP	S2112	25IP	-	-
N.3R	NSR243E	1.500	1.500	2.000	7.00	1.38	.50	.210	-	-	-	-	CM72LP	S2112	25IP	-	-
N.2L	Left hand																
N.2L	NSL122B	.750	.750	1.000	4.50	.75	.35	.138	-	-	-	-	CM75	S310	7/64	-	-
N.2L	NSL162C	1.000	1.000	1.250	5.00	.75	.35	.138	-	-	-	-	CM75	S310	7/64	-	-
N.3L	NSL123A	.750	.750	1.000	4.00	1.25	.50	.210	-	-	-	-	CM73LP	S2112	25IP	-	-
N.3L	NSL123B	.750	.750	1.000	4.50	1.25	.50	.210	-	-	-	-	CM73LP	S2112	25IP	-	-
N.3L	NSL163C	1.000	1.000	1.250	5.00	1.25	.50	.210	-	-	-	-	CM73LP	S2112	25IP	-	-
N.3L	NSL163D	1.000	1.000	1.250	6.00	1.25	.50	.210	-	-	-	-	CM73LP	S2112	25IP	-	-
N.3L	NSL853D	1.250	1.000	1.250	6.00	1.25	.50	.210	-	-	-	-	CM73LP	S2112	25IP	-	-
N.3L	NSL203D	1.250	1.250	1.500	6.00	1.25	.50	.210	-	-	-	-	CM73LP	S2112	25IP	-	-
N.3L	NSL243D	1.500	1.500	2.000	6.00	1.38	.50	.210	-	-	-	-	CM73LP	S2112	25IP	-	-
N.3L	NSL243E	1.500	1.500	2.000	7.00	1.38	.50	.210	-	-	-	-	CM73LP	S2112	25IP	-	-
Metric	Right hand																
N.2R	NSR2020K2	20	20	25	125	19	9	3,5	-	-	-	-	CM74	MS1200	T10	-	-
N.2R	NSR2525M2	25	25	32	150	19	9	3,5	-	-	-	-	CM74	MS1200	T10	-	-
N.3R	NSR2020K3	20	20	25	125	32	13	5,3	-	-	-	-	CM72LP	MS2111	25 IP	-	-
N.3R	NSR2525M3	25	25	32	150	32	13	5,3	-	-	-	-	CM72LP	MS2111	25 IP	-	-
N.3R	NSR3225P3	32	25	32	170	32	13	5,3	-	-	-	-	CM72LP	MS2111	25 IP	-	-
N.3R	NSR3232P3	32	32	40	170	32	13	5,3	-	-	-	-	CM72LP	MS2111	25 IP	-	-
N.4R	NSR2525M4	25	25	32	150	35	14	7,5	-	-	-	-	CM72LP	MS2111	25 IP	-	-
N.4R	NSR3225P4	32	25	32	170	35	14	7,5	-	-	-	-	CM72LP	MS2111	25 IP	-	-
N.4R	NSR3232P4	32	32	40	170	35	14	7,5	-	-	-	-	CM72LP	MS2111	25 IP	-	-
N.2L	Left hand																
N.2L	NSL2020K2	20	20	25	125	19	9	3,5	-	-	-	-	CM75	MS1200	T10	-	-
N.2L	NSL2525M2	25	25	32	150	19	9	3,5	-	-	-	-	CM75	MS1200	T10	-	-
N.3L	NSL2020K3	20	20	32	125	32	13	5,3	-	-	-	-	CM73LP	MS2111	25 IP	-	-
N.3L	NSL2525M3	25	25	32	150	32	13	5,3	-	-	-	-	CM73LP	MS2111	25 IP	-	-
N.3L	NSL3225P3	32	25	32	170	32	13	5,3	-	-	-	-	CM73LP	MS2111	25 IP	-	-
N.3L	NSL3232P3	32	32	40	170	32	13	5,3	-	-	-	-	CM73LP	MS2111	25 IP	-	-
N.4L	NSL2525M4	25	25	32	150	35	14	7,5	-	-	-	-	CM73LP	MS2111	25 IP	-	-
N.4L	NSL3225P4	32	25	32	170	35	14	7,5	-	-	-	-	CM73LP	MS2111	25 IP	-	-
N.4L	NSL3232P4	32	32	40	170	35	14	7,5	-	-	-	-	CM73LP	MS2111	25 IP	-	-

Order example:

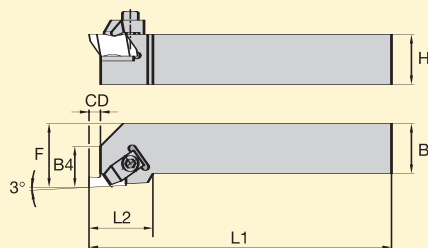
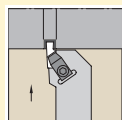
ANSI Catalog number: NSR122B

ISO Catalog number: NSR2020K2



TOP NOTCH Threading & Grooving Toolholders

NS (with shim)



Gage Insert	Catalog number	H	B	F	L1	L2	B4	CD	B3	L3	Shim Shim	Hex Screw	Hex (inch)	Clamp Clamp	Clamp Screw	Torx Plus	Jack Screw	Hex Screw (inch)
Inch	Right hand																	
N.4R	NSR164C	1.000	1.000	1.250	5.00	1.38	.54	.294	-	-	SM420	SL344	-	CM72LP	S2112	25 IP	-	-
N.4R	NSR164D	1.000	1.000	1.250	6.00	1.38	.54	.294	-	-	SM420	SL344	-	CM72LP	S2112	25 IP	-	-
N.4R	NSR854D	1.250	1.000	1.250	6.00	1.38	.54	.294	-	-	SM420	SL344	-	CM72LP	S2112	25 IP	-	-
N.4R	NSR864E	1.500	1.000	1.250	7.00	1.38	.54	.294	-	-	SM420	SL344	-	CM72LP	S2112	25 IP	-	-
N.4R	NSR204C	1.250	1.250	1.500	5.00	1.38	.54	.294	-	-	SM420	SL344	-	CM72LP	S2112	25 IP	-	-
N.4R	NSR204D	1.250	1.250	1.500	6.00	1.38	.54	.294	-	-	SM420	SL344	-	CM72LP	S2112	25 IP	-	-
N.4R	NSR244D	1.500	1.500	2.000	6.00	1.50	.54	.294	-	-	SM420	SL344	-	CM72LP	S2112	25 IP	-	-
N.4R	NSR244E	1.500	1.500	2.000	7.00	1.50	.54	.294	-	-	SM420	SL344	-	CM72LP	S2112	25 IP	-	-
	Left hand																	
N.4L	NSL164C	1.000	1.000	1.250	5.00	1.38	.54	.294	-	-	SM420	SL344	-	CM73LP	S2112	25 IP	-	-
N.4L	NSL164D	1.000	1.000	1.250	6.00	1.38	.54	.294	-	-	SM420	SL344	-	CM73LP	S2112	25 IP	-	-
N.4L	NSL854D	1.250	1.000	1.250	6.00	1.38	.54	.294	-	-	SM420	SL344	-	CM73LP	S2112	25 IP	-	-
N.4L	NSL864E	1.500	1.000	1.250	7.00	1.38	.54	.294	-	-	SM420	SL344	-	CM73LP	S2112	25 IP	-	-
N.4L	NSL204C	1.250	1.250	1.500	5.00	1.38	.54	.294	-	-	SM420	SL344	-	CM73LP	S2112	25 IP	-	-
N.4L	NSL204D	1.250	1.250	1.500	6.00	1.38	.54	.294	-	-	SM420	SL344	-	CM73LP	S2112	25 IP	-	-
N.4L	NSL244D	1.500	1.500	2.000	6.00	1.50	.54	.294	-	-	SM420	SL344	-	CM73LP	S2112	25 IP	-	-
N.4L	NSL244E	1.500	1.500	2.000	7.00	1.50	.54	.294	-	-	SM420	SL344	-	CM73LP	S2112	25 IP	-	-



Kennametal's Top Notch clamping system provides the versatility to do both threading and grooving.

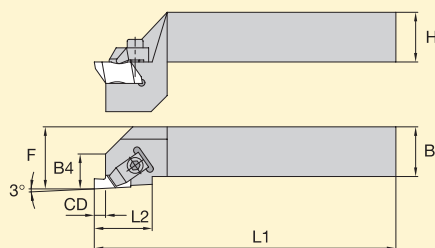
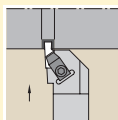
Top Notch inserts employ a unique top rake chip control geometry that efficiently evacuates chips and produces better quality parts faster.

Order example:
ANSI Catalog number: NSR164C

TOP NOTCH Threading & Grooving Toolholders



NS-DH



Gage Insert	Catalog number	H	B	F	L1	L2	B4	CD	B3	L3	Shim	Shim Screw	Hex (inch)	Clamp	Clamp Screw	Hex (inch)/Torx/Plus	Jack Screw	Hex (inch)
Inch	Right hand																	
N.2R	NSRDH122B	.750	.750	1.000	4.50	.75	.40	.138	-	-	-	-	-	CM74	S310	7/64	S1020	1/8
N.2R	NSRDH162C	1.000	1.000	1.250	5.00	.75	.40	.138	-	-	-	-	-	CM74	S310	7/64	S1020	1/8
N.3R	NSRDH123A	.750	.750	1.250	4.00	1.25	.58	.210	-	-	-	-	-	CM72LP	S2112	25 IP	-	-
N.3R	NSRDH163C	1.000	1.000	1.250	5.00	1.25	.58	.210	-	-	-	-	-	CM72LP	S2112	25 IP	-	-
N.3R	NSRDH163D	1.000	1.000	1.250	6.00	1.25	.58	.210	-	-	-	-	-	CM72LP	S2112	25 IP	-	-
N.3R	NSRDH203D	1.250	1.250	1.500	6.00	1.25	.62	.210	-	-	-	-	-	CM72LP	S2112	25 IP	S965	3/16
N.4R	NSRDH204D	1.250	1.250	1.500	6.00	1.38	.62	.294	-	-	-	-	-	CM72LP	S2112	25 IP	S965	3/16
N.3L	Left hand NSLDH203D	1.250	1.250	1.500	6.00	1.25	.62	.210	-	-	-	-	-	CM73LP	S2112	25 IP	S965	3/16
Metric	Right hand																	
N.2R	NSRDH2020K2	20	20	25	125	19	9	3,5	-	-	-	-	-	CM74	MS1200	T10	-	-
N.2R	NSRDH2525M2	25	25	32	150	19	9	3,5	-	-	-	-	-	CM74	MS1200	T10	-	-
N.3R	NSRDH2525M3	25	25	32	150	32	13	5,3	-	-	-	-	-	CM72LP	MS2111	25 IP	-	-
N.3R	NSRDH3232P3	32	32	40	170	32	13	5,3	-	-	-	-	-	CM72LP	MS2111	25 IP	-	-

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

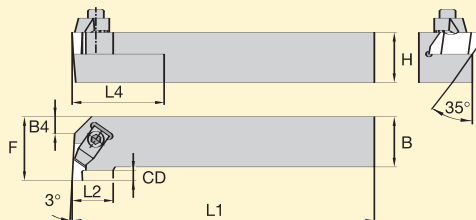
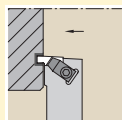
Order example:
ANSI Catalog number: NSRDH122B

ISO Catalog number: NSRDH2020K2



TOP NOTCH Threading & Grooving Toolholders

NE



Gage Insert	Catalog number	H	B	F	L1	L2	B4	CD	B3	L4	Shim Hex (inch)/ Clamp Torx/ TorxPlus Jack Hex					
											Shim	Screw	Shim	Hex	Clamp	Screw
Inch	Right hand															
N.2L	NER122B	.750	.750	1.000	4.50	.50	.29	.138	-	1.0	-	-	-	CM75	S310	7/64
N.2L	NER162C	1.000	1.000	1.250	5.00	.50	.41	.138	-	1.0	-	-	-	CM75	S310	7/64
N.3L	NER123B	.750	.750	1.125	4.50	.75	-	.210	-	2.0	-	-	-	CM73LP	S2112	25 IP
N.3L	NER163C	1.000	1.000	1.250	5.00	.75	-	.210	-	2.0	-	-	-	CM73LP	S2112	25 IP
N.3L	NER163D	1.000	1.000	1.250	6.00	.75	-	.210	-	2.0	-	-	-	CM73LP	S2112	25 IP
N.3L	NER853D	1.250	1.000	1.250	6.00	.75	-	.210	-	2.0	-	-	-	CM73LP	S2112	25 IP
N.3L	NER203D	1.250	1.250	1.500	6.00	.75	.26	.210	-	2.0	-	-	-	CM73LP	S2112	25 IP
N.3L	NER243D	1.500	1.500	2.000	6.00	.75	.76	.210	-	2.0	-	-	-	CM73LP	S2112	25 IP
N.4L	NER164C	1.000	1.000	1.375	5.00	.75	-	.294	-	2.0	-	-	-	CM73LP	S2112	25 IP
N.4L	NER164D	1.000	1.000	1.375	6.00	.75	-	.294	-	2.0	-	-	-	CM73LP	S2112	25 IP
N.4L	NER204D	1.250	1.250	1.625	6.00	.75	.27	.294	-	2.0	-	-	-	CM73LP	S2112	25 IP
N.4L	NER244D	1.500	1.500	2.000	6.00	.75	.65	.294	-	2.0	-	-	-	CM73LP	S2112	25 IP
	Left hand															
N.2R	NEL122B	.750	.750	1.000	4.50	.50	.29	.138	-	1.0	-	-	-	CM74	S310	7/64
N.2R	NEL162C	1.000	1.000	1.250	5.00	.50	.41	.138	-	1.0	-	-	-	CM74	S310	7/64
N.3R	NEL123B	.750	.750	1.125	4.50	.75	-	.210	-	2.0	-	-	-	CM72LP	S2112	25 IP
N.3R	NEL163C	1.000	1.000	1.250	5.00	.75	-	.210	-	2.0	-	-	-	CM72LP	S2112	25 IP
N.3R	NEL163D	1.000	1.000	1.250	6.00	.75	-	.210	-	2.0	-	-	-	CM72LP	S2112	25 IP
N.3R	NEL853D	1.250	1.000	1.250	6.00	.75	-	.210	-	2.0	-	-	-	CM72LP	S2112	25 IP
N.3R	NEL203D	1.250	1.250	1.500	6.00	.75	.26	.210	-	2.0	-	-	-	CM72LP	S2112	25 IP
N.3R	NEL243D	1.500	1.500	2.000	6.00	.75	.76	.210	-	2.0	-	-	-	CM72LP	S2112	25 IP
N.4R	NEL164C	1.000	1.000	1.375	5.00	.75	-	.294	-	2.0	-	-	-	CM72LP	S2112	25 IP
N.4R	NEL164D	1.000	1.000	1.375	6.00	.75	-	.294	-	2.0	-	-	-	CM72LP	S2112	25 IP
N.4R	NEL204D	1.250	1.250	1.625	6.00	.75	.27	.294	-	2.0	-	-	-	CM72LP	S2112	25 IP
N.4R	NEL244D	1.500	1.500	2.000	6.00	.75	.65	.294	-	2.0	-	-	-	CM72LP	S2112	25 IP
Metric	Right hand															
N.2L	NER2020K2	20	20	25	125	15	-	3,5	-	25,4	-	-	-	CM75	MS1200	T10
N.2L	NER2525M2	25	25	32	150	15	-	3,5	-	25,4	-	-	-	CM75	MS1200	T10
N.3L	NER2525M3	25	25	32	150	22	-	5,3	-	50,8	-	-	-	CM73LP	MS2111	25 IP
N.3L	NER3225P3	32	25	32	170	22	-	5,3	-	50,8	-	-	-	CM73LP	MS2111	25 IP
N.4L	NER2525M4	25	25	35	150	24	-	7,5	-	50,8	-	-	-	CM73LP	MS2111	25 IP
N.4L	NER3225P4	32	25	35	170	24	-	7,5	-	50,8	-	-	-	CM73LP	MS2111	25 IP
N.4L	NER3232P4	32	32	40	170	24	-	7,5	-	50,8	-	-	-	CM73LP	MS2111	25 IP
	Left hand															
N.2R	NEL2020K2	20	20	25	125	15	-	3,5	-	25,4	-	-	-	CM74	MS1200	T10
N.2R	NEL2525M2	25	25	32	150	15	-	3,5	-	25,4	-	-	-	CM74	MS1200	T10
N.3R	NEL2525M3	25	25	32	150	22	-	5,3	-	50,8	-	-	-	CM72LP	MS2111	25 IP
N.3R	NEL3225P3	32	25	32	170	22	-	5,3	-	50,8	-	-	-	CM72LP	MS2111	25 IP
N.4R	NEL2525M4	25	25	35	150	24	-	7,5	-	50,8	-	-	-	CM72LP	MS2111	25 IP
N.4R	NEL3225P4	32	25	35	170	24	-	7,5	-	50,8	-	-	-	CM72LP	MS2111	25 IP
N.4R	NEL3232P4	32	32	40	170	24	-	7,5	-	50,8	-	-	-	CM72LP	MS2111	25 IP

Order example:
ANSI Catalog number: NER122B

ISO Catalog number: NER2020K2

KENLOC INSERTS
SCREW-ON INSERTS
TOOL HOLDERS
BORING BARS
TOP NOTCH GROOVING
TURNING PRODUCTS
TOP NOTCH HOLDERS
A4
A2
LT THREADING
TOP NOTCH THREADING

TOP NOTCH Threading & Grooving Boring Bar Identification System



Inch

A two-digit number that indicates the bar diameter in 1/16-inch increments.

2. Bar Diameter

A 32

1. Bar Type

4. Insert Location

6. Insert Size

insert number	W1
1	.100
2	.150
3	.195
4	.255
5	.380
6	.383
8	.438

3. Insert Holding Method

N* – TOP NOTCH

5. Hand of Bar

7. Additional Information

through-coolant interchangeable head

*Kennametal standard only.

Metric

bar diameter in millimeters.

2. Bar Diameter

A 25

1. Bar Type

3. Bar Length

metric bars:
M = 150 mm
Q = 180 mm
R = 200 mm
S = 250 mm
T = 300 mm
U = 350 mm

5. Insert Shape

N* – TOP NOTCH

7. Rake Angle

9. Insert Size

insert number	(mm)	W1
1	3,54	.100
2	3,81	.150
3	5,35	.195
4	6,40	.255
5	9,65	.380
6	9,73	.383
8	11,13	.438

4. Insert Holding Method

N* – TOP NOTCH

6. Insert Location

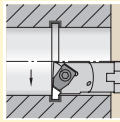
8. Hand of Bar

*Kennametal standard only.

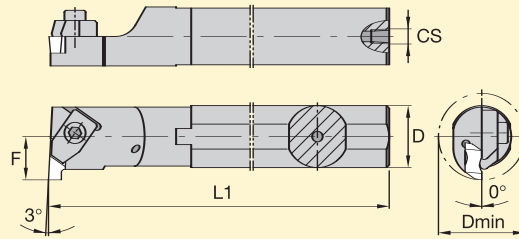


TOP NOTCH Threading & Grooving Boring Bars

A-NE



Steel shank with through coolant



Gage
Insert

Catalog number

Dmin*

D

L1

F

A

CS



Clamp



Clamp
Screw



Hex
(inch)/
Torx
Plus

Inch	Right hand	Dmin*	D	L1	F	A	CS	Clamp	Clamp Screw	Hex (inch)/ Torx Plus
N.2L	A08NER2	.730	.500	8	.437	-	1/16-27 NPT	CM147	S39	7/64
N.2L	A10NER2	1.000	.625	10	.500	-	1/8-27 NPT	CM75	S310	7/64
N.2L	A12NER2	1.125	.750	10	.562	-	1/8-27 NPT	CM75	S310	7/64
N.2L	A16NER2	1.375	1.000	12	.688	-	1/4-18 NPT	CM75	S310	7/64
N.3L	A16NER3	1.375	1.000	12	.688	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.3L	A20NER3	1.750	1.250	14	.875	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.3L	A24NER3	2.000	1.500	14	1.000	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.3L	A28NER3	2.250	1.750	14	1.125	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.3L	A32NER3	2.500	2.000	16	1.250	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.3L	A40NER3	3.000	2.500	16	1.500	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.4L	A28NER4	2.500	1.750	14	1.250	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.4L	A32NER4	2.750	2.000	16	1.375	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.4L	A36NER4	3.000	2.250	16	1.500	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.4L	A40NER4	3.250	2.500	16	1.625	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.2R	Left hand									
N.2R	A08NEL2	.730	.500	8	.437	-	1/16-27 NPT	CM146	S39	7/64
N.2R	A10NEL2	1.000	.625	10	.500	-	1/8-27 NPT	CM74	S310	7/64
N.2R	A12NEL2	1.125	.750	10	.562	-	1/8-27 NPT	CM74	S310	7/64
N.2R	A16NEL2	1.375	1.000	12	.688	-	1/4-18 NPT	CM74	S310	7/64
N.3R	A16NEL3	1.375	1.000	12	.688	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3R	A20NEL3	1.750	1.250	14	.875	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3R	A24NEL3	2.000	1.500	14	1.000	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3R	A28NEL3	2.250	1.750	14	1.125	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3R	A32NEL3	2.500	2.000	16	1.250	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3R	A40NEL3	3.000	2.500	16	1.500	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.4R	A28NEL4	2.500	1.750	14	1.250	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.4R	A32NEL4	2.750	2.000	16	1.375	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.4R	A36NEL4	3.000	2.250	16	1.500	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.4R	A40NEL4	3.250	2.500	16	1.625	-	1/4-18 NPT	CM72LP	S2112	25 IP

*NOTE: Minimum bore diameter (Dmin) capability varies with thread type and groove depth. See pages A67-A68 for details.

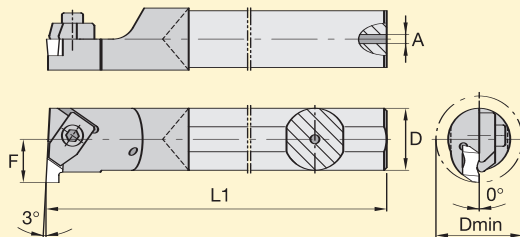
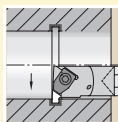
To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

Order example:
ANSI Catalog number: A08NER2

TOP NOTCH Threading & Grooving Boring Bars



E-NE

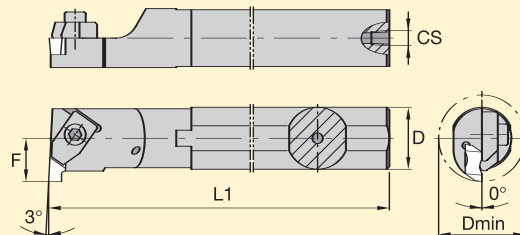
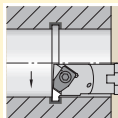


Carbide shank with through coolant



Gage Insert	Catalog number	Dmin*	D	L1	F	A	CS	Clamp	Clamp Screw	Hex (inch)/Torx Plus
Inch	Right hand									
N.2L	E08NER2	.730	.500	8	.437	0.19	-	CM147	S39	7/64
N.2L	E10NER2	1.000	.625	10	.500	0.22	-	CM75	S310	7/64
N.2L	E12NER2	1.125	.750	10	.562	0.28	-	CM75	S310	7/64
N.3L	E16NER3	1.375	1.000	12	.688	0.31	-	CM73LP	S2112	25 IP
N.2R	Left hand									
N.2R	E08NEL2	.730	.500	8	.437	0.19	-	CM146	S39	7/64
N.2R	E10NEL2	1.000	.625	10	.500	0.22	-	CM74	S310	7/64
N.2R	E12NEL2	1.125	.750	10	.562	0.28	-	CM74	S310	7/64
N.3R	E16NEL3	1.375	1.000	12	.688	0.31	-	CM72LP	S2112	25 IP

A-NNT



Steel shank with through coolant



Gage Insert	Catalog number	Dmin*	D	L1	F	A	CS	Clamp	Clamp Screw	Hex (mm)/Torx Plus
Metric	Right hand									
N.2L	A12MNNTOR2	18,5	12	150	11	-	1/16-27 NPT	CM147	MS1025	2,5
N.2L	A16MNNTOR2	22	16	150	11	-	1/8-27 NPT	CM75	MS1025	2,5
N.2L	A20QNNTOR2	26	20	180	13	-	1/8-27 NPT	CM75	MS1025	2,5
N.2L	A25RNNTOR2	34	25	200	17	-	1/4-18 NPT	CM75	MS1025	2,5
N.3L	A25RNNTOR3	34	25	200	17	-	1/4-18 NPT	CM73LP	MS2111	25 IP
N.3L	A32SNNTOR3	44	32	250	22	-	1/4-18 NPT	CM73LP	MS2111	25 IP
N.3L	A40TNNTOR3	54	40	300	27	-	1/4-18 NPT	CM73LP	MS2111	25 IP
N.4L	A40TNNTOR4	54	40	300	27	-	1/4-18 NPT	CM73LP	MS2111	25 IP
N.4L	A50UNNTOR4	70	50	350	35	-	1/4-18 NPT	CM73LP	MS2111	25 IP
N.2R	Left hand									
N.2R	A12MNNTOL2	18,5	12	150	11	-	1/16-27 NPT	CM146	MS1025	2,5
N.2R	A16MNNTOL2	22	16	150	11	-	1/8-27 NPT	CM74	MS1025	2,5
N.2R	A20QNNTOL2	26	20	180	13	-	1/8-27 NPT	CM74	MS1025	2,5
N.2R	A25RNNTOL2	34	25	200	17	-	1/4-18 NPT	CM74	MS1025	2,5
N.3R	A25RNNTOL3	34	25	200	17	-	1/4-18 NPT	CM72LP	MS2111	25 IP
N.3R	A32SNNTOL3	44	32	250	22	-	1/4-18 NPT	CM72LP	MS2111	25 IP
N.3R	A40TNNTOL3	54	40	300	27	-	1/4-18 NPT	CM72LP	MS2111	25 IP
N.4R	A40TNNTOL4	54	40	300	27	-	1/4-18 NPT	CM72LP	MS2111	25 IP
N.4R	A50UNNTOL4	70	50	350	35	-	1/4-18 NPT	CM72LP	MS2111	25 IP

*NOTE: Minimum bore diameter (Dmin) capability varies with thread type and groove depth. See pages A67-A68 for details.

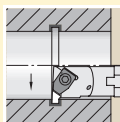
Order example:
ANSI Catalog number: E08NER2

ISO Catalog number: A12MNNTOR2

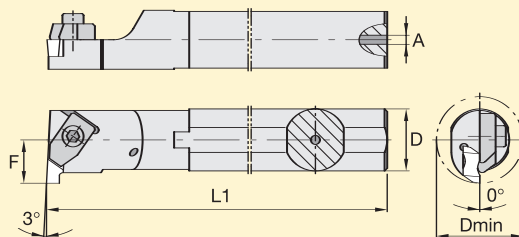


TOP NOTCH Threading & Grooving Boring Bars

J-NE

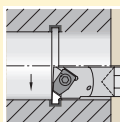


Heavy metal shank
with through coolant

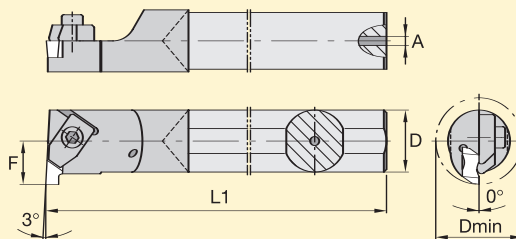


Gage Insert	Catalog number	Dmin*	D	L1	F	A	CS	Clamp	Clamp Screw	Hex (inch)/ Torx Plus
Inch	Right hand									
N.2L	J08NER2	.730	.500	8	.437	.16	-	CM147	S39	7/64
N.2L	J10NER2	1.000	.625	8	.500	.16	-	CM75	S310	7/64
N.2L	J12NER2	1.125	.750	8	.562	.16	-	CM75	S310	7/64
N.2L	J16NER2	1.375	1.000	10	.688	.25	-	CM75	S310	7/64
N.3L	J16NER3	1.375	1.000	10	.688	.25	-	CM73LP	S2112	25 IP
	Left hand									
N.2R	J08NEL2	.730	.500	8	.437	.16	-	CM146	S39	7/64
N.2R	J10NEL2	1.000	.625	8	.500	.16	-	CM74	S310	7/64
N.2R	J12NEL2	1.125	.750	8	.562	.16	-	CM74	S310	7/64
N.2R	J16NEL2	1.375	1.000	10	.688	.25	-	CM74	S310	7/64
N.3R	J16NEL3	1.375	1.000	10	.688	.25	-	CM72LP	S2112	25 IP

E-NNT



Carbide shank with
through coolant



Gage Insert	Catalog number	Dmin*	D	L1	F	A	CS	Clamp	Clamp Screw	Torx/ Torx Plus
Metric	Right hand									
N.2L	E16RNNTOR2	22	16	200	11	5,5	-	CM75	MS1200	T10
N.2L	E20SNNTOR2	26	20	250	13	7,1	-	CM75	MS1200	T10
N.3L	E25TNNTOR3	34	25	300	17	7,9	-	CM73LP	MS2111	25 IP
	Left hand									
N.2R	E16RNNTOL2	22	16	200	11	5,5	-	CM74	MS1200	T10
N.2R	E20SNNTOL2	26	20	250	13	7,1	-	CM74	MS1200	T10
N.3R	E25TNNTOL3	34	25	300	17	7,9	-	CM72LP	MS2111	25 IP

*NOTE: Minimum bore diameter (Dmin) capability varies with thread type and groove depth. See pages A67-A68 for details.

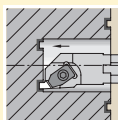
Order example:
ANSI Catalog number: J08NER2

ISO Catalog number: E16RNNTOR2

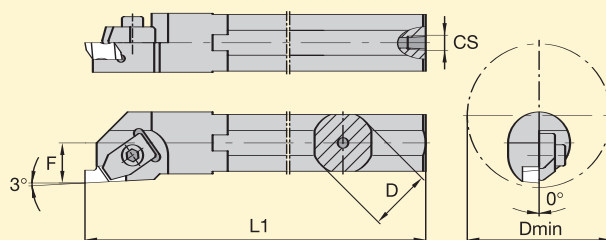
TOP NOTCH Threading & Grooving Boring Bars



A-NS



Steel shank with through coolant



Gage
Insert

Catalog number

Dmin*

D

L1

F

A

CS



Clamp



Clamp
Screw



Torx
Plus

Inch	Right hand	Dmin*	D	L1	F	A	CS	Clamp	Clamp Screw	Torx Plus
N.3R	A16NSR3	2.250	1.000	12	.640	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3R	A20NSR3	2.250	1.250	14	.765	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3R	A24NSR3	2.250	1.500	14	.890	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3R	A28NSR3	2.250	1.750	14	1.015	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3R	A32NSR3	2.375	2.000	16	1.281	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3R	A40NSR3	2.875	2.500	16	1.531	-	1/4-18 NPT	CM72LP	S2112	25 IP
N.3L	Left hand	Dmin*	D	L1	F	A	CS	Clamp	Clamp Screw	Torx Plus
N.3L	A16NSL3	2.250	1.000	12	.640	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.3L	A20NSL3	2.250	1.250	14	.765	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.3L	A24NSL3	2.250	1.750	14	1.015	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.3L	A28NSL3	2.250	1.500	14	.890	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.3L	A32NSL3	2.375	2.000	16	1.281	-	1/4-18 NPT	CM73LP	S2112	25 IP
N.3L	A40NSL3	2.875	2.500	16	1.531	-	1/4-18 NPT	CM73LP	S2112	25 IP

*Minimum bore applicable only when used with NFD-KI inserts on internal face grooves (see Lathe Catalog 4010 for inserts). See page A68 for machining guidelines when face grooving with NG and NGD inserts.

To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

Order example:
ANSI Catalog number: **A16NSR3**



Machining Guidelines for Chip Control – Grooving

- Center height of insert should be positioned at the center of the workpiece, or up to .005 inch (0,13 mm) above.
- Dwell time in the bottom of the groove, more than three revolutions, is not recommended.
- Chip control is feed rate related, and should be adjusted to fit the particular situation. Recommended feed range is .003-0.012 ipr (0,08-0,3 mm/rev).

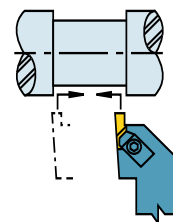
Machining Guidelines for Chip Control – Turning/Profiling

- Maximum depth of cut for side cutting (turning/profiling) depends upon material being cut and width of the tool. However, some general guidelines are:

- .031 - .062 inch (0,79-1,6 mm) wide insert can cut up to .025 inch (0,6 mm) deep.
- .067 - .128 inch (1,7-3,3 mm) wide insert can cut up to .040 inch (1,0 mm) deep.
- .138 - .189 inch (3,5-4,8 mm) wide insert can cut up to .080 inch (2,0 mm) deep.
- .197-.375 inch (5,0-9,5 mm) wide insert can cut up to .120 inch (3,0 mm) deep.

Finish turning the groove

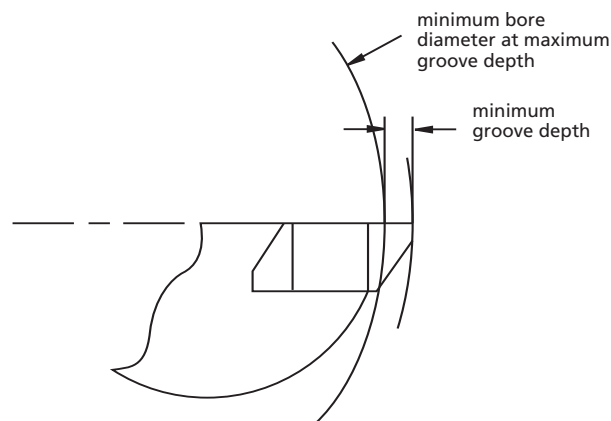
- Plunge both sides of groove width.
- Plunge center area to remove web of material remaining.
- To avoid insert chipping and to achieve groove wall perpendicularity, follow the tool path outlined here.
- Use the lightest depth of cut that still allows good chip breaking, tool life, and surface finish.



Groove Limits (Maximum Internal Groove Depth Versus Minimum Bore Diameter)

insert	maximum groove depth		minimum bore diameter	
	inch	mm	inch	mm
NG-2031R/L NG-2041R/L NG-2047R/L NG-2058R/L	.050	1,27	.730	18,54
NG-2062R/L NG-2094R/L NG-2125R/L	.110	2,79	2.500	63,5
	.102	2,59	1.750	44,45
	.098	2,49	1.500	38,10
	.080	2,03	1.000	25,40
	.055	1,40	.730	18,54
NG-3047R/L NG-3062R/L NG-3072R/L NG-3078R/L NG-3088R/L	.094	2,39	1.750	44,45
	.090	2,29	1.625	41,28
	.075	1,91	1.375	34,93
			2.375	60,33
			2.125	53,98
NG-3094R/L NG-3097R/L NG-3105R/L NG-3110R/L NG-3122R/L NG-3125R/L NG-3142R/L NG-3156R/L NG-3178R/L NG-3185R/L NG-3189R/L	.150	3,81	1.875	47,63
	.145	3,68	1.625	41,28
	.138	3,51	1.375	34,93
	.125	3,18		
	.110	2,79		
			2.750	69,85
			5.750	146,05
	.250	6,35	5.000	127,00
NG-4189R/L NG-4213R/L NG-4219R/L NG-4250R/L	.245	6,22	4.500	114,30
	.240	6,10	3.250	82,55
	.218	5,54		
	.200	5,08	2.500	63,50

Internal Groove Depth Versus Bar Interference



NOTE: Internal grooving depth limits are a function of bar clearance versus bore diameters.

*The same maximum groove depth and minimum bore diameter values also apply to metric, NG-K (chip control), and NR (full radius) inserts of similar size.

Technical Data

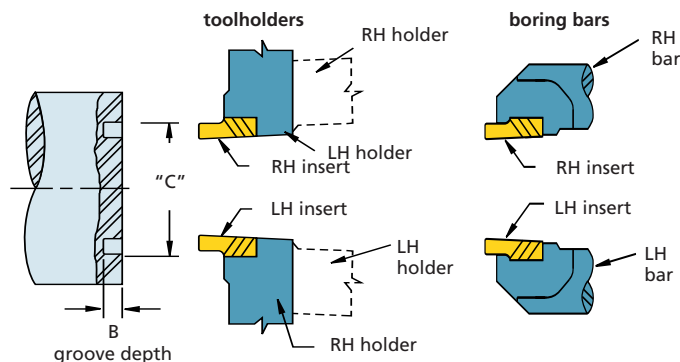


Top Notch Grooving

Machining Guidelines for Face Grooving Operations – External

Standard NG/NGD Inserts

insert family	maximum groove depth "B"		minimum groove diameter "C"	
	inch	mm	inch	mm
NG-2	.050	1,27	2.13	54,0
NG-2	.110	2,79	3.50	88,9
NG-3	.094	2,39	4.00	101,6
NG-3	.125	3,18	5.00	127,0
NG-3	.150	3,81	5.50	139,7
NGD-3	.250	6,35	6.88	174,6
NG-4	.150	3,81	6.00	152,4
NG-4	.250	6,35	8.25	209,6
NGD-4	.375	9,53	8.75	222,3
NGD-4	.500	12,70	8.75	222,3



Top Notch Threading

Inch-sized 60° V-Threading Limits

Internal threading limitations NT-1, NT-2 V-threading inserts

threads per inch	nominal thread size	minimum minor diameter (inch)
	NT-2	NT-2
6	1 7/8	1.695
7	1 3/4	1.595
8	1 5/8	1.490
9	1 9/16	1.442
10	1 1/2	1.392
11	1 7/16	1.339
11 1/2	1 3/8	1.281
12	1 3/8	1.285
13	1 5/16	1.229
14	1 1/4	1.173
16	1 1/4	1.182
18	1 1/8	1.065
20	1 1/8	1.071
24*	1 1/16	1.017

*Twenty-four threads per inch and finer can be cut with an NT-2 insert provided the minor diameter is 1.000 inch or larger.

Internal threading limitations NT-3 and 4 V-threading inserts

threads per inch	nominal thread size	minimum minor diameter (inch)
4**	3	2.729
4 1/2**	2 7/8	2.634
5	2 3/4	2.534
6	2 1/2	2.320
7	2 1/4	2.095
8	2	1.865
9	1 15/16	1.817
10	1 7/8	1.767
11	1 13/16	1.714
11 1/2	1 3/4	1.656
12	1 3/4	1.660
13	1 5/8	1.542
14	1 9/16	1.485
16*	1 7/16	1.370

*Sixteen threads per inch and finer can be cut provided minor diameter is 1.370 inch or larger.

**NT-4 insert only.

Metric 60° V-Threading Limits

Internal threading limitations NT-1 and NT-2 60° V-threading

thread pitch (mm)	nominal thread size	minimum minor thread diameter (mm)
	NT-2	NT-2
4,00	M48 x 4.00	43,67
3,00	M42 x 3.00	38,75
2,50	M39 x 2.50	36,29
2,00	M33 x 2.00	30,84
1,75	M32 x 1.75	30,11
1,50	M32 x 1.50	30,38
1,25	M29 x 1.29	27,65
1,00*	M27 x 1.00	25,92
0,75	M22 x 0.75	21,19

*Thread pitch of 1 mm and less can be cut with an NT-2 insert provided the core thread diameter is 25 mm or larger.

Internal threading limitations NT-3 and NT-4 60° V-threading

thread pitch (mm)	nominal thread size	minimum minor thread diameter (mm)
6,00**	M76 x 6.00	69,50
5,50**	M73 x 5.50	67,05
5,00	M70 x 5.00	64,59
4,00	M64 x 4.00	59,67
3,00	M52 x 3.00	48,75
2,50	M48 x 2.50	45,29
2,00	M42 x 2.00	39,84
1,75	M40 x 1.75	38,11
1,50*	M38 x 1.50	36,38

*Thread pitch of 1,5 mm and less can be cut provided core thread diameter is 35 mm or larger.

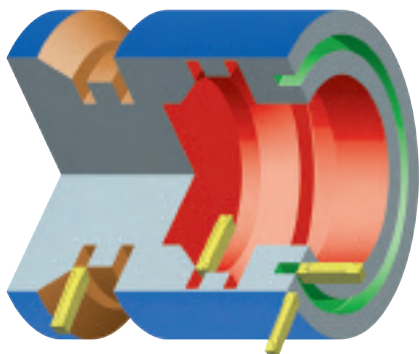
**NT-4-insert only.

For additional threading technical information, visit

www.kennametal.com

A4 Groove & Turn

- One tool for turning, facing, grooving, face-grooving, and cut-off... in OD and ID applications – that means exceptionally fast cycle times, no turret indexes!
- Extra-long clamping area, ground 120° bottom prism seating surface, and an exclusive top guide rail combine to deliver unsurpassed grooving and side-turning stability!
- Precise insert positioning is ensured – for accurate cuts!



The A4 system increases your productivity:

- Covers multiple applications.
- Reduces tool cost.
- Minimizes machining time.

KENNA UNIVERSAL – A4 Groove & Turn



3 Easy Steps to Greater Productivity in Grooving and Turning

1st Step – Select Chipbreaker Style and Feed Rate

Choose Chipbreaker Based on Material Type.

Steel	Stainless Steel	Cast Iron	High-Temp Alloys
GMN	GMP	GMN	GMP

Depth of Cut and Feed Guidelines for Square Inserts (A4G...):

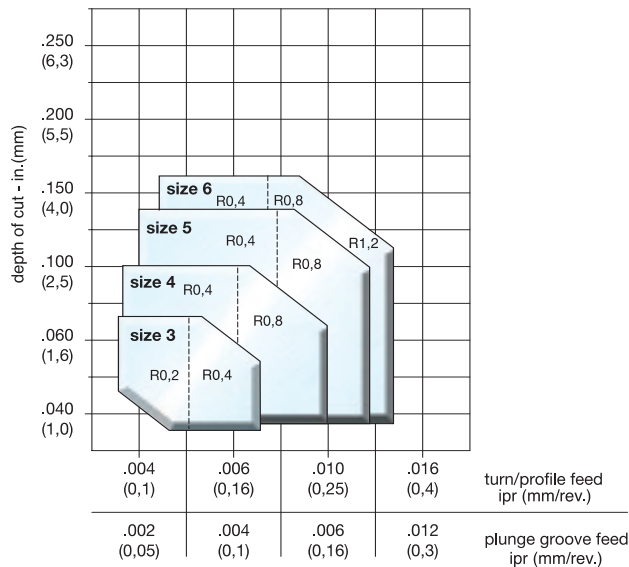
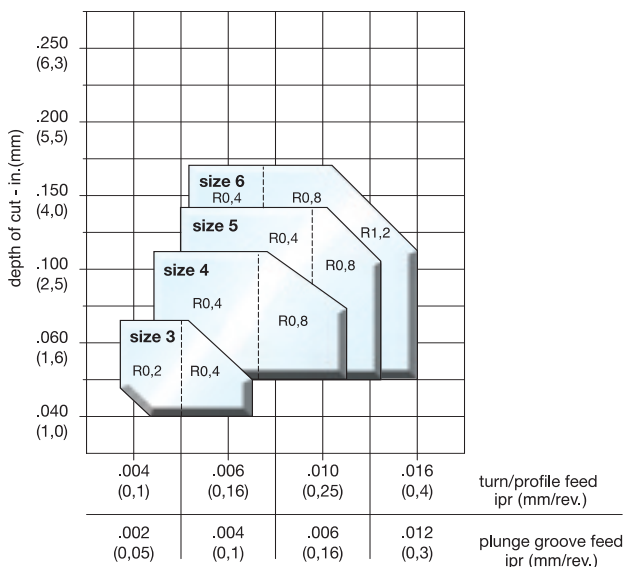
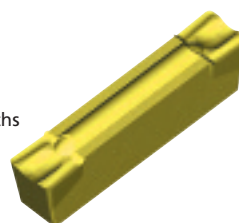
GMN Chipbreaker

- Groove & turn molded inserts
- Stable cutting edge
- Available in metric widths only



GMP Chipbreaker

- Groove & turn molded inserts
- Positive rake angle
- Available in inch and metric widths



NOTE: Select feed based on nose radius. Diagram explanation: R0,2 - R = corner radius; 0,2 = 0,2 mm radius; see page A72 for further references.

Depth of Cut and Feed Guidelines for Full Radius Inserts (A4R...):

GMN Chipbreaker



Maximum turning and profiling depth of cut equals half the insert width.

The maximum turn and profile feed rate depends on the material to be machined and the depth of cut. For easy-to-machine materials, feed can be increased up to 1.5 times.



2nd Step – Select Speed

Recommended KENNA UNIVERSAL Grade

Cutting Conditions		Grades
heavily interrupted cut		KU30T
lightly interrupted cut		KU30T
varying depth of cut, casting or forging skin		KU30T
smooth cut, pre-turned surface		KU30T

Recommended KENNA UNIVERSAL Cutting Speeds

Material Group	Grade	Speed - sfm (m/min)					Starting Conditions	
		150 (45)	300 (90)	450 (140)	600 (185)	750 (230)	sfm	m/min
P	KU30T						400	120
M	KU30T						350	105
K	KU30T						650	200
S	KU30T						200	60

3rd Step – Select Insert and Holder from Catalog Page

Example for A4 – Groove and Turn

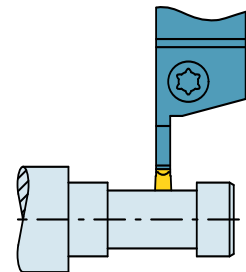
material: low-alloyed steel
 workpiece OD: 1.5 in. (38 mm)
 groove depth: .5 in. (12 mm)
 groove width: .850 in. (22 mm)
 operation: lightly interrupted cut

Recommendation:

insert: A4G0405M04U08GMN
 grade: KU30T
 insert width: .159 in. (4,05 mm)
 insert seat size: 4

toolholder: A45MR160417
 grooving depth: .670 in. (17 mm)
 seat size: 4

NOTE: The insert seat size must match the seat size of your toolholder selection.



speed: 400 sfm (120 m/min)
 turn feed: .010 ipr (0,25 mm)
 plunge feed: .006 ipr (0,14 mm)

To place an order, contact your authorized
 Kennametal distributor or visit www.kennametal.com.

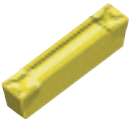
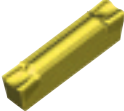
A4 Insert Identification System



Groove & Turn Inserts

A4 – Groove & Turn 1. Tooling System A4		Expressed in 1/100 mm or .001 in. 3. Groove Width 0405		Pocket Seat Size 03 04 05 06		Cutting Width (mm) 3,0 – 3,05 4,0 – 4,05 5,0 – 5,05 6,0 – 6,05		Metric 02 = 0,2 04 = 0,4 08 = 0,8		Inch 05 = .008 1 = .016 2 = .032 full radius = 00	
				5. Seat Size 04		U		7. Corner Radius 02		GMN	
2. Insert Type G – square R – full radius		4. Unit of Measurement for Grooving Width M – metric		6. Insert Tolerance U = utility molded grooving width tolerance: 3,05-6,05: $\frac{+0,006 \text{ in.}}{-0}$ $\frac{(+0,15 \text{ mm})}{-0}$				8. Chipbreaker Type/ Edge Prep GMN = groove & turn medium machining stable cutting edge GMP = groove & turn medium machining positive rake angle			

Insert Overview Table

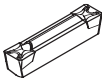
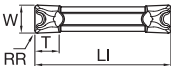
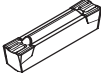
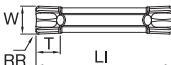
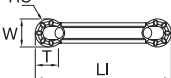
Insert Type & Chipbreaker Designation		Application Range	Metric Widths (mm)	Inch Widths (in.)	Steel	Stainless Steel	Cast Iron	High-Temp Alloys
molded: A4G-U-GMN		Groove & Turn: • stable cutting edge for higher feed rates • utility molded	3,05-10,05	–	●		●	
molded: A4G-U-GMP		Groove & Turn: • positive rake angle • reduced cutting force • small to medium feed rates • utility molded	3,05-10,05	–	○	●		●
molded: A4R-U-GMN		Groove & Turn: • stable cutting edge for higher feed rates • utility molded	3,05-10,05	–	●		●	○

● - primary application ○ - secondary application



A4 Groove & Turn Inserts

Dimensions and Grade Selection

				Catalog number	Dimensions								KUB30T	KUB30T
	Seat size	W			RR		RC		LI		T			
		inch	mm		inch	mm	inch	mm	inch	mm	inch	mm		
A4G-U-GMN  	3	.120	3,05	A4G0305M03U02GMN	.008	0,2	—	—	.79	20	.138	3,5	●	
	3	.120	3,05	A4G0305M03U04GMN	.016	0,4	—	—	.79	20	.138	3,5	●	
	4	.159	4,05	A4G0405M04U04GMN	.016	0,4	—	—	.79	20	.138	3,5	●	
	5	.199	5,05	A4G0505M05U04GMN	.016	0,4	—	—	.98	25	.165	4,2	●	
	5	.199	5,05	A4G0505M05U08GMN	.031	0,8	—	—	.98	25	.165	4,2	●	
	6	.238	6,05	A4G0605M06U08GMN	.031	0,8	—	—	1.18	30	.193	4,9	●	
A4G-U-GMP  	3	.120	3,05	A4G0305M03U02GMP	.008	0,2	—	—	.79	20	.138	3,5	●	
	4	.159	4,05	A4G0405M04U04GMP	.016	0,4	—	—	.79	20	.138	3,5	●	
	4	.159	4,05	A4G0405M04U08GMP	.031	0,8	—	—	.79	20	.138	3,5	●	
	5	.199	5,05	A4G0505M05U08GMP	.031	0,8	—	—	.99	25	.165	4,2	●	
	6	.238	6,05	A4G0605M06U08GMP	.031	0,8	—	—	1.19	30	.193	4,9	●	
A4R-U-GMN  	3	.120	3,05	A4R0305M03U00GMN	—	—	.060	1,5	.79	20	.101	2,6	●	
	4	.159	4,05	A4R0405M04U00GMN	—	—	.080	2,0	.79	20	.134	3,4	●	
	5	.199	5,05	A4R0505M05U00GMN	—	—	.099	2,5	.99	25	.161	4,1	●	
	6	.238	6,05	A4R0605M06U00GMN	—	—	.119	3,	1.19	30	.192	4,9	●	

Order example:
Catalog number:
Insert grade:

A4G0305M03U02GMN
KU30T

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

A4 Holder Identification System



Toolholders

A4 – Groove & Turn 1. Tooling System A4		3. Support Type S		5. Shank Size 2525M (metric)		7. Max. Grooving Depth 03 17 in Millimeters
2. Tool Style S – straight E – end mounted 90° 		4. Hand of Tool R = right hand L = left hand N = neutral		6. Seat Size 16 (inch)		

M = maximum support for specific groove widths and straight clearance for unlimited workpiece diameters
E = no steel support for face grooving

inch sizes: for square shanks, the number indicates the height and width in 1/16-inch increments (rectangular: 1st digit = width in 1/8-inch increments, 2nd digit = height in 1/4-inch increments)
metric: height x width in mm, letter indicates tool length according to ISO
metric tool length (mm)
 K = 125
 M = 150
 P = 170

Boring Bars

1. Steel Bar with Coolant A 16		4. A4 Groove & Turn System R A4		6. Support Type E M		8. Insert Seat Size R 03		10. Tool Units 10 N	
2. Bar Diameter inch bars: A two-digit number which indicates the bar diameter in 1/16-inch increments. metric bars: bar diameter in millimeters		3. Bar Length inch bars: R = 8 inch S = 10 inch T = 12 inch metric bars: R = 200 mm S = 250 mm T = 300 mm		5. Tool Style E = end mounted (90°)		7. Hand of Tool R = right hand L = left hand		9. Grooving Depth in mm conversions: inch 7 mm = .28 10 mm = .39 12 mm = .47 16 mm = .63	

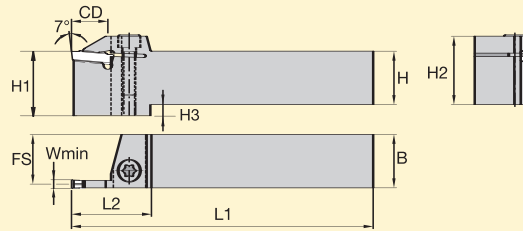
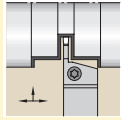
M = maximum support
M – metric
N – inch

Pocket Seat Size
 03 3,0 – 3,05
 04 4,0 – 4,05
 05 5,0 – 5,05
 06 6,0 – 6,05

Cutting Width (mm)
 3,0 – 3,05
 4,0 – 4,05
 5,0 – 5,05
 6,0 – 6,05



A4SM



Seat Size	CD	Catalog number Right hand/Left hand	Wmin	H= H1	B	H2	H3	L1	FS	L2	Torx Clamp Screw	Torx
Inch												
3	.55	A4SM R/L 120314	.118	.75	.75	1.06	-	5.00	.69	1.38	MS1595	T30
3	.67	A4SM R/L 160317	.118	1.00	1.00	1.26	-	6.00	.94	1.46	MS1970	T30
4	.55	A4SM R/L 120414	.157	.75	.75	1.06	-	5.00	.67	1.38	MS1595	T30
4	.67	A4SM R/L 160417	.157	1.00	1.00	1.26	-	6.00	.92	1.46	MS1970	T30
4	.67	A4SM R/L 200417	.157	1.25	1.25	1.54	-	6.00	1.17	1.46	MS1970	T30
5	.75	A4SM R/L 120519	.197	.75	.75	1.10	-	5.00	.65	1.57	MS1595	T30
5	.79	A4SM R/L 160520	.197	1.00	1.00	1.30	-	6.00	.90	1.57	MS1970	T30
5	.87	A4SM R/L 200522	.197	1.25	1.25	1.54	-	6.00	1.15	1.65	MS1970	T30
6	.79	A4SM R/L 120620	.236	.75	.75	1.06	-	5.00	.65	1.57	MS1595	T30
6	.79	A4SM R/L 160620	.236	1.00	1.00	1.30	-	6.00	.89	1.57	MS1970	T30
6	.94	A4SM R/L 160624	.236	1.00	1.00	1.30	-	6.00	.89	1.69	MS1970	T30
6	1.02	A4SM R/L 200626	.236	1.25	1.25	1.57	-	6.00	1.15	1.77	MS1970	T30
6	1.02	A4SM R/L 240626	.236	1.50	1.50	1.81	-	7.00	1.39	1.77	MS1970	T30
Metric												
3	17	A4SM R/L 2016K0317	3,00	20	16	32	5	125	14,70	37	MS1970	T30
3	14	A4SM R/L 2020K0314	3,00	20	20	27	-	125	18,72	35	MS1595	T30
3	17	A4SM R/L 2020K0317	3,00	20	20	32	5	125	18,70	37	MS1970	T30
3	17	A4SM R/L 2525M0317	3,00	25	25	32	-	150	23,72	37	MS1970	T30
4	17	A4SM R/L 2016K0417	4,00	20	16	32	5	125	14,20	37	MS1970	T30
4	14	A4SM R/L 2020K0414	4,00	20	20	27	-	125	18,22	35	MS1595	T30
4	17	A4SM R/L 2525M0417	4,00	25	25	32	-	150	23,22	37	MS1970	T30
4	17	A4SM R/L 3225P0417	4,00	32	25	40	-	170	23,22	37	MS1970	T30
5	19	A4SM R/L 2020K0519	5,00	20	20	28	-	125	17,72	40	MS1595	T30
5	20	A4SM R/L 2525M0520	5,00	25	25	33	-	150	22,72	40	MS1970	T30
5	22	A4SM R/L 3225P0522	5,00	32	25	40	-	170	22,72	42	MS1970	T30
6	20	A4SM R/L 2020K0620	6,00	20	20	33	5	125	17,30	40	MS1970	T30
6	20	A4SM R/L 2525M0620	6,00	25	25	33	-	150	22,30	40	MS1970	T30
6	26	A4SM R/L 3225P0626	6,00	32	25	40	-	170	22,30	45	MS1970	T30

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

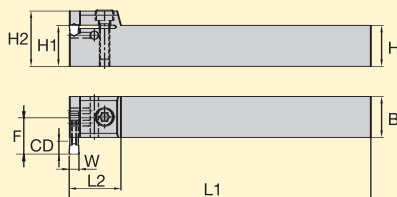
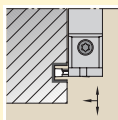
Order example:
ANSI Right hand: **A4SMR120314**
ISO Right hand: **A4SMR2016K0317**

ANSI Left hand: **A4SML120314**
ISO Left hand: **A4SML2016K0317**

A4 Groove & Turn Toolholders



A4EN



Seat Size	CD	Catalog number	Wmin	Dmin	H=H1	B	H2	L1	F	L2	Torx Clamp Screw	Torx	Hex Seating Screw	Hex (mm)
Inch														
3	.20	A4ENN120305	.118	2.756	.75	.75	1.06	4.95	.965	.98	MS2091	T25	MS2090	1,5
3	.20	A4ENN160305	.118	2.756	1.00	1.00	1.26	5.95	1.213	.98	MS2091	T25	MS2090	1,5
4	.28	A4ENN120407	.157	3.543	.75	.75	1.06	4.93	1.061	.98	MS2091	T25	MS2090	1,5
4	.28	A4ENN160407	.157	3.543	1.00	1.00	1.26	5.93	1.309	.98	MS2091	T25	MS2090	1,5
5	.35	A4ENN120509	.197	4.724	.75	.75	1.06	4.91	1.148	.98	MS2091	T25	MS2090	1,5
5	.35	A4ENN160509	.197	4.724	1.00	1.00	1.26	5.91	1.398	.98	MS2091	T25	MS2090	1,5
6	.43	A4ENN120611	.236	4.724	.75	.75	1.10	4.89	1.374	1.34	MS1595	T30	193.297	2,0
6	.43	A4ENN160611	.236	4.724	1.00	1.00	1.30	5.89	1.538	1.34	MS1970	T30	193.297	2,0
6	.43	A4ENN200611	.236	4.724	1.25	1.25	1.58	5.89	1.697	1.34	MS1970	T30	193.297	2,0
Metric														
3	5	A4ENN2020K0305	3,00	70	20	20	27	123,8	25,4	25	MS2091	T25	MS2090	1,5
3	5	A4ENN2525M0305	3,00	70	25	25	32	148,8	30,4	25	MS2091	T25	MS2090	1,5
4	7	A4ENN2020K0407	4,00	90	20	20	27	123,3	27,9	25	MS2091	T25	MS2090	1,5
4	7	A4ENN2525M0407	4,00	90	25	25	32	148,3	33,1	25	MS2091	T25	MS2090	1,5
5	9	A4ENN2020K0509	5,00	120	20	20	27	122,8	30,1	25	MS2091	T25	MS2090	1,5
5	9	A4ENN2525M0509	5,00	120	25	25	32	147,8	35,1	25	MS2091	T25	MS2090	1,5
6	11	A4ENN2020K0611	6,00	120	20	20	28	122,3	35,4	34	MS1595	T30	193.297	2,0
6	11	A4ENN2525M0611	6,00	120	25	25	33	147,3	38,9	34	MS1970	T30	193.297	2,0
6	11	A4ENN3232P0611	6,00	120	32	32	40	167,3	43,4	34	MS1970	T30	193.297	2,0

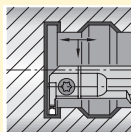
*Dmin for face grooving applications.

Order example:
ANSI: A4ENN120305

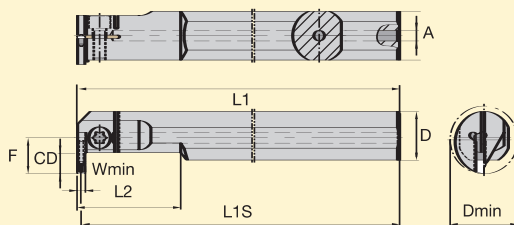
ISO: A4ENN2020K0305



A-A4E



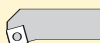
Steel shank with through coolant



Seat Size	CD	Catalog number Right hand/Left hand	Wmin	D	Dmin	L1	F	L1S	L2	A	Torx Clamp Screw	Torx
Inch												
3	.276	A12RA4EM R/L 0307N	.118	.750	.984	8.00	.512	7.94	1.57	.16	MS2089	T25
3	.394	A16RA4EM R/L 0310N	.118	1.000	1.260	8.00	.669	7.94	1.97	.20	MS1595	T30
3	.472	A20SA4EM R/L 0312N	.118	1.250	1.575	10.00	.866	9.94	2.52	.24	MS1595	T30
4	.276	A12RA4EM R/L 0407N	.157	.750	.984	8.00	.512	7.92	1.57	.16	MS2089	T25
4	.394	A16RA4EM R/L 0410N	.157	1.000	1.260	8.00	.669	7.92	1.97	.20	MS1595	T30
4	.472	A20SA4EM R/L 0412N	.157	1.250	1.575	10.00	.866	9.92	2.52	.24	MS1595	T30
4	.630	A24TA4EM R/L 0416N	.157	1.500	2.047	12.00	1.181	11.92	3.15	.24	MS1970	T30
5	.630	A20SA4EM R/L 0516N	.197	1.250	1.732	10.00	1.024	9.90	2.52	.24	MS1595	T30
5	.630	A24TA4EM R/L 0516N	.197	1.500	2.047	12.00	1.181	11.90	3.15	.24	MS1970	T30
6	.630	A20SA4EM R/L 0616N	.236	1.250	1.732	10.00	1.024	9.92	2.52	.24	MS1595	T30
6	.630	A24TA4EM R/L 0616N	.236	1.500	2.047	12.00	1.181	11.92	3.15	.24	MS1970	T30
6	.630	A32TA4EM R/L 0616N	.236	2.000	2.559	12.00	1.378	11.92	3.94	.24	MS1970	T30
Metric												
3	7	A20RA4EM R/L 0307M	3,00	20	25	200	13	198,5	40	4	MS2089	T25
3	10	A25RA4EM R/L 0310M	3,00	25	32	200	17	198,5	50	5	MS1595	T30
3	12	A32SA4EM R/L 0312M	3,00	32	40	250	22	248,5	64	6	MS1595	T30
4	7	A20RA4EM R/L 0407M	4,00	20	25	200	13	198,0	40	4	MS2089	T25
4	10	A25RA4EM R/L 0410M	4,00	25	32	200	17	198,0	50	5	MS1595	T30
4	12	A32SA4EM R/L 0412M	4,00	32	40	250	22	248,0	64	6	MS1595	T30
4	16	A40TA4EM R/L 0416M	4,00	40	52	300	30	298,0	80	6	MS1970	T30
5	16	A32SA4EM R/L 0516M	5,00	32	44	250	26	247,5	64	6	MS1595	T30
5	16	A40TA4EM R/L 0516M	5,00	40	52	300	30	297,5	80	6	MS1970	T30
6	16	A40TA4EM R/L 0616M	6,00	40	52	300	30	297,0	80	6	MS1970	T30

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

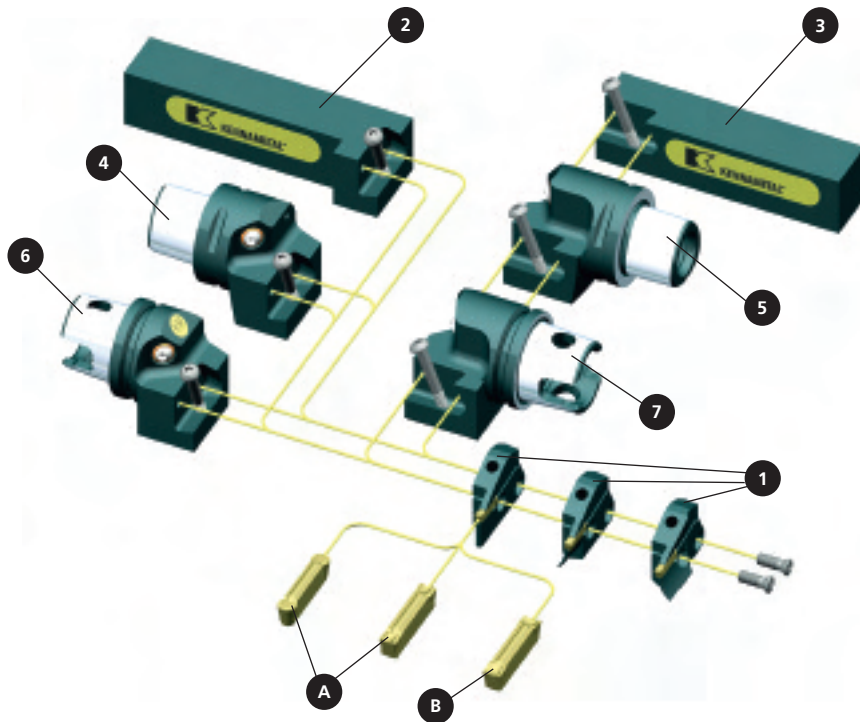
Order example:
ANSI Right hand: A12RA4EMR0307N
ISO Right hand: A20RA4EMR0307M



ANSI Left hand: A12RA4EML0307N
ISO Left hand: A20RA4EML0307M



A4 Groove & Turn Toolholders



Legend

		page
A	A4 Groove & Turn Inserts	A72
B	A4 Cut-off Inserts	Lathe 4010*
1	OD and Face Grooving Blades	A80
2	KGME Toolholder	A82
3	KGMS Toolholder	A82
4	Capto KGME Cutting Unit	Lathe 4010*
5	Capto KGMS Cutting Unit	Lathe 4010*
6	KM KGME Cutting Unit	Lathe 4010*
7	KM KGMS Cutting Unit	Lathe 4010*

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*Please refer to the Lathe 4010 catalog.

Modular blade assembly for A4 inserts

1. A4 Tooling System

A4M

50

2. Modular System Size

3. Hand of Tool

R

5. Maximum Groove Depth

14

4. Seat Size

Pocket Seat Size	Cutting Width (mm)
03	3,0 – 3,05
04	4,0 – 4,05
05	5,0 – 5,05

7. Face Grooving Diameter Dmin-Dmax (mm)

048-072

6. Tool Style

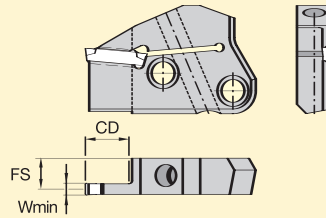
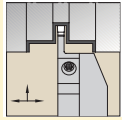
M = maximum support for specific groove widths and straight clearance for unlimited workpiece diameters

A = inboard sweep face grooving support

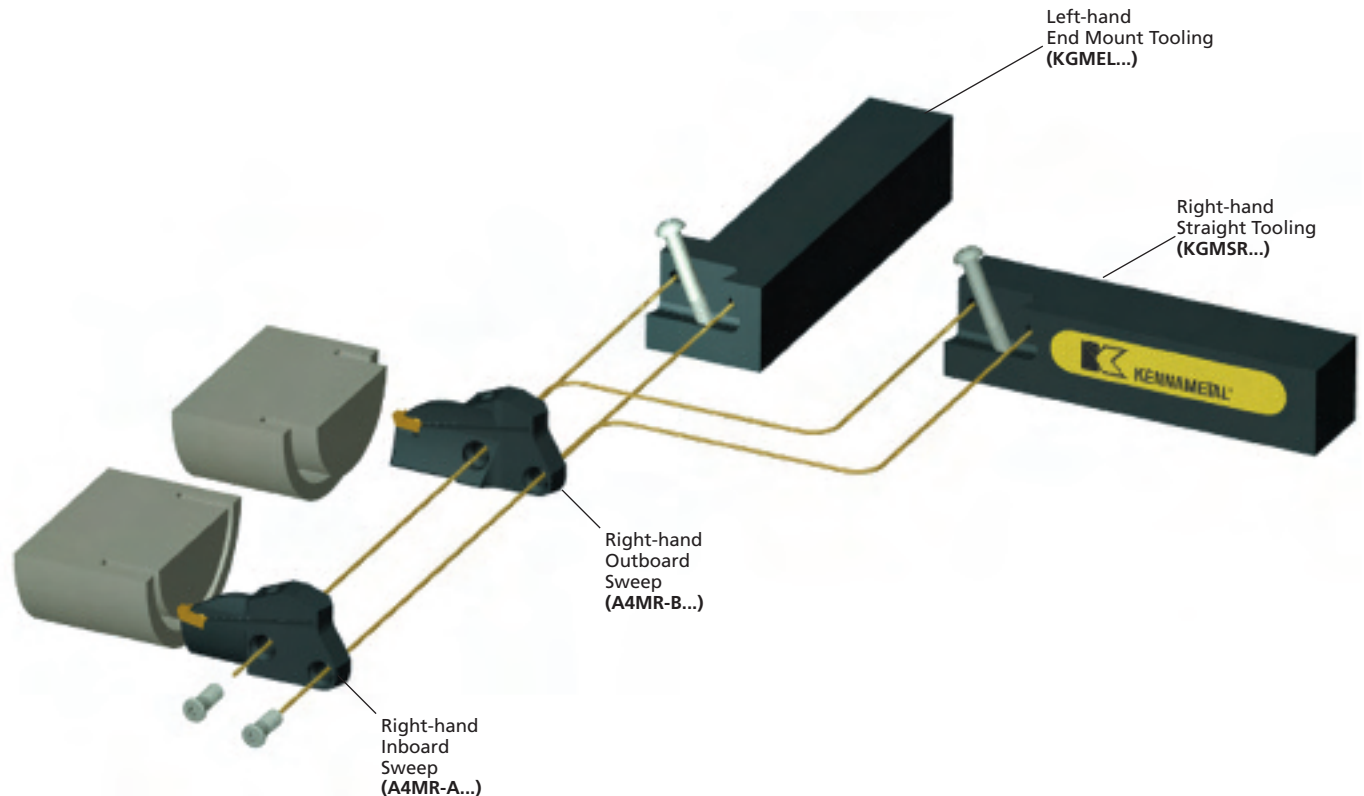
B = outboard sweep face grooving support



A4M-M



Seat Size	CD	Catalog number Right hand/Left hand	Wmin	FS	Blade Size
Inch					
3	.55	A4M50 R/L 0314M	.118	.413	50
4	.55	A4M50 R/L 0414M	.157	.394	50
5	.75	A4M50 R/L 0519M	.197	.374	50



Order example:
Right hand: A4M50R0314M



Left hand: A4M50L0314M

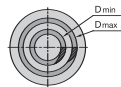
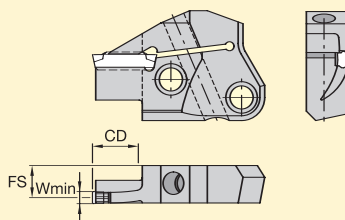
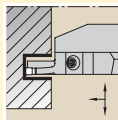


A4 Groove & Turn Modular Blades



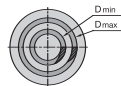
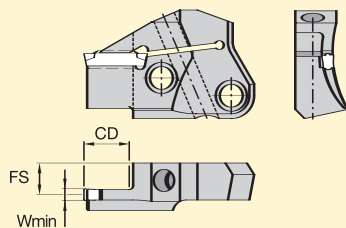
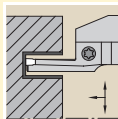
Face Grooving

A4M-A INBOARD SWEEP



Seat Size	Dmin	Dmax	Catalog number Right hand/Left hand	Wmin	CD	FS	Blade Size
Inch							
3	1.417	1.890	A4M50 R/L 0314A036048	.118	.55	.413	50
3	1.654	2.284	A4M50 R/L 0314A042058	.118	.55	.413	50
3	2.047	2.913	A4M50 R/L 0314A052074	.118	.55	.413	50
3	2.677	3.937	A4M50 R/L 0314A068100	.118	.55	.413	50
3	3.543	6.299	A4M50 R/L 0314A090160	.118	.55	.413	50
3	5.118	11.811	A4M50 R/L 0314A130300	.118	.55	.413	50
3	11.417	-	A4M50 R/L 0314A290999	.118	.55	.413	50
4	1.890	2.835	A4M50 R/L 0414A048072	.157	.55	.394	50
4	2.520	3.937	A4M50 R/L 0414A064100	.157	.55	.394	50
4	3.622	5.906	A4M50 R/L 0414A092150	.157	.55	.394	50
4	5.197	11.811	A4M50 R/L 0414A132300	.157	.55	.394	50
4	11.417	-	A4M50 R/L 0414A290999	.157	.55	.394	50
5	2.284	3.701	A4M50 R/L 0519A058094	.197	.75	.374	50
5	3.150	5.354	A4M50 R/L 0519A080136	.197	.75	.374	50
5	4.724	11.811	A4M50 R/L 0519A120300	.197	.75	.374	50
5	9.843	-	A4M50 R/L 0519A250999	.197	.75	.374	50

A4M-B OUTBOARD SWEEP



Seat Size	Dmin	Dmax	Catalog number Right hand/Left hand	Wmin	CD	FS	Blade Size
Inch							
3	1.417	1.890	A4M50 R/L 0314B036048	.118	.55	.413	50
3	1.654	2.284	A4M50 R/L 0314B042058	.118	.55	.413	50
3	2.047	2.913	A4M50 R/L 0314B052074	.118	.55	.413	50
3	2.677	3.937	A4M50 R/L 0314B068100	.118	.55	.413	50
3	3.543	6.299	A4M50 R/L 0314B090160	.118	.55	.413	50
3	5.118	11.811	A4M50 R/L 0314B130300	.118	.55	.413	50
3	11.417	-	A4M50 R/L 0314B290999	.118	.55	.413	50
4	1.890	2.835	A4M50 R/L 0414B048072	.157	.55	.394	50
4	2.520	3.937	A4M50 R/L 0414B064100	.157	.55	.394	50
4	3.622	5.906	A4M50 R/L 0414B092150	.157	.55	.394	50
4	5.197	11.811	A4M50 R/L 0414B132300	.157	.55	.394	50
4	11.417	-	A4M50 R/L 0414B290999	.157	.55	.394	50
5	2.284	3.701	A4M50 R/L 0519B058094	.197	.75	.374	50
5	3.150	5.354	A4M50 R/L 0519B080136	.197	.75	.374	50
5	4.724	11.811	A4M50 R/L 0519B120300	.197	.75	.374	50
5	9.843	-	A4M50 R/L 0519B250999	.197	.75	.374	50

Order example:

ANSI Right hand: A4M50R0314A036048

ANSI Left hand: A4M50L0314A036048



1. Kennametal Grooving Modular

KGM

2. Tool Style

S

E

3. Hand of Tool

R

height

width

Square Shanks: The number indicates the toolholder cross section in 1/16-inch increments.
Rectangular Shanks: The first digit indicates the number of eighth-inch increments of width and the second digit indicates the number of quarter-inch increments of height.

4. Shank Dimensions

16
(inch)

25
(metric)

4. Shank Height

height

shank height in millimeters

5. Blade Size

50

25

5. Shank Width

width

shank width in millimeters

6. Tool Units

N

M

6. Tool Length

50

7. Blade Size

over insert in a support blade with a 12,5 mm D dimension
M = 150 mm
P = 170 mm

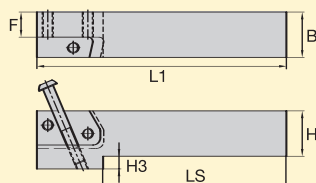


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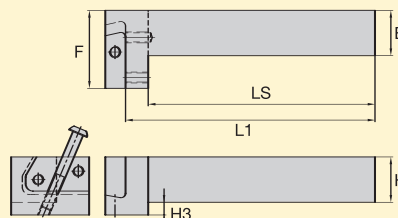
A4 Groove & Turn Toolholders



KGMS..



KGME..

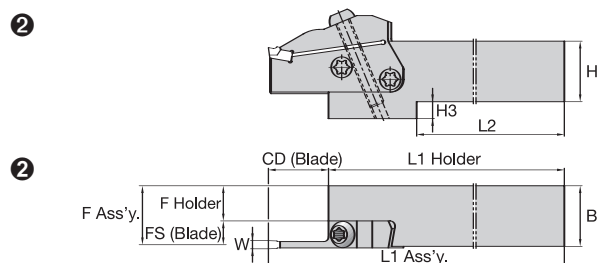


Catalog number Right hand/Left hand	Blade Size	H	B	L1	LS	F	H3	Blade Screw (2 req'd)	Clamp Screw	Torx
Inch										
KGMS R/L 1650	-	1.00	1.00	5.5	4.26	.56	.25	MS1162	MS2002	T25
KGMS R/L 2050	-	1.25	1.25	5.5	-	.81	-	MS1162	MS2002	T25
KGMS R/L 2450	-	1.50	1.50	5.5	-	1.06	-	MS1162	MS2002	T25
Metric										
KGMS R/L 2525M50	50	25	25	138,75	101,25	13,84	7,00	MS1162	MS2002	T25
KGMS R/L 3232P50	50	32	32	158,75	-	20,81	-	MS1162	MS2002	T25
Inch										
KGME R/L 1650	-	1.00	1.00	5.5	4.96	1.7	.25	MS1162	MS2002	T25
KGME R/L 2050	-	1.25	1.25	5.5	4.96	1.7	-	MS1162	MS2002	T25
KGME R/L 2450	-	1.50	1.50	5.5	4.96	1.7	-	MS1162	MS2002	T25
Metric										
KGME R/L 2525M50	50	25	25	139,25	125,25	42,75	6,84	MS1162	MS2002	T25
KGME R/L 3232P50	50	32	32	159,25	145,25	42,75	-	MS1162	MS2002	T25

Note: KGMS..: Right-hand holder uses right-hand blades.
 KGME..: Right-hand holder uses left-hand blades.
 Blade and clamp screw torque equals 71-88 in.-lbs. (8-10 Nm)

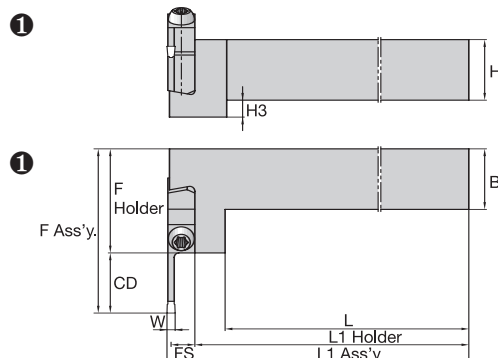
A4 Modular Blade Assemblies

KGMS Toolholder with Modular Blade Assembly



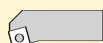
- ② F Ass'y. = F (Holder) + FS (Blade) + W/2
 L1 Ass'y. = L1 (Holder) + CD (Blade) + .22" (or 5,5 mm)

KGME Toolholder with Modular Blade Assembly



- ① F Ass'y. = F (Holder) + CD (Blade) + .22" (or 5,5 mm)
 L1 (Ass'y.) = L1 (Holder) + FS (Blade) + W/2

Order example:
 ANSI Right hand: **KGMSR1650**
 ISO Right hand: **KGMSR2525M50**



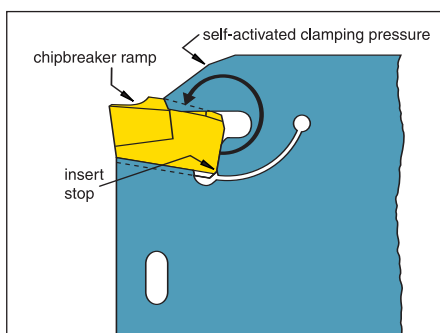
ANSI Left hand: **KGMSL1650**
 ISO Left hand: **KGMSL2525M50**



A2 Cut-Off

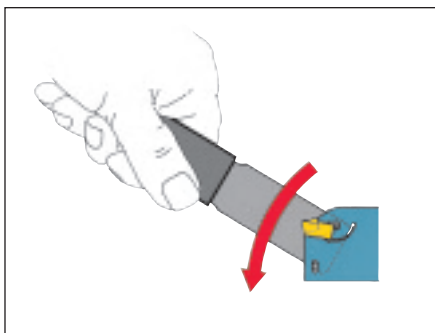
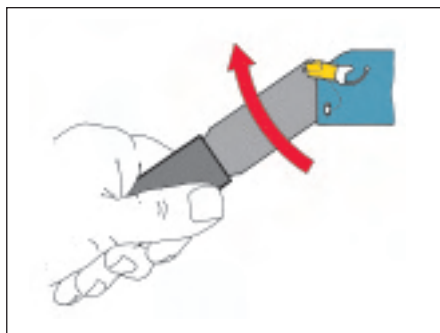
Innovative A2 Insert Design

- V-prisms on both top and bottom enable higher clamping force to prevent insert movement, even when cutting at high feed rates.
- The cutting edge has a molded-in chipbreaker ramp to direct chips away from the blade, extending blade life.
- Positive rake cutting action combined with Kennametal's high-performance PVD coatings result in superior tool life and chip control.



Patented A2 Insert Stop Design

- As cutting forces increase, clamping forces also increase for secure holding power.
- Fixed insert stop ensures solid seating with every index and delivers up to 30% longer life.
- Cutting height is accurately controlled for maximum reliability and performance on even small-diameter parts.



Quick and Easy Insert Indexing

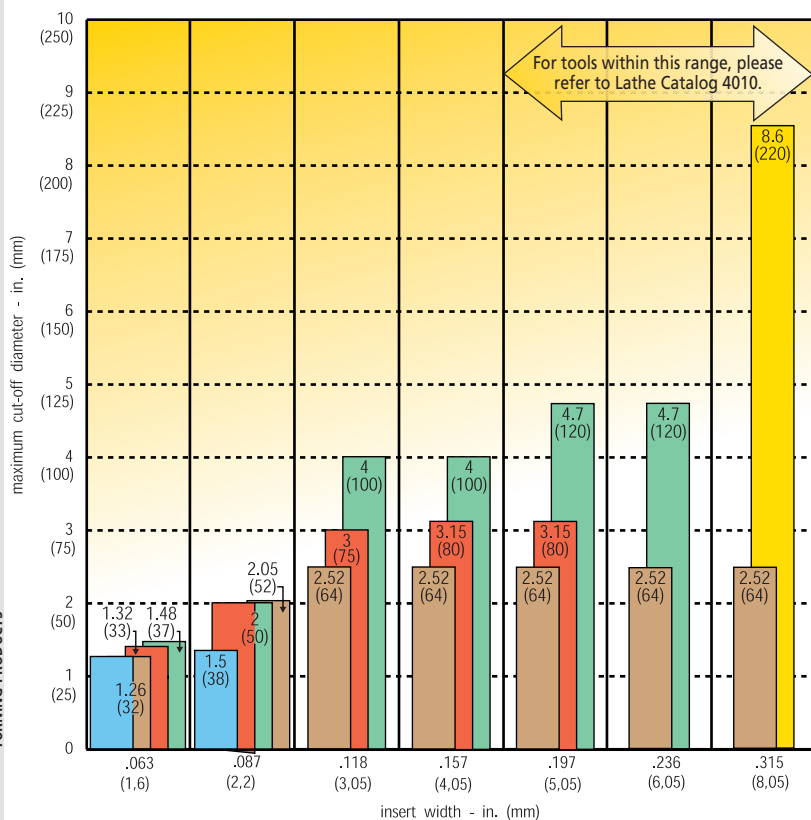
- A convenient indexing wrench is available to minimize downtime by enabling fast removal and insertion without damage to the cutting edge.

KENNA UNIVERSAL – A2 Cut-Off



5 Easy Steps to Maximize Cut-Off Productivity

1st Step – Select Insert Width and Holder Type



What you need to know:

- cut-off diameter
- part/machine requirements

For required cut-off diameter, select insert width and holder type based on the part and machine requirement:

- To maximize rigidity, select the largest possible blade height or an integral shank toolholder.
- Diameters shown are for cut-off to center. Maximum cut-off depth to a through-hole is one-half of the diameter.
- To determine capability for cut-off to a through-hole on integral shank or reinforced blades, please refer to listing for that tool in this catalog.

blade height	
19 mm	
26 mm	
32 mm	
52 mm	
Integral Shank Toolholders	

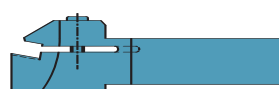
Toolholder Type

Blade: (self-clamping)



- frequently used tool
- two insert seats
- deepest depth-of-cut capability

Toolholder: (with clamping screw)



- shank tool with the highest stability
- limited depth of cut
- single insert seat

2nd Step – Select Insert Lead Angle

- part type
- burr and center stub considerations
- Cut-off to center or through-hole

	Neutral (0°)	Right/Left 6° - 10°	Right/Left 15° - 16°
Insert Type			
Recommended Application	• for cutting off solid workpieces • center stub will form on cut-off part • eliminates lateral deflection • best for deep cut-off depths	• for cutting off solid workpieces with reduced formation of center stub • for cut-off to a through-hole with reduced burr	• for thin-walled workpieces • for cutting off small diameter workpieces with minimal burr or center stub
Tool Life	best tool life	better tool life	good tool life

**3rd Step – Select Chipbreaker Style and Feed Rate**

- lead angle or neutral insert
- workpiece material



- cut-off insert with precision ground cutting edge for low feeds
- curved cutting edge



- cut-off insert with precision molded cutting edge for medium feeds
- stabilized straight cutting edge



- cut-off insert with precision molded cutting edge for higher feed rates
- curved cutting edge

Chipbreaker Style and Feed Rates - in/rev (mm/rev)

Insert Type	Steel	Stainless Steel	Cast Iron	Non-Ferrous Metals	High-Temp Alloys
	N-CR .003 – .012 (0,08 – 0,3)	N-CF .002 – .005 (0,05 – 0,12)	N-CM .002 – .008 (0,05 – 0,2)	N-CF .002 – .007 (0,05 – 0,18)	N-CF .002 – .004 (0,04 – 0,10)
	N-CF .002 – .006 (0,05 – 0,15)				
	R/L-CR .002 – .005 (0,05 – 0,12)	R/L-CF .002 – .003 (0,04 – 0,08)	R/L-CM .002 – .005 (0,05 – 0,12)	R/L-CF .002 – .004 (0,04 – 0,10)	R/L-CF .002 – .003 (0,04 – 0,08)
	R/L-CF .002 – .003 (0,04 – 0,08)				

4th Step – Select Grade and Speed**Recommendations for Grade and Speed Selection – sfm (m/min)**

	Workpiece Material				
	Steel	Stainless Steel	Cast Iron	Non-Ferrous Metals	High-Temp Alloys
KENNA UNIVERSAL	KU25T 210 - 450 (65 - 135)	KU25T 210 - 400 (65 - 120)	KU25T 180 - 400 (55 - 120)	KU25T 400 - 785 (120 - 240)	KU25T 65 - 200 (20 - 60)

5th Step – Select Insert and Holder from Catalog Page**Example for A2 Cut-off:**

material: low carbon steel
workpiece dia.: 1.02 in. (27 mm)
depth of cut: .157 in. (4 mm)
requirements: need to minimize burr on through-hole

See page A4 for grade descriptions.

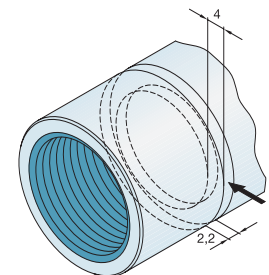
Recommendation:

insert: A2022R06CF02
grade: KU25T
cutting width: .087 in. (2,2 mm)
insert seat size: 2

toolholder: A2BNSN3202
seat size: 2

speed: 350 sfm (110 m/min)
feed: .002 ipr (0,05 mm)

Note: The insert seat size must match the seat size of your holder selection.



KENLOC INSERTS
SCREW-ON INSERTS
TOOL HOLDERS
BORING BARS
TOP NOTCH GROOVING
TURNING PRODUCTS
TOP NOTCH HOLDERS
A4
A2
LT THREADING
TOP NOTCH THREADING

A2 Insert Identification System

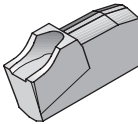
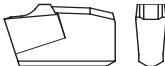
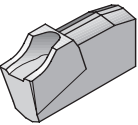
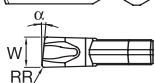
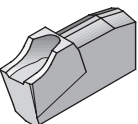
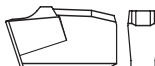


Cut-Off

A2 Cut-off		N = neutral R = right hand L = left hand		-CF (Cut-off Fine) -CM (Cut-off Medium) -CR (Cut-off Rough)	
1. Insert Type		3. Hand of Insert		5. Chipbreaker	
A2 040		N 00		CF 02	
2. Cutting Width		4. Approach Angle of Main Cutting Edge		6. Corner Radius	
(in 1/10 mm)		00 = neutral 06 = 6° 10 = 10° 15 = 15° 16 = 16°			
Cutting Width (mm)	Pocket Seat Size				
1,60	01			00	0,0 .000
2,20	02			01	0,1 .004
3,05	03			02	0,2 .008
4,05	04			03	0,3 .012

KENNA
UNIVERSAL

KU25T

				Catalog number	Dimensions			KUNNING PROOF
	Seat Size	W			α°	RR		
		inch	mm			inch	mm	
A2-N-CF   	1	.063	1,60	Neutral A2016N00CF01	-	.004	0,15	●
	2	.087	2,20	A2022N00CF02	-	.008	0,20	●
	3	.118	3,05	A2030N00CF02	-	.008	0,20	●
	4	.159	4,05	A2040N00CF02	-	.008	0,20	●
A2-L-CF   	3	.120	3,05	Left hand A2030L06CF02	6	.008	0,20	●
	3	.120	3,05	A2030L10CF00	10	.000	0,00	●
	3	.120	3,05	A2030L15CF00	15	.000	0,00	●
	4	.159	4,05	A2040L06CF02	6	.008	0,20	●
A2-R-CF   	1	.063	1,60	Right hand A2016R16CF00	16	.000	0,00	●
	2	.087	2,20	A2022R06CF02	6	.008	0,20	●
	2	.087	2,20	A2022R16CF00	16	.000	0,00	●
	3	.120	3,05	A2030R06CF02	6	.008	0,20	●
	3	.120	3,05	A2030R10CF00	10	.000	0,00	●
	3	.120	3,05	A2030R15CF00	15	.000	0,00	●
	4	.159	4,05	A2040R06CF02	6	.008	0,20	●

Order example:
Catalog number:
Insert grade:

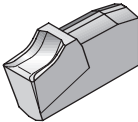
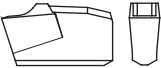
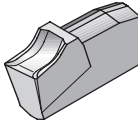
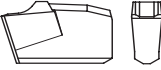
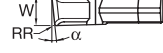
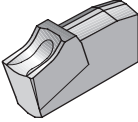
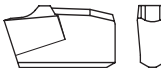
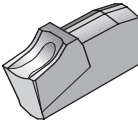
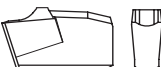
A2016N00CF01
KU25T

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

A2 Cut-Off Inserts

Dimensions and Grade Selection



			Catalog number	Dimensions			KENNA UNIVERSA  KU25T	
	Seat Size	W		α°	RR			
		inch			mm	inch		mm
A2-N-CM   	1 2 3 4	.063 .087 .120 .159	1,60 2,20 3,05 4,05	Neutral A2016N00CM01 A2022N00CM02 A2030N00CM02 A2040N00CM02	- - - -	.004 .008 .008 .008	0,10 0,20 0,20 0,20	● ● ● ●
A2-R-CM   	1	.063	1,60	Right hand A2016R06CM00	6	.000	0,00	●
A2-N-CR   	2 3 4	.087 .120 .159	2,20 3,05 4,05	Neutral A2022N00CR02 A2030N00CR02 A2040N00CR02	- - -	.008 .008 .008	0,20 0,20 0,20	● ● ●
A2-R-CR   	3	.118	3,05	Right hand A2030R06CR03	6	.012	0,30	●

Order example:
Catalog number:
Insert grade:

A2016N00CM01
KU25T

A88

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.



A2 Holder Identification System

Cut-Off – Toolholders

1. A3 Screw-Clamp Holder*			2. Tool Style		3. Support Type		4. Hand of Tool		5. Shank Size		6. Seat Size		7. Max. Cutting Depth	
A3			S		C		R		16 (inch) 2525M (metric)		03		26 in millimeters	
*NOTE: A3 screw-clamp OD holders are also designed to hold A2 inserts			S = Straight		S = standard (straight clearance) M = max. support (straight clearance) C = reinforced max. support (circular clearance)		R = right L = left		Inch sizes: for square shanks, the number indicates the height and width in 1/16-inch increments (rectangular: 2nd digit = height in 1/4-inch increments) metric: height x width in mm, letter indicates tool length according to ISO (see table in tool block identification system)		Pocket Seat Size		Cutting Width (mm)	
											01 1,60 02 2,20 03 3,05 04 4,05 05 5,05 06 6,05 08 8,05			

Cut-Off – Blades

1. A2 Cut-Off Blade		2. Tool Style		3. Support Style		4. Hand of Tool		5. Blade Size		6. Overall Length		7. Seat Size		8. Max. Cutting Depth	
A2		BN		C		R		32		J		02		21 in (mm) (reinforced blade only)	
BN = 2 pocket blade BH = 1 pocket blade		S = standard C = reinforced		in (mm) 19 / 26 / 32 / 52		R = right L = left N = neutral		letter designation according to ISO (see table in tool block identification system) J = 110 mm M = 150 mm X = Special		01 = 1,60 mm; 04 = 4,05 mm; 02 = 2,20 mm; 05 = 5,05 mm; 03 = 3,05 mm; 06 = 6,05 mm; 08 = 8,05 mm					

Cut-Off – Tool Blocks

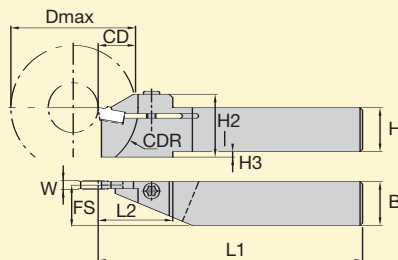
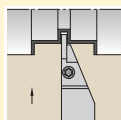
1. A2 Cut-Off		2. Tool Block		3. Clamping Style		4. Hand of Tool		5. Shank Dimensions		6. Blade Size		7. Tool Length in (mm)		8. Blade Size	
A2		T		E		N		16 (inch) 25 (metric)		32 23		J		32	
		E = integral clamp Z = removable clamp		R = right L = left N = neutral		square shank: This number indicates the toolholder cross section in 1/16-inch increments. rectangular shank: The first digit indicates the number of eighth-inch increments of width and the second digit indicates the number of quarter inches of height.		in millimeters		in millimeters		J = 110 X = other length		in millimeters	

A3 Reinforced Toolholders for Cut-Off



Cut-Off

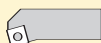
A3SC



Seat Size	CD	Catalog number	Right hand/Left hand	W	Dmax	H	B	FS	L1	L2	H2	H3	CDR	Clamp Screw	Torx
Inch															
1	.630	A3SC R/L 120116		.063	1.65	.750	.750	.722	4.500	1.180	1.040	-	.870	MS1944	T25
2	.630	A3SC R/L 120216		.087	1.65	.750	.750	.715	4.500	1.180	1.040	-	.870	MS1944	T25
3	.630	A3SC R/L 120316		.120	2.05	.750	.750	.705	4.500	1.180	1.040	-	1.060	MS1944	T25
3	1.020	A3SC R/L 120326		.120	2.44	.750	.750	.705	4.500	1.670	1.040	-	1.260	MS1595	T30
3	.630	A3SC R/L 160316		.120	2.44	1.000	1.000	.955	6.000	1.180	1.240	-	1.260	MS1944	T25
3	1.020	A3SC R/L 160326		.120	2.44	1.000	1.000	.955	6.000	1.670	1.260	-	1.260	MS1595	T30
3	1.260	A3SC R/L 200332		.120	2.44	1.250	1.250	1.205	6.000	1.970	1.670	.160	1.260	MS1595	T30
4	.630	A3SC R/L 120416		.159	2.05	.750	.750	.685	4.500	1.180	1.040	-	1.060	MS1944	T25
4	1.020	A3SC R/L 120426		.159	2.44	.750	.750	.685	4.500	1.670	1.040	-	1.260	MS1595	T30
4	.630	A3SC R/L 160416		.159	2.44	1.000	1.000	.933	6.000	1.180	1.240	-	1.260	MS1944	T25
4	1.020	A3SC R/L 160426		.159	2.44	1.000	1.000	.933	6.000	1.670	1.260	-	1.260	MS1595	T30
4	1.260	A3SC R/L 200432		.159	2.44	1.250	1.250	1.285	6.000	1.970	1.670	.160	1.260	MS1595	T30
Metric															
1	16	A3SC R/L 2020K0116		1,60	42	20	20	19,2	125	30	26,5	-	22	MS1944	T25
2	16	A3SC R/L 2020K0216		2,20	42	20	20	19,1	125	30	26,5	-	22	MS1944	T25
2	26	A3SC R/L 2525M0226		2,20	62	25	25	24,1	150	42	31,5	-	32	MS1595	T30
3	16	A3SC R/L 2020K0316		3,05	52	20	20	18,8	125	30	26,5	-	27	MS1944	T25
3	26	A3SC R/L 2020K0326		3,05	62	20	20	18,8	125	42	26,5	-	32	MS1595	T30
3	16	A3SC R/L 2525M0316		3,05	62	25	25	23,8	150	30	31,5	-	32	MS1944	T25
3	26	A3SC R/L 2525M0326		3,05	62	25	25	23,8	150	42	31,5	-	32	MS1595	T30
3	32	A3SC R/L 3225P0332		3,05	62	32	25	23,8	170	52	42,5	4	32	MS1595	T30
4	16	A3SC R/L 2020K0416		4,05	52	20	20	18,3	125	30	26,5	-	27	MS1944	T25
4	26	A3SC R/L 2020K0426		4,05	62	20	20	18,3	125	42	26,5	-	32	MS1595	T30
4	16	A3SC R/L 2525M0416		4,05	62	25	25	23,3	150	30	31,5	-	32	MS1944	T25
4	26	A3SC R/L 2525M0426		4,05	62	25	25	23,3	150	42	31,5	-	32	MS1595	T30
4	32	A3SC R/L 3225P0432		4,05	62	32	25	23,3	170	52	42,5	4	32	MS1595	T30

Order example:

ANSI Right hand: A3SCR120116
ISO Right hand: A3SCR2020K0116

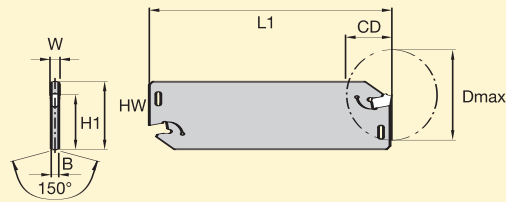
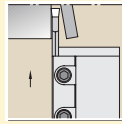


ANSI Left hand: A3SCL120116
ISO Left hand: A3SCL2020K0116





A2BNSN



*Seat size 1 blades only

											
HW		Seat Size	Catalog number	W	W1†	H1	L1	B	Dmax*	CD	Assembly** Wrench
inch	mm										
Inch											
.748	19	1	A2BNSN19X0116	.063	.051	.606	3.39	.071	1.181	.63	170.137
1.024	26	1	A2BNSN26J0117	.063	.051	.843	4.33	.071	1.339	.66	170.137
1.260	32	1	A2BNSN32M0119	.063	.051	.984	5.91	.095	1.496	.74	170.137
.748	19	2	A2BNSN19X02	.087	-	.606	3.39	.071	-	.80	170.137
1.024	26	2	A2BNSN26G02	.087	-	.843	3.54	.071	-	1.00	170.137
1.024	26	2	A2BNSN26J02	.087	-	.843	4.33	.071	-	1.00	170.137
1.024	26	2	A2BNSN26M02	.087	-	.843	5.91	.071	-	1.00	170.137
1.260	32	2	A2BNSN32M02	.087	-	.984	5.91	.071	-	2.40	170.137
1.024	26	3	A2BNSN26G03	.120	-	.843	3.54	.095	-	1.60	170.137
1.024	26	3	A2BNSN26J03	.120	-	.843	4.33	.095	-	1.60	170.137
1.024	26	3	A2BNSN26M03	.120	-	.843	5.91	.095	-	1.60	170.137
1.260	32	3	A2BNSN32H03	.120	-	.984	3.94	.095	-	2.00	170.137
1.260	32	3	A2BNSN32M03	.120	-	.984	5.91	.095	-	2.00	170.137
1.024	26	4	A2BNSN26J04	.159	-	.843	4.33	.134	-	1.60	170.137
1.260	32	4	A2BNSN32M04	.159	-	.984	5.91	.134	-	2.00	170.137
Metric											
-	19	1	A2BNSN19X0116	1,6	1,3	15,4	86	1,8	32	16	170.137
-	26	1	A2BNSN26J0117	1,6	1,3	21,4	110	1,8	34	17	170.137
-	32	1	A2BNSN32M0119	1,6	1,3	25,0	150	2,4	38	19	170.137
-	19	2	A2BNSN19X02	2,2	-	15,4	86	1,8	-	20	170.137
-	26	2	A2BNSN26G02	2,2	-	21,4	90	1,8	-	25	170.137
-	26	2	A2BNSN26J02	2,2	-	21,4	110	1,8	-	25	170.137
-	26	2	A2BNSN26M02	2,2	-	21,4	150	1,8	-	25	170.137
-	32	2	A2BNSN32M02	2,2	-	25,0	150	1,8	-	60	170.137
-	26	3	A2BNSN26G03	3,0	-	21,4	90	2,4	-	40	170.137
-	26	3	A2BNSN26J03	3,0	-	21,4	110	2,4	-	40	170.137
-	26	3	A2BNSN26M03	3,0	-	21,4	150	2,4	-	40	170.137
-	32	3	A2BNSN32H03	3,0	-	25,0	100	2,4	-	50	170.137
-	32	3	A2BNSN32M03	3,0	-	25,0	150	2,4	-	50	170.137
-	26	4	A2BNSN26J04	4,0	-	21,4	110	3,4	-	40	170.137
-	32	4	A2BNSN32M04	4,0	-	25,0	150	3,4	-	50	170.137

** Assembly wrench 170.137 must be ordered separately.

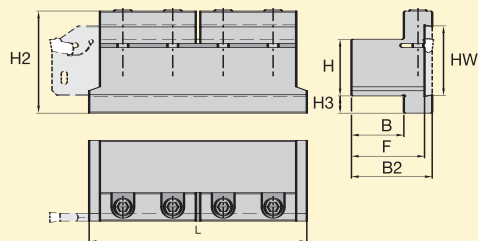
† Reduced blade tip width for seat size 1 blades.

To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

A2 Cut-Off Tool Blocks

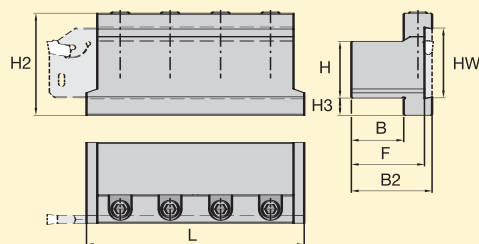


A2TE – Integral Clamp



HW												
inch	mm	H	Catalog number	B	F	H2	B2	H3	L	Clamp	Clamp Screw	Hex (mm)
Inch												
.748	19	.625	A2TEN1019	.625	.945	1.18	1.02	.16	2.95	-	125.525	4
1.024	26	.750	A2TEN1226	.750	1.161	1.57	1.34	.32	3.39	-	125.625	5
1.260	32	1.000	A2TEN1632	1.000	1.417	1.89	1.63	.30	4.33	-	125.630	5
1.260	32	1.250	A2TEN2032	1.250	1.673	1.97	1.89	.13	4.33	-	125.630	5
Metric												
-	19	16	A2TEN1616X19	16	24,0	30	26,0	4,0	75	-	125.520	4
-	26	20	A2TEN2020X26	20	29,5	40	34,0	8,0	86	-	125.625	5
-	32	25	A2TEN2520J32	20	30,5	49	36,0	8,0	110	-	125.630	5
-	26	25	A2TEN2523X26	23	33,5	41	38,0	3,0	86	-	125.625	5
-	32	32	A2TEN3228J32	28	38,5	50	44,0	3,0	110	-	125.630	5
-	52	40	A2TEN4035X52	35	50,0	80	58,0	20,0	135	-	125.835	6
-	52	50	A2TEN5038X52	38	50,0	80	59,0	9,0	135	-	125.835	6

A2TZ – Removable Clamp



HW												
inch	mm	H	Catalog number	B	F	H2	B2	H3	L	Clamp	Clamp Screw	Hex (mm)
Inch												
.748	19	.750	A2TZN1219	.750	1.220	1.46	1.30	.16	3.39	168.935	125.516	4
1.024	26	.750	A2TZN1226	.750	1.201	1.65	1.38	.31	3.39	168.682	125.616	5
1.024	26	1.000	A2TZN1626	1.000	1.457	1.89	1.63	.31	3.39	168.682	125.616	5
1.260	32	1.000	A2TZN1632	1.000	1.417	1.89	1.63	.30	4.33	168.936	125.616	5
1.024	26	1.250	A2TZN2026	1.250	1.713	1.97	1.89	.12	3.39	168.682	125.616	5
1.260	32	1.250	A2TZN2032	1.250	1.673	1.97	1.89	.13	4.33	168.936	125.616	5
Metric												
-	26	20	A2TZN2019X26	19	33,5	44	38,0	9,0	86	168.682	125.616	5
-	32	25	A2TZN2523J32	23	34,5	48	40,0	8,0	110	168.936	125.616	5
-	32	32	A2TZN3225J32	25	36,5	48	42,0	3,0	110	168.936	125.616	5

Order example:

ANSI Catalog number: **A2TEN1019** ISO Catalog number: **A2TEN1616X19**

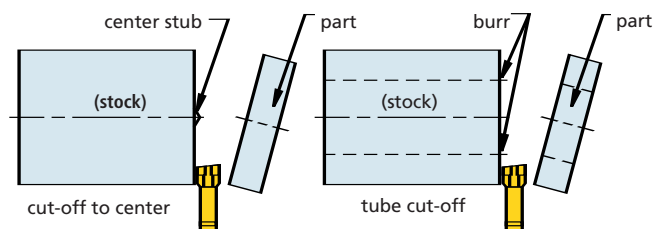
Definitions and Guidelines

1. width of cut (W) = width of the insert
2. lead angle = 0° (neutral) 6°, 10°, 15°, 16° (RH or LH)

To reduce the burr of cut-off faces:

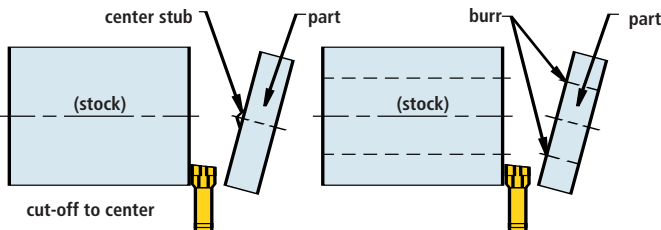
- To reduce burr formation on the part, use lead angle type insert (figure 1 & 2). Lead angle on a cut-off insert reduces the burr that remains on the part, but decreases tool life and increases tool side deflection and possibly cycle time.

fig. 1
insert selection right-hand lead



Right-hand lead insert leaves center stub or burr on stock and produces clean part.

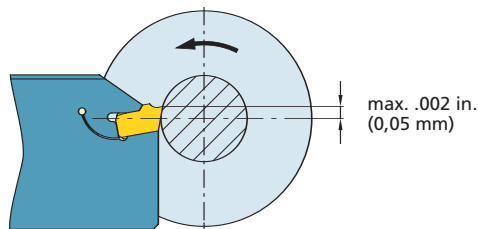
fig. 2
insert selection left-hand lead



Left-hand lead insert leaves center stub or burr on part and produces clean stock surface.

- Check tool height and maintain on center with part diameter.
- The cutting edge height should be within $\pm .004$ in. (0,1 mm) to the center; recommended cutting position is .002 in. (0,05 mm) above center.

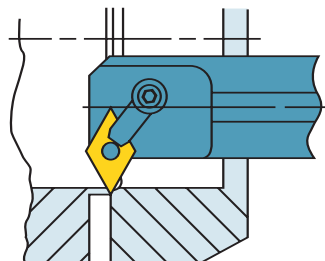
fig. 3
Above center:



- If 0° lead angle is mandatory, use the narrowest possible cut-off insert and blade. This will minimize the center stub or cut-off burr length. Decrease the feed rate to .002 in. (0,05 mm) or less at the point where diameter equals insert width.

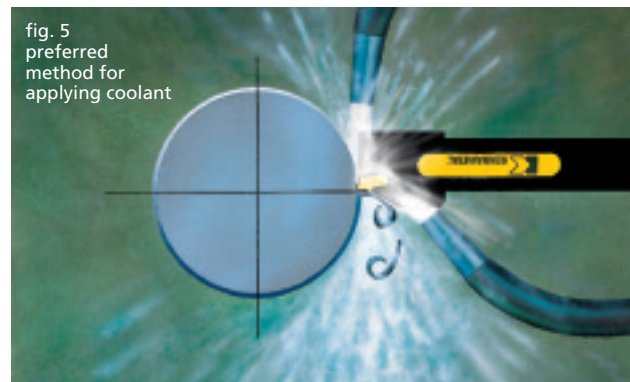
- On tubing-type parts that require a chamfer on the ID, align ID chamfer tool with cut-off surface. This will enable the chamfering operation to actually separate the part from the bar (see figure 4). Note the part may drop onto the chamfering bar which, in this case, will act like a part's catcher.

fig. 4
internal chamfer line up



To improve surface finish of cut-off faces:

- Use insert with 0° lead angle.
- Increase coolant flow or improve application technique, as shown in figure 5.
- Decrease the feed rate near the break-through point of the cut.
- Check that the grooving tool is set at a right angle.
- Use blades with the greatest possible face height and smallest possible cutting width.
- Increase the speed.



- Mount cut-off tool upside down. This allows gravity to remove chips and avoids cutting the chips twice. Another benefit from mounting the tool upside down is preventing chips from wedging between the tool insert and the groove side walls, which galls the side wall surfaces.

A2 and A3 compatibility:

A2 and A3 inserts can be interchangeably used on all screw-clamping holders within the following guidelines:

- A2 inserts can be used in A3 holders with equal seat sizes.
- A3 inserts CANNOT be used in self-clamping cut-off blades.
- A2 inserts are NOT recommended for face grooving toolholders.
- A2 inserts can be used in A3 modular blades if the guidelines noted above are followed.



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machine tools and manage
your machine tool control
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cncGcoder™ technical details

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www.kennametal.com/mobile

LT – Laydown Triangle Threading

- LT is the system of choice for:
 - fine-pitch threads
 - high-helix/multi-start threads
 - single-point threading
- Achieve unrestricted chip flow with the low-profile system design – ideal for ID threads.
- Maximize tool life and improve thread quality with variable shim angles that enable proper cutting geometry for high helix angle and reverse helix angle threading.
- Get more parts per insert with the economy of the LT insert's three cutting edges.



New KENNA UNIVERSAL Inserts

- Provide outstanding utility and value with precision molded LT-K thread form.
- Achieve excellent chip control
- Trouble-free threading with new KU25T grade
- Ideal for a variety of workpiece materials



KENNA UNIVERSAL – LT Threading



5 Easy Steps to Improve Productivity

What you need to know:

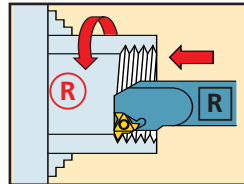
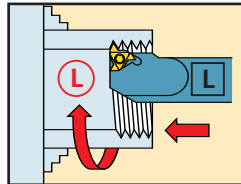
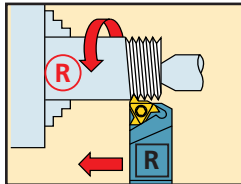
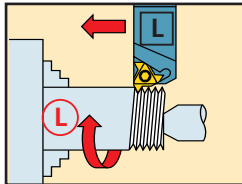
- external/internal operation
- spindle rotation/hand of thread
- feed direction

1st Step – Select Threading Method and Hand of Tooling

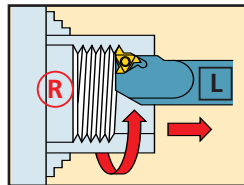
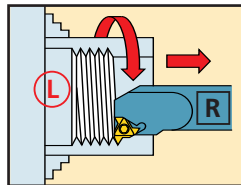
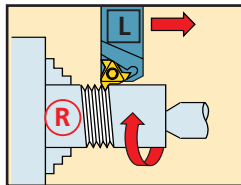
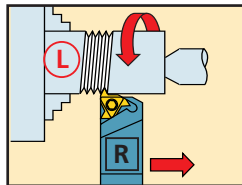
(L) or (R) – hand of thread

(L) or (R) – hand of holder/insert

• Feed direction toward the chuck – standard helix



• Feed direction away from the chuck – reverse helix



2nd Step – Choose Insert for Application

- See threading insert overview on page A98.
- Select cresting inserts for fully controlled thread form including diameter. Cresting inserts eliminate the need for deburring and are optimized for the best tool life at that pitch.
- Non-cresting partial profile inserts offer the flexibility to cut a variety of thread pitches with one insert.
- Note insert size for toolholder selection.



Insert Size	catalog number	KU25T
11	LT11NRA60K	●
16	LT16NRAG60K	●

3rd Step – Select Grade and Speed

Recommendations for Grade and Speed Selection – sfm (m/min)

Workpiece Material		Steel	Stainless Steel	Cast Iron	Non-Ferrous Metals	High-Temp Alloys
KENNA UNIVERSAL	Insert Style	-K Chipbreaker				
	Selection	KU25T 80 - 450 (25 - 140)	KU25T 80 - 350 (25 - 100)	KU25T 100 - 360 (30 - 110)	KU25T 100 - 1000 (30 - 300)	KU25T 35 - 280 (10 - 85)



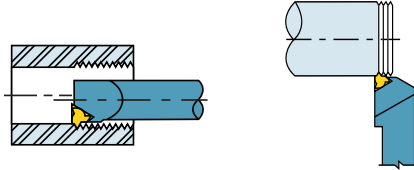
**4th Step – Select Holder from Catalog Page**

Note: The insert size must match the gage insert size of your toolholder selection:

Required information:

- external/internal operation
- minimum bore diameter (for internal operations)
- hand of tool
- insert size (gage insert)

Select the appropriate holder for the insert size and hand

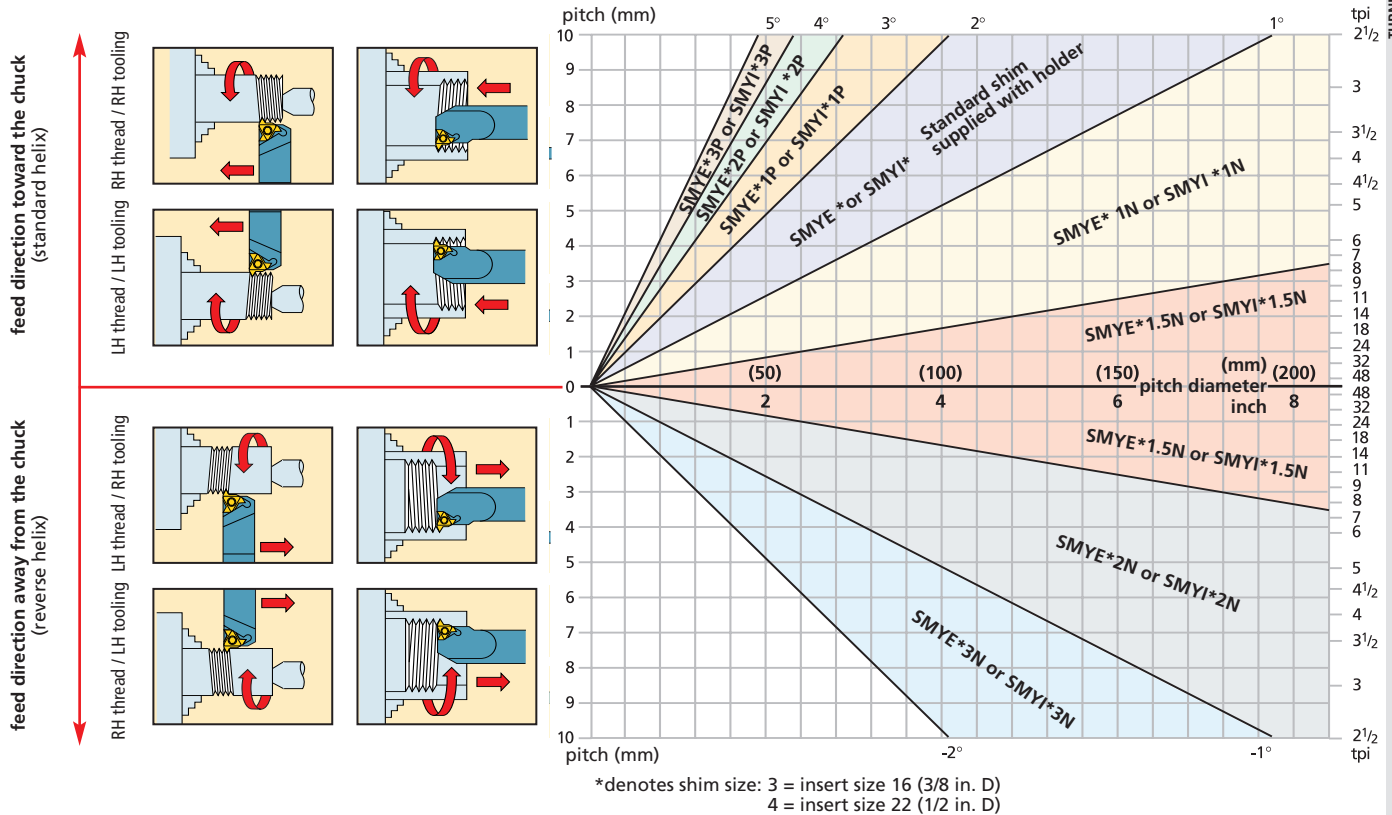


catalog number	gage insert	min. bore diameter	shim
S1212LSER3	LT16NR	.90 in	SMYI3
A2020LSER16	LT16NR	16 mm	SMYI3

5th Step – Select Appropriate Shim**Required information:**

- thread form (tpi or pitch)
- pitch diameter
- helix method (hand of tool, feed direction, hand of thread)

Select the proper shim SMYE... for external RH or internal LH
SMYI... for internal RH or external LH



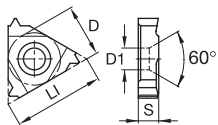
If recommended shim is different from shim supplied with toolholder, order shim separately.

For additional technical support, visit www.kennametal.com or contact your Kennametal representative.

LT Threading – Insert Identification System



11 16	11,0 16,5	.250 .375	6,35 9,52	.126 .143	3,20 3,63	.128 .155	3,25 3,94
insert size	L (mm)	D (inch)	D (mm)	S (inch)	S (mm)	D1 (inch)	D1 (mm)



ER – external right hand
EL – external left hand
NR – internal right hand
NL – internal left hand

K – KENNA UNIVERSAL
chipbreaker

2. Cutting Edge Length (Size)

LT

16

3. Hand of Insert

ER

20

6. Chip Control

UN

K

1. Type of Insert

LT-laydown triangle threading

4. Thread Pitch

partial profile		
designation	thread pitch (mm)	TPI
A	0,50 - 1,5	48 - 16
AG	0,50 - 3,0	48 - 8
G	1,75 - 3,0	14 - 8
N	3,50 - 5,0	7 - 5
full profile		
actual TPI or pitch in mm is designated	0,5 - 4,0	48 - 8

5. Thread Profile

ISO – ISO metric 60°
UN – American UN 60°
60 – Partial Profile non-cresting 60°

LT Threading – Insert Overview Table

	Style -K	Thread Profile	Standard	Tolerance Class	Cresting	Application
LT-60K		Partial Profile 60°	-	-	N	general use for 60° thread forms such as ISO and UN where non-cresting inserts are desired to cut a variety of pitches
LT-ISOK		Metric ISO	ISO R262, DIN 13	6g / 6H	Y	widely used metric 60° V-form for all industries
LT-UNK		American UN	ANSI B1.1:74	2A / 2B	Y	widely used inch-based 60° V-form for all industries



LT Threading Inserts

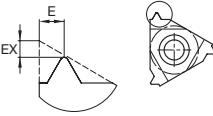
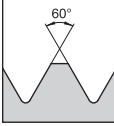
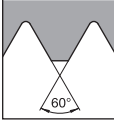
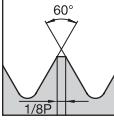
Dimensions and Grade Selection

KENLOC INSERTS
SCREW-ON INSERTS
TOOLHOLDERS
BORING BARS
TOP NOTCH GROOVING
TURNING PRODUCTS
TOP NOTCH HOLDERS
A4
A2
LT THREADING
TOP NOTCH THREADING

KENNA
UNIVERSAL



KU25T

		Insert size	Catalog number		P pitch (mm)	TPI	TPF	RC		EX		E		KU25T
			Right hand	Left hand				inch	mm	inch	mm	inch	mm	
LT-ER-60K  non-cresting	Partial Profile 60° External 	16	LT16ERAG60K		0,50-3,00	48-8	-	.003	0,08	.047	1,2	.067	1,7	●
		16	LT16ERG60K		1,75-3,00	14-8	-	.007	0,18	.047	1,2	.067	1,7	●
LT-NR-60K  non-cresting	Partial Profile 60° Internal 	11	LT11NRA60K		0,50-1,50	48-16	-	.001	0,03	.031	0,8	.035	0,9	●
		16	LT16NRAG60K		0,50-3,00	48-8	-	.002	0,04	.047	1,2	.067	1,7	●
		16	LT16NRG60K		1,75-3,00	14-8	-	.003	0,08	.047	1,2	.067	1,7	●
LT-ER-ISOK  	ISO Metric External	16	LT16ER10ISOK		1,00	-	-	-	-	.028	0,7	.028	0,7	●
		16	LT16ER125ISOK		1,25	-	-	-	-	.043	1,1	.031	0,8	●
		16	LT16ER15ISOK		1,50	-	-	-	-	.031	0,8	.039	1,0	●
		16	LT16ER175ISOK		1,75	-	-	-	-	.047	1,2	.059	1,2	●
		16	LT16ER20ISOK		2,00	-	-	-	-	.039	1,0	.051	1,3	●
		16	LT16ER25ISOK		2,50	-	-	-	-	.047	1,2	.059	1,5	●
		16	LT16ER30ISOK		3,00	-	-	-	-	.051	1,3	.059	1,5	●

Order example:
ANSI catalog number: LT16ERAG60K
Insert grade: KU25T

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

A99

LT Threading Inserts

Dimensions and Grade Selection



		Insert size	Catalog number		P pitch (mm)	TPI	TPF	RC		EX		E		KUNNA UNIVERSAL KU25T
			Right hand	Left hand				inch	mm	inch	mm	inch	mm	
	LT-NR-ISOK ISO Metric Internal	11	LT11NR10ISOK		1,00	-	-	-	-	.028	0,7	.031	0,8	●
		11	LT11NR125ISOK		1,25	-	-	-	-	.028	0,7	.031	0,8	●
		16	LT16NR10ISOK		1,00	-	-	-	-	.028	0,7	.028	0,7	●
		16	LT16NR15ISOK		1,50	-	-	-	-	.031	0,8	.039	1,0	●
		16	LT16NR175ISOK		1,75	-	-	-	-	.047	1,2	.059	1,2	●
		16	LT16NR20ISOK		2,00	-	-	-	-	.039	1,0	.051	1,3	●
		16	LT16NR25ISOK		2,50	-	-	-	-	.047	1,2	.059	1,5	●
		16	LT16NR30ISOK		3,00	-	-	-	-	.051	1,3	.059	1,5	●
	LT-ER-UNK American UN-External	16	LT16ER24UNK		-	24	-	-	-	.028	0,7	.031	0,8	●
		16	LT16ER20UNK		-	20	-	-	-	.028	0,7	.031	0,8	●
		16	LT16ER18UNK		-	18	-	-	-	.028	0,7	.031	0,8	●
		16	LT16ER16UNK		-	16	-	-	-	.035	0,9	.043	1,1	●
		16	LT16ER14UNK		-	14	-	-	-	.047	1,2	.059	1,5	●
		16	LT16ER12UNK		-	12	-	-	-	.043	1,1	.055	1,4	●
		16	LT16ER8UNK		-	8	-	-	-	.047	1,2	.063	1,6	●
	LT-NR-UNK American UN-Internal	11	LT11NR24UNK		-	24	-	-	-	.028	0,7	.031	0,8	●
		11	LT11NR20UNK		-	20	-	-	-	.028	0,7	.031	0,8	●
		11	LT11NR18UNK		-	18	-	-	-	.028	0,7	.031	0,8	●
		16	LT16NR16UNK		-	16	-	-	-	.035	0,9	.043	1,1	●
		16	LT16NR14UNK		-	14	-	-	-	.047	1,2	.059	1,5	●
		16	LT16NR12UNK		-	12	-	-	-	.043	1,1	.055	1,4	●
		16	LT16NR8UNK		-	8	-	-	-	.051	1,3	.059	1,5	●

Order example:
Catalog number:
Insert grade:

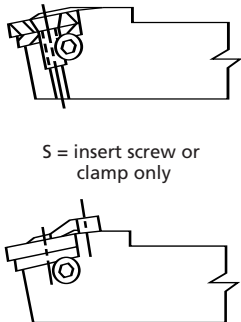
LT11NR10ISOK
KU25T

A100

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.



LT Threading – Toolholder Identification System

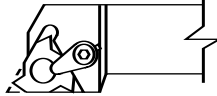


S = insert screw or clamp only

2. Insert Holding Method

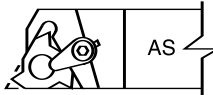
L S

1. Insert Style



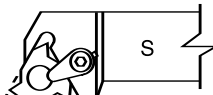
L = laydown triangle

straight shank



AS

offset shank



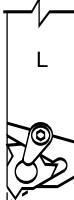
S

3. Tool Style

AS R

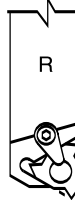
4. Hand of Tool

left hand

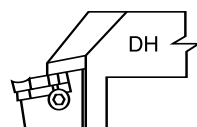


L

right hand



R



DH

5. Drop Head

2525K
(metric)

16
(inch)

6. Shank Size

Metric:
Shank height and width in mm and holder length according to ISO standard

Inch:
This position will show a significant two-digit number that indicates the holder cross section. For shanks 5/8" square and over, the number will represent the number of sixteenths of width and height. For shanks under 5/8" square, the number of sixteenths of cross section will be preceded by a zero. For rectangular holders, the first digit represents the number of eighths of width, and the second digit the number of quarters of height, except for a toolholder 1 1/4" x 1 1/2", which is given the number 91.

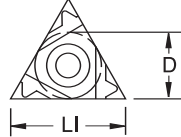
C – qualified back and end, 5" long
D – qualified back and end, 6" long
E – qualified back and end, 7" long
T – qualified back and end, 3.250" long
Q – qualified metric holder

8. Qualified Surface and Length

16 D

7. Insert Size

Size equals number of 1/8-inch increments of IC.



inch insert size	metric insert size	D (inch)	LI (mm)
2	11	1/4	11,0
3	16	3/8	16,5
4	22	1/2	22,0

*NOTE: Toolholders with primary shank sizes larger than 1/2-inch or 12 mm are supplied with clamp and insert screw. Secure the insert with either the clamp or insert screw. **Do not use both.**

LT Threading – Shim Identification System

1. Shim

SM

2. Shim for LT Standard Inserts

Y

3. External Internal

E I

4. Insert Size

3

D value in 1/8ths inch

5. Shim Angle

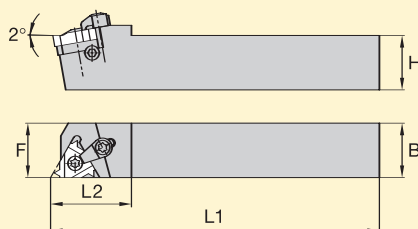
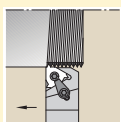
2P

2P– 2° positive
1P– 1° positive
— 0° neutral
1N– 1° negative
2N– 2° negative
3N– 3° negative

LT Threading Toolholders



LSA

Gage
Insert

Catalog number

H

B

F

L1

L2



Shim

Shim
Screw

Torx

Clamp
Assembly

Torx

Insert
Screw

Torx

Inch

LT16ER
LT16ER
LT16ERRight hand
LSASR123
LSASR163
LSASR203

.750	.750	.750	5.00	1.20
1.000	1.000	1.000	6.00	1.20
1.250	1.250	1.250	7.00	1.18

SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10
SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10
SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10

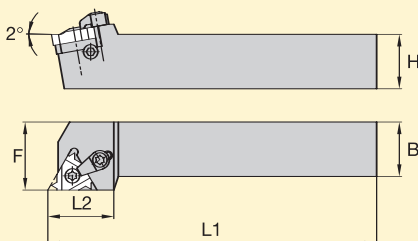
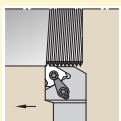
Metric

LT16ER
LT16ER
LT16ERRight hand
LSASR2020K16
LSASR2525M16
LSASR3232P16

20	20	20	125	30
25	25	25	150	30
32	32	32	170	30

SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10
SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10
SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10

LSS

Gage
Insert

Catalog number

H

B

F

L1

L2



Shim

Shim
Screw

Torx

Clamp
Assembly

Torx

Insert
Screw

Torx

Inch

LT16ER
LT16ER
LT16ERRight hand
LSSR123D
LSSR163D
LSSR203D

.750	.750	1.000	6.00	1.00
1.000	1.000	1.250	6.00	1.00
1.250	1.250	1.500	6.00	1.00

SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10
SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10
SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10

Metric

LT16ER
LT16ER
LT16ERRight hand
LSSR2020K16Q
LSSR2525M16Q
LSSR3232P16Q

20	20	25	125	25
25	25	32	150	25
32	32	40	170	32

SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10
SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10
SMYE3	SSY3T	T10	CKC3	T15	SSA3T	T10

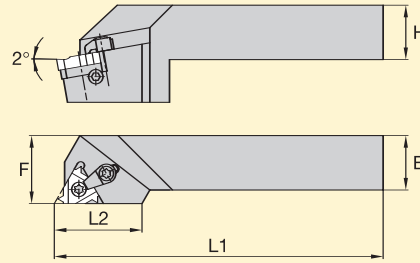
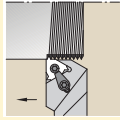
Order example:

ANSI Catalog number: LSASR123

ISO Catalog number: LSASR2020K16



LSS-DH



Gage
Insert

Catalog number

H

B

F

L1

L2



Shim



Shim
Screw



Torx



Clamp
Assembly



Torx



Insert
Screw



Torx

Inch

LT16ER

Right hand
LSSRDH123C

.750

.750

1.000

5.00

1.50

SMYE3

SSY3T

T10

CKC3

T15

SSA3T

T10

Metric

LT16ER

Right hand
LSSRDH2020K16Q

20

20

25

125

38

SMYE3

SSY3T

T10

CKC3

T15

SSA3T

T10

LT16ER

LSSRDH2525M16

25

25

32

150

38

SMYE3

SSY3T

T10

CKC3

T15

SSA3T

T10

LT16ER

LSSRDH3232P16

32

32

40

170

38

SMYE3

SSY3T

T10

CKC3

T15

SSA3T

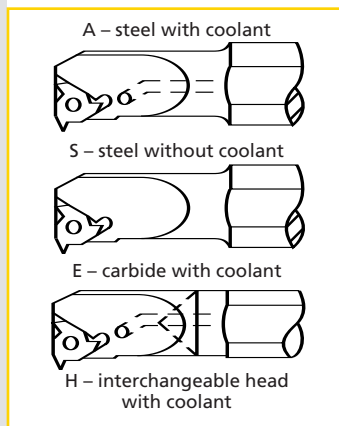
T10



Visit
www.kennametal.com
for expert technical support and
troubleshooting assistance

Order example:
ANSI Catalog number: LSSRDH123C ISO Catalog number: LSSRDH2020K16Q

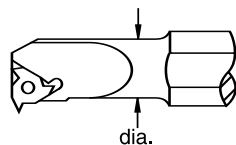
LT Threading – Boring Bar Identification System



1. Bar Type

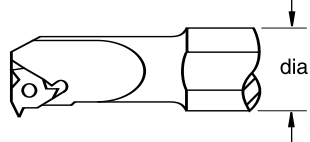
S 08

2. Primary Necked-Shank Bar Diameter



A two-digit number that indicates the primary bar diameter in 1/16-inch increments. Metric diameter in mm.

A two-digit number that indicates the secondary bar diameter in 1/16-inch increments. Metric diameter in mm.



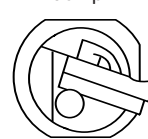
3. Secondary (Mounting) Bar Diameter

12 L

4. Insert Style



S = insert screw or clamp



5. Insert Holding Method

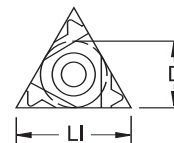
S E

6. Bar Style



end cutting edge mount

Size equals number of 1/8-inch increments of IC.



inch insert size	metric insert size	D (inch)	LI (mm)
2	11	1/4	11,0
3	16	3/8	16,5
4	22	1/2	22,0

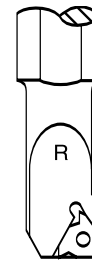
8. Insert Size

R 2

7. Hand of Bar



left hand



right hand

*NOTE: Boring bars with primary bar diameters larger than 5/8-inch or 16 mm are supplied with clamp and insert screw. Secure the insert with either the clamp or insert screw. Do not use both.

LT Threading – Shim Identification System

2P– 2° positive
1P– 1° positive
— 0° neutral
1N– 1° negative
2N– 2° negative
3N– 3° negative

1. Shim

SM

**3. E – External
I – Internal**

Y

2. Y – Shim for LT Standard Inserts

E

3

4. Insert Size

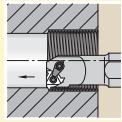
D value in 1/8ths inch

5. Shim Angle

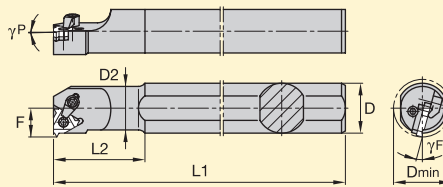
2P



S-LSE

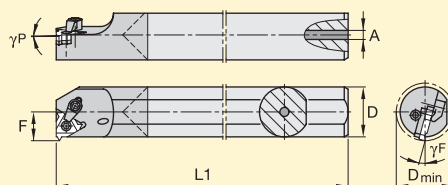


Steel shank without through coolant



Gage Insert	Catalog number	D	Dmin	D2	F	L1	L2	A	γF°	γP°	Shim	Shim Screw	Torx	Clamp Assembly	Torx	Insert Screw	Torx
Inch	Right hand																
LT11NR	S0612LSER2	.750	.500	.375	.280	7,00	1,00	-	-15,0	-1,5	-	-	-	-	-	SSN2T	T8
LT11NR	S0812LSER2	.750	.650	.500	.340	7,00	1,25	-	-15,0	-1,5	-	-	-	-	-	SSN2T	T8
LT16NR	S1012LSER3	.750	.800	.625	.460	7,00	1,50	-	-15,0	-1,5	-	-	-	-	-	SSA3T	T10
LT16NR	S1212LSER3	.750	.900	-	.510	7,00	-	-	-15,0	-1,5	SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10
LT16NR	S1620LSER3	1.250	1.200	1.000	.650	10,00	2,50	-	-15,0	-1,5	SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10
LT16NR	S2020LSER3	1.250	1.450	-	.770	10,00	-	-	-15,0	-1,5	SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10
Metric	Right hand																
LT11NR	A1010LSER11	10	13	10,0	7,3	100	100	4,5	-15,0	-1,5	-	-	-	-	-	SSN2T	T8
LT11NR	A1020LSER11	20	13	10,0	7,3	180	25	4,5	-15,0	-1,5	-	-	-	-	-	SSN2T	T8
LT11NR	A1320LSER11	20	16	13,0	8,9	180	32	4,5	-15,0	-1,5	-	-	-	-	-	SSN2T	T8
LT16NR	A1616LSER16	16	20	16,0	11,3	150	32	4,5	-15,0	-1,5	-	-	-	-	-	SSA3T	T10
LT16NR	A1320LSER16	20	17	13,0	10,3	180	32	4,5	-15,0	-1,5	-	-	-	-	-	SSA3T	T10
LT16NR	A1620LSER16	20	20	16,0	11,5	180	40	4,5	-15,0	-1,5	-	-	-	-	-	SSA3T	T10
LT16NR	A2020LSER16	20	24	20,0	13,4	180	40	4,5	-15,0	-1,5	SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10
LT16NR	A2525LSER16	25	29	24,6	15,8	200	45	8,0	-15,0	-1,5	SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10
LT16NR	A2532LSER16	32	29	25,0	16,0	250	60	8,0	-15,0	-1,5	SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10

Order example:
ANSI Catalog number: **S0612LSER2** ISO Catalog number: **A1010LSER11**



Carbide shank with through coolant

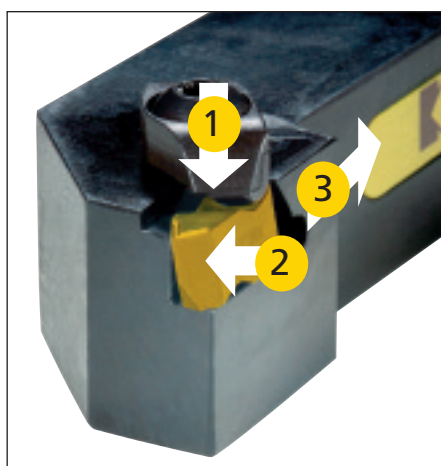
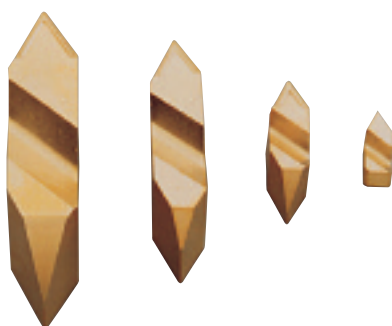
																	
Gage Insert	Catalog number	D	Dmin	D2	F	L1	L2	A	γF°	γP°	Shim	Shim Screw	Torx	Clamp Assembly	Torx	Insert Screw	Torx
Inch	Right hand																
LT11NR	E06LSER2	.375	.500	-	.280	6,00	-	.125	-15,0	-1,5	-	-	-	-	-	SSN2T	T8
LT11NR	E08LSER2	.500	.650	-	.340	8,00	-	.187	-15,0	-1,5	-	-	-	-	-	SSN2T	T8
LT16NR	E10LSER3	.625	.800	-	.460	10,00	-	.218	-15,0	-1,5	-	-	-	-	-	SSA3T	T10
LT16NR	E12LSER3	.750	.900	-	.510	10,00	-	.281	-15,0	-1,5	SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10
LT16NR	E16LSER3	1.000	1.200	-	.650	12,00	-	.312	-15,0	-1,5	SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10
Metric	Right hand																
LT16NR	E16RLSER16	16	20	-	11,5	200	-	5,537	-15,0	-1,5	-	-	-	-	-	SSA3T	T10
LT16NR	E20LSER16	20	24	-	13,4	250	-	7,137	-15,0	-1,5	SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10
LT16NR	E25TLSER16	25	29	-	15,8	300	-	7,925	-15,0	-1,5	SMYI3	SSY3T	T10	CKC3	T15	SSA3T	T10

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

TOP NOTCH Threading

Choosing the TOP NOTCH Threading System

- A superior choice for coarse pitch applications.
- A very rigid insert clamping design assures best tool life, surface finish, and workpiece quality.
- Simplicity of the Top Notch design does not require shim selection for thread helix angles. This helps to avoid mistakes on the shop floor.
- Reduces inventory by using the same Top Notch toolholders and boring bars with either threading or grooving inserts.
- Top Notch chipbreaker inserts eliminate long troublesome coils.
- Rigid clamping design prevents insert movement during high infeed threading applications.



Precision-Ground Thread Form

- minimizes built-up edge
- precisely cuts most common materials
- reduces cutting forces
- ensures accurate high-quality threads

Superior Chip Control

- eliminates long, troublesome coils
- excellent for internal threading operations
- available in partial profile inserts for 60° thread forms

New KENNA UNIVERSAL Inserts

- PVD-coated grade KU25T provides outstanding utility and value
- available in partial profile 60° thread forms both with and without chip control



What you need to know:

- external/internal operation
- spindle rotation/hand of thread
- feed direction

1st Step – Select Threading Method and Hand of Tooling

- (L) or (R) – hand of thread
- (L) or (R) – hand of toolholder
- or – hand of insert

- Feed direction toward the chuck – standard helix

external left-hand thread

external right-hand thread

internal left-hand thread

internal right-hand thread

- Feed direction away from the chuck – reverse helix

external right-hand thread

external left-hand thread

internal right-hand thread

internal left-hand thread

2nd Step – Choose Insert for Application

- Non-cresting partial profile inserts can cut a variety of thread pitches. Chip control is only available with partial profile inserts.
- Note insert size for toolholder selection.

	Insert Size	Catalog Number
	2	NT-2RK
	3	NT-3RK
	4	NT-4RK

3rd Step – Select Grade and Speed

Recommendations for Grade and Speed Selection – sfm (m/min)

Workpiece Material		Steel	Stainless Steel	Cast Iron	Non-Ferrous Metals	High-Temp Alloys
KENNA UNIVERSAL	Insert Style	chip control or neutral				
	Selection	KU25T 80 - 450 (25 - 140)	KU25T 80 - 350 (25 - 100)	KU25T 100 - 360 (30 - 110)	KU25T 100 - 1000 (30 - 300)	KU25T 35 - 280 (10 - 85)



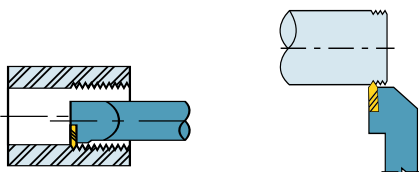
4th Step – Select Holder from Catalog Page

Note: The insert size must match the gage insert size of your toolholder selection:

Required information:

- external/internal operation
- minimum bore diameter (for internal operations)
- hand of tool
- insert size (gage insert)

Select the appropriate holder for the insert size and hand



catalog number	gage insert
NSR-163D	N.3R
NSR-164D	N.4R

NOTE: TOP NOTCH toolholders and boring bars are listed with a gage insert to indicate the size and hand required. They are compatible with both grooving and threading inserts of the

TOP NOTCH Threading Example:

application: 8 TPI UN internal
right-hand thread
material: alloy steel
workpiece dia.: 4.5 inch (114,3 mm)
good cutting conditions
feed toward the chuck

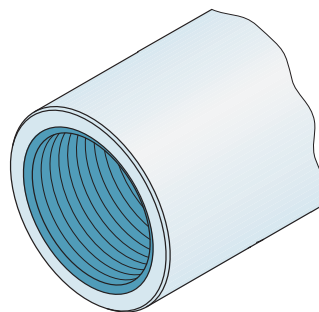
Recommendation:

insert: NT3LK
grade: KU25T
insert size:: 3

boring bar: A40NER3 (metric: A50UNNTOR4)
gage insert: N.3L

speed: 250 sfm (75 m/min)
infeed passes: 12 passes

See pages A68 for internal threading diameter limit chart.



For TOP NOTCH Threading Toolholders and Boring Bars, see pages A57-A66.

KENLOC INSERTS
SCREW-ON INSERTS
TOOL HOLDERS
BORING BARS
TOP NOTCH GROOVING
TURNING PRODUCTS
A4
A2
IT THREADING
TOP NOTCH THREADING

TOP NOTCH Threading – Insert Identification System



*TOP NOTCH

1. Type of Insert

N **T**

2. Insert Style

T – 60° V thread

4. Hand of Insert

R – right
L – left

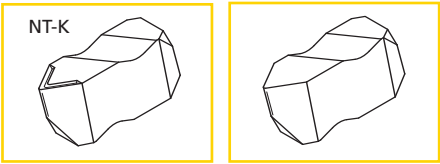
3 **R**

3. Insert Size

5. Additional Information

K – standard chip control
□ – (blank) flat top

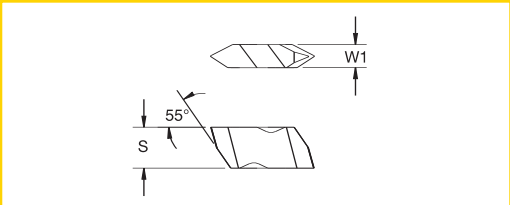
K



*Kennametal proprietary standard only.

insert size	W1 (inch)	W1 (mm)
2	.150	3,81
3	.195	4,95
4	.255	6,48

See full dimension chart at left.



Top Notch Threading and Grooving Insert Dimensions

insert size	S		W1	
	inch	mm	inch	mm
2	.219	5,56	.150	3,81
3	.344	8,74	.195	4,95
4	.453	11,51	.255	6,48

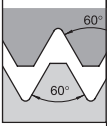
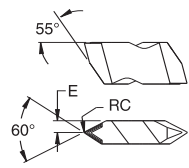
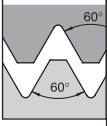
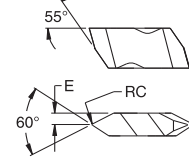
Top Notch Threading – Insert Overview Table

Style		Thread Profile	Cresting	Application
Chip Control - K	Neutral			
NT-K 	NT 	Partial Profile 60°	N	general use for 60° thread forms such as ISO and UN where non-cresting inserts are desired to cut a variety of pitches



TOP NOTCH Threading Inserts

Dimensions and Grade Selection

		Insert size	Catalog number		Pitch (mm)		TPI		RC		E		KENNA UNIVERSAL KU25T
			Right hand	Left hand	external	internal	external	internal	inch	mm	inch	mm	
NT-K   	Partial Profile 60°	2	NT2RK		0,70-3,00	1,25-3,50	8-36	7-20	.004	0,10	.075	1,91	●
		2		NT2LK	0,70-3,00	1,25-3,50	8-36	7-20	.004	0,10	.075	1,91	●
		3	NT3RK		1,25-4,00	2,00-5,00	6-20	5-12	.0065	0,17	.098	2,49	●
		3		NT3LK	1,25-4,00	2,00-5,00	6-20	5-12	.0065	0,17	.098	2,49	●
		4	NT4RK		1,25-6,25	2,00-6,25	4-20	4-12	.0065	0,17	.128	3,25	●
		4		NT4LK	1,25-6,25	2,00-6,25	4-20	4-12	.0065	0,17	.128	3,25	●
NT   	Partial Profile 60°	2	NT2R		0,70-3,00	1,25-3,50	8-36	7-20	.004	0,10	.075	1,91	●
		2		NT2L	0,70-3,00	1,25-3,50	8-36	7-20	.004	0,10	.075	1,91	●
		3	NT3R		1,25-4,00	2,00-5,00	6-20	5-12	.0065	0,17	.098	2,49	●
		3		NT3L	1,25-4,00	2,00-5,00	6-20	5-12	.0065	0,17	.098	2,49	●
		4	NT4R		1,25-6,25	2,00-6,25	4-20	4-20	.0065	0,17	.128	3,25	●
		4		NT4L	1,25-6,25	2,00-6,25	4-20	4-20	.0065	0,17	.128	3,25	●

NOTE: For toolholders and boring bars, see pages A57-A66.
For technical data, see page A68.

Order example:
Catalog number: NT2RK
Insert grade: KU25T

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

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 - KU40D
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KENNA UNIVERSAL – Solid Carbide Drills



Cutting Data Recommendations for B966 KENNA UNIVERSAL Drills

Without Coolant Holes

Cutting Groups	Material Group	Composition/Structure		Tensile Strength RM (MPa)	Hardness HB	Cutting Speed (m/min) (sfm)	Starting Recommendations for Feed (mm/r and ipr) by Drill Diameter				
							D = 3mm .1181	D = 5mm .1969	D = 8mm .3150	D = 12mm .4724	D = 16mm .6299
1	Unalloyed steel, cast steel, machining steel	C = 0,10-0,25	Annealed, long-chipping	420	125	100 - 130 330 - 430	0,07 - 0,13 .003 - .005	0,11 - 0,19 .004 - .007	0,15 - 0,27 .006 - .011	0,21 - 0,36 .008 - .014	0,26 - 0,44 .010 - .017
2		C = 0,25-0,55	Annealed, long-chipping	640	190	100 - 300 330 - 980	0,08 - 0,13 .003 - .005	0,12 - 0,19 .005 - .007	0,17 - 0,27 .007 - .011	0,22 - 0,36 .009 - .014	0,27 - 0,44 .011 - .017
3		C = 0,25-0,55	Tempered	850	250	80 - 100 260 - 330	0,09 - 0,15 .004 - .006	0,13 - 0,22 .005 - .009	0,19 - 0,32 .007 - .013	0,26 - 0,44 .010 - .017	0,32 - 0,54 .013 - .021
4		C = 0,25-0,80	Annealed	915	270	60 - 110 200 - 360	0,09 - 0,15 .004 - .006	0,13 - 0,22 .005 - .009	0,19 - 0,32 .007 - .013	0,26 - 0,44 .010 - .017	0,32 - 0,54 .013 - .021
5		C = 0,25-0,80	Tempered	1020	300	60 - 110 200 - 360	0,09 - 0,15 .004 - .006	0,13 - 0,22 .005 - .009	0,19 - 0,32 .007 - .013	0,26 - 0,44 .010 - .017	0,32 - 0,54 .013 - .021
6	Low-alloy steel, cast steel, machining steel	Annealed		610	180	100 - 120 330 - 390	0,09 - 0,14 .004 - .006	0,13 - 0,21 .005 - .008	0,18 - 0,30 .007 - .012	0,25 - 0,41 .010 - .016	0,30 - 0,50 .012 - .020
7		Tempered		930	275	80 - 100 260 - 330	0,08 - 0,14 .003 - .006	0,12 - 0,20 .005 - .008	0,16 - 0,28 .006 - .011	0,22 - 0,37 .009 - .015	0,27 - 0,45 .011 - .018
8		Tempered		1020	300	70 - 90 230 - 300	0,08 - 0,14 .003 - .006	0,11 - 0,20 .004 - .008	0,16 - 0,27 .006 - .011	0,21 - 0,35 .008 - .014	0,25 - 0,43 .010 - .017
9		Tempered		1190	350	60 - 80 200 - 260	0,08 - 0,14 .003 - .006	0,12 - 0,20 .005 - .008	0,16 - 0,28 .006 - .011	0,22 - 0,37 .009 - .015	0,27 - 0,45 .011 - .018
10	High-alloy steel, cast steel, high-alloy tool steel	Annealed		680	200	50 - 70 160 - 230	0,06 - 0,10 .002 - .004	0,09 - 0,15 .004 - .006	0,13 - 0,23 .005 - .009	0,18 - 0,31 .007 - .012	0,23 - 0,40 .009 - .016
11		Hardened and Tempered		1100	325	40 - 60 130 - 200	0,06 - 0,10 .002 - .004	0,09 - 0,14 .004 - .006	0,13 - 0,21 .005 - .008	0,18 - 0,28 .007 - .011	0,22 - 0,36 .009 - .014
15	Gray cast iron	Pearlitic / Ferritic			180	170 - 210 560 - 690	0,11 - 0,19 .004 - .007	0,16 - 0,26 .006 - .010	0,22 - 0,36 .009 - .014	0,28 - 0,47 .011 - .019	0,34 - 0,57 .013 - .022
16		Pearlitic (Martensitic)			260	120 - 160 390 - 520	0,09 - 0,14 .004 - .006	0,13 - 0,21 .005 - .008	0,18 - 0,30 .007 - .012	0,25 - 0,40 .010 - .016	0,30 - 0,49 .012 - .019
17	Cast iron with nodular cast iron	Ferritic			160	130 - 160 430 - 520	0,09 - 0,16 .004 - .006	0,13 - 0,22 .005 - .009	0,17 - 0,30 .007 - .012	0,23 - 0,38 .009 - .015	0,27 - 0,46 .011 - .018
18		Pearlitic			250	100 - 120 330 - 390	0,09 - 0,14 .004 - .006	0,12 - 0,19 .005 - .007	0,15 - 0,24 .006 - .009	0,19 - 0,31 .007 - .012	0,23 - 0,36 .009 - .014
19	Malleable cast iron	Ferritic			130	140 - 170 460 - 560	0,09 - 0,15 .004 - .006	0,12 - 0,21 .005 - .008	0,17 - 0,29 .007 - .011	0,23 - 0,39 .009 - .015	0,28 - 0,47 .011 - .019
20		Pearlitic			230	120 - 170 390 - 560	0,08 - 0,15 .003 - .006	0,11 - 0,20 .004 - .008	0,15 - 0,27 .006 - .011	0,20 - 0,35 .008 - .014	0,24 - 0,42 .009 - .017

Notes: These are starting condition guidelines only. The machine tool, fixturing, toolholding, part configuration, and coolant capability may significantly influence specific applications. Use proper and safe machining practices. Make the set-up as rigid as possible. Decrease speed as material hardness increases.

Grade Description

Grade	
KC7315	composition: A PVD TiAlN coated straight 9.5% cobalt submicron grade. application: For most steels, gray cast iron, nodular iron, malleable iron, and compacted graphite iron. geometry: Heavily honed cutting edges with corner chamfer. Double margin design. Low thrust point.





With Coolant Holes

Cutting Groups	Material Group	Composition/Structure		Tensile Strength RM (MPa)	Hardness HB	Cutting Speed (m/min) (sfm)	Starting Recommendations for Feed (mm/r and ipr) by Drill Diameter					
							D = 4mm .1575	D = 6mm .2362	D = 8mm .3150	D = 12mm .4724	D = 16mm .6299	D = 20mm .7843
1.1	Unalloyed steel, cast steel, machining steel	C= 0,10-0,25	Annealed, long-chipping	420	125	130 - 170 430 - 560	0,09 - 0,14 .004 - .006	0,12 - 0,19 .005 - .007	0,14 - 0,24 .006 - .009	0,20 - 0,32 .008 - .013	0,24 - 0,40 .009 - .016	0,31 - 0,50 .012 - .020
1.2		C= 0,10-0,25	Annealed, short-chipping	420	125	140 - 180 460 - 590	0,09 - 0,15 .004 - .006	0,13 - 0,20 .005 - .008	0,16 - 0,25 .006 - .010	0,22 - 0,34 .009 - .013	0,27 - 0,43 .011 - .017	0,34 - 0,54 .013 - .021
2.1		C= 0,25-0,55	Annealed, long-chipping	640	190	110 - 150 360 - 490	0,09 - 0,15 .004 - .006	0,13 - 0,20 .005 - .008	0,16 - 0,25 .006 - .010	0,22 - 0,34 .009 - .013	0,27 - 0,43 .011 - .017	0,34 - 0,54 .013 - .021
2.2		C= 0,25-0,55	Annealed, short-chipping	640	190	120 - 170 390 - 560	0,11 - 0,18 .004 - .007	0,15 - 0,24 .006 - .009	0,18 - 0,29 .007 - .011	0,24 - 0,39 .009 - .015	0,29 - 0,47 .011 - .019	0,36 - 0,59 .014 - .023
3		C= 0,25-0,55	Tempered	850	250	90 - 130 300 - 430	0,10 - 0,16 .004 - .006	0,14 - 0,22 .006 - .009	0,17 - 0,27 .007 - .011	0,24 - 0,37 .009 - .015	0,29 - 0,47 .011 - .019	0,38 - 0,60 .015 - .024
4		C= 0,25-0,80	Annealed	915	270	80 - 120 260 - 390	0,10 - 0,16 .004 - .006	0,14 - 0,22 .006 - .009	0,17 - 0,27 .007 - .011	0,24 - 0,37 .009 - .015	0,29 - 0,47 .011 - .019	0,38 - 0,60 .015 - .024
5		C= 0,25-0,80	Tempered	1020	300	80 - 120 260 - 390	0,10 - 0,16 .004 - .006	0,14 - 0,22 .006 - .009	0,17 - 0,27 .007 - .011	0,24 - 0,37 .009 - .015	0,29 - 0,47 .011 - .019	0,38 - 0,60 .015 - .024
6	Low-alloy steel, cast steel, machining steel	Annealed		610	180	80 - 120 260 - 390	0,11 - 0,19 .004 - .007	0,15 - 0,25 .006 - .010	0,18 - 0,31 .007 - .012	0,24 - 0,42 .009 - .017	0,30 - 0,52 .012 - .020	0,38 - 0,65 .015 - .026
7		Tempered		930	275	80 - 120 260 - 390	0,10 - 0,17 .004 - .007	0,14 - 0,23 .006 - .009	0,17 - 0,29 .007 - .011	0,23 - 0,38 .009 - .015	0,28 - 0,47 .011 - .019	0,35 - 0,59 .014 - .023
8		Tempered		1020	300	80 - 120 260 - 390	0,09 - 0,15 .004 - .006	0,13 - 0,21 .005 - .008	0,16 - 0,25 .006 - .010	0,21 - 0,34 .008 - .013	0,26 - 0,42 .010 - .017	0,32 - 0,53 .013 - .021
9		Tempered		1190	350	70 - 90 230 - 300	0,10 - 0,17 .004 - .007	0,14 - 0,23 .006 - .009	0,17 - 0,28 .007 - .011	0,22 - 0,37 .009 - .015	0,27 - 0,45 .011 - .018	0,34 - 0,57 .013 - .022
10	High-alloy steel, cast steel, high-alloy tool steel	Annealed		680	200	60 - 80 200 - 260	0,07 - 0,11 .003 - .004	0,09 - 0,16 .004 - .006	0,12 - 0,20 .005 - .008	0,16 - 0,27 .006 - .011	0,20 - 0,35 .008 - .014	0,26 - 0,45 .010 - .018
11		Hardened and Tempered		1100	325	50 - 70 160 - 230	0,06 - 0,10 .002 - .004	0,09 - 0,15 .004 - .006	0,11 - 0,19 .004 - .007	0,15 - 0,26 .006 - .010	0,20 - 0,33 .008 - .013	0,26 - 0,43 .010 - .017
15	Gray cast iron	Pearlitic / Ferritic			180	150 - 210 490 - 690	0,14 - 0,24 .006 - .009	0,19 - 0,31 .007 - .012	0,23 - 0,38 .009 - .015	0,30 - 0,49 .012 - .019	0,36 - 0,60 .014 - .024	0,45 - 0,74 .018 - .029
16		Pearlitic (Martensitic)			260	100 - 160 330 - 520	0,12 - 0,19 .005 - .007	0,16 - 0,26 .006 - .010	0,20 - 0,32 .008 - .013	0,26 - 0,43 .010 - .017	0,33 - 0,53 .013 - .021	0,41 - 0,67 .016 - .026
17	Cast iron with nodular cast iron	Ferritic			160	100 - 160 330 - 520	0,12 - 0,19 .005 - .007	0,16 - 0,25 .006 - .010	0,20 - 0,31 .008 - .012	0,25 - 0,40 .010 - .016	0,31 - 0,48 .012 - .019	0,38 - 0,60 .015 - .024
18		Pearlitic			250	100 - 160 330 - 520	0,09 - 0,14 .004 - .006	0,12 - 0,19 .005 - .007	0,14 - 0,23 .006 - .009	0,19 - 0,31 .007 - .012	0,24 - 0,39 .009 - .015	0,30 - 0,49 .012 - .019
19	Malleable cast iron	Ferritic			130	120 - 180 390 - 590	0,12 - 0,19 .005 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,30 .007 - .012	0,24 - 0,40 .009 - .016	0,30 - 0,48 .012 - .019	0,37 - 0,60 .015 - .024
20		Pearlitic			230	120 - 180 390 - 590	0,10 - 0,17 .004 - .007	0,13 - 0,22 .005 - .009	0,16 - 0,27 .006 - .011	0,21 - 0,35 .008 - .014	0,25 - 0,43 .010 - .017	0,31 - 0,53 .012 - .021

Notes: These are starting condition guidelines only. The machine tool, fixturing, toolholding, part configuration, and coolant capability may significantly influence specific applications. Use proper and safe machining practices. Make the set-up as rigid as possible. Decrease speed as material hardness increases.

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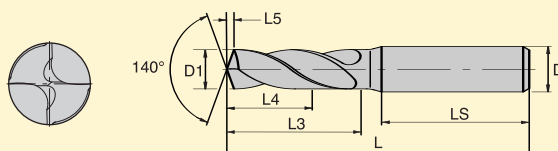
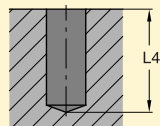
KENNA UNIVERSAL – Solid Carbide Drills



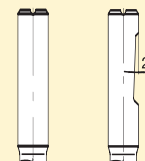
Type B966 without Coolant Holes

DIN 6537K - Short

For Steel and Cast Iron



A-shank F-shank



D1		Catalog number A shank/F shank	Grade KC7315		D	L	L3	L4 max.	LS	L5
Inch	Metric		A	F						
.1181	3,00	B966 A/F 03000	●	●	6	62	20	14	36	0,5
.1378	3,50	B966 A/F 03500	●	●	6	62	20	14	36	0,6
.1457	3,70	B966 A/F 03700	●	●	6	62	20	14	36	0,6
.1496	3,80	B966 A/F 03800	●	●	6	66	24	17	36	0,6
.1575	4,00	B966 A/F 04000	●	●	6	66	24	17	36	0,7
.1654	4,20	B966 A/F 04200	●	●	6	66	24	17	36	0,7
.1772	4,50	B966 A/F 04500	●	●	6	66	24	17	36	0,7
.1811	4,60	B966 A/F 04600	●	●	6	66	24	17	36	0,8
.1890	4,80	B966 A/F 04800	●	●	6	66	28	20	36	0,8
.1969	5,00	B966 A/F 05000	●	●	6	66	28	20	36	0,8
.2165	5,50	B966 A/F 05500	●	●	6	66	28	20	36	0,9
.2244	5,70	B966 A/F 05700	●	●	6	66	28	20	36	1,0
.2283	5,80	B966 A/F 05800	●	●	6	66	28	20	36	1,0
.2362	6,00	B966 A/F 06000	●	●	6	66	28	20	36	1,0
.2559	6,50	B966 A/F 06500	●	●	8	79	34	24	36	1,1
.2677	6,80	B966 A/F 06800	●	●	8	79	34	24	36	1,1
.2756	7,00	B966 A/F 07000	●	●	8	79	34	24	36	1,2
.2913	7,40	B966 A/F 07400	●	●	8	79	41	29	36	1,3
.2953	7,50	B966 A/F 07500	●	●	8	79	41	29	36	1,3
.3071	7,80	B966 A/F 07800	●	●	8	79	41	29	36	1,3
.3150	8,00	B966 A/F 08000	●	●	8	79	41	29	36	1,4
.3346	8,50	B966 A/F 08500	●	●	10	89	47	35	40	1,4
.3465	8,80	B966 A/F 08800	●	●	10	89	47	35	40	1,5
.3543	9,00	B966 A/F 09000	●	●	10	89	47	35	40	1,5
.3661	9,30	B966 A/F 09300	●	●	10	89	47	35	40	1,6
.3740	9,50	B966 A/F 09500	●	●	10	89	47	35	40	1,6
.3858	9,80	B966 A/F 09800	●	●	10	89	47	35	40	1,7
.3937	10,00	B966 A/F 10000	●	●	10	89	47	35	40	1,7
.4016	10,20	B966 A/F 10200	●	●	12	102	55	40	45	1,7
.4134	10,50	B966 A/F 10500	●	●	12	102	55	40	45	1,8
.4213	10,70	B966 A/F 10700	●	●	12	102	55	40	45	1,8
.4331	11,00	B966 A/F 11000	●	●	12	102	55	40	45	1,9
.4409	11,20	B966 A/F 11200	●	●	12	102	55	40	45	1,9
.4528	11,50	B966 A/F 11500	●	●	12	102	55	40	45	2,0
.4606	11,70	B966 A/F 11700	●	●	12	102	55	40	45	2,0
.4724	12,00	B966 A/F 12000	●	●	12	102	55	40	45	2,1
.4921	12,50	B966 A/F 12500	●	●	14	107	60	43	45	2,2
.5000	12,70	B966 A/F 12700	●	●	14	107	60	43	45	2,2
.5118	13,00	B966 A/F 13000	●	●	14	107	60	43	45	2,2
.5315	13,50	B966 A/F 13500	●	●	14	107	60	43	45	2,3
.5394	13,70	B966 A/F 13700	●	●	14	107	60	43	45	2,4
.5512	14,00	B966 A/F 14000	●	●	14	107	60	43	45	2,4
.5709	14,50	B966 A/F 14500	●	●	16	115	65	45	48	2,5
.5787	14,70	B966 A/F 14700	●	●	16	115	65	45	48	2,5
.5906	15,00	B966 A/F 15000	●	●	16	115	65	45	48	2,6
.6102	15,50	B966 A/F 15500	●	●	16	115	65	45	48	2,7
.6181	15,70	B966 A/F 15700	●	●	16	115	65	45	48	2,7
.6299	16,00	B966 A/F 16000	●	●	16	115	65	45	48	2,8

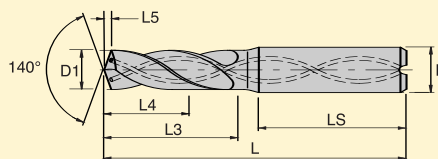
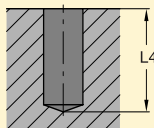
Order example:

A shank: B966A03000
Grade: KC7315F shank: B966F03000
Grade: KC7315



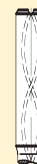
DIN 6537K - Short

For Steel and Cast Iron



A-shank

F-shank



Inch	D1 Fraction	Metric	Catalog number A shank/F shank	Grade KC7315		D	L	L3	L4 max.	LS	L5
				A	F						
.1563	5/32	3,970	B976A03970	●		6	66	24	17	36	0,7
.1575		4,000	B976 A/F 04000	●	●	6	66	24	17	36	0,7
.1654		4,200	B976 A/F 04200	●	●	6	66	24	17	36	0,7
.1772		4,500	B976 A/F 04500	●	●	6	66	24	17	36	0,7
.1811		4,600	B976 A/F 04600	●	●	6	66	24	17	36	0,8
.1875	3/16	4,763	B976A04763	●	●	6	66	28	20	36	0,8
.1890		4,800	B976 A/F 04800	●	●	6	66	28	20	36	0,8
.1969		5,000	B976 A/F 05000	●	●	6	66	28	20	36	0,8
.2165		5,500	B976 A/F 05500	●	●	6	66	28	20	36	0,9
.2195		5,575	B976A05575	●	●	6	66	28	20	36	0,9
.2244		5,700	B976 A/F 05700	●	●	6	66	28	20	36	1,0
.2283		5,800	B976 A/F 05800	●	●	6	66	28	20	36	1,0
.2362		6,000	B976 A/F 06000	●	●	6	66	28	20	36	1,0
.2500	1/4	6,350	B976A06350	●		8	79	34	24	36	1,1
.2559		6,500	B976 A/F 06500	●	●	8	79	34	24	36	1,1
.2656	17/64	6,746	B976A06746	●		8	79	34	24	36	1,1
.2677		6,800	B976 A/F 06800	●	●	8	79	34	24	36	1,1
.2756		7,000	B976 A/F 07000	●	●	8	79	34	24	36	1,2
.2813	9/32	7,145	B976A07145	●		8	79	41	29	36	1,2
.2913		7,400	B976 A/F 07400	●	●	8	79	41	29	36	1,3
.2953		7,500	B976 A/F 07500	●	●	8	79	41	29	36	1,3
.2969	19/64	7,541	B976A07541	●		8	79	41	29	36	1,3
.3071		7,800	B976 A/F 07800	●	●	8	79	41	29	36	1,3
.3125	5/16	7,938	B976A07938	●		8	79	41	29	36	1,3
.3150		8,000	B976 A/F 08000	●	●	8	79	41	29	36	1,4
.3281	21/64	8,334	B976A08334	●		10	89	47	35	40	1,4
.3346		8,500	B976 A/F 08500	●	●	10	89	47	35	40	1,4
.3438	11/32	8,733	B976A08733	●		10	89	47	35	40	1,5
.3465		8,800	B976 A/F 08800	●	●	10	89	47	35	40	1,5
.3543		9,000	B976 A/F 09000	●	●	10	89	47	35	40	1,5
.3594	23/64	9,129	B976A09129	●		10	89	47	35	40	1,6
.3661		9,300	B976 A/F 09300	●	●	10	89	47	35	40	1,6
.3740		9,500	B976 A/F 09500	●	●	10	89	47	35	40	1,6
.3750	3/8	9,525	B976A09525	●		10	89	47	35	40	1,6
.3858		9,800	B976 A/F 09800	●	●	10	89	47	35	40	1,7
.3906	25/64	9,921	B976A09921	●		10	89	47	35	40	1,7
.3937		10,000	B976 A/F 10000	●	●	10	89	47	35	40	1,7

Continued on next page.

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
A shank: **B976A03970**
Grade: **KC7315**

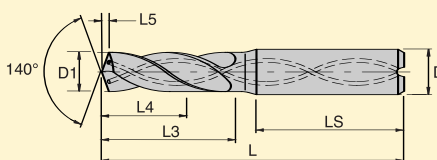
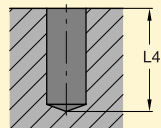
F shank: **B976F04000**
Grade: **KC7315**

KENNA UNIVERSAL – Solid Carbide Drills

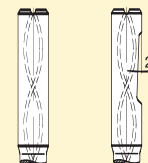


Type B976 with Coolant Holes (continued)

Continued from page B5.



A-shank F-shank



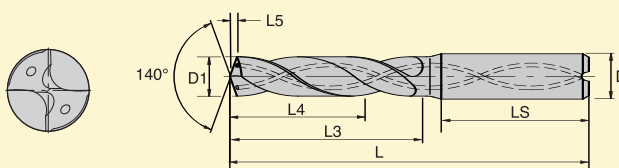
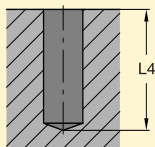
Inch	D1 Fraction	Metric	Catalog number A shank/F shank	Grade KC7315		D	L	L3	L4 max.	LS	L5
				A	F						
.4016		10,200	B976 A/F 10200	●	●	12	102	55	40	45	1,7
.4063	13/32	10,320	B976A10320	●	●	12	102	55	40	45	1,8
.4134		10,500	B976 A/F 10500	●	●	12	102	55	40	45	1,8
.4213		10,700	B976 A/F 10700	●	●	12	102	55	40	45	1,8
.4219	27/64	10,716	B976A10716	●	●	12	102	55	40	45	1,8
.4331		11,000	B976 A/F 11000	●	●	12	102	55	40	45	1,9
.4375	7/16	11,113	B976A11113	●	●	12	102	55	40	45	1,9
.4409		11,200	B976 A/F 11200	●	●	12	102	55	40	45	1,9
.4528		11,500	B976 A/F 11500	●	●	12	102	55	40	45	2,0
.4531	29/64	11,509	B976A11509	●	●	12	102	55	40	45	2,0
.4606		11,700	B976 A/F 11700	●	●	12	102	55	40	45	2,0
.4688	15/32	11,908	B976A11908	●	●	12	102	55	40	45	2,0
.4724		12,000	B976 A/F 12000	●	●	12	102	55	40	45	2,1
.4844	31/64	12,304	B976A12304	●	●	14	107	60	43	45	2,1
.4921		12,500	B976 A/F 12500	●	●	14	107	60	43	45	2,2
.5000	1/2	12,700	B976 A/F 12700	●	●	14	107	60	43	45	2,2
.5118		13,000	B976 A/F 13000	●	●	14	107	60	43	45	2,2
.5315		13,500	B976 A/F 13500	●	●	14	107	60	43	45	2,3
.5394		13,700	B976 A/F 13700	●	●	14	107	60	43	45	2,4
.5512		14,000	B976 A/F 14000	●	●	14	107	60	43	45	2,4
.5625	9/16	14,288	B976A14288	●	●	16	115	65	45	48	2,5
.5709		14,500	B976 A/F 14500	●	●	16	115	65	45	48	2,5
.5787		14,700	B976 A/F 14700	●	●	16	115	65	45	48	2,5
.5906		15,000	B976 A/F 15000	●	●	16	115	65	45	48	2,6
.6102		15,500	B976 A/F 15500	●	●	16	115	65	45	48	2,7
.6181		15,700	B976 A/F 15700	●	●	16	115	65	45	48	2,7
.6250	5/8	15,875	B976A15875	●	●	16	115	65	45	48	2,7
.6299		16,000	B976 A/F 16000	●	●	16	115	65	45	48	2,8
.6496		16,500	B976 A/F 16500	●	●	18	123	73	51	48	2,9
.6693	11/16	17,000	B976 A/F 17000	●	●	18	123	73	51	48	3,0
.6875		17,463	B976A17463	●	●	18	123	73	51	48	3,0
.6890		17,500	B976 A/F 17500	●	●	18	123	73	51	48	3,0
.7087		18,000	B976 A/F 18000	●	●	18	123	73	51	48	3,1
.7283		18,500	B976 A/F 18500	●	●	20	131	79	55	50	3,2
.7480	3/4	19,000	B976 A/F 19000	●	●	20	131	79	55	50	3,3
.7500		19,050	B976A19050	●	●	20	131	79	55	50	3,3
.7677		19,500	B976 A/F 19500	●	●	20	131	79	55	50	3,4
.7874		20,000	B976 A/F 20000	●	●	20	131	79	55	50	3,5

Order example:
A shank: B976A10200
Grade: KC7315

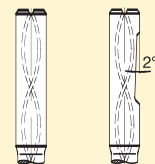
F shank: B976F10200
Grade: KC7315

**DIN 6537L - Long**

For Steel and Cast Iron



A-shank F-shank



Inch	D1 Fraction	Metric	Catalog number A shank/F shank	Grade KC7315		D	L	L3	L4 max.	L5	L5
				A	F						
.1563	5/32	3,970	B977A03970	●		6	74	36	29	36	0,7
.1575		4,000	B977 A/F 04000	●	●	6	74	36	29	36	0,7
.1654		4,200	B977 A/F 04200	●	●	6	74	36	29	36	0,7
.1772		4,500	B977 A/F 04500	●	●	6	74	36	29	36	0,7
.1803		4,580	B977A04580	●		6	74	36	29	36	0,8
.1811		4,600	B977 A/F 04600	●	●	6	74	36	29	36	0,8
.1820		4,623	B977A04623	●		6	74	36	29	36	0,8
.1875	3/16	4,763	B977A04763	●		6	82	44	35	36	0,8
.1890		4,800	B977 A/F 04800	●	●	6	82	44	35	36	0,8
.1969		5,000	B977 A/F 05000	●	●	6	82	44	35	36	0,8
.2130		5,410	B977A05410	●		6	82	44	35	36	0,9
.2165		5,500	B977 A/F 05500	●	●	6	82	44	35	36	0,9
.2188	7/32	5,558	B977A05558	●		6	82	44	35	36	0,9
.2283		5,800	B977 A/F 05800	●	●	6	82	44	35	36	1,0
.2362		6,000	B977 A/F 06000	●	●	6	82	44	35	36	1,0
.2500	1/4	6,350	B977A06350	●		8	91	53	43	36	1,1
.2559		6,500	B977 A/F 06500	●	●	8	91	53	43	36	1,1
.2570		6,528	B977A06528	●		8	91	53	43	36	1,1
.2677		6,800	B977 A/F 06800	●	●	8	91	53	43	36	1,1
.2720		6,909	B977A06909	●		8	91	53	43	36	1,2
.2756		7,000	B977 A/F 07000	●	●	8	91	53	43	36	1,2
.2813	9/32	7,145	B977A07145	●		8	91	53	43	36	1,2
.2913		7,400	B977 A/F 07400	●	●	8	91	53	43	36	1,3
.2953		7,500	B977 A/F 07500	●	●	8	91	53	43	36	1,3
.2969	19/64	7,541	B977A07541	●		8	91	53	43	36	1,3
.3071		7,800	B977 A/F 07800	●	●	8	91	53	43	36	1,3
.3125	5/16	7,938	B977A07938	●		8	91	53	43	36	1,3
.3150		8,000	B977 A/F 08000	●	●	8	91	53	43	36	1,4
.3281	21/64	8,334	B977A08334	●		10	103	61	49	40	1,4
.3320		8,433	B977A08433	●		10	103	61	49	40	1,4
.3346		8,500	B977 A/F 08500	●	●	10	103	61	49	40	1,4
.3465		8,800	B977 A/F 08800	●	●	10	103	61	49	40	1,5
.3543		9,000	B977 A/F 09000	●	●	10	103	61	49	40	1,5
.3594	23/64	9,129	B977A09129	●		10	103	61	49	40	1,6
.3661		9,300	B977 A/F 09300	●	●	10	103	61	49	40	1,6
.3680		9,347	B977A09347	●		10	103	61	49	40	1,6
.3740		9,500	B977 A/F 09500	●	●	10	103	61	49	40	1,6
.3750	3/8	9,525	B977A09525	●		10	103	61	49	40	1,6
.3820		9,703	B977A09703	●		10	103	61	49	40	1,7
.3837		9,746	B977A09746	●		10	103	61	49	40	1,7
.3858		9,800	B977 A/F 09800	●	●	10	103	61	49	40	1,7
.3906		9,921	B977A09921	●		10	103	61	49	40	1,7
.3937		10,000	B977 A/F 10000	●	●	10	103	61	49	40	1,7

Continued on next page.

To place an order, contact your authorized
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Order example:

A shank: B977A03970

Grade: KC7315

F shank: B977F04000

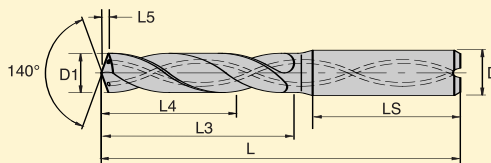
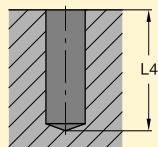
Grade: KC7315

KENNA UNIVERSAL – Solid Carbide Drills

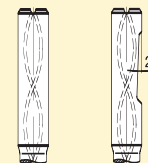


Type B977 with Coolant Holes (continued)

Continued from page B7.



A-shank F-shank



Inch	D1 Fraction	Metric	Catalog number A shank/F shank	Grade KC7315		D	L	L3	L4 max.	LS	L5
				A	F						
.4016		10,200	B977 A/F 10200	●	●	12	118	71	56	45	1,7
.4063	13/32	10,320	B977A10320	●	●	12	118	71	56	45	1,8
.4134		10,500	B977 A/F 10500	●	●	12	118	71	56	45	1,8
.4213		10,700	B977 A/F 10700	●	●	12	118	71	56	45	1,8
.4219	27/64	10,716	B977A10716	●	●	12	118	71	56	45	1,8
.4331		11,000	B977 A/F 11000	●	●	12	118	71	56	45	1,9
.4375	7/16	11,113	B977A11113	●	●	12	118	71	56	45	1,9
.4409		11,200	B977 A/F 11200	●	●	12	118	71	56	45	1,9
.4528		11,500	B977 A/F 11500	●	●	12	118	71	56	45	2,0
.4531	29/64	11,509	B977A11509	●	●	12	118	71	56	45	2,0
.4606		11,700	B977 A/F 11700	●	●	12	118	71	56	45	2,0
.4688	15/32	11,908	B977A11908	●	●	12	118	71	56	45	2,0
.4724		12,000	B977 A/F 12000	●	●	12	118	71	56	45	2,1
.4844	31/64	12,304	B977A12304	●	●	14	124	77	60	45	2,1
.4921		12,500	B977 A/F 12500	●	●	14	124	77	60	45	2,2
.5000	1/2	12,700	B977 A/F 12700	●	●	14	124	77	60	45	2,2
.5080		12,903	B977A12903	●	●	14	124	77	60	45	2,2
.5118		13,000	B977 A/F 13000	●	●	14	124	77	60	45	2,2
.5156	33/64	13,096	B977A13096	●	●	14	124	77	60	45	2,3
.5315		13,500	B977 A/F 13500	●	●	14	124	77	60	45	2,3
.5394		13,700	B977 A/F 13700	●	●	14	124	77	60	45	2,4
.5512		14,000	B977 A/F 14000	●	●	14	124	77	60	45	2,4
.5625	9/16	14,288	B977A14288	●	●	16	133	83	63	48	2,5
.5709		14,500	B977 A/F 14500	●	●	16	133	83	63	48	2,5
.5787		14,700	B977 A/F 14700	●	●	16	133	83	63	48	2,5
.5906		15,000	B977 A/F 15000	●	●	16	133	83	63	48	2,6
.6102		15,500	B977 A/F 15500	●	●	16	133	83	63	48	2,7
.6181		15,700	B977 A/F 15700	●	●	16	133	83	63	48	2,7
.6250	5/8	15,875	B977A15875	●	●	16	133	83	63	48	2,7
.6299		16,000	B977 A/F 16000	●	●	16	133	83	63	48	2,8
.6330		16,078	B977A16078	●	●	18	143	93	71	48	2,8
.6496		16,500	B977 A/F 16500	●	●	18	143	93	71	48	2,9
.6562	21/32	16,667	B977A16667	●	●	18	143	93	71	48	2,9
.6693		17,000	B977 A/F 17000	●	●	18	143	93	71	48	3,0
.6875	11/16	17,463	B977A17463	●	●	18	143	93	71	48	3,0
.6890		17,500	B977 A/F 17500	●	●	18	143	93	71	48	3,0
.7087		18,000	B977 A/F 18000	●	●	18	143	93	71	48	3,1
.7283		18,500	B977 A/F 18500	●	●	20	153	101	77	50	3,2
.7480		19,000	B977 A/F 19000	●	●	20	153	101	77	50	3,3
.7500	3/4	19,050	B977A19050	●	●	20	153	101	77	50	3,3
.7580		19,253	B977A19253	●	●	20	153	101	77	50	3,3
.7656	49/64	19,446	B977A19446	●	●	20	153	101	77	50	3,4
.7677		19,500	B977 A/F 19500	●	●	20	153	101	77	50	3,4
.7874		20,000	B977 A/F 20000	●	●	20	153	101	77	50	3,5

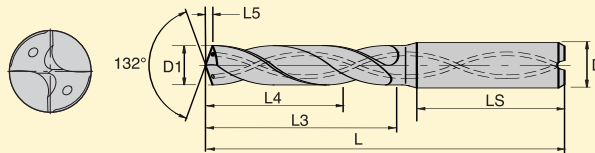
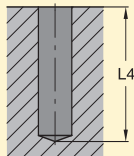
Order example:
A shank: B977A10200
Grade: KC7315

F shank: B977F10200
Grade: KC7315



Internal Standard - Extra Long

For Steel and Cast Iron



A-shank



			Catalog number	Grade						
			A shank	KC7315						
Inch	D1 Fraction	Metric		A	D	L	L3	L4 max.	LS	L5
.1563	5/32	3,970	B978A03970	●	6	87	49	41	36	0,8
.1875	3/16	4,763	B978A04763	●	6	94	56	48	36	1,0
.1969		5,000	B978A05000	●	6	94	56	48	36	1,0
.2165		5,500	B978A05500	●	6	94	56	48	36	1,1
.2188	7/32	5,558	B978A05558	●	6	94	56	48	36	1,2
.2362		6,000	B978A06000	●	6	94	56	48	36	1,3
.2500	1/4	6,350	B978A06350	●	8	105	67	57	36	1,3
.2559		6,500	B978A06500	●	8	105	67	57	36	1,4
.2656	17/64	6,746	B978A06746	●	8	105	67	57	36	1,4
.2677		6,800	B978A06800	●	8	105	67	57	36	1,4
.2756		7,000	B978A07000	●	8	105	67	57	36	1,5
.2813	9/32	7,145	B978A07145	●	8	110	72	61	36	1,5
.2953		7,500	B978A07500	●	8	110	72	61	36	1,6
.2969	19/64	7,541	B978A07541	●	8	110	72	61	36	1,6
.3071		7,800	B978A07800	●	8	110	72	61	36	1,6
.3125	5/16	7,938	B978A07938	●	8	110	72	61	36	1,7
.3150		8,000	B978A08000	●	8	110	72	61	36	1,7
.3281	21/64	8,334	B978A08334	●	10	122	80	68	40	1,8
.3346		8,500	B978A08500	●	10	122	80	68	40	1,8
.3438	11/32	8,733	B978A08733	●	10	122	80	68	40	1,8
.3543		9,000	B978A09000	●	10	122	80	68	40	1,9
.3594	23/64	9,129	B978A09129	●	10	122	80	68	40	1,9
.3740		9,500	B978A09500	●	10	122	80	68	40	2,0
.3750	3/8	9,525	B978A09525	●	10	122	80	68	40	2,0
.3906	25/64	9,921	B978A09921	●	10	122	80	68	40	2,1
.3937		10,000	B978A10000	●	10	122	80	68	40	2,1
.4016		10,200	B978A10200	●	12	141	94	79	45	2,2
.4063	13/32	10,320	B978A10320	●	12	141	94	79	45	2,2
.4134		10,500	B978A10500	●	12	141	94	79	45	2,2
.4219	27/64	10,716	B978A10716	●	12	141	94	79	45	2,3
.4331		11,000	B978A11000	●	12	141	94	79	45	2,3
.4375	7/16	11,113	B978A11113	●	12	141	94	79	45	2,4
.4528		11,500	B978A11500	●	12	141	94	79	45	2,4
.4531	29/64	11,509	B978A11509	●	12	141	94	79	45	2,4
.4688		11,908	B978A11908	●	12	141	94	79	45	2,5
.4724		12,000	B978A12000	●	12	141	94	79	45	2,6

Continued on next page.

To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

Order example:
A shank: B978A03970
Grade: KC7315

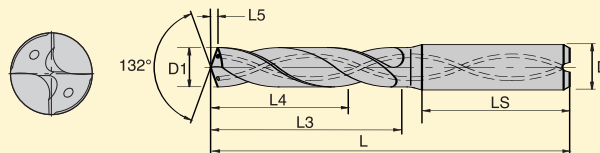
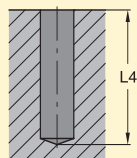
KENNA UNIVERSAL – Solid Carbide Drills



Type B978 with Coolant Holes (continued)

Continued from page B9.

A-shank



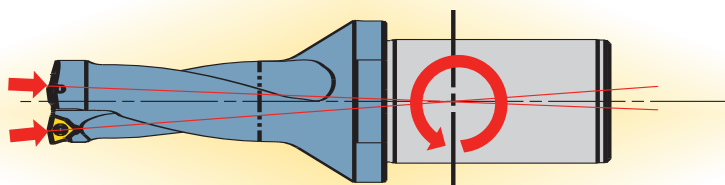
			Catalog number	Grade						
			A shank	KC7315						
inch	D1 fraction	mm		A	D	L	L3	L4 max.	LS	L5
.4844	31/64	12,304	B978A12304	●	14	155	108	91	45	2,6
.4921		12,500	B978A12500	●	14	155	108	91	45	2,7
.5000	1/2	12,700	B978A12700	●	14	155	108	91	45	2,7
.5118		12,000	B978A13000	●	14	155	108	91	45	2,8
.5315		13,500	B978A13500	●	14	155	108	91	45	2,9
.5512		14,000	B978A14000	●	14	155	108	91	45	3,0
.5625	9/16	14,288	B978A14288	●	16	171	121	101	48	3,0
.5709		14,500	B978A14500	●	16	171	121	101	48	3,1
.5906		15,000	B978A15000	●	16	171	121	101	48	3,2
.6102		15,500	B978A15500	●	16	171	121	101	48	3,3
.6250	5/8	15,875	B978A15875	●	16	171	121	101	48	3,4
.6299		16,000	B978A16000	●	16	171	121	101	48	3,4
.6330		16,078	B978A16078	●	18	185	135	113	48	3,4
.6496		16,500	B978A16500	●	18	185	135	113	48	3,5
.6693		17,000	B978A17000	●	18	185	135	113	48	3,6
.6875	11/16	17,463	B978A17463	●	18	185	135	113	48	3,7
.6890		17,500	B978A17500	●	18	185	135	113	48	3,8
.7087		18,000	B978A18000	●	18	185	135	113	48	3,9
.7283		18,500	B978A18500	●	20	200	148	124	50	4,0
.7480		19,000	B978A19000	●	20	200	148	124	50	4,1
.7500	3/4	19,050	B978A19050	●	20	200	148	124	50	4,1
.7580		19,253	B978A19253	●	20	200	148	124	50	4,1
.7677		19,500	B978A19500	●	20	200	148	124	50	4,2
.7874		20,000	B978A20000	●	20	200	148	124	50	4,3



To place an order,
contact your authorized
Kennametal distributor or
visit www.kennametal.com.

Order example:
A shank: B978A12304
Grade: KC7315

DRILL-FIX Indexable Drills



Our DRILL-FIX product line is one of the most comprehensive in the industry. We'll help you achieve productivity gains with these proven features:

- DRILL-FIX drills are **engineered to optimize insert position**. Feed forces meet at the center of the shank to minimize tool deflection and chatter, and maximize hole accuracy.
- Inch and metric cutting diameters are **standard**.
- New flute profile ensures **excellent chip evacuation**.
- **"X" offset capability** provides added versatility.
- **"X" offset** is marked on the body for **easy set up**.
- **User-friendly shanks** fit the most popular holding devices.
- **Through-coolant** access is located on both the shank end and side of the drill body for inch applications.
- New **KENNA UNIVERSAL insert grade KU40D** handles demanding metalcutting applications with precision.

Grade Description

Grade	
 KU40D	composition: A CVD TiN/TiCN/TiN-coated tough alloyed carbide grade with 11.0% cobalt. application: KU40D is a universal drilling grade capable of providing consistent performance over a wide variety of drilling applications, such as high-carbon steels; alloy and tool steels; stainless steels; ductile and cast irons; non-ferrous materials; and high-temperature alloys. geometry: -GD geometry offers excellent edge strength for general applications, and -MD geometry offers a more positive cutting action.



Kennametal DRILL-FIX DFT Technical Information



DFT Applications – Cutting Data Recommendations for DRILL-FIX DFT

SOLID CARBIDE DRILLS

INDEXABLE DRILLS

OPV DRILLS

HOLEMAKING PRODUCTS

Cutting Groups	Material Group	Composition/Structure		Tensile Strength RM (MPa)	Hardness HB	Cutting Speed vc: (m/min) (sfm)				Feed Rate Per Revolution by Insert Size: (mm/r) (ipr)				
						Stable	Normal	Unstable	Interrupted Cut	DFT 03...	DFT 05...	DFT 06...	DFT 07...	DFT 09...
1.1	Unalloyed steel, cast steel, machining steel	C= 0,10-0,25	Annealed, long-chipping	420	125	340 1120	280 920	220 720	140 460	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
1.2		C= 0,10-0,25	Annealed, short-chipping	420	125	340 1120	280 920	220 720	140 460	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
2.1		C= 0,25-0,55	Annealed, long-chipping	640	190	310 1020	260 850	210 720	130 430	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
2.2		C= 0,25-0,55	Annealed, short-chipping	640	190	340 1020	280 920	220 720	140 460	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
3		C= 0,25-0,55	Tempered	850	250	310 1020	260 850	210 690	130 430	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
4		C= 0,25-0,80	Annealed	915	270	300 980	250 820	200 660	130 430	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
5		C= 0,25-0,80	Tempered	1020	300	260 850	220 720	180 590	110 360	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
6	Low-alloy steel, cast steel, machining steel	Annealed		610	180	310 1020	260 850	210 690	130 430	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
7		Tempered		930	275	280 920	230 760	180 590	120 390	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
8		Tempered		1020	300	240 790	200 660	160 530	100 330	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
9		Tempered		1190	350	220 720	180 590	140 460	90 300	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
10	High-alloy steel, cast steel, high-alloy tool steel	Annealed		680	200	240 790	200 660	160 530	100 330	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
11		Hardened and Tempered		1100	325	190 620	160 530	130 430	80 260	0,06 - 0,10 .002 - .004	0,09 - 0,15 .003 - .006	0,11 - 0,18 .004 - .007	0,15 - 0,25 .006 - .010	0,19 - 0,31 .007 - .012
12	Stainless steel, cast steel	Ferritic/Martensitic	Annealed	680	200	220 720	180 590	140 460	90 300	0,06 - 0,10 .002 - .004	0,08 - 0,13 .003 - .006	0,09 - 0,15 .004 - .006	0,11 - 0,18 .004 - .007	0,14 - 0,23 .006 - .009
13		Martensitic	Tempered	810	240	190 620	160 530	130 430	80 260	0,05 - 0,09 .002 - .004	0,07 - 0,11 .003 - .004	0,09 - 0,15 .004 - .006	0,11 - 0,18 .004 - .007	0,12 - 0,20 .005 - .008
14.1	Stainless steel	Austenitic		610	180	190 620	160 530	130 430	80 260	0,05 - 0,09 .002 - .004	0,07 - 0,13 .003 - .005	0,08 - 0,16 .003 - .006	0,10 - 0,18 .004 - .007	0,11 - 0,21 .004 - .008
14.2		Austenitic/Ferritic (duplex)		880	260	190 620	160 530	130 430	80 260	0,05 - 0,09 .002 - .004	0,07 - 0,13 .003 - .005	0,08 - 0,16 .003 - .006	0,10 - 0,18 .004 - .007	0,11 - 0,21 .004 - .008
15	Gray cast iron	Pearlitic/Ferritic			180	260 850	220 720	180 590	110 360	0,07 - 0,13 .003 - .005	0,10 - 0,18 .004 - .007	0,14 - 0,26 .006 - .010	0,18 - 0,33 .007 - .013	0,21 - 0,39 .008 - .015
16		Pearlitic (Martensitic)			260	220 720	180 590	140 460	90 300	0,07 - 0,13 .003 - .005	0,10 - 0,18 .004 - .007	0,14 - 0,26 .006 - .010	0,18 - 0,33 .007 - .013	0,21 - 0,39 .008 - .015
17	Cast iron with nodular cast iron	Ferritic			160	220 720	180 590	140 460	90 300	0,07 - 0,13 .003 - .005	0,10 - 0,18 .004 - .007	0,14 - 0,26 .006 - .010	0,18 - 0,33 .007 - .013	0,21 - 0,39 .008 - .015
18		Pearlitic			250	180 590	150 490	120 400	80 260	0,06 - 0,10 .002 - .004	0,08 - 0,16 .003 - .006	0,14 - 0,26 .006 - .010	0,18 - 0,33 .007 - .013	0,21 - 0,39 .008 - .015
19	Malleable cast iron	Ferritic			130	240 790	200 660	160 530	100 330	0,07 - 0,13 .003 - .005	0,10 - 0,18 .004 - .007	0,14 - 0,26 .006 - .010	0,18 - 0,33 .007 - .013	0,21 - 0,39 .008 - .015
20		Pearlitic			230	220 720	180 590	140 460	90 300	0,07 - 0,13 .003 - .005	0,10 - 0,18 .004 - .007	0,14 - 0,26 .006 - .010	0,18 - 0,33 .007 - .013	0,21 - 0,39 .008 - .015
21	Aluminum forging alloys	Not heat treatable			60	720 2360	600 1970	480 1580	300 980	0,05 - 0,07 .002 - .003	0,07 - 0,09 .003 - .004	0,10 - 0,14 .006 - .010	0,12 - 0,16 .005 - .006	0,14 - 0,18 .006 - .007
22		Heat treatable/Heat treated			100	720 2360	600 1970	480 1580	300 980	0,05 - 0,07 .002 - .003	0,07 - 0,09 .003 - .004	0,10 - 0,14 .006 - .010	0,12 - 0,16 .005 - .006	0,14 - 0,18 .006 - .007
23	Aluminum casting alloys	<12% Si	Not heat treatable		75	720 2360	600 1970	480 1580	300 980	0,05 - 0,07 .002 - .003	0,07 - 0,09 .003 - .004	0,10 - 0,14 .006 - .010	0,12 - 0,16 .005 - .006	0,14 - 0,18 .006 - .007
24		<12% Si	Heat treatable/Heat treated		90	600 1970	500 1640	400 1310	250 820	0,05 - 0,07 .002 - .003	0,07 - 0,09 .003 - .004	0,10 - 0,14 .006 - .010	0,12 - 0,16 .005 - .006	0,14 - 0,18 .006 - .007
25		>12% Si	Not heat treatable		130	480 1580	400 1310	320 1050	200 660	0,05 - 0,07 .002 - .003	0,07 - 0,09 .003 - .004	0,10 - 0,14 .006 - .010	0,12 - 0,16 .005 - .006	0,14 - 0,18 .006 - .007
26	Copper and copper alloys (bronze, brass)	Machining Alloys, Pb > 1%			110	600 1970	500 1640	400 1310	250 820	0,05 - 0,07 .002 - .003	0,07 - 0,09 .003 - .004	0,10 - 0,14 .006 - .010	0,12 - 0,16 .005 - .006	0,14 - 0,18 .006 - .007
27		CuZn, CuSnZn			90	600 1970	500 1640	400 1310	250 820	0,05 - 0,07 .002 - .003	0,07 - 0,09 .003 - .004	0,10 - 0,14 .006 - .010	0,12 - 0,16 .005 - .006	0,14 - 0,18 .006 - .007
28		Cu, lead-free copper/electrolytic copper			100	480 1580	400 1310	320 1050	200 660	0,05 - 0,07 .002 - .003	0,07 - 0,09 .003 - .004	0,10 - 0,14 .006 - .010	0,12 - 0,16 .005 - .006	0,14 - 0,18 .006 - .007
31	Heat resistant alloys	Fe-based	Annealed		200	70 230	60 200	50 160	30 100	0,03 - 0,05 .001 - .002	0,04 - 0,06 .001 - .002	0,05 - 0,08 .002 - .003	0,06 - 0,10 .002 - .004	0,08 - 0,13 .003 - .005
32			Heat treated		230	70 230	60 200	50 160	30 100	0,03 - 0,05 .001 - .002	0,04 - 0,06 .001 - .002	0,05 - 0,08 .002 - .003	0,06 - 0,10 .002 - .004	0,08 - 0,13 .003 - .005
33		Ni or Co-based	Annealed		250	60 200	50 160	40 130	30 100	0,03 - 0,05 .001 - .002	0,04 - 0,06 .001 - .002	0,05 - 0,08 .002 - .003	0,06 - 0,10 .002 - .004	0,08 - 0,13 .003 - .005
34			Heat treated		350	60 200	50 160	40 130	30 100	0,03 - 0,05 .001 - .002	0,04 - 0,06 .001 - .002	0,05 - 0,08 .002 - .003	0,06 - 0,10 .002 - .004	0,08 - 0,13 .003 - .005
35		Cast			320	60 200	50 160	40 130	30 100	0,03 - 0,05 .001 - .002	0,04 - 0,06 .001 - .002	0,05 - 0,08 .002 - .003	0,06 - 0,10 .002 - .004	0,08 - 0,13 .003 - .005
36	Titanium alloys	Pure titanium			400	100 330	80 260	60 200	40 130	0,04 - 0,06 .001 - .002	0,05 - 0,08 .002 - .003	0,06 - 0,10 .002 - .004	0,06 - 0,10 .002 - .004	0,09 - 0,15 .004 - .006
37		Alpha-beta alloys			55 HRC	70 230	60 200	50 160	30 100	0,04 - 0,06 .001 - .002	0,05 - 0,08 .002 - .003	0,06 - 0,10 .002 - .004	0,06 - 0,10 .002 - .004	0,06 - 0,10 .002 - .004

Notes: These are starting condition guidelines only. The machine tool, fixturing, toolholding, part configuration, and coolant capability may significantly influence specific applications. Use proper and safe machining practices. Make the set-up as rigid as possible. Decrease speed as material hardness increases.

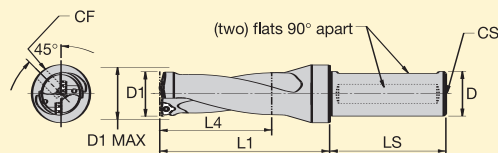


Ordering Information:

- Drill shipped with insert screws, side pipe plug, and Torx wrench.
- Use with SSF adapters for rotating applications.

Flanged Shank

Shank	D	LS	CS	Side Pipe Plug CF
SSF075	.750	2.00	1/8 - 27 NPT	193.259
SSF100	1.000	3.00	1/4 - 18 NPT	193.259
SSF125	1.250	3.25	1/4 - 18 NPT	193.259
SSF150	1.500	3.75	1/4 - 18 NPT	193.259
SSF200	2.000	4.00	1/4 - 18 NPT	193.259



D1 ± .008

Inch

D1	D1 max.	Order number	Catalog number	D	Gage Insert	L1	L4	Insert Screw	Torx Wrench	Torx Size
.625	.780	1527597	DFT0625R2SSF075	.750	DFT030204	2.88	1.60	191.164	170.027	T6
.625	.780	1527664	DFT0625R2SSF100	1.000	DFT030204	2.88	1.60	191.164	170.027	T6
.656	.806	1530245	DFT0656R2SSF075	.750	DFT030204	3.00	1.64	191.164	170.027	T6
.656	.806	1527666	DFT0656R2SSF100	1.000	DFT030204	3.00	1.64	191.164	170.027	T6
.688	.838	1527625	DFT0688R2SSF075	.750	DFT030204	3.00	1.75	191.164	170.027	T6
.688	.838	1527667	DFT0688R2SSF100	1.000	DFT030204	3.00	1.75	191.164	170.027	T6
.703	.853	1527626	DFT0703R2SSF075	.750	DFT030204	3.00	1.76	191.164	170.027	T6
.703	.853	1527669	DFT0703R2SSF100	1.000	DFT030204	3.00	1.76	191.164	170.027	T6
.734	.884	1527627	DFT0734R2SSF075	.750	DFT030204	3.00	1.84	191.164	170.027	T6
.734	.884	1527681	DFT0734R2SSF100	1.000	DFT030204	3.00	1.84	191.164	170.027	T6
.750	.850	1527628	DFT0750R2SSF075	.750	DFT030304	3.25	1.88	MS1152	170.023	T7
.750	.850	1527682	DFT0750R2SSF100	1.000	DFT030304	3.25	1.88	MS1152	170.023	T7
.781	.881	1527629	DFT0781R2SSF075	.750	DFT030304	3.25	1.96	MS1152	170.023	T7
.781	.881	1527691	DFT0781R2SSF100	1.000	DFT030304	3.25	1.96	MS1152	170.023	T7
.813	.913	1527630	DFT0813R2SSF075	.750	DFT030304	3.38	2.03	MS1152	170.023	T7
.813	.913	1527698	DFT0813R2SSF100	1.000	DFT030304	3.38	2.03	MS1152	170.023	T7
.844	.919	1527661	DFT0844R2SSF075	.750	DFT030304	3.38	2.11	MS1152	170.023	T7
.844	.919	1527699	DFT0844R2SSF100	1.000	DFT030304	3.38	2.11	MS1152	170.023	T7
.875	.950	1527663	DFT0875R2SSF075	.750	DFT030304	3.63	2.19	MS1152	170.023	T7
.875	.950	1527700	DFT0875R2SSF100	1.000	DFT030304	3.63	2.19	MS1152	170.023	T7
.875	.950	1600515	DFT0875R2SSF125	1.250	DFT030304	3.63	2.19	MS1152	170.023	T7
.906	.981	1527731	DFT0906R2SSF100	1.000	DFT030304	3.63	2.27	MS1152	170.023	T7
.906	.981	1527689	DFT0906R2SSF125	1.250	DFT030304	3.63	2.27	MS1152	170.023	T7
.938	1.000	1527732	DFT0938R2SSF100	1.000	DFT030304	3.75	2.35	MS1152	170.023	T7
.938	1.000	1528316	DFT0938R2SSF125	1.250	DFT030304	3.75	2.35	MS1152	170.023	T7
.969	1.019	1527733	DFT0969R2SSF100	1.000	DFT030304	3.75	2.40	MS1152	170.023	T7
.969	1.019	1528317	DFT0969R2SSF125	1.250	DFT030304	3.75	2.40	MS1152	170.023	T7
.984	1.109	1527687	DFT0984R2SSF100	1.000	DFT05T308	3.88	2.50	191.924	170.024	T9
.984	1.109	1528318	DFT0984R2SSF125	1.250	DFT05T308	3.88	2.50	191.924	170.024	T9
1.000	1.125	1527688	DFT1000R2SSF100	1.000	DFT05T308	4.00	2.50	191.924	170.024	T9
1.000	1.125	1528319	DFT1000R2SSF125	1.250	DFT05T308	4.00	2.50	191.924	170.024	T9
1.000	1.125	1528369	DFT1000R2SSF150	1.500	DFT05T308	4.00	2.50	191.924	170.024	T9
1.031	1.156	1528320	DFT1031R2SSF125	1.250	DFT05T308	4.00	2.60	191.924	170.024	T9
1.063	1.188	1528341	DFT1063R2SSF125	1.250	DFT05T308	4.13	2.65	191.924	170.024	T9
1.094	1.219	1528342	DFT1094R2SSF125	1.250	DFT05T308	4.13	2.70	191.924	170.024	T9
1.125	1.250	1528343	DFT1125R2SSF125	1.250	DFT05T308	4.38	2.85	191.924	170.024	T9
1.156	1.281	1528344	DFT1156R2SSF125	1.250	DFT05T308	4.38	2.89	191.924	170.024	T9
1.188	1.288	1528345	DFT1188R2SSF125	1.250	DFT05T308	4.50	3.00	191.924	170.024	T9

Continued on next page.

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: DFT0625R2SSF075
Order number: 1527597

DRILL-FIX DFT Drill Bodies

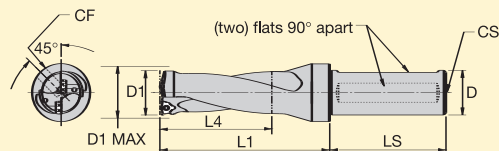


Inch – 2.5X Diameter Cutting Depth (continued)

Flanged Shank

Continued from page B13.

Shank	D	LS	CS	Side Pipe Plug CF
SSF075	.750	2.00	1/8 - 27 NPT	193.259
SSF100	1.000	3.00	1/4 - 18 NPT	193.259
SSF125	1.250	3.25	1/4 - 18 NPT	193.259
SSF150	1.500	3.75	1/4 - 18 NPT	193.259
SSF200	2.000	4.00	1/4 - 18 NPT	193.259



D1 ± .008

Inch											
D1	D1 max.	Order number	Catalog number	D	Gage Insert	L1	L4	Insert Screw	Torx Wrench	Torx Size	
1.219	1.319	1528346	DFT1219R2SSF125	1.250	DFT05T308	4.63	3.05	191.924	170.024	T9	
1.219	1.319	1528370	DFT1219R2SSF150	1.500	DFT05T308	4.63	3.05	191.924	170.024	T9	
1.250	1.325	1528347	DFT1250R2SSF125	1.250	DFT05T308	4.75	3.13	191.924	170.024	T9	
1.250	1.325	1528391	DFT1250R2SSF150	1.500	DFT05T308	4.75	3.13	191.924	170.024	T9	
1.281	1.345	1528348	DFT1281R2SSF125	1.250	DFT05T308	4.75	3.20	191.924	170.024	T9	
1.281	1.345	1528392	DFT1281R2SSF150	1.500	DFT05T308	4.75	3.20	191.924	170.024	T9	
1.313	1.438	1528349	DFT1313R2SSF125	1.250	DFT05T308	4.88	3.30	191.848	170.025	T15	
1.313	1.438	1528393	DFT1313R2SSF150	1.500	DFT06T308	4.88	3.30	191.848	170.025	T15	
1.375	1.500	1528350	DFT1375R2SSF125	1.250	DFT06T308	5.13	3.45	191.848	170.025	T15	
1.375	1.500	1528394	DFT1375R2SSF150	1.500	DFT06T308	5.13	3.45	191.848	170.025	T15	
1.406	1.531	1528361	DFT1406R2SSF125	1.250	DFT06T308	5.13	3.50	191.848	170.025	T15	
1.406	1.531	1528395	DFT1406R2SSF150	1.500	DFT06T308	5.13	3.50	191.848	170.025	T15	
1.438	1.563	1528362	DFT1438R2SSF125	1.250	DFT06T308	5.25	3.60	191.848	170.025	T15	
1.438	1.563	1528396	DFT1438R2SSF150	1.500	DFT06T308	5.25	3.60	191.848	170.025	T15	
1.469	1.594	1528363	DFT1469R2SSF125	1.250	DFT06T308	5.38	3.70	191.848	170.025	T15	
1.469	1.594	1528397	DFT1469R2SSF150	1.500	DFT06T308	5.38	3.70	191.848	170.025	T15	
1.500	1.625	1528364	DFT1500R2SSF125	1.250	DFT06T308	5.50	3.75	191.848	170.025	T15	
1.500	1.625	1528398	DFT1500R2SSF150	1.500	DFT06T308	5.50	3.75	191.848	170.025	T15	
1.531	1.656	1528365	DFT1531R2SSF125	1.250	DFT06T308	5.50	3.85	191.848	170.025	T15	
1.531	1.656	1528399	DFT1531R2SSF150	1.500	DFT06T308	5.50	3.85	191.848	170.025	T15	
1.563	1.688	1528366	DFT1563R2SSF125	1.250	DFT06T308	5.63	3.90	191.848	170.025	T15	
1.563	1.688	1528400	DFT1563R2SSF150	1.500	DFT06T308	5.63	3.90	191.848	170.025	T15	
1.625	1.750	1528367	DFT1625R2SSF125	1.250	DFT070408	5.88	4.10	191.698	170.025	T15	
1.625	1.750	1528401	DFT1625R2SSF150	1.500	DFT070408	5.88	4.10	191.698	170.025	T15	
1.688	1.813	1528368	DFT1688R2SSF125	1.250	DFT070408	6.00	4.25	191.698	170.025	T15	
1.688	1.813	1528402	DFT1688R2SSF150	1.500	DFT070408	6.00	4.25	191.698	170.025	T15	
1.750	1.875	1528403	DFT1750R2SSF150	1.500	DFT070408	6.25	4.38	191.698	170.025	T15	
1.813	1.938	1528404	DFT1813R2SSF150	1.500	DFT070408	6.38	4.55	191.698	170.025	T15	
1.875	2.000	1528405	DFT1875R2SSF150	1.500	DFT070408	6.63	4.70	191.698	170.025	T15	
1.938	2.188	1528406	DFT1938R2SSF150	1.500	DFT090508	6.75	4.85	191.726	170.026	T20	
2.000	2.250	1528407	DFT2000R2SSF150	1.500	DFT090508	7.00	5.00	191.726	170.026	T20	
2.000	2.250	1528409	DFT2000R2SSF200	2.000	DFT090508	7.00	5.00	191.726	170.026	T20	
2.125	2.375	1528408	DFT2125R2SSF150	1.500	DFT090508	7.38	5.35	191.726	170.026	T20	
2.125	2.375	1528410	DFT2125R2SSF200	2.000	DFT090508	7.38	5.35	191.726	170.026	T20	
2.250	2.500	1528421	DFT2250R2SSF200	2.000	DFT090508	7.75	5.63	191.726	170.026	T20	
2.375	2.590	1528422	DFT2375R2SSF200	2.000	DFT090508	8.13	5.95	191.726	170.026	T20	
2.500	2.650	1528423	DFT2500R2SSF200	2.000	DFT090508	8.50	6.25	191.726	170.026	T20	

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

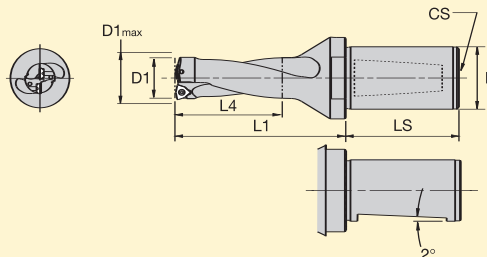
Order example:
Catalog number: DFT1219R2SSF125
Order number: 1528346



Ordering Information:

- Drill shipped with insert screws and Torx wrench.
- Use with WD-style adapters.

Flanged 2° Whistle Notch Shank (WD)



D1 ± 0,2 mm

Metric											
D1	D1 max.	Order number	Catalog number	D	Gage Insert	L1	L4	Insert Screw	Torx Wrench	Torx Size	
16,0	17,0	1541287	DFT160R2WD20M	20	DFT030204	65,0	38,0	191.164	170.027	T6	
16,0	17,0	1541320	DFT160R2WD32M	32	DFT030204	65,0	38,0	191.164	170.027	T6	
17,0	18,0	1541288	DFT170R2WD20M	20	DFT030204	65,0	38,0	191.164	170.027	T6	
17,0	18,0	1541371	DFT170R2WD32M	32	DFT030204	65,0	38,0	191.164	170.027	T6	
18,0	19,0	1541289	DFT180R2WD20M	20	DFT030204	65,0	38,0	191.164	170.027	T6	
18,0	19,0	1541372	DFT180R2WD32M	32	DFT030204	65,0	38,0	191.164	170.027	T6	
19,0	21,0	1541290	DFT190R2WD20M	20	DFT030304	75,0	48,0	192.432	170.028	T8	
19,0	21,0	1541734	DFT190R2WD32M	32	DFT030304	75,0	48,0	192.432	170.028	T8	
19,0	21,0	1541841	DFT190R2WD40M	40	DFT030304	75,0	48,0	192.432	170.028	T8	
20,0	21,0	1541361	DFT200R2WD20M	20	DFT030304	75,0	48,0	192.432	170.028	T8	
20,0	21,0	1541362	DFT200R2WD32M	32	DFT030304	75,0	48,0	192.432	170.028	T8	
20,0	21,0	1541842	DFT200R2WD40M	40	DFT030304	75,0	48,0	192.432	170.028	T8	
21,0	23,0	1541317	DFT210R2WD20M	20	DFT030304	75,0	48,0	192.432	170.028	T8	
21,0	23,0	1541363	DFT210R2WD32M	32	DFT030304	75,0	48,0	192.432	170.028	T8	
21,0	23,0	1541843	DFT210R2WD40M	40	DFT030304	75,0	48,0	192.432	170.028	T8	
22,0	23,0	1541318	DFT220R2WD20M	20	DFT030304	75,0	49,0	192.432	170.028	T8	
22,0	23,0	1541364	DFT220R2WD32M	32	DFT030304	75,0	49,0	192.432	170.028	T8	
22,0	23,0	1541844	DFT220R2WD40M	40	DFT030304	75,0	49,0	192.432	170.028	T8	
23,0	25,0	1541319	DFT230R2WD20M	20	DFT030304	75,0	48,0	192.432	170.028	T8	
23,0	25,0	1541365	DFT230R2WD32M	32	DFT030304	75,0	48,0	192.432	170.028	T8	
23,0	25,0	1541845	DFT230R2WD40M	40	DFT030304	75,0	48,0	192.432	170.028	T8	
24,0	25,0	1541366	DFT240R2WD32M	32	DFT030304	90,0	59,0	192.432	170.028	T8	
24,0	25,0	1541846	DFT240R2WD40M	40	DFT030304	90,0	59,0	192.432	170.028	T8	
25,0	27,0	1541367	DFT250R2WD32M	32	DFT05T308	90,0	58,0	191.924	170.024	T9	
25,0	27,0	1541847	DFT250R2WD40M	40	DFT05T308	90,0	58,0	191.924	170.024	T9	
26,0	27,0	1541368	DFT260R2WD32M	32	DFT05T308	90,0	59,0	191.924	170.024	T9	
26,0	27,0	1541848	DFT260R2WD40M	40	DFT05T308	90,0	59,0	191.924	170.024	T9	
27,0	29,0	1541369	DFT270R2WD32M	32	DFT05T308	100,0	66,0	191.924	170.024	T9	
27,0	29,0	1541849	DFT270R2WD40M	40	DFT05T308	100,0	66,0	191.924	170.024	T9	
28,0	29,0	1541370	DFT280R2WD32M	32	DFT05T308	100,0	66,0	191.924	170.024	T9	
28,0	29,0	1541850	DFT280R2WD40M	40	DFT05T308	100,0	66,0	191.924	170.024	T9	
29,0	31,0	1541381	DFT290R2WD32M	32	DFT05T308	100,0	66,0	191.924	170.024	T9	
29,0	31,0	1541851	DFT290R2WD40M	40	DFT05T308	100,0	66,0	191.924	170.024	T9	
30,0	31,0	1541382	DFT300R2WD32M	32	DFT05T308	115,0	76,0	191.924	170.024	T9	
30,0	31,0	1541852	DFT300R2WD40M	40	DFT05T308	115,0	76,0	191.924	170.024	T9	
31,0	33,0	1541383	DFT310R2WD32M	32	DFT05T308	115,0	76,0	191.924	170.024	T9	
31,0	33,0	1541853	DFT310R2WD40M	40	DFT05T308	115,0	76,0	191.924	170.024	T9	
32,0	33,0	1541384	DFT320R2WD32M	32	DFT05T308	115,0	76,0	191.924	170.024	T9	
32,0	33,0	1541854	DFT320R2WD40M	40	DFT05T308	115,0	76,0	191.924	170.024	T9	
33,0	35,0	1541385	DFT330R2WD32M	32	DFT06T308	115,0	76,0	191.848	170.025	T15	
33,0	35,0	1541855	DFT330R2WD40M	40	DFT06T308	115,0	76,0	191.848	170.025	T15	
34,0	35,0	1541386	DFT340R2WD32M	32	DFT06T308	115,0	76,0	191.848	170.025	T15	
34,0	35,0	1541856	DFT340R2WD40M	40	DFT06T308	115,0	76,0	191.848	170.025	T15	
35,0	38,0	1541387	DFT350R2WD32M	32	DFT06T308	115,0	76,0	191.848	170.025	T15	
35,0	38,0	1541857	DFT350R2WD40M	40	DFT06T308	115,0	76,0	191.848	170.025	T15	
36,0	37,0	1541388	DFT360R2WD32M	32	DFT06T308	115,0	76,0	191.848	170.025	T15	
36,0	37,0	1541858	DFT360R2WD40M	40	DFT06T308	115,0	76,0	191.848	170.025	T15	

Continued on next page.

Order example:
Catalog number: DFT160R2WD20M
Order number: 1541287

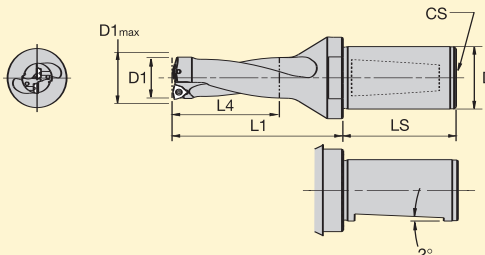
DRILL-FIX DFT Drill Bodies



Metric – 2.5X Diameter Cutting Depth (continued)

Flanged 2° Whistle Notch Shank (WD)

Continued from page B15.



Shank	D	LS	CS
WD20M	20	45	R1/8 BSP
WD32M	32	58	R1/4 BSP
WD40M	40	68	R1/4 BSP
WD50M	50	68	R1/4 BSP

Metric								
D1	D1 max.	Order number	Catalog number	D	Gage Insert	L1	L4	Insert Screw Torx Wrench Torx Size
37,0	38,0	1541389	DFT370R2WD32M	32	DFT06T308	135,0	96,0	191.848 170.025 T15
37,0	38,0	1541859	DFT370R2WD40M	40	DFT06T308	135,0	96,0	191.848 170.025 T15
38,0	41,0	1541390	DFT380R2WD32M	32	DFT06T308	135,0	96,0	191.848 170.025 T15
38,0	41,0	1541871	DFT380R2WD40M	40	DFT06T308	135,0	96,0	191.848 170.025 T15
39,0	40,0	1541391	DFT390R2WD32M	32	DFT06T308	135,0	96,0	191.848 170.025 T15
39,0	40,0	1541872	DFT390R2WD40M	40	DFT06T308	135,0	96,0	191.848 170.025 T15
40,0	41,0	1541392	DFT400R2WD32M	32	DFT06T308	135,0	97,0	191.848 170.025 T15
40,0	41,0	1541873	DFT400R2WD40M	40	DFT06T308	135,0	97,0	191.848 170.025 T15
41,0	44,0	1541393	DFT410R2WD32M	32	DFT070408	135,0	96,0	191.698 170.025 T15
41,0	44,0	1541874	DFT410R2WD40M	40	DFT070408	135,0	96,0	191.698 170.025 T15
42,0	43,0	1541394	DFT420R2WD32M	32	DFT070408	135,0	96,0	191.698 170.025 T15
42,0	43,0	1541875	DFT420R2WD40M	40	DFT070408	135,0	96,0	191.698 170.025 T15
43,0	44,0	1541395	DFT430R2WD32M	32	DFT070408	150,0	112,0	191.698 170.025 T15
43,0	44,0	1541876	DFT430R2WD40M	40	DFT070408	150,0	112,0	191.698 170.025 T15
44,0	47,0	1541396	DFT440R2WD32M	32	DFT070408	150,0	112,0	191.698 170.025 T15
44,0	47,0	1541877	DFT440R2WD40M	40	DFT070408	150,0	112,0	191.698 170.025 T15
45,0	46,0	1541878	DFT450R2WD40M	40	DFT070408	150,0	112,0	191.698 170.025 T15
45,0	46,0	1541931	DFT450R2WD50M	50	DFT070408	150,0	112,0	191.698 170.025 T15
46,0	47,0	1541879	DFT460R2WD40M	40	DFT070408	150,0	112,0	191.698 170.025 T15
46,0	47,0	1541932	DFT460R2WD50M	50	DFT070408	150,0	112,0	191.698 170.025 T15
47,0	50,0	1541880	DFT470R2WD40M	40	DFT070408	150,0	111,0	191.698 170.025 T15
47,0	50,0	1541933	DFT470R2WD50M	50	DFT070408	150,0	111,0	191.698 170.025 T15
48,0	49,0	1541860	DFT480R2WD40M	40	DFT070408	150,0	111,0	191.698 170.025 T15
48,0	49,0	1541934	DFT480R2WD50M	50	DFT070408	150,0	111,0	191.698 170.025 T15
49,0	50,0	1541901	DFT490R2WD40M	40	DFT090508	165,0	117,0	191.726 170.026 T20
49,0	50,0	1541935	DFT490R2WD50M	50	DFT090508	165,0	117,0	191.726 170.026 T20
50,0	54,0	1541902	DFT500R2WD40M	40	DFT090508	165,0	117,0	191.726 170.026 T20
50,0	54,0	1541936	DFT500R2WD50M	50	DFT090508	165,0	117,0	191.726 170.026 T20
51,0	52,0	1541903	DFT510R2WD40M	40	DFT090508	165,0	117,0	191.726 170.026 T20
51,0	52,0	1541951	DFT510R2WD50M	50	DFT090508	165,0	117,0	191.726 170.026 T20
52,0	53,0	1541904	DFT520R2WD40M	40	DFT090508	165,0	117,0	191.726 170.026 T20
52,0	53,0	1541952	DFT520R2WD50M	50	DFT090508	165,0	117,0	191.726 170.026 T20
53,0	54,0	1541905	DFT530R2WD40M	40	DFT090508	165,0	117,0	191.726 170.026 T20
53,0	54,0	1541953	DFT530R2WD50M	50	DFT090508	165,0	117,0	191.726 170.026 T20
54,0	58,0	1541906	DFT540R2WD40M	40	DFT090508	165,0	117,0	191.726 170.026 T20
54,0	58,0	1542043	DFT540R2WD50M	50	DFT090508	165,0	117,0	191.726 170.026 T20
55,0	56,0	1542071	DFT550R2WD50M	50	DFT090508	180,0	110,0	191.726 170.026 T20
56,0	57,0	1542072	DFT560R2WD50M	50	DFT090508	180,0	112,0	191.726 170.026 T20
57,0	58,0	1542074	DFT570R2WD50M	50	DFT090508	180,0	114,0	191.726 170.026 T20
58,0	62,0	1542076	DFT580R2WD50M	50	DFT090508	180,0	116,0	191.726 170.026 T20
59,0	60,0	1544364	DFT590R2WD50M	50	DFT090508	180,0	118,0	191.726 170.026 T20
60,0	61,0	1542081	DFT600R2WD50M	50	DFT090508	180,0	120,0	191.726 170.026 T20
61,0	62,0	1542083	DFT610R2WD50M	50	DFT090508	180,0	122,0	191.726 170.026 T20
62,0	65,0	1542090	DFT620R2WD50M	50	DFT090508	180,0	124,0	191.726 170.026 T20
63,0	64,0	1542092	DFT630R2WD50M	50	DFT090508	180,0	126,0	191.726 170.026 T20
64,0	65,0	1542093	DFT640R2WD50M	50	DFT090508	180,0	128,0	191.726 170.026 T20
65,0	66,0	1542096	DFT650R2WD50M	50	DFT090508	180,0	127,0	191.726 170.026 T20
66,0	69,0	1542097	DFT660R2WD50M	50	DFT090508	180,0	127,0	191.726 170.026 T20
67,0	69,0	1541954	DFT670R2WD50M	50	DFT090508	180,0	126,0	191.726 170.026 T20
68,0	69,0	1542099	DFT680R2WD50M	50	DFT090508	180,0	126,0	191.726 170.026 T20

Order example:
Catalog number: DFT370R2WD32M
Order number: 1541389


KU40D

	Insert catalog number	D1		L10		S		D		R _ε		KU40D
		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
	DFT030304GD	.156	3,97	.104	2,65	.116	2,95	.236	6,00	.0157	0,40	●
	DFT05T308GD	.208	5,29	.134	3,40	.148	3,75	.315	8,00	.0310	0,80	●
	DFT06T308GD	.260	6,62	.173	4,40	.148	3,75	.394	10,00	.0315	0,80	●
	DFT070408GD	.313	7,94	.173	4,40	.187	4,75	.472	12,00	.0315	0,80	●
	DFT090508GD	.391	9,92	.217	5,50	.207	5,25	.591	15,00	.0315	0,80	●
	DFT030204MD	.156	3,97	.089	2,25	.096	2,45	.236	6,00	.0157	0,40	●
	DFT030304MD	.156	3,97	.104	2,65	.116	2,95	.236	6,00	.0157	0,40	●
	DFT05T308MD	.208	5,29	.134	3,40	.148	3,75	.315	8,00	.0315	0,80	●
	DFT06T308MD	.260	6,62	.173	4,40	.148	3,75	.394	10,00	.0315	0,80	●
	DFT070408MD	.313	7,94	.173	4,40	.187	4,75	.472	12,00	.0315	0,80	●
	DFT090508MD	.391	9,92	.217	5,50	.207	5,25	.591	15,00	.0315	0,80	●



DRILL-FIX Offset Capability

Both our inch and metric DRILL-FIX product lines offer the capability of being offset in the "X" direction. That means you can produce hole sizes larger than the nominal size, which will reduce cycle times and eliminate the need for special tools.

DRILL-FIX can be applied in the offset condition, to cut into the solid without any pre-drilling. This can eliminate a boring operation.

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: **DFT030304GD**
Grade: **KU40D**



Kennametal QPV Drills



Quality

- HSS cobalt grades KC100 and KC300 provide longer tool life, better economy.
- Through-coolant capability cools the workpiece and helps evacuate chips.
- Steel bodies are hardened to 40 - 45 HRC for excellent resistance to chip wash and wear.

Performance

- Increased spindle speeds and feed rates mean reduced cycle times compared to conventional HSS drills.
- Good chip control and surface finish ensure quality parts.
- HSS cobalt blades are ideal for difficult deep-hole applications, less rigid machine tools, and slower speeds.
- Two-flat shank design enables easy mounting on the machine tool.

Value

- Low-cost, efficient solution for any metalcutting application.
- Interchangeable with other spade-type drills so upgrading to our QPV drills is easy.
- No need to regrind! Simply replace the worn blades.
- Large selection of blade diameters available to reduce your drill body inventory.
- Straight shank and Morse taper steel body designs available.

Grade Description QPV Drills HSS Grades and Geometry

Grade	
KC100	composition: A PVD TiN coating over a T15 powdered metal cobalt substrate. application: A general-purpose drilling grade that provides strength, toughness, and tool security. The PVD TiN coating is relatively tough compared to other coatings and has good resistance to build-up on the cutting edge. PVD TiN coating has better wear resistance compared to uncoated tools. This grade is the primary choice for machining soft, low-carbon steels, free machining steels, copper, and aluminum. geometry: The cutting edge is lightly honed.
KC300	composition: A PVD TiAlN coating over a T15 powdered metal cobalt substrate. Harder than KC100. application: This is a higher productivity grade compared to KC100. The TiAlN coating offers better hot hardness, which often enables higher cutting speeds with equal or better tool life compared to TiN coated tools. This grade is the primary choice for machining harder low-carbon steel, alloy steel, ferritic and martensitic stainless steel, cast iron and high-temp alloys. geometry: The cutting edge is lightly honed.



Kennametal QPV Drills Technical Information

Speeds and Feeds

SOLID CARBIDE DRILLS

INDEXABLE DRILLS

HOLEMAKING PRODUCTS
QPV DRILLS

Cutting Groups	Material Group	Composition/Structure		Tensile Strength RM (MPa)	Hardness HB	Starting Speed (m/min) (sfm)	Starting Recommendation for Feed (mm/r and ipr) by Insert Blade Seat Size							
							Y & Z	0	1	2	3	4	5	6-7-8
							9,5 - 12,7 .3740 - .5000	13,0 - 17,5 .5118 - .6890	17,8 - 24,0 .7031 - .9449	24,6 - 35,0 .9688 - 1.3780	35,7 - 47,6 1.4063 - 1.8750	48,0 - 65,1 1.8898 - 2.5625	63,5 - 76,2 2.5000 - 3.000	77,0 - 114,3 3.0313 - 4.5000
1	Unalloyed steel, cast steel, machining steel	C= 0,10-0,25	Annealed, long-chipping	420	125	55 180	0,178 .007	0,254 .010	0,330 .013	0,406 .016	0,508 .020	0,610 .024	0,635 .025	0,686 .027
2		C= 0,25-0,55	Annealed, long-chipping	640	190	52 170	0,152 .006	0,229 .009	0,305 .012	0,381 .015	0,508 .020	0,584 .023	0,610 .024	0,660 .026
3		C= 0,25-0,55	Tempered	850	250	47 155	0,127 .005	0,203 .008	0,254 .010	0,356 .014	0,457 .018	0,533 .021	0,584 .023	0,635 .025
4		C= 0,25-0,80	Annealed	915	270	49 160	0,152 .006	0,254 .010	0,330 .013	0,406 .016	0,508 .020	0,584 .023	0,610 .024	0,660 .026
5		C= 0,25-0,80	Tempered	1020	300	44 145	0,127 .005	0,203 .008	0,254 .010	0,356 .014	0,457 .018	0,533 .021	0,584 .023	0,635 .025
6	Low-alloy steel, cast steel, machining steel		Annealed	610	180	46 150	0,152 .006	0,203 .008	0,254 .010	0,356 .014	0,432 .017	0,483 .019	0,533 .021	0,584 .023
7			Tempered	930	275	41 135	0,127 .005	0,178 .007	0,254 .010	0,330 .013	0,432 .017	0,508 .020	0,533 .021	0,584 .023
8			Tempered	1020	300	38 125	0,102 .004	0,152 .006	0,229 .009	0,305 .012	0,381 .015	0,457 .018	0,483 .019	0,533 .021
9			Tempered	1190	350	33 110	0,076 .003	0,152 .006	0,229 .009	0,305 .012	0,381 .015	0,432 .017	0,457 .018	0,483 .019
10	High-alloy steel, cast steel, high-alloy tool steel		Annealed	680	200	38 125	0,127 .005	0,229 .009	0,279 .011	0,330 .013	0,432 .017	0,508 .020	0,533 .021	0,584 .023
11			Hardened and Tempered	1100	325	20 65	0,076 .003	0,127 .005	0,178 .007	0,203 .008	0,254 .010	0,330 .013	0,381 .015	0,406 .016
12	Stainless steel, cast steel	Ferritic / Martensitic	Annealed	680	200	20 65	0,102 .004	0,127 .005	0,178 .007	0,229 .009	0,279 .011	0,356 .014	0,381 .015	0,406 .016
13		Martensitic	Tempered	810	240	30 100	0,127 .005	0,178 .007	0,203 .008	0,254 .010	0,305 .012	0,356 .014	0,406 .016	0,457 .018
14.1	Stainless steel	Austenitic		610		27 90	0,152 .006	0,203 .008	0,229 .009	0,279 .011	0,279 .011	0,406 .016	0,279 .011	0,508 .020
14.2		Austenitic / Ferritic (duplex)		880		23 75	0,127 .005	0,178 .007	0,203 .008	0,254 .010	0,305 .012	0,356 .014	0,406 .016	0,457 .018
15	Gray cast iron	Pearlitic / Ferritic			180	53 175	0,152 .006	0,229 .009	0,305 .012	0,406 .016	0,457 .018	0,533 .021	0,584 .023	0,635 .025
16		Pearlitic (martensitic)			260	38 125	0,102 .004	0,152 .006	0,178 .007	0,229 .009	0,305 .012	0,356 .014	0,406 .016	0,457 .018
17		Ferritic			160	61 200	0,178 .007	0,279 .011	0,356 .014	0,457 .018	0,559 .022	0,635 .025	0,686 .027	0,737 .029
18		Pearlitic			250	38 125	0,102 .004	0,152 .006	0,178 .007	0,229 .009	0,305 .012	0,356 .014	0,406 .016	0,457 .018
19		Ferritic			130	68 225	0,203 .008	0,305 .012	0,406 .016	0,508 .020	0,610 .024	0,686 .027	0,737 .029	0,787 .031
20		Pearlitic			230	46 150	0,127 .005	0,178 .007	0,229 .009	0,305 .012	0,356 .014	0,432 .017	0,483 .019	0,533 .021
21	Aluminum forging alloys	Not heat treatable			60	182 600	0,178 .007	0,305 .012	0,381 .015	0,483 .019	0,533 .021	0,610 .024	0,635 .025	0,660 .026
22		Heat treatable / heat-treated			100	75 600	0,178 .007	0,305 .012	0,381 .015	0,483 .019	0,533 .021	0,610 .024	0,635 .025	0,660 .026
23	Aluminum casting alloys	<12% Si	Not heat treatable		75	91 300	0,203 .008	0,330 .013	0,406 .016	0,508 .020	0,559 .022	0,635 .025	0,660 .026	0,686 .027
24		<12% Si	Heat treatable/heat-treated		90	91 300	0,203 .008	0,330 .013	0,406 .016	0,508 .020	0,559 .022	0,635 .025	0,660 .026	0,686 .027
25		>12% Si	Not heat treatable		130	91 300	0,203 .008	0,330 .013	0,406 .016	0,508 .020	0,559 .022	0,635 .025	0,660 .026	0,686 .027
31	Heat resistant alloys	Fe-Based	Annealed		200	14 45	0,127 .005	0,178 .007	0,203 .008	0,254 .010	0,305 .012	0,381 .015	0,406 .016	0,432 .017
32			Heat treated		230	12 40	0,102 .004	0,152 .006	0,178 .007	0,229 .009	0,279 .011	0,305 .012	0,330 .013	0,356 .014
33		Ni or Co-based	Annealed		250	12 40	0,102 .004	0,152 .006	0,178 .007	0,229 .009	0,279 .011	0,305 .012	0,330 .013	0,356 .014
34			Heat treated		350	11 35	0,102 .004	0,127 .005	0,152 .006	0,178 .007	0,229 .009	0,279 .011	0,305 .012	0,330 .013
35			Cast		320	11 35	0,102 .004	0,127 .005	0,152 .006	0,178 .007	0,229 .009	0,279 .011	0,305 .012	0,330 .013

Notes: These are starting condition guidelines only. The machine tool, fixturing, toolholding, part configuration, and coolant capability may significantly influence specific applications. Use proper and safe machining practices. Make the set-up as rigid as possible. Decrease speed as material hardness increases.

Kennametal QPV Drills Technical Information



Minimum Recommended Coolant Volume Flow Rate (GPM/LPM) and Coolant Pressure

SOLID CARBIDE DRILLS

INDEXABLE DRILLS

QPV DRILLS
HOLEMAKING PRODUCTS

Cutting Groups	Material Group		Series/Diameters							
			Y & Z	0	1	2	3	4	5	6-7-8
			9,5 - 12,7 .3740 - .5000	13,0 - 17,5 .5118 - .6890	17,8 - 24,0 .7031 - .9449	24,6 - 35,0 .9688 - 1.3780	35,7 - 47,6 1.4063 - 1.8750	48,0 - 65,1 1.8898 - 2.5625	63,5 - 76,2 2.5000 - 3.000	77,0 - 114,3 3.0313 - 4.5000
1-5	Unalloyed steel, cast steel, machining steel	flow - GPM	2.4 - 2.6	2.4 - 2.6	3.7 - 4.2	6 - 7	11 - 12	26 - 30	26 - 30	36 - 40
		flow - LPM	9,0 - 9,8	9,0 - 9,8	14,0 - 15,9	22,7 - 26,5	41,6 - 45,4	98,4 - 113,6	98,4 - 113,6	136,3 - 151,4
		pressure - PSI	160 - 170	75 - 90	75 - 95	60 - 80	55 - 75	30 - 40	30 - 40	>50
6 - 9	Low-alloy steel, cast steel, machining steel	pressure - BAR	11 - 11,7	5,1 - 6,2	5,1 - 6,5	4,1 - 5,5	3,8 - 5,1	2,0 - 2,7	2,0 - 2,7	>3,4
		flow - GPM	2.5 - 2.7	2.8 - 3.0	4.4 - 5.2	7 - 8	12 - 14	30 - 33	30 - 33	37 - 41
		flow - LPM	9,5 - 10,2	10,6 - 11,4	16,7 - 19,7	26,5 - 30,3	45,4 - 53,0	113,6 - 124,9	113,6 - 124,9	140,0 - 155,2
10 - 11	High-alloy steel, cast steel, high-alloy tool steel	pressure - PSI	175 - 185	100 - 120	105 - 140	80 - 115	75 - 100	40 - 50	40 - 50	>60
		pressure - BAR	12,0 - 12,8	6,9 - 8,3	7,2 - 9,7	5,5 - 7,9	5,1 - 6,9	2,7 - 3,4	2,7 - 3,4	>4,1
		flow - GPM	2.3 - 2.5	2.3 - 2.6	3.6 - 4.1	5 - 6	10 - 12	26 - 30	26 - 30	36 - 40
12 - 13	Stainless steel, cast steel	flow - LPM	8,7 - 9,5	8,7 - 9,8	13,6 - 15,5	18,9 - 22,7	37,9 - 45,4	98,4 - 113,6	98,4 - 113,6	136,3 - 151,4
		pressure - PSI	155 - 165	70 - 85	70 - 90	55 - 75	50 - 70	30 - 40	30 - 40	>50
		pressure - BAR	10,7 - 11,4	4,8 - 5,8	4,8 - 6,2	3,8 - 5,2	3,4 - 4,8	2,0 - 2,7	2,0 - 2,7	>3,4
14.1-14.2	Stainless steel	flow - GPM	2.3 - 2.5	2.3 - 2.5	2.9 - 3.1	4 - 5	7 - 8	21 - 23	21 - 23	27 - 30
		flow - LPM	8,7 - 9,5	8,7 - 9,5	11,0 - 11,7	15,1 - 18,9	26,5 - 30,3	79,5 - 87,1	79,5 - 87,1	102,2 - 113,6
		pressure - PSI	145 - 155	55 - 60	45 - 50	25 - 30	25 - 30	20 - 25	20 - 25	>30
15 - 20	Cast iron gray, nodular, malleable	pressure - BAR	10,0 - 10,7	3,8 - 4,1	3,1 - 3,4	1,7 - 2,1	1,7 - 2,1	1,4 - 1,7	1,4 - 1,7	>2,1
		flow - GPM	2.3 - 2.5	2.3 - 2.6	3.5 - 3.7	5 - 6	9 - 10	23 - 26	23 - 26	33 - 37
		flow - LPM	8,7 - 9,5	8,7 - 9,8	13,2 - 14,0	18,9 - 22,7	34,0 - 37,9	87,1 - 98,4	87,1 - 98,4	124,9 - 140,0
21 - 25	Aluminum	pressure - PSI	160 - 170	70 - 85	65 - 75	40 - 55	40 - 50	25 - 30	25 - 30	>35
		pressure - BAR	11 - 11,7	4,8 - 5,8	4,5 - 5,2	2,8 - 3,8	2,8 - 3,5	1,7 - 2,1	1,7 - 2,1	>2,4
		flow - GPM	2.6 - 2.8	3.3 - 3.7	5.3 - 6.1	8 - 9	14 - 16	30 - 33	30 - 33	37 - 41
31 - 35	Heat-resistant alloys	flow - LPM	9,8 - 10,6	12,5 - 14,0	20,1 - 23,1	30,3 - 34,1	53,0 - 60,6	113,6 - 124,9	113,6 - 124,9	140,0 - 155,2
		pressure - PSI	185 - 200	140 - 180	150 - 200	115 - 160	90 - 125	40 - 50	40 - 50	>60
		pressure - BAR	12,8 - 13,8	9,7 - 12,4	10,3 - 13,8	7,9 - 11,0	6,2 - 8,6	2,8 - 3,5	2,8 - 3,5	>4,1
		flow - GPM	2.2 - 2.4	2.2 - 2.4	3.1 - 3.2	4 - 5	7 - 8	23 - 26	23 - 26	27 - 30
		flow - LPM	8,3 - 9,1	8,3 - 9,1	11,7 - 12,1	15,1 - 18,9	26,5 - 30,3	87,1 - 98,4	87,1 - 98,4	102,2 - 113,6
		pressure - PSI	150 - 160	60 - 65	50 - 55	30 - 35	25 - 30	25 - 30	25 - 30	>30
		pressure - BAR	10,3 - 11,0	4,1 - 4,6	3,4 - 3,8	2,0 - 2,4	1,7 - 2,1	1,7 - 2,1	1,7 - 2,1	>2,1

Useful Formulas:

kW = hp ÷ 1.341022
 kN = lbs. ÷ 225
 Nm = ft.-lbs. ÷ .7375621

GPM = gallons per minute
 LPM = liters per minute

NOTE: Coolant should be filtered prior to use to approximately 30-50 microns.

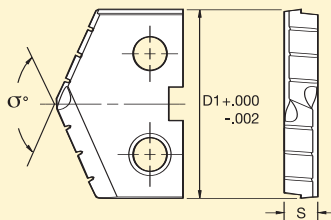
Chipping of the insert might occur in applications such as machines with fixed speed lower than recommended, old machines with loose spindles, or interrupted cuts. For these applications, grade KC100 is the recommended choice.

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.



Ordering Information:

- Order the blade required for hole diameter.
- Match the blade series number with body series number. See pages B26-B27.
- For application information, see pages B19-B20.

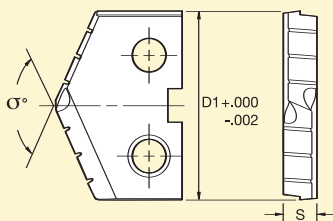


D1		Seat Size/Series	Catalog number	S	Point Angle σ°	Grades	
Inch	Metric					KC100	KC300
.3740	9,50	Y	QPV0950HDM	.094	132°	●	●
.3750	9,53	Y	QPV0375HD	.094	132°	●	●
.3858	9,80	Y	QPV0386HD	.094	132°	●	●
.3906	9,92	Y	QPV0391HD	.094	132°	●	●
.3937	10,00	Y	QPV1000HDM	.094	132°	●	●
.4016	10,20	Y	QPV1020HDM	.094	132°	●	●
.4063	10,32	Y	QPV0406HD	.094	132°	●	●
.4134	10,50	Y	QPV1050HDM	.094	132°	●	●
.4219	10,72	Y	QPV0422HD	.094	132°	●	●
.4252	10,80	Y	QPV1080HDM	.094	132°	●	●
.4331	11,00	Y	QPV1100HDM	.094	132°	●	●
.4375	11,11	Z	QPV0438HD	.094	132°	●	●
.4409	11,20	Z	QPV1120HDM	.094	132°	●	●
.4528	11,50	Z	QPV1150HDM	.094	132°	●	●
.4606	11,70	Z	QPV1170HDM	.094	132°	●	●
.4646	11,80	Z	QPV1180HDM	.094	132°	●	●
.4531	11,51	Z	QPV0453HD	.094	132°	●	●
.4688	11,91	Z	QPV0469HD	.094	132°	●	●
.4724	12,00	Z	QPV1200HDM	.094	132°	●	●
.4823	12,25	Z	QPV1225HDM	.094	132°	●	●
.4844	12,30	Z	QPV0484HD	.094	132°	●	●
.4921	12,50	Z	QPV1250HDM	.094	132°	●	●
.5000	12,70	Z	QPV0500HD	.094	132°	●	●
.5118	13,00	0	QPV1300HDM	.125	132°	●	●
.5156	13,10	0	QPV0516HD	.125	132°	●	●
.5313	13,50	0	QPV0531HD	.125	132°	●	●
.5469	13,89	0	QPV0547HD	.125	132°	●	●
.5512	14,00	0	QPV1400HDM	.125	132°	●	●
.5625	14,29	0	QPV0563HD	.125	132°	●	●
.5709	14,50	0	QPV1450HDM	.125	132°	●	●
.5781	14,68	0	QPV0578HD	.125	132°	●	●
.5807	14,75	0	QPV1475HDM	.125	132°	●	●
.5906	15,00	0	QPV1500HDM	.125	132°	●	●
.5938	15,08	0	QPV0594HD	.125	132°	●	●
.6004	15,25	0	QPV1525HDM	.125	132°	●	●
.6102	15,50	0	QPV1550HDM	.125	132°	●	●
.6250	15,88	0	QPV0625HD	.125	132°	●	●
.6299	16,00	0	QPV1600HDM	.125	132°	●	●
.6406	16,27	0	QPV0641HD	.125	132°	●	●
.6496	16,50	0	QPV1650HDM	.125	132°	●	●
.6563	16,67	0	QPV0656HD	.125	132°	●	●
.6614	16,80	0	QPV1680HDM	.125	132°	●	●
.6693	17,00	0	QPV1700HDM	.125	132°	●	●
.6719	17,06	0	QPV0672HD	.125	132°	●	●
.6791	17,25	0	QPV1725HDM	.125	132°	●	●
.6875	17,46	0	QPV0688HD	.125	132°	●	●
.6890	17,50	0	QPV1750HDM	.125	132°	●	●
.7031	17,86	1	QPV0703HD	.156	132°	●	●
.7087	18,00	1	QPV1800HDM	.156	132°	●	●
.7188	18,26	1	QPV0719HD	.156	132°	●	●

Continued on next page.

Order example:
Catalog number: QPV0950HDM
Grade: KC100

Continued from page B21.



D1		Seat Size/Series	Catalog number	S	Point Angle σ°	Grades	
Inch	Metric					KC100	KC300
.7283	18,50	1	QPV1850HDM	.156	132°	●	●
.7344	18,65	1	QPV0734HD	.156	132°	●	●
.7480	19,00	1	QPV1900HDM	.156	132°	●	●
.7500	19,05	1	QPV0750HD	.156	132°	●	●
.7559	19,20	1	QPV1920HDM	.156	132°	●	●
.7656	19,45	1	QPV0766HD	.156	132°	●	●
.7677	19,50	1	QPV1950HDM	.156	132°	●	●
.7813	19,84	1	QPV0781HD	.156	132°	●	●
.7874	20,00	1	QPV2000HDM	.156	132°	●	●
.7969	20,24	1	QPV0797HD	.156	132°	●	●
.8071	20,50	1	QPV2050HDM	.156	132°	●	●
.8125	20,64	1	QPV0813HD	.156	132°	●	●
.8268	21,00	1	QPV2100HDM	.156	132°	●	●
.8281	21,03	1	QPV0828HD	.156	132°	●	●
.8438	21,43	1	QPV0844HD	.156	132°	●	●
.8594	21,83	1	QPV0859HD	.156	132°	●	●
.8661	22,00	1	QPV2200HDM	.156	132°	●	●
.8750	22,23	1	QPV0875HD	.156	132°	●	●
.8906	22,62	1	QPV0891HD	.156	132°	●	●
.9055	23,00	1	QPV2300HDM	.156	132°	●	●
.9063	23,02	1	QPV0906HD	.156	132°	●	●
.9219	23,42	1	QPV0922HD	.156	132°	●	●
.9375	23,81	1	QPV0938HD	.156	132°	●	●
.9449	24,00	1	QPV2400HDM	.156	132°	●	●
.9598	24,38	1	QPV2438HDM	.156	132°	●	●
.9688	24,61	2	QPV0969HD	.188	132°	●	●
.9844	25,00	2	QPV0984HD	.188	132°	●	●
1.0000	25,40	2	QPV1000HD	.188	132°	●	●
1.0156	25,80	2	QPV1016HD	.188	132°	●	●
1.0236	26,00	2	QPV2600HDM	.188	132°	●	●
1.0313	26,19	2	QPV1031HD	.188	132°	●	●
1.0433	26,50	2	QPV2650HDM	.188	132°	●	●
1.0625	26,99	2	QPV1063HD	.188	132°	●	●
1.0938	27,78	2	QPV1094HD	.188	132°	●	●
1.1024	28,00	2	QPV2800HDM	.188	132°	●	●
1.1250	28,58	2	QPV1125HD	.188	132°	●	●
1.1417	29,00	2	QPV2900HDM	.188	132°	●	●
1.1563	29,37	2	QPV1156HD	.188	132°	●	●
1.1614	29,50	2	QPV2950HDM	.188	132°	●	●
1.1811	30,00	2	QPV3000HDM	.188	132°	●	●
1.1875	30,16	2	QPV1188HD	.188	132°	●	●
1.1929	30,30	2	QPV3030HDM	.188	132°	●	●
1.2188	30,96	2	QPV1219HD	.188	132°	●	●
1.2008	30,50	2	QPV3050HDM	.188	132°	●	●
1.2205	31,00	2	QPV3100HDM	.188	132°	●	●
1.2500	31,75	2	QPV1250HD	.188	132°	●	●
1.2598	32,00	2	QPV3200HDM	.188	132°	●	●
1.2813	32,54	2	QPV1281HD	.188	132°	●	●
1.2992	33,00	2	QPV3300HDM	.188	132°	●	●
1.3125	33,34	2	QPV1313HD	.188	132°	●	●
1.3386	34,00	2	QPV3400HDM	.188	132°	●	●

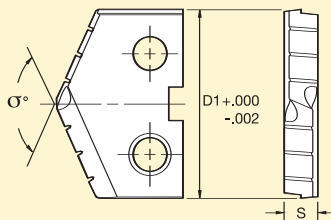
Continued on next page.

Order example:
Catalog number: QPV1850HDM
Grade: KC100

**Ordering Information:**

- Order the blade required for hole diameter.
- Match the blade series number with body series number. See pages B26-B27.
- For application information, see pages B19-B20.

Continued from page B22.

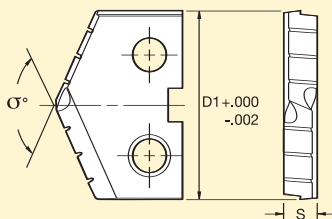


D1		Seat Size/Series	Catalog number	S	Point Angle σ°	Grades	
Inch	Metric					KC100	KC300
1.3438	34,13	2	QPV1344HD	.188	132°	●	●
1.3750	34,93	2	QPV1375HD	.188	132°	●	●
1.3780	35,00	2	QPV3500HDM	.188	132°	●	●
1.4063	35,72	3	QPV1406HD	.250	132°	●	●
1.4173	36,00	3	QPV3600HDM	.250	132°	●	●
1.4375	36,51	3	QPV1438HD	.250	132°	●	●
1.4567	37,00	3	QPV3700HDM	.250	132°	●	●
1.4688	37,31	3	QPV1469HD	.250	132°	●	●
1.4961	38,00	3	QPV3800HDM	.250	132°	●	●
1.5000	38,10	3	QPV1500HD	.250	132°	●	●
1.5313	38,89	3	QPV1531HD	.250	132°	●	●
1.5354	39,00	3	QPV3900HDM	.250	132°	●	●
1.5625	39,69	3	QPV1563HD	.250	132°	●	●
1.5748	40,00	3	QPV4000HDM	.250	132°	●	●
1.5938	40,48	3	QPV1594HD	.250	132°	●	●
1.6142	41,00	3	QPV4100HDM	.250	132°	●	●
1.6250	41,28	3	QPV1625HD	.250	132°	●	●
1.6535	42,00	3	QPV4200HDM	.250	132°	●	●
1.6563	42,07	3	QPV1656HD	.250	132°	●	●
1.6875	42,86	3	QPV1688HD	.250	132°	●	●
1.6929	43,00	3	QPV4300HDM	.250	132°	●	●
1.7188	43,66	3	QPV1719HD	.250	132°	●	●
1.7323	44,00	3	QPV4400HDM	.250	132°	●	●
1.7500	44,45	3	QPV1750HD	.250	132°	●	●
1.7717	45,00	3	QPV4500HDM	.250	132°	●	●
1.7813	45,24	3	QPV1781HD	.250	132°	●	●
1.8110	46,00	3	QPV4600HDM	.250	132°	●	●
1.8125	46,04	3	QPV1813HD	.250	132°	●	●
1.8438	46,83	3	QPV1844HD	.250	132°	●	●
1.8504	47,00	3	QPV4700HDM	.250	132°	●	●
1.8750	47,63	3	QPV1875HD	.250	132°	●	●
1.8898	48,00	4	QPV4800HDM	.313	132°	●	●
1.9063	48,42	4	QPV1906HD	.313	132°	●	●
1.9291	49,00	4	QPV4900HDM	.313	132°	●	●
1.9375	49,21	4	QPV1938HD	.313	132°	●	●
1.9688	50,00	4	QPV1969HD	.313	132°	●	●
2.0000	50,80	4	QPV2000HD	.313	132°	●	●
2.0079	51,00	4	QPV5100HDM	.313	132°	●	●
2.0313	51,59	4	QPV2031HD	.313	132°	●	●
2.0469	52,00	4	QPV2047HD	.313	132°	●	●
2.0625	52,39	4	QPV2063HD	.313	132°	●	●
2.0866	53,00	4	QPV5300HDM	.313	132°	●	●
2.0938	53,18	4	QPV2094HD	.313	132°	●	●
2.1250	53,98	4	QPV2125HD	.313	132°	●	●
2.1260	54,00	4	QPV5400HDM	.313	132°	●	●
2.1563	54,77	4	QPV2156HD	.313	132°	●	●
2.1654	55,00	4	QPV5500HDM	.313	132°	●	●
2.1875	55,56	4	QPV2188HD	.313	132°	●	●
2.2047	56,00	4	QPV5600HDM	.313	132°	●	●
2.2188	56,36	4	QPV2219HD	.313	132°	●	●

Continued on next page.

Order example:
Catalog number: QPV1344HD
Grade: KC100

Continued from page B23.



D1		Seat Size/Series	Catalog number	S	Point Angle σ°	Grades	
Inch	Metric					KC100	KC300
2.2441	57,00	4	QPV5700HDM	.313	132°	●	●
2.2500	57,15	4	QPV2250HD	.313	132°	●	●
2.2559	57,30	4	QPV5730HDM	.313	132°	●	●
2.2813	57,94	4	QPV2281HD	.313	132°	●	●
2.2835	58,00	4	QPV5800HDM	.313	132°	●	●
2.3125	58,74	4	QPV2313HD	.313	132°	●	●
2.3228	59,00	4	QPV5900HDM	.313	132°	●	●
2.3438	59,53	4	QPV2344HD	.313	132°	●	●
2.3622	60,00	4	QPV6000HDM	.313	132°	●	●
2.3750	60,33	4	QPV2375HD	.313	132°	●	●
2.4016	61,00	4	QPV6100HDM	.313	132°	●	●
2.4063	61,12	4	QPV2406HD	.313	132°	●	●
2.4375	61,91	4	QPV2438HD	.313	132°	●	●
2.4409	62,00	4	QPV6200HDM	.313	132°	●	●
2.4688	62,71	4	QPV2469HD	.313	132°	●	●
2.4803	63,00	4	QPV6300HDM	.313	132°	●	●
2.5000	63,50	4	QPV2500HD4	.313	144°	●	●
2.5313	64,29	4	QPV2531HD4	.313	144°	●	●
2.5591	65,00	4	QPV6500HDM	.313	144°	●	●
2.5625	65,09	4	QPV2563HD4	.313	144°	●	●
2.5000	63,50	5	QPV2500HD5	.438	144°	●	●
2.5313	64,29	5	QPV2531HD5	.438	144°	●	●
2.5625	65,09	5	QPV2563HD5	.438	144°	●	●
2.5938	65,88	5	QPV2594HD	.438	144°	●	●
2.5984	66,00	5	QPV6600HDM	.438	144°	●	●
2.6250	66,68	5	QPV2625HD	.438	144°	●	●
2.6563	67,47	5	QPV2656HD	.438	144°	●	●
2.6772	68,00	5	QPV6800HDM	.438	144°	●	●
2.6875	68,26	5	QPV2688HD	.438	144°	●	●
2.7188	69,05	5	QPV2719HD	.438	144°	●	●
2.7500	69,85	5	QPV2750HD	.438	144°	●	●
2.7559	70,00	5	QPV7000HDM	.438	144°	●	●
2.7813	70,64	5	QPV2781HD	.438	144°	●	●
2.8125	71,44	5	QPV2813HD	.438	144°	●	●
2.8346	72,00	5	QPV7200HDM	.438	144°	●	●
2.8438	72,23	5	QPV2844HD	.438	144°	●	●
2.8750	73,03	5	QPV2875HD	.438	144°	●	●
2.9063	73,82	5	QPV2906HD	.438	144°	●	●
2.9134	74,00	5	QPV7400HDM	.438	144°	●	●
2.9375	74,61	5	QPV2938HD	.438	144°	●	●
2.9688	75,41	5	QPV2969HD	.438	144°	●	●
2.9921	76,00	5	QPV7600HDM	.438	144°	●	●
3.0000	76,20	5	QPV3000HD	.438	144°	●	●
3.0313	76,99	6	QPV3031HD	.438	144°	●	●
3.0625	77,79	6	QPV3063HD	.438	144°	●	●
3.0709	78,00	6	QPV7800HDM	.438	144°	●	●
3.0938	78,58	6	QPV3094HD	.438	144°	●	●
3.1250	79,38	6	QPV3125HD	.438	144°	●	●
3.1496	80,00	6	QPV8000HDM	.438	144°	●	●
3.1563	80,17	6	QPV3156HD	.438	144°	●	●

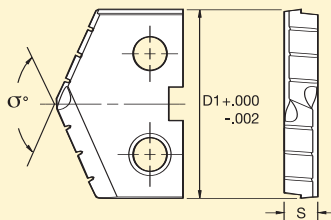
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Order example:
Catalog number: QPV5700HDM
Grade: KC100

**Ordering Information:**

- Order the blade required for hole diameter.
- Match the blade series number with body series number. See pages B26-B27.
- For application information, see pages B19-B20.

Continued from page B24.



D1		Seat Size/Series	Catalog number	S	Point Angle σ°	Grades	
Inch	Metric					KC100	KC300
3.1875	80,96	6	QPV3188HD	.438	144°	●	●
3.2188	81,76	6	QPV3219HD	.438	144°	●	●
3.2283	82,00	6	QPV8200HDM	.438	144°	●	●
3.2500	82,55	6	QPV3250HD	.438	144°	●	●
3.2813	83,34	6	QPV3281HD	.438	144°	●	●
3.3071	84,00	6	QPV8400HDM	.438	144°	●	●
3.3125	84,14	6	QPV3313HD	.438	144°	●	●
3.3438	84,93	6	QPV3344HD	.438	144°	●	●
3.3750	85,73	6	QPV3375HD	.438	144°	●	●
3.3858	86,00	6	QPV8600HDM	.438	144°	●	●
3.4063	86,52	6	QPV3406HD	.438	144°	●	●
3.4375	87,31	6	QPV3438HD	.438	144°	●	●
3.4646	88,00	6	QPV8800HDM	.438	144°	●	●
3.4688	88,11	6	QPV3469HD	.438	144°	●	●
3.5000	88,90	6	QPV3500HD	.438	144°	●	●
3.5313	89,69	7	QPV3531HD	.438	144°	●	●
3.5433	90,00	7	QPV9000HDM	.438	144°	●	●
3.5625	90,49	7	QPV3563HD	.438	144°	●	●
3.5938	91,28	7	QPV3594HD	.438	144°	●	●
3.6220	92,00	7	QPV9200HDM	.438	144°	●	●
3.6250	92,08	7	QPV3625HD	.438	144°	●	●
3.6563	92,87	7	QPV3656HD	.438	144°	●	●
3.6875	93,66	7	QPV3688HD	.438	144°	●	●
3.7008	94,00	7	QPV9400HDM	.438	144°	●	●
3.7188	94,46	7	QPV3719HD	.438	144°	●	●
3.7500	95,25	7	QPV3750HD	.438	144°	●	●
3.7795	96,00	7	QPV9600HDM	.438	144°	●	●
3.7813	96,04	7	QPV3781HD	.438	144°	●	●
3.8125	96,84	7	QPV3813HD	.438	144°	●	●
3.8438	97,63	7	QPV3844HD	.438	144°	●	●
3.8583	98,00	7	QPV9800HDM	.438	144°	●	●
3.8750	98,43	7	QPV3875HD	.438	144°	●	●
3.9063	99,22	7	QPV3906HD	.438	144°	●	●
3.9375	100,01	7	QPV3938HD	.438	144°	●	●
3.9688	100,81	7	QPV3969HD	.438	144°	●	●
4.0000	101,60	7	QPV4000HD	.438	144°	●	●
4.0156	102,00	8	QPV4016HD	.438	144°	●	●
4.0625	103,19	8	QPV4063HD	.438	144°	●	●
4.0945	104,00	8	QPV10400HDM	.438	144°	●	●
4.1250	104,78	8	QPV4125HD	.438	144°	●	●
4.1732	106,00	8	QPV10600HDM	.438	144°	●	●
4.1875	106,36	8	QPV4188HD	.438	144°	●	●
4.2500	107,95	8	QPV4250HD	.438	144°	●	●
4.2520	108,00	8	QPV10800HDM	.438	144°	●	●
4.3125	109,54	8	QPV4313HD	.438	144°	●	●
4.3307	110,00	8	QPV11000HDM	.438	144°	●	●
4.3750	111,13	8	QPV4375HD	.438	144°	●	●
4.4094	112,00	8	QPV11200HDM	.438	144°	●	●
4.4375	112,71	8	QPV4438HD	.438	144°	●	●
4.4882	114,00	8	QPV11400HDM	.438	144°	●	●
4.5000	114,30	8	QPV4500HD	.438	144°	●	●

Order example:
Catalog number: QPV3188HD
Grade: KC100

QPV Drill Bodies

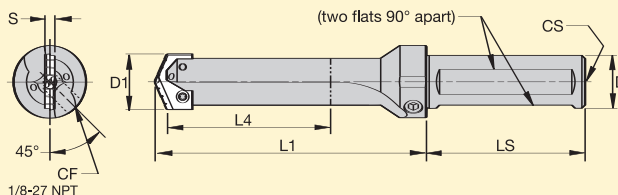


Inch – Multiple Cutting Depths

Ordering Information:

- Four drill body length options: short, standard, long, and extra-long.
- Match the body series number with blade series number. See pages B21-B25.
- Insert screw, Torx wrench, and side pipe plug are shipped with body. We recommend ordering extra screws.

Flanged Shank – SSF

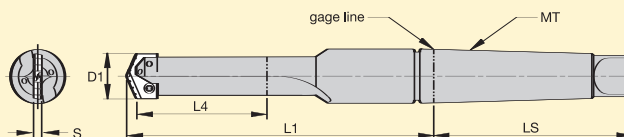


D1										 		
min.	max.	Order number	Catalog number	Insert Blade Seat Size	D	L1	L4 max.	LS	S	Insert Screw	Torx Wrench	End Pipe Thread CS
Short Length												
.374	.435	1731874	QPV0435RSSSF075	Y	.750	2.73	1.25	2.00	.094	MS2103PKG	FT7	1/8-27 NPT
.437	.511	1731875	QPV0511RSSSF075	Z	.750	2.73	1.25	2.00	.094	MS2104PKG	FT6	1/8-27 NPT
.512	.610	1731876	QPV0610RSSSF075	0	.750	2.88	1.38	2.00	.125	MS2105PKG	FT7	1/8-27 NPT
.610	.702	1731877	QPV0702RSSSF075	0	.750	2.88	1.38	2.00	.125	MS2105PKG	FT7	1/8-27 NPT
.703	.859	1731878	QPV0859RSSSF075	1	.750	4.33	2.63	2.00	.156	MS2106PKG	FT8	1/8-27 NPT
.859	.960	1731879	QPV0960RSSSF100	1	1.000	4.33	2.63	3.00	.156	MS2106PKG	FT8	1/4-18 NPT
.961	1.188	1731880	QPV1188RSSSF100	2	1.000	5.13	3.38	3.00	.188	MS2107PKG	FT15	1/4-18 NPT
1.187	1.380	1731951	QPV1380RSSSF125	2	1.250	5.20	3.38	3.25	.188	MS2107PKG	FT15	1/4-18 NPT
1.359	1.875	1731952	QPV1875RSSSF150	3	1.500	6.81	4.75	3.75	.250	MS2108PKG	FT20	1/4-18 NPT
1.859	2.563	1731953	QPV2563RSSSF150	4	1.500	7.28	5.13	3.75	.313	MS2108PKG	FT20	1/4-18 NPT
2.480	3.500	1731954	QPV3500RSSSF200	5-6	2.000	8.94	6.75	4.00	.438	MS2109PKG	KT25	1/4-18 NPT
3.484	4.500	1731955	QPV4500RSSSF250	6-7-8	2.500	9.38	6.75	4.25	.438	MS2109PKG	KT25	1/4-18 NPT
Standard Length												
.374	.435	1731956	QPV0435RRSSF075	Y	.750	3.86	2.38	2.00	.094	MS2103PKG	FT7	1/8-27 NPT
.437	.511	1731957	QPV0511RRSSF075	Z	.750	3.86	2.38	2.00	.094	MS2104PKG	FT6	1/8-27 NPT
.512	.610	1731958	QPV0610RRSSF075	0	.750	4.00	2.50	2.00	.125	MS2105PKG	FT7	1/8-27 NPT
.610	.702	1731959	QPV0702RRSSF075	0	.750	4.00	2.50	2.00	.125	MS2105PKG	FT7	1/8-27 NPT
.703	.859	1731960	QPV0859RRSSF075	1	.750	6.33	4.63	2.00	.156	MS2106PKG	FT8	1/8-27 NPT
.859	.960	1731981	QPV0960RRSSF100	1	1.000	6.33	4.63	3.00	.156	MS2106PKG	FT8	1/4-18 NPT
.961	1.188	1731982	QPV1188RRSSF100	2	1.000	7.13	5.38	3.00	.188	MS2107PKG	FT15	1/4-18 NPT
1.187	1.380	1731983	QPV1380RRSSF125	2	1.250	7.22	5.38	3.25	.188	MS2107PKG	FT15	1/4-18 NPT
1.359	1.875	1731984	QPV1875RRSSF150	3	1.500	8.31	6.25	3.75	.250	MS2108PKG	FT20	1/4-18 NPT
1.859	2.563	1731985	QPV2563RRSSF150	4	1.500	9.28	7.13	3.75	.313	MS2108PKG	FT20	1/4-18 NPT
2.480	3.500	1731988	QPV3500RRSSF200	5-6	2.000	10.94	8.75	4.00	.438	MS2109PKG	KT25	1/4-18 NPT
3.484	4.500	1731989	QPV4500RRSSF250	6-7-8	2.500	11.38	8.75	4.25	.438	MS2109PKG	KT25	1/4-18 NPT
Long Length												
.374	.435	1731990	QPV0435RLSSF075	Y	.750	5.86	4.38	2.00	.094	MS2103PKG	FT7	1/8-27 NPT
.437	.511	1732041	QPV0511RLSSF075	Z	.750	5.86	4.38	2.00	.094	MS2104PKG	FT6	1/8-27 NPT
.512	.610	1732042	QPV0610RLSSF075	0	.750	6.00	4.50	2.00	.125	MS2105PKG	FT7	1/8-27 NPT
.610	.702	1732043	QPV0702RLSSF075	0	.750	6.00	4.50	2.00	.125	MS2105PKG	FT7	1/8-27 NPT
.703	.859	1732044	QPV0859RLSSF075	1	.750	8.33	6.63	2.00	.156	MS2106PKG	FT8	1/8-27 NPT
.859	.960	1732045	QPV0960RLSSF100	1	1.000	8.33	6.63	3.00	.156	MS2106PKG	FT8	1/4-18 NPT
.961	1.188	1732046	QPV1188RLSSF100	2	1.000	9.13	7.38	3.00	.188	MS2107PKG	FT15	1/4-18 NPT
1.187	1.380	1732047	QPV1380RLSSF125	2	1.250	9.22	7.38	3.25	.188	MS2107PKG	FT15	1/4-18 NPT
1.359	1.875	1732048	QPV1875RLSSF150	3	1.500	10.31	8.25	3.75	.250	MS2108PKG	FT20	1/4-18 NPT
1.859	2.563	1732049	QPV2563RLSSF150	4	1.500	11.28	9.13	3.75	.313	MS2108PKG	FT20	1/4-18 NPT
2.480	3.500	1732050	QPV3500RLSSF200	5-6	2.000	12.94	10.75	4.00	.438	MS2109PKG	KT25	1/4-18 NPT
3.484	4.500	1732071	QPV4500RLSSF250	6-7-8	2.500	13.38	10.75	4.25	.438	MS2109PKG	KT25	1/4-18 NPT
Extra-Long Length												
.703	.859	1732072	QPV0859RESSF075	1	.750	12.33	10.63	2.00	.156	MS2106PKG	FT8	1/8-27 NPT
.859	.960	1732074	QPV0960RESSF100	1	1.000	12.33	10.63	3.00	.156	MS2106PKG	FT8	1/4-18 NPT
.961	1.188	1732075	QPV1188RESSF100	2	1.000	13.13	11.38	3.00	.188	MS2107PKG	FT15	1/4-18 NPT
1.187	1.380	1732076	QPV1380RESSF125	2	1.250	13.22	11.38	3.25	.188	MS2107PKG	FT15	1/4-18 NPT

Order example:
Catalog number: QPV0435RSSSF075
Order number: 1731874

**Ordering Information:**

- Four drill body length options: short, standard, long, and extra-long.
- Match the body series number with blade series number. See pages B21-B25.
- Insert screw, Torx wrench, and side plug are shipped with body. We recommend ordering extra screws.

Morse Taper Shank – MT

D1		Order number	Catalog number	Insert Blade Seat Size	L1	L4 max.	LS	MT	S		
min.	max.										
Short Length											
.374	.435	1732078	QPV0435RSMT2	Y	4.16	1.25	2.94	#2	.094	MS2103PKG	FT7
.437	.511	1732079	QPV0511RSMT2	Z	4.20	1.25	2.94	#2	.094	MS2104PKG	FT6
.512	.610	1732091	QPV0610RSMT2	0	4.36	1.38	2.94	#2	.125	MS2105PKG	FT7
.610	.702	1732092	QPV0702RSMT2	0	4.42	1.38	2.94	#2	.125	MS2105PKG	FT7
.703	.859	1732094	QPV0859RSMT3	1	6.06	2.63	3.69	#3	.156	MS2106PKG	FT8
.859	.960	1732095	QPV0960RSMT3	1	6.03	2.63	3.69	#3	.156	MS2106PKG	FT8
.961	1.188	1732096	QPV1188RSMT3	2	6.56	3.38	3.69	#3	.188	MS2107PKG	FT15
1.187	1.380	1732098	QPV1380RSMT3	2	6.80	3.38	3.69	#3	.188	MS2107PKG	FT15
1.359	1.875	1732099	QPV1875RSMT4	3	8.38	4.75	4.63	#4	.250	MS2108PKG	FT20
1.859	2.563	1732100	QPV2563RSMT4	4	9.11	5.13	4.63	#4	.313	MS2108PKG	FT20
2.480	3.500	1732121	QPV3500RSMT5	5-6	12.06	6.75	5.88	#5	.438	MS2109PKG	KT25
3.484	4.500	1732122	QPV4500RSMT5	6-7-8	12.50	6.75	5.88	#5	.438	MS2109PKG	KT25
Standard Length											
.374	.435	1732124	QPV0435RRMT2	Y	5.28	2.38	2.94	#2	.094	MS2103PKG	FT7
.437	.511	1732125	QPV0511RRMT2	Z	5.33	2.38	2.94	#2	.094	MS2104PKG	FT6
.512	.610	1732126	QPV0610RRMT2	0	5.48	2.50	2.94	#2	.125	MS2105PKG	FT7
.610	.702	1732127	QPV0702RRMT2	0	5.56	2.50	2.94	#2	.125	MS2105PKG	FT7
.703	.859	1732128	QPV0859RRMT3	1	8.06	4.63	3.69	#3	.156	MS2106PKG	FT8
.859	.960	1732129	QPV0960RRMT3	1	8.03	4.63	3.69	#3	.156	MS2106PKG	FT8
.961	1.188	1732130	QPV1188RRMT3	2	8.56	5.38	3.69	#3	.188	MS2107PKG	FT15
1.187	1.380	1732151	QPV1380RRMT3	2	8.80	5.38	3.69	#3	.188	MS2107PKG	FT15
1.359	1.875	1732153	QPV1875RRMT4	3	9.88	6.25	4.63	#4	.250	MS2108PKG	FT20
1.859	2.563	1732155	QPV2563RRMT4	4	11.11	7.13	4.63	#4	.313	MS2108PKG	FT20
2.480	3.500	1732156	QPV3500RRMT5	5-6	14.06	8.75	5.88	#5	.438	MS2109PKG	KT25
3.484	4.500	1732157	QPV4500RRMT5	6-7-8	14.50	8.75	5.88	#5	.438	MS2109PKG	KT25
Long Length											
.374	.435	1732158	QPV0435RLMT2	Y	7.28	4.38	2.94	#2	.094	MS2103PKG	FT7
.437	.511	1732159	QPV0511RLMT2	Z	7.33	4.38	2.94	#2	.094	MS2104PKG	FT6
.512	.610	1732160	QPV0610RLMT2	0	7.48	4.50	2.94	#2	.125	MS2105PKG	FT7
.610	.702	1732171	QPV0702RLMT2	0	7.56	4.50	2.94	#2	.125	MS2105PKG	FT7
.703	.859	1732172	QPV0859RLMT3	1	10.06	6.63	3.69	#3	.156	MS2106PKG	FT8
.859	.960	1732173	QPV0960RLMT3	1	10.03	6.63	3.69	#3	.156	MS2106PKG	FT8
.961	1.188	1732174	QPV1188RLMT3	2	10.56	7.38	3.69	#3	.188	MS2107PKG	FT15
1.187	1.380	1732175	QPV1380RLMT3	2	10.80	7.38	3.69	#3	.188	MS2107PKG	FT15
1.359	1.875	1732176	QPV1875RLMT4	3	11.88	8.25	4.63	#4	.250	MS2108PKG	FT20
1.859	2.563	1732177	QPV2563RLMT4	4	13.11	9.13	4.63	#4	.313	MS2108PKG	FT20
2.480	3.500	1732178	QPV3500RLMT5	5-6	16.06	10.75	5.88	#5	.438	MS2109PKG	KT25
3.484	4.500	1732179	QPV4500RLMT5	6-7-8	16.50	10.75	5.88	#5	.438	MS2109PKG	KT25
Extra-Long Length											
.703	.859	1732180	QPV0859REMT3	1	14.06	10.63	3.69	#3	.156	MS2106PKG	FT8
.859	.960	1732201	QPV0960REMT3	1	14.06	10.63	3.69	#3	.156	MS2106PKG	FT8
.961	1.188	1732202	QPV1188REMT3	2	14.56	11.38	3.69	#3	.188	MS2107PKG	FT15
1.187	1.380	1732203	QPV1380REMT3	2	14.80	11.38	3.69	#3	.188	MS2107PKG	FT15

Order example:
Catalog number: QPV0435RSMT2
Order number: 1732078

QPV Drill Bodies

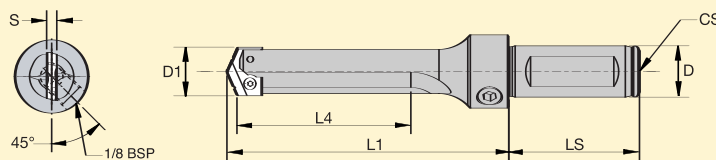


Metric – Multiple Cutting Depths

Ordering Information:

- Four drill body length options: short, standard, long, and extra-long.
- Match the body series number with blade series number. See pages B21-B25.
- Insert screw, Torx wrench, and side pipe plug are shipped with body. We recommend ordering extra screws.

Flanged Shank – SF

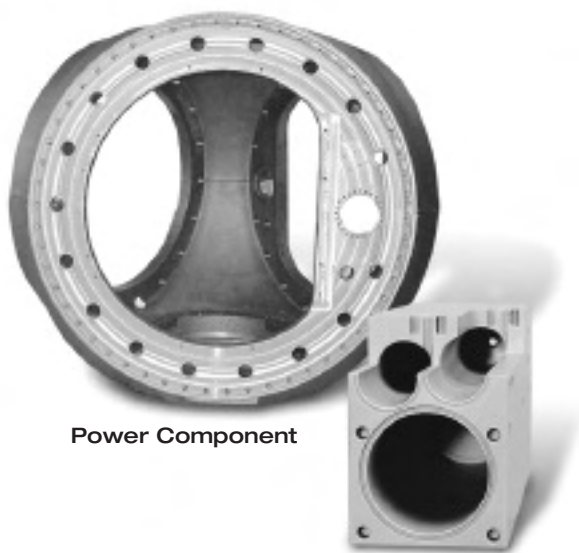


												 			
D1 Inch		D1 Metric		Order number	Catalog number	Insert Blade Seat Size	D	L1	L4 max.	LS	S	Insert Screw	Torx Wrench	CS	Side Pipe Plug
min.	max.	min.	max.												
Short Length															
.3740	.4331	9,50	11,00	2648898	QPV0950RSSF20M	Y	20	69,35	31,75	51	2,41	MS2103PKG	FT7	1/8 BSP	191.982
.4374	.5000	11,11	12,70	2648899	QPV1111RSSF20M	Z	20	69,35	31,75	51	2,41	MS2104PKG	FT6	1/8 BSP	191.982
.5118	.6102	13,00	15,50	2648900	QPV1300RSSF20M	0	20	73,15	34,93	51	3,21	MS2105PKG	FT7	1/8 BSP	191.982
.6102	.6890	15,50	17,50	2648901	QPV1550RSSF20M	0	20	73,15	34,93	51	3,21	MS2105PKG	FT7	1/8 BSP	191.982
.7031	.8591	17,86	21,82	2648902	QPV1786RSSF20M	1	20	109,98	66,80	51	4,01	MS2106PKG	FT8	1/8 BSP	191.982
.8591	.9449	21,82	24,00	2648923	QPV2182RSSF32M	1	32	109,98	66,80	61	4,01	MS2106PKG	FT8	1/8 BSP	191.982
.9689	1.1882	24,61	30,18	2648924	QPV2461RSSF32M	2	32	130,30	85,85	61	4,78	MS2107PKG	FT15	1/8 BSP	191.982
1.1811	1.3780	30,00	35,00	2648925	QPV3000RSSF32M	2	32	132,08	85,85	61	4,78	MS2107PKG	FT15	1/8 BSP	191.982
1.4059	1.8752	35,71	47,63	2648926	QPV3571RSSF40M	3	40	172,97	120,65	71	6,36	MS2108PKG	FT20	1/8 BSP	191.982
1.8898	2.5630	48,00	65,10	2648927	QPV4800RSSF40M	4	40	184,76	130,30	71	7,95	MS2108PKG	FT20	1/8 BSP	191.982
2.5000	3.5000	63,50	88,90	2648928	QPV6350RSSF50M	5-6	50	227,08	171,45	81	11,13	MS2109PKG	KT25	1/8 BSP	191.982
3.5000	4.5000	88,90	114,30	2648929	QPV8890RSSF50M	6-7-8	50	238,25	171,45	81	11,13	MS2109PKG	KT25	1/8 BSP	191.982
Standard Length															
.3740	.4331	9,50	11,00	2648930	QPV0950RRSF20M	Y	20	98,04	60,45	51	2,41	MS2103PKG	FT7	1/8 BSP	191.982
.4374	.5000	11,11	12,70	2648931	QPV1111RRSF20M	Z	20	98,04	60,45	51	2,41	MS2104PKG	FT6	1/8 BSP	191.982
.5118	.6102	13,00	15,50	2648932	QPV1300RRSF20M	0	20	101,60	63,50	51	3,21	MS2105PKG	FT7	1/8 BSP	191.982
.6102	.6890	15,50	17,50	2648933	QPV1550RRSF20M	0	20	101,60	63,50	51	3,21	MS2105PKG	FT7	1/8 BSP	191.982
.7031	.8591	17,86	21,82	2648934	QPV1786RRSF20M	1	20	160,78	117,60	51	4,01	MS2106PKG	FT8	1/8 BSP	191.982
.8591	.9449	21,82	24,00	2648935	QPV2182RRSF32M	1	32	160,78	117,60	61	4,01	MS2106PKG	FT8	1/8 BSP	191.982
.9689	1.1882	24,61	30,18	2648936	QPV2461RRSF32M	2	32	181,10	136,65	61	4,78	MS2107PKG	FT15	1/8 BSP	191.982
1.1811	1.3780	30,00	35,00	2648937	QPV3000RRSF32M	2	32	183,39	136,65	61	4,78	MS2107PKG	FT15	1/8 BSP	191.982
1.4059	1.8752	35,71	47,63	2648938	QPV3571RRSF40M	3	40	211,07	158,75	71	6,36	MS2108PKG	FT20	1/8 BSP	191.982
1.8898	2.5630	48,00	65,10	2648939	QPV4800RRSF40M	4	40	235,56	181,10	71	7,95	MS2108PKG	FT20	1/8 BSP	191.982
2.5000	3.5000	63,50	88,90	2648940	QPV6350RRSF50M	5-6	50	277,88	222,25	81	11,13	MS2109PKG	KT25	1/8 BSP	191.982
3.5000	4.5000	88,90	114,30	2648941	QPV8890RRSF50M	6-7-8	50	289,05	222,25	81	11,13	MS2109PKG	KT25	1/8 BSP	191.982
Long Length															
.3740	.4331	9,50	11,00	2648942	QPV0950RLSF20M	Y	20	148,84	111,25	51	2,41	MS2103PKG	FT7	1/8 BSP	191.982
.4374	.5000	11,11	12,70	2648943	QPV1111RLSF20M	Z	20	148,84	111,25	51	2,41	MS2104PKG	FT6	1/8 BSP	191.982
.5118	.6102	13,00	15,50	2648944	QPV1300RLSF20M	0	20	152,40	114,30	51	3,21	MS2105PKG	FT7	1/8 BSP	191.982
.6102	.6890	15,50	17,50	2648945	QPV1550RLSF20M	0	20	152,40	114,30	51	3,21	MS2105PKG	FT7	1/8 BSP	191.982
.7031	.8591	17,86	21,82	2648946	QPV1786RLSF20M	1	20	211,58	168,40	51	4,01	MS2106PKG	FT8	1/8 BSP	191.982
.8591	.9449	21,82	24,00	2648947	QPV2182RLSF32M	1	32	211,58	168,40	61	4,01	MS2106PKG	FT8	1/8 BSP	191.982
.9689	1.1882	24,61	30,18	2648948	QPV2461RLSF32M	2	32	231,90	187,45	61	4,78	MS2107PKG	FT15	1/8 BSP	191.982
1.1811	1.3780	30,00	35,00	2648949	QPV3000RLSF32M	2	32	234,19	187,45	61	4,78	MS2107PKG	FT15	1/8 BSP	191.982
1.4059	1.8752	35,71	47,63	2648950	QPV3571RLSF40M	3	40	261,87	209,55	71	6,36	MS2108PKG	FT20	1/8 BSP	191.982
1.8898	2.5630	48,00	65,10	2648951	QPV4800RLSF40M	4	40	286,36	231,90	71	7,95	MS2108PKG	FT20	1/8 BSP	191.982
2.5000	3.5000	63,50	88,90	2648952	QPV6350RLSF50M	5-6	50	328,68	273,05	81	11,13	MS2109PKG	KT25	1/8 BSP	191.982
3.5000	4.5000	88,90	114,30	2648953	QPV8890RLSF50M	6-7-8	50	339,85	273,05	81	11,13	MS2109PKG	KT25	1/8 BSP	191.982
Extra-Long Length															
.7031	.8591	17,86	21,82	2648954	QPV1786RESF20M	1	20	313,18	270,00	51	4,01	MS2106PKG	FT8	1/8 BSP	191.982
.8591	.9449	21,82	24,00	2648955	QPV2182RESF32M	1	32	313,18	270,00	61	4,01	MS2106PKG	FT8	1/8 BSP	191.982
.9689	1.1882	24,61	30,18	2648956	QPV2461RESF32M	2	32	333,50	289,05	61	4,78	MS2107PKG	FT15	1/8 BSP	191.982
1.1811	1.3780	30,00	35,00	2648957	QPV3000RESF32M	2	32	335,79	289,05	61	4,78	MS2107PKG	FT15	1/8 BSP	191.982

Order example:
Catalog number: QPV0950RSSF20M
Order number: 2648898

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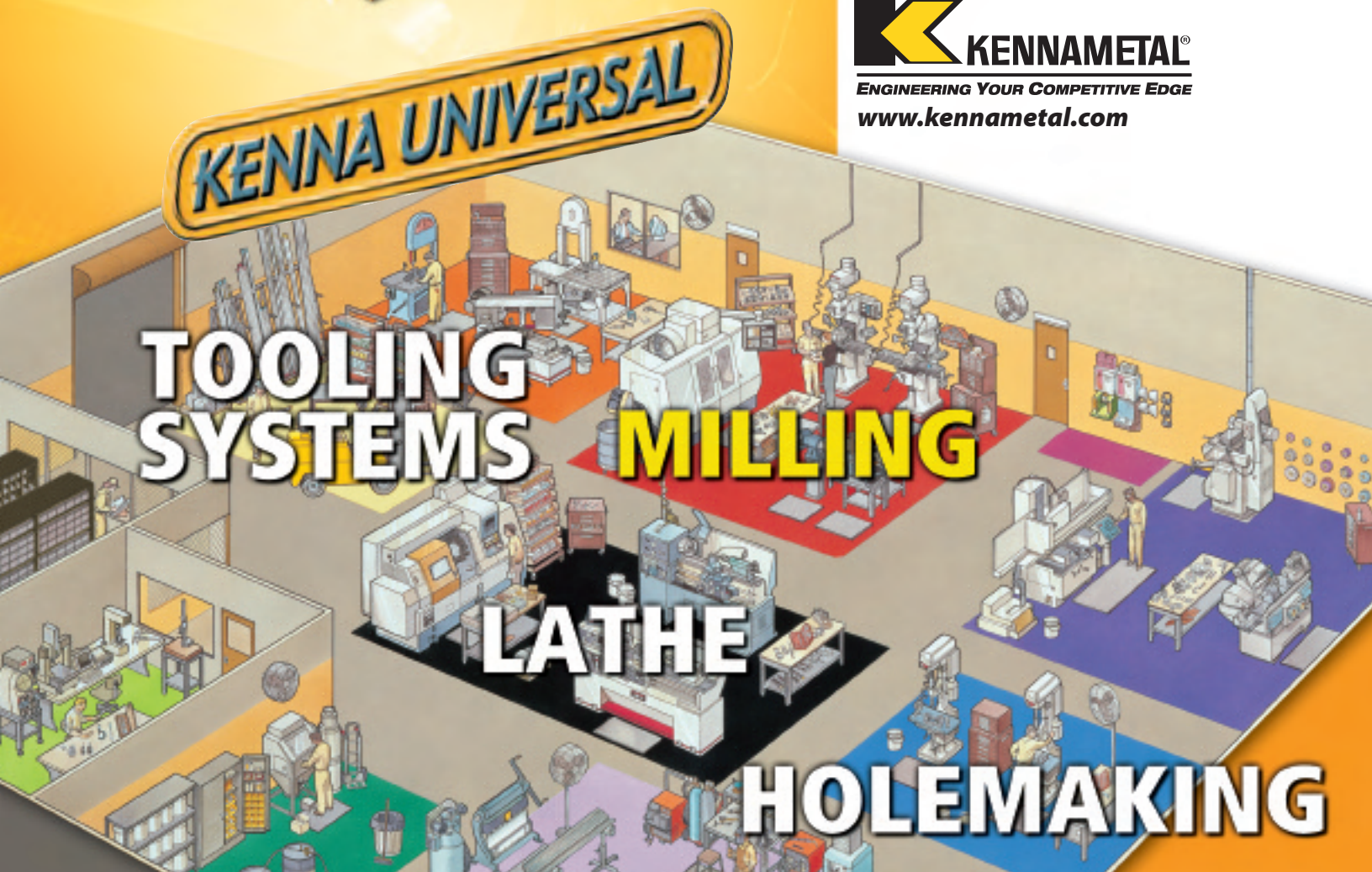
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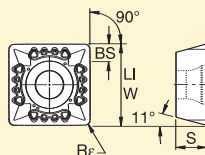
KSSM Face Mills	C2
NGE-B End Mills	C10
Solid Carbide End Mills	C13



Face Mills 0°/90° — KSSM



10 mm IC Inserts



..GB (ground) 5° rake face

					P	M	K	N	S	KENNA UNIVERSAL	
										KUC30M	KUC20M
Catalog number	LI	BS	S	Rε							
Inch											
SPET3125PPER8GB	.394	.132	.156	.031	■	■	■		■	●	●
SPET3125PPSR8GB	.394	.132	.156	.031	■		■			●	●
Metric											
SPET10T3PPERGB	10,0	3,35	3,96	0,8	■	■	■		■	●	●
SPET10T3PPSRGB	10,0	3,35	3,96	0,8	■		■			●	●

■ Suitable for these material groups.

0°/90° KSSM Inch

Insert Catalog number	Material Group	Surface speed (ft./min.)		
		Grades		
		KUC30M	KUC20M	IPT
SPET..E.GB	Steel (P)	300 - 650	400 - 900	.004 - .010
SPET..S.GB		300 - 650	400 - 900	.006 - .012
SPET..E.GB	Stainless Steel (M)	200 - 500	300 - 700	.004 - .012
SPET..S.GB		—	300 - 500	.003 - .010
SPET..E.GB	Cast Iron (K)	—	300 - 500	.004 - .010
SPET..S.GB		—	300 - 500	.004 - .010
SPET..E.GB	High-Temp Alloys (S)	80 - 120	80 - 150	.004 - .007
SPET..S.GB		—	—	—

0°/90° KSSM Metric

Insert Catalog number	Material Group	Surface speed (m/min.)		
		Grades		
		KUC30M	KUC20M	f _z
SPET..E.GB	Steel (P)	90 - 200	130 - 300	0,10 - 0,25
SPET..S.GB		90 - 200	130 - 300	0,15 - 0,30
SPET..E.GB	Stainless Steel (M)	60 - 155	100 - 230	0,10 - 0,30
SPET..S.GB		—	100 - 160	0,07 - 0,25
SPET..E.GB	Cast Iron (K)	—	100 - 160	0,10 - 0,25
SPET..S.GB		—	100 - 160	0,10 - 0,25
SPET..E.GB	High-Temp Alloys (S)	25 - 35	25 - 45	0,10 - 0,18
SPET..S.GB		—	—	—

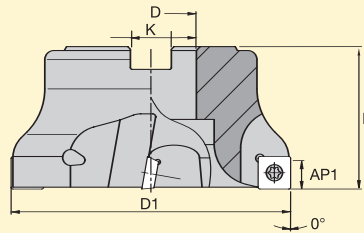
		Coated carbide with a TiN/TiAlN (PVD) coating. KUC20M is engineered to provide better performance in general machining of high-temperature alloys. KUC20M resists breakage, offers improved wear resistance, and increased strength.
		Coated carbide grade with a PVD multi-layer coating (TiN/TiCN/TiN). New universal carbide grade for milling steel, stainless steel, and high-temperature alloys. KUC30M can be used with or without coolant. Primarily for use in light and general machining.

Order example:
Catalog number: SPET3125PPER8GB
Grade: KUC30M



Face and End Mills 0°/90° — KSSM

Screw-On Inserts — 10 mm IC

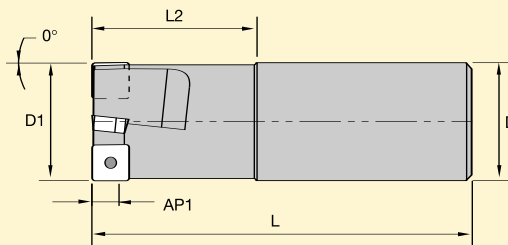


FACE MILLS

INDEXABLE END MILLS

MILLING PRODUCTS
SOLID CARBIDE END MILLS

Face Mills – Inch									lbs.				
D1	Order number	Catalog number	Number of inserts	D	L	K	AP1	Max. RPM					
Inch													
1.50	1229047	KSSR150SP10T30F2	4	.50	1.25	.25	.26	30300	0.30	MS2148	TTP9	10	S422
2.00	1229078	KSSR200SP10T30F3	5	.75	1.75	.31	.26	26300	0.60	MS2148	TTP9	10	S445
2.50	1229079	KSSR250SP10T30F4	6	1.00	1.75	.38	.26	23500	0.90	MS2148	TTP9	10	—
3.00	1229080	KSSR300SP10T30F4	8	1.00	1.75	.38	.26	21450	1.30	MS2148	TTP9	10	—
4.00	1229081	KSSR400SP10T30F5	10	1.25	2.00	.50	.26	18600	2.50	MS2148	TTP9	10	—
4.00	1229082	KSSR400SP10T30F6	10	1.50	2.00	.63	.26	18600	3.10	MS2148	TTP9	10	—
5.00	1229083	KSSR500SP10T30F6	12	1.50	2.38	.63	.26	16600	4.50	MS2148	TTP9	10	—
Face Mills – Metric									kg			(Nm)	
Metric													
50	1981677	50A05RS90SP10DG	5	22	40	10,5	6,5	26300	0.4	MS2148	TTP9	1.5	MS1234
63	1981678	63A06RS90SP10DG	6	22	40	10,5	6,5	23500	0.4	MS2148	TTP9	1.5	MS1234
80	1981853	80A08RS90SP10DG	8	27	50	10,5	6,5	21450	0.9	MS2148	TTP9	1.5	MS1556
100	1981854	100B10RS90SP10DG	10	32	50	10,5	6,5	18600	1.6	MS2148	TTP9	1.5	—
125	1981856	125B12RS90SP10DG	12	40	63	10,5	6,5	15700	2.5	MS2148	TTP9	1.5	—

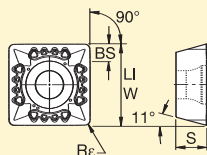


Smooth End Mills – Inch									lbs.			
D1	Order number	Catalog number	Number of inserts	D	L	L2	AP1	Max. RPM				
Inch												
.75	1229101	KISR075SP10T30FS3	1	.75	3.50	1.47	.26	42900	0.35	MS2148	TTP9	10
1.00	1229102	KISR100SP10T30FS4	2	1.00	3.50	1.22	.26	37100	0.63	MS2148	TTP9	10
1.25	1229103	KISR125SP10T30FS5	3	1.25	4.03	1.75	.26	33200	1.11	MS2148	TTP9	10
1.50	1229104	KISR150SP10T30FS6	4	1.50	4.03	1.34	.26	30300	1.66	MS2148	TTP9	10
Weldon End Mills – Inch												
Inch												
.75	1229091	KISR075SP10T30F	1	.75	3.50	1.47	.26	42900	0.35	MS2148	TTP9	10
1.00	1229092	KISR100SP10T30F	2	1.00	3.50	1.22	.26	37100	0.62	MS2148	TTP9	10
1.25	1229095	KISR125SP10T30F	3	1.25	4.03	1.75	.26	33200	1.10	MS2148	TTP9	10
1.50	1229096	KISR150SP10T30F	4	1.50	4.03	1.34	.26	30300	1.63	MS2148	TTP9	10
Weldon End Mills – Metric									kg			(Nm)
Metric												
25	1981679	25A02R039B25SSP10G	2	25	95	39	6,6	37100	0.63	MS2148	TTP9	1-5
32	1981788	32A03R039B32SSP10G	3	32	100	39	6,6	33200	1.11	MS2148	TTP9	1-5
40	1981790	40A04R049B32SSP10G	4	40	110	49	6,6	30300	1.66	MS2148	TTP9	1-5

Face Mills 0°/90° — KSSM



1/2" IC Inserts



					P	M	K	N	S	KENNA UNIVERSAL	
Catalog number	LI	BS	S	Rε						KUC30M	KUC20M
Inch											
..GB (ground) 5° rake face											
SDET43PDER8GB	.500	.132	.187	.031	■	■	■		■	●	●
SDET43PDSR8GB	.500	.132	.187	.031	■		■			●	●
..GB (precision sintered) 5° rake face											
SDPT43PDER8GB	.500	.132	.187	.031	■	■	■			●	●
SDPT43PDSR8GB	.500	.132	.187	.031	■					●	●
Metric											
..GB (ground) 5° rake face											
SDET1204PDERGB	12,7	3,4	4,7	0,8	■	■	■		■	●	●
SDET1204PDSRGB	12,7	3,4	4,7	0,8	■		■			●	●
..GB (precision sintered) 5° rake face											
SDPT1204PDERGB	12,7	3,4	4,7	0,8	■	■	■			●	●
SDPT1204PDSRGB	12,7	3,4	4,7	0,8	■					●	●

■ Suitable for these material groups.

0°/90° KSSM Inch

Insert Catalog number	Material Group	Surface speed (ft./min.)		
		Grades	KUC30M	KUC20M
SDPT..E.GB	Steel (P)	300 - 650	400 - 900	.003 - .010
SDPT..E.GB		300 - 650	400 - 900	.004 - .010
SDPT..S.GB		300 - 650	400 - 900	.007 - .015
SDPT..GB	Stainless Steel (M)	200 - 500	300 - 700	.003 - .012
SDPT..GB		200 - 500	300 - 700	.004 - .012
SDPT..E.GB	Cast Iron (K)	—	300 - 500	.004 - .012
SDPT..E.GB		—	300 - 500	.004 - .010
SDPT..S.GB		—	300 - 500	.004 - .015
SDPT..E.GB	High-Temp Alloys (S)	30-120	80 - 150	.004 - .007

0°/90° KSSM Metric

Insert Catalog number	Material Group	Surface speed (m/min.)		
		Grades	KUC30M	KUC20M
SDPT..E.GB	Steel (P)	90 - 200	130 - 300	0,08 - 0,25
SDPT..E.GB		90 - 200	130 - 300	0,10 - 0,25
SDPT..S.GB		90 - 200	130 - 300	0,17 - 0,32
SDPT..GB	Stainless Steel (M)	60 - 155	100 - 230	0,08 - 0,28
SDPT..GB		60 - 155	100 - 230	0,10 - 0,28
SDPT..E.GB	Cast Iron (K)	—	100 - 160	0,10 - 0,28
SDPT..E.GB		—	100 - 160	0,10 - 0,25
SDPT..S.GB		—	100 - 160	0,10 - 0,32
SDPT..E.GB	High-Temp Alloys (S)	25 - 35	25 - 45	0,10 - 0,18

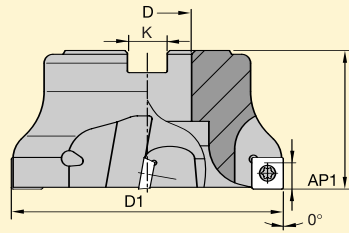
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: SDPT43PDER8GB
Grade: KUC30M



Face Mills 0°/90° — KSSM – Inch

Screw-On Inserts – 1/2" IC



Coarse Pitch									lbs.
D1	Order number	Catalog number	Number of inserts	D	L	K	AP1	Max. RPM	
Inch									
2.00	1024970	KSSISR200SD430C3	3	.75	1.75	.31	.36	20450	0.79
2.50	1024996	KSSISR250SD430C4	4	1.00	1.75	.38	.36	18290	1.21
3.00	1024930	KSSISR300SD430C4	4	1.00	1.75	.38	.36	16700	1.42
4.00	1025025	KSSISR400SD430C5	5	1.25	2.00	.50	.36	14460	3.05
4.00	1025027	KSSISR400SD430C6	5	1.50	2.00	.63	.36	14460	3.58
5.00	1024933	KSSISR500SD430C6	6	1.50	2.38	.63	.36	12940	5.82
6.00	1024966	KSSISR600SD430C6	8	1.50	2.38	.63	.36	11800	8.52
6.00	1025071	KSSISR600SD430C8	8	2.00	2.38	.75	.36	11800	7.37
8.00	1025102	KSSISR800SD430C10	10	2.50	2.38	1.00	.36	10230	15.40
10.00	1025138	KSSISR1000SD430C10	12	2.50	2.38	1.00	.36	9150	24.20
Medium Pitch									
Inch									
2.00	1024972	KSSISR200SD430M3	4	.75	1.75	.31	.36	20450	0.75
2.50	1024998	KSSISR250SD430M4	5	1.00	1.75	.38	.36	18290	1.20
3.00	1024931	KSSISR300SD430M4	6	1.00	1.75	.38	.36	16700	1.38
4.00	1025029	KSSISR400SD430M5	7	1.25	2.00	.50	.36	14460	3.03
4.00	1025031	KSSISR400SD430M6	7	1.50	2.00	.63	.36	14460	3.57
5.00	1024964	KSSISR500SD430M6	8	1.50	2.38	.63	.36	12940	5.91
6.00	1024967	KSSISR600SD430M6	10	1.50	2.38	.63	.36	11800	8.58
6.00	1025094	KSSISR600SD430M8	10	2.00	2.38	.75	.36	11800	7.44
8.00	1025134	KSSISR800SD430M10	12	2.50	2.38	1.00	.36	10230	15.40
10.00	1025140	KSSISR1000SD430M10	16	2.50	2.38	1.00	.36	9150	25.90
Fine Pitch									
Inch									
2.00	1024994	KSSISR200SD430F3	5	.75	1.75	.31	.36	20450	0.77
2.50	1025000	KSSISR250SD430F4*	6	1.00	1.75	.38	.36	18290	1.23
3.00	1024932	KSSISR300SD430F4*	7	1.00	1.75	.38	.36	16700	1.38
4.00	1025033	KSSISR400SD430F5	8	1.25	2.00	.50	.36	14460	3.01
4.00	1025065	KSSISR400SD430F6	8	1.50	2.00	.63	.36	14460	3.62
5.00	1024965	KSSISR500SD430F6	10	1.50	2.38	.63	.36	12940	5.96
6.00	1024968	KSSISR600SD430F6	12	1.50	2.38	.63	.36	11800	8.60
6.00	1025097	KSSISR600SD430F8	12	2.00	2.38	.75	.36	11800	7.47
8.00	1025136	KSSISR800SD430F10	14	2.50	2.38	1.00	.36	10230	15.30
10.00	1025142	KSSISR1000SD430F10	18	2.50	2.38	1.00	.36	9150	24.40

*NOTE: 2.5" and 3.0" fine pitch cutters do not have shims.

Spares – Inch

D1	Insert Screw	Torx Wrench	Torque (in./lbs.)	Shim	Shim Screw	Hex Wrench	Torque (in./lbs.)	Mounting Screw
2.00	MS2078	TTP15	35	—	—	—	—	S445
2.50	MS2078	TTP15	35	SM449	SRS3	THW35M	40	S458
3.00 - 10.00	MS2078	TTP15	35	SM449	SRS3	THW35M	40	—

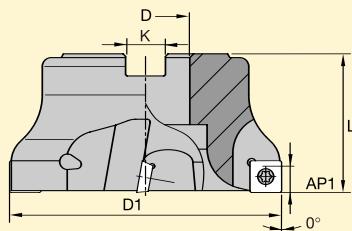
Order example:
Catalog number: KSSISR200SD430C3
Order number: 1024970

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Face Mills 0°/90° — KSSM – Metric



Screw-On Inserts — 1/2" IC



Coarse Pitch									
D1	Order number	Catalog number	Number of inserts	D	L	K	AP1	Max. RPM	
Metric									
50	1926939	50A03RS90SD12DG	3	22	40	10,5	9	20600	0.3
63	1926936	63A04RS90SD12DG	4	22	40	10,5	9	18300	0.5
80	1926901	80A05RS90SD12DG	5	27	50	12,5	9	16300	1.0
100	1926841	100B06RS90SD12DG	6	32	50	14,5	9	14600	1.6
125	1926839	125B07RS90SD12DG	7	40	63	16,5	9	13000	2.8
160	1926836	160C08RS90SD12DG	8	40	63	16,5	9	11500	4.3
200	1926942	200C11RS90SD12DG	11	60	63	25,8	9	10300	6.8
Fine Pitch									
Metric									
50	1926938	50A04RS90SD12DG	4	22	40	10,5	9	20600	0.3
63	1926933	63A05RS90SD12DG	5	22	40	10,5	9	18300	0.5
80	1926898	80A06RS90SD12DG	6	27	50	12,5	9	16300	1.0
100	1926840	100B08RS90SD12DG	8	32	50	14,5	9	14600	1.7
125	1926837	125B10RS90SD12DG	10	40	63	16,5	9	13000	2.9
160	1926983	160C12RS90SD12DG	12	40	63	16,5	9	11500	4.4
200	1926941	200C14RS90SD12DG	14	60	63	25,8	9	10300	6.8

Spares – Metric

D1								
	Insert Screw	Torx Wrench	Torque (Nm)	Shim	Shim Screw	Hex Wrench	Torque (Nm)	Mounting Screw
50	MS2078	TTP15	4	—	—	—	—	MS1234
63	MS2078	TTP15	4	—	—	—	—	MS1234
80 - 200	MS2078	TTP15	4	SM449	SRS3	THW35M	415	MS2038

Order example:
Catalog number: 50A03RS90SD12DG
Order number: 1926939



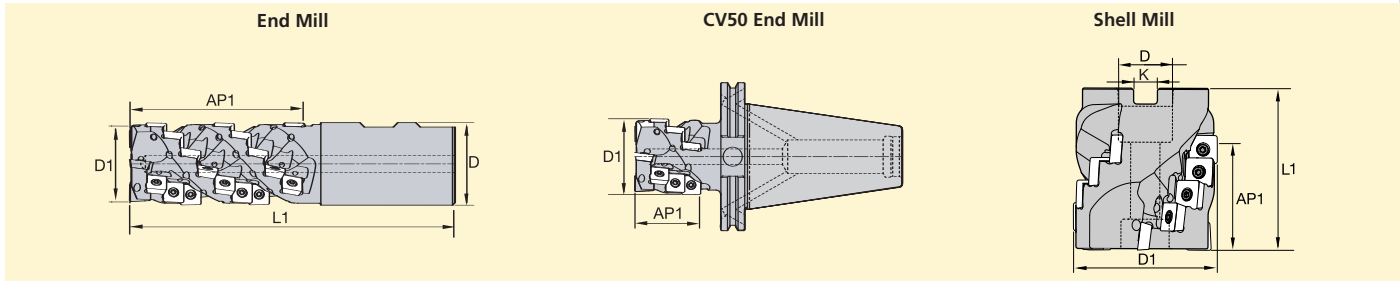
Helical Face Mills 0°/90° – KSSM

Screw-On Inserts — 1/2" IC

FACE MILLS

INDEXABLE END MILLS

MILLING PRODUCTS
SOLID CARBIDE END MILLS



Maximum nose radius of lead insert is .094" for 2.00" and 50 mm cutters, and .125" for 2.5", 63 mm, and above.
All subsequent inserts up the flute should have a maximum nose radius of .031" to avoid lap lines.

End Mills – Inch											lbs.
D1	Order number	Catalog number	Number of inserts	Effective flutes	D	L1	K	Insert	AP1	Max. RPM	
Inch											
2.00	2528269	KSSP200R3SD43W150L169	12	3	1.25	4.53	–	SD.T1204	1.69	16300	1.70
2.00	2528270	KSSP200R3SD43CV50L169	12	3	CV50	–	–	SD.T1204	1.69	16300	6.73
Shell Mills – Inch											
Inch											
2.00	2601012	KSSP200R3SD43L125	9	3	.75	1.875	.312	SD.T1204	1.25	16300	1.0
2.00	2400680	KSSP200R3SD43L168	12	3	.75	2.250	.312	SD.T1204	1.65	16300	1.0
2.50	2400681	KSSP250R3SD43L200	15	3	1.00	2.750	.375	SD.T1204	2.00	14550	2.0
3.00	2400682	KSSP300R4SD43L240	24	4	1.25	3.250	.500	SD.T1204	2.40	13300	3.8
Shell Mills – Metric											kg
Metric											
50	2400693	50A3RS90SD12L32	9	3	22	55	10	SD.T1204	32	16400	0.88
63	2400694	63A3RS90SD43L50	15	3	27	70	13	SD.T1204	50	14600	2.00
80	2400695	80A4RS90SD43L61	24	4	32	80	14	SD.T1204	61	12950	4.20

Spares				
Catalog number	Torx Screw	Mounting Screw	Torx Wrench	Torque (in./lbs.)
Inch				
KSSP200R3SD43L125	MS1273	S446CG	TT15	35
KSSP200R3SD43L168	MS1273	S447CG	TT15	35
KSSP250R3SD43L200	MS1273	S462CG	TT15	35
KSSP300R4SD43L240	MS1273	S2149CG	TT15	35
				(Nm)
Metric				
50A3RS90SD12L32	MS1273	MS1235CG	TT15	4
63A3RS90SD43L50	MS1273	MS1238C	TT15	4
80A4RS90SD43L61	MS1273	MS1241C	TT15	4

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

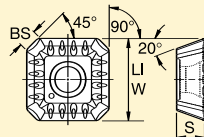
Order example:
Catalog number: KSSP200R3SD43W150L169
Order number: 2528269

Face Mills 45° — KSSM

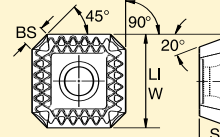


14 mm IC Inserts

..GP (ground) 11° rake face



..GB (precision sintered) 5° rake face



									KENNA UNIVERSAL	
				P	M	K	N	S	KUC30M	KUC20M
Catalog number	LI	BS	S							
Inch										
..GP (ground) 11° rake face				■	■	■		■	●	●
SEKT443AEEN7GP	.551	.104	.187	■	■	■			●	●
SEKT443AESN7GP	.551	.104	.187							
..GB (precision sintered) 5° rake face				■	■	■		■	●	●
SEPT443AEEN7GB	.551	.104	.187	■		■			●	●
SEPT443AESN7GB	.551	.104	.187	■		■			●	●
Metric										
..GP (ground) 11° rake face				■	■	■		■	●	●
SEKT1404AEENGP	14	2,64	4,75	■	■	■			●	●
SEKT1404AESNGP	14	2,64	4,75	■	■	■			●	●
..GP (precision sintered) 5° rake face				■	■	■		■	●	●
SEPT1404AEENG	14	2,64	4,75	■		■			●	●
SEPT1404AESNG	14	2,64	4,75	■		■			●	●

■ Suitable for these material groups.

0°/90° KSSM Inch

Insert Catalog number	Material Group	Surface speed (ft./min.)		
		Grades	KUC30M	KUC20M IPT
SEKT..E.GP	Steel (P)	300 - 650	400 - 900	.005 - .014
SEPT..E.GB		300 - 650	400 - 900	.005 - .014
SEKT..S.GP		300 - 650	400 - 900	.010 - .016
SEPT..S.GB		300 - 650	400 - 900	.012 - .020
SEKT..E.GP	Stainless Steel (M)	180 - 475	300 - 700	.005 - .014
SEPT..E.GB		180 - 475	300 - 700	.005 - .014
SEKT..S.GP		180 - 475	300 - 700	.010 - .016
SEKT..E.GP	Cast Iron (K)	—	300 - 500	.005 - .014
SEPT..E.GB		—	300 - 500	.005 - .014
SEKT..S.GP		—	300 - 500	.010 - .016
SEKT..E.GP	High-Temp Alloys (S)	80 - 120	80 - 150	.005 - .010
SEPT..E.GB		80 - 120	80 - 150	.005 - .010

0°/90° KSSM Metric

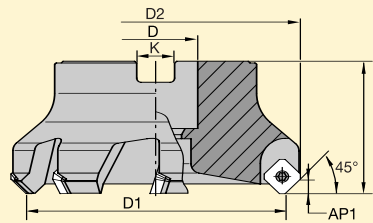
Insert Catalog number	Material Group	Surface speed (m/min.)		
		Grades	KUC30M	KUC20M f _z
SEKT..E.GP	Steel (P)	90 - 200	130 - 300	0,13 - 0,35
SEPT..E.GB		90 - 200	130 - 300	0,13 - 0,35
SEKT..S.GP		90 - 200	130 - 300	0,25 - 0,40
SEPT..S.GB		90 - 200	130 - 300	0,30 - 0,50
SEKT..E.GP	Stainless Steel (M)	60 - 155	100 - 230	0,13 - 0,35
SEPT..E.GB		60 - 155	100 - 230	0,13 - 0,35
SEKT..S.GP		60 - 155	100 - 230	0,25 - 0,40
SEKT..E.GP	Cast Iron (K)	—	100 - 160	0,13 - 0,35
SEPT..E.GB		—	100 - 160	0,13 - 0,35
SEKT..S.GP		—	100 - 160	0,25 - 0,40
SEKT..E.GP	High-Temp Alloys (S)	25 - 35	25 - 45	0,13 - 0,25
SEPT..E.GB		25 - 35	25 - 45	0,13 - 0,25

Order example:
Catalog number **SEKT443AEEN7GP**
Grade: **KUC30M**



Face Mills 45° – KSSM

Screw-On Inserts – 14 mm IC



Coarse Pitch										lbs.
D1	Order number	Catalog number	Number of inserts	D	D2 max.	L	K	AP1	Max. RPM	
Inch										
1.97	1817866	KSSISR197SE44345C3	3	.75	2.52	1.58	.31	.26	22500	0.87
2.48	1817868	KSSISR248SE44345C4	4	1.00	3.02	1.58	.38	.26	20200	1.31
3.15	1817870	KSSISR315SE44345C4	4	1.00	3.69	1.97	.38	.26	18000	2.16
3.94	1817872	KSSISR394SE44345C5	5	1.25	4.48	1.97	.50	.26	16000	3.58
4.92	1817934	KSSISR492SE44345C6	6	1.50	5.46	2.48	.63	.26	14400	6.50
6.30	1817936	KSSISR630SE44345C6	7	1.50	6.84	2.48	.63	.26	12500	9.91
7.87	1817938	KSSISR787SE44345C10	8	2.50	8.41	2.48	1.00	.26	11300	13.24
										kg
Metric										
40	1926850	40A03RS45SE14EG	3	16	54	40	8,5	6,6	26000	0.3
50	1926812	50A03RS45SE14EG	3	22	64	40	10,5	6,6	22500	0.4
63	1926899	63A04RS45SE14EG	4	22	77	40	10,5	6,6	20200	0.5
80	1926894	80A05RS45SE14EG	5	27	94	50	12,5	6,6	18000	1.1
100	1926926	100B05RS45SE14EG	5	32	114	50	14,5	6,6	16000	1.7
125	1926924	125B06RS45SE14EG	6	40	139	63	16,5	6,6	14400	2.9
160	1926909	160C07RS45SE14EG	7	40	174	63	16,5	6,6	12500	4.1
										lbs.
Medium Pitch										
D1	Order number	Catalog number	Number of inserts	D	D2 max.	L	K	AP1	Max. RPM	
Inch										
1.97	1817867	KSSISR197SE44345M3	4	.75	2.52	1.58	.31	.26	22500	0.88
2.48	1817869	KSSISR248SE44345M4	5	1.00	3.02	1.58	.38	.26	20200	1.30
3.15	1817871	KSSISR315SE44345M4	6	1.00	3.69	1.97	.38	.26	18000	2.19
3.94	1817933	KSSISR394SE44345M5	7	1.25	4.48	1.97	.50	.26	16000	3.60
4.92	1817935	KSSISR492SE44345M6	8	1.50	5.46	2.48	.63	.26	14400	6.56
6.30	1817937	KSSISR630SE44345M6	10	1.50	6.84	2.48	.63	.26	12500	10.03
7.87	1817939	KSSISR787SE44345M10	12	2.50	8.41	2.48	1.00	.26	11300	13.37
										kg
Metric										
50	1926900	50A04RS45SE14EG	4	22	64	40	10,5	6,6	22500	0.4
63	1926897	63A05RS45SE14EG	5	22	77	40	10,5	6,6	20200	0.6
80	1926893	80A06RS45SE14EG	6	27	94	50	12,5	6,6	18000	1.2
100	1926925	100B07RS45SE14EG	7	32	114	50	14,5	6,6	16000	1.8
125	1926911	125B08RS45SE14EG	8	40	139	63	16,5	6,6	14400	3.0
160	1926908	160C10RS45SE14EG	10	40	174	63	16,5	6,6	12500	4.3

See page CXXX for spare parts.

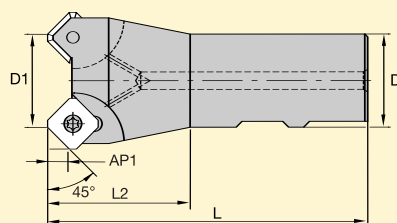
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number KSSISR197SE44345C3
Order number: 1817866

Indexable End Mills 45° — KSSM



Screw-On Inserts – 14 mm



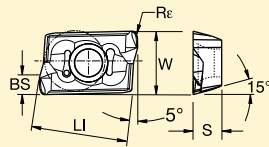
End Mills – Inch												
D1	Order number	Catalog number	Number of inserts	D	L	L2	Max. RPM	AP1		Insert Screw	Torx Wrench	Torque (in./lbs.)
Inch												
1.26	1817940	KISR126SE44345M	2	1.25	3.86	1.57	28000	.26	1.30	MS2078	TTP15	35
1.58	1817941	KISR157SE44345M	3	1.25	3.86	1.57	26000	.26	1.40	MS2078	TTP15	35
1.97	1817942	KISR197SE44345M	4	1.25	3.86	1.57	22500	.26	1.66	MS2078	TTP15	35
2.48	1817953	KISR248SE44345M	5	1.25	3.86	1.57	20200	.26	2.07	MS2078	TTP15	35
End Mills – Metric												(Nm)
Metric												
32	1926907	32D2R049B32SSE14G	2	32	110	49	28000	6,6	1.40	MS2078	TTP15	4
40	1926943	40D3R049B32SSE14G	3	32	110	49	26000	6,6	1.50	MS2078	TTP15	4

Spares – for Shell Mills

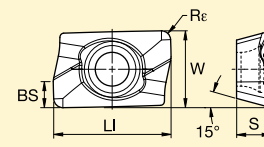
D1								
	Insert Screw	Torx Wrench	Torque (in./lbs.)	Shim	Shim Screw	Hex Wrench	Torque (in./lbs.)	Mounting Screw
Inch								
1.97	MS2078	TTP15	35	—	—	—	—	S2043
2.48	MS2078	TTP15	35	—	—	—	—	S2044
3.15	MS2078	TTP15	35	SM455	SRS3	THW35M	40	—
3.94	MS2078	TTP15	35	SM455	SRS3	THW35M	40	—
4.92	MS2078	TTP15	35	SM455	SRS3	THW35M	40	—
6.30	MS2078	TTP15	35	SM455	SRS3	THW35M	40	—
7.87	MS2078	TTP15	35	SM455	SRS3	THW35M	40	—
			(Nm)				(Nm)	
Metric								
40	MS2078	TTP15	4	—	—	—	—	MS2040
50	MS2078	TTP15	4	—	—	—	—	—
63	MS2078	TTP15	4	—	—	—	—	—
80	MS2078	TTP15	4	SM455	SRS3	THW35M	415	—
100	MS2078	TTP15	4	SM455	SRS3	THW35M	415	—
125	MS2078	TTP15	4	SM455	SRS3	THW35M	415	—
160	MS2078	TTP15	4	SM455	SRS3	THW35M	415	—

Order example:
Catalog number: KISR126SE44345M
Order number: 1817940

-GB



-LD



Order number	ANSI Insert Catalog number	ISO Insert Catalog number	W		LI		S		BS		Re		KUC30M
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
-GB													
2619612	ADKT2328PDER5GB	ADKT1545PDERGB	.394	10,00	.591	15,00	.177	4,50	.073	1,85	1/32	0,80	●
2619613	ADKT2328PD5SR5GB	ADKT1545PD5SRGB	.394	10,00	.591	15,00	.177	4,50	.073	1,85	1/32	0,80	●
-LD													
2619614	ADCT2328PDER5LD	ADCT1545PDERLC	.394	10,00	.591	15,00	.177	4,50	.072	1,84	1/16	1,60	●

NGE-B – Inch				NGE-B – Metric			
Insert Catalog number	Material Group	Surface speed (ft./min.)		Insert Catalog number	Material Group	Surface speed (m/min.)	
		Grade	IPT			Grade	f _z
ADKT..E.GB	Steel (P)	300 - 750	.005 - .010	ADKT..E.GB	Steel (P)	100 - 250	0,12 - 0,25
ADKT..S.GB		300 - 750	.005 - .012	ADKT..S.GB		100 - 250	0,12 - 0,30
ADCT..E.LD		300 - 750	.003 - .006	ADCT..E.LD		100 - 250	0,07 - 0,15
ADKT..E.GB	Stainless Steel (M)	225 - 650	.005 - .010	ADKT..E.GB	Stainless Steel (M)	80 - 200	0,12 - 0,25
ADKT..S.GB		225 - 650	.005 - .012	ADKT..S.GB		80 - 200	0,12 - 0,30
ADCT..E.LD		225 - 650	.003 - .006	ADCT..E.LD		80 - 200	0,07 - 0,15
ADKT..E.GB	High-Temp Alloys (S)	80 - 140	.005 - .010	ADKT..E.GB	High-Temp Alloys (S)	25 - 45	0,12 - 0,25
ADCT..E.LD		80 - 140	.003 - .006	ADCT..E.LD		25 - 45	0,07 - 0,15

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

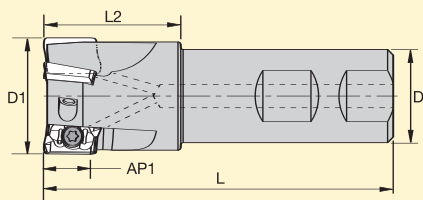
Order example:
Catalog number: **ADKT2328PDER5GB**
Grade: **KUC30M**

NGE-B 0° Lead Angle End Mills

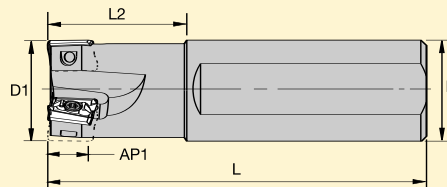


Insert Size ADKT 1545

End Mills with Coolant – Weldon Shank



End Mills – Extended Length



End Mills with Coolant – Weldon Shank – Inch

D1	Order number	Catalog number	Number of inserts	D	L	L2	Max. RPM	AP1	lbs.	Insert Screw	Torx Wrench	Torque (in./lbs.)
Inch												
.750	1894634	KISR075AD23203	1	.750	3.380	1.340	31500	.500	.30	MS1168	KT15	35
1.000	1894635	KISR100AD23204	2	1.000	3.500	1.220	27250	.500	.60	MS1184	KT15	35
1.250	1894636	KISR125AD23204	3	1.000	3.750	1.470	24400	.500	.80	MS1184	KT15	35
1.500	1894637	KISR150AD23205	4	1.250	4.030	1.750	22250	.500	1.00	MS1184	KT15	35

End Mills with Coolant – Weldon Shank – Metric

D1	Order number	Catalog number	Number of inserts	D	L	L2	Max. RPM	AP1	kg			(Nm)
Metric												
25	1758316	25A2R043B25SAD15	2	25	100	43	27500	12,7	0.29	MS1168	KT15	4
32	1758317	32A3R049B32SAD15	3	32	110	49	24300	12,7	0.57	MS1184	KT15	4
40	1758318	40A4R049B32SAD15	4	32	110	49	21800	12,7	0.63	MS1184	KT15	4

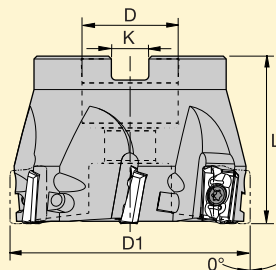
End Mills – Extended Length

D1	Order number	Catalog number	Number of inserts	D	L	L2	Max. RPM	AP1	lbs.			(in./lbs.)
Inch												
.750	1592598	KIEX6R075AD23203	1	.750	6.000	1.570	31500	.500	.68	MS1168	DT15	35
1.000	1592604	KIEX78R100AD23204	2	1.000	7.850	1.720	27250	.500	1.61	MS1184	DT15	35
1.250	1592605	KIEX10R125AD23205	3	1.250	10.000	1.720	24400	.500	3.30	MS1184	DT15	35
1.500	1592606	KIEX10R150AD23206	4	1.500	10.000	1.720	22250	.500	4.60	MS1184	DT15	35

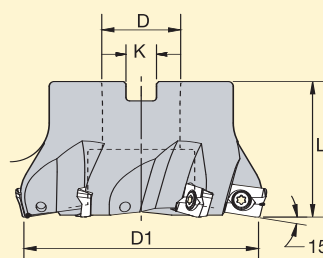
NGE-B 0°/90° and 15°/75° Face Mills

Insert Size ADKT 1545

0°/90°



15°/75°



Shell Mills – 90° – Inch

D1	Order number	Catalog number	Number of inserts	D	L	K	Max. RPM	lbs.	Insert Screw
Inch									
2.00	1592607	KSSR200AD23203	5	.75	1.75	5/16	19300	.70	MS1184
2.50	1592608	KSSR250AD23204	6	1.00	1.75	3/8	17250	1.23	MS1184
3.00	1592609	KSSR300AD23204	7	1.00	1.75	3/8	15750	1.80	MS1184
4.00	1592611	KSSR400AD23206	8	1.50	2.00	5/8	13650	3.40	MS1184

Shell Mills – 90° – Metric

D1	Order number	Catalog number	Number of inserts	D	L	K	Max. RPM	kg	
Metric									
100	1758354	100B08RS90AD15D	8	32	32	12,7	13800	1.20	MS1273

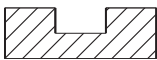
Shell Mills – 15° – Inch

D1	Order number	Catalog number	Number of inserts	D	L	K	Max. RPM	lbs.	
Inch									
3.00	1592616	KSSR300AD232154	6	1.00	1.75	.39	15750	1.70	MS1184
4.00	1592617	KSSR400AD232156	7	1.50	1.75	.64	13650	2.90	MS1184



Cutting Material	Coating	Composition and Application
K600 	uncoated carbide	Carbide grade made from high quality, micrograin materials for cutting all types of material. Extreme toughness guarantees a controlled wear rate. The micrograin structure permits extremely sharp cutting edges.
KC610M 	TiN TiCN TiN	Coated carbide grade with PVD multilayer coating (TiN/TiCN/TiN). An excellent grade for milling steel, stainless steel, and nodular graphite iron. Because of the resistance to thermal shocks of its substrate, this grade is an excellent choice for wet as well as dry machining.
KC625M 	TiC(N) TiCN TiN	Coated carbide grade with a PVD multilayer coat [TiN/TiCN/TiC(N)]. KC625M is a high performance grade for milling all types of material. Good hardness and wear resistance characterizes this grade. It provides outstanding protection for solid carbide tools against cratering and abrasion. This grade is ideally used with cooling or minimal lubrication.
KC633M 	TiAlN TiN TiAlN	Coated carbide grade with a PVD multilayer coating (TiAlN, TiN, TiAlN). KC633M is a high performance grade for dry milling of all material types. This grade is extremely hard and wear resistant. It provides outstanding protection for solid carbide tools against cratering and abrasion.
KC635M 	TiAlN	PVD TiAlN coated carbide on a deformation resistant substrate. Exceptional heat and wear resistance qualities make this grade an excellent choice for milling aluminum, cast iron, heat resistant alloys, steels, and stainless steels in finishing applications.
KC637M 	TiAlN	PVD TiAlN coated carbide on a "new" sub-micron carbide substrate. It's a very thin and hard coating that provides outstanding performance in milling hardened materials (50-65 HRC).

Application Icons



Slotting



Peripheral / Profile Milling



Contour Milling

Fine Finishing ($a_e / woc < .2X$ diameter)Finishing ($.2X$ diameter $< a_e / woc < .5X$ diameter)Roughing ($a_e / woc > .5X$ diameter)

Selection Guide

FACE MILLS

INDEXABLE END MILLS

SOLID CARBIDE END MILLS
MILLING PRODUCTS

End Mill Style — Inch	General-Purpose Carbide					
	HEC	CRHEC	HHEC	DHEC	BNEC	DBNEC
catalog page	C18-C19	C28	C27	C29	C32	C34
diameter range	1/64" - 1"	1/8" - 1"	1/8" - 1"	1/32" - 1/2"	1/64" - 1"	1/32" - 1/2"
center cutting	Y	Y	Y	Y	Y	Y
grade designation...see page C13	K600 KC610M KC635M	KC610M KC635M	K605 KC615 KC635M	K600 KC610M KC635M	K600 KC610M KC635M	KC610M
no. of flutes	2, 3, & 4	4	3	2 & 4	2, 3, & 4	4
length of cut	stub standard extended	standard	standard	stub	standard extended	stub
helix angle	30°	30°	60°	30°	30°	30°
special features		corner radius				

End Mill Style — Metric	F..DK45 F..DK30 F..DL45 F..DL30 F..DN30				F...DL30 F...DN30	
catalog page	C16-C17 C20-C23				C33	
diameter range	2.5-20 mm				2-25 mm	
center cutting	Y				Y	
grade designation...see page C13	KC633M				KC633M	
no. of flutes	2, 3 & 4				2 & 4	
length of cut	DIN 6527 short and long DIN 6528				DIN 6527 long DIN 6528	
helix angle	30° & 45°				30°	
special features						



P	Steels (<286 HB) <35 HRC	●	●		●	●	●
	Steels (>286 HB) 35 to 45 HRC	●	●		●	●	●
M	Stainless Steel	●	●	●	●	●	●
K	Cast Iron	●	●		●	●	●
N	Non-Ferrous and Non-Metals	●	●		●	●	●
S	High-Temp Alloys	●	●	●	●	●	●
H	Hardened Materials						

● First Choice

● Alternate Choice

Blank = Not Recommended



End Mill Style — Inch	General-Purpose Carbide						
	MDRHEC	SFRHEC					
catalog page	C24	C24					
diameter range	1/4" - 1"	1/4" - 1"					
center cutting	Y	Y					
grade designation...see page C13	KC610M KC625M	KC625M					
no. of flutes	3, 4, & 5	3					
length of cut	standard	standard					
helix angle	40° & 30°	40°					
special features	coarse pitch rougher	coarse pitch rougher					
Special Applications							
End Mill Style — Metric	F...BW..20 F...BW..20C	F3BA..BW.30 F3BA..BW.30C	F.B..BDL30.. F.B..BDL45...	F2AA..DL45	F.AV..DL45	F3AS..BDK35	F3BS..BDK35 F3BS..BDL35
catalog page	C25	C25	C26	C31	C30	C31	C31
diameter range	6-25 mm	6-25 mm	6-25 mm	3-20 mm	6-25 mm	3-20 mm	3-20 mm
center cutting	Y	Y	Y	Y	Y	Y	Y
grade designation...see page C13	KC633M	K600	KC633M	K600	KC637M	KC633M	KC633M
no. of flutes	3, 4 & 5	3	3, 4 & 6	2	6 & 8	3	3
length of cut	factory standard	factory standard	DIN 6527 long	DIN 6527 long	DIN 6527 long	DIN 6527 short	DIN 6527 short and long
helix angle	20°	30° & 45°	30° & 45°	45°	45°	35°	35°
special features	with or without coolant	with or without coolant	Semi-Finishing	Aluminum	Hard Milling	Stainless Steel	Semi-Finishing Stainless Steel
							
P Steels (<286 HB) <35 HRC	●		●			●	●
Steels (>286 HB) 35 to 45 HRC	●		●			●	●
M Stainless Steel	●	●	●			●	●
K Cast Iron	●		●				
N Non-Ferrous and Non-Metals		●		●		●	●
S High-Temp Alloys	● (inch only)	●	●	●		●	●
H Hardened Materials					●		

● First Choice

● Alternate Choice

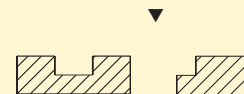
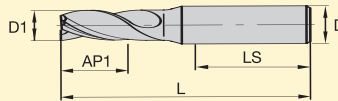
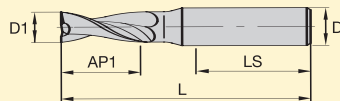
Blank = Not Recommended

KENNA UNIVERSAL Solid Carbide End Mills – Metric



Single End, Short Length — 2 and 3 Flutes (30° & 45° Helix)

DIN 6527 Short



A = cylindrical shank, no flats
B = Weldon shank

D1		2 Flutes, 30° Helix Catalog number A Shank/B Shank	Grade KC633M		3 Flutes, 30° Helix Catalog number A Shank/B Shank	Grade KC633M		3 Flutes, 45° Helix Catalog number A Shank/B Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B		A	B		A	B				
.079	2,00	F2AH0200 A/B DK30	●	●	F3AH0200 A/B DK30	●	●	F3AH0200 A/B DK45	●	●	3	6	50	36
.098	2,50	F2AH0250 A/B DK30	●	●	F3AH0250 A/B DK30	●	●	F3AH0250 A/B DK45	●	●	3	6	50	36
.110	2,80				F3AH0280 A/B DK30	●	●				3	6	50	36
.118	3,00	F2AH0300 A/B DK30	●	●	F3AH0300 A/B DK30	●	●	F3AH0300 A/B DK45	●	●	4	6	50	36
.138	3,50	F2AH0350 A/B DK30	●	●	F3AH0350 A/B DK30	●	●	F3AH0350 A/B DK45	●	●	4	6	50	36
.150	3,80				F3AH0380 A/B DK30	●	●				4	6	50	36
.158	4,00	F2AH0400 A/B DK30	●	●	F3AH0400 A/B DK30	●	●	F3AH0400 A/B DK45	●	●	5	6	54	36
.177	4,50	F2AH0450 A/B DK30	●	●	F3AH0450 A/B DK30	●	●	F3AH0450 A/B DK45	●	●	5	6	54	36
.189	4,80				F3AH0480 A/B DK30	●	●				5	6	54	36
.197	5,00	F2AH0500 A/B DK30	●	●	F3AH0500 A/B DK30	●	●	F3AH0500 A/B DK45	●	●	6	6	54	36
.217	5,50	F2AH0550 A/B DK30	●	●	F3AH0550 A/B DK30	●	●				7	6	54	36
.226	5,75				F3AH0575 A/B DK30	●	●				7	6	54	36
.236	6,00	F2AH0600 A/B DK30	●	●	F3AH0600 A/B DK30	●	●	F3AH0600 A/B DK45	●	●	7	6	54	36
.256	6,50	F2AH0650 A/B DK30	●	●	F3AH0650 A/B DK30	●	●				8	8	58	36
.266	6,75				F3AH0675 A/B DK30	●	●				8	8	58	36
.276	7,00	F2AH0700 A/B DK30	●	●	F3AH0700 A/B DK30	●	●	F3AH0700 A/B DK45	●	●	8	8	58	36
.295	7,50	F2AH0750 A/B DK30	●	●	F3AH0750 A/B DK30	●	●				9	8	58	36
.305	7,75				F3AH0775 A/B DK30	●	●				9	8	58	36
.315	8,00	F2AH0800 A/B DK30	●	●	F3AH0800 A/B DK30	●	●	F3AH0800 A/B DK45	●	●	9	8	58	40
.335	8,50	F2AH0850 A/B DK30	●	●	F3AH0850 A/B DK30	●	●				10	10	66	40
.343	8,70				F3AH0870 A/B DK30	●	●				10	10	66	40
.354	9,00	F2AH0900 A/B DK30	●	●	F3AH0900 A/B DK30	●	●	F3AH0900 A/B DK45	●	●	10	10	66	40
.374	9,50	F2AH0950 A/B DK30	●	●	F3AH0950 A/B DK30	●	●				11	10	66	40
.382	9,70				F3AH0970 A/B DK30	●	●				11	10	66	40
.394	10,00	F2AH1000 A/B DK30	●	●	F3AH1000 A/B DK30	●	●	F3AH1000 A/B DK45	●	●	11	10	66	45
.433	11,00	F2AH1100 A/B DK30	●	●	F3AH1100 A/B DK30	●	●				12	12	73	45
.461	11,70				F3AH1170 A/B DK30	●	●				12	12	73	45
.472	12,00	F2AH1200 A/B DK30	●	●	F3AH1200 A/B DK30	●	●	F3AH1200 A/B DK45	●	●	12	12	73	45
.512	13,00	F2AH1300 A/B DK30	●	●	F3AH1300 A/B DK30	●	●				14	14	75	45
.539	13,70				F3AH1370 A/B DK30	●	●				14	14	75	45
.551	14,00	F2AH1400 A/B DK30	●	●	F3AH1400 A/B DK30	●	●	F3AH1400 A/B DK45	●	●	14	14	75	48
.591	15,00	F2AH1500 A/B DK30	●	●	F3AH1500 A/B DK30	●	●				16	16	82	48
.618	15,70				F3AH1570 A/B DK30	●	●				16	16	82	48
.630	16,00	F2AH1600 A/B DK30	●	●	F3AH1600 A/B DK30	●	●	F3AH1600 A/B DK45	●	●	16	16	82	48
.709	18,00	F2AH1800 A/B DK30	●	●	F3AH1800 A/B DK30	●	●	F3AH1800 A/B DK45	●	●	18	18	84	50
.787	20,00	F2AH2000 A/B DK30	●	●	F3AH2000 A/B DK30	●	●	F3AH2000 A/B DK45	●	●	20	20	92	50

Order example:

A Shank: F2AH0200ADK30
Grade: KC633M

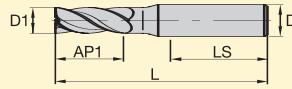
B Shank: F2AH0200BDK30
Grade: KC633M



KENNA UNIVERSAL Solid Carbide End Mills – Metric

Single End, Short Length — 4 Flutes (30° Helix)

DIN 6527 Short



A = cylindrical shank, no flats
B = Weldon shank

D1		4 Flutes, 30° Helix Catalog number A Shank/B Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B				
.079	2,00	F4AJ0200 A/B DK30	●	●	4	6	50	36
.098	2,50	F4AJ0250 A/B DK30	●	●	4	6	50	36
.118	3,00	F4AJ0300 A/B DK30	●	●	5	6	50	36
.138	3,50	F4AJ0350 A/B DK30	●	●	6	6	50	36
.158	4,00	F4AJ0400 A/B DK30	●	●	8	6	54	36
.177	4,50	F4AJ0450 A/B DK30	●	●	8	6	54	36
.197	5,00	F4AJ0500 A/B DK30	●	●	9	6	54	36
.217	5,50	F4AJ0550 A/B DK30	●	●	10	6	54	36
.236	6,00	F4AJ0600 A/B DK30	●	●	10	6	54	36
.256	6,50	F4AJ0650 A/B DK30	●	●	11	8	58	36
.276	7,00	F4AJ0700 A/B DK30	●	●	11	8	58	36
.295	7,50	F4AJ0750 A/B DK30	●	●	12	8	58	36
.315	8,00	F4AJ0800 A/B DK30	●	●	12	8	58	36
.335	8,50	F4AJ0850 A/B DK30	●	●	13	10	66	40
.354	9,00	F4AJ0900 A/B DK30	●	●	13	10	66	40
.374	9,50	F4AJ0950 A/B DK30	●	●	14	10	66	40
.394	10,00	F4AJ1000 A/B DK30	●	●	14	10	66	40
.433	11,00	F4AJ1100 A/B DK30	●	●	16	12	73	45
.472	12,00	F4AJ1200 A/B DK30	●	●	16	12	73	45
.512	13,00	F4AJ1300 A/B DK30	●	●	18	14	75	45
.551	14,00	F4AJ1400 A/B DK30	●	●	18	14	75	45
.591	15,00	F4AJ1500 A/B DK30	●	●	22	16	82	48
.630	16,00	F4AJ1600 A/B DK30	●	●	22	16	82	48
.709	18,00	F4AJ1800 A/B DK30	●	●	24	18	84	48
.787	20,00	F4AJ2000 A/B DK30	●	●	26	20	92	50

To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

Order example:
A Shank: F4AJ0200ADK30
Grade: KC633M

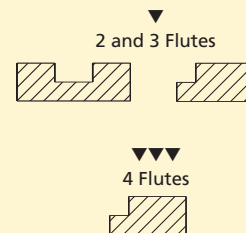
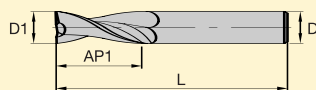
B Shank: F4AJ0200BDK30
Grade: KC633M

KENNA UNIVERSAL Solid Carbide End Mills – Inch



Single End — 2, 3, and 4 Flutes (30° Helix)

Square End/30° Right-Hand Spiral/Right-Hand Cutting/Center Cutting HEC



D1			2 Flutes, 30° Helix Catalog number	Grades			3 Flutes, 30° Helix Catalog number	Grades		4 Flutes, 30° Helix Catalog number	Grades			AP1	D	L
Inch	Fraction	Metric		K600	KC610M	KC635M		K600	KC610M		K600	KC610M	KC635M			
.016	1/64	0,396	HEC016S2	●	●	●				HEC016S4	●	●	●	1/32	1/8	1 1/2
.031	1/32	0,795	HEC031S2	●	●	●				HEC031S4	●	●	●	5/64	1/8	1 1/2
.047	3/64	1,191	HEC047S2	●	●	●				HEC047S4	●	●	●	1/8	1/8	1 1/2
.063	1/16	1,588	HEC062S2013	●	●	●	HEC062S3	●	●	HEC062S4013	●	●	●	1/8	1/8	1 1/2
.063	1/16	1,588	HEC062S2	●	●	●				HEC062S4	●	●	●	3/16	1/8	1 1/2
.078	5/64	1,984	HEC078S2	●	●	●				HEC078S4	●	●	●	3/16	1/8	1 1/2
.094	3/32	2,383	HEC094S2018	●	●	●	HEC094S3	●	●	HEC094S4018	●	●	●	3/16	1/8	1 1/2
.094	3/32	2,383	HEC094S2	●	●	●				HEC094S4	●	●	●	3/8	1/8	1 1/2
.094	3/32	2,383	HEC094S2063	●	●	●				HEC094S4063	●	●	●	5/8	1/8	2
.109	7/64	2,779	HEC109S2	●	●	●	HEC125S3	●	●	HEC109S4	●	●	●	3/8	1/8	1 1/2
.125	1/8	3,175	HEC125S2025	●	●	●				HEC125S4025	●	●	●	1/4	1/8	1 1/2
.125	1/8	3,175	HEC125S2	●	●	●				HEC125S4	●	●	●	1/2	1/8	1 1/2
.125	1/8	3,175	HEC125S2075	●	●	●	HEC156S3	●	●	HEC125S4075	●	●	●	3/4	1/8	2 1/4
.125	1/8	3,175	HEC125S2100	●	●	●				HEC125S4100	●	●	●	1	1/8	3
.141	9/64	3,571	HEC141S2	●	●	●				HEC141S4	●	●	●	9/16	3/16	2
.156	5/32	3,970	HEC156S2031	●	●	●	HEC156S3	●	●	HEC156S4031	●	●	●	5/16	3/16	2
.156	5/32	3,970	HEC156S2	●	●	●				HEC156S4	●	●	●	9/16	3/16	2
.172	11/64	4,366	HEC172S2	●	●	●				HEC172S4	●	●	●	5/8	3/16	2
.188	3/16	4,763	HEC188S2031	●	●	●	HEC188S3	●	●	HEC188S4031	●	●	●	5/16	3/16	1 1/2
.188	3/16	4,763	HEC188S2	●	●	●				HEC188S4	●	●	●	5/8	3/16	2
.188	3/16	4,763	HEC188S2075	●	●	●				HEC188S4075	●	●	●	3/4	3/16	2 1/2
.188	3/16	4,763	HEC188S2113	●	●	●	HEC203S3	●	●	HEC188S4113	●	●	●	1 1/8	3/16	3
.203	13/64	5,159	HEC203S2	●	●	●				HEC203S4	●	●	●	5/8	1/4	2 1/2
.219	7/32	5,558	HEC219S2044	●	●	●				HEC219S4044	●	●	●	7/16	1/4	2
.219	7/32	5,558	HEC219S2	●	●	●	HEC219S3	●	●	HEC219S4	●	●	●	5/8	1/4	2 1/2
.234	15/64	5,954	HEC234S2	●	●	●				HEC234S4	●	●	●	3/4	1/4	2 1/2
.250	1/4	6,350	HEC250S2050	●	●	●				HEC250S4050	●	●	●	1/2	1/4	2
.250	1/4	6,350	HEC250S2	●	●	●	HEC250S3	●	●	HEC250S4	●	●	●	3/4	1/4	2 1/2
.250	1/4	6,350	HEC250S2113	●	●	●				HEC250S4113	●	●	●	1 1/8	1/4	3
.250	1/4	6,350	HEC250S2150	●	●	●				HEC250S4150	●	●	●	1 1/2	1/4	4
.250	1/4	6,350					HEC281S3	●	●	HEC250S4150L	●	●	●	1 1/2	1/4	6
.266	17/64	6,746	HEC266S2	●	●	●				HEC266S4	●	●	●	3/4	5/16	2 1/2
.281	9/32	7,145	HEC281S2	●	●	●				HEC281S4	●	●	●	3/4	5/16	2 1/2
.297	19/64	7,541	HEC297S2	●	●	●	HEC312S3	●	●	HEC297S4	●	●	●	13/16	5/16	2 1/2
.313	5/16	7,938	HEC312S2050	●	●	●				HEC312S4050	●	●	●	1/2	5/16	2
.313	5/16	7,938	HEC312S2	●	●	●				HEC312S4	●	●	●	13/16	5/16	2 1/2
.313	5/16	7,938	HEC312S2113	●	●	●	HEC344S3	●	●	HEC312S4113	●	●	●	1 1/8	5/16	3
.313	5/16	7,938	HEC312S2163	●	●	●				HEC312S4163	●	●	●	1 5/8	5/16	4
.328	21/64	8,334	HEC328S2	●	●	●				HEC328S4	●	●	●	1	3/8	2 1/2
.344	11/32	8,733	HEC344S2	●	●	●	HEC375S3088	●	●	HEC344S4	●	●	●	1	3/8	2 1/2
.359	23/64	9,129	HEC360S2	●	●	●				HEC360S4	●	●	●	1	3/8	2 1/2
.375	3/8	9,525	HEC375S2063	●	●	●				HEC375S4063	●	●	●	5/8	3/8	2
.375	3/8	9,525	HEC375S2088	●	●	●	HEC375S3113	●	●	HEC375S4088	●	●	●	7/8	3/8	2 1/2
.375	3/8	9,525	HEC375S2113	●	●	●				HEC375S4113	●	●	●	1 1/8	3/8	3
.375	3/8	9,525	HEC375S2175	●	●	●				HEC375S4175	●	●	●	1 3/4	3/8	4
.375	3/8	9,525					HEC406S3	●	●	HEC375S4150L	●	●	●	1 1/2	3/8	6
.391	25/64	9,921	HEC391S2100	●	●	●				HEC391S4100	●	●	●	1	7/16	2 3/4
.406	13/32	10,320	HEC406S2100	●	●	●				HEC406S4100	●	●	●	1	7/16	2 3/4
.422	27/64	10,716	HEC422S2100	●	●	●	HEC438S3	●	●	HEC422S4100	●	●	●	1	7/16	2 3/4
.438	7/16	11,113	HEC438S2063	●	●	●				HEC438S4063	●	●	●	5/8	7/16	2 1/2
.438	7/16	11,113	HEC438S2	●	●	●								1	7/16	2 1/2

Continued on next page.

Order example:
Catalog number: HEC016S2
Grade: K600

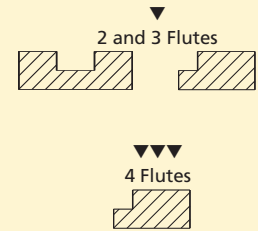
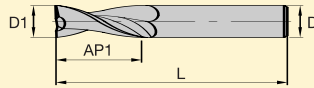


KENNA UNIVERSAL Solid Carbide End Mills – Inch

Single End — 2, 3, and 4 Flutes (30° Helix) (continued)

Square End/30° Right-Hand Spiral/Right-Hand Cutting/Center Cutting

HEC



Continued from page C18.

D1			2 Flutes, 30° Helix Catalog number	Grades			3 Flutes, 30° Helix Catalog number	Grades		4 Flutes, 30° Helix Catalog number	Grades			AP1	D	L
Inch	Fraction	Metric		K600	KC610M	KC635M		K600	KC610M		K600	KC610M	KC635M			
.438	7/16	11,113								HEC438S4100				1	7/16	2 3/4
.438	7/16	11,113	HEC438S2200							HEC438S4200				2	7/16	4
.469	15/32	11,908	HEC469S2				HEC469S3			HEC469S4				1	1/2	3
.484	31/64	12,304	HEC484S2							HEC484S4				1	1/2	3
.500	1/2	12,700	HEC500S2063							HEC500S4063				5/8	1/2	2 1/2
.500	1/2	12,700	HEC500S2				HEC500S3			HEC500S4				1	1/2	3
.500	1/2	12,700	HEC500S2200				HEC500S3200			HEC500S4200				2	1/2	4
.500	1/2	12,700	HEC500S2300							HEC500S4300				3	1/2	6
.563	9/16	14,288	HEC562S2075							HEC562S4075				3/4	9/16	3
.563	9/16	14,288	HEC562S2125							HEC562S4125				1 1/4	9/16	3 1/2
.563	9/16	14,288	HEC562S2225							HEC562S4225				2 1/4	9/16	5
.625	5/8	15,875	HEC625S2075							HEC625S4075				3/4	5/8	3
.625	5/8	15,875	HEC625S2				HEC625S3			HEC625S4				1 1/4	5/8	3 1/2
.625	5/8	15,875	HEC625S2225							HEC625S4225				2 1/4	5/8	5
.625	5/8	15,875	HEC625S2400							HEC625S4400				4	5/8	7
.688	11/16	17,463	HEC688S2							HEC688S4				1 3/8	3/4	4
.750	3/4	19,050	HEC750S2100							HEC750S4100				1	3/4	3
.750	3/4	19,050	HEC750S2				HEC750S3			HEC750S4				1 1/2	3/4	4
.750	3/4	19,050	HEC750S2225				HEC750S3225			HEC750S4225				2 1/4	3/4	5
.750	3/4	19,050	HEC750S2300							HEC750S4300				3	3/4	6
.750	3/4	19,050	HEC750S2400							HEC750S4400				4	3/4	7
.875	7/8	22,225	HEC875S2							HEC875S4				1 1/2	7/8	4
.875	7/8	22,225	HEC875S2225							HEC875S4225				2 1/4	7/8	5
1.000	1	25,400	HEC100S2				HEC100S3			HEC100S4				1 1/2	1	4
1.000	1	25,400	HEC100S2225				HEC100S3225			HEC100S4225				2 1/4	1	5
1.000	1	25,400	HEC100S2300							HEC100S4300				3	1	6
1.000	1	25,400	HEC100S2400							HEC100S4400				4	1	7
1.125	1 1/8	28,575	HEC1125S2200							HEC1125S4200				2	1	4 1/2
1.250	1 1/4	31,750	HEC1250S2200							HEC1250S4200				2	1 1/4	4 1/2

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

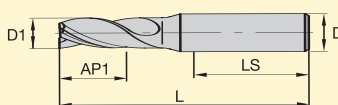
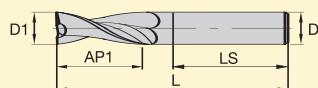
Order example:
Catalog number: HEC500S2063
Grade: K600

KENNA UNIVERSAL Solid Carbide End Mills – Metric



Single End — 2 and 3 Flutes (30° & 45° Helix)

DIN 6527 Long



A = cylindrical shank, no flats
B = Weldon shank

D1		2 Flutes, 30° Helix Catalog number A Shank/B Shank	Grade KC633M		3 Flutes, 30° Helix Catalog number A Shank/B Shank	Grade KC633M		3 Flutes, 45° Helix Catalog number A Shank/B Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B		A	B		A	B				
.098	2,50	F2AH0250 A/B DL30	●	●					●	●	7	6	57	36
.118	3,00	F2AH0300 A/B DL30	●	●				F3AH0300 A/B DL45	●	●	7	6	57	36
.138	3,50							F3AH0350 A/B DL45	●	●	7	6	57	36
.158	4,00	F2AH0400 A/B DL30	●	●	F3AH0400 A/B DL30	●	●	F3AH0400 A/B DL45	●	●	8	6	57	36
.177	4,50	F2AH0450 A/B DL30	●	●	F3AH0450 A/B DL30	●	●	F3AH0450 A/B DL45	●	●	8	6	57	36
.189	4,80				F3AH0480 A/B DL30	●	●				10	6	57	36
.197	5,00	F2AH0500 A/B DL30	●	●	F3AH0500 A/B DL30	●	●	F3AH0500 A/B DL45	●	●	10	6	57	36
.217	5,50	F2AH0550 A/B DL30	●	●	F3AH0550 A/B DL30	●	●				10	6	57	36
.226	5,75				F3AH0575 A/B DL30	●	●				10	6	57	36
.236	6,00	F2AH0600 A/B DL30	●	●	F3AH0600 A/B DL30	●	●	F3AH0600 A/B DL45	●	●	10	6	57	36
.256	6,50				F3AH0650 A/B DL30	●	●				10	6	57	36
.266	6,75				F3AH0675 A/B DL30	●	●				10	6	57	36
.276	7,00	F2AH0700 A/B DL30	●	●	F3AH0700 A/B DL30	●	●	F3AH0700 A/B DL45	●	●	13	8	63	36
.305	7,75				F3AH0775 A/B DL30	●	●				16	8	63	36
.315	8,00	F2AH0800 A/B DL30	●	●	F3AH0800 A/B DL30	●	●	F3AH0800 A/B DL45	●	●	16	8	63	36
.335	8,50				F3AH0850 A/B DL30	●	●				16	10	72	40
.343	8,70				F3AH0870 A/B DL30	●	●				16	10	72	40
.354	9,00	F2AH0900 A/B DL30	●	●	F3AH0900 A/B DL30	●	●	F3AH0900 A/B DL45	●	●	16	10	72	40
.382	9,70				F3AH0970 A/B DL30	●	●				19	10	72	40
.394	10,00	F2AH1000 A/B DL30	●	●	F3AH1000 A/B DL30	●	●	F3AH1000 A/B DL45	●	●	19	10	72	40
.433	11,00	F2AH1100 A/B DL30	●	●	F3AH1100 A/B DL30	●	●				22	12	83	45
.461	11,70				F3AH1170 A/B DL30	●	●				22	12	83	45
.472	12,00	F2AH1200 A/B DL30	●	●	F3AH1200 A/B DL30	●	●	F3AH1200 A/B DL45	●	●	22	12	83	45
.512	13,00				F3AH1300 A/B DL30	●	●				22	14	83	45
.539	13,70				F3AH1370 A/B DL30	●	●				22	14	83	45
.551	14,00	F2AH1400 A/B DL30	●	●	F3AH1400 A/B DL30	●	●	F3AH1400 A/B DL45	●	●	22	14	83	45
.591	15,00	F2AH1500 A/B DL30	●	●	F3AH1500 A/B DL30	●	●				26	16	92	48
.618	15,70				F3AH1570 A/B DL30	●	●				26	16	92	48
.630	16,00	F2AH1600 A/B DL30	●	●	F3AH1600 A/B DL30	●	●	F3AH1600 A/B DL45	●	●	26	16	92	48
.709	18,00	F2AH1800 A/B DL30	●	●	F3AH1800 A/B DL30	●	●	F3AH1800 A/B DL45	●	●	26	18	92	48
.787	20,00	F2AH2000 A/B DL30	●	●	F3AH2000 A/B DL30	●	●	F3AH2000 A/B DL45	●	●	32	20	104	50

To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

Order example:

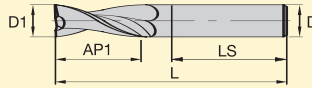
A Shank: F2AH0250ADL30
Grade: KC633M

B Shank: F2AH0250BDL30
Grade: KC633M



DIN 6528

Shank diameter = Cutting diameter



A = cylindrical shank, no flats
B = Weldon shank

D1		2 Flutes, 30° Helix Catalog number A Shank	Grade KC633M		3 Flutes, 30° Helix Catalog number A Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B		A	B				
.158	4,00	F2AH0400ADN30	●		F3AH0400ADN30	●		8	4	50	28
.177	4,50	F2AH0450ADN30	●		F3AH0450ADN30	●		8	4,5	50	28
.197	5,00	F2AH0500ADN30	●		F3AH0500ADN30	●		10	5	50	28
.217	5,50	F2AH0550ADN30	●		F3AH0550ADN30	●		10	5,5	57	36
.236	6,00	F2AH0600ADN30	●		F3AH0600ADN30	●		10	6	57	36
.256	6,50	F2AH0650ADN30	●		F3AH0650ADN30	●		13	6,5	60	36
.276	7,00	F2AH0700ADN30	●		F3AH0700ADN30	●		13	7	60	36
.295	7,50	F2AH0750ADN30	●		F3AH0750ADN30	●		16	7,5	63	36
.315	8,00	F2AH0800ADN30	●		F3AH0800ADN30	●		16	8	63	36
.335	8,50	F2AH0850ADN30	●		F3AH0850ADN30	●		16	8,5	67	36
.354	9,00	F2AH0900ADN30	●		F3AH0900ADN30	●		16	9	67	36
.374	9,50	F2AH0950ADN30	●		F3AH0950ADN30	●		19	9,5	72	40
.394	10,00	F2AH1000ADN30	●		F3AH1000ADN30	●		19	10	72	40
.433	11,00	F2AH1100ADN30	●		F3AH1100ADN30	●		22	11	83	40
.472	12,00	F2AH1200ADN30	●		F3AH1200ADN30	●		22	12	83	45
.512	13,00	F2AH1300ADN30	●		F3AH1300ADN30	●		22	13	83	45
.551	14,00	F2AH1400ADN30	●		F3AH1400ADN30	●		22	14	83	45
.591	15,00	F2AH1500ADN30	●		F3AH1500ADN30	●		26	15	92	45
.630	16,00	F2AH1600ADN30	●		F3AH1600ADN30	●		26	16	92	48
.709	18,00	F2AH1800ADN30	●		F3AH1800ADN30	●		26	18	92	48
.787	20,00	F2AH2000ADN30	●		F3AH2000ADN30	●		32	20	104	50

Kennametal offers a wide variety of
Inch and Metric
solid carbide end mills to meet your application needs!

Order example:
A Shank: **F2AH0400ADN30**
Grade: **KC633M**

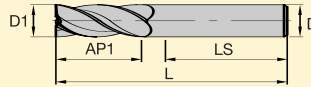
KENNA UNIVERSAL Solid Carbide End Mills – Metric



Single End — 2 and 4 Flutes (30° Helix)

DIN 6528

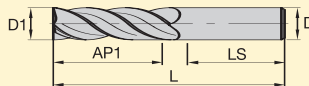
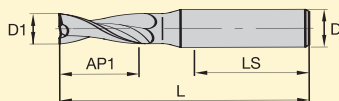
Shank diameter = Cutting diameter



A = cylindrical shank, no flats
B = Weldon shank

D1		4 Flutes, 30° Helix Catalog number A Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B				
.079	2,00	F4AJ0200ADN30	●		8	2	32	20
.098	2,50	F4AJ0250ADN30	●		8	2,5	32	20
.118	3,00	F4AJ0300ADN30	●		12	3	32	15
.138	3,50	F4AJ0350ADN30	●		12	3,5	32	15
.158	4,00	F4AJ0400ADN30	●		11	4	50	28
.177	4,50	F4AJ0450ADN30	●		11	4,5	50	28
.197	5,00	F4AJ0500ADN30	●		13	5	50	28
.217	5,50	F4AJ0550ADN30	●		13	5,5	57	36
.236	6,00	F4AJ0600ADN30	●		13	6	57	36
.256	6,50	F4AJ0650ADN30	●		16	6,5	60	36
.276	7,00	F4AJ0700ADN30	●		16	7	60	36
.295	7,50	F4AJ0750ADN30	●		19	7,5	63	36
.315	8,00	F4AJ0800ADN30	●		19	8	63	36
.335	8,50	F4AJ0850ADN30	●		19	8,5	67	36
.354	9,00	F4AJ0900ADN30	●		19	9	67	36
.374	9,50	F4AJ0950ADN30	●		22	9,5	72	40
.394	10,00	F4AJ1000ADN30	●		22	10	72	40
.433	11,00	F4AJ1100ADN30	●		26	11	83	40
.472	12,00	F4AJ1200ADN30	●		26	12	83	45
.512	13,00	F4AJ1300ADN30	●		26	13	83	45
.551	14,00	F4AJ1400ADN30	●		26	14	83	45
.591	15,00	F4AJ1500ADN30	●		32	15	92	45
.630	16,00	F4AJ1600ADN30	●		32	16	92	48
.709	18,00	F4AJ1800ADN30	●		32	18	92	48
.787	20,00	F4AJ2000ADN30	●		38	20	104	50

Extra-Long, Factory Standard



A = cylindrical shank, no flats
B = Weldon shank

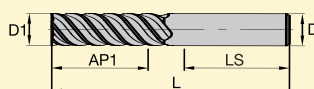
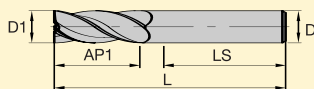
D1		2 Flutes, 30° Helix Catalog number A Shank	Grade KC625M		4 Flutes, 30° Helix Catalog number A Shank	Grade KC625M		AP1	D	L	LS
Inch	Metric		A	B		A	B				
.118	3,00	F2AH0300AWM30	●		F4AJ0300AWM30	●		20	3	75	28
.158	4,00	F2AH0400AWM30	●		F4AJ0400AWM30	●		25	4	75	28
.197	5,00	F2AH0500AWM30	●		F4AJ0500AWM30	●		30	5	75	28
.236	6,00	F2AH0600AWM30	●		F4AJ0600AWM30	●		30	6	75	36
.315	8,00	F2AH0800AWL30	●		F4AJ0800AWL30	●		40	8	100	36
.394	10,00	F2AH1000AWL30	●		F4AJ1000AWL30	●		40	10	100	40
.472	12,00	F2AH1200AWX30	●		F4AJ1200AWX30	●		45	12	150	45
.551	14,00	F2AH1400AWX30	●		F4AJ1400AWX30	●		45	14	150	45
.630	16,00	F2AH1600AWX30	●		F4AJ1600AWX30	●		65	16	150	48
.709	18,00	F2AH1800AWX30	●		F4AJ1800AWX30	●		65	18	150	48
.787	20,00	F2AH2000AWX30	●		F4AJ2000AWX30	●		65	20	150	50



KENNA UNIVERSAL Solid Carbide End Mills – Metric

Single End — 4, 6, and 8 Flutes (30° Helix)

DIN 6527 Long



A = cylindrical shank, no flats
B = Weldon shank

D1		4 Flutes, 30° Helix Catalog number A shank	Grade KC633M		6 Flutes, 30° Helix Catalog number A shank	Grade KC633M		8 Flutes, 30° Helix Catalog number A shank	Grade KC633M		AP1	D	L	LS
			A	B		A	B		A	B				
.158	4,00	F4AJ0400ADL30	●			●			●		11	6	57	36
.177	4,50	F4AJ0450ADL30	●			●			●		11	6	57	36
.197	5,00	F4AJ0500ADL30	●			●			●		13	6	57	36
.236	6,00	F4AJ0600ADL30	●		F6AJ0600ADL30	●			●		13	6	57	36
.276	7,00	F4AJ0700ADL30	●			●			●		16	8	63	36
.315	8,00	F4AJ0800ADL30	●		F6AJ0800ADL30	●			●		19	8	63	36
.354	9,00	F4AJ0900ADL30	●			●			●		19	10	72	40
.394	10,00	F4AJ1000ADL30	●		F6AJ1000ADL30	●			●		22	10	72	40
.433	11,00	F4AJ1100ADL30	●			●			●		26	12	83	45
.472	12,00	F4AJ1200ADL30	●		F6AJ1200ADL30	●			●		26	12	83	45
.512	13,00	F4AJ1300ADL30	●			●			●		26	14	83	45
.551	14,00	F4AJ1400ADL30	●		F6AJ1400ADL30	●			●		26	14	83	45
.591	15,00	F4AJ1500ADL30	●			●			●		32	16	92	48
.630	16,00	F4AJ1600ADL30	●		F6AJ1600ADL30	●			●		32	16	92	48
.709	18,00	F4AJ1800ADL30	●					F8AJ1800ADL30	●		32	18	92	48
.787	20,00	F4AJ2000ADL30	●					F8AJ2000ADL30	●		38	20	104	50



To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

Order example:
A Shank: F4AJ0400ADL30
Grade: KC633M

FACE MILLS

INDEXABLE END MILLS

MILLING PRODUCTS
SOLID CARBIDE END MILLS

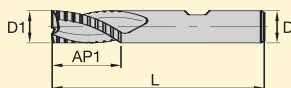
KENNA UNIVERSAL Solid Carbide End Mills – Inch



Single End, Roughing — 3, 4, and 5 Flutes

Roughing/Right-Hand Spiral/Right-Hand Cutting/Sinusoidal Grind/Weldon Flat

For Steel, Stainless Steel, Cast Iron, High-Temp Alloys

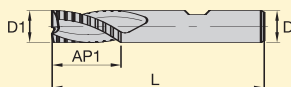


D1			4 Flutes Catalog number	Grade KC633M	5 Flutes Catalog number	Grade KC633M	AP1	D	L
Inch	Fraction	Metric							
.250	1/4	6,350	MDRHEC250S4025	●			1/4	1/4	2
.250	1/4	6,350	MDRHEC250S4075	●			3/4	1/4	2 1/2
.313	5/16	7,938	MDRHEC312S4081	●			13/16	5/16	2 1/2
.375	3/8	9,525	MDRHEC375S4038	●			3/8	3/8	2
.375	3/8	9,525	MDRHEC375S4088	●			7/8	3/8	2 1/2
.500	1/2	14,288	MDRHEC500S4050	●			1/2	1/2	2 1/2
.500	1/2	14,288	MDRHEC500S4100	●			1	1/2	3
.625	5/8	15,875	MDRHEC625S4063	●			5/8	5/8	3
.625	5/8	15,875	MDRHEC625S4125	●			1 1/4	5/8	3 1/2
.750	3/4	19,050	MDRHEC750S4075	●			3/4	3/4	3 1/2
.750	3/4	19,050	MDRHEC750S4150	●			1 1/2	3/4	4
1.000	1	25,400			MDRHEC100S5113	●	1 1/8	1	3 1/2
1.000	1	25,400			MDRHEC100S5150	●	1 1/2	1	4

Roughing/Right-Hand Spiral/Right-Hand Cutting/Sinusoidal Grind/Weldon Flat

SFRHEC

For Aluminum



D1			3 Flutes Catalog number	Grades		AP1	D	L
Inch	Fraction	Metric		K600	KC625M			
.250	1/4	6,350	SFRHEC250S3075	●	●	3/4	1/4	2 1/2
.313	5/16	7,938	SFRHEC312S3075	●	●	3/4	5/16	2 1/2
.375	3/8	9,525	SFRHEC375S3088	●	●	7/8	3/8	2 1/2
.500	1/2	14,288	SFRHEC500S3100	●	●	1	1/2	3
.500	1/2	14,288	SFRHEC500S3200	●	●	2	1/2	4 1/2
.625	5/8	15,875	SFRHEC625S3125	●	●	1 1/4	5/8	3 1/2
.625	5/8	15,875	SFRHEC625S3225	●	●	2 1/4	5/8	5
.750	3/4	19,050	SFRHEC750S3150	●	●	1 1/2	3/4	4
.750	3/4	19,050	SFRHEC750S3225	●	●	2 1/4	3/4	5
1.000	1	25,400	SFRHEC100S3150	●	●	1 1/2	1	4
1.000	1	25,400	SFRHEC100S3225	●	●	2 1/4	1	5

Order example:
Catalog number: MDRHEC250S4025
Grade: KC633M

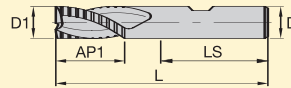


KENNA UNIVERSAL Solid Carbide End Mills – Metric

Single End, Roughing — 3, 4, and 5 Flutes

Factory Standard (20° Helix)

For Steel

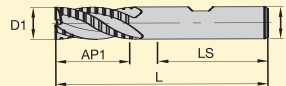


A = cylindrical shank, no flats
B = Weldon shank

D1		With Through Coolant Catalog number B Shank	Grade KC633M		Number of Flutes	Without Through Coolant Catalog number B Shank	Grade KC633M		Number of Flutes	AP1	D	L	LS
Inch	Metric		A	B			A	B					
.236	4,00					F3BH0400BWS20L110		●	3	11	6	55	36
.315	5,00					F3BH0500BWS20L130		●	3	13	6	57	33
.236	6,00					F3BH0600BWS20L080		●	3	8	6	54	41
.236	6,00					F3BH0600BWS20L130		●	3	13	6	57	39
.315	8,00	F3BH0800BWS20C110		●	3	F3BH0800BWS20L110		●	3	11	8	58	40
.315	8,00	F3BH0800BWM20C160		●	3	F3BH0800BWM20L160		●	3	16	8	63	39
.394	10,00	F4BJ1000BWM20C130		●	4	F4BJ1000BWM20L130		●	4	13	10	66	47
.394	10,00	F4BJ1000BWM20C220		●	4	F4BJ1000BWM20L220		●	4	22	10	72	45
.472	12,00	F4BJ1200BWM20C160		●	4	F4BJ1200BWM20L160		●	4	16	12	73	52
.472	12,00	F4BJ1200BWL20C260		●	4	F4BJ1200BWL20L260		●	4	26	12	83	51
.551	14,00					F4BJ1400BWL20L260		●	4	26	14	83	50
.630	16,00	F4BJ1600BWL20C190		●	4	F4BJ1600BWL20L190		●	4	19	16	82	56
.630	16,00	F4BJ1600BWL20C320		●	4	F4BJ1600BWL20L320		●	4	32	16	92	51
.787	20,00	F4BJ2000BWL20C220		●	4	F4BJ2000BWL20L220		●	4	22	20	92	59
.787	20,00	F4BJ2000BWX20C380		●	4	F4BJ2000BWX20L380		●	4	38	20	104	59
.984	25,00					F5BJ2500BWX20L450		●	5	45	25	121	69

3 Flutes, Factory Standard (30° Helix)

For Aluminum



A = cylindrical shank, no flats
B = Weldon shank

D1		3 Flutes, With Through Coolant Catalog number B Shank	Grade K600		3 Flutes, With Through Coolant Catalog number B Shank	Grade K600		AP1	D	L	LS
Inch	Metric		A	B		A	B				
.236	6,00	F3BA0600BWS30C130		●	F3BA0600BWS30		●	13	6	57	39
.315	8,00	F3BA0800BWM30C160		●	F3BA0800BWM30		●	16	8	63	41
.394	10,00	F3BA1000BWM30C220		●	F3BA1000BWM30		●	22	10	72	42
.472	12,00	F3BA1200BWL30C260		●	F3BA1200BWL30		●	26	12	83	47
.630	16,00	F3BA1600BWL30C320		●	F3BA1600BWL30		●	32	16	92	55
.787	20,00	F3BA2000BWX30C380		●	F3BA2000BWX30		●	38	20	104	53
.984	25,00	F3BA2500BWX30C450		●	F3BA2500BWX30		●	45	25	121	60

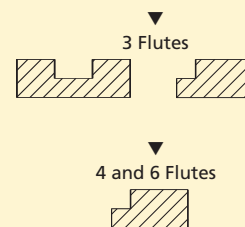
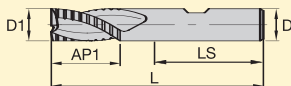
Order example:
B Shank: F3BH0800BWS20C110
Grade: KC633M

KENNA UNIVERSAL Solid Carbide End Mills – Metric



Single End, Semi-Finishing — 3, 4, and 6 Flutes

DIN 6527 Long (30° and 45° Helix)



A = cylindrical shank, no flats
B = Weldon shank

D1		3 Flutes, 30° Helix Catalog number B Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B				
.236	6,00	F3BH0600BDL30		●	10	6	57	36
.315	8,00	F3BH0800BDL30		●	16	8	63	36
.394	10,00	F3BH1000BDL30		●	19	10	72	40
.472	12,00	F3BH1200BDL30		●	22	12	83	45
.630	16,00	F3BH1600BDL30		●	26	16	92	48
.787	20,00	F3BH2000BDL30		●	32	20	104	50
.984	25,00	F3BH2500BDL30		●	45	25	121	56

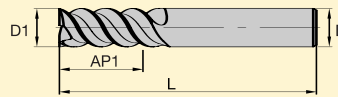
D1		4 Flutes, 30° Helix Catalog number B Shank	Grade KC633M		6 Flutes, 45° Helix Catalog number B Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B		A	B				
.236	6,00	F4BJ0600BDL30		●	F4BJ0600BDL45		●	13	6	57	36
.315	8,00	F4BJ0800BDL30		●	F4BJ0800BDL45		●	19	8	63	36
.394	10,00	F4BJ1000BDL30		●	F4BJ1000BDL45		●	22	10	72	40
.472	12,00	F4BJ1200BDL30		●	F4BJ1200BDL45		●	26	12	83	45
.630	16,00	F4BJ1600BDL30		●	F6BJ1600BDL45		●	32	16	92	48
.787	20,00	F4BJ2000BDL30		●	F6BJ2000BDL45		●	38	20	104	50
.984	25,00				F6BJ2500BDL45		●	45	25	121	56

D1		4 Flutes, 45° Helix Catalog number B Shank	Grade KC633M		6 Flutes, 45° Helix Catalog number B Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B		A	B				
.236	6,00	F4BJ0600BDL45L060		●				6	6	57	36
.315	8,00	F4BJ0800BDL45L080		●				8	8	63	36
.394	10,00	F4BJ1000BDL45L100		●				10	10	72	40
.472	12,00	F4BJ1200BDL45L120		●				12	12	83	45
.630	16,00				F6BJ1600BDL45L160		●	16	16	92	48
.787	20,00				F6BJ2000BDL45L200		●	20	20	104	50
.984	25,00				F6BJ2500BDL45L250		●	25	25	121	56

Order example:
B Shank: F3BH0600BDL30
Grade: KC633M



Right-Hand Spiral/Right-Hand Cutting/Center Cutting HHEC – 60° Helix

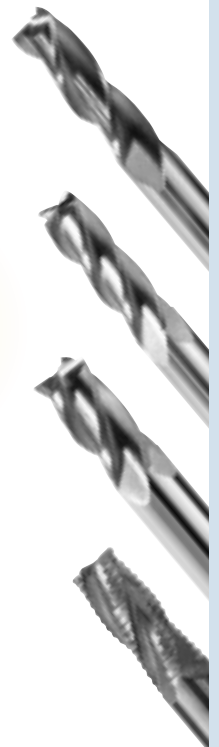


D1			3 Flutes, 60° High Helix Catalog number	Grade KC635M			
Inch	Fraction	Metric			AP1	D	L
.125	1/8	3,175	HHEC125S3	●	1/2	1/4	2 1/2
.188	3/16	4,763	HHEC188S3	●	5/8	1/4	2 1/2
.250	1/4	6,350	HHEC250S3	●	3/4	1/4	2 1/2
.313	5/16	7,938	HHEC312S3	●	13/16	5/16	2 1/2
.375	3/8	9,525	HHEC375S3	●	7/8	3/8	2 1/2
.438	7/16	11,113	HHEC438S3100	●	1	7/16	2 3/4
.500	1/2	12,700	HHEC500S3	●	1	1/2	3
.625	5/8	15,875	HHEC625S3	●	1 1/4	5/8	3 1/2
.750	3/4	19,050	HHEC750S3	●	1 1/2	3/4	4
1.000	1	25,400	HHEC100S3	●	1 1/2	1	4

Kennametal Solid Carbide End Mills

No matter what type of workpiece you're milling, Kennametal Solid Carbide End Mills will boost your productivity and profitability – and your overall manufacturing competitiveness!

- Available in grades **KC635M** (for aluminum, cast irons, high-temp alloys, steels, and stainless steels), **KC610M** (for steels, stainless steels, and nodular graphite iron), and **KC633M** (for dry milling of all types of materials)!
- New fine micro grade substrate increases tool life, minimizes deflection!
- General-purpose, single-end, and double-end styles offered!



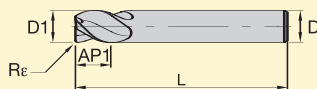
Order example:
Catalog number: **HHEC125S3**
Grade: **KC635M**

KENNA UNIVERSAL Solid Carbide End Mills – Inch



Corner Radius — 4 Flutes (30° Helix)

Right-Hand Spiral/Right-Hand Cutting/Center Cutting



D1			4 Flutes, 30° Helix Catalog number	Grades		AP1	D	L	Re
Inch	Fraction	Metric		KC610M	KC635M				
.125	1/8	3,175	CRHEC125S4R15	●	●	1/2	1/8	1 1/2	.015
.125	1/8	3,175	CRHEC125S4R20	●	●	1/2	1/8	1 1/2	.020
.188	3/16	4,763	CRHEC188S4R15	●	●	5/8	3/16	2	.015
.188	3/16	4,763	CRHEC188S4R20	●	●	5/8	3/16	2	.020
.188	3/16	4,763	CRHEC188S4R30	●	●	5/8	3/16	2	.030
.250	1/4	6,350	CRHEC250S4R15	●	●	3/4	1/4	2 1/2	.015
.250	1/4	6,350	CRHEC250S4R20	●	●	3/4	1/4	2 1/2	.020
.250	1/4	6,350	CRHEC250S4R30	●	●	3/4	1/4	2 1/2	.030
.250	1/4	6,350	CRHEC250S4R45	●	●	3/4	1/4	2 1/2	.045
.313	5/16	7,938	CRHEC312S4R15	●	●	13/16	5/16	2 1/2	.015
.313	5/16	7,938	CRHEC312S4R20	●	●	13/16	5/16	2 1/2	.020
.313	5/16	7,938	CRHEC312S4R30	●	●	13/16	5/16	2 1/2	.030
.313	5/16	7,938	CRHEC312S4R45	●	●	13/16	5/16	2 1/2	.045
.375	3/8	9,525	*CRHEC375S4R15	●	●	1	3/8	2 1/2	.015
.375	3/8	9,525	*CRHEC375S4R20	●	●	1	3/8	2 1/2	.020
.375	3/8	9,525	*CRHEC375S4R30	●	●	1	3/8	2 1/2	.030
.375	3/8	9,525	*CRHEC375S4R45	●	●	1	3/8	2 1/2	.045
.500	1/2	12,700	*CRHEC500S4R15	●	●	1	1/2	3	.015
.500	1/2	12,700	*CRHEC500S4R20	●	●	1	1/2	3	.020
.500	1/2	12,700	*CRHEC500S4R30	●	●	1	1/2	3	.030
.500	1/2	12,700	*CRHEC500S4R45	●	●	1	1/2	3	.045
.500	1/2	12,700	*CRHEC500S4R60	●	●	1	1/2	3	.060
.625	5/8	15,875	*CRHEC625S4R15	●	●	1 1/4	5/8	3 1/2	.015
.625	5/8	15,875	*CRHEC625S4R30	●	●	1 1/4	5/8	3 1/2	.030
.625	5/8	15,875	*CRHEC625S4R60	●	●	1 1/4	5/8	3 1/2	.060
.625	5/8	15,875	*CRHEC625S4R90	●	●	1 1/4	5/8	3 1/2	.090
.750	3/4	19,050	*CRHEC750S4R15	●	●	1 1/2	3/4	4	.015
.750	3/4	19,050	*CRHEC750S4R20	●	●	1 1/2	3/4	4	.020
.750	3/4	19,050	*CRHEC750S4R30	●	●	1 1/2	3/4	4	.030
.750	3/4	19,050	*CRHEC750S4R45	●	●	1 1/2	3/4	4	.045
.750	3/4	19,050	*CRHEC750S4R60	●	●	1 1/2	3/4	4	.060
.750	3/4	19,050	*CRHEC750S4R90	●	●	1 1/2	3/4	4	.090
.750	3/4	19,050	*CRHEC750S4R125	●	●	1 1/2	3/4	4	.125
1.000	1	25,400	*CRHEC100S4R15	●	●	1 1/2	1	4	.015
1.000	1	25,400	*CRHEC100S4R20	●	●	1 1/2	1	4	.020
1.000	1	25,400	*CRHEC100S4R30	●	●	1 1/2	1	4	.030
1.000	1	25,400	*CRHEC100S4R45	●	●	1 1/2	1	4	.045
1.000	1	25,400	*CRHEC100S4R60	●	●	1 1/2	1	4	.060
1.000	1	25,400	*CRHEC100S4R90	●	●	1 1/2	1	4	.090
1.000	1	25,400	*CRHEC100S4R125	●	●	1 1/2	1	4	.125

*Weldon flat on shank

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

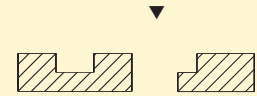
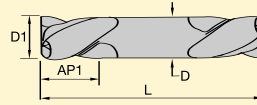
Order example:
Catalog number: CRHEC125S4R15
Grade: KC610M



KENNA UNIVERSAL Solid Carbide End Mills – Inch

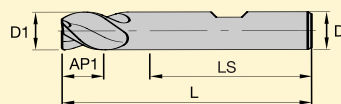
Double End, Stub Length — 2 and 4 Flutes

Right-Hand Spiral/Right-Hand Cutting/Center Cutting DHEC



D1			2 Flutes Catalog number	Grades			4 Flutes Catalog number	Grades			AP1	D	L
Inch	Fraction	Metric		K600	KC610M	KC635M		K600	KC610M	KC635M			
.031	1/32	0,795	DHEC031S2	●	●	●	DHEC031S4	●	●	●	1/16	1/8	1 1/2
.047	3/64	1,191	DHEC047S2	●	●	●	DHEC047S4	●	●	●	3/32	1/8	1 1/2
.063	1/16	1,588	DHEC062S2	●	●	●	DHEC062S4	●	●	●	1/8	1/8	1 1/2
.078	5/64	1,984	DHEC078S2	●	●	●	DHEC078S4	●	●	●	1/8	1/8	1 1/2
.094	3/32	2,383	DHEC094S2	●	●	●	DHEC094S4	●	●	●	3/16	1/8	1 1/2
.109	7/64	2,779	DHEC109S2	●	●	●	DHEC109S4	●	●	●	3/16	1/8	1 1/2
.125	1/8	3,175	DHEC125S2025	●	●	●	DHEC125S4025	●	●	●	1/4	1/8	1 1/2
.125	1/8	3,175	DHEC125S2038	●	●	●	DHEC125S4038	●	●	●	3/8	1/8	2
.141	9/64	3,571	DHEC141S2	●	●	●	DHEC141S4	●	●	●	5/16	3/16	2
.156	5/32	3,970	DHEC156S2	●	●	●	DHEC156S4	●	●	●	5/16	3/16	2
.172	11/64	4,366	DHEC172S2	●	●	●	DHEC172S4	●	●	●	5/16	3/16	2
.188	3/16	4,763	DHEC188S2	●	●	●	DHEC188S4	●	●	●	3/8	3/16	2
.203	13/64	5,159	DHEC219S2	●	●	●	DHEC203S4	●	●	●	1/2	1/4	2 1/2
.219	7/32	5,558					DHEC219S4	●	●	●	1/2	1/4	2 1/2
.234	15/64	5,954					DHEC234S4	●	●	●	1/2	1/4	2 1/2
.250	1/4	6,350	DHEC250S2	●	●	●	DHEC250S4	●	●	●	1/2	1/4	2 1/2
.281	9/32	7,145	DHEC281S2	●	●	●	DHEC281S4	●	●	●	1/2	5/16	2 1/2
.313	5/16	7,938	DHEC312S2	●	●	●	DHEC312S4	●	●	●	1/2	5/16	2 1/2
.375	3/8	9,525	DHEC375S2056	●	●	●	DHEC375S4056	●	●	●	9/16	3/8	2 1/2
.438	7/16	11,113					DHEC438S4	●	●	●	9/16	7/16	3
.500	1/2	12,700	DHEC500S2	●	●	●	DHEC500S4	●	●	●	5/8	1/2	3

Factory Standard (30° Helix) Throw-Away End Mills



A = cylindrical shank, no flats
B = Weldon shank

D1		3 Flutes, 30° Helix Catalog number B Shank	Grade KC625M		AP1	D	L	LS
Inch	Metric		A	B				
.079	2,00	F3AR0200BWS30	●	●	4	6	38	32
.118	3,00	F3AR0300BWS30	●	●	5	6	38	32
.158	4,00	F3AR0400BWS30	●	●	7	6	38	32
.197	5,00	F3AR0500BWS30	●	●	8	6	38	32
.236	6,00	F3AR0600BWS30	●	●	8	6	38	32
.315	8,00	F3AR0800BWS30	●	●	11	8	43	36
.394	10,00	F3AR1000BWS30	●	●	13	10	50	40

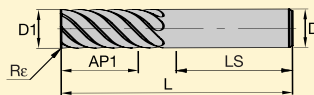
Order example:
Catalog number: DHEC031S2
Grade: K600



Single End — Special Applications

DIN 6527 Long (45° Helix)

Hard Machining



A = cylindrical shank, no flats
B = Weldon shank

D1		6 Flutes, 45° Helix Catalog number A Shank	Grade KC637M		8 Flutes, 45° Helix Catalog number A Shank	Grade KC637M		AP1	D	L	LS	Re
Inch	Metric		A	B		A	B					
.236	6,00	F6AV0600ADL45	●					13	6	57	36	0,5
.315	8,00	F6AV0800ADL45	●					19	8	63	36	0,5
.394	10,00	F6AV1000ADL45	●					22	10	72	40	0,5
.472	12,00	F6AV1200ADL45	●					26	12	83	45	1,0
.630	16,00	F6AV1600ADL45	●					32	16	92	48	1,0
.787	20,00				F8AV2000ADL45	●		38	20	104	50	1,0
.984	25,00				F8AV2500ADL45	●		45	25	121	56	1,5

Also
Available



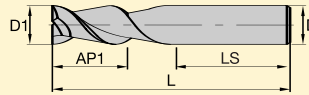
High-Performance Solid Carbide End Mills

- Non-polished shank for better gripping power!
- Material-specific solutions!
- Fine-grain carbide!
- "M" Grades!
- Optimized end mill designs for maximum productivity!

Order example:
A Shank: F6AV0600ADL45
Grade: KC637M

**DIN 6527 Long (45° Helix)**

For Aluminum Machining

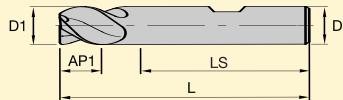


A = cylindrical shank, no flats
B = Weldon shank

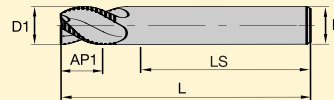
D1		2 Flutes, 45° Helix Catalog number A Shank/B Shank	Grade K600		AP1	D	L	LS
Inch	Metric		A	B				
.158	4,00	F2AA0400 A/B DL45	●	●	8	6	57	36
.197	5,00	F2AA0500 A/B DL45	●	●	10	6	57	36
.236	6,00	F2AA0600 A/B DL45	●	●	10	6	57	36
.315	8,00	F2AA0800 A/B DL45	●	●	16	8	63	36
.394	10,00	F2AA1000 A/B DL45	●	●	19	10	72	40
.472	12,00	F2AA1200 A/B DL45	●	●	22	12	83	45
.551	14,00	F2AA1400 A/B DL45	●	●	22	14	83	45
.630	16,00	F2AA1600 A/B DL45	●	●	26	16	92	48
.709	18,00	F2AA1800 A/B DL45	●	●	26	18	92	48
.787	20,00	F2AA2000 A/B DL45	●	●	32	20	104	50

DIN 6527 Short and Long (35° Helix)

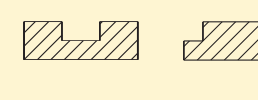
For Stainless Steel Machining



Finisher



Semi-Finisher



D1		Finisher, 3 Flutes, 35° Helix Catalog number B Shank	Grade KC633M		Semi-Finisher, 3 Flutes, 35° Helix Catalog number B Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B		A	B				
.118	3,00	F3AS0300BDK35		●			●	4	6	50	43
.158	4,00	F3AS0400BDK35		●			●	5	6	54	45
.197	5,00	F3AS0500BDK35		●			●	6	6	54	44
.236	6,00	F3AS0600BDK35		●	F3BS0600BDK35		●	7	6	54	41
.315	8,00	F3AS0800BDK35		●	F3BS0800BDK35		●	9	8	58	42
.394	10,00	F3AS1000BDK35		●	F3BS1000BDK35		●	11	10	66	45
.472	12,00	F3AS1200BDK35		●	F3BS1200BDK35		●	12	12	73	51
.551	14,00	F3AS1400BDK35		●	F3BS1400BDK35		●	14	14	75	51
.630	16,00	F3AS1600BDK35		●	F3BS1600BDK35		●	16	16	82	55
.709	18,00	F3AS1800BDK35		●			●	18	18	84	55
.787	20,00	F3AS2000BDK35		●	F3BS2000BDK35		●	20	20	92	60

D1		Semi-Finisher, 3 Flutes, 35° Helix Catalog number B Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B				
.236	6,00	F3BS0600BDL35		●	10	6	57	36
.315	8,00	F3BS0800BDL35		●	16	8	63	36
.394	10,00	F3BS1000BDL35		●	19	10	72	40
.472	12,00	F3BS1200BDL35		●	22	12	83	45
.551	14,00	F3BS1400BDL35		●	22	14	83	45
.630	16,00	F3BS1600BDL35		●	26	16	92	48
.787	20,00	F3BS2000BDL35		●	32	20	104	50

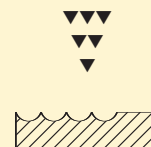
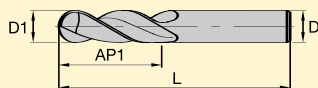
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

KENNA UNIVERSAL Solid Carbide End Mills – Inch



Ball Nose and Regular Length — 2, 3, and 4 Flutes (30° Helix)

30° Right-Hand Spiral/Right-Hand Cutting/Center Cutting
BNEC



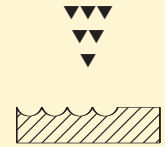
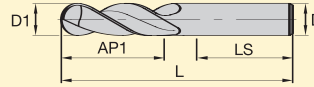
D1			2 Flutes, 30° Helix Catalog number	Grades			3 Flutes, 30° Helix Catalog number	Grades		4 Flutes, 30° Helix Catalog number	Grades			AP1	D	L
Inch	Fraction	Metric		K600	KC610M	KC635M		K600	KC610M		K600	KC610M	KC635M			
.031	1/32	0,795	BNEC031S2	●	●	●	BNEC031S3	●	●	BNEC031S4	●	●	●	5/64	1/8	1 1/2
.047	3/64	1,191	BNEC047S2	●	●	●				BNEC047S4	●	●	●	1/8	1/8	1 1/2
.063	1/16	1,588	BNEC062S2	●	●	●	BNEC062S3	●	●	BNEC062S4	●	●	●	3/16	1/8	1 1/2
.078	5/64	1,984	BNEC078S2	●	●	●				BNEC078S4	●	●	●	3/16	1/8	1 1/2
.094	3/32	2,383	BNEC094S2018	●	●	●				BNEC094S4018	●	●	●	3/16	1/8	1 1/2
.094	3/32	2,383	BNEC094S2	●	●	●	BNEC094S3	●	●	BNEC094S4	●	●	●	3/8	1/8	1 1/2
.109	7/64	2,779	BNEC109S2	●	●	●				BNEC109S4	●	●	●	3/8	1/8	1 1/2
.125	1/8	3,175	BNEC125S2025	●	●	●				BNEC125S4025	●	●	●	1/4	1/8	1 1/2
.125	1/8	3,175	BNEC125S2	●	●	●	BNEC125S3	●	●	BNEC125S4	●	●	●	1/2	1/8	1 1/2
.125	1/8	3,175	BNEC125S2075	●	●	●				BNEC125S4075	●	●	●	3/4	1/8	2 1/4
.125	1/8	3,175	BNEC125S2075L	●	●	●				BNEC125S4075L	●	●	●	3/4	1/8	3
.141	9/64	3,571	BNEC141S2	●	●	●				BNEC141S4	●	●	●	9/16	3/16	2
.156	5/32	3,970	BNEC156S2031	●	●	●				BNEC156S4031	●	●	●	5/16	3/16	2
.156	5/32	3,970	BNEC156S2	●	●	●				BNEC156S4	●	●	●	9/16	3/16	2
.172	11/64	4,366	BNEC172S2	●	●	●				BNEC172S4	●	●	●	5/8	3/16	2
.188	3/16	4,763	BNEC188S2031	●	●	●				BNEC188S4031	●	●	●	5/16	3/16	1 1/2
.188	3/16	4,763	BNEC188S2	●	●	●	BNEC188S3	●	●	BNEC188S4	●	●	●	5/8	3/16	2
.188	3/16	4,763	BNEC188S2075	●	●	●				BNEC188S4075	●	●	●	3/4	3/16	2 1/2
.188	3/16	4,763	BNEC188S2100	●	●	●				BNEC188S4100	●	●	●	1	3/16	4
.203	13/64	5,159	BNEC203S2	●	●	●				BNEC203S4	●	●	●	5/8	1/4	2 1/2
.219	7/32	5,558	BNEC219S2	●	●	●				BNEC219S4	●	●	●	5/8	1/4	2 1/2
.234	15/64	5,954	BNEC234S2	●	●	●				BNEC234S4	●	●	●	3/4	1/4	2 1/2
.250	1/4	6,350	BNEC250S2050	●	●	●				BNEC250S4050	●	●	●	1/2	1/4	2
.250	1/4	6,350	BNEC250S2	●	●	●	BNEC250S3	●	●	BNEC250S4	●	●	●	3/4	1/4	2 1/2
.250	1/4	6,350	BNEC250S2113	●	●	●				BNEC250S4113	●	●	●	1 1/8	1/4	3
.250	1/4	6,350	BNEC250S2150	●	●	●				BNEC250S4150	●	●	●	1 1/2	1/4	4
.250	1/4	6,350	BNEC250S2150L	●	●	●				BNEC250S4150L	●	●	●	1 1/2	1/4	6
.281	9/32	7,145	BNEC281S2	●	●	●				BNEC281S4	●	●	●	3/4	5/16	2 1/2
.313	5/16	7,938	BNEC312S2050	●	●	●				BNEC312S4050	●	●	●	1/2	5/16	2
.313	5/16	7,938	BNEC312S2	●	●	●				BNEC312S4	●	●	●	13/16	5/16	2 1/2
.313	5/16	7,938	BNEC312S2113	●	●	●				BNEC312S4113	●	●	●	1 1/8	5/16	3
.313	5/16	7,938	BNEC312S2150	●	●	●				BNEC312S4150	●	●	●	1 1/2	5/16	6
.344	11/32	8,733	BNEC344S2	●	●	●				BNEC344S4	●	●	●	1	3/8	2 1/2
.375	3/8	9,525	BNEC375S2063	●	●	●				BNEC375S4063	●	●	●	5/8	3/8	2
.375	3/8	9,525	BNEC375S2088	●	●	●	BNEC375S3088	●	●	BNEC375S4088	●	●	●	7/8	3/8	2 1/2
.375	3/8	9,525	BNEC375S2113	●	●	●				BNEC375S4113	●	●	●	1 1/8	3/8	3
.375	3/8	9,525	BNEC375S2175	●	●	●				BNEC375S4175	●	●	●	1 3/4	3/8	4
.375	3/8	9,525	BNEC375S2300	●	●	●				BNEC375S4300	●	●	●	3	3/8	6
.406	13/32	10,320	BNEC406S2100	●	●	●				BNEC406S4100	●	●	●	1	7/16	2 1/2
.438	7/16	11,113	BNEC438S2100	●	●	●				BNEC438S4100	●	●	●	1	7/16	2 1/2
.469	15/32	11,908	BNEC469S2	●	●	●				BNEC469S4	●	●	●	1	1/2	3
.500	1/2	12,700	BNEC500S2063	●	●	●				BNEC500S4063	●	●	●	5/8	1/2	2 1/2
.500	1/2	12,700	BNEC500S2	●	●	●	BNEC500S3	●	●	BNEC500S4	●	●	●	1	1/2	3
.500	1/2	12,700	BNEC500S2150	●	●	●				BNEC500S4150	●	●	●	1 1/2	1/2	6
.500	1/2	12,700	BNEC500S2200	●	●	●				BNEC500S4200	●	●	●	2	1/2	4
.500	1/2	14,288	BNEC500S2300	●	●	●				BNEC500S4300	●	●	●	3	1/2	6
.563	9/16	14,288	BNEC562S2	●	●	●				BNEC562S4	●	●	●	1 1/4	9/16	3 1/2
.625	5/8	15,875	BNEC625S2	●	●	●				BNEC625S4	●	●	●	1 1/4	5/8	3 1/2
.625	5/8	15,875	BNEC625S2300	●	●	●				BNEC625S4300	●	●	●	3	5/8	6
.750	3/4	19,050	BNEC750S2100	●	●	●				BNEC750S4100	●	●	●	1	3/4	3
.750	3/4	19,050	BNEC750S2	●	●	●				BNEC750S4	●	●	●	1 1/2	3/4	4
.750	3/4	19,050	BNEC750S2200	●	●	●				BNEC750S4200	●	●	●	2	3/4	6
.875	7/8	22,225	BNEC875S2	●	●	●				BNEC875S4	●	●	●	1 1/2	7/8	4
1.000	1	25,400	BNEC100S2	●	●	●				BNEC100S4	●	●	●	1 1/2	1	4
1.000	1	25,400	BNEC100S2300	●	●	●				BNEC100S4300	●	●	●	3	1	6



KENNA UNIVERSAL Solid Carbide End Mills – Metric

Ball Nose — 2 and 4 Flutes (30° Helix)

DIN 6527 Long

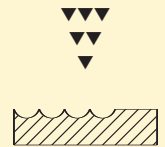
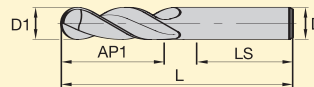


A = cylindrical shank, no flats
B = Weldon shank

D1		2 Flutes, 30° Helix Catalog number A Shank/B Shank	Grade KC633M		AP1	4 Flutes, 30° Helix Catalog number A Shank/B Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B			A	B				
.079	2,00	F2AL0200 A/B DL30	●	●	6	F4AL0300 A/B DL30	●	●	7	6	57	36
.118	3,00	F2AL0300 A/B DL30	●	●	7	F4AL0400 A/B DL30	●	●	8	6	57	36
.158	4,00	F2AL0400 A/B DL30	●	●	8					6	57	36
.197	5,00	F2AL0500 A/B DL30	●	●	10	F4AL0500 A/B DL30	●	●	11	6	57	36
.236	6,00	F2AL0600 A/B DL30	●	●	10	F4AL0600 A/B DL30	●	●	13	6	57	36
.315	8,00	F2AL0800 A/B DL30	●	●	16	F4AL0800 A/B DL30	●	●	19	8	63	36
.394	10,00	F2AL1000 A/B DL30	●	●	19	F4AL1000 A/B DL30	●	●	22	10	72	40
.472	12,00	F2AL1200 A/B DL30	●	●	22	F4AL1200 A/B DL30	●	●	26	12	83	45
.551	14,00	F2AL1400 A/B DL30	●	●	22	F4AL1400 A/B DL30	●	●	26	14	83	45
.63	16,00	F2AL1600 A/B DL30	●	●	26	F4AL1600 A/B DL30	●	●	32	16	92	48
.709	18,00	F2AL1800 A/B DL30	●	●	26	F4AL1800 A/B DL30	●	●	32	18	92	48
.787	20,00	F2AL2000 A/B DL30	●	●	32	F4AL2000 A/B DL30	●	●	38	20	104	50

DIN 6528

Shank diameter = Cutting diameter



A = cylindrical shank, no flats
B = Weldon shank

D1		2 Flutes, 30° Helix Catalog number A Shank	Grade KC633M		AP1	4 Flutes, 30° Helix Catalog number A Shank	Grade KC633M		AP1	D	L	LS
Inch	Metric		A	B			A	B				
.079	2,00	F2AL0200ADN30	●		6	F4AL0200ADN30	●		7	2	32	20
.118	3,00	F2AL0300ADN30	●		7	F4AL0300ADN30	●		8	3	32	20
.158	4,00	F2AL0400ADN30	●		8	F4AL0400ADN30	●		11	4	50	28
.197	5,00	F2AL0500ADN30	●		10	F4AL0500ADN30	●		13	5	50	28
.236	6,00	F2AL0600ADN30	●		10	F4AL0600ADN30	●		13	6	57	36
.315	8,00	F2AL0800ADN30	●		16	F4AL0800ADN30	●		19	8	63	36
.394	10,00	F2AL1000ADN30	●		19	F4AL1000ADN30	●		22	10	72	40
.472	12,00	F2AL1200ADN30	●		22	F4AL1200ADN30	●		26	12	83	45
.551	14,00	F2AL1400ADN30	●		22	F4AL1400ADN30	●		26	14	83	45
.630	16,00	F2AL1600ADN30	●		26	F4AL1600ADN30	●		32	16	92	48
.709	18,00	F2AL1800ADN30	●		26	F4AL1800ADN30	●		32	18	92	48
.787	20,00	F2AL2000ADN30	●		32	F4AL2000ADN30	●		38	20	104	50

Order example:

A Shank: F2AL0200ADL30
Grade: KC633M

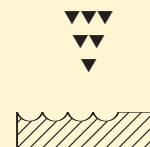
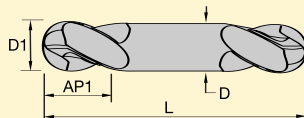
B Shank: F2AL0200BDL30
Grade: KC633M

KENNA UNIVERSAL Solid Carbide End Mills – Inch



Double-End Ball Nose, Stub Length — 4 Flutes (30° Helix)

Right-Hand Spiral/Right-Hand Cutting/Center Cutting
DBNEC



D1			4 Flutes, 30° Helix Catalog number	Grade KC610M			
Inch	Fraction	Metric			AP1	D	L
.0625	1/16	1,588	DBNEC062S4	●	1/8	1/8	1 1/2
.0938	3/32	2,383	DBNEC094S4	●	3/16	1/8	1 1/2
.1094	7/64	2,779	DBNEC109S4	●	3/16	1/8	1 1/2
.125	1/8	3,175	DBNEC125S4050	●	1/4	1/8	1 1/2
.1563	5/32	3,970	DBNEC156S4	●	5/16	3/16	2
.1875	3/16	4,763	DBNEC188S4	●	3/8	3/16	2
.250	1/4	6,350	DBNEC250S4	●	1/2	1/4	2 1/2
.3125	5/16	7,938	DBNEC312S4	●	1/2	5/16	2 1/2
.375	3/8	9,525	DBNEC375S4	●	9/16	3/8	2 1/2
.500	1/2	12,700	DBNEC500S4	●	5/8	1/2	3

CUSTOMER APPLICATION SUPPORT



Visit us online at
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to find your local contact.

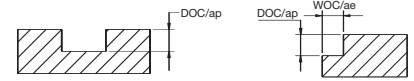
Order example:
Catalog number: DBNEC062S4
Grade: KC610M



Recommended Starting Speed and Feeds

End Mill Series Includes HEC, DHEC, CRHEC, F.DK30, F.DK45, F.DL45, F.DL30, F.DN30

- 1) Starting parameters are based on using stub-length tools.
- 2) These guidelines may require possible variations to achieve optimum results.



Low & Plain Carbon, Alloy & Tool Steels (<286 HB) <30 HRC
 AISI: 1008, 1010, 1018, 1141, 12L13, 12L14, 1045, 1335, 4140, 4340, 5120, 8620, P20
 DIN: 35S20, 95MnPB28, C45, 36Mn5, 42CrMo4, 34CrNiMo6, 21NiCrMo2,

Cutting Speed	SFM	Vc	
K600	250-350	80-110	
KC610M	300-500	90-150	Reduce speed by 20% for slotting applications.
KC633M	350-450	100-140	
KC635M	350-550	100-140	

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.
Slotting	.5 x dia.	–

Diameter		Profiling		Slotting	
		Feed/tooth	f _z	Feed/tooth	f _z
inch	mm	inch	mm	inch	mm
1/16	2	.0006	0,015	.0003	0,008
1/8	3	.001	0,025	.0005	0,013
3/16	4	.0012	0,030	.0007	0,018
1/4	6	.002	0,051	.001	0,025
5/16	8	.0022	0,056	.0017	0,043
3/8	10	.0025	0,064	.002	0,051
1/2	12	.003	0,076	.0024	0,061
5/8	16	.0035	0,089	.0028	0,071
3/4	20	.004	0,102	.003	0,076
1	25	.0045	0,114	.0035	0,089

Austenitic Stainless Steels (200 & 300 Series) Including Duplex (135-275 HB) <28 HRC
 AISI: 201, 209, 219, 302, 303, 304, 316, 321, 347, 329, ASTM: XM-1, XM-7, XM-21, CF-8M
 DIN: x 8 CrNiS 18-9, X 5 CrNiMo 17-13-3, X6CrNiTi18 10, X6CrNiNb 18 10, GX5 CrNiMo 19-11-2

Cutting Speed	SFM	Vc	
KC610M	250-400	75-120	Reduce speed by 20% for slotting applications.
KC633M	275-500	80-150	
KC635M	275-500	80-150	

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.
Slotting	.5 x dia.	–

Diameter		Profiling		Slotting	
		Feed/tooth	f _z	Feed/tooth	f _z
inch	mm	inch	mm	inch	mm
1/16	2	.0003	0,008	.0002	0,005
1/8	3	.0005	0,013	.0003	0,008
3/16	4	.0007	0,018	.0004	0,010
1/4	6	.001	0,025	.0007	0,018
5/16	8	.0015	0,033	.001	0,025
3/8	10	.002	0,051	.0015	0,033
1/2	12	.0025	0,064	.0017	0,038
5/8	16	.003	0,076	.0025	0,064
3/4	20	.0035	0,089	.003	0,076
1	25	.004	0,102	.0035	0,089

Plain Carbon, Alloy & Tool Steels (294-371 HB) 31-40 HRC
 Tool steels: H10, H11, Alloy steels AISI: 1335, 4140, 4150, 4320, 4340, 4422, 5120, 8620
 Din: x32 CrMo V3 3, x38CrMoV5-1, 36Mn5, 42CrMo4, 34CrNiMo6, 21NiCrMo2

Cutting Speed	SFM	Vc	
KC610M	150-300	45-90	Reduce speed by 20% for slotting applications.
KC633M	175-325	50-100	
KC635M	175-325	50-100	

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.
Slotting	.5 x dia.	–

Diameter		Profiling		Slotting	
		Feed/tooth	f _z	Feed/tooth	f _z
inch	mm	inch	mm	inch	mm
1/16	2	.0004	0,010	.0003	0,008
1/8	3	.0006	0,015	.0004	0,010
3/16	4	.001	0,025	.0005	0,013
1/4	6	.0012	0,030	.001	0,025
5/16	8	.002	0,051	.0011	0,028
3/8	10	.0022	0,056	.0013	0,030
1/2	12	.0025	0,064	.0015	0,033
5/8	16	.003	0,076	.0017	0,038
3/4	20	.0035	0,089	.002	0,051
1	25	.004	0,102	.0025	0,064

Ferritic, Martensitic (400 & 500 Series) & PH Stainless Steels (<371 HB) <40 HRC

AISI: 416, 416F, 416Se, 420F, PH Steels 15-5 PH, 17-4 H, 17-7 PH
 DIN: X12CrS13, X20Cr13, X4CrNiCuNb164, X7CrNiMoAl157

Cutting Speed	SFM	Vc	
KC610M	200-375	60-115	Reduce speed by 20% for slotting applications.
KC633M	200-450	60-140	
KC635M	200-450	60-140	

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.
Slotting	.5 x dia.	–

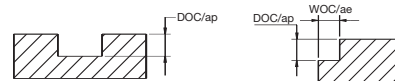
Diameter		Profiling		Slotting	
		Feed/tooth	f _z	Feed/tooth	f _z
inch	mm	inch	mm	inch	mm
1/16	2	.0006	0,015	.0003	0,008
1/8	3	.001	0,025	.0005	0,013
3/16	4	.0012	0,030	.0007	0,018
1/4	6	.002	0,051	.0015	0,033
5/16	8	.0022	0,056	.002	0,051
3/8	10	.0025	0,064	.0024	0,061
1/2	12	.003	0,076	.0028	0,071
5/8	16	.0035	0,089	.003	0,076
3/4	20	.004	0,102	.0035	0,089
1	25	.0045	0,114	.004	0,102

Recommended Starting Speed and Feeds



End Mill Series Includes HEC, DHEC, CRHEC, F.DK30, F.DK45, F.DL45, F.DL30, F.DN30

- 1) Starting parameters are based on using stub-length tools.
- 2) These guidelines may require possible variations to achieve optimum results.



Gray Cast Iron (120-220 HB) <18 HRC
ASTM A48: Class 20, 25, 30, 35, 40, 45, 50, 55, 60, SAE J431: grade G1800, G3000, G3500
DIN: GG10, GG15, GG20, GG25, GG30, GG40

Cutting Speed	SFM	Vc	
K600	350-450	110-140	Reduce speed by 20% for slotting applications.
KC633M	425-725	130-220	
KC635M	425-725	130-220	

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.
Slotting	.5 x dia.	—

Diameter		Profiling Feed/tooth		f _z	Slotting Feed/tooth		f _z
inch	mm	inch	mm		inch	mm	
1/16	2	.0007	0,018		.0005	0,013	
1/8	3	.0015	0,033		.0007	0,018	
3/16	4	.002	0,051		.0015	0,033	
1/4	6	.0025	0,064		.002	0,051	
5/16	8	.003	0,076		.0025	0,064	
3/8	10	.004	0,102		.003	0,076	
1/2	12	.005	0,127		.004	0,102	
5/8	16	.006	0,152		.005	0,127	
3/4	20	.007	0,178		.006	0,152	
1	25	.008	0,203		.007	0,178	

Titanium-alloyed
Commercially pure: Ti99.8, Alpha: Ti5Al2.5Sn, Alpha/Beta: Ti-6Al-4V
DIN: Ti99.8, TiAl6V4

Cutting Speed	SFM	Vc	
KC633M	100-250	30-75	Reduce speed by 20% for slotting applications.
KC635M	100-250	30-75	

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.
Slotting	.5 x dia.	—

Diameter		Profiling Feed/tooth		f _z	Slotting Feed/tooth		f _z
inch	mm	inch	mm		inch	mm	
1/16	2	.0002	0,005		.0001	0,003	
1/8	3	.0005	0,013		.0003	0,008	
3/16	4	.0007	0,018		.0004	0,010	
1/4	6	.001	0,025		.0006	0,015	
5/16	8	.0012	0,030		.0009	0,023	
3/8	10	.0015	0,033		.001	0,025	
1/2	12	.0018	0,046		.0015	0,033	
5/8	16	.0025	0,064		.0018	0,046	
3/4	20	.0028	0,071		.0022	0,056	
1	25	.003	0,076		.0025	0,064	

Gray Cast Iron (220-320 HB) 19-34 HRC
ASTM A48: Class 20, 25, 30, 35, 40, 45, 50, 55, 60, SAE J431: grade G1800, G3000, G3500
DIN: GG10, GG15, GG20, GG25, GG30, GG40

Cutting Speed	SFM	Vc	
K600	225-325	70-100	Reduce speed by 20% for slotting applications.
KC633M	350-500	110-150	
KC635M	350-500	110-150	

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.
Slotting	.3 x dia.	—

Diameter		Profiling Feed/tooth		f _z	Slotting Feed/tooth		f _z
inch	mm	inch	mm		inch	mm	
1/16	2	.0006	0,015		.0004	0,010	
1/8	3	.001	0,025		.0007	0,018	
3/16	4	.0012	0,030		.001	0,025	
1/4	6	.002	0,051		.0015	0,033	
5/16	8	.0022	0,056		.002	0,051	
3/8	10	.003	0,076		.0024	0,061	
1/2	12	.0035	0,089		.0028	0,071	
5/8	16	.004	0,102		.003	0,076	
3/4	20	.0045	0,114		.004	0,102	
1	25	.0055	0,140		.0045	0,114	

Titanium-alloyed, Nickel Base
Inconel: 601, 617, 625, 718, X-750, 901, Waspaloy, Hastelloy
DIN: NiCr19Fe19NbMo, NiCr20Co14MoTi, NiCr17Mo17FeW

Cutting Speed	SFM	Vc	
KC633M	60-125	20-40	Reduce speed by 20% for slotting applications.
KC635M	60-125	20-40	

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.
Slotting	.3 x dia.	—

Diameter		Profiling Feed/tooth		f _z	Slotting Feed/tooth		f _z
inch	mm	inch	mm		inch	mm	
1/16	2	.0002	0,005		.0001	0,003	
1/8	3	.0005	0,013		.0003	0,008	
3/16	4	.0007	0,018		.0004	0,010	
1/4	6	.001	0,025		.0006	0,015	
5/16	8	.0012	0,030		.0009	0,023	
3/8	10	.0015	0,033		.001	0,025	
1/2	12	.0018	0,046		.0015	0,033	
5/8	16	.0025	0,064		.0018	0,046	
3/4	20	.0028	0,071		.0022	0,056	
1	25	.003	0,076		.0025	0,064	



Recommended Starting Speed and Feeds

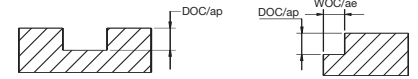
End Mill Series MDRHEC, F.BH.BW.20..

FACE MILLS

INDEXABLE END MILLS

MILLING PRODUCTS
SOLID CARBIDE END MILLS

- 1) These guidelines may require possible variations to achieve optimum results.
- 2) For WOC equal to .5 x diameter on profiling applications, decrease feed by 25%.



Low & Plain Carbon, Alloy & Tool Steels (<286 HB) <30 HRC
AISI: 1008, 1010, 1018, 1141, 12L13, 12L14, 1045, 1335, 4140, 4340, 5120, 8620, P20
DIN: 35S20, 95MnPB28, C45, 36Mn5, 42CrMo4, 34CrNiMo6, 21NiCrMo2,

Cutting Speed	SFM	Vc	
KC633M	300-350	100-117	Reduce speed by 20% for slotting applications.

Application Parameters

DOC/ap		WOC/ae			
Profiling		1 x dia.		.25 x dia.	
Slotting		1 x dia.		-	
Diameter		Profiling		Slotting	
Feed/tooth		f _z		Feed/tooth	
inch	mm	inch	mm	inch	mm
1/4	6	.002	0,051	.0012	0,030
3/16	8	.0025	0,064	.0015	0,038
3/8	10	.003	0,076	.0025	0,064
1/2	12	.0035	0,089	.003	0,076
5/8	16	.004	0,089	.0035	0,089
3/4	20	.0045	0,114	.004	0,089
1	25	.0045	0,114	.004	0,089

Austenitic Stainless Steels (200 & 300 Series) Including Duplex (135-275 HB) <28 HRC
AISI: 201, 209, 219, 302, 303, 304, 316, 321, 347, 329, ASTM: XM-1, XM-7, XM-21, CF-8M
DIN: x 8 CrNiS 18-9, X 5 CrNiMo 17-13-3, X6CrNiTi18 10, X6CrNiNb 18 10, GX5 CrNiMo 19-11-2

Cutting Speed	SFM	Vc	
KC633M	100-200	30-60	Reduce speed by 20% for slotting applications.

Application Parameters

DOC/ap		WOC/ae			
Profiling		1 x dia.		.25 x dia.	
Slotting		1 x dia.		-	
Diameter		Profiling		Slotting	
Feed/tooth		f _z		Feed/tooth	
inch	mm	inch	mm	inch	mm
1/4	6	.0007	0,018	.0006	0,015
3/16	8	.001	0,025	.0008	0,020
3/8	10	.0015	0,033	.001	0,025
1/2	12	.002	0,051	.0012	0,030
5/8	16	.002	0,051	.0014	0,036
3/4	20	.0025	0,064	.0015	0,038
1	25	.0025	0,064	.0016	0,041

Plain Carbon, Alloy & Tool Steels (294-371 HB) 31-40 HRC
Tool steels: H10, H11, Alloy steels AISI: 1335, 4140, 4150, 4320, 4340, 4422, 5120, 8620
Din: x32 CrMo V3 3, x38CrMoV5-1, 36Mn5, 42CrMo4, 34CrNiMo6, 21NiCrMo2

Cutting Speed	SFM	Vc	
KC633M	200-350	60-110	Reduce speed by 20% for slotting applications.

Application Parameters

DOC/ap		WOC/ae			
Profiling		1 x dia.		.25 x dia.	
Slotting		1 x dia.		-	
Diameter		Profiling		Slotting	
Feed/tooth		f _z		Feed/tooth	
inch	mm	inch	mm	inch	mm
1/4	6	.002	0,051	.0012	0,030
3/16	8	.0025	0,064	.0015	0,038
3/8	10	.003	0,076	.0025	0,064
1/2	12	.0035	0,089	.003	0,076
5/8	16	.004	0,089	.0035	0,089
3/4	20	.0045	0,114	.004	0,089
1	25	.0045	0,114	.004	0,089

Ferritic, Martensitic (400 & 500 Series) & PH Stainless Steels (<371 HB) <40 HRC
AISI: 416, 416F, 416Se, 420F, PH Steels 15-5 PH, 17-4 H, 17-7 PH
DIN: X12CrS13, X20Cr13, X4CrNiCuNb164, X7CrNiMoAl157

Cutting Speed	SFM	Vc	
KC633M	100-200	30-60	Reduce speed by 20% for slotting applications.

Application Parameters

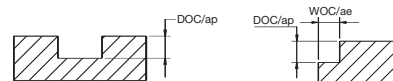
DOC/ap		WOC/ae			
Profiling		1 x dia.		.25 x dia.	
Slotting		1 x dia.		-	
Diameter		Profiling		Slotting	
Feed/tooth		f _z		Feed/tooth	
inch	mm	inch	mm	inch	mm
1/4	6	.0006	0,015	.0004	0,010
3/16	8	.0008	0,020	.0006	0,020
3/8	10	.001	0,025	.0008	0,020
1/2	12	.0012	0,030	.0008	0,020
5/8	16	.0014	0,036	.001	0,025
3/4	20	.0015	0,038	.001	0,025
1	25	.0016	0,041	.0012	0,030

Recommended Starting Speed and Feeds



End Mill Series MDRHEC, F.BH.BW.20..

- 1) These guidelines may require possible variations to achieve optimum results.
- 2) For WOC equal to .5 x diameter on profiling applications, decrease feed by 25%.



Gray Cast Iron (120-220 HB) <18 HRC
 ASTM A48: Class 20, 25, 30, 35, 40, 45, 50, 55, 60, SAE J431: grade G1800, G3000, G3500
 DIN: GG10, GG15, GG20, GG25, GG30, GG40

Cutting Speed	SFM	Vc	
KC633M	200-350	60-110	Reduce speed by 20% for slotting applications.

Application Parameters

DOC/ap		WOC/ae			
Profiling		1 x dia.		.25 x dia.	
Slotting		1 x dia.		-	
Diameter		Profiling		Slotting	
		Feed/tooth	f _z	Feed/tooth	f _z
inch	mm	inch	mm	inch	mm
1/4	6	.002	0,051	.0015	0,033
3/16	8	.0025	0,064	.002	0,051
3/8	10	.003	0,076	.0025	0,064
1/2	12	.0035	0,089	.003	0,076
5/8	16	.004	0,089	.0035	0,089
3/4	20	.0045	0,114	.004	0,089
1	25	.0045	0,114	.004	0,089

High-Temperature Alloys
 Commercially pure: Ti99.8, Alpha: Ti5a12.5Sn, Alpha/Beta: Ti-6Al-4V
 DIN: Ti99.8, TiAl6V4

Cutting Speed	SFM	Vc	
KC633M	80-100	25-35	Reduce speed by 20% for slotting applications.

Application Parameters

DOC/ap		WOC/ae			
Profiling		1 x dia.		.25 x dia.	
Slotting		1 x dia.		-	
Diameter		Profiling		Slotting	
		Feed/tooth	f _z	Feed/tooth	f _z
inch	mm	inch	mm	inch	mm
1/4	6	.001	0,025	.0006	0,015
3/16	8	.0012	0,030	.0008	0,020
3/8	10	.0015	0,033	.001	0,025
1/2	12	.0018	0,046	.0012	0,030
5/8	16	.0025	0,064	.0015	0,033
3/4	20	.003	0,076	.0025	0,064
1	25	.0035	0,089	.003	0,076

High-Temperature Alloys
 Inconel: 601, 617, 625, 718, X-750, 901, Waspaloy, Hastelloy
 DIN: NiCr19Fe19NbMo, NiCr20Co14MoTi, NiCr17Mo17FeW

Cutting Speed	SFM	Vc	
KC633M	30-175	10-50	Inconel materials are at lower end of speed range.

Application Parameters

DOC/ap		WOC/ae			
Profiling		1 x dia.		.25 x dia.	
Slotting		1 x dia.		-	
Diameter		Profiling		Slotting	
		Feed/tooth	f _z	Feed/tooth	f _z
inch	mm	inch	mm	inch	mm
1/4	6	.001	0,025	.0006	0,015
3/16	8	.0015	0,038	.001	0,025
3/8	10	.002	0,051	.0015	0,038
1/2	12	.0025	0,064	.002	0,051
5/8	16	.003	0,076	.0025	0,064
3/4	20	.0035	0,089	.003	0,076
1	25	.004	0,089	.003	0,076



Recommended Starting Speed and Feeds

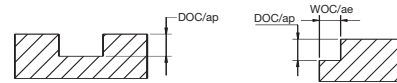
End Mill Series SFRHEC..., F3BA..BW.30

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SOLID CARBIDE END MILLS

- 1) These guidelines may require possible variations to achieve optimum results.
- 2) For woc equal to .5 x diameter on profiling applications, decrease feed by 25%.



Aluminum and Other Free-Machining, Non-Ferrous Materials, Low Silicon
Aluminum, 6061, 6063, 7075,
DIN/ISO: AlMg1SiCu, AlMg0,5Mn, AlZn5,5MgCu

Cutting Speed	SFM	Vc	
K600	600-1800	180-550	Reduce speed by 20% for slotting applications.
KC625M	800-2000	240-775	

Application Parameters

	DOC/ap		WOC/ae			
Profiling	1.5 x dia.		.5 x dia			
Slotting	1 x dia.		—			
	Diameter		Profiling		Slotting	
			Feed/tooth	f _z	Feed/tooth	f _z
	inch	mm	inch	mm	inch	mm
1/4	6	.002	0,051	.0015	0,038	
3/16	8	.0025	0,064	.002	0,051	
3/8	10	.003	0,076	.0025	0,064	
1/2	12	.004	0,102	.003	0,076	
5/8	16	.005	0,127	.004	0,102	
3/4	20	.0055	0,140	.0045	0,114	
1	25	.007	0,178	.006	0,152	

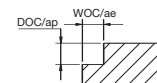
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Recommended Starting Speed and Feeds



End Mill Series — HHEC

1) These guidelines may require possible variations to achieve optimum results.



Austenitic Stainless Steels (200 & 300 Series) Including Duplex (135-275 HB) <28 HRC
 AISI: 201, 209, 219, 302, 303, 304, 316, 321, 347, 329, ASTM: XM-1, XM-7, XM-21, CF-8M
 DIN: x 8 CrNiS 18-9, X 5 CrNiMo 17-13-3, X6CrNiTi18 10, X6CrNiNb 18 10, GX5 CrNiMo 19-11-2

Cutting Speed	SFM	Vc
KC635M	275-500	80-150

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.

Diameter		Profiling Feed/tooth		f _z
inch	mm	inch	mm	
1/8	3	.0005	0,013	
3/16	4	.0007	0,018	
1/4	6	.001	0,025	
5/16	8	.0015	0,033	
3/8	10	.002	0,051	
1/2	12	.0025	0,064	
5/8	16	.003	0,076	
3/4	20	.0035	0,089	
1	25	.004	0,102	

Titanium-alloyed
 Commercially pure: Ti99.8, Alpha: Ti5a12.5Sn, Alpha/Beta: Ti-6Al-4V
 DIN: Ti99.8, TiAl6V4

Cutting Speed	SFM	Vc
KC635M	150-200	50-70

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.

Diameter		Profiling Feed/tooth		f _z
inch	mm	inch	mm	
1/8	3	.0003	0,008	
3/16	4	.0004	0,010	
1/4	6	.0005	0,013	
5/16	8	.0006	0,015	
3/8	10	.0007	0,018	
1/2	12	.001	0,025	
5/8	16	.0015	0,033	
3/4	20	.002	0,051	
1	25	.003	0,076	

Ferritic, Martensitic (400 & 500 Series) & PH Stainless Steels (<371 HB) <40 HRC
 AISI: 416, 416F, 416Se, 420F, PH Steels 15-5 PH, 17-4 H, 17-7 PH
 DIN: X12CrS13, X20Cr13, X4CrNiCuNb164, X7CrNiMoAl157

Cutting Speed	SFM	Vc
KC635M	200-450	60-140

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.

Diameter		Profiling Feed/tooth		f _z
inch	mm	inch	mm	
1/8	3	.001	0,025	
3/16	4	.0012	0,030	
1/4	6	.002	0,051	
5/16	8	.0022	0,056	
3/8	10	.0025	0,064	
1/2	12	.003	0,076	
5/8	16	.0035	0,089	
3/4	20	.004	0,102	
1	25	.0045	0,114	

Titanium-alloyed, Nickel Base
 Inconel: 601, 617, 625, 718, X-750, 901, Waspaloy, Hastelloy
 DIN: NiCr19Fe19NbMo, NiCr20Co14MoTi, NiCr17Mo17FeW

Cutting Speed	SFM	Vc
KC635M	75-100	25-35

Application Parameters

	DOC/ap	WOC/ae
Profiling	1 x dia.	.1 x dia.

Diameter		Profiling Feed/tooth		f _z
inch	mm	inch	mm	
1/8	3	.0003	0,008	
3/16	4	.0004	0,010	
1/4	6	.0005	0,013	
5/16	8	.0006	0,015	
3/8	10	.0007	0,018	
1/2	12	.001	0,025	
5/8	16	.0015	0,033	
3/4	20	.0018	0,046	
1	25	.002	0,051	



Recommended Starting Speed and Feeds

End Mill Series Includes F.AV..ADL45

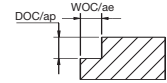
FACE MILLS

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MILLING PRODUCTS

SOLID CARBIDE END MILLS

2) These guidelines may require possible variations to achieve optimum results.



Hardened Steels: (496-560 HB) 51-55HRC
AISI: 1008, 1010, 1018, 1141, 12L13, 12L14, 1045, 1335, 4140, 4340, 5120, 8620, P20
DIN: 21NiCrMo2, 42CrMo4, 34CrNiMo6, C45

Cutting Speed	SFM	Vc
KC637M	120-500	40-150

Application Parameters

	DOC/ap	WOC/ae
Profiling	1.5 x dia.	.1 x dia.

Diameter mm	Profiling f _z mm
6	0,014
8	0,021
10	0,028
12	0,031
16	0,042
20	0,053
25	0,063

Hardened Steels: (560-654 HB) 56-60HRC
AISI: 1008, 1010, 1018, 1141, 12L13, 12L14, 1045, 1335, 4140, 4340, 5120, 8620, P20
DIN: 21NiCrMo2, 42CrMo4, 34CrNiMo6, C45

Cutting Speed	SFM	Vc
KC637M	65-390	20-120

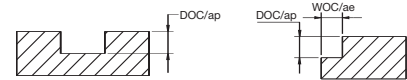
Application Parameters

	DOC/ap	WOC/ae
Profiling	1.5 x dia.	.1 x dia.

Diameter mm	Profiling f _z mm
6	0,011
8	0,014
10	0,021
12	0,025
16	0,035
20	0,042
25	0,049

End Mill Series F2AA..DL45

- 1) These guidelines may require possible variations to achieve optimum results.
- 2) For WOC equal to .5 x diameter on profiling applications, decrease feed by 25%.



Aluminum and Other Free-Machining, Non-Ferrous Materials, Low Silicon
Aluminum, 6061, 6063, 7075,
DIN/ISO: AlMg15SiCu, AlMg0,5Mn, AlZn5,5MgCu

Cutting Speed	SFM	Vc	
K600	600-1800	180-550	
KC625M	800-2000	240-775	Reduce speed by 20% for slotting applications.

Application Parameters

	DOC/ap	WOC/ae
Profiling	<1 x dia.	<1 x dia.
Slotting	1 x dia.	-

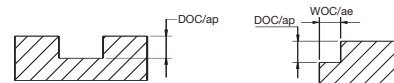
Diameter mm	Profiling f _z mm	Slotting f _z mm
4	0,043	0,038
6	0,051	0,043
8	0,076	0,064
10	0,102	0,076
12	0,127	0,102
16	0,152	0,127
20	0,178	0,152

Recommended Starting Speed and Feeds



End Mill Series Includes F3AS..BDK35

- 1) Starting parameters are based on using stub-length tools.
- 2) These guidelines may require possible variations to achieve optimum results.



Low & Plain Carbon, Alloy & Tool Steels (<286 HB) <30 HRC
AISI: 1008, 1010, 1018, 1141, 12L13, 12L14, 1045, 1335, 4140, 4340, 5120, 8620, P20
DIN: 35S20, 95MnPB28, C45, 36Mn5, 42CrMo4, 34CrNiMo6, 21NiCrMo2,

Cutting Speed	SFM	Vc	
KC633M	350-450	100-140	Reduce speed by 20% for slotting applications.

Application Parameters

	DOC/ap	WOC/ae		
Profiling	1 x dia.	.1 x dia.		
Slotting	.5 x dia.	–		
Diameter mm	Profiling f _z mm	Slotting f _z mm		
3	0,025	0,018		
4	0,030	0,025		
6	0,051	0,033		
8	0,056	0,043		
10	0,064	0,051		
12	0,089	0,076		
16	0,102	0,089		
20	0,127	0,102		

Austenitic Stainless Steels (200 & 300 Series) Including Duplex (135-275 HB) <28 HRC
AISI: 201, 209, 219, 302, 303, 304, 316, 321, 347, 329, ASTM: XM-1, XM-7, XM-21, CF-8M
DIN: x 8 CrNiS 18-9, X 5 CrNiMo 17-13-3, X6CrNiTi18 10, X6CrNiNb 18 10, GX5 CrNiMo 19-11-2

Cutting Speed	SFM	Vc	
KC633M	350-450	105-140	Reduce speed by 20% for slotting applications.

Application Parameters

	DOC/ap	WOC/ae		
Profiling	1 x dia.	.1 x dia.		
Slotting	.5 x dia.	–		
Diameter mm	Profiling f _z mm	Slotting f _z mm		
3	0,025	0,018		
4	0,030	0,025		
6	0,033	0,030		
8	0,051	0,033		
10	0,064	0,051		
12	0,076	0,064		
16	0,089	0,076		
20	0,114	0,102		

Plain Carbon, Alloy & Tool Steels (294-371 HB) 31-40 HRC
Tool steels: H10, H11, Alloy steels AISI: 1335, 4140, 4150, 4320, 4340, 4422, 5120, 8620
Din: x32 CrMo V3 3, x38CrMoV5-1, 36Mn5, 42CrMo4, 34CrNiMo6, 21NiCrMo2

Cutting Speed	SFM	Vc	
KC633M	175-325	50-100	Reduce speed by 20% for slotting applications.

Application Parameters

	DOC/ap	WOC/ae		
Profiling	1 x dia.	.1 x dia.		
Slotting	.5 x dia.	–		
Diameter mm	Profiling f _z mm	Slotting f _z mm		
3	0,025	0,015		
4	0,030	0,023		
6	0,051	0,033		
8	0,056	0,038		
10	0,064	0,051		
12	0,076	0,064		
16	0,089	0,076		
20	0,114	0,102		

Ferritic, Martensitic (400 & 500 Series) & PH Stainless Steels (<371 HB) <40 HRC
AISI: 416, 416F, 416Se, 420F, PH Steels 15-5 PH, 17-4 H, 17-7 PH
DIN: X12CrS13, X20Cr13, X4CrNiCuNb164, X7CrNiMoAl157

Cutting Speed	SFM	Vc	
KC633M	200-400	60-120	Reduce speed by 20% for slotting applications.

Application Parameters

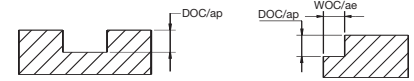
	DOC/ap	WOC/ae		
Profiling	1 x dia.	.1 x dia.		
Slotting	.5 x dia.	–		
Diameter mm	Profiling f _z mm	Slotting f _z mm		
3	0,025	0,013		
4	0,030	0,018		
6	0,051	0,033		
8	0,056	0,051		
10	0,064	0,061		
12	0,076	0,071		
16	0,089	0,076		
20	0,102	0,089		



Recommended Starting Speed and Feeds

End Mill Series Includes F3AS..BDK35

- 1) Starting parameters are based on using stub-length tools.
- 2) These guidelines may require possible variations to achieve optimum results.



Titanium-alloyed
Commercially pure: Ti99.8, Alpha: Ti5a12.55N, Alpha/Beta: Ti-6Al-4V
DIN: Ti99.8, TiAl6V4

Cutting Speed	SFM	Vc	
KC633M	100-250	30-75	Reduce speed by 20% for slotting applications.

Application Parameters

	DOC/ap	WOC/ae		
Profiling	1 x dia.	.1 x dia.	Profiling	Slotting
Slotting	.5 x dia.	–	f _z	f _z
			mm	mm
Diameter				
mm				
3			0,013	0,008
4			0,018	0,010
6			0,025	0,015
8			0,030	0,023
10			0,033	0,025
12			0,046	0,033
16			0,064	0,046
20			0,071	0,056

Titanium-alloyed, Nickel Base
Inconel: 601, 617, 625, 718, X-750, 901, Waspaloy, Hastelloy
DIN: NiCr19Fe19NbMo, NiCr20Co14MoTi, NiCr17Mo17FeW

Cutting Speed	SFM	Vc	
KC633M	60-150	20-45	Reduce speed by 20% for slotting applications.

Application Parameters

	DOC/ap	WOC/ae		
Profiling	1 x dia.	.1 x dia.	Profiling	Slotting
Slotting	.3 x dia.	–	f _z	f _z
			mm	mm
Diameter				
mm				
3			0,013	0,008
4			0,018	0,013
6			0,030	0,023
8			0,033	0,025
10			0,046	0,033
12			0,051	0,046
16			0,089	0,076
20			0,101	0,089

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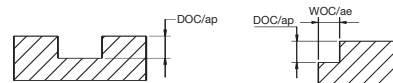
MILLING PRODUCTS
SOLID CARBIDE END MILLS

Recommended Starting Speed and Feeds



End Mill Series Includes F3BS..BD.35

- 1) Starting parameters are based on using stub-length tools.
- 2) These guidelines may require possible variations to achieve optimum results.



Low & Plain Carbon, Alloy & Tool Steels (<286 HB) <30 HRC
 AISI: 1008, 1010, 1018, 1141, 12L13, 12L14, 1045, 1335, 4140, 4340, 5120, 8620, P20
 DIN: 35S20, 9SMnPb28, C45, 36Mn5, 42CrMo4, 34CrNiMo6, 21NiCrMo2,

Cutting Speed	SFM	Vc	
KC633M	400-550	120-170	Reduce speed by 20% for slotting applications.

Application Parameters

	DOC/ap	WOC/ae	
Profiling	1 x dia.	.4 x dia.	
Slotting	1 x dia.	–	
Diameter mm	Profiling f _z mm	Slotting f _z mm	
6	0,036	0,025	
8	0,033	0,036	
10	0,041	0,033	
12	0,076	0,061	
16	0,076	0,061	
20	0,081	0,071	

Titanium-alloyed, Nickel Base
 Inconel: 601, 617, 625, 718, X-750, 901, Waspaloy, Hastelloy
 DIN: NiCr19Fe19NbMo, NiCr20Co14MoTi, NiCr17Mo17FeW

Cutting Speed	SFM	Vc	
KC633M	75-125	20-40	Reduce speed by 20% for slotting applications.

Application Parameters

	DOC/ap	WOC/ae	
Profiling	1 x dia.	.4 x dia.	
Slotting	1 x dia.	–	
Diameter mm	Profiling f _z mm	Slotting f _z mm	
6	0,018	0,013	
8	0,023	0,018	
10	0,028	0,023	
12	0,033	0,028	
16	0,046	0,033	
20	0,064	0,051	

Austenitic Stainless Steels (200 & 300 Series) Including Duplex (135-275 HB) <28 HRC
 AISI: 201, 209, 219, 302, 303, 304, 316, 321, 347, 329, ASTM: XM-1, XM-7, XM-21, CF-8M
 DIN: x 8 CrNiS 18-9, X 5 CrNiMo 17-13-3, X6CrNiTi18 10, X6CrNiNb 18 10, GX5 CrNiMo 19-11-2

Cutting Speed	SFM	Vc	
KC633M	300-425	90-130	Reduce speed by 20% for slotting applications.

Application Parameters

	DOC/ap	WOC/ae	
Profiling	1 x dia.	.4 x dia.	
Slotting	1 x dia.	–	
Diameter mm	Profiling f _z mm	Slotting f _z mm	
6	0,025	0,018	
8	0,033	0,025	
10	0,051	0,033	
12	0,064	0,038	
16	0,076	0,064	
20	0,089	0,076	



Recommended Starting Speed and Feeds

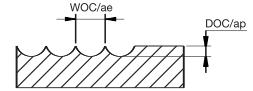
End Mill Series BNEC, DBNEC, F.AL..DL30

FACE MILLS

INDEXABLE END MILLS

MILLING PRODUCTS
SOLID CARBIDE END MILLS

1) These guidelines may require possible variations to achieve optimum results.



Low & Plain Carbon, Alloy & Tool Steels (<286 HB) <30 HRC
AISI: 1008, 1010, 1018, 1141, 12L13, 12L14, 1045, 1335, 4140, 4340, 5120, 8620, P20
DIN: 35S20, 95MnPb28, C45, 36Mn5, 42CrMo4, 34CrNiMo6, 21NiCrMo2,

Cutting Speed	SFM	Vc
K600	250-300	83-100
KC610M	300-400	100-133
KC633M	350-450	117-150
KC635M	350-450	117-150

Application Parameters

	DOC/ap	WOC/ae
Contouring	.2 x dia.	.5 x dia.

Diameter		Contouring Feed/tooth f_z	
inch	mm	inch	mm
1/16	2	.0003	0,008
1/8	3	.0006	0,015
3/16	4	.001	0,025
1/4	6	.0014	0,036
5/16	8	.0017	0,043
3/8	10	.002	0,051
1/2	12	.0024	0,061
5/8	16	.003	0,076
3/4	20	.0035	0,089
1	25	.0045	0,114

Austenitic Stainless Steels (200 & 300 Series) Including Duplex (135-275 HB) <28 HRC
AISI: 201, 209, 219, 302, 303, 304, 316, 321, 347, 329, ASTM: XM-1, XM-7, XM-21, CF-8M
DIN: x 8 CrNiS 18-9, X 5 CrNiMo 17-13-3, X6CrNiTi18 10, X6CrNiNb 18 10, GX5 CrNiMo 19-11-2

Cutting Speed	SFM	Vc
KC610M	250-350	83-117
KC633M	300-400	100-130
KC635M	300-400	100-130

Application Parameters

	DOC/ap	WOC/ae
Contouring	.2 x dia.	.5 x dia.

Diameter		Contouring Feed/tooth f_z	
inch	mm	inch	mm
1/16	2	.0003	0,008
1/8	3	.0005	0,013
3/16	4	.001	0,025
1/4	6	.0015	0,033
5/16	8	.0017	0,043
3/8	10	.002	0,051
1/2	12	.0025	0,064
5/8	16	.003	0,076
3/4	20	.0035	0,089
1	25	.004	0,102

Plain Carbon, Alloy & Tool Steels (294-371 HB) 31-40 HRC
Tool steels: H10, H11, Alloy steels AISI: 1335, 4140, 4150, 4320, 4340, 4422, 5120, 8620
Din: x32 CrMo V3 3, x38CrMoV5-1, 36Mn5, 42CrMo4, 34CrNiMo6, 21NiCrMo2

Cutting Speed	SFM	Vc
KC610M	250-300	83-100
KC633M	300-350	100-117
KC635M	300-350	100-117

Application Parameters

	DOC/ap	WOC/ae
Contouring	.2 x dia.	.5 x dia.

Diameter		Contouring Feed/tooth f_z	
inch	mm	inch	mm
1/16	2	.0003	0,008
1/8	3	.0004	0,010
3/16	4	.0007	0,018
1/4	6	.001	0,025
5/16	8	.0013	0,030
3/8	10	.0015	0,033
1/2	12	.002	0,051
5/8	16	.0025	0,064
3/4	20	.003	0,076
1	25	.004	0,102

Ferritic, Martensitic (400 & 500 Series) & PH Stainless Steels (<371 HB) <40 HRC
AISI: 416, 416F, 416Se, 420F, PH Steels 15-5 PH, 17-4 H, 17-7 PH
DIN: X12CrS13, X20Cr13, X4CrNiCuNb164, X7CrNiMoAl157

Cutting Speed	SFM	Vc
KC610M	200-275	70-95
KC633M	275-350	90-120
KC635M	275-350	90-120

Application Parameters

	DOC/ap	WOC/ae
Contouring	.2 x dia.	.5 x dia.

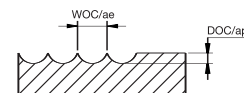
Diameter		Contouring Feed/tooth f_z	
inch	mm	inch	mm
1/16	2	.0003	0,008
1/8	3	.0004	0,010
3/16	4	.0007	0,018
1/4	6	.001	0,025
5/16	8	.0013	0,030
3/8	10	.0015	0,033
1/2	12	.002	0,051
5/8	16	.0025	0,064
3/4	20	.003	0,076
1	25	.004	0,102

Recommended Starting Speed and Feeds



End Mill Series BNEC, DBNEC, F.AL..DL30

1) These guidelines may require possible variations to achieve optimum results.



Gray Cast Iron (120-220 HB) <18 HRC
ASTM A48: Class 20, 25, 30, 35, 40, 45, 50, 55, 60, SAE J431: grade G1800, G3000, G3500
DIN: GG10, GG15, GG20, GG25, GG30, GG40

Cutting Speed	SFM	Vc
K600	300-400	100-130
KC633M	450-550	150-183
KC635M	450-550	150-183

Application Parameters

	DOC/ap	WOC/ae
Contouring	.2 x dia.	.5 x dia.

Diameter		Contouring Feed/tooth		f _z	
inch	mm	inch	mm	inch	mm
1/16	2	.0003	0,008		
1/8	3	.0005	0,013		
3/16	4	.001	0,025		
1/4	6	.002	0,051		
5/16	8	.003	0,076		
3/8	10	.0035	0,089		
1/2	12	.004	0,102		
5/8	16	.0045	0,114		
3/4	20	.005	0,127		
1	25	.0055	0,140		

Titanium-alloyed
Commercially pure: Ti99.8, Alpha: Ti5Al2.5Sn, Alpha/Beta: Ti-6Al-4V
DIN: Ti99.8, TiAl6V4

Cutting Speed	SFM	Vc
KC633M	100-200	35-70
KC635M	100-200	35-70

Application Parameters

	DOC/ap	WOC/ae
Contouring	.2 x dia.	.5 x dia.

Diameter		Contouring Feed/tooth		f _z	
inch	mm	inch	mm	inch	mm
1/16	2	.0002	0,005		
1/8	3	.0004	0,010		
3/16	4	.0007	0,018		
1/4	6	.001	0,025		
5/16	8	.0013	0,030		
3/8	10	.0015	0,033		
1/2	12	.0018	0,046		
5/8	16	.002	0,051		
3/4	20	.0025	0,064		
1	25	.003	0,076		

Gray Cast Iron (220-320 HB) 19-34 HRC
ASTM A48: Class 20, 25, 30, 35, 40, 45, 50, 55, 60, SAE J431: grade G1800, G3000, G3500
DIN: GG10, GG15, GG20, GG25, GG30, GG40

Cutting Speed	SFM	Vc
K600	250-325	83-110
KC633M	350-450	117-150
KC635M	350-450	117-150

Application Parameters

	DOC/ap	WOC/ae
Contouring	.2 x dia.	.5 x dia.

Diameter		Profiling Feed/tooth		f _z	
inch	mm	inch	mm	inch	mm
1/16	2	.0003	0,008		
1/8	3	.0005	0,013		
3/16	4	.001	0,025		
1/4	6	.002	0,051		
5/16	8	.003	0,076		
3/8	10	.0035	0,089		
1/2	12	.004	0,102		
5/8	16	.0045	0,114		
3/4	20	.005	0,127		
1	25	.0055	0,140		

Titanium-alloyed, Nickel Base
Inconel: 601, 617, 625, 718, X-750, 901, Waspaloy, Hastelloy
DIN: NiCr19Fe19NbMo, NiCr20Co14MoTi, NiCr17Mo17FeW

Cutting Speed	SFM	Vc
KC633M	75-150	25-50
KC635M	75-150	25-50

Application Parameters

	DOC/ap	WOC/ae
Contouring	.2 x dia.	.5 x dia.

Diameter		Contouring Feed/tooth		f _z	
inch	mm	inch	mm	inch	mm
1/16	2	.0002	0,005		
1/8	3	.0004	0,010		
3/16	4	.0007	0,018		
1/4	6	.001	0,025		
5/16	8	.0013	0,030		
3/8	10	.0015	0,033		
1/2	12	.0018	0,046		
5/8	16	.002	0,051		
3/4	20	.0025	0,064		
1	25	.003	0,076		

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Tooling Systems Products

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- Kennametal's "balanced-by-design" CV toolholders meet or exceed ANSI B5.50 specifications and recent standard updates. The detent hole in the shallow drive slot is deepened to a controlled depth. This modification enables the toolholder still to be loaded in the ATC in only one position, but now corrects the unnecessary inherent imbalance of the CV taper flange to significantly reduce spindle wear at higher speeds.
- The 7/24 shank cones are produced to the highest industry standards according to ISO-1947, with a taper accuracy of AT3 or better to provide optimum fit between the spindle and toolholder.
- Essential surfaces are not black-oxide, to provide better fitments.
- All non-critical surfaces are black-oxide, except for the high-performance toolholders.
- Through-coolant is a standard feature when permitted by toolholder design.
- Depending on the application, Kennametal's CV40 and CV50 balanced-by-design toolholders perform effectively up to 12,000 rpm. All other toolholders are effective at speeds up to 10,000 rpm, unless stated otherwise. Kennametal recommends that toolholder assemblies (toolholder, components, retention knob, collets, cutting tools) should be balanced when used at speeds in excess of 10,000 rpm.

IMPORTANT!

- All critical surfaces must be protected from damage. Neglect from dings and scratches will impair accuracy and performance.
- All assembly components must be clean. Never overtighten the components; this can permanently destroy the function and accuracy of the toolholder.

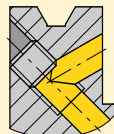
For retention knobs, please see page D50.



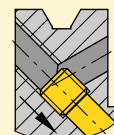
Form B coolant

Some toolholders are equipped with the form B coolant-style feature.

CAUTION!

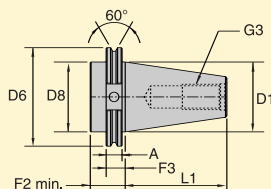


Toolholders are factory set to the form B coolant supply position. When relocating coolant position screws, use of a removable liquid (small screw thread locker) is recommended.

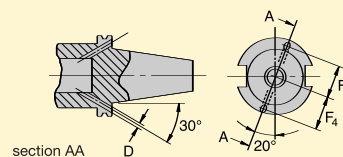


Possible variation of coolant supply to DIN 69871 form AD; tightening screws will stop coolant from escaping through the flange.

Caterpillar (inch) CV – ANSI B5.50



Form B – Flange Coolant Entry Ports



	D1	D6	D8	L1	F2	F3	A	G3
30	1.250 (31,75)	1.812 (46,02)	1.250 (31,75)	1.875 (47,63)	1.375 (35,00)	.750 (19,05)	.125 (3,18)	1/2-13 thread
40	1.750 (44,45)	2.500 (63,05)	1.750 (44,45)	2.687 (68,25)	1.375 (35,00)	.750 (19,05)	.125 (3,18)	5/8-11 thread
45	2.250 (57,15)	3.250 (82,50)	2.250 (57,15)	3.250 (82,55)	1.375 (35,00)	.750 (19,05)	.125 (3,18)	3/4-10 thread
50	2.750 (69,85)	3.875 (98,41)	2.750 (69,85)	4.000 (101,60)	1.375 (35,00)	.750 (19,05)	.125 (3,18)	1-8 thread
60	4.250 (107,95)	5.500 (139,70)	4.250 (107,95)	6.375 (161,93)	1.500 (38,10)	.750 (19,05)	.125 (3,18)	1 1/4-7 thread

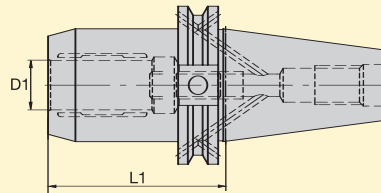
	D	F4 ±.004
30	.157 (4,00)	.827 (21,00)
40	.157 (4,00)	1.063 (27,00)
45	.197 (5,00)	1.378 (35,00)
50	.236 (6,00)	1.654 (42,00)



Hydraulic Chucks – BASIC Line



See page D41.

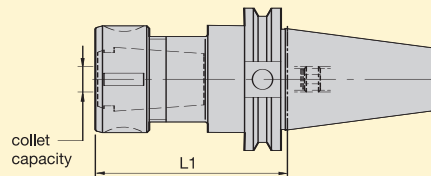


	Order number	Catalog number	D1	L1
				
Inch 40	2001976	CV40BHC075400	3/4	4.00
Metric 40	2001975	CV40BHC20M400	20	102

TG Single-Angle Collet Chucks – Inch



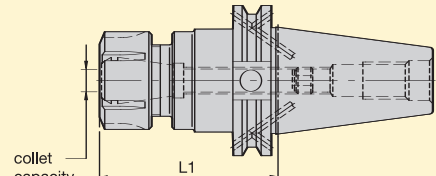
See page D42.



ER Single-Angle Collet Chucks – Inch



See page D46.



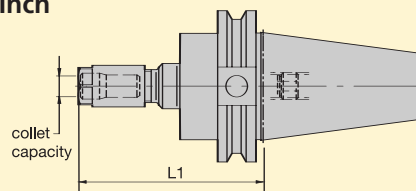
TG Single-Angle Collet Chucks						
	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Inch						
40	1025664	CV40TG050279G	50TG	1/32	17/32	2.79
40	1025598	CV40TG050300	50TG	1/32	17/32	3.00
40	1025599	CV40TG050479G	50TG	1/32	17/32	4.79
40	1025665	CV40TG050500	50TG	1/32	17/32	5.00
40	1025887	CV40TG050800	50TG	1/32	17/32	8.00
40	1025888	CV40TG0501000	50TG	1/32	17/32	10.00
40	1794107	CV40TG075254G	75TG	3/64	3/4	2.54
40	1025799	CV40TG075275	75TG	3/64	3/4	2.75
40	1025601	CV40TG075579G	75TG	3/64	3/4	5.79
40	1025600	CV40TG075600	75TG	3/64	3/4	6.00
40	1025889	CV40TG075800G	75TG	3/64	3/4	8.00
40	1025890	CV40TG0751000G	75TG	3/64	3/4	10.00
40	1025771	CV40TG100300	100TG	5/64	1	3.00
40	1025773	CV40TG100400	100TG	5/64	1	4.00
40	1025772	CV40TG100600	100TG	5/64	1	6.00
40	1013532	CV40TG150488	150TG	23/64	1 1/2	4.88
ER Single-Angle Collet Chucks						
Inch						
40	1901019	CV40BER16250	16ER	.02	.41	2.50
40	1901046	CV40BER16500	16ER	.02	.41	5.00
40	1261618	CV40BER20250	20ER	.02	.50	2.50
40	2249531	CV40BER20600	20ER	.02	.50	6.00
40	2249532	CV40BER25250	25ER	.04	.63	2.50
40	2249703	CV40BER25600	25ER	.04	.63	6.00
40	1261619	CV40BER32275	32ER	.08	.81	2.75
40	1901045	CV40BER32600	32ER	.08	.81	6.00
40	2249704	CV40BER40300	40ER	.12	1.00	3.00
40	2249705	CV40BER40600	40ER	.12	1.00	6.00

Order example:
Catalog number: CV40BHC075400
Order number: 2001976

DA Double-Angle Collet Chucks – Inch

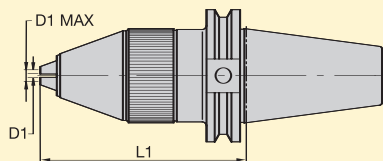


See page D48.

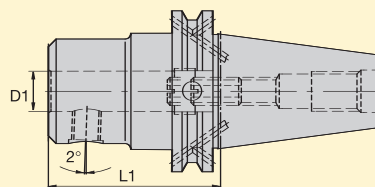


	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Inch						
40	1015515	CV40DA208300	200DA	1/64	25/64	3.00
40	1015305	CV40DA208500	200DA	1/64	25/64	5.00
40	1015596	CV40DA188300	180DA	1/64	3/4	3.00
40	1015304	CV40DA188600	180DA	1/64	3/4	6.00

Drill Chucks – Inch



Whistle Notch Adapters – Metric



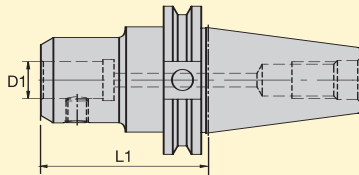
Drill Chucks					
	Order number	Catalog number	D1	D1 max.	L1
Inch					
40	2262967	CV40DC13M421	.039	.512	4.21
Whistle Notch Adapters					
Metric					
40	1549300	CV40BWN06M244	6	–	62
40	1549315	CV40BWN08M244	8	–	62
40	1549317	CV40BWN10M244	10	–	62
40	1549320	CV40BWN12M260	12	–	66
40	1549326	CV40BWN14M260	14	–	66
40	1549328	CV40BWN16M275	16	–	70
40	1549329	CV40BWN18M275	18	–	70
40	1549342	CV40BWN20M275	20	–	70
40	1549330	CV40BWN25M375	25	–	95
40	1549341	CV40BWN32M388	32	–	99

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

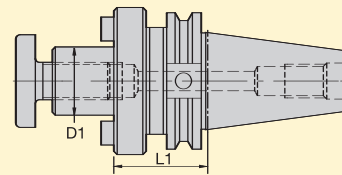
Order example:
Catalog number: **CV40DA208300**
Order number: **1015515**



End Mill Adapters – Inch



Shell Mill Adapters – Inch

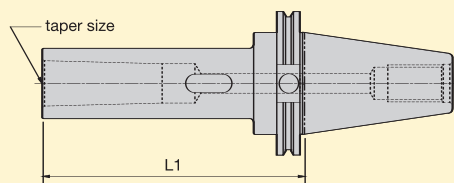


End Mill Adapters				
	Order number	Catalog number	D1	L1
Inch				
40	1026404	* CV40ZEM012138	1/8	1.38
40	1026405	CV40EM012450	1/8	4.50
40	1026406	* CV40ZEM018138	3/16	1.38
40	1025921	CV40EM018250	3/16	2.50
40	1026407	CV40EM018450	3/16	4.50
40	1026408	* CV40ZEM025138	1/4	1.38
40	1018427	CV40EM025250	1/4	2.50
40	1026409	CV40EM025450	1/4	4.50
40	1026410	* CV40ZEM031138	5/16	1.38
40	1026411	CV40EM031450	5/16	4.50
40	1026412	* CV40ZEM038138	3/8	1.38
40	1026338	CV40EM038250	3/8	2.50
40	1013350	CV40EM038450	3/8	4.50
40	1013351	CV40EM038650	3/8	6.50
40	1013352	* CV40ZEM044175	7/16	1.75
40	1013353	CV40EM044450	7/16	4.50
40	1026380	* CV40ZEM050175	1/2	1.75
40	1025922	CV40EM050262	1/2	2.63
40	1013374	CV40EM050462	1/2	4.63
40	1013375	CV40EM050662	1/2	6.62
40	1026381	* CV40ZEM062175	5/8	1.75
40	1025923	CV40EM062375	5/8	3.75
40	1013376	CV40EM062575	5/8	5.75
40	1026382	* CV40ZEM075175	3/4	1.75
40	1025944	CV40EM075375	3/4	3.75
40	1013377	CV40EM075575	3/4	5.75
40	1013378	* CV40ZEM088175	7/8	1.75
40	1025945	CV40EM088400	7/8	4.00
40	1013424	CV40EM088600	7/8	6.00
40	1026383	* CV40ZEM100175	1	1.75
40	1025946	CV40EM100400	1	4.00
40	1013425	CV40EM100600	1	6.00
40	1013426	* CV40ZEM125200	1 1/4	2.00
40	1025947	CV40EM125425	1 1/4	4.25
40	1013427	CV40EM125625	1 1/4	6.25
40	1025986	* CV40EM150462	1 1/2	4.63
40	1013428	CV40EM150662	1 1/2	6.63
Shell Mill Adapters				
Inch				
40	1018237	CV40SM050138	1/2	1.38
40	1926572	CV40SM050350	1/2	3.50
40	1025918	CV40SM075138	3/4	1.38
40	1013431	CV40SM075350	3/4	3.50
40	1013432	CV40SM075600	3/4	6.00
40	1025917	CV40ZSM100100	1	1.00
40	1026339	CV40SM100206	1	2.06
40	1013433	CV40SM100400	1	4.00
40	1013444	CV40SM100600	1	6.00
40	1025919	CV40SM125212	1 1/4	2.12
40	1013445	CV40SM125400	1 1/4	4.00
40	1025920	CV40SM150241	1 1/2	2.41
40	1013446	CV40SM150400	1 1/2	4.00

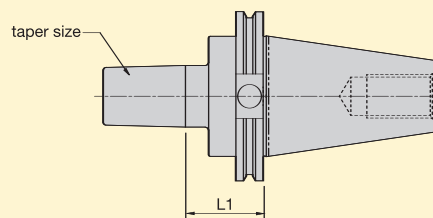
* Deviates from ANSI-B5.50 standard. The 1.750 diameter in front of the V-flange has been eliminated.

Order example:
Catalog number: CV40ZEM012138
Order number: 1026404

Morse Taper Adapters – Inch



Jacobs Taper Adapters – Inch



Morse Taper Adapters

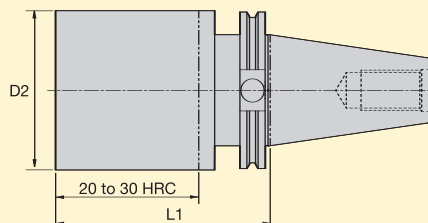


	Order number	Catalog number	Taper Size	L1
Inch				
40	1025948	CV40MT1175	1	1.750
40	1025949	CV40MT2244	2	2.440
40	1025950	CV40MT3300	3	3.000
40	1025987	CV40MT4388	4	3.875

Jacobs Taper Adapters

Inch				
40	1025951	CV40JT2244	2	1.565
40	1025953	CV40JT3278	3	1.561
40	1025952	CV40JT33256	33	1.560

Bar Blanks – Inch



	Order number	Catalog number	D2	L1
Inch				
40	1020563	CV40BB400600	4.00	6.00
40	1020634	CV40BB400120	4.00	12.00

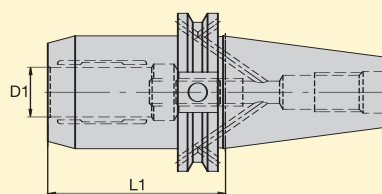
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: **CV40MT1175**
Order number: **1025948**

Hydraulic Chucks – BASIC Line

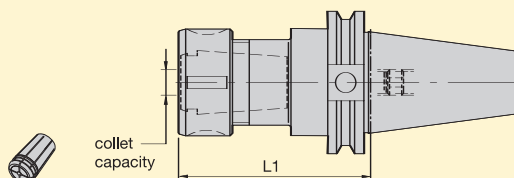


See page D41.



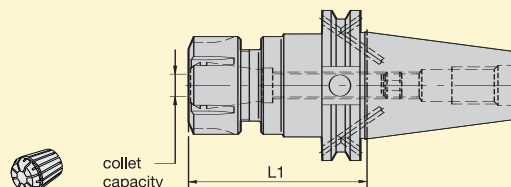
	Order number	Catalog number	D1	L1
Inch				
50	2001978	CV50BHC8075400	3/4	4.00
Metric				
50	2001977	CV50BHC820M400	20	102

TG Single-Angle Collet Chucks – Inch



See page D42.

ER Single-Angle Collet Chucks – Inch



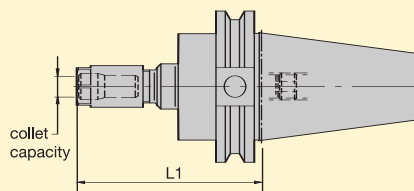
See page D46.

	Order number	Catalog number	Collet Series	Collet Capacity min.	Collet Capacity max.	L1
Inch						
50	1025602	CV50TG050279G	50TG	1/32	17/32	2.79
50	1025666	CV50TG050300	50TG	1/32	17/32	3.00
50	1025636	CV50TG050479G	50TG	1/32	17/32	4.79
50	1025668	CV50TG050500	50TG	1/32	17/32	5.00
50	1025891	CV50TG050800	50TG	1/32	17/32	8.00
50	1025892	CV50TG0501000	50TG	1/32	17/32	10.00
50	1025893	CV50TG0501200	50TG	1/32	17/32	12.00
50	1025603	CV50TG075279G	75TG	3/64	3/4	2.79
50	1025667	CV50TG075300	75TG	3/64	3/4	3.00
50	1025801	CV50TG075450	75TG	3/64	3/4	4.50
50	1025635	CV50TG075579G	75TG	3/64	3/4	5.79
50	1025634	CV50TG075600	75TG	3/64	3/4	6.00
50	1025914	CV50TG075800G	75TG	3/64	3/4	8.00
50	1025915	CV50TG0751000G	75TG	3/64	3/4	10.00
50	1025916	CV50TG0751200G	75TG	3/64	3/4	12.00
50	1025743	CV50TG100300	100TG	5/64	1	3.00
50	1025695	CV50TG100350	100TG	5/64	1	3.50
50	1025694	CV50TG100550	100TG	5/64	1	5.50
50	1025673	CV50TG100750	100TG	5/64	1	7.50
50	1013535	CV50TG150300	150TG	23/64	1 1/2	3.00
50	1013530	CV50TG150350	150TG	23/64	1 1/2	3.50
50	1013528	CV50TG150550	150TG	23/64	1 1/2	5.50
50	1013536	CV50TG150750	150TG	23/64	1 1/2	7.50
ER Single-Angle Collet Chucks						
Inch						
50	2249706	CV50BER16250	16ER	.02	.41	2.50
50	2249707	CV50BER16400	16ER	.02	.41	4.00
50	2249708	CV50BER16600	16ER	.02	.41	6.00
50	2249709	CV50BER20250	20ER	.02	.50	2.50
50	1261782	CV50BER20400	20ER	.02	.50	4.00
50	2249710	CV50BER20600	20ER	.02	.50	6.00
50	2249711	CV50BER25250	25ER	.04	.63	2.50
50	2249712	CV50BER25400	25ER	.04	.63	4.00
50	2249713	CV50BER25600	25ER	.04	.63	6.00
50	2249714	CV50BER32275	32ER	.08	.81	2.75
50	1261783	CV50BER32400	32ER	.08	.81	4.00
50	2249715	CV50BER32600	32ER	.08	.81	6.00
50	2249716	CV50BER40300	40ER	.12	1.00	3.00
50	2249717	CV50BER40600	40ER	.12	1.00	6.00

DA Double-Angle Collet Chucks – Inch

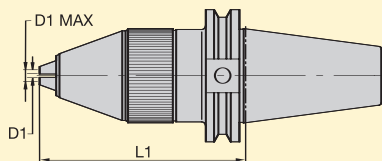


See page D48.

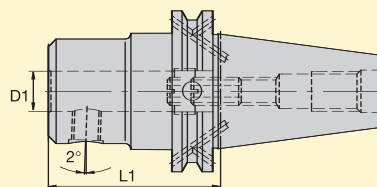


	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Inch						
50	1015306	CV50DA188300	180DA	1/64	3/4	3.00
50	1015307	CV50DA188600	180DA	1/64	3/4	6.00

Drill Chucks – Inch



Whistle Notch Adapters – Metric

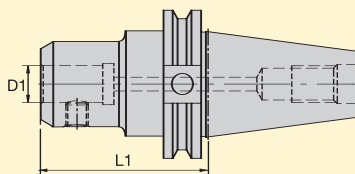


Drill Chucks					
	Order number	Catalog number	D1	D1 max.	L1
Inch					
50	2262968	CV50DC13M421	.039	.512	.421
Whistle Notch Adapters					
Metric					
50	1549343	CV50BWN06M244	6	-	62
50	1549344	CV50BWN08M244	8	-	62
50	1549378	CV50BWN10M244	10	-	62
50	1549345	CV50BWN12M264	12	-	67
50	1549346	CV50BWN14M264	14	-	67
50	1549352	CV50BWN16M275	16	-	70
50	1549353	CV50BWN18M275	18	-	70
50	1549362	CV50BWN20M275	20	-	70
50	1549354	CV50BWN25M375	25	-	95
50	1549355	CV50BWN32M388	32	-	99

Order example:
Catalog number: **CV50DA188300**
Order number: **1015306**



End Mill Adapters – Inch

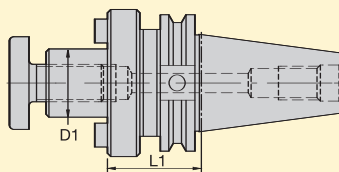


		Order number	Catalog number	
Inch			D1	L1
50		1013379	CV50EM018250	3/16
50		1013408	CV50EM018450	3/16
50		1013409	CV50EM018650	3/16
50		1013380	CV50EM025250	1/4
50		1013410	CV50EM025450	1/4
50		1013411	CV50EM025650	1/4
50		1013381	CV50EM031250	5/16
50		1013412	CV50EM031450	5/16
50		1013413	CV50EM031650	5/16
50		1026020	CV50EM038250	3/8
50		1026286	CV50EM038450	3/8
50		1026093	CV50EM038650	3/8
50		1013382	CV50EM038850	3/8
50		1013383	CV50EM044250	7/16
50		1026021	CV50EM050262	1/2
50		1026114	CV50EM050462	1/2
50		1026115	CV50EM050662	1/2
50		1013404	CV50EM050850	1/2
50		1026022	CV50EM062375	5/8
50		1026116	CV50EM062575	5/8
50		1026117	CV50EM062775	5/8
50		1026250	CV50EM075375	3/4
50		1026118	CV50EM075575	3/4
50		1026119	CV50EM075775	3/4
50		1013405	CV50EM0751000	3/4
50		1026023	CV50EM088375	7/8
50		1026120	CV50EM088575	7/8
50		1026121	CV50EM088775	7/8
50		1026044	CV50EM100400	1
50		1026287	CV50EM100600	1
50		1026122	CV50EM100800	1
50		1013406	CV50EM1001000	1
50		1026045	CV50EM125400	1 1/4
50		1026123	CV50EM125600	1 1/4
50		1026288	CV50EM125800	1 1/4
50		1013407	CV50EM1251000	1 1/4
50		1026284	CV50EM150400	1 1/2
50		1026289	CV50EM150600	1 1/2
50		1026144	CV50EM150800	1 1/2
50		1026046	CV50EM200562	2
50		1026145	CV50EM200762	2
50		1026290	CV50EM200962	2

To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: CV50EM018250
Order number: 1013379

Shell Mill Adapters – Inch



	Order number	Catalog number	D1	L1
Inch				
50	1926613	CV50SM050150	1/2	1.50
50	1926614	CV50SM050350	1/2	3.50
50	1026146	CV50SM050550	1/2	5.50
50	1026251	CV50SM075150	3/4	1.50
50	1026147	CV50SM075350	3/4	3.50
50	1026148	CV50SM075550	3/4	5.50
50	1013447	CV50SM075700	3/4	7.00
50	1013448	CV50SM075900	3/4	9.00
50	1026253	CV50SM100200	1	2.00
50	1026087	CV50SM100400	1	4.00
50	1026089	CV50SM100600	1	6.00
50	1013449	CV50SM100800	1	8.00
50	1013450	CV50SM1001000	1	10.00
50	1026047	CV50SM125150	1 1/4	1.50
50	1026149	CV50SM125350	1 1/4	3.50
50	1026291	CV50SM125550	1 1/4	5.50
50	1013451	CV50SM125700	1 1/4	7.00
50	1013452	CV50SM125900	1 1/4	9.00
50	1026053	CV50SM150240	1 1/2	2.40
50	1026285	CV50SM150400	1 1/2	4.00
50	1019103	CV50SM150600	1 1/2	6.00
50	1013453	CV50SM150800	1 1/2	8.00
50	1026252	CV50SM200240	2	2.40
50	1026150	CV50SM200400	2	4.00
50	1026292	CV50SM200600	2	6.00
50	1013474	CV50SM200800	2	8.00
50	1026048	CV50SM250240	2 1/2	2.40
50	1026293	CV50SM250400	2 1/2	4.00

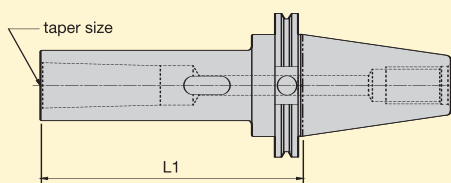


Basic Line

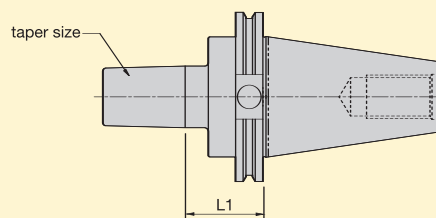
“Basic Line” hydraulic chucks have the same high-quality runout specification of 0,003 (.0001”). Basic Line chucks are balanced-by-design for speeds up to 10,000 rpm. The simple axial back-up screw adjustment of 10,0 (.375”) is achieved through the chuck bore the same way as the Trend Line. Larger body diameters give this chuck higher stability along with higher torque transmission (grip) of 300 Nm (220 ft-lb). Please note that the standard SEFAS chamfering ring cannot be used on this chuck design.

Order example:
Catalog number: CV50SM050150
Order number: 1926613

Morse Taper Adapters – Inch

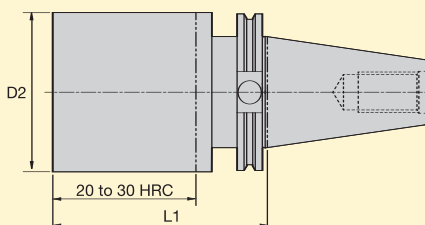


Jacobs Taper Adapters – Inch



Morse Taper Adapters				
	Order number	Catalog number	Taper Size	L1
Inch				
50	1026049	CV50MT1150	1	1.500
50	1026050	CV50MT2200	2	2.000
50	1026051	CV50MT3250	3	2.500
50	1026052	CV50MT4338	4	3.380
50	1026091	CV50MT5375	5	3.750
Jacobs Taper Adapters				
Inch				
50	1026379	CV50JT3268	3	1.461

Bar Blanks – Inch



	Order number	Catalog number	D2	L1
Inch				
50	1020558	CV50BB400600	4.00	6.00
50	1065951	CV50BB400120	4.00	12.00
50	1020559	CV50BB600600	6.00	6.00
50	1020560	CV50BB600120	6.00	12.00
50	1020307	CV50BB612700	6.12	7.00

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: CV50MT1150
Order number: 1026049



- Meets or exceeds JIS B 6339 specifications and all current standard updates.
- The 7/24 shank cones are produced to the highest industry standards, per ISO-1947. With a taper accuracy of AT3 or better, an optimum fit between spindle and toolholder is provided.
- Essential surfaces are not black-oxidized, to provide better fitments.
- All non-critical surfaces are black-oxidized, except for the high-performance toolholders.
- Wherever the toolholder design allows, through coolant is a standard feature.
- Depending on the application, Kennametal's BT30, BT40, and BT50 "balanced-by-design" toolholders will perform effectively up to 12,000 rpm. All other toolholders are good up to 10,000 rpm unless otherwise stated. Kennametal recommends that in excess of these speeds, the toolholder assembly (toolholder, components, retention knob, collets, cutting tools, etc.) should be balanced.

IMPORTANT!

- All critical surfaces must be protected from damage. Neglect from dings and scratches will impair accuracy and performance.
- All assembly components must be clean. Never overtighten the components; this can permanently destroy the function and accuracy of the toolholder.

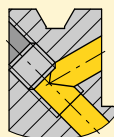
For retention knobs, please see page D50.



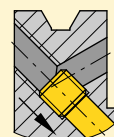
Form B coolant

Some toolholders are equipped with the form B coolant-style feature.

CAUTION!

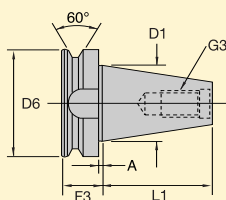


Toolholders are factory set to the form B coolant supply position. When relocating coolant position screws, use of a removable liquid (small screw thread locker) is recommended.

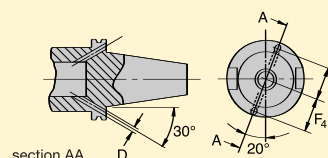


Possible variation of coolant supply to DIN 69871 form AD; tightening screws will stop coolant from escaping through the flange.

Tooling Standard Dimensions – JIS B6339



Form B – Flange Coolant Entry Ports

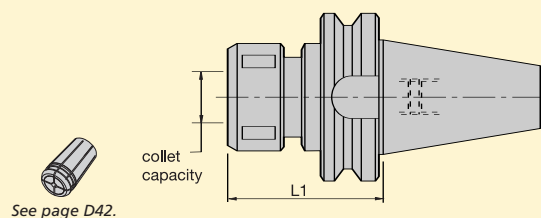


	D1	D6	L1	F3	A	G3
30	1.250 (31,75)	1.811 (46,00)	1.906 (48,40)	.866 (22,00)	.079 (2,00)	M12 thread
35*	1.500 (38,10)	2.087 (53,00)	2.224 (56,50)	.945 (24,00)	.079 (2,00)	M12 thread
40	1.750 (44,45)	2.480 (63,00)	2.575 (65,40)	1.063 (27,00)	.079 (2,00)	M16 thread
45	2.250 (57,15)	3.346 (85,00)	3.260 (82,80)	1.299 (33,00)	.118 (3,00)	M20 thread
50	2.750 (69,85)	3.937 (100,00)	4.008 (101,80)	1.496 (38,00)	.118 (3,00)	M24 thread

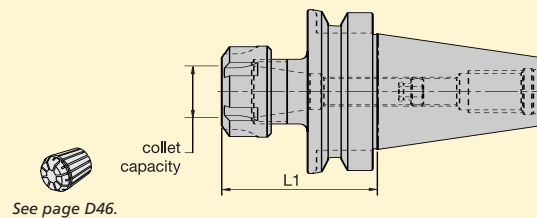
	D	F4 ±.004
30	.157 (4,00)	.827 (21,00)
40	.157 (4,00)	1.063 (27,00)
45	.197 (5,00)	1.378 (35,00)
50	.236 (6,00)	1.654 (42,00)

*Manufactured to MAS-403-1972 standards.

TG Single-Angle Collet Chucks – Metric

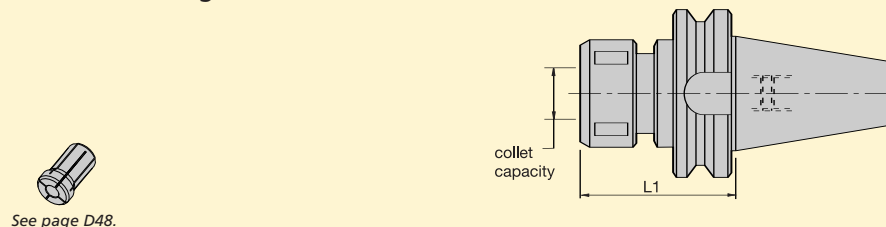


ER Single-Angle Collet Chucks – Metric



	TG Single-Angle Collet Chucks					
	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
	1156351	BT30TG075075M	75TG	2,6	20,0	75
ER Single-Angle Collet Chucks						
	1258023	BT30ER16060M	16ER	0,5	10,0	60
	1021296	BT30ER20060M	20ER	0,5	13,0	60
	1258025	BT30ER25060M	25ER	1,0	16,0	60
	1156350	BT30ER32070M	32ER	2,0	20,0	70

DA Double-Angle Collet Chucks – Metric

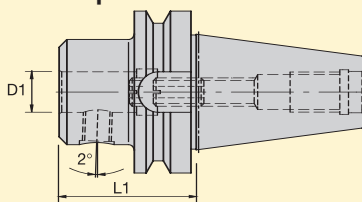


	DA Double-Angle Collet Chucks					
	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
	1258011	BT30DA208060M	200DA	0,2	10,0	60
	1191712	BT30DA188060M	180DA	2,2	20,0	60

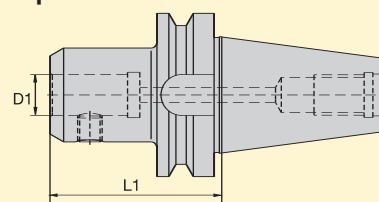
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: **BT30TG075075M**
Order number: **1156351**

Whistle Notch Adapters – Metric



End Mill Adapters



Whistle Notch Adapters – Metric



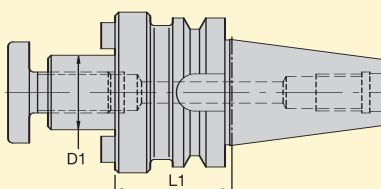
	Order number	Catalog number	D1	L1
Metric				
30	1861102	BT30WN06080M	6	80
30	1861123	BT30WN08080M	8	80
30	2255556	BT30WN10080M	10	80
30	2255557	BT30WN12090M	12	90
30	2255558	BT30WN14090M	14	90
30	2255559	BT30WN16090M	16	90

End Mill Adapters

Inch				
30	2249689	BT30EM012236	1/8	2.36
30	2249690	BT30EM018236	3/16	2.36
30	1258012	BT30EM025236	1/4	2.36
30	2249691	BT30EM031236	5/16	2.36
30	1258013	BT30EM038236	3/8	2.36
30	1258014	BT30EM050236	1/2	2.36
30	1258016	BT30EM062236	5/8	2.36
30	1258017	BT30EM075236	3/4	2.36

Metric				
30	1258015	BT30EM06050M	6	50
30	1258018	BT30EM08060M	8	60
30	1258019	BT30EM10060M	10	60
30	1155346	BT30EM12060M	12	60
30	1258020	BT30EM16060M	16	60
30	1258021	BT30EM20080M	20	80

Shell Mill Adapters



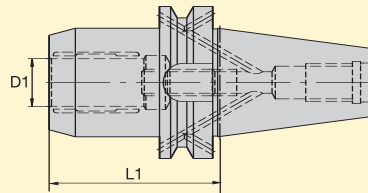
	Order number	Catalog number	D1	L1
Inch				
30	1925467	BT30SM050118	1/2	1.18
30	1258049	BT30SM075118	3/4	1.18
30	1258050	BT30SM100177	1	1.77
Metric				
30	2255553	BT30SM16035M	16	35
30	2255554	BT30SM22040M	22	40
30	2255555	BT30SM27045M	27	45

Order example:
Catalog number: BT30WN06080M
Order number: 1861102

Hydraulic Chucks – BASIC Line



See page D41.

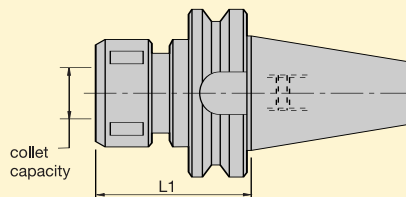


	Order number	Catalog number	D1	L1
Inch 40	2263074	BT40BHC075374	3/4	3.74
Metric 40	1599687	BT40BHC20095M	20	95

TG Single-Angle Collet Chucks – Metric



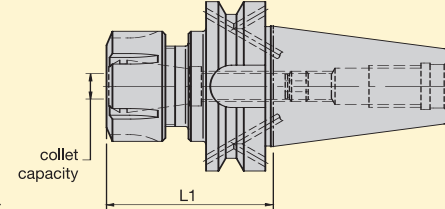
See page D42.



ER Single-Angle Collet Chucks – Metric



See page D46.



TG Single-Angle Collet Chucks						
	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Metric 40	1156366	BT40TG075070M	75TG	2,6	20,0	70
40	1156367	BT40TG100080M	100TG	2,6	25,5	80
40	1191754	BT40TG100100M	100TG	2,6	25,5	100
40	1191755	BT40TG100150M	100TG	2,6	25,5	150
40	1191756	BT40TG150110M	150TG	11,6	40,0	110
ER Single-Angle Collet Chucks						
	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Metric 40	1315660	BT40BER16060M	16ER	0,5	10,0	60
40	1623345	BT40BER16120M	16ER	0,5	10,0	120
40	1718315	BT40BER25070M	25ER	1,0	16,0	70
40	1610709	BT40BER25120M	25ER	1,0	16,0	120
40	1538985	BT40BER32070M	32ER	2,0	20,0	70
40	1538986	BT40BER32120M	32ER	2,0	20,0	120
40	1871535	BT40BER40080M	40ER	3,0	26,0	80
40	1871538	BT40BER40120M	40ER	3,0	26,0	120

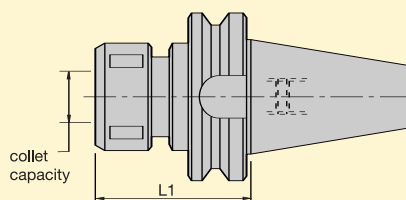
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: BT40BHC075374
Order number: 2263074

DA Double-Angle Collet Chucks – Metric

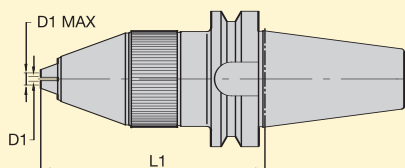


See page D48.

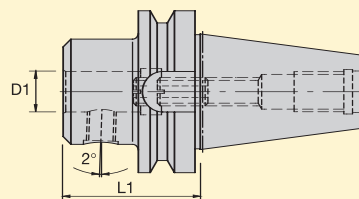


	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Metric						
40	1191725	BT40DA208070M	200DA	0,2	10,0	70
40	1191722	BT40DA108070M	100DA	1,7	14,0	70
40	1191723	BT40DA188070M	180DA	2,2	20,0	70
40	1258159	BT40DA188100M	180DA	2,2	20,0	100
40	1191724	BT40DA188150M	180DA	2,2	20,0	150

Drill Chucks – Metric



Whistle Notch Adapters – Metric

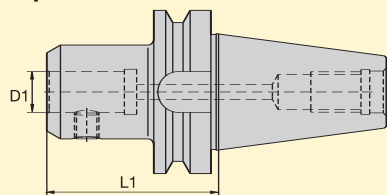


Drill Chucks					
	Order number	Catalog number	D1	D1 max.	L1
Metric					
40	1131693	BT40REX1396M	1,0	13	103,5
40	1131713	BT40REX16112M	2,5	16	119,5
Whistle Notch Adapters					
Metric					
40	1126481	BT40BWN06050M	6	–	50
40	1126482	BT40BWN08050M	8	–	50
40	1126850	BT40BWN10063M	10	–	63
40	1126483	BT40BWN12063M	12	–	63
40	1126844	BT40BWN14063M	14	–	63
40	1126845	BT40BWN16063M	16	–	63
40	1126846	BT40BWN18063M	18	–	63
40	1126847	BT40BWN20063M	20	–	63
40	1126479	BT40BSWN25075M	25	–	75
40	1126848	BT40BWN25090M	25	–	90
40	1126480	BT40BSWN32075M	32	–	75
40	1126849	BT40BWN32100M	32	–	100

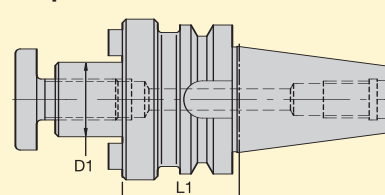
Order example:
Catalog number: **BT40DA208070M**
Order number: **1191725**



End Mill Adapters



Shell Mill Adapters

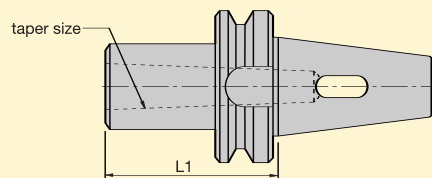


End Mill Adapters				
	Order number	Catalog number	D1	L1
Inch				
40	1258164	BT40EM025255	1/4	2.55
40	1258165	BT40EM031255	5/16	2.55
40	1258166	BT40EM038255	3/8	2.55
40	1026620	BT40EM050255	1/2	2.55
40	1064863	BT40EM050400	1/2	4.00
40	1258176	BT40EM062255	5/8	2.55
40	1084589	BT40EM075150	3/4	1.50
40	1258177	BT40EM075255	3/4	2.55
40	1258184	BT40EM088335	7/8	3.35
40	1084590	BT40EM100162	1	1.63
40	1150875	BT40EM100374	1	3.74
40	1064864	BT40EM100500	1	5.00
40	1084591	BT40EM125250	1 1/4	2.50
40	1258194	BT40EM125335	1 1/4	3.35
Metric				
40	1126852	BT40BEM08050M	8	50
40	1126853	BT40BEM10063M	10	63
40	1127275	BT40BEM12063M	12	63
40	1126914	BT40BEM14063M	14	63
40	1126915	BT40BEM16063M	16	63
40	1126916	BT40BEM18063M	18	63
40	1126917	BT40BEM20063M	20	63
40	1126478	BT40BEM25090M	25	90
Shell Mill Adapters				
Inch				
40	1925468	BT40SM050177	1/2	1.77
40	1925469	BT40SM050400	1/2	4.00
40	1258302	BT40SM075177	3/4	1.77
40	1018488	BT40SM075400	3/4	4.00
40	1018487	BT40SM075600	3/4	6.00
40	1104312	BT40SM100177	1	1.77
40	1018492	BT40SM100400	1	4.00
40	1018490	BT40SM100600	1	6.00
40	1026619	BT40SM125236	1 1/4	2.36
40	1018486	BT40SM125500	1 1/4	5.00
40	1191740	BT40SM150236	1 1/2	2.36
Metric				
40	1191741	BT40SM16050M	16	50
40	1156365	BT40SM22055M	22	55
40	1191743	BT40SM22100M	22	100
40	1191744	BT40SM27055M	27	55
40	1191746	BT40SM27100M	27	100
40	1191747	BT40SM32060M	32	60
40	1191748	BT40SM32100M	32	100
40	1191749	BT40SM40060M	40	60
40	1191750	BT40SM40100M	40	100

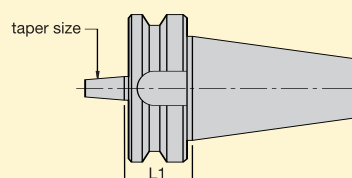
To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: BT40EM025255
Order number: 1258164

Morse Taper Adapters – Metric

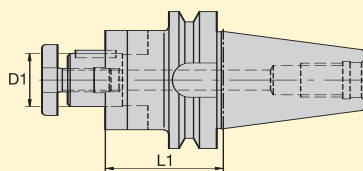


Jacobs Taper Adapters – Metric

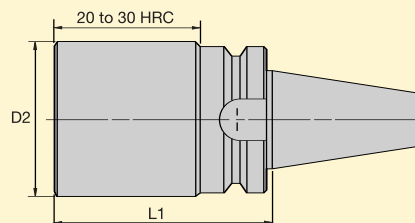


Morse Taper Adapters				
	Order number	Catalog number	Taper Size	L1
Metric				
40	1156364	BT40MT1050M	1	50
40	119135	BT40MT2050M	2	50
40	1191736	BT40MT3070M	3	70
40	1191737	BT40MT4095M	4	95
Jacobs Taper Adapters				
Metric				
40	1156363	BT40JT33045M	33	45,0

Combi Shell Mill Adapters – Metric



Bar Blanks – Metric



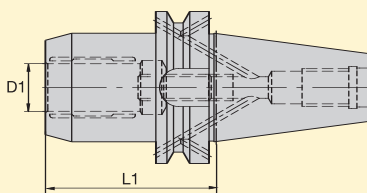
Combi Shell Mill Adapters					
	Order number	Catalog number	D1	D2	L1
Metric					
40	1191713	BT40CS16055M	16	-	55
40	1191714	BT40CS16100M	16	-	100
40	1191715	BT40CS22055M	22	-	55
40	1191716	BT40CS22150M	22	-	150
40	1191717	BT40CS27055M	27	-	55
40	1191718	BT40CS27150M	27	-	150
40	1191719	BT40CS32060M	32	-	60
40	1191720	BT40CS32150M	32	-	150
40	1191721	BT40CS40080M	40	-	80
Bar Blanks					
Metric					
40	1258122	BT40BB104200M	-	104	200

Order example:
Catalog number: **BT40MT1050M**
Order number: **1156364**

Hydraulic Chucks – BASIC Line



See page D41.

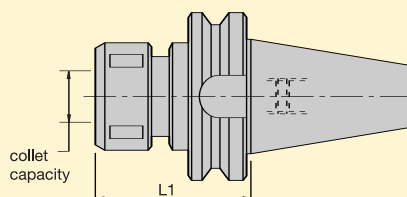


	Order number	Catalog number	D1	L1
Inch				
50	2263082	BT50BHC8075413	3/4	4.13
Metric				
50	1599688	BT50BHC820105M	20	105

TG Single-Angle Collet Chucks – Metric



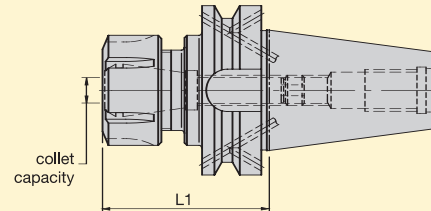
See page D42.



ER Single-Angle Collet Chucks – Metric



See page D46.



TG Single-Angle Collet Chucks						
	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Metric						
50	1156372	BT50TG100090M	100TG	2,6	25,5	90
50	1188173	BT50TG100150M	100TG	2,6	25,5	150
50	1188172	BT50TG100200M	100TG	2,6	25,5	200
50	1191801	BT50TG150100M	150TG	11,6	40,0	100
50	1258570	BT50TG150150M	150TG	11,6	40,0	150
ER Single-Angle Collet Chucks						
Metric						
50	1586520	BT50ER16100M	16ER	0,5	10,0	100
50	1871539	BT50ER16150M	16ER	0,5	10,0	150
50	1871540	BT50ER25070M	25ER	1,0	16,0	70
50	1871541	BT50ER25150M	25ER	1,0	16,0	150
50	1587031	BT50ER32070M	32ER	2,0	20,0	70
50	1729881	BT50ER32150M	32ER	2,0	20,0	150
50	1556433	BT50ER40080M	40ER	3,0	26,0	80
50	1187371	BT50ER40150M	40ER	3,0	26,0	150

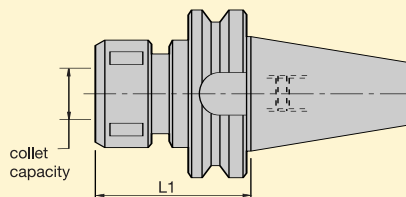
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: BT50BHC8075413
Order number: 2263082

DA Double-Angle Collet Chucks – Metric

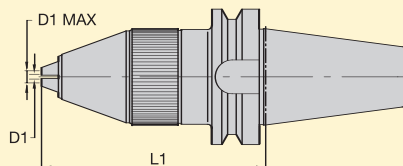


See page D48.

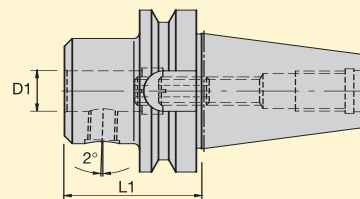


	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Metric						
50	1191767	BT50DA188070M	180DA	2,2	20,0	70
50	1197722	BT50DA188150M	180DA	2,2	20,0	150
50	1258441	BT50DA188200M	180DA	2,2	20,0	200

Drill Chucks – Metric



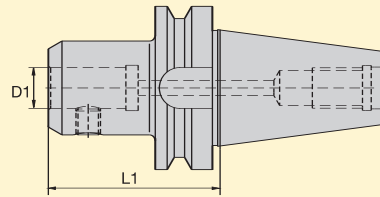
Whistle Notch Adapters – Metric



	Order number	Catalog number	D1	D1 max.	L1
Drill Chucks					
Metric					
50	1131734	BT50REX1396M	1,0	13	114,5
50	1131738	BT50REX16112M	2,5	16	130,5
Whistle Notch Adapters –Metric					
Metric					
50	1175468	BT50BWN06063M	6	-	63
50	1300426	BT50BWN08063M	8	-	63
50	1137510	BT50BWN10063M	10	-	63
50	1137518	BT50BWN12080M	12	-	80
50	1137526	BT50BWN14080M	14	-	80
50	1137535	BT50BWN16080M	16	-	80
50	1137543	BT50BWN18080M	18	-	80
50	1137550	BT50BWN20080M	20	-	80
50	1134607	BT50BSWN25075M	25	-	75
50	1137558	BT50BWN25100M	25	-	100
50	1134608	BT50BSWN32075M	32	-	75
50	1137576	BT50BWN32105M	32	-	105

Order example:
Catalog number: **BT50DA188070M**
Order number: **1191767**

End Mill Adapters



	Order number	Catalog number	D1	L1
Inch				
50	1258444	BT50EM050295	1/2	2.95
50	1258447	BT50EM075295	3/4	2.95
50	1258450	BT50EM100413	1	4.13
50	1258451	BT50EM100600	1	6.00
50	1258456	BT50EM125413	1 1/4	4.13
50	1258457	BT50EM125600	1 1/4	6.00
50	1258459	BT50EM150413	1 1/2	4.13
50	1232393	BT50EM200531	2	5.31
Metric				
50	1191769	BT50EM06063M	6	63
50	1258446	BT50EM06150M	6	150
50	1191770	BT50EM08063M	8	63
50	1191771	BT50EM10080M	10	80
50	1258453	BT50EM10100M	10	100
50	1191772	BT50EM12080M	12	80
50	1191773	BT50EM16080M	16	80
50	1191774	BT50EM20080M	20	80
50	1191776	BT50EM25105M	25	105
50	1156369	BT50EM32105M	32	105
50	1191777	BT50EM40120M	40	120
50	1258473	BT50EM50130M	50	130

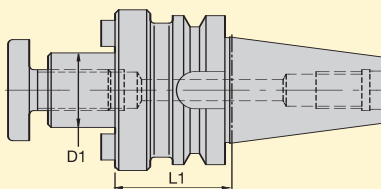
Heat up your profits...Shrink your costs!



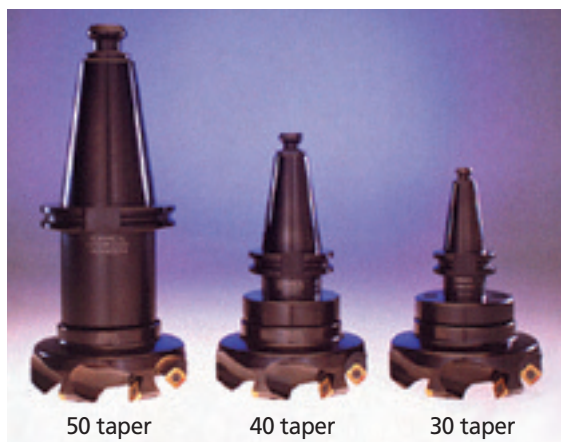
- Concentricity less than .0001 (0,003 mm) can be achieved.
- Strong gripping forces...one of the strongest cutting tool clamping systems available today
- Excellent rigidity
- Great for roughing and finishing operations
- Best toolholder design for high-speed machining
- Axial adjustment with through-coolant capability
- If the Kennametal induction heater unit is used properly, one toolholder with 1/4" (6 mm) bore and higher can withstand over 5,000 cutting tool changes.

Order example:
Catalog number: **BT50EM050295**
Order number: **1258444**

Shell Mill Adapters



	Order number	Catalog number	D1	L1
Inch				
50	1925470	BT50SM050177	1/2	1.77
50	1087398	BT50SM050400	1/2	4.00
50	1925471	BT50SM075177	3/4	1.77
50	1925472	BT50SM075400	3/4	4.00
50	1925513	BT50SM100177	1	1.77
50	1925514	BT50SM100400	1	4.00
50	1258537	BT50SM125177	1 1/4	1.77
50	1925515	BT50SM125400	1 1/4	4.00
50	1064918	BT50SM150177	1 1/2	1.77
50	1925516	BT50SM150400	1 1/2	4.00
50	1258541	BT50SM200236	2	2.36
50	1925517	BT50SM200400	2	4.00
50	1925518	BT50SM250236	1 1/2	2.36
50	1925519	BT50SM250400	2 1/2	4.00
Metric				
50	1258538	BT50SM16045M	16	45
50	1191789	BT50SM22045M	22	45
50	1191790	BT50SM22100M	22	100
50	1228269	BT50SM22150M	22	150
50	1322082	BT50SM22160M	22	160
50	1191791	BT50SM27045M	27	45
50	1556919	BT50SM27060M	27	60
50	1191792	BT50SM27100M	27	100
50	1258547	BT50SM27150M	27	150
50	1191793	BT50SM32045M	32	45
50	1191794	BT50SM32100M	32	100
50	1258551	BT50SM32150M	32	150
50	1191795	BT50SM40050M	40	50
50	1191796	BT50SM40100M	40	100
50	1258555	BT50SM40150M	40	150
50	1191797	BT50SM60090M	60	90



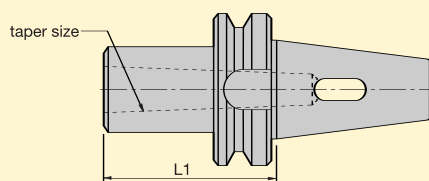
Taper Size

Realistic tooling decisions need to be made based on your machine's taper size. When choosing cutting parameters, realize that a machine with a 30 taper spindle will not be able to achieve the same heavy cuts or use as large a cutter as a 50 taper machine.

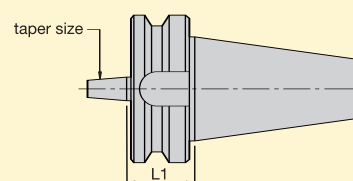
Shown are four-inch diameter cutters mounted to 50, 40, and 30 taper adapters. It's unrealistic to try to achieve the same heavy cut with the 30 taper as you can with a 50 taper.

Order example:
Catalog number: **BT50SM050177**
Order number: **1925470**

Morse Taper Adapters – Metric

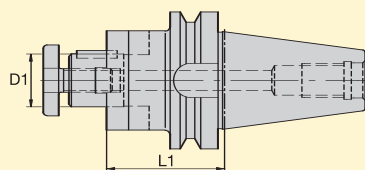


Jacobs Taper Adapters – Metric

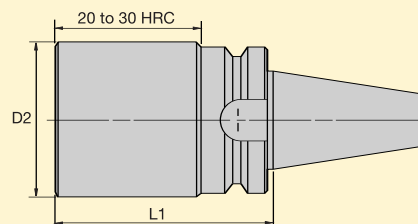


Morse Taper Adapters				
	Order number	Catalog number	Taper Size	L1
Metric 50	1191785	BT50MT5105M	5	105
Jacobs Taper Adapters				
Metric 50	1258492	BT50JT33041M	33	41,1

Combi Shell Mill Adapters – Metric



Bar Blanks



Combi Shell Mill Adapters					
	Order number	Catalog number	D1	D2	L1
Metric 50	1258428	BT50CS16070M	16	-	70
50	1258431	BT50CS16150M	16	-	150
50	1191760	BT50CS22070M	22	-	70
50	1258433	BT50CS22150M	22	-	150
50	1191761	BT50CS22200M	22	-	200
50	1191762	BT50CS27070M	27	-	70
50	1258435	BT50CS27150M	27	-	150
50	1191763	BT50CS32070M	32	-	70
50	1258437	BT50CS32150M	32	-	150
50	1191764	BT50CS40070M	40	-	70
50	1191765	BT50CS40150M	40	-	150
50	1258438	BT50CS40200M	40	-	200
50	1258439	BT50CS50075M	50	-	75
50	1191766	BT50CS50150M	50	-	150
Bar Blanks					
Metric 50	1258386	BT50BB134250M	-	134	250

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: **BT50MT5105M**
Order number: **1191785**



- Meets or exceeds DIN69871 specifications and all current standard updates.
- The 7/24 shank cones are produced to the highest industry standards, per ISO-1947. With a taper accuracy of AT3 or better, an optimum fit between spindle and toolholder is provided.
- Essential surfaces are not black-oxidized, which provides better fitments.
- All non-critical surfaces are black-oxidized, except for the high-performance toolholders.
- Wherever the toolholder design allows, through coolant is a standard feature.
- Depending on application and symmetry of toolholder assembly (toolholder, components, retention knob, collets, cutting tools, etc.) DV40 and DV50 toolholders will perform effectively up to 10,000 rpm before the complete toolholder assembly needs to be balanced. At speeds above 10,000 rpm, Kennametal recommends that the toolholder assembly be balanced.

IMPORTANT!

- All critical surfaces must be protected from damage. Neglect from dings and scratches will impair accuracy and performance.
- All assembly components must be clean. Never overtighten the components; this can permanently destroy the function and accuracy of the toolholder.

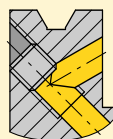
For retention knobs, please see page D50.



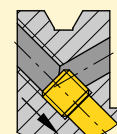
Form B coolant

Some toolholders are equipped with the form B coolant-style feature.

CAUTION!

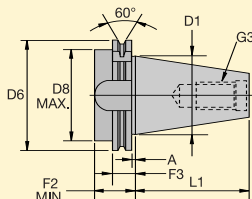


Toolholders are factory set to the form B coolant supply position. When relocating coolant position screws, use of a removable liquid (small screw thread locker) is recommended.

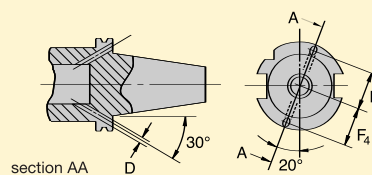


Possible variation of coolant supply to DIN 69871 form AD; tightening screws will stop coolant from escaping through the flange.

DIN 69871 DV Form A



DIN 69871 DV Form B – Flange Coolant Entry Ports



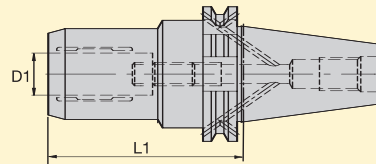
	D1	D6	D8 Max.	L1	F2 min.	F3	A	G3
30	1.250 (31,75)	1.967 (49,95)	1.772 (45,00)	1.876 (47,65)	1.378 (35,00)	.750 (19,05)	.126 (3,20)	M12 thread
40	1.750 (44,45)	2.480 (63,00)	1.969 (50,00)	2.687 (68,25)	1.378 (35,00)	.750 (19,05)	.126 (3,20)	M16 thread
45	2.250 (57,15)	3.228 (82,00)	2.480 (63,00)	3.250 (82,55)	1.378 (35,00)	.750 (19,05)	.126 (3,20)	M20 thread
50	2.750 (69,85)	3.837 (97,45)	3.150 (80,00)	4.000 (101,60)	1.378 (35,00)	.750 (19,05)	.126 (3,20)	M24 thread

	D	F4 ±.004
30	.157 (4,00)	.827 (21,00)
40	.157 (4,00)	1.063 (27,00)
45	.197 (5,00)	1.378 (35,00)
50	.236 (6,00)	1.654 (42,00)

Hydraulic Chucks – BASIC Line – Metric



See page D41.

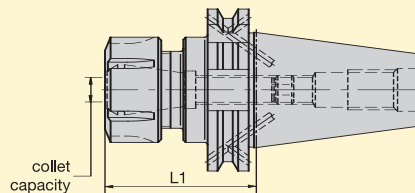


	Order number	Catalog number	D1	L1
Metric 40	1599399	DV40BHC20082M	20	82

ER Single-Angle Collet Chucks – Metric



See page D46.

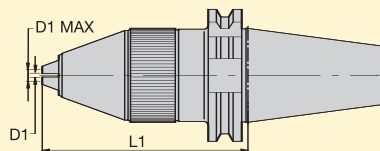


	Order number	Catalog number	Collet Series	Collet Capacity		L1
Metric				min.	max.	
40	1770957	DV40BER16070M	16ER	0,5	10,0	70
40	1770958	DV40BER16120M	16ER	0,5	10,0	120
40	1263807	DV40BER25065M	25ER	1,0	16,0	65
40	1263808	DV40BER25120M	25ER	1,0	16,0	120
40	1263809	DV40BER32070M	32ER	2,0	20,0	70
40	1263810	DV40BER32120M	32ER	2,0	20,0	120
40	1263811	DV40BER40080M	40ER	3,0	26,0	80
40	1263812	DV40BER40120M	40ER	3,0	26,0	120

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

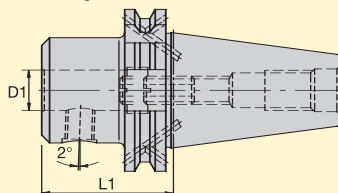
Order example:
Catalog number: DV40BHC20082M
Order number: 1599399

Drill Chucks – Metric

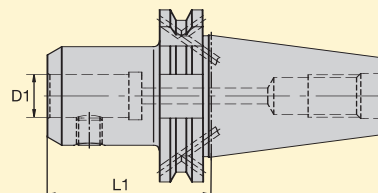


	Order number	Catalog number	D1	D1 max.	L1
Metric					
40	1124477	DV40REX1396M	1,0	13	95,5
40	1124486	DV40REX16112M	2,5	16	109,5

Whistle Notch Adapters – Metric



End Mill Adapters – Metric



Whistle Notch Adapters

	Order number	Catalog number	D1	L1
Metric				
40	1135194	DV40BWN06050M	6	50
40	1135203	DV40BWN08050M	8	50
40	1135210	DV40BWN10050M	10	50
40	1135219	DV40BWN12050M	12	50
40	1135227	DV40BWN14050M	14	50
40	1135245	DV40BWN16063M	16	63
40	1135255	DV40BWN18063M	18	63
40	1135265	DV40BWN20063M	20	63
40	1134537	DV40BSWN25075M	25	75
40	1135273	DV40BWN25100M	25	100
40	1134538	DV40BSWN32075M	32	75
40	1135282	DV40BWN32100M	32	100

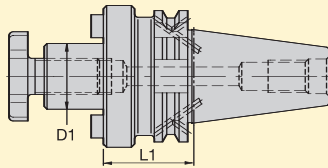
End Mill Adapters

Metric				
40	1263781	DV40BEM06050M	6	50
40	1263784	DV40BEM08050M	8	50
40	1263787	DV40BEM10050M	10	50
40	1263790	DV40BEM12050M	12	50
40	1263796	DV40BEM16063M	16	63
40	1263799	DV40BEM20063M	20	63
40	1156378	DV40BEM25100M	25	100
40	1237816	DV40BEM32100M	32	100

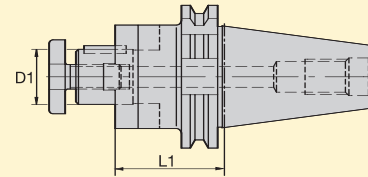
Order example:
Catalog number: **DV40REX1396M**
Order number: **1124477**



Shell Mill Adapters – Metric



Combi Shell Mill Adapters – Metric



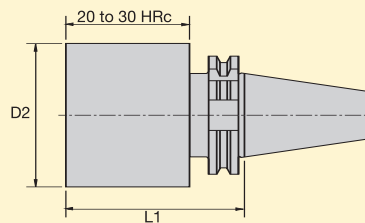
Shell Mill Adapters

	Order number	Catalog number	D1	L1
Metric				
40	1839491	DV40BSM22035M	22	35
40	1839565	DV40BSM22100M	22	100
40	1839492	DV40BSM27035M	27	35
40	1839566	DV40BSM27100M	27	100
40	1839489	DV40BSM32050M	32	50
40	1839567	DV40BSM32100M	32	100
40	1839564	DV40BSM40050M	40	50
40	1839568	DV40BSM40100M	40	100

Combi Shell Mill Adapters

Metric				
40	1263828	DV40CS16055M	16	55
40	1191920	DV40CS16100M	16	100
40	1236436	DV40CS22055M	22	55
40	1191921	DV40CS22100M	22	100
40	1156379	DV40CS27055M	27	55
40	1263832	DV40CS27100M	27	100
40	1263833	DV40CS27150M	27	150
40	1191922	DV40CS32060M	32	60
40	1263835	DV40CS32100M	32	100
40	1191923	DV40CS40060M	40	60

Bar Blanks – Metric



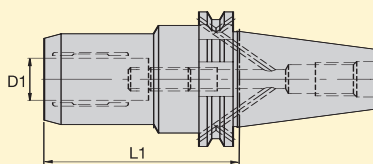
	Order number	Catalog number	D2	L1
Metric				
40	1263773	DV40BB063280M	63	280
40	1263774	DV40BB082280M	82	280
40	1263775	DV40BB104200M	104	200

Order example:
Catalog number: DV40BSM22035M
Order number: 1839491

Hydraulic Chuck – BASIC Line – Metric



See page D41.

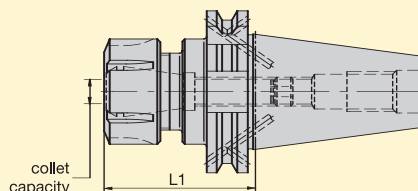


	Order number	Catalog number	D1	L1
Metric				
50	1599686	DV50BHC20082M	20	82

ER Single-Angle Collet Chucks – Metric



See page D46.



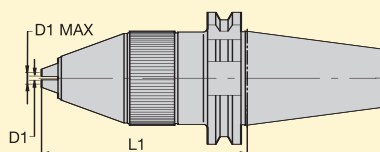
	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Metric						
50	1748235	DV50BER16100M	16ER	0,5	10,0	100
50	1972537	DV50BER16150M	16ER	0,5	10,0	150
50	1264126	DV50BER25070M	25ER	1,0	16,0	70
50	1264127	DV50BER25150M	25ER	1,0	16,0	150
50	1264128	DV50BER32070M	32ER	2,0	20,0	70
50	1264129	DV50BER32150M	32ER	2,0	20,0	150
50	1264130	DV50BER40080M	40ER	3,0	26,0	80
50	1264132	DV50BER40150M	40ER	3,0	26,0	150

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: **DV50BHC20082M**
Order number: **1599686**

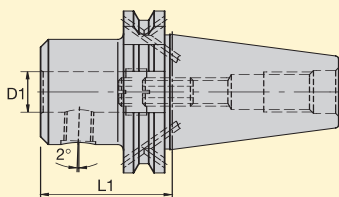


Drill Chucks

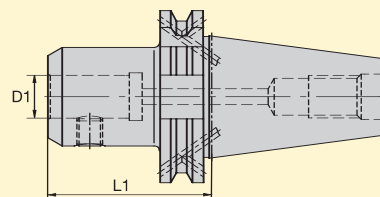


	Order number	Catalog number	D1	D1 max.	L1
					
Metric					
50	1156398	DV50REX1396M	1,0	13	95,5
50	1133416	DV50REX16112M	2,5	16	111,5

Whistle Notch Adapters – Metric



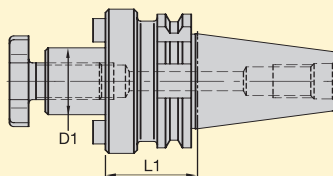
End Mill Adapters – Metric



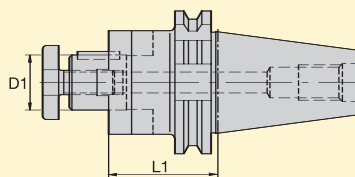
	Order number	Catalog number	D1	L1
				
Metric				
50	1136755	DV50BWN06063M	6	63
50	1136774	DV50BWN08063M	8	63
50	1136783	DV50BWN10063M	10	63
50	1191334	DV50BWN12063M	12	63
50	1136800	DV50BWN14063M	14	63
50	1136806	DV50BWN16063M	16	63
50	1136814	DV50BWN18063M	18	63
50	1136823	DV50BWN20063M	20	63
50	1134539	DV50BSWN25070M	25	70
50	1136842	DV50BWN25080M	25	80
50	1134540	DV50BSWN32070M	32	70
50	1136851	DV50BWN32100M	32	100
End Mill Adapters				
Metric				
50	1264207	DV50EM06063M	6	63
50	1264208	DV50EM06150M	6	150
50	1264210	DV50EM08063M	8	63
50	1264212	DV50EM08150M	8	150
50	1264214	DV50EM10063M	10	63
50	1264216	DV50EM10150M	10	150
50	1191975	DV50EM12063M	12	63
50	1264219	DV50EM12150M	12	150
50	1191976	DV50EM16063M	16	63
50	1189666	DV50EM16150M	16	150
50	1264225	DV50EM20063M	20	63
50	1152193	DV50EM20150M	20	150
50	1191977	DV50EM25080M	25	80
50	1191978	DV50EM32100M	32	100
50	1264239	DV50EM40110M	40	110
50	1191979	DV50EM50120M	50	120

Order example:
Catalog number: DV50REX1396M
Order number: 1156398

Shell Mill Adapters – Metric

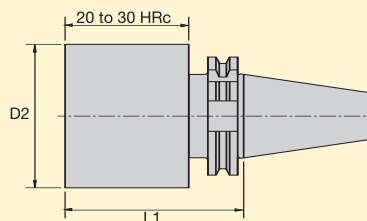


Combi Shell Mill Adapters – Metric



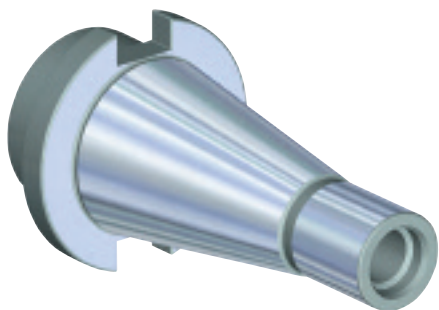
Shell Mill Adapters				
	Order number	Catalog number	D1	L1
Metric				
50	1264293	DV50SM16035M	16	35
50	1191990	DV50SM22035M	22	35
50	1156400	DV50SM22100M	22	100
50	1243965	DV50SM22150M	22	150
50	1191991	DV50SM27035M	27	35
50	1191992	DV50SM27100M	27	100
50	1264311	DV50SM27150M	27	150
50	1191993	DV50SM32035M	32	35
50	1264317	DV50SM32100M	32	100
50	1264318	DV50SM32150M	32	150
50	1104327	DV50SM40050M	40	50
50	1191994	DV50SM40100M	40	100
50	1191995	DV50SM40150M	40	150
50	1191996	DV50SM60070M	60	70
Combi Shell Mill Adapters				
Metric				
50	1264174	DV50CS16055M	16	55
50	1191972	DV50CS22055M	22	55
50	1264181	DV50CS22100M	22	100
50	1236218	DV50CS22150M	22	150
50	1191973	DV50CS27055M	27	55
50	1264185	DV50CS27100M	27	100
50	1264186	DV50CS27150M	27	150
50	1191974	DV50CS32055M	32	55
50	1264188	DV50CS32100M	32	100
50	1264189	DV50CS32150M	32	150
50	1188351	DV50CS40055M	40	55
50	1232559	DV50CS40100M	40	100
50	1264192	DV50CS40150M	40	150
50	1264194	DV50CS50075M	50	75
50	1264195	DV50CS50150M	50	150

Bar Blanks – Metric



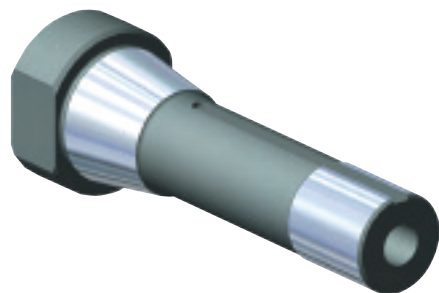
	Order number	Catalog number	D2	L1
Metric				
50	1264076	DV50BB104350M	104	350
50	1123987	DV50BB134250M	134	250

Order example:
Catalog number: **DV50SM16035M**
Order number: **1264293**



Quick Change 30, 40 & 50 Taper Sizes

- Quick-change (QC) shank design is similar to and interchangeable with NMTB shank tooling.
- Hub at the tail end of the taper cone houses the machine's draw bar bolt.
- Drive flange faces are precision ground to accommodate QC locknuts.
- QC locknuts can be retrofitted to manual-loading milling machine spindles to convert them to quick-change systems.
- Tapers are similar to the 7/24 shank cones of the CV, BT and DV tooling.
- Tapers are manufactured to the highest industry standards per ISO-1947.
- Taper accuracy provides optimum fit between spindle and toolholder.



R8 Taper Shank Tooling

- Locking groove aligns into a locking mechanism when inserted into the spindle.
- Milling machine draw bar bolt draws the tool into the spindle for a secure connection.



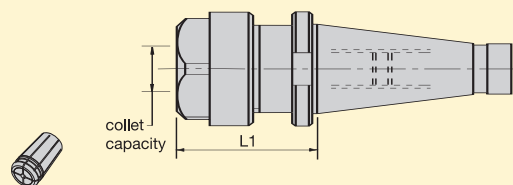
Straight Shank Tooling

- Ideal for extending tool to get to those hard-to-reach spots that need machined.
- Use in combination with other toolholder and adapter systems.

General Notes:

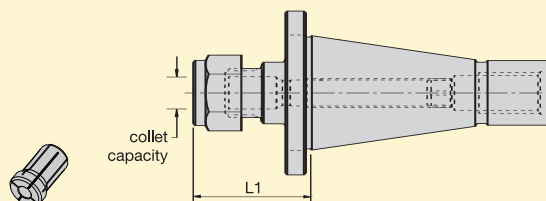
- All non-critical surfaces are black-oxide.
- Coolant is standard feature as enabled by toolholder design.
- Collets, QC, R8, and straight shank toolholders perform effectively up to 8,000 rpm, depending on the application and unless stated otherwise. Kennametal recommends the toolholder assembly (toolholder, components, collets, cutting tools) be balanced when operating at speeds higher than 8,000 rpm.
- All critical surfaces need to be protected from damage. Neglect from dings and scratches from cutting edges will impair accuracy and performance.
- Make sure components are clean when assembled.
- Never overtighten toolholders. This can permanently destroy their function and accuracy.

TG Collet Chucks – Inch



See page D42.

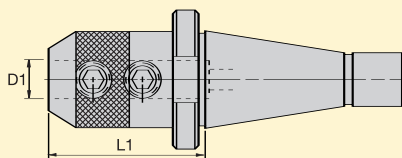
DA Collet Chucks – Inch



See page D48.

	TG Collet Chucks		Collet Series	Collet Capacity		L1
	Order number	Catalog number		min.	max.	
Inch						
30	1025640	QC30TG075253	75TG	3/64	3/4	2.53
30	1025641	QC30TG100394	100TG	5/64	1	3.94
DA Collet Chucks						
Inch						
30	1015552	QC30DA308162	300DA	1/64	1/4	1.62
30	1015546	QC30DA208181	200DA	1/64	25/64	1.81
30	1015544	QC30DA108200	100DA	1/64	9/16	2.00
30	1015595	QC30DA188206	180DA	1/64	3/4	2.06

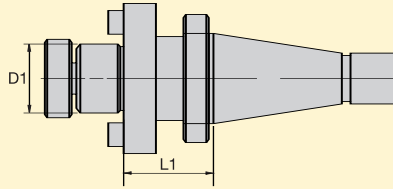
End Mill Adapters – Inch



	Order number	Catalog number	D1	L1
Inch				
30	1018668	QC30EM018175	3/16	1.75
30	1018242	QC30EM025175	1/4	1.75
30	1018669	QC30EM038175	3/8	1.75
30	1018670	QC30EM050175	1/2	1.75
30	1018671	QC30EM062175	5/8	1.75
30	1018672	QC30EM075213	3/4	2.13
30	1018673	QC30EM088250	7/8	2.50
30	1018714	QC30EM100269	1	2.69
30	1018715	QC30EM125363	1 1/4	3.63

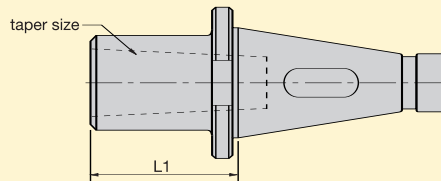
Order example:
Catalog number: QC30TG075253
Order number: 1025640

Shell Mill Adapters – Inch

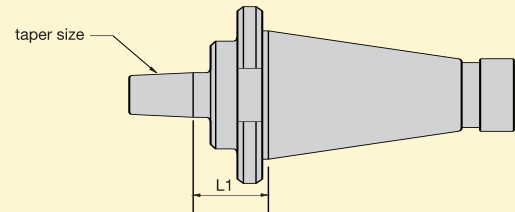


	Order number	Catalog number	D1	L1
Inch				
30	1018716	QC30SM050125	1/2	1.25
30	1018717	QC30SM075131	3/4	1.31
30	1018718	QC30SM100131	1	1.31
30	1018719	QC30SM125144	1 1/4	1.44
30	1018720	QC30SM150156	1 1/2	1.56

Morse Taper Adapters – Inch



Jacobs Taper Adapters – Inch

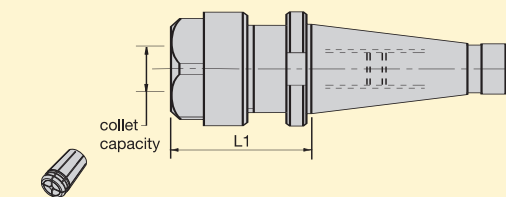


	Morse Taper Adapters			
	Order number	Catalog number	Taper Size	L1
Inch				
30	1018721	QC30MT1100	1	1.00
30	1018722	QC30MT2212	2	2.12
30	1018723	QC30MT3281	3	2.81
	Jacobs Taper Adapters			
Inch				
30	1018774	QC30JT1159	1	.934
30	1018775	QC30JT2181	2	.935
30	1018776	QC30JT3219	3	.971
30	1018779	QC30JT33197	33	.970
30	1018777	QC30JT4262	4	.964
30	1018778	QC30JT6197	6	.970

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

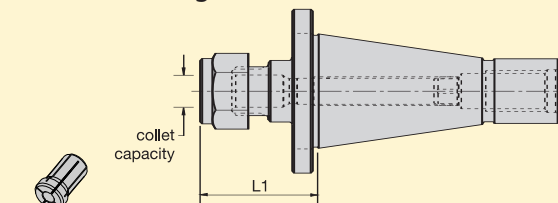
Order example:
Catalog number: **QC30SM050125**
Order number: **1018716**

TG Collet Chucks – Inch



See page D42.

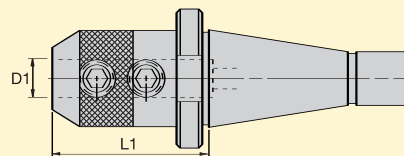
DA Double-Angle Collet Chucks – Inch



See page D48.

	TG Collet Chucks		Collet Series	Collet Capacity		L1
	Order number	Catalog number		min.	max.	
Inch						
40	1025642	QC40TG075211	75TG	3/64	3/4	2.11
40	1025643	QC40TG100255	100TG	5/64	1	2.55
40	1013525	QC40TG150450	150TG	23/64	1 1/2	4.50
DA Double-Angle Collet Chucks						
Inch						
40	1015413	QC40DA308163	300DA	1/64	1/4	1.62
40	1015412	QC40DA208181	200DA	1/64	25/64	1.79
40	1015410	QC40DA108200	100DA	1/64	9/16	2.00
40	1015411	QC40DA188206	180DA	1/64	3/4	2.06

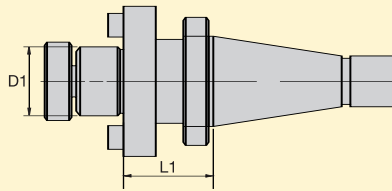
End Mill Adapters – Inch



	Order number	Catalog number	D1	L1
Inch				
40	1018781	QC40EM018231	3/16	2.31
40	1018667	QC40EM025138	1/4	1.38
40	1018782	QC40EM038231	3/8	2.31
40	1018783	QC40EM050231	1/2	2.31
40	1018844	QC40EM062231	5/8	2.31
40	1018845	QC40EM075231	3/4	2.31
40	1018846	QC40EM088294	7/8	2.94
40	1018847	QC40EM100338	1	3.38
40	1018848	QC40EM125369	1 1/4	3.69
40	1019099	QC40EM150395	1 1/2	3.95

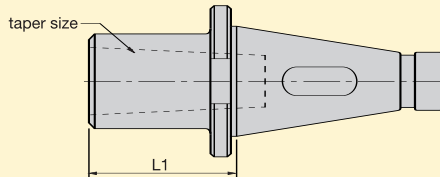
Order example:
Catalog number: **QC40TG075211**
Order number: **1025642**

Shell Mill Adapters – Inch

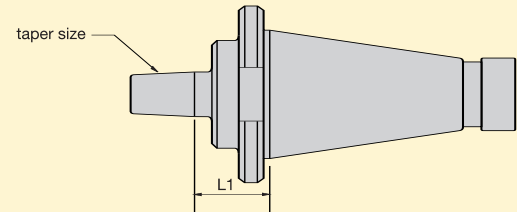


		Order number	Catalog number	D1	L1
Inch					
40		1018849	QC40SM050088	1/2	.88
40		1018850	QC40SM075088	3/4	.88
40		1018851	QC40SM100131	1	1.31
40		1018852	QC40SM125150	1 1/4	1.50
40		1018853	QC40SM150163	1 1/2	1.63
40		1018904	QC40SM200163	2	1.63

Morse Taper Adapters – Inch



Jacobs Taper Adapters – Inch



		Morse Taper Adapters			
		Order number	Catalog number	Taper Size	L1
Inch					
40		1018905	QC40MT1094	1	.94
40		1018906	QC40MT2206	2	2.06
40		1018907	QC40MT3225	3	2.25
40		1018908	QC40MT4306	4	3.06
40		1019097	QC40MT5700	5	7.00
		Jacobs Taper Adapters			
Inch					
40		1018909	QC40JT2188	2	1.005
40		1018910	QC40JT3225	3	1.031
40		1018913	QC40JT33194	33	.940
40		1018911	QC40JT4269	4	1.034
40		1018912	QC40JT6194	6	.940

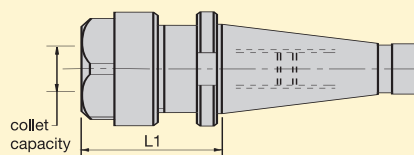
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: **QC40SM050088**
Order number: **1018849**

TG Collet Chucks – Inch

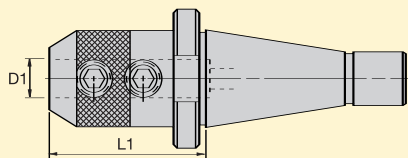


See page D42.

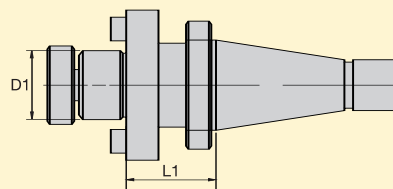


	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Inch						
50	1025798	QC50TG100272	100TG	5/64	1	2.72
50	1013526	QC50TG150284	150TG	23/64	1 1/2	2.84

End Mill Adapters – Inch



Shell Mill Adapters – Inch

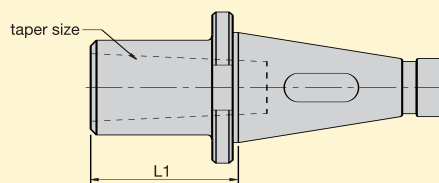


	End Mill Adapters			
	Order number	Catalog number	D1	L1
Inch				
50	1019096	QC50EM038275	3/8	2.75
50	1018979	QC50EM050275	1/2	2.75
50	1019101	QC50EM062275	5/8	2.75
50	1019100	QC50EM075275	3/4	2.75
50	1018980	QC50EM088200	7/8	2.00
50	1018981	QC50EM100306	1	3.06
50	1019102	QC50EM125306	1 1/4	3.06
50	1019145	QC50EM150350	1 1/2	3.50
50	1018982	QC50EM200475	2	4.75
	Shell Mill Adapters			
Inch				
50	1925520	QC50SM050125	1/2	1.25
50	1018983	QC50SM075125	3/4	1.25
50	1019273	QC50SM075600	3/4	6.00
50	1019024	QC50SM100188	1	1.88
50	1019334	QC50SM100600	1	6.00
50	1019335	QC50SM100800	1	8.00
50	1019025	QC50SM125188	1 1/4	1.88
50	1019336	QC50SM125600	1 1/4	6.00
50	1019146	QC50SM150188	1 1/2	1.88
50	1019095	QC50SM200188	2	1.88
50	1019026	QC50SM250200	2 1/2	2.00

Order example:
Catalog number: QC50TG100272
Order number: 1025798



Morse Taper Adapters – Inch



	Order number	Catalog number	Taper Size	L1
Inch				
50	1019027	QC50MT2188	2	1.88
50	1019028	QC50MT3238	3	2.38
50	1019029	QC50MT4325	4	3.25
50	1019030	QC50MT5462	5	4.62

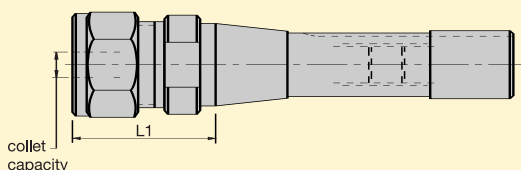
To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: **QC50MT2188**
Order number: **1019027**

DA Double-Angle Collet Chucks – Inch

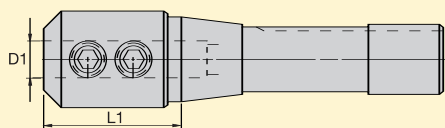


See page D48.

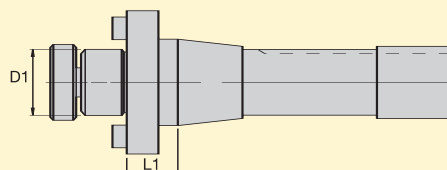


	Order number	Catalog number	Collet Series	Collet Capacity		L1
				min.	max.	
Inch R8	1015548	R8DA188181	180DA	1/64	3/4	1.81

End Mill Adapters – Inch



Shell Mill Adapters – Inch



	End Mill Adapters			
	Order number	Catalog number	D1	L1
Inch				
R8	1286048	R8EM018112	3/16	1.12
R8	1286049	R8EM038100	3/8	1.00
R8	1286050	R8EM050112	1/2	1.12
R8	1286051	R8EM062150	5/8	1.50
R8	1229174	R8EM075262	3/4	2.62
R8	1286052	R8EM088306	7/8	3.06
R8	1286053	R8EM100306	1	3.06
R8	1286054	R8EM125306	1 1/4	3.06
	Shell Mill Adapters			
Inch				
R8	1286058	R8SM050102	1/2	1.02
R8	1286059	R8SM075102	3/4	1.02
R8	1286060	R8SM100102	1	1.02
R8	1286061	R8SM125102	1 1/4	1.02

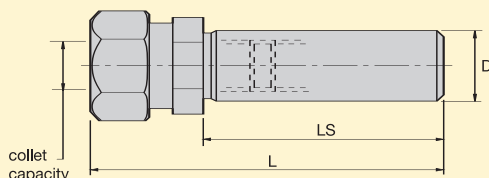
Order example:
Catalog number: **R8DA188181**
Order number: **1015548**



TG Collet Chucks – Inch



See page D42.

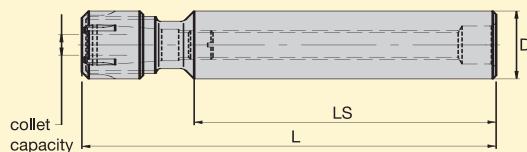


D	Order number	Catalog number	Collet Series	Collet Capacity		L	LS
				min.	max.		
Inch							
1.000	1025637	SS100TG050698G	50TG	3/64	17/32	6.98	5.50
1.000	1082537	SS100TG050719	50TG	3/64	17/32	7.19	5.50
1.250	1025794	SS125TG075850	75TG	1/16	3/4	8.50	6.00
1.500	1025797	SS150TG075775	75TG	1/16	3/4	7.75	6.02
1.500	1025638	SS150TG100925	100TG	3/32	1	9.25	6.00
1.750	1025796	SS175TG100819	100TG	3/32	1	8.19	6.02
2.000	1025795	SS200TG100819	100TG	3/32	1	8.19	6.02

ER Single-Angle Collet Chucks



See page D46.



D	Order number	Catalog number	Collet Series	Collet Capacity		L	LS
				min.	max.		
Inch							
.375	1021460	SS038ER08500	8ER	.020	.197	5.00	4.14
.500	1021462	SS050ER11700	11ER	.020	.276	7.00	5.51
.750	1021494	SS075ER16700	16ER	.020	.406	7.00	5.51
1.000	1021496	SS100ER20700	20ER	.020	.512	7.00	5.51
1.000	1021498	SS100ER25750	25ER	.040	.630	7.50	5.69
Metric							
12,0	1288261	SS120ER11107M	11ER	0,5	7,0	107,0	80,0
16,0	1288285	SS160ER11132M	11ER	0,5	7,0	132,0	100,0
20,0	1125015	SS200ER16182M	16ER	0,5	10,0	182,0	140,0
20,0	1288303	SS200ER25146M	25ER	1,0	16,0	146,0	100,0
20,0	1288304	SS200ER32154M	32ER	2,0	20,0	154,0	100,0
25,0	1288321	SS250ER20190M	20ER	0,5	13,0	190,0	150,0

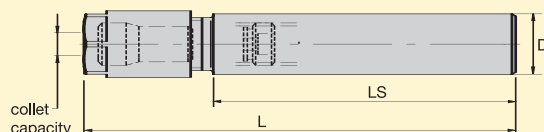
To place an order, contact your authorized
Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: **SS100TG050698G**
Order number: **1025637**

DA 04-Style Double-Angle Collet Chucks



See page D48.



D	Order number	Catalog number	Collet Series	Collet Capacity		L	LS
				min.	max.		
Inch							
.500	1015308	SS050DA304438	300DA	1/64	1/4	4.38	3.00
.500	1015311	SS050DA304681	300DA	1/64	1/4	6.81	5.42
.750	1015334	SS075DA204469	200DA	1/64	25/64	4.69	3.03
.750	1015337	SS075DA204712	200DA	1/64	25/64	7.12	5.50
1.000	1015338	SS100DA104488	100DA	1/64	9/16	4.88	2.97
1.000	1015342	SS100DA104731	100DA	1/64	9/16	7.31	5.40
1.250	1015517	SS125DA184738	180DA	1/64	3/4	7.38	5.41
Metric							
12,5	1015037	SS125DA304109M	300DA	0,2	6,0	109,0	72,4
12,5	1015038	SS125DA304173M	300DA	0,2	6,0	173,0	136,4
19,0	1015034	SS190DA204117M	200DA	0,2	10,0	117,0	73,9
19,0	1015013	SS190DA204181M	200DA	0,2	10,0	181,0	137,9
20,0	1015035	SS200DA204117M	200DA	0,2	10,0	117,0	73,9
20,0	1015036	SS200DA204181M	200DA	0,2	10,0	181,0	137,9
25,0	1015011	SS250DA104122M	100DA	1,7	14,0	122,0	72,9
25,0	1015012	SS250DA104186M	100DA	1,7	14,0	186,0	136,9

Toolholders and Adapters: Tech Tips

The toolholder and adapter are a crucial component of the complete machining setup, where any problem in this area could ruin a workpiece. Please review the following areas of concern:

Cleanliness

Mounting surfaces of toolholders and adapters must be clean and free of any nicks or gouges that might affect radial and or axial runout.

Storage

Toolholders and adapters should always be stored safely in a dry, clean atmosphere, where the mounting surfaces are protected and not allowed to be damaged by rolling around.

Toolholder and Adapter Length

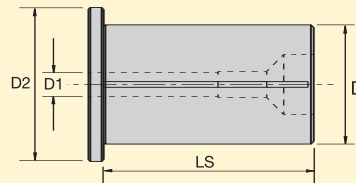
Always use the shortest possible shell mill, end mill, or collet-style adapter to obtain the best possible rigidity. Deep-pocket milling may require longer adapters, which in turn require lower speed, feed rates, and depth-of-cut to eliminate chatter.

Order example:
Catalog number: **SS050DA304438**
Order number: **1015308**



Collets and Sleeves

HC Hydraulic Chuck Sleeves



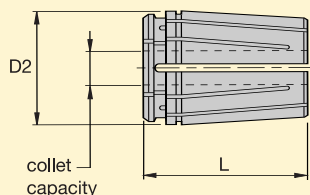
	12HC D = 12 mm D2 = 21 mm LS = 41,5 mm		20HC D = 20 mm D2 = 29 mm LS = 46,5 mm		32HC D = 32 mm D2 = 41 mm LS = 57,5 mm	
D1	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number
Metric with Metric Bores						
3,0	1984810	280.476	1984811	280.475		
4,0	1156790	280.473	1156793	280.474		
6,0	1125003	280.455	1125021	280.458		
8,0	1156792	280.456	1156804	280.459		
10,0	1125014	280.457	1156805	280.460		
12,0			1156416	280.461		
14,0			1156806	280.462		
16,0			1125040	280.463	1125047	280.469
18,0					1156807	280.470
20,0					1156808	280.471
25,0					1125057	280.472
Metric with Inch Bores						
3/16			1093566	20HCM0188		
1/4			1093567	20HCM0250		
5/16			1093568	20HCM0312		
3/8			1093569	20HCM0375		
7/16			1093570	20HCM0438		
1/2			1093571	20HCM0500	1093594	32HCM0500
9/16			1093572	20HCM0562	1093595	32HCM0562
5/8			1093573	20HCM0625	1093596	32HCM0625
11/16					1093597	32HCM0688
3/4					1093598	32HCM0750
7/8					1093599	32HCM0875
1					1093600	32HCM1000
D1	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number
Inch with Metric Bores						
3,0	2248993	50HC030M	2248995	75HC030M		
4,0	1606050	50HC040M	2248996	75HC040M		
5,0	2248994	50HC050M	2248997	75HC050M		
6,0	1606061	50HC060M	1093271	75HC060M		
8,0	1606062	50HC080M	1093272	75HC080M		
10,0	1606064	50HC100M	1093273	75HC100M		
12,0			1093524	75HC120M		
14,0			1093525	75HC140M		
16,0			1093526	75HC160M	1093538	12HC160M
18,0					1093539	12HC180M
20,0					1093540	12HC200M
25,0					1093541	12HC250M
Inch with Inch Bores						
1/8	2248951	50HC0125	1937870	75HC0125		
3/16	1606046	50HC0188	1093496	75HC0188		
1/4	1606047	50HC0250	1093497	75HC0250		
5/16	1606048	50HC0312	1093498	75HC0312		
3/8	1606049	50HC0375	1093500	75HC0375		
7/16			1093501	75HC0438		
1/2			1093268	75HC0500	1093527	12HC0500
9/16			1093269	75HC0562	1093528	12HC0562
5/8			1093270	75HC0625	1093529	12HC0625
11/16					1093530	12HC0688
3/4					1093533	12HC0750
13/16					2248952	12HC0812
7/8					1093535	12HC0875
1					1093536	12HC1000

Collets and Sleeves



TG Collets

TG 50 – Inch and Metric



Collet Capacity	50TG Standard D2 = .760 in. L = 1.438 in.	
	Order number	Catalog number
Inch		
3/64	1014266	50TG0047
1/16	1014269	50TG0062
5/64	1014267	50TG0078
3/32	1013719	50TG0094
7/64	1013722	50TG0109
1/8	1013686	50TG0125
9/64	1013747	50TG0141
5/32	1013687	50TG0156
11/64	1013751	50TG0172
3/16	1013689	50TG0188
13/64	1013776	50TG0203
7/32	1013690	50TG0219
15/64	1013781	50TG0234
1/4	1013691	50TG0250
17/64	1013796	50TG0266
9/32	1013692	50TG0281
19/64	1013801	50TG0297
5/16	1013834	50TG0312
21/64	1013836	50TG0328
11/32	1013839	50TG0344
23/64	1013842	50TG0359
3/8	1014268	50TG0375
25/64	1013858	50TG0391
13/32	1013861	50TG0406
27/64	1013874	50TG0422
7/16	1013714	50TG0438
29/64	1013879	50TG0453
15/32	1013715	50TG0469
31/64	1013914	50TG0484
1/2	1014232	50TG0500
33/64	1013920	50TG0516
17/32	1014272	50TG0531

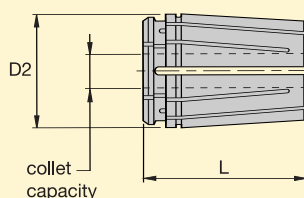
Collet Capacity	50TG Standard D2 = 19,30 mm L = 36,53 mm	
	Order number	Catalog number
Metric		
1,50	1105225	50TG015M
2,00	1105226	50TG020M
2,50	1105127	50TG025M
3,00	1105128	50TG030M
3,50	1105129	50TG035M
4,00	1105130	50TG040M
4,50	1105334	50TG045M
5,00	1105131	50TG050M
5,50	1105132	50TG055M
6,00	1105133	50TG060M
6,50	1105234	50TG065M
7,00	1105228	50TG070M
7,50	1105229	50TG075M
8,00	1105231	50TG080M
8,50	1105232	50TG085M
9,00	1105233	50TG090M
9,50	1105244	50TG095M
10,00	1105245	50TG100M
10,50	1105246	50TG105M
11,00	1105247	50TG110M
11,50	1105248	50TG115M
12,00	1105249	50TG120M
12,50	1105251	50TG125M
13,00	1105252	50TG130M
13,50	1105253	50TG135M

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: 50TG0047
Order number: 1014266



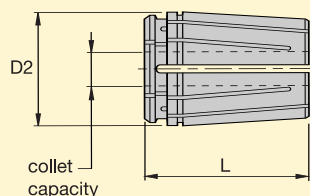
TG 75 – Inch and Metric



Collet Capacity	75TG Standard D2 = 1.062 in. L = 1.844 in.		Collet Capacity	75TG Standard D2 = 26,98 mm L = 46,84 mm	
	Order number	Catalog number		Order number	Catalog number
Inch			Metric		
1/16	1013717	75TG0062	3,0	1014554	75TG030M
5/64	1013718	75TG0078	3,5	1014555	75TG035M
3/32	1013720	75TG0094	4,0	1014556	75TG040M
7/64	1013723	75TG0109	4,5	1014557	75TG045M
1/8	1013745	75TG0125	5,0	1014558	75TG050M
9/64	1013748	75TG0141	5,5	1014559	75TG055M
5/32	1013688	75TG0156	6,0	1014560	75TG060M
11/64	1013752	75TG0172	6,5	1014561	75TG065M
3/16	1013774	75TG0188	7,0	1014562	75TG070M
13/64	1013777	75TG0203	7,5	1014563	75TG075M
7/32	1013779	75TG0219	8,0	1014594	75TG080M
15/64	1013782	75TG0234	8,5	1014595	75TG085M
1/4	1013794	75TG0250	9,0	1014596	75TG090M
17/64	1013797	75TG0266	9,5	1014597	75TG095M
9/32	1013799	75TG0281	10,0	1014533	75TG100M
19/64	1013802	75TG0297	10,5	1014598	75TG105M
5/16	1013693	75TG0312	11,0	1014599	75TG110M
21/64	1013837	75TG0328	11,5	1014600	75TG115M
11/32	1013840	75TG0344	12,0	1014601	75TG120M
23/64	1013843	75TG0359	12,5	1014602	75TG125M
3/8	1013855	75TG0375	13,0	1014603	75TG130M
13/32	1013862	75TG0406	13,5	1014624	75TG135M
27/64	1013875	75TG0422	14,0	1014625	75TG140M
7/16	1013877	75TG0438	14,5	1014626	75TG145M
29/64	1013880	75TG0453	15,0	1014627	75TG150M
15/32	1013882	75TG0469	15,5	1014628	75TG155M
31/64	1013915	75TG0484	16,0	1014629	75TG160M
1/2	1013917	75TG0500	16,5	1014630	75TG165M
33/64	1013921	75TG0516	17,0	1014631	75TG170M
17/32	1013934	75TG0531	17,5	1014632	75TG175M
35/64	1013937	75TG0547	18,0	1014633	75TG180M
9/16	1013940	75TG0562	18,5	1014654	75TG185M
37/64	1013943	75TG0578	19,0	1014655	75TG190M
19/32	1013975	75TG0594	19,5	1014656	75TG195M
39/64	1013978	75TG0609	20,0	1014657	75TG200M
5/8	1013980	75TG0625			
41/64	1013983	75TG0641			
21/32	1013995	75TG0656			
43/64	1013998	75TG0672			
11/16	1014000	75TG0688			
45/64	1014003	75TG0703			
23/32	1014025	75TG0719			
47/64	1013716	75TG0734			
3/4	1014030	75TG0750			

Order example:
Catalog number: 75TG0062
Order number: 1013717

TG 100 – Inch and Metric

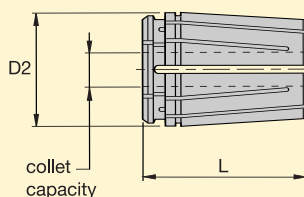


Collet Capacity	100TG Standard D2 = 1.379 in. L = 2.375 in.		Collet Capacity	100TG Standard D2 = 35,03 mm L = 60,33 mm	
	Order number	Catalog number		Order number	Catalog number
Inch			Metric		
3/32	1013721	100TG0094	3,0	1014659	100TG030M
7/64	1013744	100TG0109	3,5	1014660	100TG035M
1/8	1013746	100TG0125	4,0	1014661	100TG040M
9/64	1013749	100TG0141	4,5	1014662	100TG045M
5/32	1013750	100TG0156	5,0	1014663	100TG050M
11/64	1013753	100TG0172	5,5	1014694	100TG055M
3/16	1013775	100TG0188	6,0	1014695	100TG060M
13/64	1013778	100TG0203	6,5	1014696	100TG065M
7/32	1013780	100TG0219	7,0	1014697	100TG070M
15/64	1013783	100TG0234	7,5	1014698	100TG075M
1/4	1013795	100TG0250	8,0	1014699	100TG080M
17/64	1013798	100TG0266	8,5	1014700	100TG085M
9/32	1013800	100TG0281	9,0	1014701	100TG090M
19/64	1013803	100TG0297	9,5	1014702	100TG095M
5/16	1013835	100TG0312	10,0	1014703	100TG100M
21/64	1013838	100TG0328	10,5	1014714	100TG105M
11/32	1013841	100TG0344	11,0	1014715	100TG110M
23/64	1013854	100TG0359	11,5	1014716	100TG115M
3/8	1013856	100TG0375	12,0	1014717	100TG120M
25/64	1013860	100TG0391	12,5	1014718	100TG125M
13/32	1013863	100TG0406	13,0	1014719	100TG130M
27/64	1013876	100TG0422	13,5	1014720	100TG135M
7/16	1013878	100TG0438	14,0	1014721	100TG140M
29/64	1013881	100TG0453	14,5	1014722	100TG145M
15/32	1013883	100TG0469	15,0	1014723	100TG150M
31/64	1013916	100TG0484	15,5	1014744	100TG155M
1/2	1013918	100TG0500	16,0	1014745	100TG160M
33/64	1013922	100TG0516	16,5	1014746	100TG165M
17/32	1013935	100TG0531	17,0	1014747	100TG170M
35/64	1013938	100TG0547	17,5	1014748	100TG175M
9/16	1013941	100TG0562	18,0	1014749	100TG180M
37/64	1013974	100TG0578	18,5	1014750	100TG185M
19/32	1013976	100TG0594	19,0	1014751	100TG190M
39/64	1013979	100TG0609	19,5	1014752	100TG195M
5/8	1013981	100TG0625	20,0	1014753	100TG200M
41/64	1013994	100TG0641	20,5	1014774	100TG205M
21/32	1013996	100TG0656	21,0	1014775	100TG210M
43/64	1013999	100TG0672	21,5	1014776	100TG215M
11/16	1014001	100TG0688	22,0	1014777	100TG220M
45/64	1014024	100TG0703	22,5	1014778	100TG225M
23/32	1014026	100TG0719	23,0	1014779	100TG230M
47/64	1014028	100TG0734	23,5	1014780	100TG235M
3/4	1014031	100TG0750	24,0	1014781	100TG240M
49/64	1014033	100TG0766	24,5	1014782	100TG245M
25/32	1014044	100TG0781	25,0	1014783	100TG250M
51/64	1014046	100TG0797	25,5	1014814	100TG255M
13/16	1014047	100TG0812			
53/64	1014049	100TG0828			
27/32	1014050	100TG0844			
55/64	1014052	100TG0859			
7/8	1014053	100TG0875			
57/64	1014075	100TG0891			
29/32	1014076	100TG0906			
59/64	1014078	100TG0922			
15/16	1014079	100TG0938			
61/64	1014081	100TG0953			
31/32	1014082	100TG0969			
63/64	1014104	100TG0984			
1	1014105	100TG1000			

Order example:
Catalog number: 100TG0094
Order number: 1013721



TG 150 – Inch and Metric



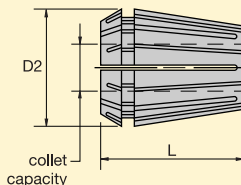
Collet Capacity	150TG Standard D2 = 2.000 in. L = 3.000 in.		Collet Capacity	150TG Standard D2 = 2.000 in. L = 3.000 in.		Collet capacity	150TG Standard D2 = 50,83 mm L = 76,20 mm	
	Order number	Catalog number		Order number	Catalog number		Order number	Catalog number
Inch			Inch			Metric		
3/8	1013857	150TG0375	1 9/32	1014140	150TG1281	12,00	1014815	150TG120M
25/64	1029094	150TG0391	1 19/64	1014320	150TG1297	12,50	1014816	150TG125M
13/32	1029095	150TG0406	1 5/16	1014141	150TG1312	13,00	1014817	150TG130M
27/64	1029096	150TG0422	1 21/64	1014321	150TG1328	13,50	1014818	150TG135M
7/16	2420208	150TG0438	1 11/32	1014142	150TG1344	14,00	1014819	150TG140M
29/64	1092283	150TG0453	1 23/64	1014322	150TG1359	14,50	1014820	150TG145M
15/32	1083003	150TG0468	1 3/8	1014143	150TG1375	15,00	1014821	150TG150M
31/64	1029099	150TG0484	1 25/64	1014323	150TG1391	15,50	1014822	150TG155M
1/2	1013919	150TG0500	1 13/32	1014164	150TG1406	16,00	1014823	150TG160M
33/64	1013923	150TG0516	1 27/64	1014165	150TG1422	16,50	1014844	150TG165M
17/32	1013936	150TG0531	1 7/16	1014166	150TG1438	17,00	1014845	150TG170M
35/64	1013939	150TG0547	1 29/64	1014167	150TG1453	17,50	1014846	150TG175M
9/16	1013942	150TG0562	1 15/32	1014168	150TG1469	18,00	1014847	150TG180M
37/64	1014290	150TG0578	1 31/64	1014169	150TG1484	18,50	1014848	150TG185M
19/32	1013977	150TG0594	1 1/2	1014170	150TG1500	19,00	1014849	150TG190M
39/64	1014291	150TG0609				19,50	1014850	150TG195M
5/8	1013982	150TG0625				20,00	1014851	150TG200M
41/64	1014292	150TG0641				20,50	1014852	150TG205M
21/32	1013997	150TG0656				21,00	1014853	150TG210M
43/64	1014293	150TG0672				21,50	1014874	150TG215M
11/16	1014002	150TG0688				22,00	1014875	150TG220M
45/64	1014273	150TG0703				22,50	1014876	150TG225M
23/32	1014027	150TG0719				23,00	1014877	150TG230M
47/64	1014029	150TG0734				23,50	1014878	150TG235M
3/4	1014032	150TG0750				24,00	1014879	150TG240M
49/64	1014314	150TG0766				24,50	1014880	150TG245M
25/32	1014045	150TG0781				25,00	1014881	150TG250M
51/64	1014288	150TG0797				25,50	1014882	150TG255M
13/16	1014048	150TG0812				26,00	1014883	150TG260M
53/64	1014285	150TG0828				26,50	1014914	150TG265M
27/32	1014051	150TG0844				27,00	1014915	150TG270M
55/64	1014315	150TG0859				27,50	1014916	150TG275M
7/8	1014074	150TG0875				28,00	1014917	150TG280M
57/64	1014316	150TG0891				28,50	1014918	150TG285M
29/32	1014077	150TG0906				29,00	1014919	150TG290M
59/64	1014317	150TG0922				29,50	1014920	150TG295M
15/16	1014080	150TG0938				30,00	1014921	150TG300M
61/64	1014318	150TG0953				30,50	1014922	150TG305M
31/32	1014083	150TG0969				31,00	1014923	150TG310M
63/64	1014289	150TG0984				31,50	1014944	150TG315M
1	1014106	150TG1000				32,00	1014945	150TG320M
1 1/64	1014286	150TG1016				32,50	1014946	150TG325M
1 1/32	1014108	150TG1031				33,00	1014947	150TG330M
1 3/64	1014265	150TG1047				33,50	1014948	150TG335M
1 1/16	1014109	150TG1062				34,00	1014949	150TG340M
1 5/64	1014110	150TG1078				34,50	1014950	150TG345M
1 3/32	1014111	150TG1094				35,00	1014951	150TG350M
1 7/64	1014264	150TG1109				35,50	1014952	150TG355M
1 1/8	1014112	150TG1125				36,00	1014953	150TG360M
1 9/64	1014319	150TG1141				36,50	1014964	150TG365M
1 5/32	1014113	150TG1156				37,00	1014965	150TG370M
1 11/64	1014287	150TG1172				37,50	1014966	150TG375M
1 3/16	1014134	150TG1187				38,00	1014967	150TG380M
1 13/64	1014233	150TG1203				38,50	1014968	150TG385M
1 7/32	1014135	150TG1219				39,00	1014969	150TG390M
1 15/64	1014136	150TG1234				39,50	1014970	150TG395M
1 1/4	1014137	150TG1250				40,00	1014971	150TG400M
1 17/64	1014139	150TG1266						

Collets and Sleeves



ER Series Collets – Inch

DIN 6499 form B



Maximum collapse is .040.

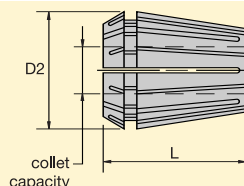
Collet Capacity		ER16 D2 = .669 in. L = 1.083 in.		ER20 D2 = .827 in. L = 1.240 in.		ER25 D2 = 1.024 in. L = 1.339 in.		ER32 D2 = 1.299 in. L = 1.575 in.		ER40 D2 = 1.614 in. L = 1.811 in.		Collet Capacity
fraction	range max. min.	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number	
1/16	.0625 .0225	1730499	16ER0062	1730500	20ER0062	1949805	25ER0062					1/16
3/32	.0938 .0538	1949904	16ER0094	2269917	20ER0094	2269934	25ER0094					3/32
1/8	.1250 .0850	1729816	16ER0125	1729831	20ER0125	1729852	25ER0125	1729903	32ER0125	1949806	40ER0125	1/8
5/32	.1563 .1163	1949905	16ER0156	2269918	20ER0156	2269935	25ER0156	2269943	32ER0156	2269954	40ER0156	5/32
3/16	.1875 .1475	1729817	16ER0188	1729833	20ER0188	1729855	25ER0188	1729904	32ER0188	1729932	40ER0188	3/16
7/32	.2188 .1788	1950125	16ER0219	2269919	20ER0219	2269936	25ER0219	2269944	32ER0219	2269955	40ER0219	7/32
1/4	.2500 .2100	1729818	16ER0250	1729834	20ER0250	1729857	25ER0250	1729905	32ER0250	1729933	40ER0250	1/4
9/32	.2813 .2413	1950126	16ER0281	2269920	20ER0281	2269937	25ER0281	2269945	32ER0281	2269956	40ER0281	9/32
5/16	.3125 .2725	1729819	16ER0312	1729836	20ER0312	1950129	25ER0312	1950132	32ER0312	1950158	40ER0312	5/16
11/32	.3438 .3038	1950127	16ER0344	2269921	20ER0344	2269938	25ER0344	2269946	32ER0344	2269957	40ER0344	11/32
3/8	.3750 .3350	1729820	16ER0375	1729837	20ER0375	1729859	25ER0375	1729906	32ER0375	1729934	40ER0375	3/8
13/32	.4063 .3663	1950128	16ER0406	2269922	20ER0406	2269939	25ER0406	2269947	32ER0406	2269958	40ER0406	13/32
7/16	.4375 .3975			1729838	20ER0438	1950130	25ER0438	1950154	32ER0438	1950162	40ER0438	7/16
15/32	.4688 .4288			2269933	20ER0469	2269940	25ER0469	2269948	32ER0469	2269959	40ER0469	15/32
1/2	.5000 .4600			1729839	20ER0500	1729862	25ER0500	1729908	32ER0500	1729936	40ER0500	1/2
17/32	.5313 .4913					2269941	25ER0531	2269949	32ER0531	2269960	40ER0531	17/32
9/16	.5625 .5225					1950131	25ER0562	1950155	32ER0562	1950203	40ER0562	9/16
19/32	.5938 .5538					2269942	25ER0594	2269950	32ER0594	2269961	40ER0594	19/32
5/8	.6250 .5850					1950131	25ER0625	1729909	32ER0625	1729938	40ER0625	5/8
21/32	.6563 .6163							2269951	32ER0656	2269962	40ER0656	21/32
11/16	.6875 .6475							1950156	32ER0688	1950204	40ER0688	11/16
23/32	.7188 .6788							2269952	32ER0719	2269963	40ER0719	23/32
3/4	.7500 .7100							1729910	32ER0750	1729939	40ER0750	3/4
25/32	.7813 .7413							2269953	32ER0781	2269964	40ER0781	25/32
13/16	.8125 .7725							1950157	32ER0812	1950205	40ER0812	13/16
27/32	.8438 .8038									2269965	40ER0844	27/32
7/8	.8750 .8350									1950206	40ER0875	7/8
29/32	.9063 .8663									2269966	40ER0906	29/32
15/16	.9375 .8975									1950207	40ER0938	15/16
31/32	.9688 .9288									2269967	40ER0969	31/32
1	1.0000 .9600									1729940	40ER1000	1

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: **16ER0062**
Order number: **1730499**



DIN 6499 form B



Maximum collapse is 0,5 mm.

Collet Capacity range		ER11 D2 = 11,5 mm L = 18 mm	
max.	min.	Order number	Catalog number
1,0	0,5	1025778	11ER010M
1,5	1,0	1025779	11ER015M
2,0	1,5	1025780	11ER020M
2,5	2,0	1025781	11ER025M
3,0	2,5	1025782	11ER030M
3,5	3,0	1025783	11ER035M
4,0	3,5	1025804	11ER040M
4,5	4,0	1025805	11ER045M
5,0	4,5	1025806	11ER050M
5,5	5,0	1025807	11ER055M
6,0	5,5	1025808	11ER060M
6,5	6,0	1025809	11ER065M
7,0	6,5	1025810	11ER070M

Maximum collapse is 1,0 mm.

Collet Capacity range		ER16 D2 = 17 mm L = 27,5 mm		ER20 D2 = 21 mm L = 31,5 mm		ER25 D2 = 26 mm L = 34 mm		ER32 D2 = 33 mm L = 40 mm		ER40 D2 = 41 mm L = 46 mm	
max.	min.	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number
1,0	0,5	1125005	16ER010M*	1025811	20ER010M						
1,0	1,5	1295604	16ER015M*								
1,0	2,0	1123683	16ER020M	1025812	20ER020M	1125486	25ER020M				
1,5	2,5	1126832	16ER025M								
2,0	3,0	1136014	16ER030M	1025813	20ER030M	1123793	25ER030M	1125478	32ER030M		
2,5	3,5	1108458	16ER035M								
3,0	4,0	1123978	16ER040M	1025834	20ER040M	1123892	25ER040M	1123753	32ER040M	1128808	40ER040M
3,5	4,5	1110558	16ER045M								
4,0	5,0	1107148	16ER050M	1025835	20ER050M	1135954	25ER050M	1123901	32ER050M	1127120	40ER050M
4,5	5,5	1110557	16ER055M								
5,0	6,0	1123829	16ER060M	1025836	20ER060M	1135935	25ER060M	1106008	32ER060M	1127102	40ER060M
5,5	6,5	1108459	16ER065M								
6,0	7,0	1123759	16ER070M	1025837	20ER070M	1123871	25ER070M	1105988	32ER070M	1127094	40ER070M
6,5	7,5	1110559	16ER075M								
7,0	8,0	1123945	16ER080M	1025838	20ER080M	1135918	25ER080M	1084750	32ER080M	1123939	40ER080M
7,5	8,5	1154644	16ER085M								
8,0	9,0	1123931	16ER090M	1025839	20ER090M	1135885	25ER090M	1123722	32ER090M	1136034	40ER090M
8,5	9,5	1154645	16ER095M								
9,0	10,0	1123730	16ER100M	1025840	20ER100M	1123690	25ER100M	1123865	32ER100M	1123786	40ER100M
10,0	11,0			1025841	20ER110M	1135945	25ER110M	1084749	32ER110M	1129723	40ER110M
11,0	12,0			1025842	20ER120M	1135900	25ER120M	1123840	32ER120M	1128825	40ER120M
12,0	13,0			1025843	20ER130M	1135972	25ER130M	1093519	32ER130M	1128832	40ER130M
13,0	14,0					1126258	25ER140M	1125471	32ER140M	1130414	40ER140M
14,0	15,0					1131214	25ER150M	1124997	32ER150M	1128237	40ER150M
15,0	16,0					1135962	25ER160M	1105989	32ER160M	1127868	40ER160M
16,0	17,0							1125453	32ER170M	1130406	40ER170M
17,0	18,0							1123909	32ER180M	1123699	40ER180M
18,0	19,0							1123879	32ER190M	1127110	40ER190M
19,0	20,0							1123833	32ER200M	1123924	40ER200M
20,0	21,0									1123738	40ER210M
21,0	22,0									1130401	40ER220M
22,0	23,0									1123671	40ER230M
23,0	24,0									1130133	40ER240M
24,0	25,0									1123951	40ER250M
25,0	26,0									1123885	40ER260M

* These collets have a maximum collapse of 0,5 mm.

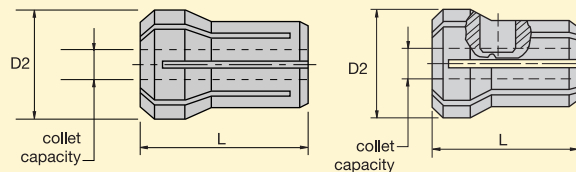
Order example:
Catalog number: **11ER010M**
Order number: **1025778**

Collets and Sleeves



DA Collets – Inch

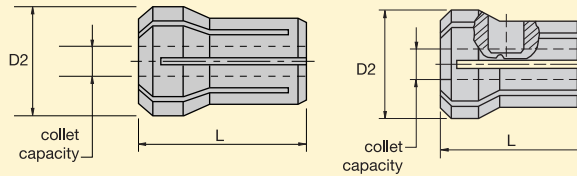
DA Double-Angle Series – Inch



Collet Capacity	300DA Standard D2 = .375 in. L = 1.000 in.		300DAC Coolant-Bonded D2 = .375 in. L = 1.000 in.		200DA Standard D2 = .539 in. L = 1.188 in.		200DAC Coolant-Bonded D2 = .539 in. L = 1.188 in.			
	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number		
1/32	1014511	300DA0031								
3/64	1014534	300DA0047			1014513	200DA0047				
1/16	1014537	300DA0062			1014536	200DA0062				
5/64	1014541	300DA0078			1014540	300DA0078				
3/32	1014574	300DA0094			1014543	200DA0094				
7/64	1014578	300DA0109			1014577	300DA0109				
1/8	1014581	300DA0125	1086631	300DAC0125	1014580	200DA0125	1086613	200DAC0125		
9/64	1014606	300DA0141	1086630	300DAC0141	1014605	200DA0141	1086614	200DAC0141		
5/32	1014611	300DA0156	1086583	300DAC0156	1014610	200DA0156	1086615	200DAC0156		
11/64	1014645	300DA0172	1086633	300DAC0172	1014644	200DA0172	1086616	200DAC0172		
3/16	1014649	300DA0188	1086632	300DAC0188	1014648	200DA0188	1086617	200DAC0188		
13/64	1014653	300DA0203	1086686	300DAC0203	1014652	200DA0203	1086618	200DAC0203		
7/32	1014678	300DA0219	1086685	300DAC0219	1014677	200DA0219	1086619	200DAC0219		
15/64	1014683	300DA0234	1086684	300DAC0234	1014682	200DA0234	1086620	200DAC0234		
1/4	1014728	300DA0250	1086687	300DAC0250	1014727	200DA0250	1086621	200DAC0250		
17/64					1014732	200DA0266	1086622	200DAC0266		
9/32					1014755	200DA0281	1086623	200DAC0281		
19/64					1014759	200DA0297	1086624	200DAC0297		
5/16					1014762	200DA0312	1086625	200DAC0312		
21/64					1014796	200DA0328	1086626	200DAC0328		
11/32					1014800	200DA0344	1086629	200DAC0344		
23/64					1014824	200DA0359	1086627	200DAC0359		
3/8					1014828	200DA0375	1086628	200DAC0375		
25/64					1014833	200DA0391	1086688	200DAC0391		
Collet Capacity	100DA Standard D2 = .769 in. L = 1.438 in.		100DAC Coolant-Bonded D2 = .769 in. L = 1.438 in.		180DA Standard D2 = 1.035 in. L = 1.625 in.		180DAC Coolant-Bonded D2 = 1.035 in. L = 1.625 in.		180DANP Milling/Non-Pullout D2 = 1.035 in. L = 1.625 in.	
	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number
3/64	1021108	100DA0047			1014512	180DA0047				
1/16	1021109	100DA0062			1014535	180DA0062				
5/64	1014538	100DA0078			1014539	180DA0078				
3/32	1021110	100DA0094			1014542	180DA0094				
7/64	1021111	100DA0109			1014576	180DA0109				
1/8	1021112	100DA0125	1080566	100DAC0125	1014579	180DA0125				
9/64	1014583	100DA0141	1080567	100DAC0141	1014604	180DA0141				
5/32	1014608	100DA0156	1080568	100DAC0156	1014609	180DA0156				
11/64	1021113	100DA0172	1080569	100DAC0172	1014613	180DA0172				
3/16	1014646	100DA0188	1080570	100DAC0188	1014647	180DA0188				
13/64	1021144	100DA0203	1083014	100DAC0203	1014651	180DA0203				
7/32	1014675	100DA0219	1080571	100DAC0219	1014676	180DA0219				
15/64	1014680	100DA0234	1080572	100DAC0234	1014681	180DA0234				
1/4	1014725	100DA0250	1080573	100DAC0250	1014726	180DA0250	1080594	180DAC0250		
17/64	1014730	100DA0266	1080574	100DAC0266	1014731	180DA0266	1080595	180DAC0266		
9/32	1014733	100DA0281	1080575	100DAC0281	1014754	180DA0281	1080596	180DAC0281		
19/64	1014757	100DA0297	1080576	100DAC0297	1014758	180DA0297	1080597	180DAC0297		
5/16	1014760	100DA0312	1080577	100DAC0312	1014761	180DA0312	1080298	180DAC0312		
21/64	1014794	100DA0328	1080578	100DAC0328	1014795	180DA0328	1080599	180DAC0328		
11/32	1014798	100DA0344	1080579	100DAC0344	1014799	180DA0344	1080600	180DAC0344		
23/64	1014802	100DA0359	1080580	100DAC0359	1014803	180DA0359	1080601	180DAC0359		
3/8	1014826	100DA0375	1080581	100DAC0375	1014827	180DA0375	1080602	180DAC0375	1015264	180DANP0375
25/64	1014831	100DA0391	1080582	100DAC0391	1014832	180DA0391	1080603	180DAC0391		
13/32	1014865	100DA0406	1080583	100DAC0406	1014866	180DA0406	1080604	180DAC0406		
27/64	1014868	100DA0422	1080584	100DAC0422	1014869	180DA0422	1080605	180DAC0422		
7/16	1014871	100DA0438	1080585	100DAC0438	1014872	180DA0438	1080606	180DAC0438		
29/64	1014895	100DA0453	1080586	100DAC0453	1014896	180DA0453	1080607	180DAC0453		
15/32	1014898	100DA0469	1080587	100DAC0469	1014899	180DA0469	1080608	180DAC0469		
31/64	1014901	100DA0484	1080588	100DAC0484	1014902	180DA0484	1080609	180DAC0484		
1/2	1014934	100DA0500	1080589	100DAC0500	1014935	180DA0500	1080610	180DAC0500	1015265	180DANP0500
33/64	1014938	100DA0516	1080590	100DAC0516	1014939	180DA0516	1080611	180DAC0516		
17/32	1014941	100DA0531	1080591	100DAC0531	1014942	180DA0531	1080612	180DAC0531		
35/64	1014975	100DA0547	1080592	100DAC0547	1014976	180DA0547	1080613	180DAC0547		
9/16	1014978	100DA0562	1080593	100DAC0562	1014979	180DA0562	1080614	180DAC0562		
37/64					1014982	180DA0578	1080615	180DAC0578		
19/32					1014983	180DA0594	1080616	180DAC0594		
39/64					1015016	180DA0609	1080617	180DAC0609		
5/8					1015018	180DA0625	1080618	180DAC0625	1015266	180DANP0625
41/64					1015021	180DA0641	1080619	180DAC0641		
21/32					1015023	180DA0656	1080620	180DAC0656		
43/64					1015046	180DA0672	1080621	180DAC0672		
11/16					1015048	180DA0688	1080622	180DAC0688		
45/64					1015051	180DA0703	1080623	180DAC0703		
23/32					1015053	180DA0719	1080624	180DAC0719		
47/64					1015086	180DA0734	1080625	180DAC0734		
3/4					1015088	180DA0750	1080626	180DAC0750	1015267	180DANP0750



DA Double-Angle Series – Metric

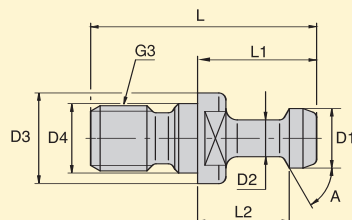


Collet Capacity	300DA Standard D2 = 9,53 mm L = 25,40 mm		200DA Standard D2 = 13,69 mm L = 30,18 mm		200DAC Coolant-Bonded D2 = 13,69 mm L = 30,18 mm		100DA Standard D2 = 19,53 mm L = 36,53 mm	
	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number
1,0	1297411	300DA010M	1191023	200DA010M				
1,5	1297412	300DA015M	1191024	200DA015M				
2,0	1297413	300DA020M	1191025	200DA020M				
2,5	1297414	300DA025M	1191026	200DA025M			1110458	100DA025M
3,0	1297415	300DA030M	1191027	200DA030M			1108138	100DA030M
3,5	1014249	300DA035M	1014215	200DA035M			1014124	100DA035M
4,0	1014250	300DA040M	1014216	200DA040M			1014125	100DA040M
4,5	1014251	300DA045M	1014217	200DA045M			1014126	100DA045M
5,0	1014252	300DA050M	1014218	200DA050M			1014127	100DA050M
5,5	1014253	300DA055M	1014219	200DA055M			1014128	100DA055M
6,0	1014294	300DA060M	1014220	200DA060M	1092302	200DAC060M	1014129	100DA060M
6,5			1014221	200DA065M			1014130	100DA065M
7,0			1014222	200DA070M			1014131	100DA070M
7,5			1014223	200DA075M			1014132	100DA075M
8,0			1014244	200DA080M	1086796	200DAC080M	1014133	100DA080M
8,5			1014245	200DA085M			1014174	100DA085M
9,0			1014246	200DA090M			1014175	100DA090M
9,5			1014247	200DA095M			1014176	100DA095M
10,0			1014248	200DA100M	1086087	200DAC100M	1014093	100DA100M
10,5							1014177	100DA105M
11,0							1014178	100DA110M
11,5							1014179	100DA115M
12,0							1014180	100DA120M
12,5							1014181	100DA125M
13,0							1014182	100DA130M
13,5							1014183	100DA135M
14,0							1014214	100DA140M
Collet Capacity	100DAC Coolant-Bonded D2 = 19,53 mm L = 36,53 mm		180DA Standard D2 = 26,29 mm L = 41,28 mm		180DAC Coolant-Bonded D2 = 26,29 mm L = 41,28 mm		180DANP Milling/Non-Pullout D2 = 26,29 mm L = 41,28 mm	
	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number	Order number	Catalog number
3,0			1174153	180DA030M				
3,5			1014436	180DA035M				
4,0			1014437	180DA040M				
4,5			1014438	180DA045M				
5,0			1014439	180DA050M				
5,5			1014440	180DA055M				
6,0	1092179	100DAC060M	1014441	180DA060M	1092287	180DAC060M		
6,5			1014442	180DA065M				
7,0			1014443	180DA070M				
7,5			1014474	180DA075M				
8,0	1092180	100DAC080M	1014475	180DA080M	1092288	180DAC080M		
8,5			1014476	180DA085M				
9,0			1014477	180DA090M				
9,5			1014478	180DA095M				
10,0	1092181	100DAC100M	1014435	180DA100M	1092289	180DAC100M	1014529	180DANP100M
10,5			1014479	180DA105M				
11,0			1014480	180DA110M				
11,5			1014481	180DA115M				
12,0	1092182	100DAC120M	1014482	180DA120M	1092290	180DAC120M	1014532	180DANP120M
12,5			1014483	180DA125M				
13,0			1014494	180DA130M				
13,5			1014495	180DA135M				
14,0	1092183	100DAC140M	1014496	180DA140M	1092291	180DAC140M		
14,5			1014497	180DA145M				
15,0			1014498	180DA150M				
15,5			1014499	180DA155M				
16,0			1014500	180DA160M	1092292	180DAC160M	1014530	180DANP160M
16,5			1014501	180DA165M				
17,0			1014502	180DA170M				
17,5			1014503	180DA175M				
18,0			1014524	180DA180M	1092293	180DAC180M		
18,5			1014525	180DA185M				
19,0			1014526	180DA190M				
19,5			1014527	180DA195M				
20,0			1014528	180DA200M	1092294	180DAC200M		

Retention Knobs

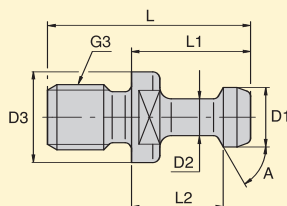
BT Style

BT MAS-Style with Pilot



	Inch with Pilot											Catalog number	Suggested Torque Max.	
	Order number	Catalog number	G3	A	D1	D2	D3	D4	L	L1	L2		ft./lbs.	Nm
Inch														
40	1026729	RK31114	5/8 - 11	45°	.591	.394	.94	.636	2.250	1.264	.988	RKW40	85	118
40	1025459	RK31114B	5/8 - 11	90°	.591	.394	.94	.636	2.250	1.264	.988	RKW40	85	118
50	1021844	RK31118	1 - 8	45°	.905	.670	1.44	1.021	3.355	1.778	1.384	RKW50	110	152
50	1021800	RK31118B	1 - 8	90°	.905	.670	1.44	1.021	3.355	1.778	1.384	RKW50	110	152
Metric with Pilot														
Metric														
30	1192417	RK30BT1M	M12 - 1.75	45°	.433	.276	.650	.492	1.693	.906	.709	RKW30	40	55
30	1192416	RK30BT2M	M12 - 1.75	60°	.433	.276	.650	.492	1.693	.906	.709	RKW30	40	55
40	1192419	RK40BT1M	M16 - 2.0	45°	.591	.394	.906	.669	2.362	1.378	1.102	RKW40	85	118
40	1192420	RK40BT2M	M16 - 2.0	60°	.591	.394	.906	.669	2.362	1.378	1.102	RKW40	85	118
40	1285441	RK40BT3M	M16 - 2.0	90°	.591	.394	.906	.669	2.362	1.378	1.102	RKW40	85	118
50	1192426	RK50BT1M	M24 - 3.0	45°	.906	.669	1.496	.984	3.307	1.772	1.378	RKW50M	110	152
50	1192427	RK50BT2M	M24 - 3.0	60°	.906	.669	1.496	.984	3.307	1.772	1.378	RKW50M	110	152
50	1285482	RK50BT3M	M24 - 3.0	90°	.906	.669	1.496	.984	3.307	1.772	1.378	RKW50M	110	152

BT MAS-Style without Pilot



	Inch without Pilot											Catalog number	Suggested Torque Max.	
	Order number	Catalog number	G3	A	D1	D2	D3	D4	L	L1	L2		ft./lbs.	Nm
Inch														
40	1026730	RK32114	5/8 - 11	45°	.591	.394	.904	—	2.125	1.264	.988	RKW40	85	118

WARNING!

Retention knobs are available in various styles, and are not necessarily interchangeable. At all times the proper retention knob must be used with the appropriate adapter, according to machine specifications as provided by the machine's original manufacturer. Failure to use the correct retention knob, or to adequately install and tighten the retention knob, may result in the adapter coming loose. The use of a combination of metric and non-metric components can result in inadequate coupling of the adapter to the spindle during machining, and a failure of the component. While Kennametal has endeavored to obtain accurate and up-to-

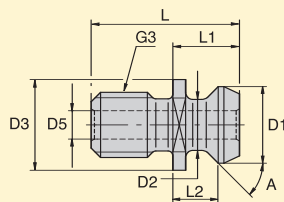
date information regarding retention knob selection based on individual machine tool builder specifications, we cannot guarantee that the information and specifications contained in this catalog are complete and that they have not been modified or superseded by the manufacturer. **You, the machine tool operator, are ultimately responsible for proper selection and use of retention knobs.** The purchase of retention knobs from Kennametal is subject to Kennametal's Standard Terms and Conditions of Sale.

Order example:
Catalog number: **RK31114**
Order number: **1026729**



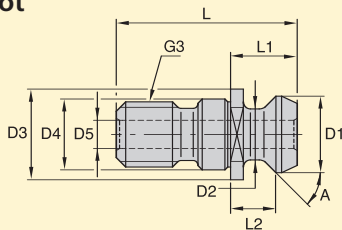
ANSI Style

Short CV without Pilot



	Order number	Catalog number	G3	A	D1	D2	D3	D5	L	L1	L2	Catalog number	Suggested Torque Max. ft./lbs. Nm
													
Inch													
40	1026590	RK40CV	5/8 - 11	45°	.740	.490	.900	.281	1.500	.640	.440	RKW40	85 118
50	1026690	RK50CV	1 - 8	45°	1.140	.820	1.40	.500	2.300	1.000	.700	RKW50	110 152
Metric													
40	1192421	RK40CV1M	M16 - 2.0	45°	.740	.490	.886	.274	1.500	.642	.440	RKW40	85 118
50	1285478	RK50AV1M	M24 - 3.0	45°	1.146	.772	1.457	.455	2.362	1.006	.707	RKW50M	110 152

ANSI Style with Pilot – Short CV with Pilot



	Order number	Catalog number	G3	A	D1	D2	D3	D4	D5	L	L1	L2	Catalog number	Suggested Torque Max. ft./lbs. Nm
														
Inch														
40	1192422	RK40CV3M	M16 - 2.0	45°	.740	.490	.930	.669	.281	1.624	.640	.440	RKW40	85 118
50	1026734	RK50HPCV	M24 - 3.0	45°	1.140	.820	1.430	.984	.468	2.575	1.000	.700	RKW50	110 152

Order example:
Catalog number: **RK40CV**
Order number: **1026590**

DIN Style

Technical drawing of a shaft-hub assembly. The drawing shows a shaft with a central hub. Dimensions are labeled as follows: L (total length), L1 (length of the right section), L2 (length of the left section), D (outer diameter of the right section), D2 (inner diameter of the right section), D3 (outer diameter of the left section), D4 (outer diameter of the left section), D5 (outer diameter of the left section), G3 (keyway), and A (angle of the taper).

														
	Order number	Catalog number	G3	A	D1	D2	D3	D4	D5	L	L1	L2	Catalog number	Suggested Torque Max. ft./lbs. Nm.
Metric														
40	1192424	RK40DVM	M16 - 2.0	75°	.747	.550	.902	.668	.278	2.126	1.024	.787	RKW40	85 55
50	1192430	RK50DVM	M24 - 3.0	75°	1.101	.825	1.413	.983	.455	2.913	1.339	.984	RKW50M	110 118

Technical drawing of a tapered roller bearing in cross-section. The diagram shows the internal structure with rollers and a cage. Key dimensions are labeled: L (total length), L_1 (length of the outer ring), L_2 (length of the inner ring), D_3 (outer diameter of the inner ring), D_4 (outer diameter of the outer ring), D (outer diameter of the bearing), G_3 (width of the cage), D_2 (inner diameter of the inner ring), and A (angle of the tapered roller). The angle 45° is also indicated.

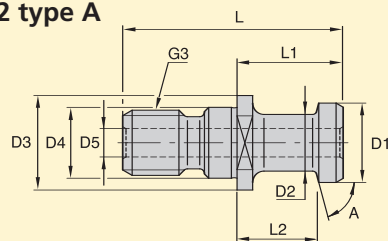
														
	Order number	Catalog number	G3	A	D1	D2	D3	D4	L	L1	L2	Catalog number	ft./lbs.	Nm.
Metric														
40	1192423	RK40DVBM	M16 - 2.0	75°	.747	.550	.902	.668	2.126	1.024	.787	RKW40	85	55
50	1192429	RK50DVBM	M24 - 3.0	75°	1.101	.825	1.413	.983	2.913	1.339	.984	RKW50M	110	118

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

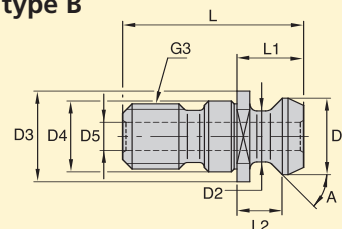


ISO Style

ISO 7388/2 type A

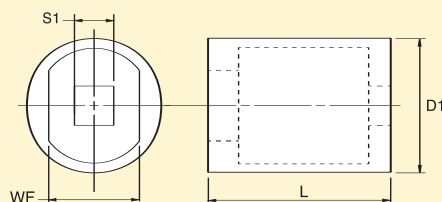


ISO 7388/2 type B



	ISO 7388/2 type A												 Suggested Torque Max.		
	Order number	Catalog number	G3	A	D1	D2	D3	D4	D5	L	L1	L2	Catalog number	ft./lbs.	Nm
Metric 40 50	1285460	RK40ISAM	M16 - 2.0	75°	.747	.550	.902	.668	.278	2.126	1.024	.787	RKW40	85	55
	1285502	RK50ISAM	M24 - 3.0	75°	1.101	.825	1.413	.983	.455	2.913	1.339	.984	RKW50M	110	118
	ISO 7388/2 type B														
Metric 40 50	1192425	RK40ISBM	M16 - 2.0	45°	.740	.504	.856	.668	.295	1.752	.640	.433	RKW40M	85	55
	1192431	RK50ISBM	M24 - 3.0	45°	1.140	.766	1.418	.983	.461	2.579	1.000	.700	RKW50M	110	118

Retention Knob — Socket Wrench



			WF		D1		L		S1	
	Order number	Catalog number	inch	mm	inch	mm	inch	mm	inch	mm
30	2407087	RKW30	.536	13,61	1.000	25,40	1.500	38,10	.500	12,70
40	2407088	RKW40	.755	19,18	1.937	49,20	1.250	31,75	.500	12,70
40	2407089	RKW40M	.711	18,06	1.250	31,75	1.250	31,75	.500	12,70
50	2407090	RKW50	1.255	31,88	1.750	44,45	1.625	41,28	.500	12,70
50	2407091	RKW50M	1.190	30,23	1.750	44,45	2.375	60,33	.500	12,70

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Catalog number: **RK40ISAM**
Order number: **1285460**

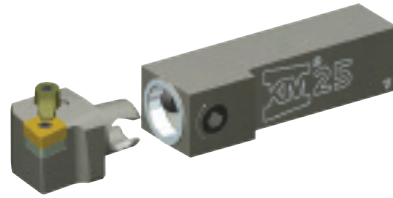


Modular Quick-Change Tooling

- most economical modular quick-change tooling system available
- reduces downtime, increases productivity
- replaces conventional square-shank tooling
- no machine modifications required
- ideal for machines up to 30 hp (22kW)

KM25 Calculation Example	Conventional	KM25 Quick-Change	
number of set-ups per shift	1	1	
number of tools per set-up	6	6	
time per tool for set-up (minutes)	5	0.5	
number of insert indexes per shift	6	6	
insert indexing time (minutes)	5	0.5	
number of measuring cuts per shift	6	0*	
measuring cut time (minutes)	5	5	
number of shifts per year	240**	240**	
minimum cost per hour	75	75	

Result	Conventional	KM25 Quick-Change	SAVINGS PER SHIFT (minutes)
total set-up time/shift (minutes)	30	3	27
total insert indexing time (minutes)	30	3	27
total measuring cut time (minutes)	30	0	30
TOTAL TIME	90	6	84



*Pre-gaged off line. **Based on one shift a day.

THREE-YEAR SAVINGS*

Opening Balance
Investment
Savings ($\frac{84 \text{ min.} \times 240 \times 75}{60}$)
Closing Balance

YEAR ONE

0
\$1,650
\$25,200
\$23,550

YEAR TWO

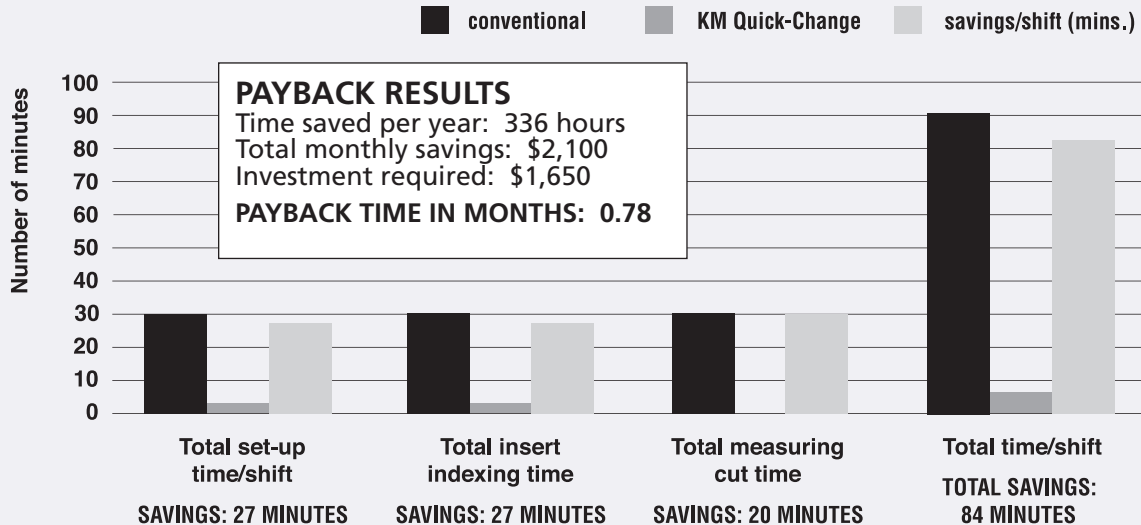
\$23,550
0
\$25,200
\$48,750

YEAR THREE

\$48,750
0
\$25,200
\$73,950

*All figures in U.S. dollars.

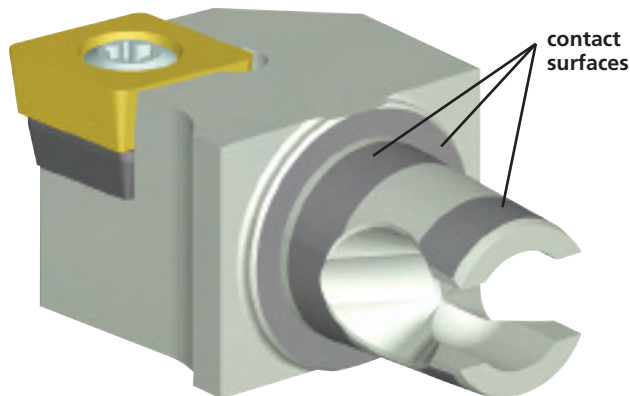
THREE-YEAR SAVINGS WITH KM... \$73,950.00!





The KM25 Coupling

The rigidity and stiffness of the patented KM25 joint is achieved through a combination of unique design elements incorporated in both the shank of the tool and the clamping mechanism. The KM25 joint was developed as a system and takes full advantage of both the tool shank and the mechanism to obtain maximum benefit from the space utilized.



Taper Shank

All KM25 tooling is designed around a short 10:1 tapered shank. Extensive testing of many different lengths and angles proves this combination provides the maximum stiffness and input forces required for locking/unlocking. The taper is self-centering to promote easy tool loading and unloading.

Face and Taper Contact

KM25 tooling is designed to have simultaneous taper and face contact. With KM25 tooling, elastic deformation takes the form of expansion of the female taper (on the clamping unit) as the larger male taper (on the cutting unit) is pulled back during lockup. Our testing proved that an optimum combination of pull-back force and elastic deformation (rather than a close tolerance) provides greater static and dynamic stiffness, achieves a metal-to-metal fit, and is less costly to manufacture.

Clamping Mechanism

The mechanism design consists of two components: the torque screw and the wedge nut. This simple, yet highly effective, clamping mechanism enables the user to lock and unlock the cutting unit by simply using a preset torque wrench.

Reliability

The KM25 cutting unit and clamping mechanism are on a shared axis and provide accurate axial and radial repeatability of $\pm .00008$ inch (± 2 micron) for a specific cutting unit in a specific clamping unit.

When more than one cutting unit is used, the accuracy of each cutting unit must be considered. Pre-gaging (when changing tools) measures the deviations of each tool from the nominal. These deviations can then be compensated for by the machine tool control offsets.

Locking Sequence

The clamping sequence starts by inserting the cutting unit into the female taper of the clamping unit. The torque screw is activated by a preset torque wrench at a right angle to the centerline of the cutting tool, located behind the gage face of the clamping unit.

A small amount of elastic deformation takes place at the front of the female taper as the locking force is applied. As the torque screw is tightened to the preset torque of 25-30 ft-lbs (34-40 Nm), (4-1/4 turns), the cutting unit advances until the gage face makes contact with the face of the clamping unit. The final amount of torque applied enables the tail of the cutting unit to spread to clamp securely between the clamping mechanism and the clamping unit inside diameter.

Installation

When first clamping the KM25 shank in a machine tool slot, a cutting unit should be in the shank.

Lubrication

Using a hex wrench, back out the torque screw against the positive stop and generously apply grease to the threads and conical surface of the component hardware. Also, apply grease to the female taper surface. Do this periodically. Recommended grease: Gleitmo 805.

Summary

The KM25 coupling offers a very rigid joint with a high degree of repeatability while maintaining a very compact envelope. This permits a high degree of versatility without sacrificing cutting performance.

Operating Instructions for KM25

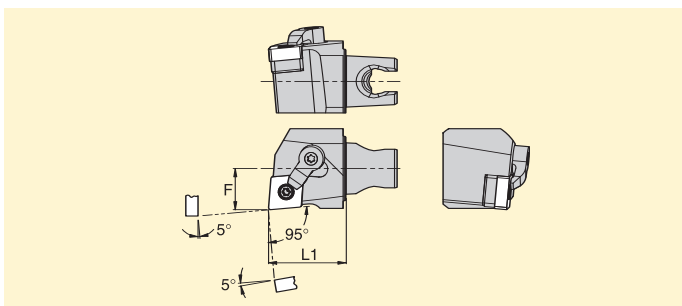
To change tooling, the machine operator simply releases the locking system, changes the KM25 cutting unit, and locks the new tool into position. The operator then makes the offset adjustments according to the previously recorded pre-gaged data. This process takes about 30 seconds versus up to 10 minutes, yielding dramatic productivity improvements.

Specific steps in the tool change process:

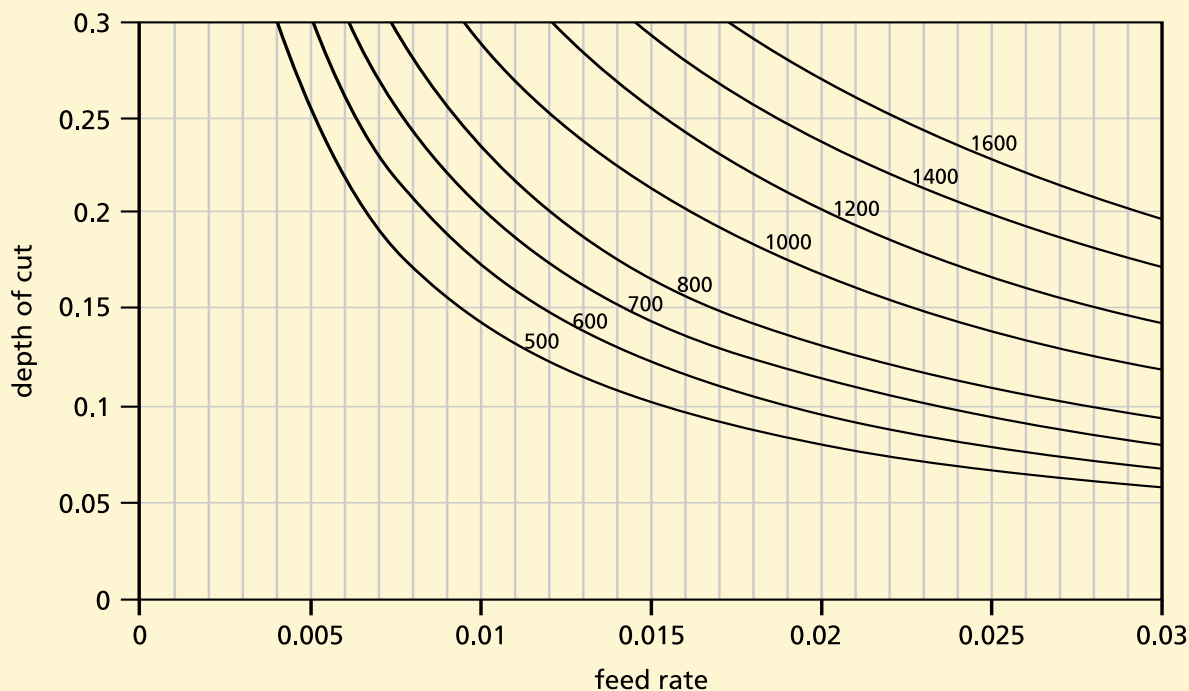
1. Use shop air to clean the clamping unit/cutting unit.
2. Using the appropriate wrench, turn the torque screw in a counterclockwise direction until it reaches an internal stop.
3. Remove the cutting unit. (Note: If cutting unit does not release, internal stop has not been reached.)
4. Use shop air to clean the clamping unit/cutting unit.
5. Insert the new cutting unit into the taper.
6. Tighten the torque screw by turning it in a clockwise direction, until the required torque specification is achieved.
7. If the machine being used has the ability to pre-gage, adjust machine offsets as required.

Maximum Tangential Load – KM25 Cutting Units

F dimension (mm)	L1 dimension (mm)	tangential load (lbf)	tangential load (kN)
16	30	1600	7,12
22	30	1100	4,89
28,5	30	750	3,34
24	30	950	4,23
16	35	1250	5,56
16	45	750	3,34
25,3	30	850	3,78
32	30	600	2,67

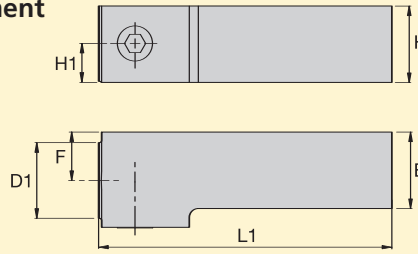


Depth of Cut (inch) and Feed Rate (ipr) vs. Tangential Forces (lbs.) for KM25





RCM/NCM – Square Shank Replacement

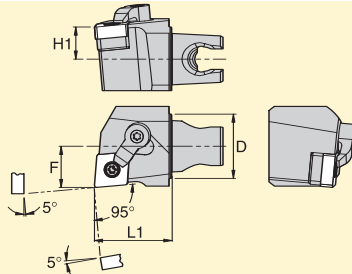


Note: A torque wrench must be used to achieve required clamping force. See page D61.

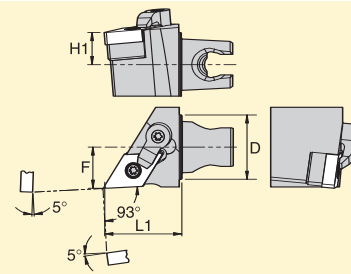
Catalog number			B		H		L1		F		H1		Spares Package	Hex	Tightening Torque
Right hand/Left hand	D1	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm				
Inch															
KM25 R/L CM16382	25 mm	1.000	25,40	1.000	25,40	3.819	97,00	.630	16,00	.508	12,90	KM25NOPKG	6 mm		25-30 ft./lbs.
KM25 R/L CM16482	25 mm	1.000	25,40	1.000	25,40	4.819	122,40	.630	16,00	.508	12,90	KM25NOPKG	6 mm		25-30 ft./lbs.
Metric															
KM25NCM2525120	25 mm	.984	25,00	.984	25,00	4.724	120,00	.630	16,00	.492	12,50	KM25NOPKG	6 mm		34-40 Nm

KM25 Cutting Units – KENLOC

MCLN 95°



MDJN 93°



MCLN 95°

Catalog number			L1		F		H1		Insert	Shim	Lock Pin	Clamp	Clamp Screw	Wrench	Torx
Right hand/Left hand	D	inch	mm	inch	mm	inch	mm								
KM25MCLN R/L 1230	25 mm	1.181	30,00	.630	16,00	.492	12,50		CNMG432 CNMG120408	ICSN433	KLM4615IP	CKM20LP	STCM1115IP	K15IP	T15IP
MDJN 93°															
KM25MDJN R/L 150430	25 mm	1.181	30,00	.630	16,00	.492	12,50		DNMG432 DNMG150408	IDSN442	KLM4615IP	CKM20LP	STCM1115IP	K15IP	T15IP

To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Right hand: **KM25RCM16382**

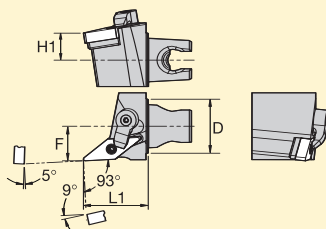
Left hand: **KM25LCM16382**

KM25 Tooling

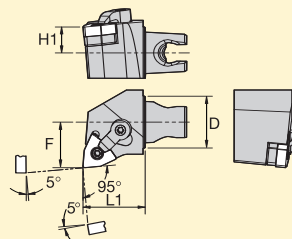
KM Clamping Units – KENLOC



MVJN 93°



MWLN 95°



MVJN 93°

Catalog number	L1		F		H1	
Right hand/Left hand	D	inch mm	inch mm	inch mm	inch mm	
KM25MVJN R/L 1630	25 mm	1.181 30,00	.630 16,00	.492 12,50		

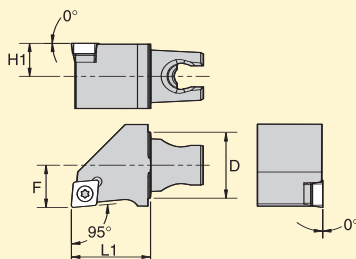
Insert	Shim	Lock Pin	Clamp	Clamp Screw	Wrench	Torx
VNMG332 VNMG160408	IVSN322	KLM34L9IP	CKM20LP	STCM119IP	K9IP	T9IP
WNMG432	IWSN433	KLM4615IP	CKM20LP	STCM1115IP	K15IP	T15IP
WNMG080408						

MWLN 95°

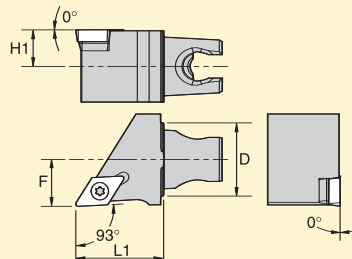
KM25MWLN R/L 0830	25 mm	1.181 30,00	.866 22,00	.492 12,50		
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Cutting Units – SCREW-ON

SCLC 95°



SDJC 93°



SCLC 95°

Catalog number	L1		F		H1	
Right hand/Left hand	D	inch mm	inch mm	inch mm	inch mm	
KM25SCLC R/L 1230	25 mm	1.181 30,00	.630 16,00	.492 12,50		

Insert	Insert Screw	Shim	Shim Screw	Wrench	Torx
CCMT432 CCMT120408	MS1158	SKCP453	SRS4	FT154	T15
DCMT3252	MS1156	SKDP343	SRS3	FT1535	T15
DCMT111T308					

SDJC 93°

KM25SDJC R/L 1130	25 mm	1.181 30,00	.630 16,00	.492 12,50		
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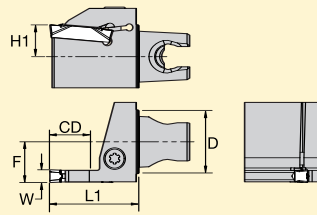
To place an order, contact your authorized Kennametal distributor or visit www.kennametal.com.

Order example:
Right hand: KM25MVJNR1630

Left hand: KM25MVJNL1630



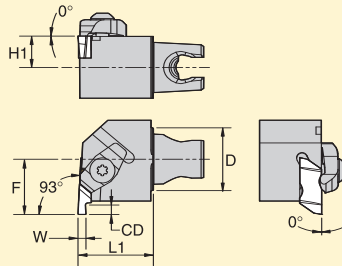
A4SM – Straight Mount



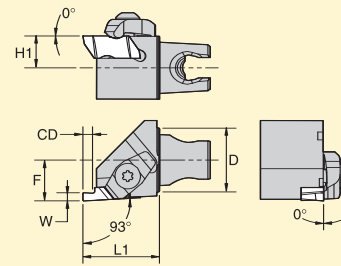
																
Catalog number		L1			F		W		CD		H1		Insert Seat Size	Clamp Screw	Wrench	Torx
Right hand/Left hand	D	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm					
KM25A4SM R/L 031430	25 mm	1.181	30,00	.630	16,00	.118	3,00	.551	14,00	.492	12,50	3	MS2091	K25IP	T25IP	
KM25A4SM R/L 041430	25 mm	1.181	30,00	.630	16,00	.157	4,00	.551	14,00	.492	12,50	4	MS2091	K25IP	T25IP	
KM25A4SM R/L 051935	25 mm	1.378	35,00	.630	16,00	.197	5,00	.748	19,00	.492	12,50	5	MS2091	K25IP	T25IP	

KM25 Cutting Units – TOP NOTCH

NE 93° – End Mount



NS 93° – Side Mount



NE 93° – End Mount

NE 93 – End Mount																
Catalog number	Catalog number	L1		F		W		CD		H1		Insert	Clamp	Clamp Screw	Wrench	Torx
Right hand	Left hand	D	inch mm	inch mm	inch mm	inch mm	inch mm	inch mm	inch mm							
KM25NER330		25 mm	1.181 30,00	.866 22,00	.047-.189	1,19 - 4,80	.075-.150	1,90 - 3,81	.492 12,50			NG3L	CM73LP	MS2111	K25IP	T25IP
	KM25NEL330	25 mm	1.181 30,00	.866 22,00	.047-.189	1,19 - 4,80	.075-.150	1,90 - 3,81	.492 12,50			NG3R	CM72LP	MS2111	K25IP	T25IP

NS 93° – Side Mount

KM25NSR230		25 mm	1.181 30,00	.630 16,00	.031-.125	0,79 - 3,17	.050-.110	1,27 - 2,80	.492 12,50			NG2R	CM 74	MS1200	KT10	T10
	KM25NSL230	25 mm	1.181 30,00	.630 16,00	.031-.125	0,79 - 3,17	.050-.110	1,27 - 2,80	.492 12,50			NG2L	CM 75	MS1200	KT10	T10
KM25NSR330		25 mm	1.181 30,00	.630 16,00	.047-.189	1,19 - 4,80	.075-.150	1,90 - 3,81	.492 12,50			NG3R	CM 72LP	MS2111	K25IP	T25IP
	KM25NSL330	25 mm	1.181 30,00	.630 16,00	.047-.189	1,19 - 4,80	.075-.150	1,90 - 3,81	.492 12,50			NG3L	CM 73LP	MS2111	K25IP	T25IP
KM25NSR430		25 mm	1.181 30,00	.630 16,00	.125-.250	3,17 - 6,35	.150-.250	3,81 - 6,35	.492 12,50			NG4R	CM212LP	MS2111	K25IP	T25IP
	KM25NSL430	25 mm	1.181 30,00	.630 16,00	.125-.250	3,17 - 6,35	.150-.250	3,81 - 6,35	.492 12,50			NG4L	CM213LP	MS2111	K25IP	T25IP

Order example:

Right hand: **KM25A4SMR031430**

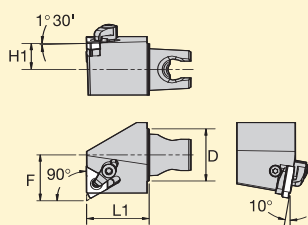
Left hand: **KM25A4SML031430**

KM25 Tooling

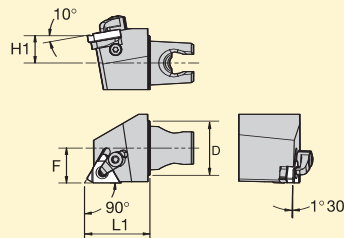


KM25 Cutting Units – LT Threading

LSE – End Mount



LSS – Side Mount

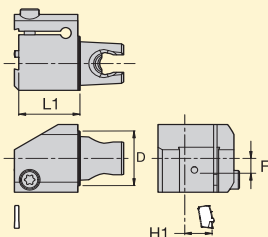


LSE – End Mount

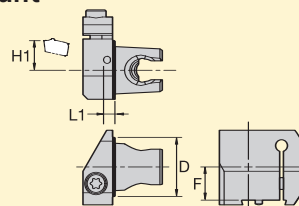
Catalog number	Catalog number		L1		F		H1		Insert	Shim	Insert Screw	Shim Screw	Torx Size	Clamp Assembly	Torx Size
Right hand	Left hand	D	inch	mm	inch	mm	inch	mm							
KM25LSER1630		25 mm	1.181	30,00	.866	22,00	.492	12,50	LT16EL	SMYI3	SSA3T	SSY3T	T10	CKC3	T15
	KM25LSEL1630	25 mm	1.181	30,00	.866	22,00	.492	12,50	LT16ER	SMYE3	SSA3T	SSY3T	T10	CKC3	T15
LSS – Side Mount															
KM25LSSR1630		25 mm	1.181	30,00	.630	16,00	.492	12,50	LT16ER	SMYE3	SSA3T	SSY3T	T10	CKC3	T15
	KM25LSSL1630	25 mm	1.181	30,00	.630	16,00	.492	12,50	LT16EL	SMYI3	SSA3T	SSY3T	T10	CKC3	T15

KM25 Cutting Units – A2 Modular Cut-Off

BE – End Mount



BS – Side Mount



BE – End Mount

Catalog number		L1		F		H1		Clamp Screw	Blade	Torx
Right hand/Left hand	D	inch	mm	inch	mm	inch	mm			
KM25BE R/L	25 mm	1.103	28,0	.268	6,80	.492	12,50	MS1898	A2BHSN-	T27
BS – Side Mount										
KM25BS R/L	25 mm	.189	4,80	.552	14,00	.492	12,50	MS1898	A2BHSN-	T27

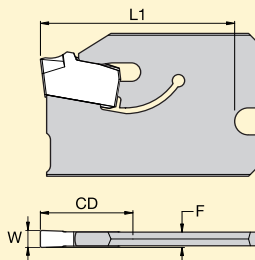
Order example:

Right hand: KM25LSER1630

Left hand: KM25LSEL1630



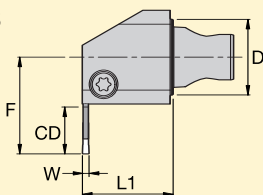
A2 Modular Blade



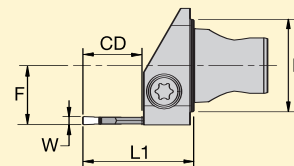
Order blade separately.

Catalog number Right hand/Left hand	L1		F		W		CD		 Insert	 Assembly Wrench*
	inch	mm	inch	mm	inch	mm	inch	mm		
A2BHSN19X0211	.795	20,19	.079	2,00	.087	2,20	.433	11,00	A2022-	170.137
A2BHSN19X0216	.992	25,20	.079	2,00	.087	2,20	.630	16,00	A2022-	170.137
A2BHSN19X0116	.992	25,20	.067	1,70	.063	1,60	.600	15,25	A2016-	170.137

*Assembly wrench 170.137 must be ordered separately.

KM25 Cutting Units
with A2 Modular
Blade Assemblies
BE – End Mount

$$F (\text{assembly}) = F (\text{toolholder}) + L1 (\text{blade})$$
$$L1 (\text{assembly}) = L1 (\text{toolholder}) + F (\text{blade})$$

KM25 Cutting Units
with A2 Modular
Blade Assemblies
BS – Side Mount

$$F (\text{assembly}) = F (\text{toolholder}) + F (\text{blade})$$
$$L1 (\text{assembly}) = L1 (\text{toolholder}) + L1 (\text{blade})$$

KM25 Accessories

Torque Wrench



Catalog number	KM Size dK _M	Wrench Type	Adapter Square Size	Driver Hex Size	 Torque	Torque Wrench Description
TW628R	25	ratchet	.375	6 mm	28 ft./lbs. (38 Nm)	complete with adapter & driver bit

Order example:
Right hand: A2BHSN19X0211

KM3225 Tooling

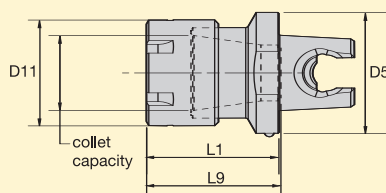


KM3225 Cutting Units

KM3225 Cutting Units - ER Collet Chucks

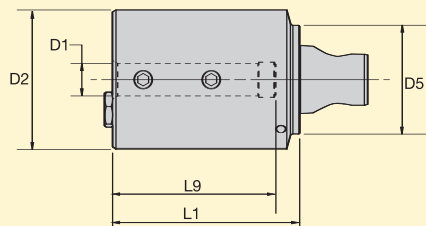


See page D46.



Order number	Catalog number	System Size	Collet System Size	Collet Capacity		D5	D11		L1		L9		Locknut	Wrench	Torque			
				inch	mm	mm	inch	mm	inch	mm	inch	mm			ft./lbs.	Nm	kg.	lbs.
2527514	KM3225ER1630	KM3225	ER 16	1/64 - 3/8	0,5-10,0	32	.866	22	1.181	30	1.173	29,8	LER16M	ER16WEM	20	27	0.09	0.20
2527516	KM3225ER2035	KM3225	ER 20	1/16 - 1/2	0,5-13,0	32	1.102	28	1.378	35	1.390	35,3	LER20M	ER20WEM	50	68	0.119	0.26
2527515	KM3225ER2540	KM3225	ER 25	1/32 - 5/8	1,0-16,0	32	1.654	42	1.575	40	1.409	35,8	LNER25M	ER25WM	100	136	0.218	0.48

KM3225 Cutting Units - Boring Bar Adapters

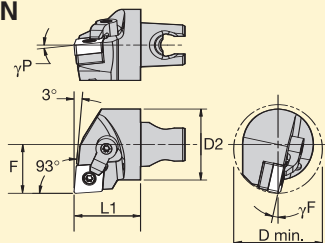


													
Order number	Catalog number	System Size	D1		D2		D5	L1		L9		Set Screw	Hex Size SW
			inch	mm	inch	mm	mm	inch	mm	inch	mm		
Inch													
2527490	KM3225BA06217	KM3225	.375	9,53	1.614	41	32	2.165	55	1.890	48	S843	1/8
2527491	KM3225BA08236	KM3225	.500	12,7	1.693	43	32	2.362	60	2.047	52	S852	5/32
2527492	KM3225BA10256	KM3225	.625	15,88	1.850	47	32	2.559	65	2.165	55	S863	3/16
2527503	KM3225BA12276	KM3225	.750	19,05	1.969	50	32	2.756	70	2.283	58	S1716	1/4
Metric													
2527505	KM3225BA0645M	KM3225	.236	6,00	1.457	37	32	1.772	45	1.417	36	MS 1210	2,5
2527506	KM3225BA0845M	KM3225	.315	8,00	1.535	39	32	1.772	45	1.417	36	MS 1210	2,5
2527507	KM3225BA1055M	KM3225	.394	10,00	1.614	41	32	2.165	55	1.890	48	MS 1211	4
2527508	KM3225BA1260M	KM3225	.472	12,00	1.693	43	32	2.362	60	2.047	52	MS 1211	4
2527509	KM3225BA1665M	KM3225	.630	16,00	1.850	47	32	2.559	65	2.165	55	MS 1935	6
2527510	KM3225BA2070M	KM3225	.787	20,00	1.969	50	32	2.756	70	2.283	58	MS 1935	6

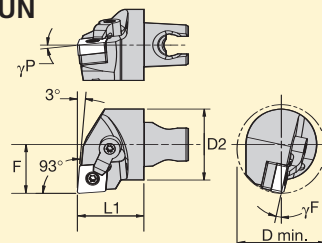
Order example:
Catalog number: KM3225ER1630
Order number: 2527514



KM3225 MCLN

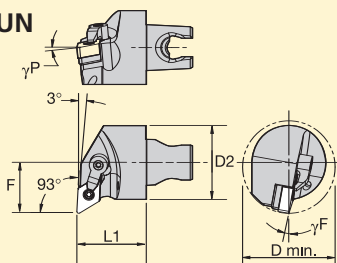


KM3225 MDUN

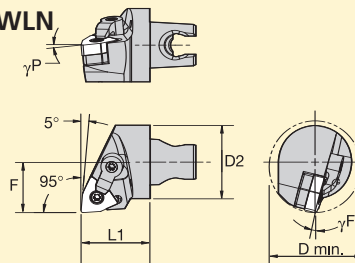


Catalog number Right hand/Left hand	System Size	D min		D2	L1		F		γP°	γF°	Insert		Shim	Lock Pin	Clamp	Clamp Screw	Wrench	Torx Size
		inch	mm		inch	mm	inch	mm			inch	mm						
KM3225MCLN R/L 1230	KM3225	1.575	40	32	1.181	30	.866	22	-5	-12	CNMG432	CNMG120408	ICSN432	KLM 46L15IP	CKM20LP	STCM1115IP	K15IP	15IP
MDUN																		
KM3225MDUN R/L 150430	KM3225	1.575	40	32	1.181	30	.866	22	-3	-12	DMNG432	DMNG150408	IDSN432	KLM 46L15IP	CKM20LP	STCM1115IP	K15IP	15IP

KM3225 MDUN



KM3225 MWLN



MDUN

Catalog number Right hand/Left hand	System Size	D min		D2	L1		F		γP°	γF°	Insert		Shim	Lock Pin	Clamp	Clamp Screw	Wrench	Torx Size
		inch	mm		inch	mm	inch	mm			inch	mm						
KM3225MDUN R/L 1130	KM3225	1.575	40	32	1.181	30	.866	22	-3	-10	DNMG332	DNMG110408	IDSN322	KLM34LT9	CKM7LP	STCM9T9	KT9	T9
MWLN																		
KM3225MWLN R/L 0830	KM3225	1.575	40	32	1.181	30	.866	22	-5	-14	WNMG432	WNMG080408	IWSN433	KLM46L15IP	CKM20LP	STCM1115IP	K15IP	15IP

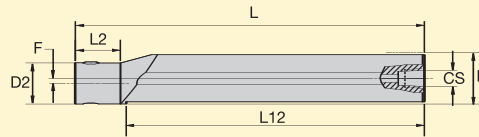
To place an order, contact your authorized
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KM3225 Tooling

KM3225 Clamping Units



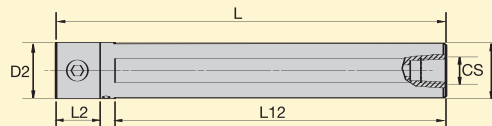
Eccentric Shank



Note: A torque wrench must be used to achieve required clamping force. See page D61.

																		
Order number	Catalog number	System Size	D		D2	L		L2		L12		F		CS	Spare Parts	Hex	Torque	
			inch	mm	mm	inch	mm	inch	mm	inch	mm	inch	mm				ft./lbs.	Nm
2541730	KM3225ECMS24	KM3225	1.5	38,1	32	10	254	1.378	35	8.465	215	.120	3,04	1/4-18 NPT	KM3225NRPKG	6 mm	25-30	34-40
2541836	KM3225ECMS40	KM3225	1.574	40	32	10.65	270	–	–	9.134	232	.157	3,99	1/4-18 NPT	KM3225NRPKG	6 mm	25-30	34-40

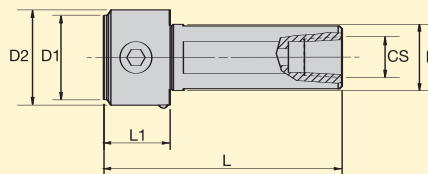
Boring Bar



Note: A torque wrench must be used to achieve required clamping force. See page D61.

																
Order number	Catalog number	System Size	D		D2	L		L2		L12		CS	Spare Parts	Hex	Torque	
			inch	mm	mm	inch	mm	inch	mm	inch	mm				ft./lbs.	Nm
Inch																
2541835	KM3225NCMS20	KM3225	1.250	31,75	32	6.750	172	.984	25	5.512	140	1/4-18 NPT	KM3225NRPKG	6 mm	25-30	34-40
2541837	KM3225NCMS32	KM3225	1.260	32	32	8.661	220	.984	25	7.402	188	1/4-18 NPT	KM3225NRPKG	6 mm	25-30	34-40

Straight Shank



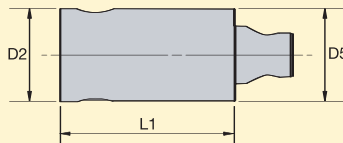
Note: A torque wrench must be used to achieve required clamping force. See page D61.

																	
Order number	Catalog number	System Size	D		D1	D2		L		L1		CS	Spare Parts	Hex	Torque		
			inch	mm	mm	inch	mm	inch	mm	inch	mm				ft./lbs.	Nm	
2594729	KM3225NCMSS16098	KM3225	1.000	25,4	32	1.417	36	3.543	90	.984	25	1/4-18 NPT	KM3225NRPKG	6 mm	25-30	34-40	
2594730	KM3225NCMSS2525	KM3225	.984	25,0	32	1.417	36	3.543	90	.984	25	1/4-18 NPT	KM3225NRPKG	6 mm	25-30	34-40	

Order example:
Catalog number: **KM3225ECMS24**
Order number: **2541730**



Extension



Note: A torque wrench must be used to achieve required clamping force. See page D61.

Order number	Catalog number	System Size	D2		D5		L1		Spare Parts	Hex	Torque	
			inch	mm	inch	mm	inch	mm			ft./lbs.	Nm
2541964	KM3225S3240	KM3225	1.260	32	1.260	32	1.575	40	KM3225NRPKG	6 mm	25-30	34-40
2541965	KM3225S3260	KM3225	1.260	32	1.260	32	2.362	60		6 mm	25-30	34-40

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Order example:
 Catalog number: KM3225S3240
 Order number: 2541964



Lined area for notes, consisting of multiple horizontal lines.

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