



KM MICRO™

KENNAMETAL'S SOLUTION
FOR SMALL PART MACHINING

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KM MICRO™ - Tools for Automatic Lathes and Small CNC Lathes

The tools listed in this catalogue have been specifically designed for the series production of small components, which require the highest precision. Single and multi-spindle automatic lathes and small CNC lathes are used in production. These machine types place specific demands on the tooling system. For example, special tools are used with shank dimensions of 8 to 16 mm. Due to the limited space in the machine area, tooling systems which provide easy access to the indexable insert clamping mechanism are preferred.

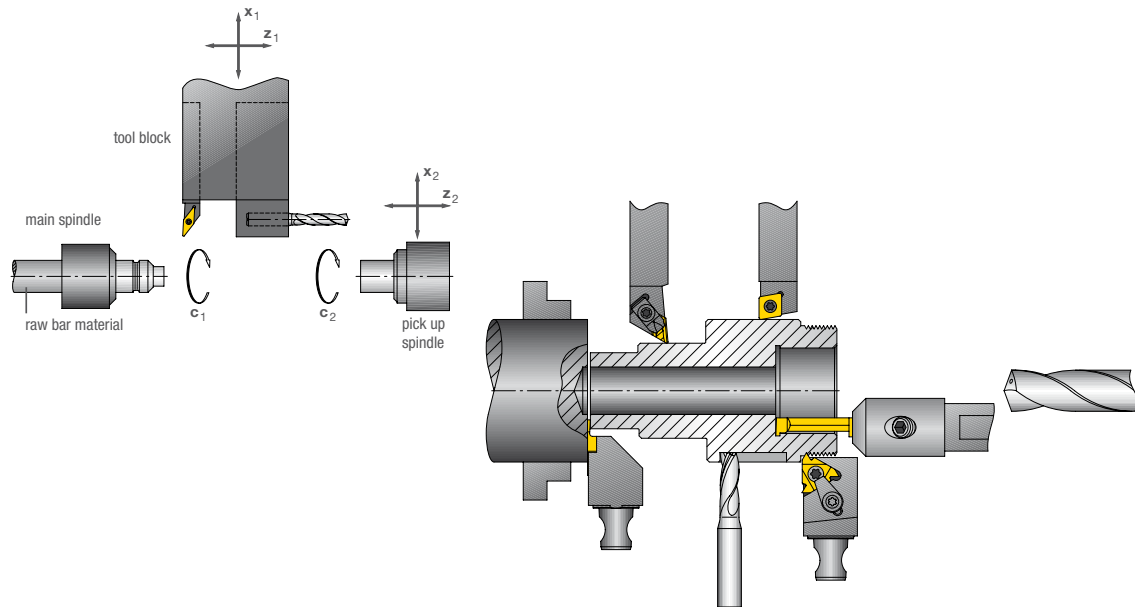
The KM Micro quick-change tooling system, which changes cutting units quickly and easily, is an excellent alternative.

Rule of thumb:

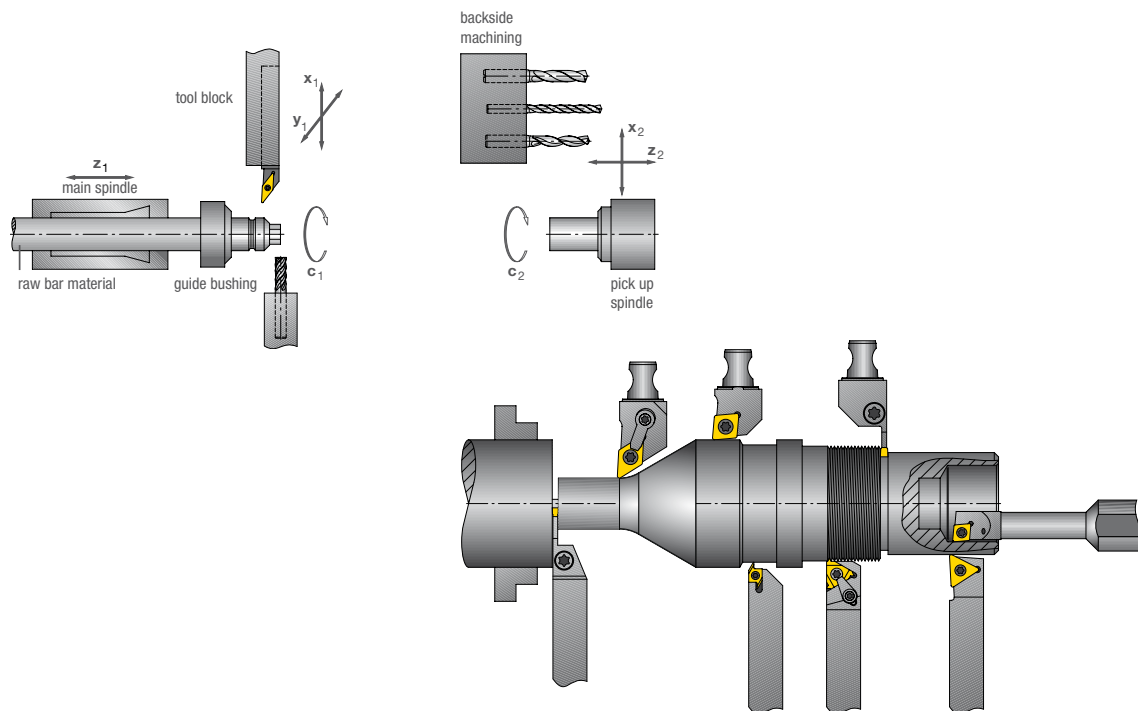
Chuck diameter $\leq 4 \times$ lathe length $\Rightarrow$ Short automatic lathe

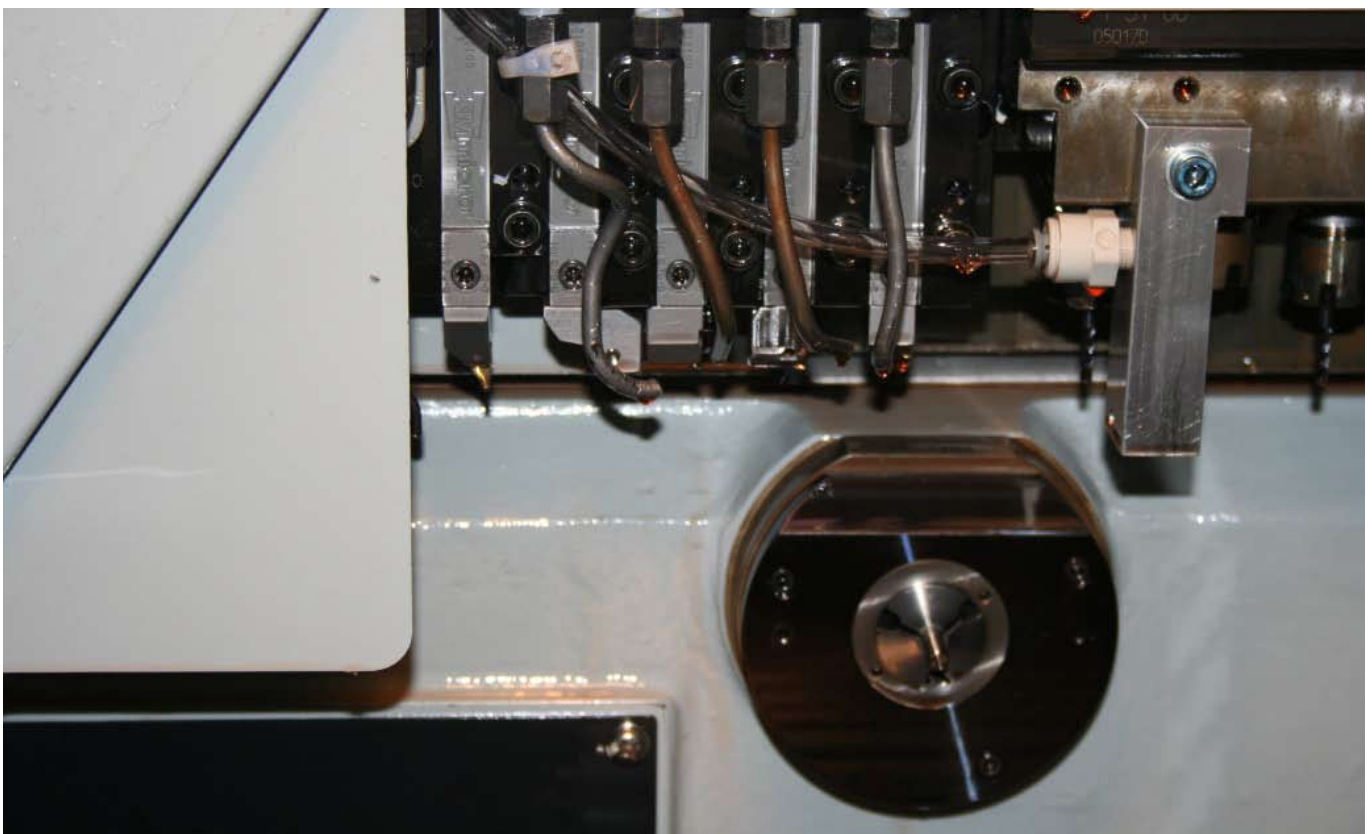
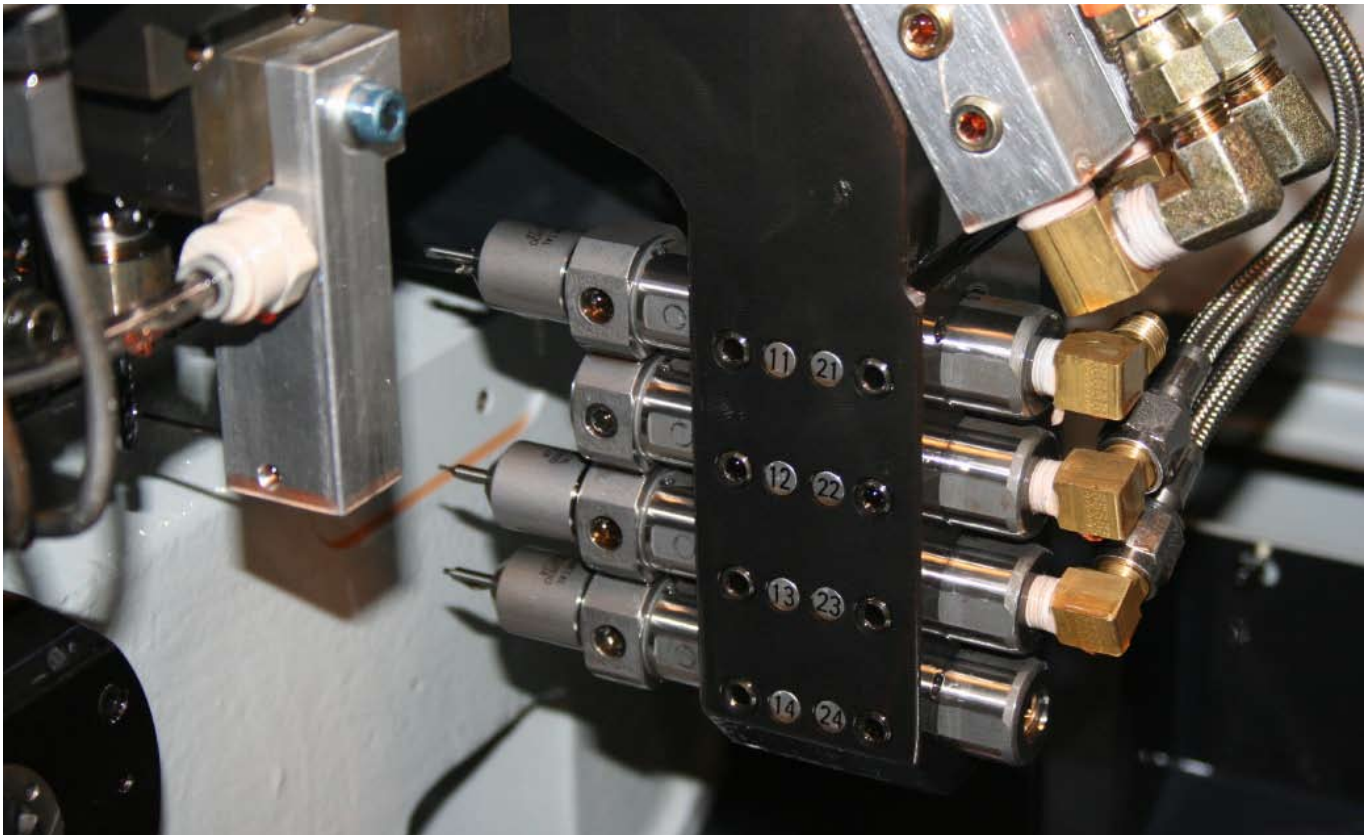
Chuck diameter $> 4 \times$ lathe length $\Rightarrow$ Long automatic lathe

SHORT AUTOMATIC LATHE FEED VIA AXIAL MOVEMENT OF THE TOOL BODY



LONG AUTOMATIC LATHE FEED VIA AXIAL MOVEMENT OF THE FEED BARS





KM MICRO™ - Quick-Change Tooling System

...Kennametal has developed yet another revolutionary quick-change tooling system.

The KM Micro tooling system is a further development of the internationally renowned KM™ system, but is a smaller, more compact version.

REDUCE INDEXING AND SETUP BY TIMES BY 66%.

The KM Micro system has been specially designed for use with automatic lathes, as well as smaller universal lathes. The quick-change cutter heads reduce indexing and setup times on machines by up to 66%.

The unique flange attachment system enables an additional 1 to 3 tool spaces to be used on a single tool block. This considerably increases the tool capacity of the machine. A further advantage is the high level of stability of the block, as rigidity is greatly improved during deep tool turning operations by removing the tool slots.

QUICK AND EASY INSTALLATION.

The new KM Micro square shank adapters can be installed quickly and easily in existing tool block adapters. Existing clamp-type tool holders are replaced by KM Micro adapters with the same dimensions, and the machine is then ready for use.

KENNAMETAL provides you with a comprehensive range of KM Micro solutions to meet your requirements.



WHAT IS KM MICRO[™] ?

...It is a revolutionary Quick-Change tooling system utilizing face and taper contact design. The KM Micro tooling System is designed for, but not limited to, the Swiss style machine tool industry.


1

Typical Swiss tool block.
➤ DIFFICULT TO CHANGE THE INSERT.

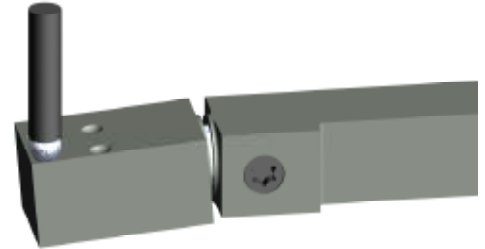

2

Change the Cutting Unit, not the insert!
➤ ACTUAL TOOL CHANGE.



FOR FACE - TAPER CONTACT SYSTEMS
 STIFFNESS DEPENDS ON

➤ **INTERFERENCE LEVEL AND CLAMPING FORCE**

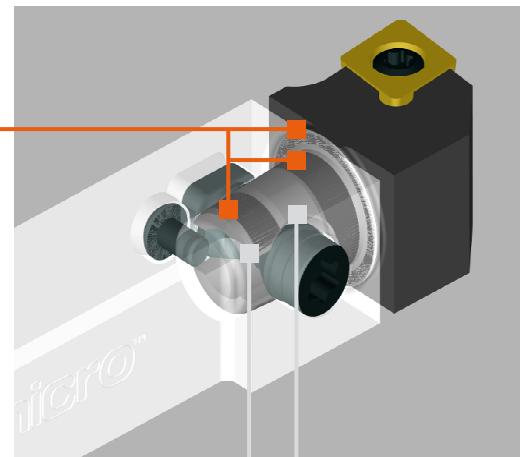


Features - Functions -
 Benefits

TAPER FEATURES

3 SURFACE CONTACT

- 3 Surface Contact - Provides bands at face, gage, and tail.
- 10:1 Taper Angle - Same as standard the KM™ system. Interference Level optimized to provide maximum rigidity.
- Features are generally the same as the standard KM™ system, but with wedge(cone) locking rather than balls.



Wedge (Cone) clamping 10:1 Taper

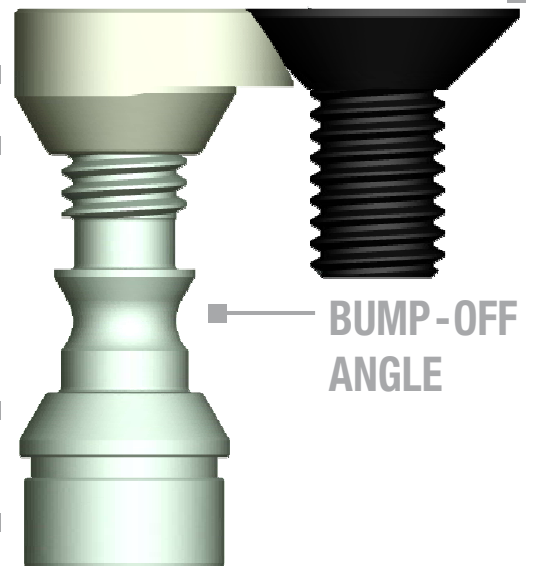
MECHANISM FEATURES

STOP SCREW

WEDGE NUT
 ANTI-ROTATION

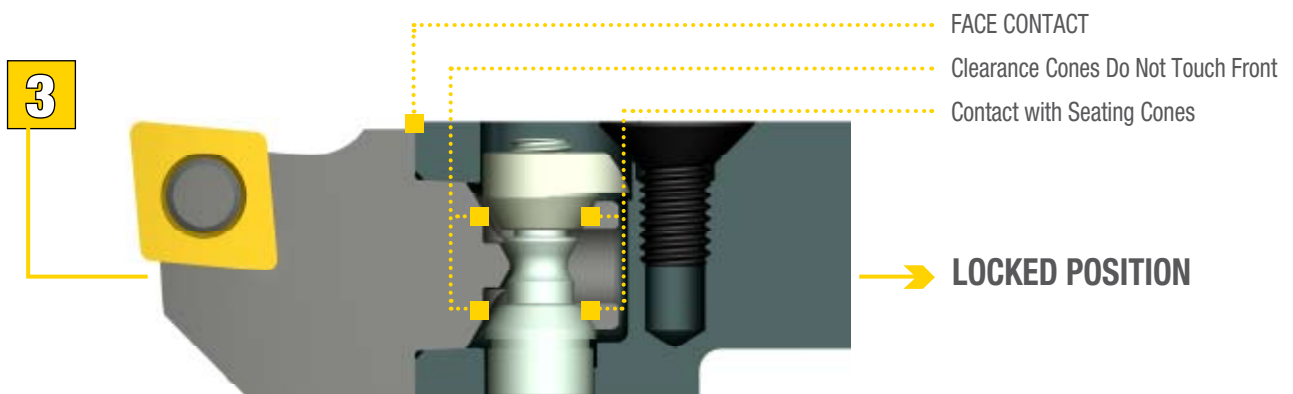
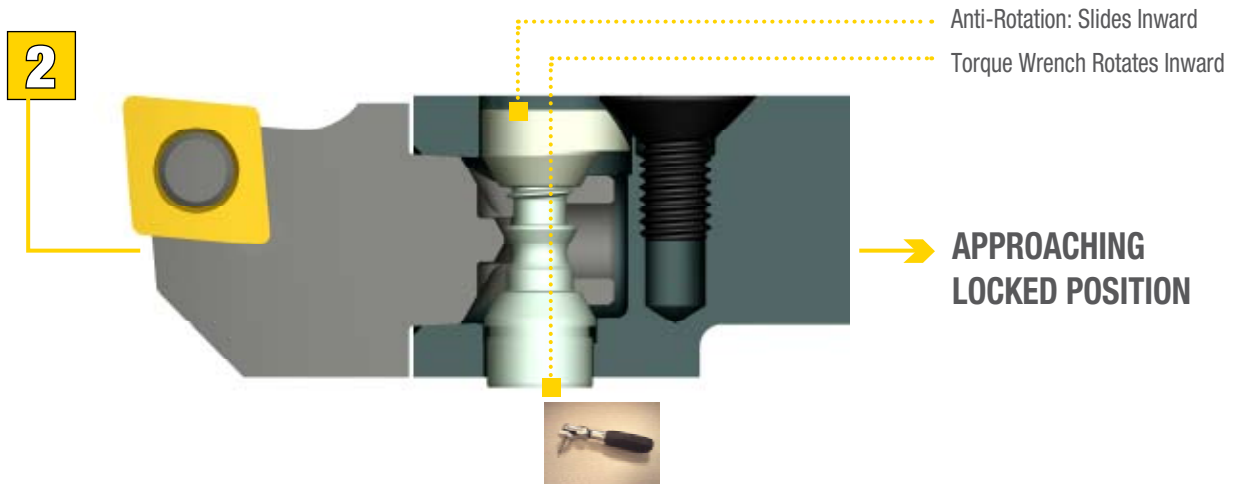
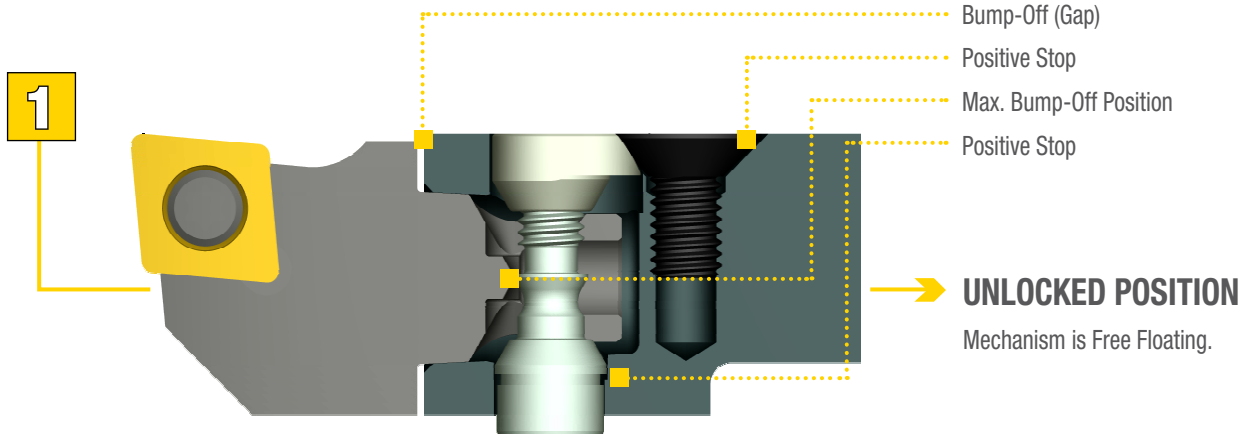
LOCKING CONE

TORQUE SCREW
 TORX PLUS DRIVE



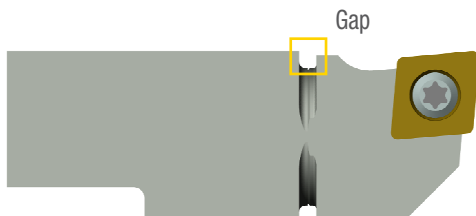
BUMP-OFF
 ANGLE

MODULAR QUICK-CHANGE TOOLING

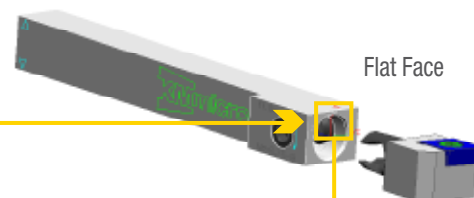
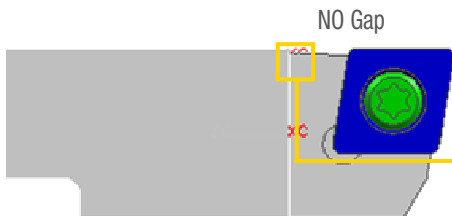


KM MICRO™ ENHANCEMENTS GAGE FACE REMOVAL

OLD



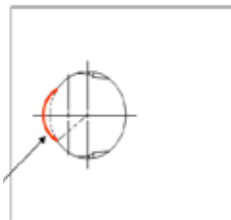
NEW



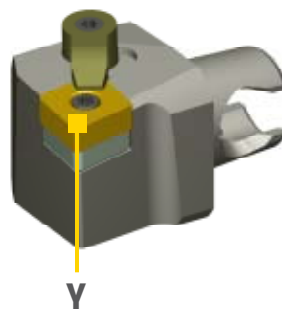
ADVANTAGES

- NO Chip Wrap
- MORE Face Contact
- offers a higher load bearing capability

KM MICRO™ ENHANCEMENTS CENTERHEIGHT REPEATABILITY (50% IMPROVEMENT)



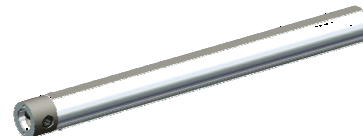
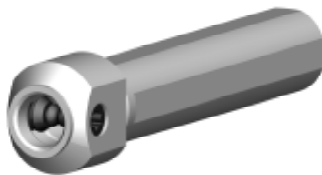
➤ Added Scallop –
SIMILAR TO A V-BLOCK



➤ Center Height Repeatability:
5 MICRONS OR BETTER

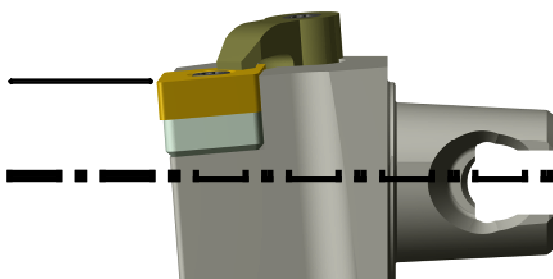
WHAT ARE KM1612 & KM2016 FOR ID MACHINING

The KM1612/KM2016 is the ID endworking tooling product line to compliment the KM12/KM16 OD turning tooling product line.

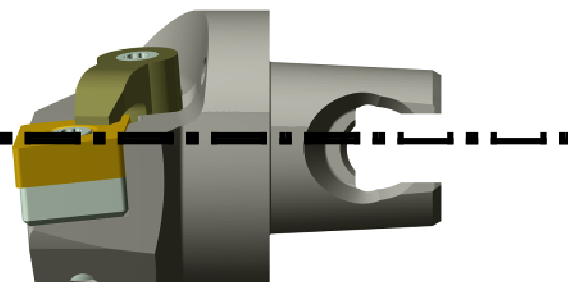


- All KM1612/KM2016 products are through coolant capable.
- Taper design is the same as the KM12/KM16.

Major difference between KM12/KM16 & KM1612/KM2016 is center height location of the insert.



KM12/KM16 - SQUARE-BASED HEADS
INSERT IS ABOVE CENTERLINE



KM1612/KM2016 - ROUND-BASED HEADS
INSERT IS ON CENTERLINE

**ERICKSON**TM

Trust Kennametal. Trust Kennametal EricksonTM.

When you buy Kennametal Erickson products, you can be assured that you're buying the best the industry has to offer. The Kennametal Erickson portfolio — including Steep Taper, HSK, and collets and sleeve products — offers high productivity, increased accuracy, and application flexibility unmatched by any other competitive systems products. With one of the broadest product offerings in the industry, Kennametal Erickson tools may be used in a variety of machining applications ranging from low-speed, heavy-milling jobs to high-speed operations greater than 20,000 RPMs.



Count on Kennametal Erickson products for consistent, high-quality performance, even in the most challenging environments. To learn more, visit www.kennametal.com or contact your Authorized Kennametal Distributor.

FEATURES – FUNCTIONS – ADVANTAGES

Features	Functions	Advantages
KM Micro is a compact quick-change tooling system.	 The complete cutting unit (including indexable insert) can be easily changed.	- Indexable inserts can be changed outside the machine: - Reduces the time required for changing indexable inserts by up to 60%. - Reduces the machine setup time by up to 80%.
Face and taper surface contact between the cutting unit and clamping units.	Precise and repeatable cutting edge position is in both directions of cut.	- Test cuts are minimized or no longer required. - Premeasured tools can be installed in the machine – once the deviation/correction value has been specified, the tools are ready for use.
Mating taper clamping surfaces.	- Maximum possible surface contact between the clamping mechanism and the cutting unit. - Precise radial positioning. - The KM design induces positive expansion of the taper, resulting in secure clamping.	 - Large contact surface increases interface life. - High radial and center height repeatability.
Simple but highly effective clamping mechanism.	- Secure and release via a screw using a torque wrench: 6,75 - 8 Nm for KM12; 3 turns 9,5 - 11 Nm for KM16; 3 turns	- Cutting units can be easily changed. - High clamping forces through low clamping torques.
Square shank adapters for standard tool blocks.	- clamping unit sizes in accordance with industrial standards. - Fits standard tool adapters. - Designed for: - fixed and sliding headstock machines - Small universal lathes	This system does not require special tool adapters or adapter blocks for installation or replacement operations on your machine  Square shank adapter
Universal flange clamping units are a versatile alternative to square shank adapters.	Flange attachment systems can also be retrofitted to existing machines. As a result additional tool spaces can become available.	 - Increased tool capacity (up to 3 additional tools per tool block). - Increased rigidity and stability as clamp-type tool holder slots are not required Flange attachment system
Flange attachment units in a wide range of configurations with or without coolant facility.	Kennametal offers various flange attachment units that can be used for a wide range of turret and tool block configurations and combinations of modern machines.	 The tool block/flange combination can be optimized to meet the requirements of a machine or a specific workpiece range. Very close fitting flange attachment system Optimization of tool length

KM MICRO™

Clamping Units

FOR OD AND ID APPLICATION

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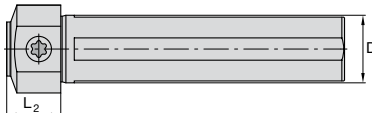
Number Code.....	A2
Clamping Units for OD Application	A3
Clamping Units for ID Application.....	A4-A6

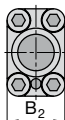
NUMBER CODE

CLAMPING UNITS

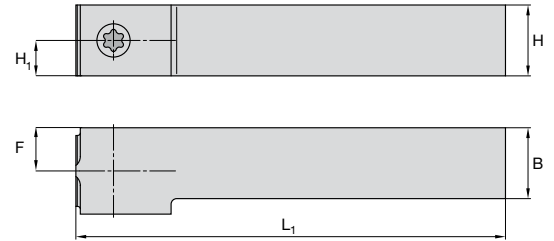
KM	12	N	C	M
1. KENNAMETAL Modular; KM Micro™ quick-change tooling system	2. System Size KM 12 = Ø 12x12 mm 16 = Ø 16x16 mm	3. Version N - Neutral L - Left-hand version R - Right-hand version	4. Clamping Unit	5. Control M - Manual A - Automatic

	12	12	100
6. Type Square shank	7. Shank height H	8. Shank width B	9. Shank length L₂
			

SS	19	14
6. Type SS- Square shank with shoulders	7. Shank diameter D	8. Shoulder length L₁
		

SF	27
6. Type SF - Flange Mount SEF - Extended flange mount	7. Flange width B₂
	

SQUARE SHANK



NCM

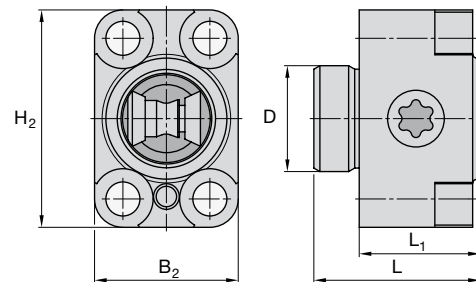
■ Metric

order no.	KM size	cat. no.	RH LH N	B mm	H mm	H1 mm	F mm	L1 mm	spare parts PKG	wrench size - actuation screw	torque Nm
1922492	12	KM12NCM1212100	N	12,00	12,00	6,00	8,00	100,00	KM12NAPKG	T25IP	6,75 - 8
2238505	16	KM16NCM1616100	N	16,00	16,00	8,00	1000	100,00	KM16NAPKG	T27IP	9,5 - 11

■ Inch

order no.	KM size	cat. no.	RH LH N	B mm	B inch	F mm	F inch	H mm	H inch	H1 mm	H1 inch	L1 mm	L1 inch	spare parts PKG	wrench size - actuation screw	torque Nm
1925740	12	KM12LCM08400	LH	12,70	.500	8,00	.315	12,70	.500	6,68	.263	101,60	4.000	KM12NAPKG	T25IP	6,75 - 8
1920380	12	KM12RCM08400	RH	12,70	.500	8,00	.315	12,70	.500	6,68	.263	101,60	4.000	KM12NAPKG	T25IP	6,75 - 8
2238506	16	KM16NCM10400	N	15,75	.625	10,00	.394	15,75	.625	7,90	.311	101,60	4.000	KM16NAPKG	T27IP	9,5 - 11

FLANGE ADAPTERS

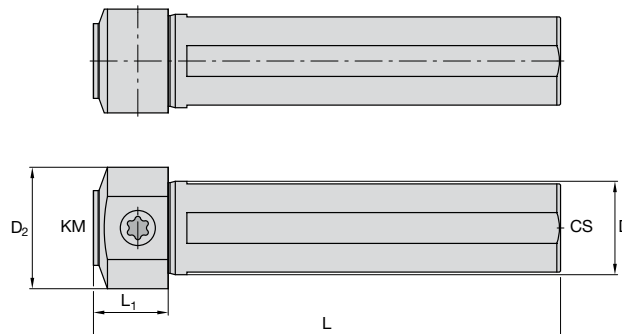


NCM

order no.	KM size	cat. no.	B2 mm	D mm	H2 mm	L mm	L1 mm	Spare Parts Package	wrench size - actuation screw	torque Nm
1925741	12	KM12NCMSF1522	15,75	10	21,5	18	14	KM12NRPKG	T25IP	6,75 - 8
1898043	16	KM16NCMSF1928	19	14	27,5	22	16	KM16NRPKG	T27IP	9,5 - 11

ROUND SHANK

NCM-SS (through coolant)



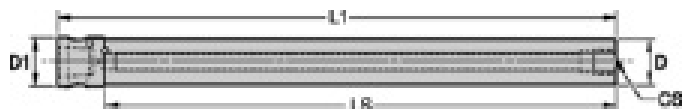
■ Metric

order no.	KM size	cat. no.	D mm	D2 mm	L mm	L1 mm	spare parts PKG	CS	wrench size - actuation screw	torque Nm
2439977	1612	KM1612NCMSS1614	16	22	100	14	KM12NRPKG	1/8-27NPT	T25IP	6,75 - 8
1925739	1612	KM1612NCMSS1914	19	25	100	14	KM12NRPKG	1/8-27NPT	T25IP	6,75 - 8
2439981	1612	KM1612NCMSS2014	20	26	100	14	KM12NRPKG	1/8-27NPT	T25IP	6,75 - 8
2439978	1612	KM1612NCMSS2514	25	31	100	14	KM12NRPKG	1/4-18NPT	T25IP	6,75 - 8
2439979	2016	KM2016NCMSS1616	16	25	100	16	KM16NRPKG	1/8-27NPT	T27IP	9,5 - 11
1898050	2016	KM2016NCMSS2016	20	26	100	16	KM16NRPKG	1/8-27NPT	T27IP	9,5 - 11
1898051	2016	KM2016NCMSS2216	22	28	100	16	KM16NRPKG	1/4-18NPT	T27IP	9,5 - 11
2439980	2016	KM2016NCMSS2516	25	31	100	16	KM16NRPKG	1/4-18NPT	T27IP	9,5 - 11

■ Inch

order no.	KM size	cat. no.	D mm	D inch	D2 mm	D2 inch	L mm	L inch	L1 mm	L1 inch	spare parts PKG	CS	wrench size - actuation screw	torque Nm
2439982	1612	KM1612NCMSS08055	12,7	.500	20	.787	100	3.937	14	.551	KM12NRPKG	n/a	T25IP	6,75 - 8
1939520	1612	KM1612NCMSS10055	15,86	.625	22	.866	100	3.937	14	.551	KM12NRPKG	1/8-27NPT	T25IP	6,75 - 8
1925738	1612	KM1612NCMSS12055	19,04	.750	25	.984	100	3.937	14	.551	KM12NRPKG	1/8-27NPT	T25IP	6,75 - 8
2440003	2016	KM2016NCMSS08063	12,7	.500	23	.906	100	3.937	16	.630	KM16NRPKG	n/a	T27IP	9,5 - 11
2440004	2016	KM2016NCMSS10063	15,86	.625	25	.984	100	3.937	16	.630	KM16NRPKG	1/8-27NPT	T27IP	9,5 - 11
1898048	2016	KM2016NCMSS12063	19,04	.750	25	.984	100	3.937	16	.630	KM16NRPKG	1/8-27NPT	T27IP	9,5 - 11
1898049	2016	KM2016NCMSS16063	25,4	1.000	32	1.260	100	3.937	16	.630	KM16NRPKG	1/4-18NPT	T27IP	9,5 - 11

NCM-S (through coolant)



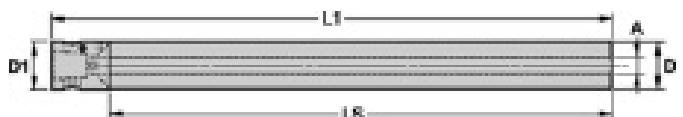
■ Metric

order no.	KM size	cat. no.	CS mm	D mm	D1 mm	L1 mm	LS mm	Spare Parts PKG	wrench size - actuation screw	torque Nm
3016744	2016	KM2016NCMS20	1/8-27NPT	20	20	230	210	KM16NRPKG	T27IP	9,5 - 11

■ Inch

order no.	KM size	cat. no.	CS mm	D mm	D1 mm	L1 mm	LS mm	Spare Parts PKG	wrench size - actuation screw	torque Nm
3016743	2016	KM2016NCMS12	1/8-27NPT	0,75	0,787	9,213	8,425	KM16NRPKG	T27IP	9,5 - 11

NCM-E (Carbide) (through coolant)



■ Metric

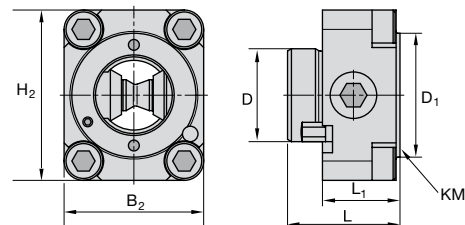
order no.	KM size	cat. no.	A mm	D mm	D1 mm	L1 mm	LS mm	Spare Parts PKG	wrench size - actuation screw	torque Nm
3016722	2016	KM2016NCME20	7,14	20	20,18	242,84	217,84	KM16NRPKG	T27IP	9,5 - 11

■ Inch

order no.	KM size	cat. no.	A mm	D mm	D1 mm	L2 mm	LS mm	Spare Parts PKG	wrench size - actuation screw	torque Nm
3016721	2016	KM2016NCME12	0,281	0,75	0,787	9,589	8,605	KM16NRPKG	T27IP	9,5 - 11



FLANGE ADAPTERS



NCMSF (through coolant)

Mounting Controls available on request.

order no.	KM size	cat. no.	B2 mm	D mm	D1 mm	H2 mm	L mm	L1 mm	spare parts PKG	wrench size - actuation screw	torque Nm
3735627	1612	KM1612NCMSF2127	21	17	16	27	18	14	KM12NRPKG	T25IP	6,75 - 8
3735628	2016	KM2016NCMSF2533	25	20	20	33	22	16	KM16NRPKG	T27IP	9,5 - 11

Kennametal Machine Utilization Strategy

Some of the greatest challenges facing large and small organizations today involve finding ways to increase the productive cutting time of machine tools. Two tooling-related activities, tool changing and setup or gaging, generally consume 25%-40% of available time.

To reduce tooling-related downtime, Kennametal Inc. recommends the implementation of a Machine Utilization Strategy (or MUS). A Machine Utilization Strategy combines products, technologies, and procedures to yield the optimal output from capital equipment.

Kennametal recommends the following products and services that, when used as part of a Machine Utilization Strategy, can provide significant cost savings:

1. KM[™] Quick-Change Tooling — increases uptime by reducing tool change and setup time.
2. Advanced Cutting Tool Materials — enable your machine tools to run longer and faster with fewer tool changes, increasing productivity.
3. Tool Kitting — provides all the tooling necessary (including fixturing) to complete a production run or shift of operation.
4. Pre-Gaged Tooling — eliminates the time spent measuring cuts during the setup process, reduces the risk of human error at the machine control, and provides a quick and efficient method for changing worn tools.
5. Kennametal Advanced Tool Management System (KATMS) — this powerful, modular software allows you to manage and track tooling, gages, kits, tool assemblies, and tool reconditioning processes for maximum productivity.

With Kennametal's manufacturing strategy you can transfer tool maintenance from the machine tool to the tool crib to:

- Improve tool maintenance
- Reduce on-hand inventory and tool consumption
- Reduce setup time by up to 66%
- Decrease scrap parts
- Increase machine uptime and overall productivity

To begin developing your Machine Utilization Strategy, contact your Kennametal Representative or Authorized Kennametal Distributor.

KM MICRO™

Cutting Units

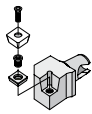
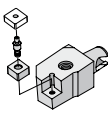
FOR OD APPLICATION

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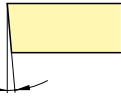
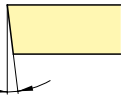
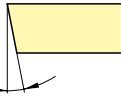
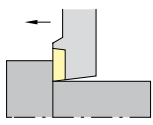
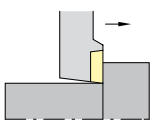
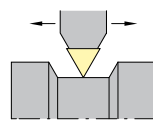
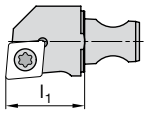
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Cutting Units Grooving and Cutoff	B14-B16
Cutting Units Top Notch™	B17
Cutting Units Kenna Precision™	B18
Cutting Units LT Threading.....	B19

NUMBER CODE

SCREW-ON; KENLOC™; TOP NOTCH™ Profiling cutting units

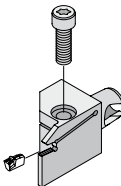
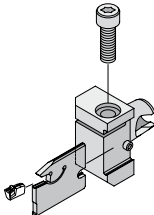
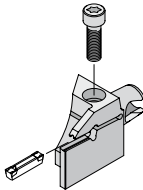
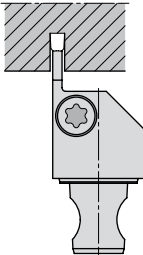
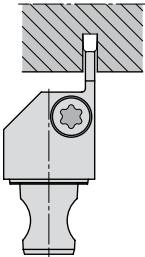
KM	12	S	C	G
1. KENNAMETAL Modular; KM Micro™ quick-change tooling system	2. System Size d_{KM} 12 = Ø 12x12 mm 16 = Ø 16x16 mm	3. Clamping System S - SCREW-ON  clamped from above with a screw, for indexable inserts with hole. M - KENLOC™  clamped from above and through hole with using a pin, for indexable inserts with hole.	4. Basic shape of the indexable insert C  D  K  S 	5. Shape of the cutting unit A  D  G  J  L  M 

Cutting Units for OD

C	R	09	20
6. Normal clearance angle of the indexable insert B 5°  C 7°  N 0°  P 11° 	7. Direction L = Left-hand cutting unit  R = Right-hand cutting unit  N = Neutral cutting unit 	8. Size of the indexable insert C D  V  K  S  T  W 	9. Cutting unit length l_1 

NUMBER CODE

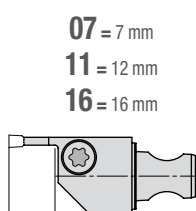
A2™; A3™; A4™ cutting units

KM	12	A2	S	R
1. KENNAMETAL Modular; KM Micro™ quick- change tooling system	2. System Size d _{KM} 12 = Ø 12x12 mm 16 = Ø 16x16 mm	3. Clamping system A2™/A3™ integral  A2™ modular  A4™ Cutting units with screw clamping 	4. Holder version S = Straight version	5. Direction R = Right-hand  L = Left-hand 
2	11	20		

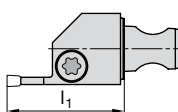
6.
Insert seat size/
cutting width

insert seat size	Cutting width in mm
2	2,20
3	3,05
4	4,05

7.
Cutting depth T

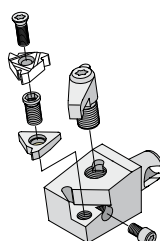
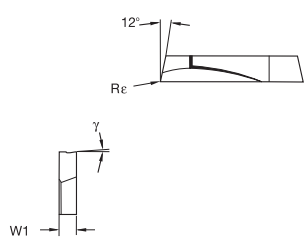
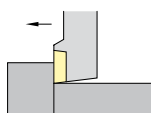
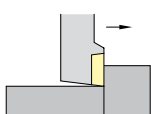


8.
Cutting unit
length L₁



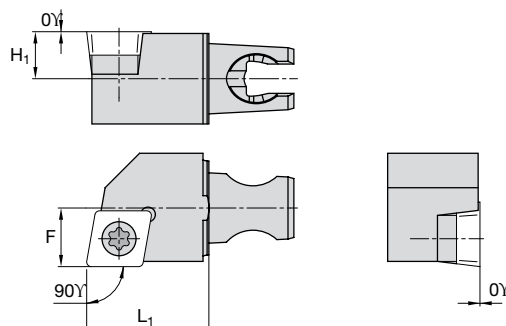
NUMBER CODE

LAYDOWN; ON-EDGE Cutting units

1. KENNAMETAL Modular; quick-change tooling system	2. System Size d _{KM} 12 = Ø 12x12 mm 16 = Ø 16x16 mm	3. Clamping system LAYDOWN clamped from above with a screw 	4. Basic shape of the indexable insert LAYDOWN S ON-EDGE T W 								
5. Application G = Grooving, parting P = Profiling, reverse copy turning T = Thread cutting	6. Direction L = Left-hand cutting unit  R = Right-hand cutting unit 	7. Indexable insert size <table><tr><th></th><th>d (mm)</th></tr><tr><td>06</td><td>6,350</td></tr><tr><td>13</td><td>7,940</td></tr><tr><td>16</td><td>9,525</td></tr></table>		d (mm)	06	6,350	13	7,940	16	9,525	8. Cutting unit length l ₁
	d (mm)										
06	6,350										
13	7,940										
16	9,525										

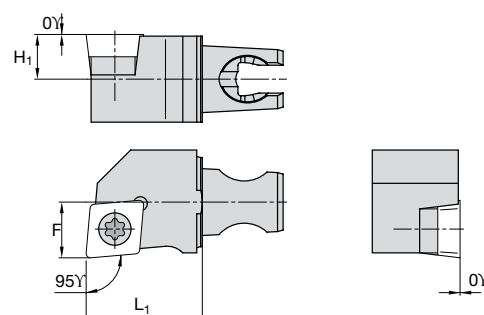
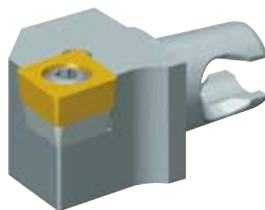
SCREW-ON – TURNING OPERATIONS

SCGC 90°



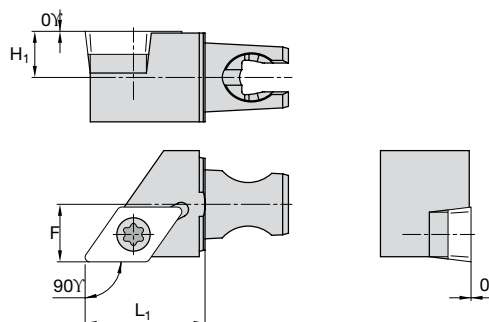
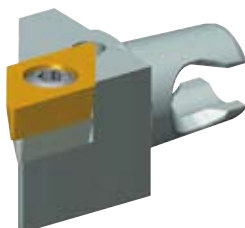
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	torx	clamping screw
2226230	12	KM12SCGCL0920	LH	8	6	20	CC..09T3	n/a	n/a	15	MS1155
2226229	12	KM12SCGCR0920	RH	8	6	20	CC..09T3	n/a	n/a	15	MS1155
1846447	16	KM16SCGCL0920	LH	10	8	20	CC..09T3	SKCP343	SRS3	15	MS1156
1831207	16	KM16SCGCR0920	RH	10	8	20	CC..09T3	SKCP343	SRS3	15	MS1156

SCLC 95°



order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	torx	clamping screw
2226232	12	KM12SCLCL0920	LH	8	6	20	CC..09T3	n/a	n/a	15	MS1155
2226231	12	KM12SCLCR0920	RH	8	6	20	CC..09T3	n/a	n/a	15	MS1155
1851750	15	KM16SCLCL0920	LH	10	8	20	CC..09T3	SKCP343	SRS3	15	MS1156
1831206	15	KM16SCLCR0920	RH	10	8	20	CC..09T3	SKCP343	SRS3	15	MS1156

SCREW-ON – TURNING OPERATIONS

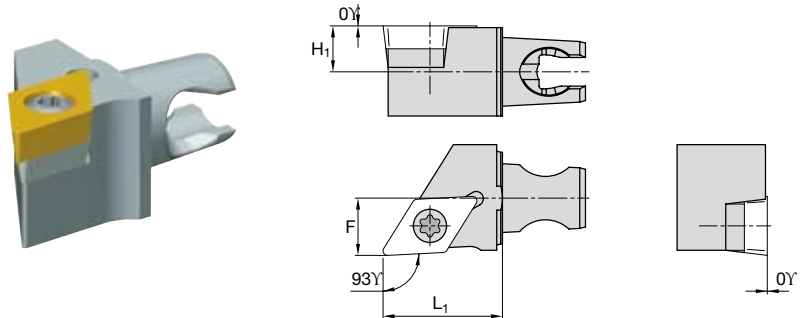


SDAC 90°

order no.	KM size	cat. no.	RH LH N	F mm	H mm	L1 mm	insert	shim	shim screw	torx	clamping screw
1925809	12	KM12SDACL1120	LH	8	6	20	DC..11T3	n/a	n/a	15	MS1155
1920414	12	KM12SDACR1120	RH	8	6	20	DC..11T3	n/a	n/a	15	MS1155
1851752	16	KM16SDACL1120	LH	10	8	20	DC..11T3	SKDP343	SRS3	15	MS1156
1831208	16	KM16SDACR1120	RH	10	8	20	DC..11T3	SKDP343	SRS3	15	MS1156

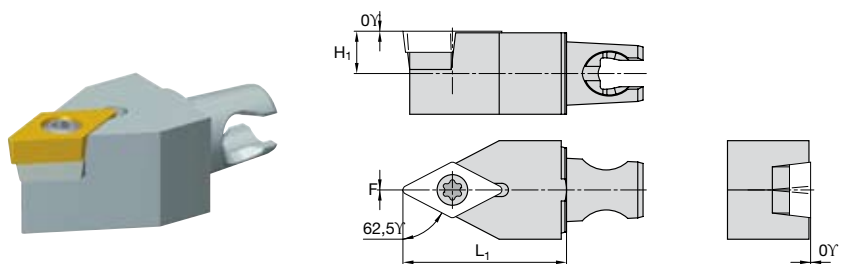
SCREW-ON – TURNING OPERATIONS

SDJC 93°



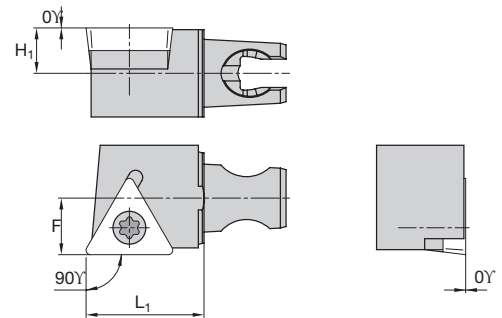
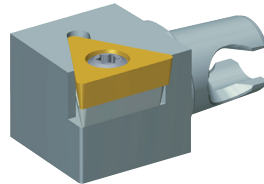
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	torx	clamping screw
1925811	12	KM12SDJCL1120	LH	8	6	20	DC..11T3	n/a	n/a	15	MS1155
1925810	12	KM12SDJCR1120	RH	8	6	20	DC..11T3	n/a	n/a	15	MS1155
1851763	16	KM16SDJCL1120	LH	10	8	20	DC..11T3	SKDP343	SRS3	15	MS1156
1831209	16	KM16SDJCR1120	RH	10	8	20	DC..11T3	SKDP343	SRS3	15	MS1156

SDPC 62,5°



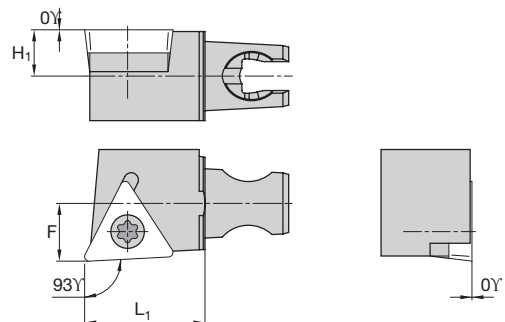
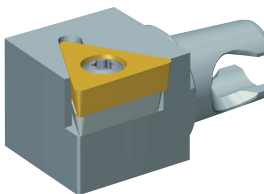
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	torx	clamping screw
2226253	12	KM12SDPCN1120	N	0	6	20	DC..11T3	n/a	n/a	15	MS1155
2226254	16	KM16SDPCN1120	N	0	8	20	DC..11T3	SKDP343	SRS3	15	MS1156

SCREW-ON – TURNING OPERATIONS



STGC 90°

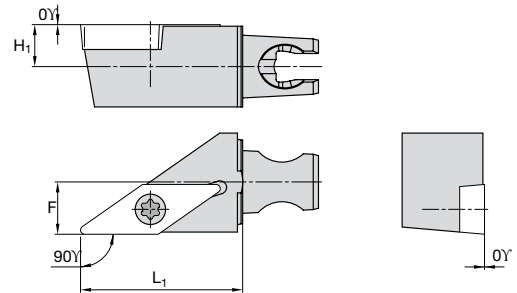
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	torx	clamping screw
2226256	12	KM12STGCL1120	LH	8	6	20	TC..1102	n/a	n/a	7	MS1153
2226255	12	KM12STGCR1120	RH	8	6	20	TC..1102	n/a	n/a	7	MS1153
1851764	16	KM16STGCL1120	LH	10	8	20	TC..1102	n/a	n/a	7	MS1153
1831211	16	KM16STGCR1120	RH	10	8	20	TC..1102	n/a	n/a	7	MS1153
1851765	16	KM16STGCL1620	LH	10	8	20	TC..16T3	SKTP343	SRS3	15	MS1156
1831212	16	KM16STGCR1620	RH	10	8	20	TC..16T3	SKTP343	SRS3	15	M;S1156



STJC 93°

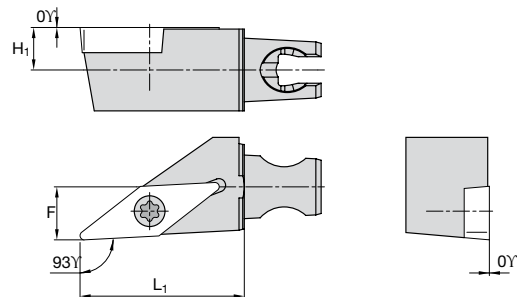
order no.	KM size	cat. no.	RH LH N	H mm	F mm	L1 mm	insert	shim	shim screw	torx	clamping screw
2226258	12	KM12STJCL1120	LH	6	8	20	TC..1102	n/a	n/a	7	MS1153
2226257	12	KM12STJCR1120	RH	6	8	20	TC..1102	n/a	n/a	7	MS1153
1851766	16	KM16STJCL1120	LH	8	10	20	TC..1102	n/a	n/a	7	MS1153
1831213	16	KM16STJCR1120	RH	8	10	20	TC..1102	n/a	n/a	7	MS1153
1851767	16	KM16STJCL1620	LH	8	10	20	TC..16T3	SKTP343	SRS3	15	MS1156
1831214	16	KM16STJCR1620	RH	8	10	20	TC..16T3	SKTP343	SRS3	15	M;S1156

SCREW-ON – TURNING OPERATIONS



SVGB 90°

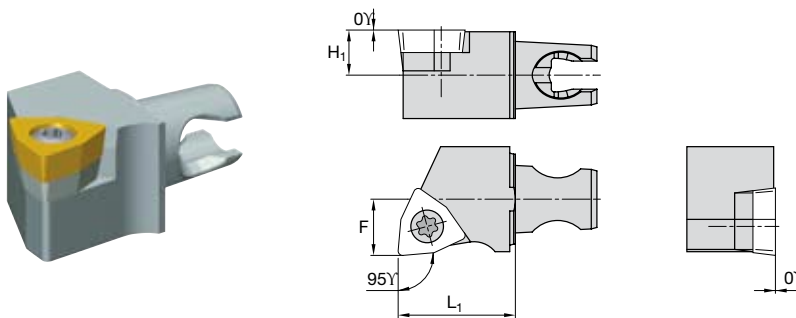
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	torx	clamping screw
1925822	12	KM12SVGBL1120	LH	8	6	20	VB..1103	n/a	n/a	7	MS1153
1925821	12	KM12SVGBR1120	RH	8	6	20	VB..1103	n/a	n/a	7	MS1153
2226260	16	KM16SVGBL1120	LH	10	8	20	VB..1103	n/a	n/a	7	MS1153
2226259	16	KM16SVGBR1120	RH	10	8	20	VB..1103	n/a	n/a	7	MS1153



SVJB 93°

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	torx	clamping screw
1925823	12	KM12SVJBL1120	LH	8	6	20	VB..1103	n/a	n/a	7	MS1153
1920381	12	KM12SVJBR1120	RH	8	6	20	VB..1103	n/a	n/a	7	MS1153
1898056	16	KM16SVJBL1120	LH	10	8	20	VB..1103	n/a	n/a	7	MS1153
1884683	16	KM16SVJBR1120	RH	10	8	20	VB..1103	n/a	n/a	7	MS1153

SCREW-ON – TURNING OPERATIONS



SWLC 95°

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	torx	clamping screw
2226262	12	KM12SWLCL0620	LH	8	6	20	WC..06T3	n/a	n/a	15	MS1155
2226261	12	KM12SWLCR0620	RH	8	6	20	WC..06T3	n/a	n/a	15	MS1155
1851772	16	KM16SWLCL0620	LH	10	8	20	WC..06T3	SKWP343	SRS3	15	MS1156
1851771	16	KM16SWLCR0620	RH	10	8	20	WC..06T3	SKWP343	SRS3	15	MS1156

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Kennametal is everywhere you are.

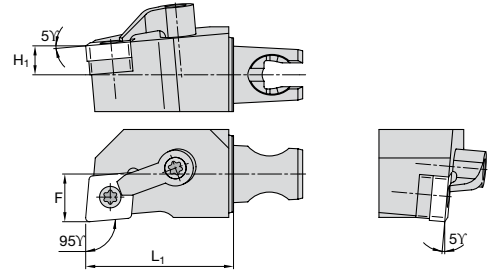
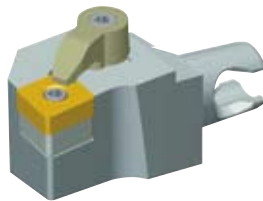
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Covering the entire manufacturing process.

- Key alliances with machine tool builders and other leading technology manufacturers ensure a complete solution, optimizing the entire process.

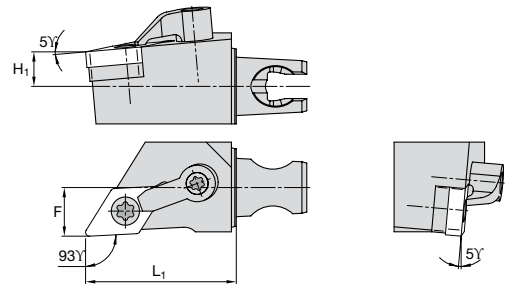
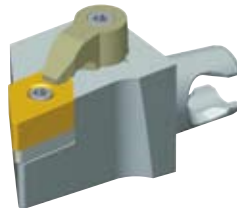
***For more information or to place an order, contact your Kennametal Representative,
Authorized Kennametal Distributor, or visit www.kennametal.com.***

KENLOC™ – TURNING OPERATIONS



MCLN 95°

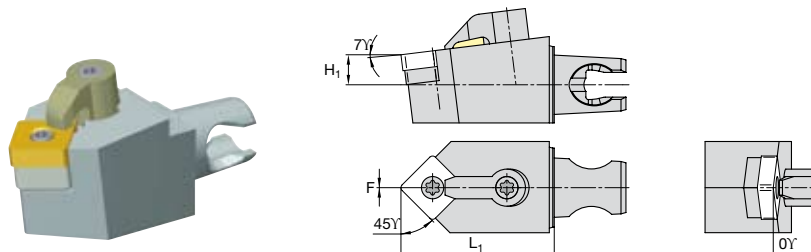
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	clamp	lock pin	hex
2226264	16	KM16MCLNL0920	LH	10	8	20	CN..0903	ICSN332	n/a	KLM34L	2
2226263	16	KM16MCLNR0920	RH	10	8	20	CN..0903	ICSN332	n/a	KLM34L	2
2226266	16	KM16MCLNL1220	LH	10	8	20	CN..1204	ICSN432	n/a	KLM46	2,5
2226265	16	KM16MCLNR1220	RH	10	8	20	CN..1204	ICSN432	n/a	KLM46	2,5



MDJN 93°

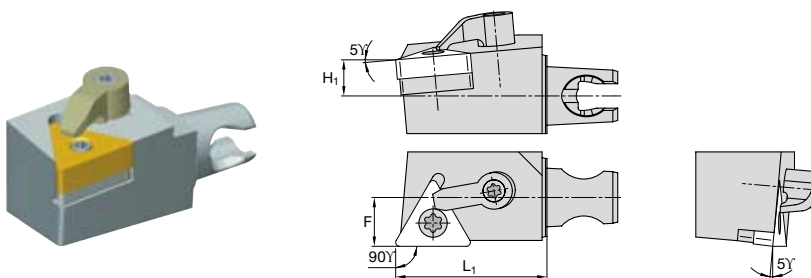
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	clamp	lock pin	hex
2226268	16	KM16MDJNL1120	LH	10	8	20	DN..1104	IDSN322	n/a	KLM34L	2
2226267	16	KM16MDJNR1120	RH	10	8	20	DN..1104	IDSN322	n/a	KLM34L	2

KENLOC™ – TURNING OPERATIONS



MSDN 45°

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	clamp	lock pin	hex
2226269	16	KM16MSDNN0920	N	0	8	20	SN..0903	ISSN322	n/a	KLM34L	2

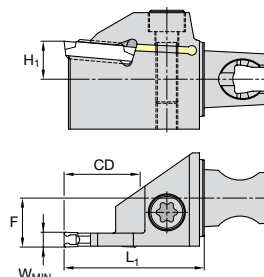


MTGN 90°

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	clamp	lock pin	hex
2226271	16	KM16MTGNL1620	LH	10	8	20	TN..1604	ITSN322	n/a	KLM34L	2
2226270	16	KM16MTGNR1620	RH	10	8	20	TN..1604	ITSN322	n/a	KLM34L	2

TURNING - GROOVING - PARTING

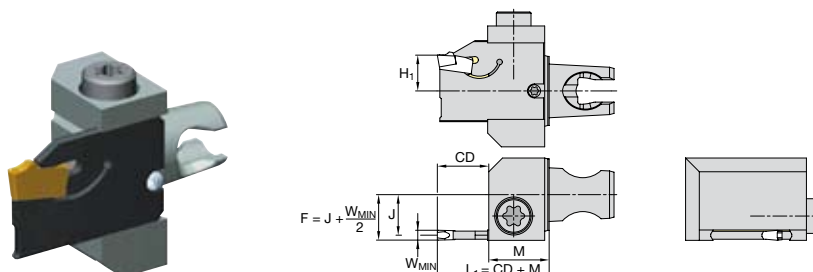
A4™



A4S

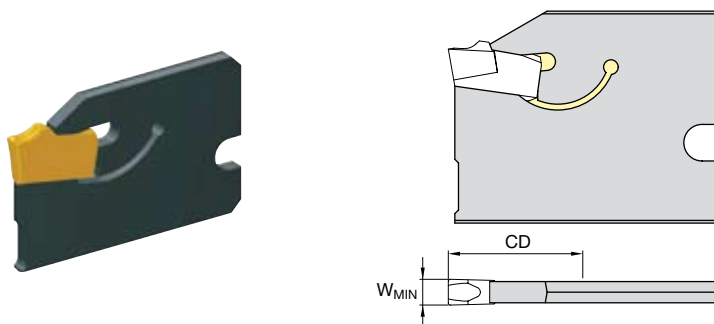
order no.	KM size	cat. no.	RH LH N	CD mm	F mm	H1 mm	L1 mm	W _{MIN} mm	insert	clamping screw	wrench size actuation screw	Nm
2226289	12	KM12A4SCL031630	LH	16	8	6	30	3	A4G0300M0	MS1944	T25	5,0
2226288	12	KM12A4SCR031630	RH	16	8	6	30	3	A4G0300M0	MS1944	T25	5,0
3377359	12	KM12A4SCL021630	LH	16	8	6	30	2	A4G0200M0	MS1944	T25	5,0
3377360	12	KM12A4SCR021630	RH	16	8	6	30	2	A4G0200M0	MS1944	T25	5,0
3377361	12	KM12A4SCL011330	LH	13,5	8	6	30	1,5	A4G0150M0	MS1156	T15	3,8
3377362	12	KM12A4SCR011330	RH	13,5	8	6	30	1,5	A4G0150M0	MS1156	T15	3,8
2226283	16	KM16A4SCL031630	LH	16	10	8	30	3	A4G0305M0	MS1944	T25	5,0
2226282	16	KM16A4SCR031630	RH	16	10	8	30	3	A4G0305M0	MS1944	T25	5,0
3377199	16	KM16A4SCL2B1630	LH	16	10	8	30	2,5	A4G0250M0	MS1160	T20	5,0
3377200	16	KM16A4SCR2B1630	RH	16	10	8	30	2,5	A4G0250M0	MS1160	T20	5,0
3377201	16	KM16A4SCL021630	LH	16	10	8	30	2	A4G0200M0	MS1160	T25	5,0
3377202	16	KM16A4SCR021630	RH	16	10	8	30	2	A4G0200M0	MS1160	T25	5,0
3377283	16	KM16A4SCL011330	LH	13,5	10	8	30	1,5	A4G0150M0	MS1156	T15	3,8
3377284	16	KM16A4SCR011330	RH	13,5	10	8	30	1,5	A4G0150M0	MS1156	T15	3,8

PARTING – A2™ MODULAR TOOL BODY


BS

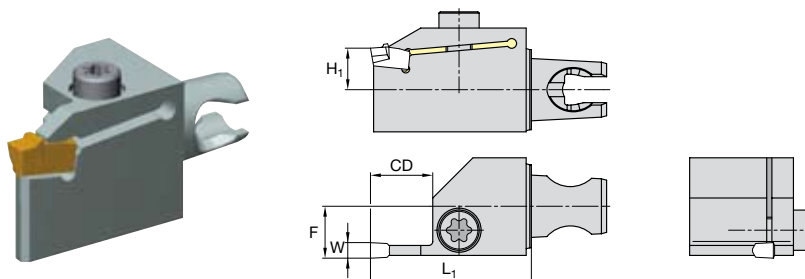
order no.	KM size	cat. no.	RH LH N	H1 mm	J mm	M mm	A2 Steel Body	torx	clamping screw
1925843	12	KM12BSL	LH	6,1	6,9	13,5	A2BHSN19X...	27	MS1898
1925842	12	KM12BSR	RH	6,1	6,9	13,5	A2BHSN19X...	27	MS1898
1851793	16	KM16BSL	LH	8,1	8,9	13,5	A2BHSN19X...	27	MS1898
1831217	16	KM16BSR	RH	8,1	8,9	13,5	A2BHSN19X...	27	MS1898

A2™ CUT-OFF BLADE


A2 BHSN

order no.	cat. no.	insert Size	CD mm	W _{MIN} mm	insert
1984998	A2BHSN19X0116	1	16,5	1,6	A2016...
1851800	A2BHSN19X0211	2	11,5	2,2	A2022...
1851799	A2BHSN19X0216	2	16,5	2,2	A2022...

A3™ – DEEP GROOVING

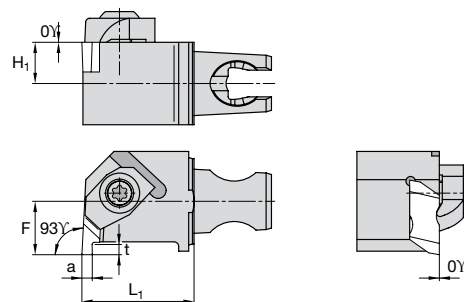


A3S

order no.	KM size	cat. no.	RH LH N	CD mm	F mm	H1 mm	L1 mm	W mm	insert	clamping screw	torx
1925861	12	KM12A3SL311	LH	11	8	6	30	3	A3..0300M03..	MS1944	25
1925837	12	KM12A3SR311	RH	11	8	6	30	3	A3..0300M03..	MS1944	25
1925856	16	KM16A3SL311	LH	11	10	8	30	3	A3..0300M03..	MS1944	25
1917367	16	KM16A3SR311	RH	11	10	8	30	3	A3..0300M03..	MS1944	25
1851798	16	KM16A3SI411	LH	11	10	8	30	4	A3..3.91400-1..	MS1944	25
1831218	16	KM16A3SR411	RH	11	10	8	30	4	A3..3.91400-1..	MS1944	25

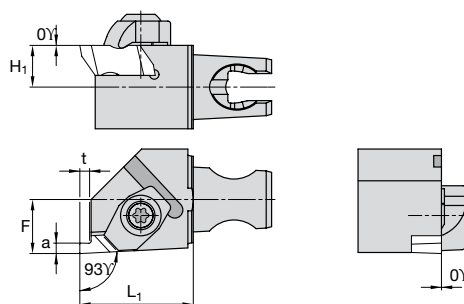
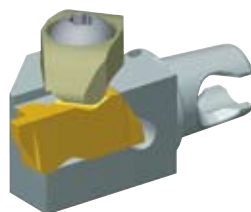
GROOVING AND THREADING - TOP NOTCH™

NE



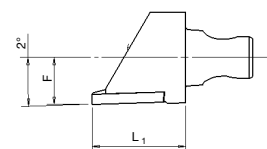
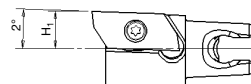
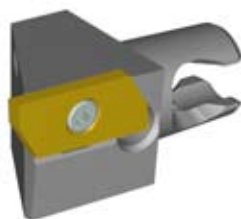
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	clamp	clamping screw	torx
1898053	16	KM16NEL220	LH	10	8	20	NG2R	CM146	MS1200	10
1884834	16	KM16NER220	RH	10	8	20	NG2L	CM147	MS1200	10

NS



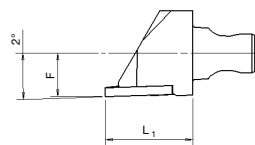
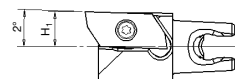
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	clamp	clamping screw	torx
1925830	12	KM12NSL220	LH	8	6	20	NG2L	CM147	MS1200	10
1920416	12	KM12NSR220	RH	8	6	20	NG2R	CM146	MS1200	10
1846446	16	KM16NSL220	LH	10	8	20	NG2L	CM147	MS1200	10
1831203	16	KM16NSR220	RH	10	8	20	NG2R	CM146	MS1200	10
1851748	16	KM16NSL330	LH	10	8	30	NG3L	CM169	MS1220	25
1831204	16	KM16NSR330	RH	10	8	30	NG3R	CM168	MS1220	25

KENNA PRECISION™



WS

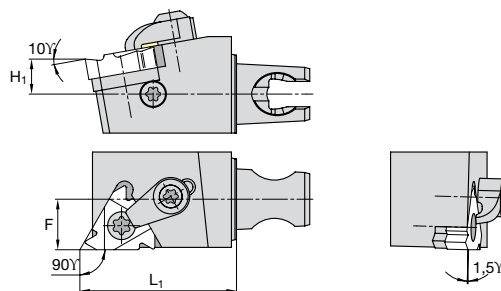
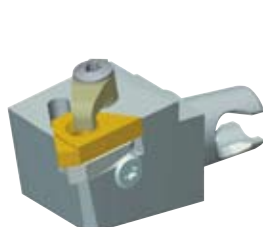
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	screw	torx
3851786	12	KM12WSJ15EL20	LH	8	6	20	KPJ15EL..	MS1969	8
3851787	12	KM12WSJ15ER20	RH	8	6	20	KPJ15ER..	MS1969	8
3522574	16	KM16WSJ15EL20	LH	10	8	20	KPJ15EL..	MS1969	8
3522575	16	KM16WSJ15ER20	RH	10	8	20	KPJ15ER..	MS1969	8



WSK

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	screw	torx
3851788	12	KM12WSK15EL20	LH	8	6	20	KPK15EL..	MS1969	8
3851789	12	KM12WSK15ER20	RH	8	6	20	KPK15ER..	MS1969	8
3522576	16	KM16WSK15EL20	LH	10	8	20	KPK15EL..	MS1969	8
3522577	16	KM16WSK15ER20	RH	10	8	20	KPK15ER..	MS1969	8

LT- THREAD CUTTING



LSS

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	insert screw	shim screw	clamp	torx
2226281	12	KM12LSSL1620	LH	8	6	20	LT16EL	SMYI3	SSA3T	SSY3T	n/a	10
2226280	12	KM12LSSR1620	RH	8	6	20	LT16ER	SMYE3	SSA3T	SSY3T	n/a	10
2226291	16	KM16LSSL1620	LH	10	8	20	LT16EL	SMYI3	SSA3T	SSY3T	n/a	10
2226290	16	KM16LSSR1620	RH	10	8	20	LT16ER	SMYE3	SSA3T	SSY3T	n/a	10

KM MICRO™

High Pressure Coolant

FOR OD APPLICATION

TABLE OF CONTENTS

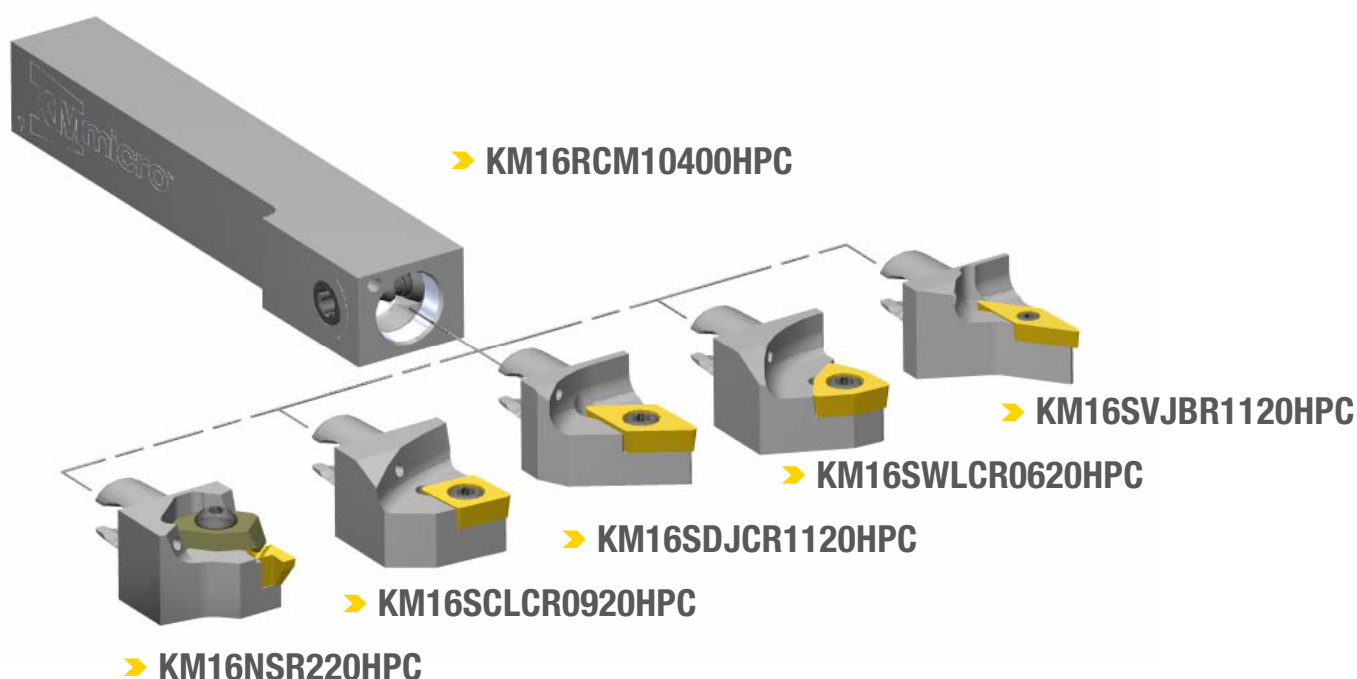
Features and Benefits	C2
Number Code Clamping Units	C3
Clamping Units	C4
Number Code Cutting Units	C5-C6
Cutting Units Screw-On	C7-C9
Cutting Units Top Notch™	C10
Cutting Units LT Threading	C11

PATENTED QUICK-CHANGE DESIGN

Part Finish - Metal Removal Rates - Chip Management

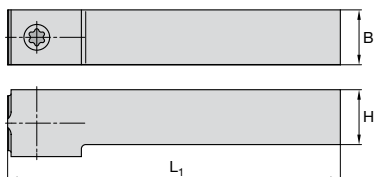
5/8" x 5/8" TOOL SHANK

- Proprietary quick-change design
- Available in popular 5/8" and 16mm square shank
- Designed to handle over 138 bar
- No troublesome coolant lines
- Coolant directed w/pin point accuracy
- 1/8 NPT port at end OD holder
- ANSI / ISO standard insert pockets
- Improved part finish
- Achieve higher metal removal rates
- Improve chip management

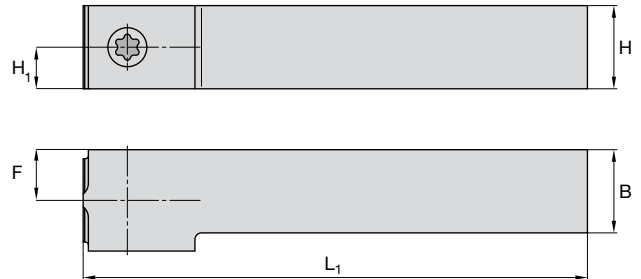


NUMBER CODE

CLAMPING UNITS

KM	12	N	C	M
1. KENNAMETAL Modular; KM Micro™ quick-change tooling system	2. System Size KM 12 = Ø 12x12 mm 16 = Ø 16x16 mm	3. Version N - Neutral L - Left-hand version R - Right-hand version	4. Clamping Unit	5. Control M - Manual A - Automatic
	12	12	100	HPC
6. Type Square shank	7. Shank height H 	8. Shank width B	9. Shank length L₂	10. HPC = High Coolant Pressure

HIGH PRESSURE COOLANT



NCM-HPC (through coolant)

■ Metric

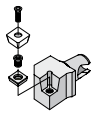
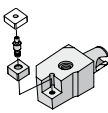
order no.	KM size	cat. no.	RH LH N	B mm	H mm	L1 mm	hardware	torx plus	torque Nm
3397255	16	KM16RCM1616100HPC	N	16	16	100	KM16NAPKG	27	9,5 - 11
3397256	16	KM16LCM1616100HPC	N	16	16	100	KM16NAPKG	27	9,5 - 11

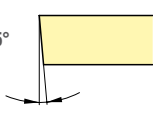
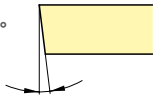
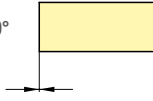
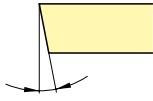
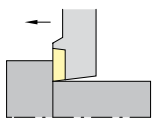
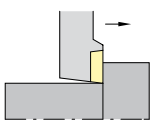
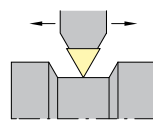
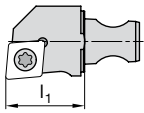
■ Inch

order no.	KM size	cat. no.	RH LH N	B mm	B inch	H mm	H inch	L1 mm	L1 inch	hardware	torx plus	torque Nm
3134823	16	KM16RCM10400HPC	RH	15,75	.625	15,75	.625	101,60	2.913	KM16NAPKG	27	9,5 - 11
3134824	16	KM16LCM10400HPC	LH	15,75	.625	15,75	.625	101,60	2.913	KM16NAPKG	27	9,5 - 11

NUMBER CODE

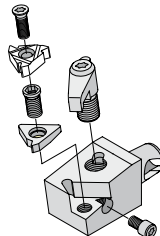
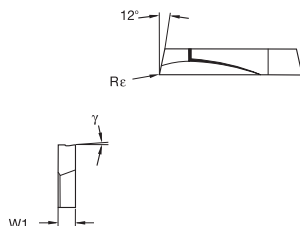
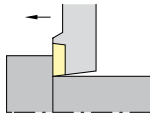
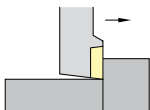
SCREW-ON; KENLOC™; TOP NOTCH™ Profiling cutting units

KM	12	S	C	G
1. KENNAMETAL Modular; KM Micro™ quick-change tooling system	2. System Size d_{KM} 12 = Ø 12x12 mm 16 = Ø 16x16 mm	3. Clamping System S - SCREW-ON  clamped from above with a screw, for indexable inserts with hole. M - KENLOC™  clamped from above and through hole with using a pin, for indexable inserts with hole.	4. Basic shape of the indexable insert C  D  K  S  T  V  W 	5. Shape of the cutting unit A  D  G  J  L  M  P 

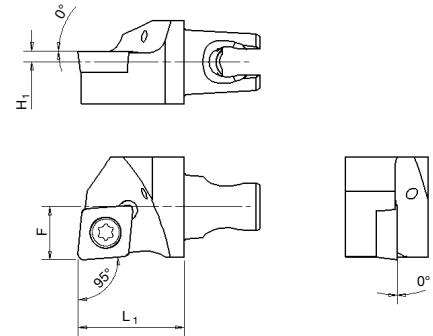
C	R	09	20	HPC
6. Normal clearance angle of the indexable insert B 5°  C 7°  N 0°  P 11° 	7. Direction L = Left-hand cutting unit  R = Right-hand cutting unit  N = Neutral cutting unit 	8. Size of the indexable insert C D  V  K  S  T  W 	9. Cutting unit length l_1 	10. HPC = High Coolant Pressure

NUMBER CODE

LAYDOWN; ON-EDGE Cutting units

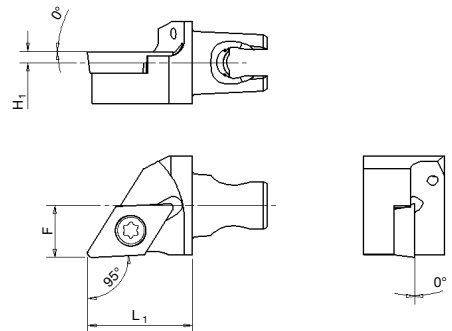
KM 1. KENNAMETAL Modular; quick-change tooling system	12 2. System Size d_{KM} 12 = Ø 12x12 mm 16 = Ø 16x16 mm	S 3. Clamping system LAYDOWN clamped from above with a screw 	S 4. Basic shape of the indexable insert LAYDOWN S ON-EDGE T W 									
P 5. Application G = Grooving, parting P = Profiling, reverse copy turning T = Thread cutting	R 6. Direction L = Left-hand cutting unit  R = Right-hand cutting unit 	06 7. Indexable insert size <table><tr><td></td><td>d (mm)</td></tr><tr><td>06</td><td>6,350</td></tr><tr><td>13</td><td>7,940</td></tr><tr><td>16</td><td>9,525</td></tr></table>		d (mm)	06	6,350	13	7,940	16	9,525	20 8. Cutting unit length l₁	HPC 9. HPC = High Coolant Pressure
	d (mm)											
06	6,350											
13	7,940											
16	9,525											

SCREW-ON HPC



SCLC-HPC 95° (through coolant)

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	clamping screw	torx
3180670	16	KM16SCLCR0920HPC	RH	10	2	20	CC..09T3	n/a	n/a	MS1155	15
3180671	16	KM16SCLCL0920HPC	LH	10	2	20	CC..09T3	n/a	n/a	MS1155	15

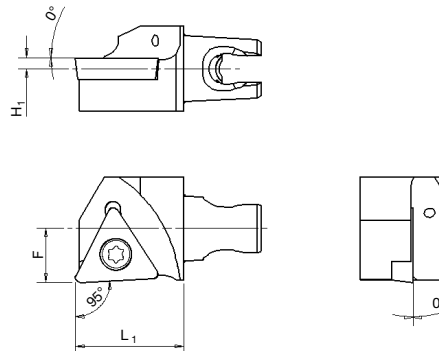


SDJC-HPC 93° (through coolant)

■ Metric

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	clamping screw	torx
3176692	16	KM16SDJCR1120HPC	RH	10	2	20	DC..11T3	n/a	n/a	MS1155	15
3180663	16	KM16SDJCL1120HPC	LH	10	2	20	DC..11T3	n/a	n/a	MS1155	15

SCREW-ON

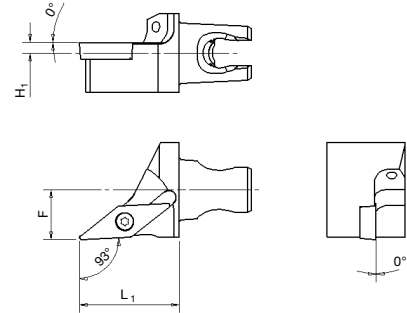


STJC-HPC 93° (through coolant)

■ Metric

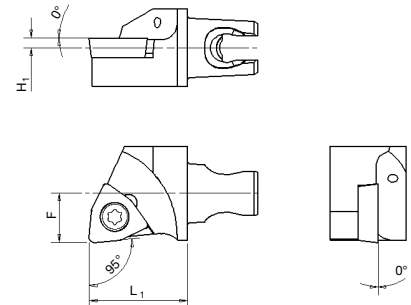
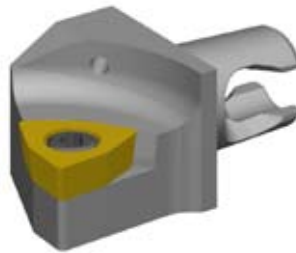
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	clamping screw	torx
3180666	16	KM16STJCR1620HPC	RH	10	2	20	TC..16T3	n/a	n/a	MS1155	15
3180667	16	KM16STJCL1620HPC	LH	10	2	20	TC..16T3	n/a	n/a	M;S1155	15

SCREW-ON



SVJB 93° (through coolant)

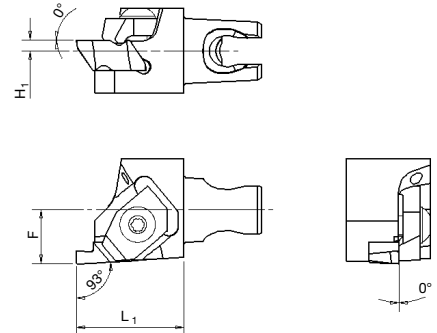
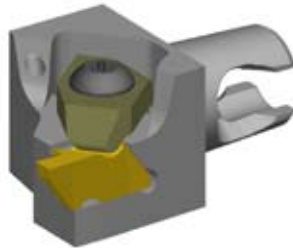
order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	clamping screw	torx
3180672	16	KM16SVJBR1120HPC	RH	10	2	20	n/a	n/a	7	MS1153	15
3180673	16	KM16SVJBL1120HPC	LH	10	2	20	n/a	n/a	7	MS1153	15



SWLC-HP 95° (through coolant)

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	clamping screw	torx
3180668	16	KM16SWLCR0620HPC	RH	10	2	20	WC..06T3	SKWP343	SRS3	MS1155	15
3180669	16	KM16SWLCL0620HPC	LH	10	2	20	WC..06T3	SKWP344	SRS4	MS1155	15

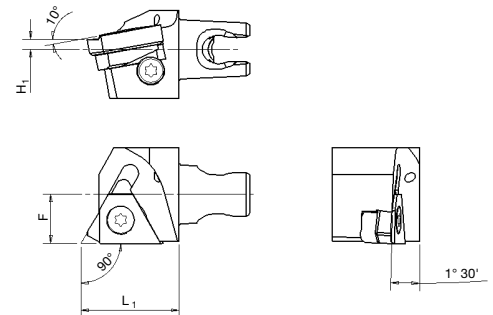
TOP NOTCH™



NS-HPC (through coolant)

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	clamp	clamping screw	torx
3180674	16	KM16NSR220HPC	RH	10	2	20	NG2R	CM146	MS1200	10
3180675	16	KM16NSL220HPC	LH	10	2	20	NG2L	CM147	MS1200	10

LT THREADING



LSS-HPC (through coolant)

order no.	KM size	cat. no.	RH LH N	F mm	H1 mm	L1 mm	insert	shim	shim screw	screw	clamp	torx
3180676	16	KM16LSSR1620HPC	RH	10	2	20	LT16ER	SMYI3	SSA3T	SSY3T	n/a	10
3180677	16	KM16LSSL1620HPC	LH	10	2	20	LT16EL	SMYI3	SSA3T	SSY3T	n/a	10



For more than 20 years, KM[™] has
been the best choice in Quick-Change Tooling.
And now, it's your newest ISO standard.

Kennametal — the First, the Best, the Standard.

ISO 26622

KM MICRO™

Cutting Units

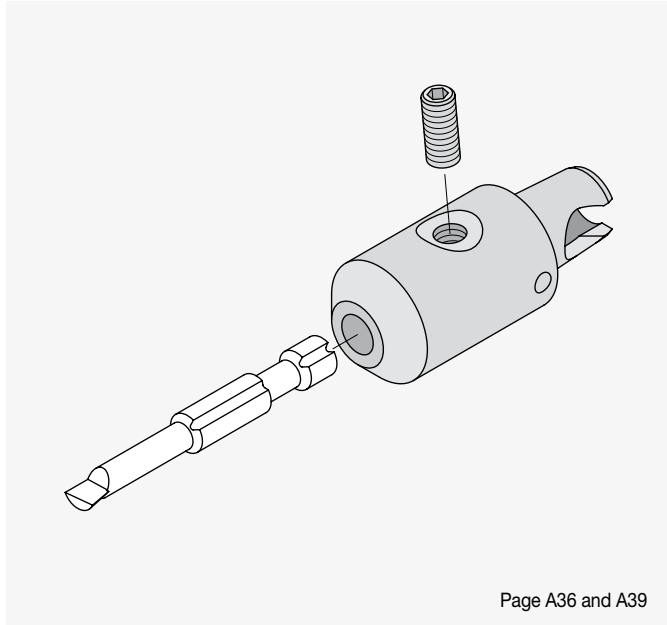
FOR ID APPLICATION

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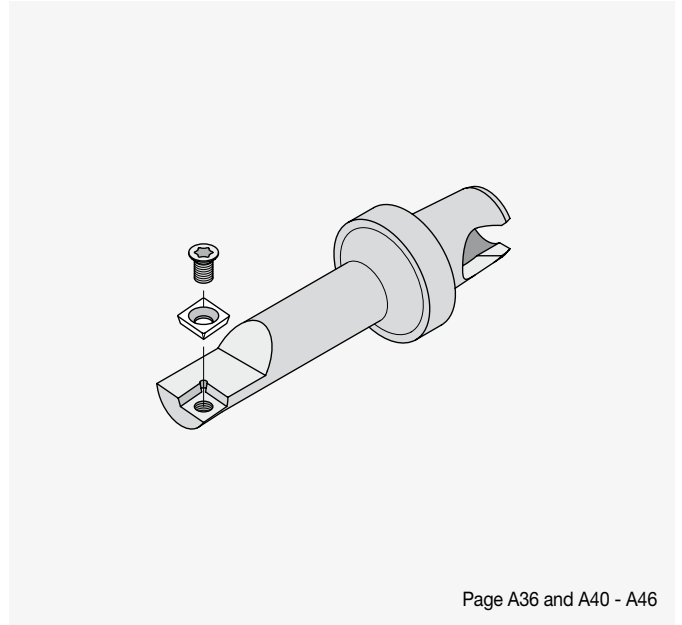
Features and Benefits	D2
Number Code Kenbore™	D3
Cutting Units Kenbore™	D4-D6
Number Code Cutting Units	D7
Cutting Units Screw-On.....	D8-D9
Boring Bars Screw-On.....	D10-D18
ER Collet Chucks	D19

BORING; PROFILING

Micro KENBORE™

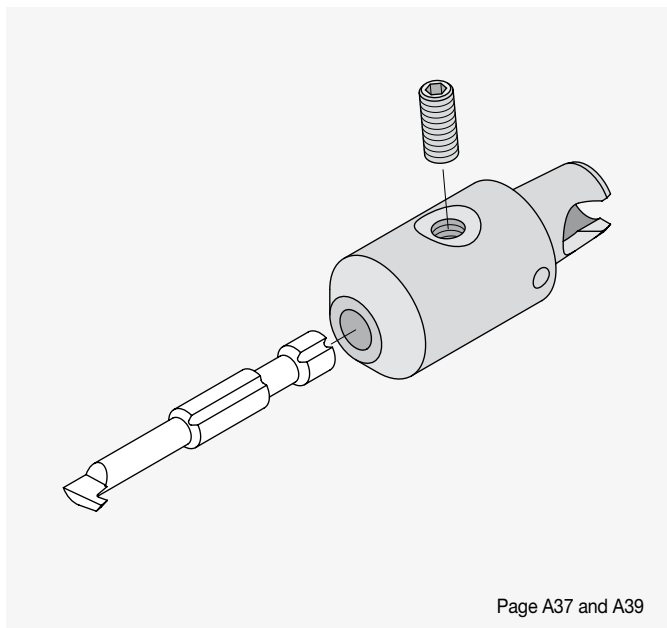


SCREW-ON

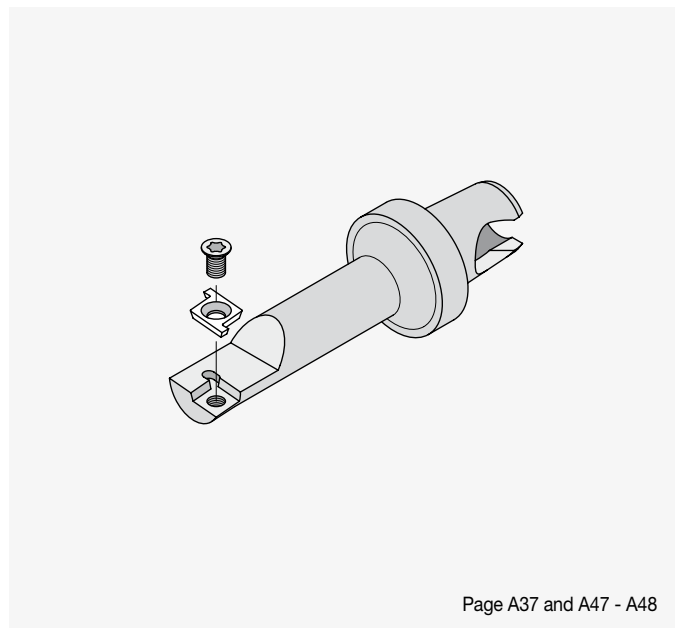


GROOVING AND THREAD CUTTING

Micro KENBORE™



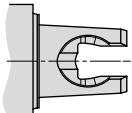
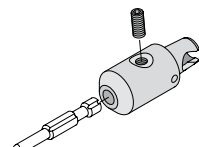
SCREW-ON





NUMBER CODE

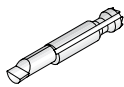
MICRO KENBORE™ CUTTING UNITS

KM	1612	MK	S	M
1. KENNAMETAL Modular; KM Micro™ quick-change tooling system	2. System Size 1612 = Ø 12 mm 2016 = Ø 16 mm	3. Clamping System MK - micro Kenbore™	4. Design Features S - Tool Steel T - Tool steel with internal coolant supply	5. Boring Bar Version M - Manual I - Inch
				

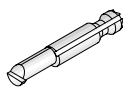
Boring bars with screw-clamped drilling inserts

MICRO KENBORE™ TOOLING SYSTEMS

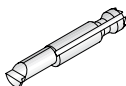
FEATURES - FUNCTIONS



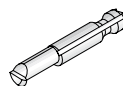
Boring



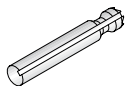
Profiling



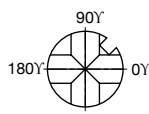
Grooving



Thread cutting



Blanks



Indexability

MICRO KENBORE™ TOOLS ARE VERY VERSATILE

The relevant cutting inserts can be used for the applications on the left.

CLAMPING THE CUTTING INSERTS IN THE TOOL BODY

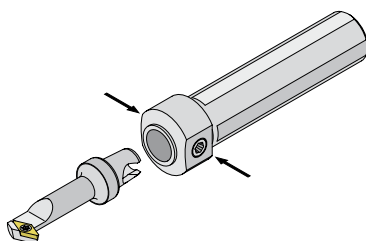
The cutting inserts are drawn tightly into the insert seat pocket by adjusting the clamping screw, and are held there securely even during pull boring operations. The fixed limit stop ensures very precise and repeatable cutting edge positioning.

INDEXABILITY OF THE CUTTING INSERTS

The design of the cutting inserts enables indexing of the cutting edge in 90° increments. This is achieved through the use of V-slots positioned every 90° and the limit stop bolt.

KM MICRO™ CLAMPING MECHANISM

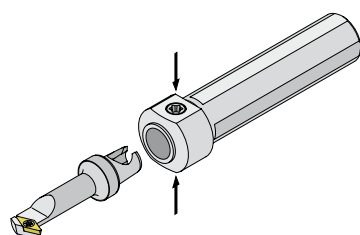
Cutting Units for Internal Operations



Direction of operation of the clamping mechanism on the clamping unit from the side.

Recommended cutting unit type: KM 12 S0633SGXPR05 S

Cutting unit version with
clamping mechanism
from the side



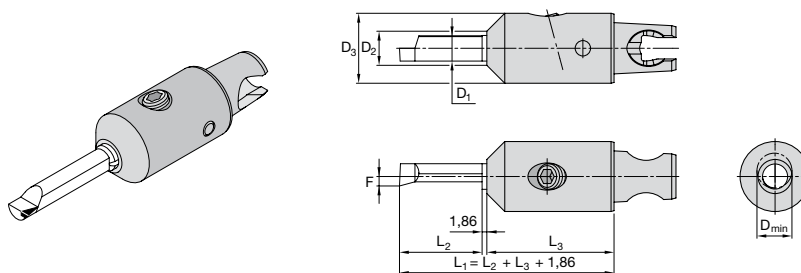
Direction of operation of the clamping mechanism on the clamping unit from above.

Recommended cutting unit type: KM 12 S0633SGXPR05 I

Cutting unit version with
clamping mechanism
from above

MICRO KENBORE™

BORING, PROFILING, GROOVING, AND THREAD CUTTING

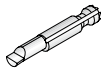
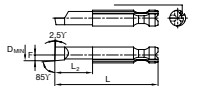
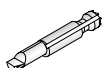
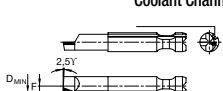
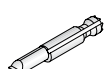
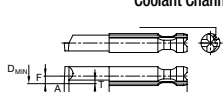
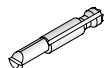
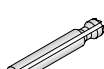
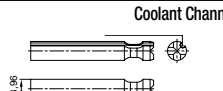


MKSM

order no.	KM size	cat. no.	D1 mm	D2 mm	L3 mm	boring	profiling	grooving	threading	screw
2253101	1612	KM1612MKSM	4	6,6	21,59	MKTB...	MKTP...	MKTG...	MKTT	MSM46
2253102	2016	KM2016MKSM	4	6,6	21,59	MKTB...	MKTP...	MKTG...	MKTT	MSM46

MICRO KENBORE™

BORING, PROFILING, GROOVING AND THREADING

MKTB (Boring)	CODE	A	D _{MIN}	F	I	L2	R	T	pitch (mm)	K1025	KC5025	KB5625	KD100
 	RIGHT-HAND												
	MKTB15804R	-	1,58	0,66	21,26	4,75	-	-	-	•			
	MKTB15807R	-	1,58	0,66	24,43	7,92	-	-	-	•			
	MKTB23807R	-	2,38	1,04	23,65	7,14	-	-	-	•			
	MKTB23812R	-	2,38	1,04	29,21	12,70	-	-	-	•	•		•
	MKTB31709R	-	3,17	1,45	26,03	9,52	-	-	-	•			
	MKTB31715R	-	3,17	1,45	32,38	15,87	-	-	-	•	•		•
	MKTB39612R	-	3,96	1,85	29,21	12,70	-	-	-	•			
	MKTB39622R	-	3,96	1,85	38,73	22,22	-	-	-	•	•		•
	LEFT-HAND												
	MKTB15804L	-	1,58	0,66	21,26	4,75	-	-	-	•			
	MKTB15807L	-	1,58	0,66	24,43	7,92	-	-	-	•			
	MKTB23807L	-	2,38	1,04	23,65	7,14	-	-	-	•			
	MKTB23812L	-	2,38	1,04	29,21	12,70	-	-	-	•	•		•
 	RIGHT-HAND												
	MKTP15804R	-	1,58	0,66	21,26	4,75	0,2	0,43	-	•			
	MKTP23907R	-	2,39	1,07	23,65	7,14	0,2	0,71	-	•			
	MKTP31709R	-	3,17	1,45	26,03	9,52	0,2	1,02	-	•			
	MKTP39612R	-	3,96	1,85	29,21	12,70	0,2	1,27	-	•			
	LEFT-HAND												
	MKTP15804L	-	1,58	0,66	21,26	4,75	0,2	0,43	-	•			
	MKTP23907L	-	2,39	1,07	23,65	7,14	0,2	0,71	-	•			
	MKTP31709L	-	3,17	1,45	26,03	9,52	0,2	1,02	-	•			
	MKTP39612L	-	3,96	1,85	29,21	12,70	0,2	1,27	-	•			
 	RIGHT-HAND												
	MKTG279070076R	0,76	2,79	1,17	24,43	7,92	-	0,76	-	•			
	MKTG356090102R	1,02	3,56	1,55	26,03	9,52	-	0,88	-	•			
	MKTG444120127R	1,27	4,44	1,93	29,21	12,70	-	1,27	-	•			
	LEFT-HAND												
	MKTG279070076L	0,76	2,79	1,17	24,43	7,92	-	0,76	-	•			
	MKTG356090102L	1,02	3,56	1,55	26,03	9,52	-	0,88	-	•			
	MKTG444120127L	1,27	4,44	1,93	29,21	12,70	-	1,27	-	•			
 	RIGHT-HAND												
	MKTT279070060R	-	2,79	1,17	24,43	7,92	-	0,56	0,50 - 0,80	•			
	MKTT356090060R	-	3,56	1,55	26,03	9,52	-	0,69	0,50 - 1,05	•			
	MKTT444120060R	-	4,44	1,93	29,21	12,70	-	0,81	0,50 - 1,27	•			
	LEFT-HAND												
	MKTT279070060L	-	2,79	1,17	24,43	7,92	-	0,56	0,50 - 0,80	•			
	MKTT356090060L	-	3,56	1,55	26,03	9,52	-	0,69	0,50 - 1,05	•			
	MKTT444120060L	-	4,44	1,93	29,21	12,70	-	0,81	0,50 - 1,27	•			
 	NEUTRAL												
	MKTL39607*	-	-	-	24,43	7,92	-	-	-	•			
	MKTL39612*	-	-	-	29,21	12,70	-	-	-	•			
	MKTL39615*	-	-	-	32,38	15,87	-	-	-	•			
	MKTL39622*	-	-	-	38,73	22,22	-	-	-	•			

NUMBER CODE

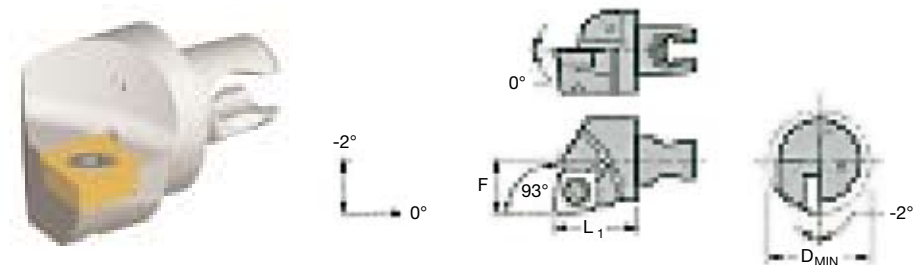
SCREW-ON cutting units

KM	1612	S	04	24	S
1. KENNAMETAL Modular; KM Micro™ quick-change tooling system	2. System Size 1612 = Ø 16 mm 2016 = Ø 20 mm 	3. Design features of the boring bar S - Tool steel	4. Shank diameter D_1 The code is shank diameter D_1 . Ignore digits after the decimal point. If the shank diameter D_1 code is a single digit, it is preceded by a 0 (zero). E.g. for Ø 8 mm = code 08.	5. Cutting unit length L_1 The code is shank diameter d_1 . Ignore digits after the decimal point.	6. Clamping System S - Screw-On clamped from above with a screw, for indexable inserts with hole.

C	L	D	R	04	S
7. Basic shape of the indexable insert C G T	8. Shape of the cutting unit F J L X - Special Version	9. Normal clearance angle of the indexable insert D P	10. Direction L - Left-hand cutting unit R - Right-hand cutting unit 	11. Indexable insert size C G T	12. Direction of operation of the clamping mechanism S = Operated from the side T = Operated from above

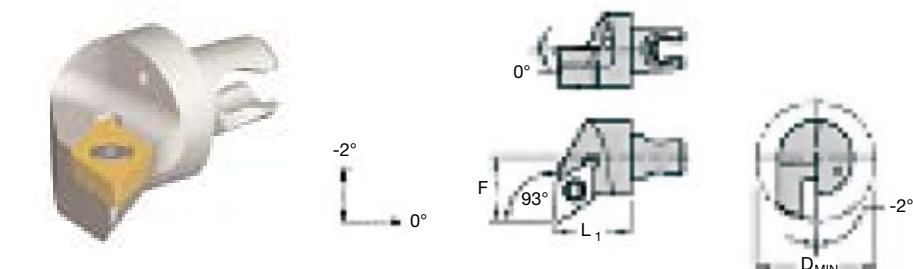
SCREW-ON

SCLP 93° (through coolant)



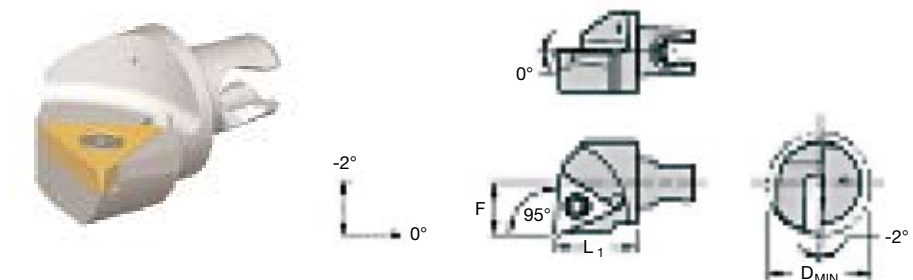
order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	F mm	L1 mm	insert	clamping screw	torx
3016746	2016	KM2016SCLPL092020	LH	25	13	20	CP..09T3	MS1155	15
3016745	2016	KM2016SCLPR092020	RH	25	13	20	CP..09T3	MS1155	15

SDUP 93° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	F mm	L1 mm	insert	clamping screw	torx
3016748	2016	KM2016SDUPL112020	LH	32	17	20	DP..11T3	MS1155	15
3016747	2016	KM2016SDUPR112020	RH	32	17	20	DP..11T3	MS1155	15

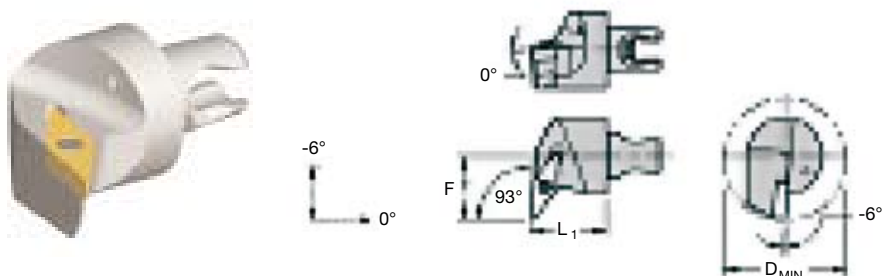
STLP 95° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	F mm	L1 mm	insert	clamping screw	torx
3016754	2016	KM2016STLPL162020	LH	25	13	20	TP..16T3	MS1155	15
3016753	2016	KM2016STLPR162020	RH	25	13	20	TP..16T3	MS1155	15

SCREW-ON

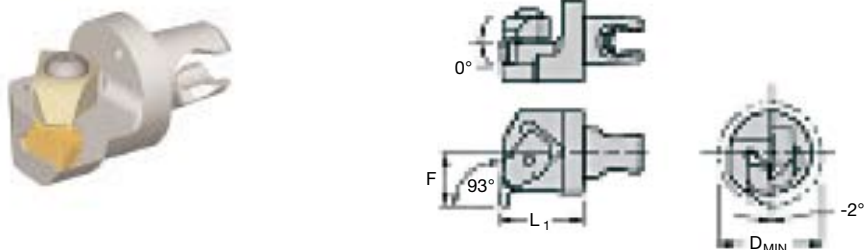
SVUB 93° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	F mm	L1 mm	insert	clamping screw	torx
3016750	2016	KM2016SVUBL1120202	LH	32	17	20	VB..1103	MS1153	7
3016749	2016	KM2016SVUBR1120202	RH	32	17	20	VB..1103	MS1153	7

TOP NOTCH™

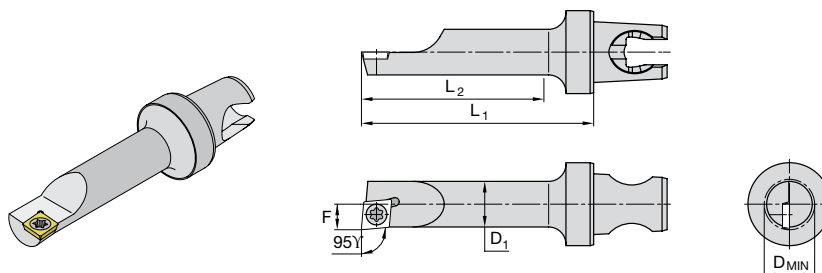
NE (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	F mm	L1 mm	insert	clamp	clamping screw	torx
3016752	2016	KM2016NEL22020	LH	25	13	20	NG2R	CM182	MS1200	10
3016751	2016	KM2016NER22020	RH	25	13	20	NG2L	CM183	MS1200	10

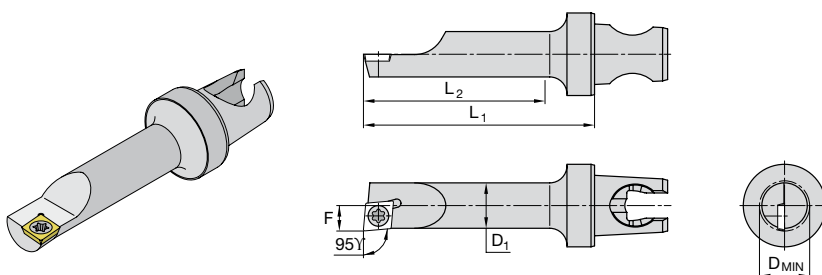
SCREW-ON – BORING; PROFILING

SCLD-S 95° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253214	1612	KM1612S0424SCLDLS4S	LH	4,8	4,2	2,4	24	16,8	CD..S4T0	CC-09	6
2253213	1612	KM1612S0424SCLDRS4S	RH	4,8	4,2	2,4	24	16,8	CD..S4T0	CC-09	6
2253216	1612	KM1612S0528SCLDLS4	LH	5,8	5,2	2,9	28	20,8	CD..S4T0	CC-11	6
2253215	1612	KM1612S0528SCLDRS4	RH	5,8	5,2	2,9	28	20,8	CD..S4T0	CC-11	6
2253218	1612	KM1612S0633SCLDLS4S	LH	7	6,2	3,7	33	25,3	CD..S4T0	CC-11	6
2253217	1612	KM1612S0633SCLDRS4S	RH	7	6,2	3,7	33	25,3	CD..S4T0	CC-11	6

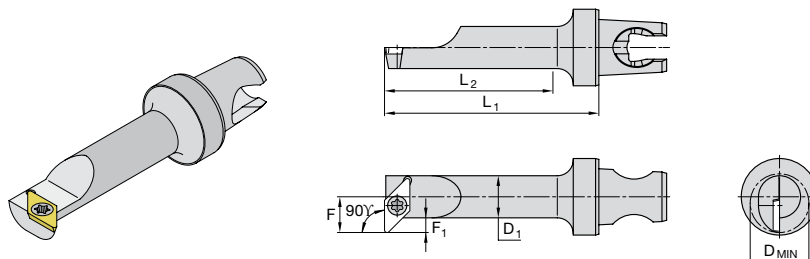
SCLD-T 95° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253220	1612	KM1612S0424SCLDLS4T	LH	4,8	4,2	2,4	24	16,8	CD..S4T0	CC-09	6
2253219	1612	KM1612S0424SCLDRS4T	RH	4,8	4,2	2,4	24	16,8	CD..S4T0	CC-09	6
2253222	1612	KM1612S0528SCLDLS4T	LH	5,8	5,2	2,9	28	20,8	CD..S4T0	CC-11	6
2253221	1612	KM1612S0528SCLDRS4T	RH	5,8	5,2	2,9	28	20,8	CD..S4T0	CC-11	6
2253224	1612	KM1612S0633SCLDLS4T	LH	7	6,2	3,7	33	25,3	CD..S4T0	CC-11	6
2253223	1612	KM1612S0633SCLDRS4T	RH	7	6,2	3,7	33	25,3	CD..S4T0	CC-11	6

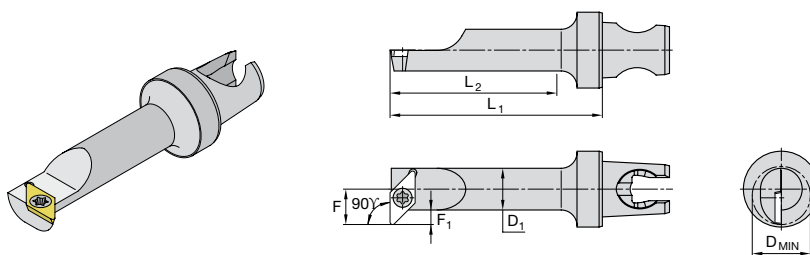
SCREW-ON – BORING; PROFILING

SGFP-S 90° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253226	1612	KM1612S0633SGFPL05S	LH	9,2	6,6	5,6	33	26,4	GP..0501	CT15	6
2253225	1612	KM1612S0633SGFPR05S	RH	9,2	6,6	5,6	33	26,4	GP..0501	CT15	6
2253228	1612	KM1612S0840SGFPL05S	LH	10,8	8,2	6,4	40	33	GP..0501	CT15	6
2253227	1612	KM1612S0840SGFPR05S	RH	10,8	8,2	6,4	40	33	GP..0501	CT15	6

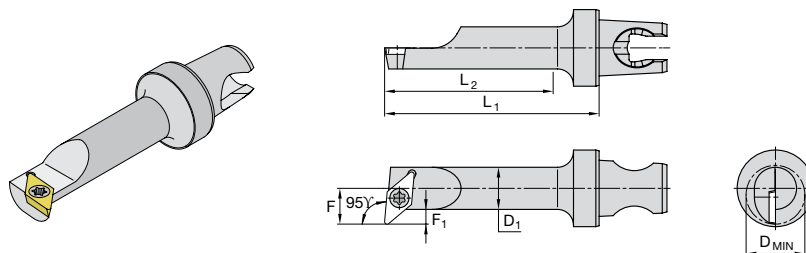
SGFP-T 90° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253230	1612	KM1612S0633SGFPL05T	LH	9,2	6,6	5,6	33	26,4	GP..0501	CT15	6
2253229	1612	KM1612S0633SGFPR05T	RH	9,2	6,6	5,6	33	26,4	GP..0501	CT15	6
2253232	1612	KM1612S0840SGFPL05T	LH	10,8	8,2	6,4	40	33	GP..0501	CT15	6
2253227	1612	KM1612S0840SGFPR05S	RH	10,8	8,2	6,4	40	33	GP..0501	CT15	6

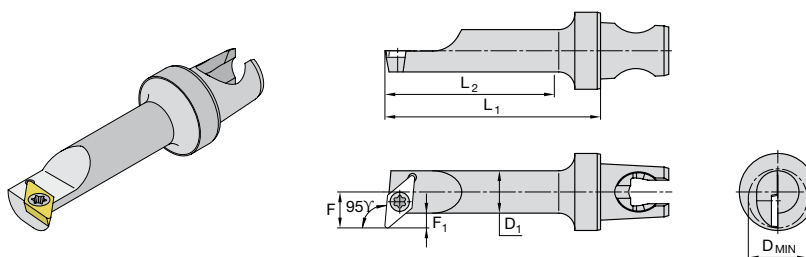
SCREW-ON – BORING; PROFILING

SGLP-S 95° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253214	1612	KM1612S0424SCLDLS4S	LH	4,8	4,2	2,4	24	16,8	CD..S4T0	CC-09	6
2253213	1612	KM1612S0424SCLDRS4S	RH	4,8	4,2	2,4	24	16,8	CD..S4T0	CC-09	6
2253216	1612	KM1612S0528SCLDLS4	LH	5,8	5,2	2,9	28	20,8	CD..S4T0	CC-11	6
2253215	1612	KM1612S0528SCLDRS4	RH	5,8	5,2	2,9	28	20,8	CD..S4T0	CC-11	6
2253218	1612	KM1612S0633SCLDLS4S	LH	7	6,2	3,7	33	25,3	CD..S4T0	CC-11	6
2253217	1612	KM1612S0633SCLDRS4S	RH	7	6,2	3,7	33	25,3	CD..S4T0	CC-11	6

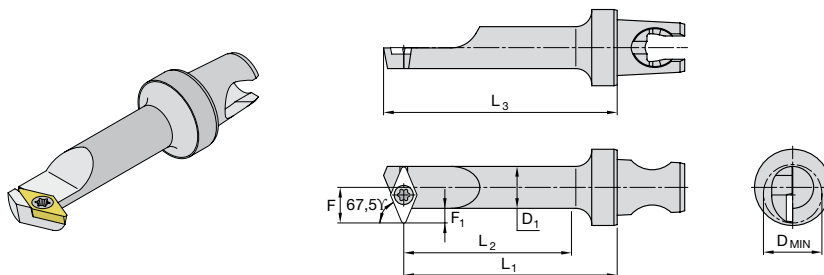
SGLP-T 95° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253220	1612	KM1612S0424SCLDLS4T	LH	4,8	4,2	2,4	24	16,8	CD..S4T0	CC-09	6
2253219	1612	KM1612S0424SCLDRS4T	RH	4,8	4,2	2,4	24	16,8	CD..S4T0	CC-09	6
2253222	1612	KM1612S0528SCLDLS4T	LH	5,8	5,2	2,9	28	20,8	CD..S4T0	CC-11	6
2253221	1612	KM1612S0528SCLDRS4T	RH	5,8	5,2	2,9	28	20,8	CD..S4T0	CC-11	6
2253224	1612	KM1612S0633SCLDLS4T	LH	7	6,2	3,7	33	25,3	CD..S4T0	CC-11	6
2253223	1612	KM1612S0633SCLDRS4T	RH	7	6,2	3,7	33	25,3	CD..S4T0	CC-11	6

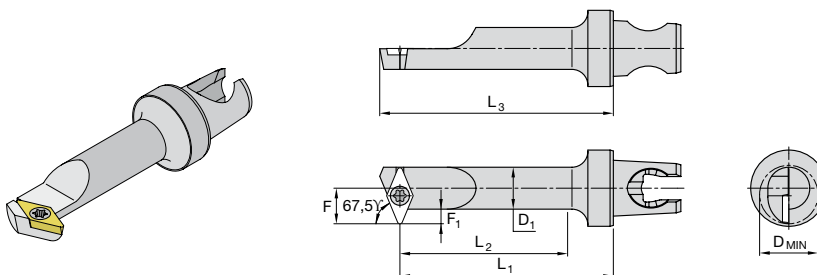
SCREW-ON – BORING; PROFILING

SGXP-S 67,5° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	F1 mm	L1 mm	L2 mm	insert	clamping screw	torx
2253289	1612	KM1612S0633SGXPL05S	LH	10,2	6,6	6,6	3,3	33	26,4	GP.0501	CST15	6
2253288	1612	KM1612S0633SGXPR05S	RH	10,2	6,6	6,6	3,3	33	26,4	GP.0501	CT15	6

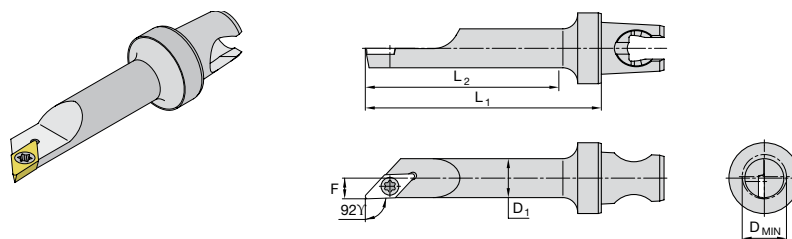
SGXP-T 67,5° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	F1 mm	L1 mm	L2 mm	insert	clamping screw	torx
2253242	1612	KM1612S0633SGXPL05T	LH	10,2	6,6	6,6	3,3	33	26,4	GP.0501	CST15	6
2253241	1612	KM1612S0633SGXPR05T	RH	10,2	6,6	6,6	3,3	33	26,4	GP.0501	CT15	6

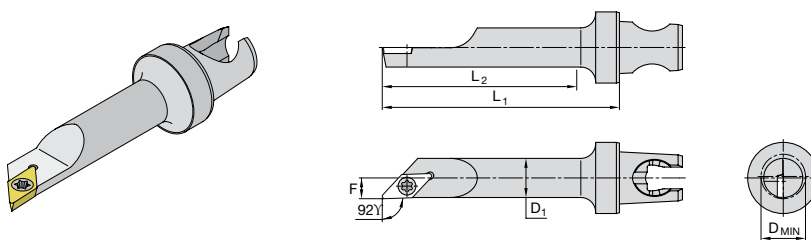
SCREW-ON – BORING; PROFILING

SGJP-S 92° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253244	1612	KM1612S0840SGJPL05S	LH	8,7	8,2	4,3	40	33	GP..0501	CT15	6
2253243	1612	KM1612S0840SGJPR05S	RH	8,7	8,2	4,3	40	33	GP..0501	CT15	6
2253248	1612	KM1612S0945SGJPL05S	LH	9,8	9,2	4,9	45	38,4	GP..0501	CT15	6
2253247	1612	KM1612S0945SGJPR05S	RH	9,8	9,2	4,9	45	38,4	GP..0501	CT15	6

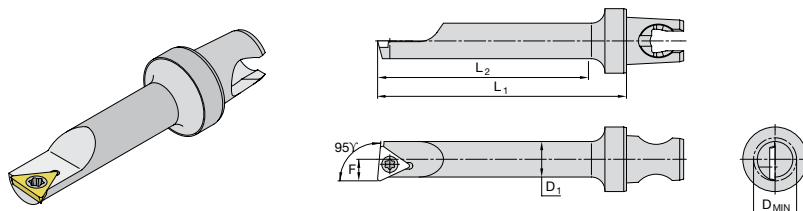
SGJP-T 92° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253250	1612	KM1612S0840SGJPL05T	LH	8,7	8,2	4,3	40	33	GP..0501	CT15	6
2253249	1612	KM1612S0840SGJPR05T	RH	8,7	8,2	4,3	40	33	GP..0501	CT15	6
2253252	1612	KM1612S0945SGJPL05T	LH	9,8	9,2	4,9	45	38,4	GP..0501	CT15	6
2253251	1612	KM1612S0945SGJPR05T	RH	9,8	9,2	4,9	45	38,4	GP..0501	CT15	6

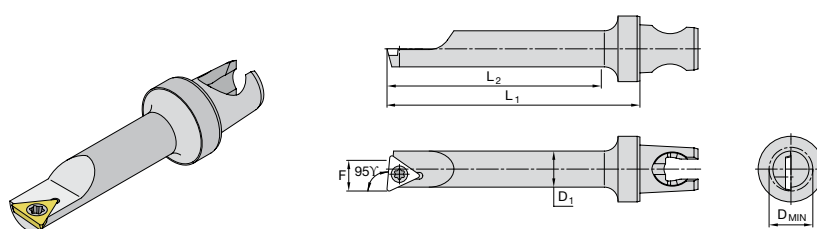
SCREW-ON – BORING; PROFILING

STLD-S 95° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253254	1612	KM1612S0633STLDL07S	LH	7,1	6,2	3,7	33	25,8	TD..07T12	FC11	6
2253253	1612	KM1612S0633STLDR07S	RH	7,1	6,2	3,7	33	25,8	TD..07T12	FC11	6
2253256	1612	KM1612S0840STLDL07S	LH	9,1	8,2	4,8	40	33	TD..07T12	FC11	6
2253255	1612	KM1612S0840STLDR07S	RH	9,1	8,2	4,8	40	33	TD..07T12	FC11	6

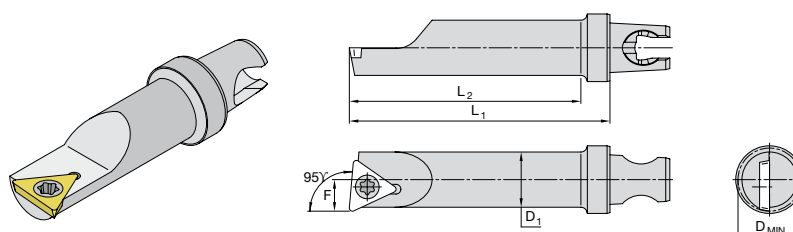
STLD-T 95° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253258	1612	KM1612S0633STLDL07T	LH	7,1	6,2	3,7	33	25,8	TD..07T12	FC11	6
2253257	1612	KM1612S0633STLDR07T	RH	7,1	6,2	3,7	33	25,8	TD..07T12	FC11	6
2253260	1612	KM1612S0840STLDL07T	LH	9,1	8,2	4,8	40	33	TD..07T12	FC11	6
2253259	1612	KM1612S0840STLDR07T	RH	9,1	8,2	4,8	40	33	TD..07T12	FC11	6

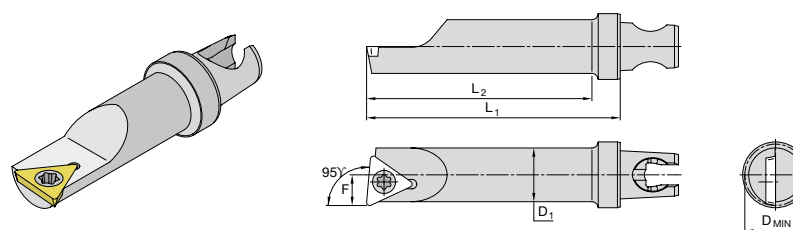
SCREW-ON – BORING; PROFILING

STLP-S 95° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2253262	1612	KM1612S1046STLPL11S	LH	11,2	10,2	5,8	46	41	TP..1102	QC21	6
2253261	1612	KM1612S1046STLPR11S	RH	11,2	10,2	5,8	46	41	TP..1102	QC21	6
2253264	2016	KM2016S1046STLPL11S	LH	11,2	10,2	5,8	46	41	TP..1102	QC21	6
2253263	2016	KM2016S1046STLPR11S	RH	11,2	10,2	5,8	46	41	TP..1102	QC21	6
2253266	2016	KM2016S1358STLPL11S	LH	14,3	13	7,5	58	52	TP..1102	QC26	6
2253265	2016	KM2016S1358STLPR11S	RH	14,3	13	7,5	58	52	TP..1102	QC26	6

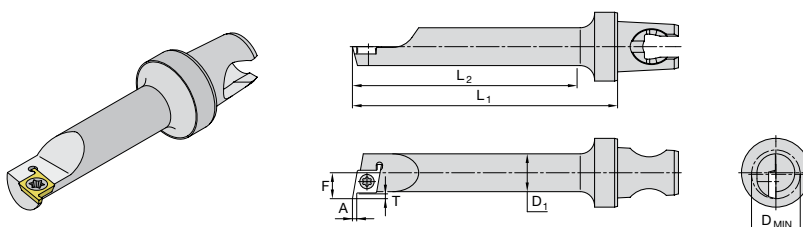
STLP-T 95° (through coolant)



order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2250068	1612	KM1612S1046STLPL11T	LH	11,2	10,2	5,8	46	41	TP..1102	QC21	6
2250067	1612	KM1612S1046STLPR11T	RH	11,2	10,2	5,8	46	41	TP..1102	QC21	6
2250070	2016	KM2016S1046STLPL11T	LH	11,2	10,2	5,8	46	41	TP..1102	QC21	6
2250069	2016	KM2016S1046STLPR11T	RH	11,2	10,2	5,8	46	41	TP..1102	QC21	6
2250072	2016	KM2016S1358STLPL11T	LH	14,3	13	7,5	58	52	TP..1102	QC26	6
2250071	2016	KM2016S1358STLPR11T	RH	14,3	13	7,5	58	52	TP..1102	QC26	6

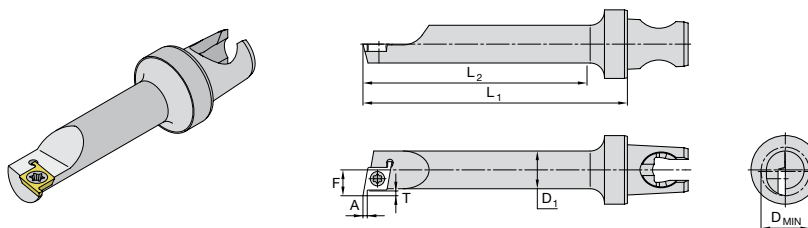
SCREW-ON – GROOVING AND THREAD CUTTING

SCXD-S (through coolant)



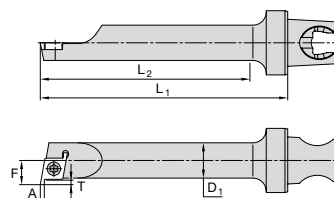
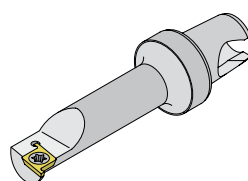
order no.	KM size	cat. no.	"RH	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2250073	1612	KM1612S0529SCXDRS	RH	7	5,6	3,9	29	22,2	CDG/CDT	CC11	6
2250074	1612	KM1612S0633SCXDRS	RH	8/	6,4	4,4	33	25,7	CDG/CDT	CC11	6

SCXD-T (through coolant)



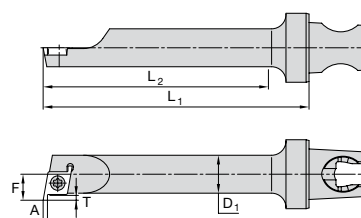
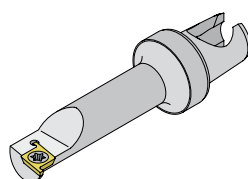
order no.	KM size	cat. no.	"RH	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2250037	1612	KM1612S0529SCXDRT	RH	7	5,6	3,9	29	22,2	CDG/CDT	CC11	6
2250038	1612	KM1612S0633SCXDRT	RH	8/	6,4	4,4	33	25,7	CDG/CDT	CC11	6

SCREW-ON – BORING; GROOVING AND THREAD CUTTING



SCXP-S (through coolant)

order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2250040	1612	KM1612S1046SCXPXS	LH	11,8	10,2	5,8	46	41	"CP..0602/CPT	QC15	6
2250039	1612	KM1612S1046SCXPXS	RH	11,8	10,2	5,8	46	41	CP..0602/CPT	QC15	6
2250041	2016	KM2016S1046SCXPXS	LH	11,8	10,2	5,8	46	41	CP..0602/CPT	QC15	6
2250042	2016	KM2016S1046SCXPXS	RH	11,8	10,2	5,8	46	41	CP..0602/CPT	QC15	6



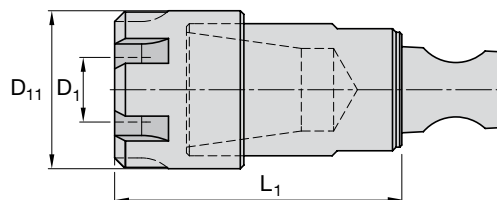
SCXP-T (through coolant)

order no.	KM size	cat. no.	RH LH N	D _{MIN} mm	D1 mm	F mm	L1 mm	L2 mm	insert	clamping screw	torx
2250064	1612	KM1612S1046SCXPXT	LH	LH	11,8	10,2	5,8	46	"CP..0602/CPT	QC15	QC15
2250063	1612	KM1612S1046SCXPXT	RH	RH	11,8	10,2	5,8	46	"CP..0602/CPT	QC15	QC15
2250065	2016	KM2016S1046SCXPXT	LH	LH	11,8	10,2	5,8	46	"CP..0602/CPT	QC15	QC15
2250066	2016	KM2016S1046SCXPXT	RH	RH	11,8	10,2	5,8	46	"CP..0602/CPT	QC15	QC15

COLLET CHUCKS - ER - COLLET CHUCKS

ERICKSON

ER
(through coolant)



order no.	KM size	cat. no.	D1 mm	D11 mm	L1 mm	nut	collet	wrench	torque Nm	
2607067	1612	KM1612ER08017	0,5-5	12	17	LER08M	08 ER...	ER08 WEM	5,0	
1925844	1612	KM1612ER11020	0,5-7	16	30	LER11M	11 ER..	ER11 WEM	16	
1925845	1612	KM1612ER16032	0,5-10	22	40	LER16M	16 ER..	ER16 WEM	24	
2607068	2016	KM2016ER08017	0,5-5	12	17	LER08M	08 ER...	ER08 WEM	5,0	
1898057	2016	KM2016ER11020	0,5-7	16	30	LER11M	11 ER..	ER11 WEM	16	
1898058	2016	KM2016ER16032	0,5-10	22	40	LER16M	16 ER..	ER16 WEM	24	
1925857	2016	KM2016ER20035	0,5-13	28	45	LER20M	20 ER..	ER20 WEM	28	
3741453	2016	KM2016ER08025C	0,5-5	12	25	LER08M	08 ER...	ER08 WEM	5,0	through coolant
3741454	2016	KM2016ER11030C	0,5-7	16	30	LER11M	11 ER..	ER11 WEM	16	through coolant
3741455	2016	KM2016ER16040C	0,5-10	22	40	LER16M	16 ER..	ER16 WEM	24	through coolant
3741456	2016	KM2016ER20045C	0,5-13	28	45	LER20M	20 ER..	ER20 WEM	28	through coolant

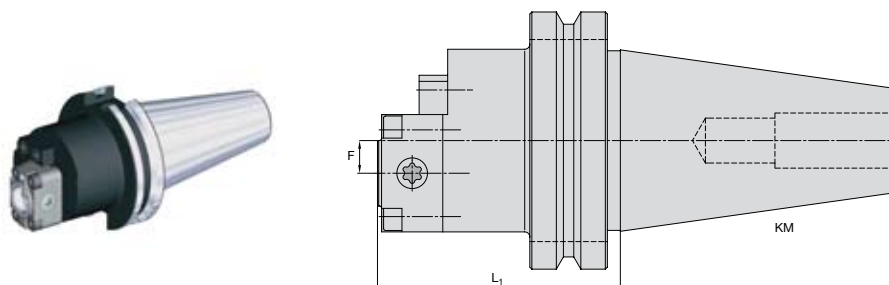
KM MICRO[™]

Adapter and Accessories

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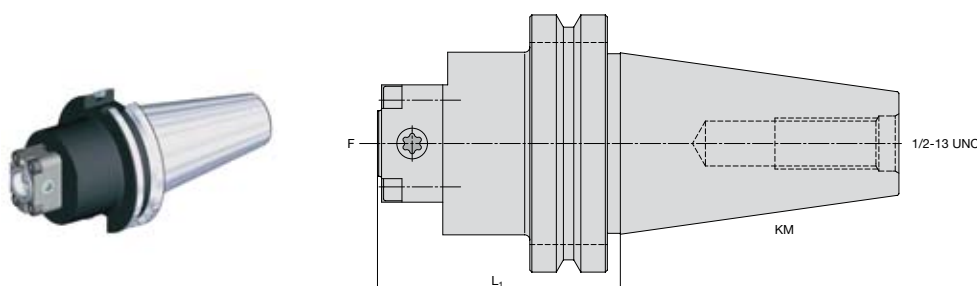
PRESET ADAPTERS - CAT 40 TAPER – OFFSET (STATIONARY TOOLS)

ERICKSON

ECTRA

CV 40 taper dimensions are the same as those for taper 40, DIN 69871

order no.	KM size	cat. no.	KM size	F mm	L1 mm	repair package
2213872	12	CV40KM12ECTRA	CV 40	6	40	KM12NRPKG
2213903	16	CV40KM16ECTRA	CV 40	8	50	KM16NRPKG

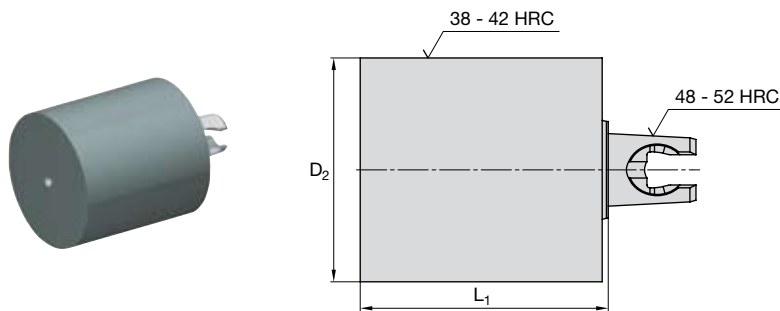
PRESET ADAPTERS - CAT 40 TAPER – CENTERED (ROTATING TOOLS)

ERICKSON

TRA

CV 40 taper dimensions are the same as those for taper 40, DIN 69871

order no.	KM size	cat. no.	KM size	F mm	L1 mm	repair package
1925846	12	CV40KM12TRA	CV 40	0	40	KM12NRPKG
1887781	16	CV40KM16TRA	CV 40	0	50	KM16NRPKG

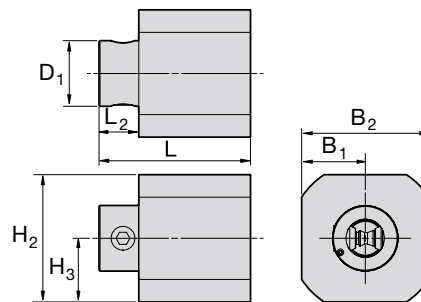
BLANKS



BN

order no.	KM size	cat. no.	D2 mm	L1 mm
2213872	12	KM12BN3133	31	33
2213903	16	KM16BN3740	37	40

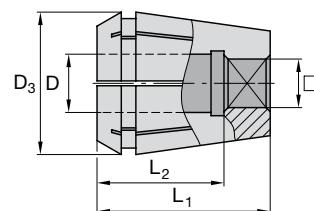
TUMBLE BLOCK



TB

order no.	KM size	cat. no.	B1 mm	B2 mm	H2 mm	H3 mm	L mm	L2 mm	repair package
2430347	12	KM12TB	32	64	64	32	50	14	KM12NRPKG
2430348	16	KM16TB	32	64	64	32	50	16	KM16NRPKG

ERTC – TAP COLLETS TO DIN 6499

ERICKSON


ERTC

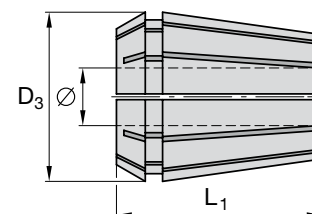
ERTC – Tap collets for taps to DIN 371, 374, 376

order no.	cat. no.	ERTC size	thread size	D mm	D3 mm	L1 mm	T2 mm	
1125101	16ERTC045034M	16	M4 - M10	4,5	17	27,5	18	3,4
1295593	16ERTC055043M	16	M4 - M10	5,5	17	27,5	18	4,3
1124519	16ERTC060049M	16	M4 - M10	6	17	27,5	18	4,9
1128193	16ERTC070055M	16	M4 - M10	7	17	27,5	18	5,5
1551134	20ERTC045034M	20	M4 - M12	4,5	21	31,5	18	3,4
1551135	20ERTC055043M	20	M4 - M12	5,5	21	31,5	18	4,3
1175962	20ERTC060049M	20	M4 - M12	6	21	31,5	18	4,9
1307508	20ERTC070055M	20	M4 - M12	7	21	31,5	18	5,5
1746797	20ERTC080062M	20	M4 - M12	8	21	31,5	22	6,2
1307509	20ERTC090070M	20	M4 - M12	9	21	31,5	22	7
1152394	20ERTC100080M	20	M4 - M12	10	21	31,5	25	8

COLLET CHUCKS -

ER - COLLETS TO DIN 6499 FORM B

ER COLLETS



11ERS000M ER11 collet set	16ERS000M ER16 collet set	20ERS000M ER20 collet set
13 pieces 1 – 7 mm (0,5 mm graduation)	10 pieces 1 – 10 mm (1 mm graduation)	12 pieces 2 – 13 mm (1 mm graduation)

order no.	cat. no.	ER	D	D3 mm	L1 mm
1025778	11ER010M	11	1	11,5	18,5
1025779	11ER015M	11	1,5	11,5	18,5
1025780	11ER020M	11	2	11,5	18,5
1025781	11ER025M	11	2,5	11,5	18,5
1025782	11ER030M	11	3	11,5	18,5
1025783	11ER035M	11	3,5	11,5	18,5
1025804	11ER040M	11	4	11,5	18,5
1025805	11ER045M	11	4,5	11,5	18,5
1025806	11ER050M	11	5	11,5	18,5
1025807	11ER055M	11	5,5	11,5	18,5
1025808	11ER060M	11	6	11,5	18,5
1025809	11ER065M	11	6,5	11,5	18,5
1025810	11ER070M	11	7	11,5	18,5
1125005	16ER010M	16	1	17	27,5
1295604	16ER015M	16	1,5	17	27,5
1123683	16ER020M	16	2	17	27,5
1126832	16ER025M	16	2,5	17	27,5
1136014	16ER030M	16	3	17	27,5
1108458	16ER035M	16	3,5	17	27,5
1123978	16ER040M	16	4	17	27,5
1110558	16ER045M	16	4,5	17	27,5
1107148	16ER050M	16	5	17	27,5
1110557	16ER055M	16	5,5	17	27,5
1123829	16ER060M	16	6	17	27,5
1108459	16ER065M	16	6,5	17	27,5
1123759	16ER070M	16	7	17	27,5
1110559	16ER075M	16	7,5	17	27,5
1123945	16ER080M	16	8	17	27,5
1154644	16ER085M	16	8,5	17	27,5
1123931	16ER090M	16	9	17	27,5
1154645	16ER095M	16	9,5	17	27,5
1123730	16ER100M	16	10	17	27,5
1025811	20ER010M	20	1	21	31,5
1025812	20ER020M	20	2	21	31,5
1025813	20ER030M	20	3	21	31,5
1025834	20ER040M	20	4	21	31,5
1025835	20ER050M	20	5	21	31,5
1025836	20ER060M	20	6	21	31,5
1025837	20ER070M	20	7	21	31,5
1025838	20ER080M	20	8	21	31,5
1025839	20ER090M	20	9	21	31,5
1025840	20ER100M	20	10	21	31,5
1025841	20ER110M	20	11	21	31,5
1025842	20ER120M	20	12	21	31,5

For availability see current price list.

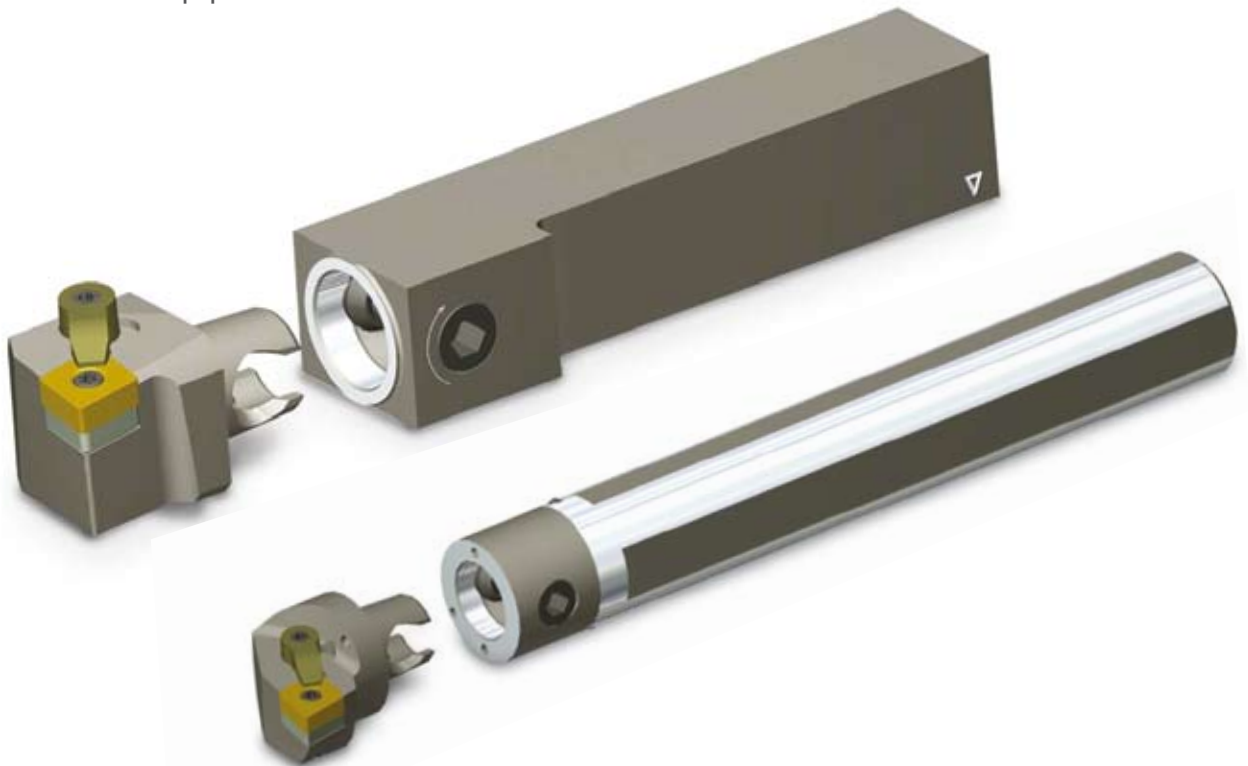
order example: 11ER010M

Introducing

KENNAMETAL'S 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!



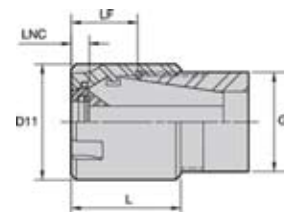
ER LOCKNUT SLIM COOLANT

ERICKSON

Interchangeable with Slim locknuts.

Must be ordered separately.

Used in conjunction with ER coolant-sealing disks for high-pressure coolant applications; up to 150 bar (2,000 psi) and must be ordered separately.



order no.	collet series	cat. no.	D11 mm	D11 inch	L mm	L inch	LF mm	LF inch	LNC mm	LNC inch	G3	wrench size	torque-c'bore collet Nm	torque-straight collet Nm
2255307	ER16	LABER16M	22,0	.87	22,0	.87	11,5	.45	4,5	.18	M19 X 1.0	ER16WEM	24	24
2398953	ER20	LABER20M	28,0	1.1	24,0	.94	13,0	.51	5,0	.20	M19 X 1.0	ER20WEM	28	28

ER16 LOCKNUT COOLANT SEAL DISK

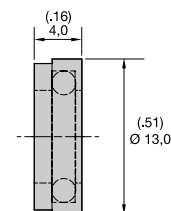
ERICKSON

0,5mm (.020") range of sealing per disk.

High-pressure coolant up to 150 bar (2,000 psi).

Accommodates both metric and inch size cutting tool shanks.

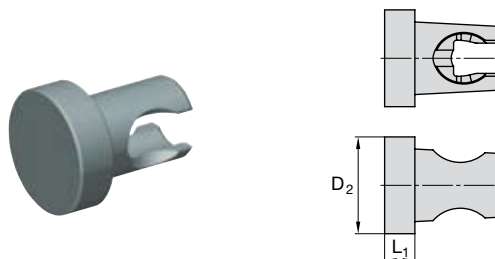
Standard size replaceable O-rings.



range		order number	catalog number	collet series
metric	fraction			
3.0 - 3.5	1/8	1128244	CDER16035M	ER16
3.5 - 4.0	5/32	1122128	CDER16040M	ER16
4.0 - 4.5	-	1125973	CDER16045M	ER16
4.5 - 5.0	3/16	1125741	CDER16050M	ER16
5.0 - 5.5	7/32	1260100	CDER16055M	ER16
5.5 - 6.0	-	1130781	CDER16060M	ER16
6.0 - 6.5	1/4	1260101	CDER16065M	ER16
6.5 - 7.0	-	1260102	CDER16070M	ER16
7.0 - 7.5	9/32	1260103	CDER16075M	ER16
7.5 - 8.0	5/16	1124948	CDER16080M	ER16
8.0 - 8.5	-	1254499	CDER16085M	ER16
8.5 - 9.0	11/32	1120977	CDER16090M	ER16
9.0 - 9.5	3/8	1260104	CDER16095M	ER16
9.5 - 10.0	-	1128201	CDER16100M	ER16

PLUGS

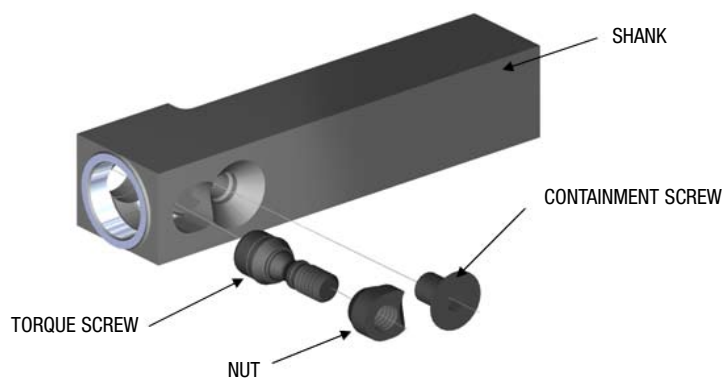
P



order no.	KM size	cat. no.	D2 mm	L1 mm
1925848	12	KM12P	12	5
1851741	16	KM16P	16	5
3397220	1612	KM1612P	16	5
3397219	2016	KM2016P	20	5

SQUARE SHANK ADAPTER

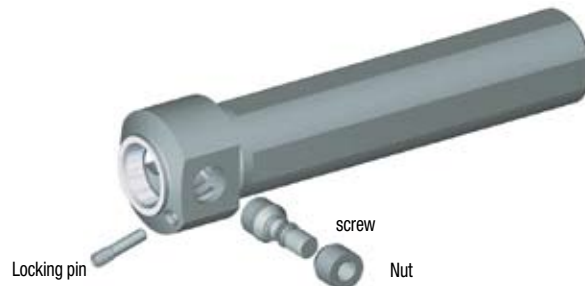
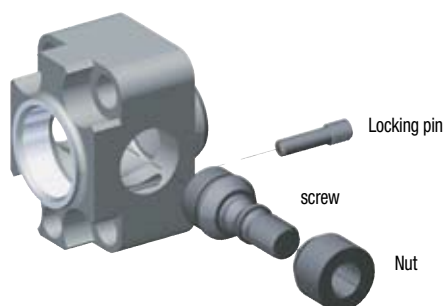
NCM



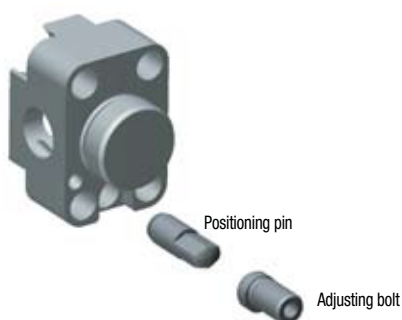
order no.	cat. no.	screw	nut	containment screw	bit
3953388	KM12NAPKG	1	1	1	1
3953386	KM16NAPKG	1	1	1	1

NCM

ROUND SHANK AND FLANGE ADAPTERS



order no.	cat. no.	screw	nut	locking pin	bit
1925858	KM12NRPKG	1	1	1	1
1851801	KM16NRPKG	1	1	1	1



D _{AM}	CODE
12	microcam12
16	microcam16

CENTER HEIGHT ADJUSTMENT OPTION:

On KM Micro™ flange adapters the center height of the indexable insert can be adjusted using an adjusting bolt. These adjusting bolts should be ordered separately.

Procedure:

1. Remove the positioning pin from the flange adapter.
2. Insert the adjusting bolt in the adapter hole on the tool block.
3. Secure the flange adapter to the tool block. Make sure the adjusting bolt is inserted in the hole for the positioning pin on the rear of the flange.
4. To adjust, simply move the hexagonal face of the bolt through the hole for the positioning pin to achieve the desired effect.
5. Tighten the fixing screws until the required torque is reached.

LUBRICATION OF THE CLAMPING COMPONENTS:

Using the appropriate wrench, loosen the clamping screws until the internal STOP is reached. Lubricate the thread and clamping surfaces of the clamping screws with grease.

In addition, lubricate the inner taper surface with a thin layer of grease. Gleitmo 805™ grease is recommended.

TORQUE WRENCH



TWT - TORQUE WRENCH

order no.	KM size	cat. no.	thumbwheel		torque mm
1930183	12	TWT256R	2906898	TBWL25IP	6,75 - 8
1851809	16	TWT278R	2906899	TBWL27IP	9,5 - 11
1930183	1612	TWT256R	2906898	TBWL25IP	6,75 - 8
1851809	2016	TWT278R	2906899	TBWL27IP	9,5 - 11

TWT - REPLACEMENT BITS

D _{KM}	CODE	Tx- plus 	l
12	BT-25IP	25	25
12	BTE-25IP	25	65
16	BT-27IP	27	25
16	BTE-27IP	27	65



TWT - TORQUE DRIVER

D _{KM}	CODE	Tx- plus 	torque values
12	TWT257R	25	6,75 - 8 Nm

All torque drivers are supplied as standard with a universal bit holder and a bit.

TWT - REPLACEMENT UNIVERSAL BIT HOLDER

CODE
170.260

Replacement bit: BT-25IP

WRENCH - HEX SETS

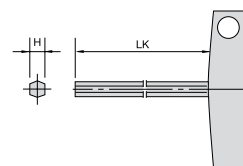
HEX WRENCH SET (Metric)

order no.	cat. no.	wrench set description
1192354	MW 9	Set contains (mm) 1,27; 1,5; 2,0; 2,5; 3,0; 4,0; 5,0; 6,0 and 8,0



T-HANDLE HEX WRENCH (Metric)

order no.	cat. no.	hex size
1138748	170.135	5 mm
1138755	170.136	6 mm



T-HANDLE WRENCH SET (Inch)

order no.	cat. no.	wrench set description
1192321	KW-7A	Set contains sizes: 5/64, 3/32, 7/64, 1/8, 5/32, 3/16 and 7/32



UNIVERSAL BIT DRIVER

order no.	cat. no.
1963869	Driver



DRIVER BITS

order no.	cat. no.	hex size	torx size	torx plus size
1138851	170.179	2,5 mm	-	-
1150198	170.180	3,0 mm	-	-
138857	170.181	4,0 mm	-	-
1962981	BT6	-	6	-
1963853	BT7	-	7	-
1963855	BT8	-	8	-
1963854	BT9	-	9	-
1963856	BT10	-	10	-
1138814	170.175	-	15	-
1138822	170.176	-	20	-
1994654	170.258	-	25	-
1984243	170.256	-	27	-
2244316	BT25IP	-	-	25 IP
2244317	BT27IP	-	-	25 IP



Introducing

KENNAMETAL'S KM20™ 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!



KM MICRO™

Technical Information

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Mounting Dimensions	F3
Application Example.....	F4
Assembly and Maintenance Instucture	F5-F8
Calculation Sheet.....	F9



KM™ Quick-Change Tooling — the ISO 26622 Standard!

Boost your overall machining efficiency by up to 60%!

- Our unique three-surface taper contact design makes this the most rigid and accurate modular quick-change tooling system available!
- It's highly versatile, too: Can be fully and easily employed on your lathe, machining center, multispindle, or mill-turn machine — significantly reducing your tool-change and part setup downtime!



KM™ Toolholders — the first, the best,
and now the ISO 26622 standard in
quick-change tooling systems!

**Kennametal will significantly boost your
productivity and profitability! Let us prove it.**

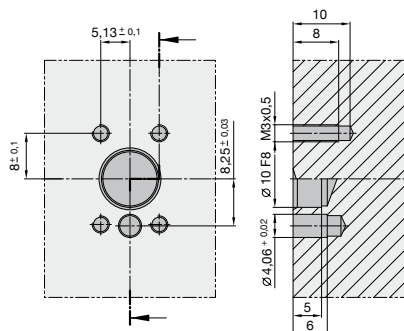
Visit www.kennametal.com or contact
your local Authorized Kennametal Distributor.

MOUNTING DIMENSIONS FOR FLANGE ADAPTERS

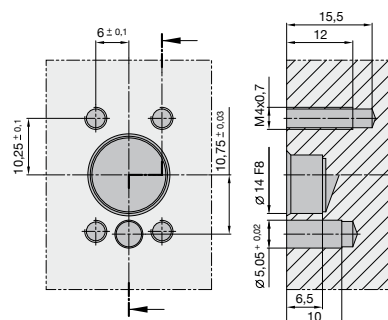
KM 12



KM 12 NCM... 1522



KM 16 NCM... 1928



KM size	cat.	replacement assembly bolts (4 required)	bolt size	hex	per bolt M_{AN}
12	KM12 NCM SF1522	125.316	M3 x 16	2,5	2,5 Nm
12	KM16 NCM SF1928	MS-319	M4 x 20	3,0	6,0 Nm
16	KM16 NCM SEF1928	MS-319	M4 x 20	3,0	6,0 Nm



KM16/KM12 METAL CUTTING TESTS

KM16 METAL CUTTING TEST

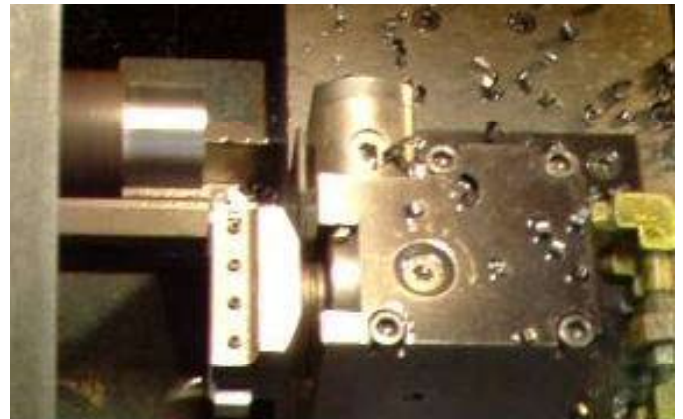
Insert : CCMT3252LF (KC935)

Material : 4340 HRC 38-42

Depth of cut : **7,6mm**

Feed : 0.20 mm/rev (.008 IPR)

Speed : 122 m/min (400 SFM)



KM12 METAL CUTTING TEST

Insert : CCMT3252LF (KC935)

Material : 4340 HRC 38-42

Depth of cut : **6,35mm**

Feed : 0.20 mm/rev (.008 IPR)

Speed : 122 m/min (400 SFM)



KM MICRO™ CUSTOMIZED TOOLBLOCK

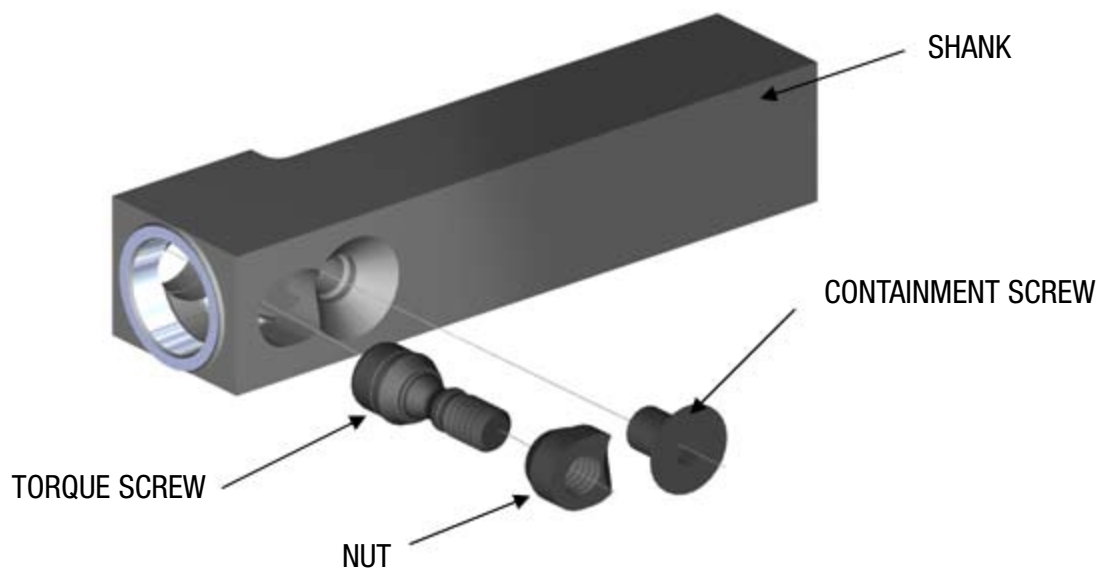




KM MICRO[™] ASSEMBLY PROCEDURE & MAINTENANCE SCHEDULE

Assembly Procedure:

- Apply Gleitmo 805[™] grease generously to threads, cones on torque screw and nut, and bump-off area (behind threads) of the torque screw. Also, apply grease generously to the female taper on the shank.
- screw the torque screw and the nut together.
- insert the torque screw and nut into the shank (as one unit) as shown.
- Install the containment screw as shown.
- When initially clamping the KM Micro[™] shank in a machine tool slot it is recommended that a cutting unit is in the shank.
- Disassembly is the reverse of assembly procedure.



Maintenance Schedule for:

Disassemble the shanks “once a month” and re-apply new grease. Grease should also be applied “1 or 2 times per week” to the torque screw and nut & both tapers (internal & external) in the release position without the need to disassemble. Before re-applying grease, shop air should be used to blow out oil coolant.

If contamination of the grease is evident, then the old grease should be immediately removed and the shank cleaned. Then new grease should be re-applied according to procedure.

Note: Apply grease with a coarse bristle brush to prevent shedding of bristles.

GREASING INSTRUCTIONS:

A Use Gleitmo 805™ grease & a small coarse bristle assembly brush.



B Apply a thin coat of grease on the entire surface of the external taper.



C Apply grease to locking cone areas (both sides).



Continued on next page ►

GREASING INSTRUCTIONS:

- D** Apply grease to bump-off ramps at center of external taper (both sides).



- E** Finished external taper greased properly.



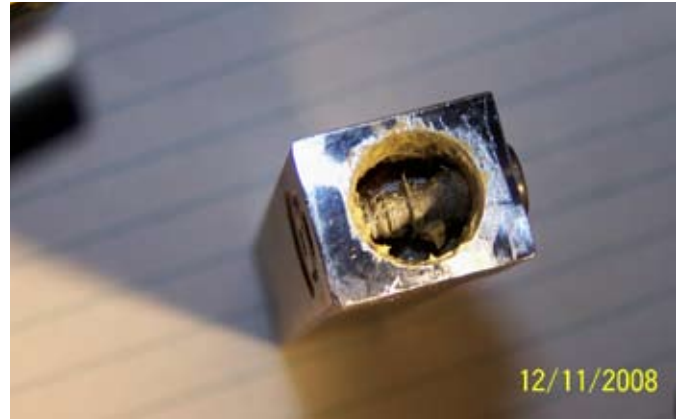
- F** Apply grease to the internal taper and also the hardware components as shown.



Continued on next page ►

GREASING INSTRUCTIONS:

G Finished internal taper greased properly.



H Cutting unit and clamping unit greased and ready for use.





POTENTIAL SAVINGS THROUGH THE USE OF KM MICRO



General data	
Machine costs/hour	35,00 €
Number of shifts/day	2
Hours/shift	8
Machine availability/shift [%]	92
Number of weeks/year	48
Number of shifts/year	480

Tool data	Conventional	KM Micro
Total number of tools	4	4
Number of tool changes/shift/tool	1	1
Time/tool change [min]	9	1,5
Number of indexable insert indexings/shift/tool	4	4
Indexing time/indexable insert [min]	5	1,5

Workpiece data	Conventional	KM Micro
Production time/workpiece [min]	3,5	
Approximate number of workpieces/shift and machine	93	118
Approximate number of workpieces/year and machine	44654	56448

Non-productive time/shift	Conventional [min]	KM Micro [min]	Saving [min]	Saving [€]
For tool change	36	6	30	17,50 €
For indexing	80	24	56	32,67 €
Total	116	30	86	50,17 €

Investment	Conventional	KM Micro
In the first year	7.500,00 €	12.000,00 €
In the second year	1.000,00 €	1.000,00 €
In the third year	1.000,00 €	1.000,00 €

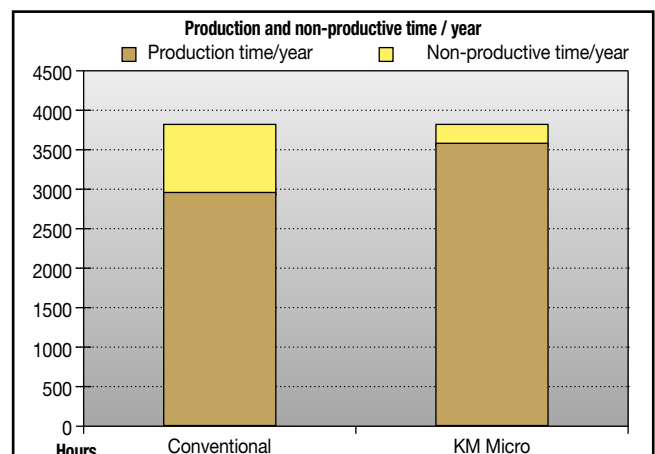
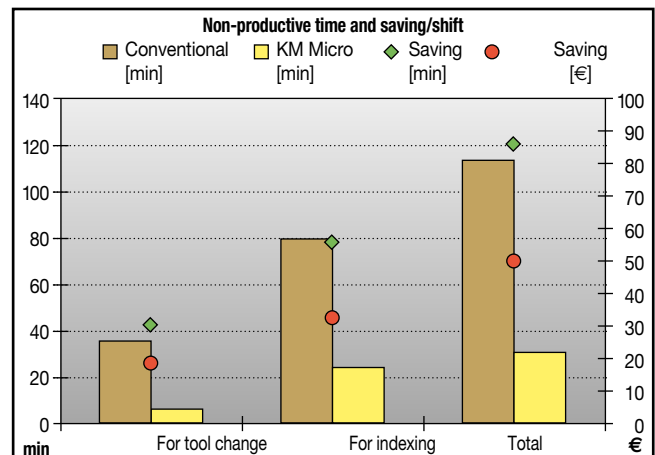
Time saved/year [hours]	688
Total annual saving	24.080,00 €
Amortisation time for the first year [months]	2,2

Saving	
Number of years, maximum 3 years	3

First year		
Machine costs/year	134.400,00 €	110.320,00 €
Investment	7.500,00 €	12.000,00 €
Year-end balance	141.900,00 €	122.320,00 €
Saving		19.580,00 €

Second year		
Previous year-end balance	141.900,00 €	122.320,00 €
Machine costs/year	134.400,00 €	110.320,00 €
Investment	1.000,00 €	1.000,00 €
Year-end balance	277.300,00 €	233.640,00 €
Saving		43.660,00 €

Third year		
Previous year-end balance	277.300,00 €	233.640,00 €
Machine costs/year	134.400,00 €	110.320,00 €
Investment	1.000,00 €	1.000,00 €
Year-end balance	412.700,00 €	344.960,00 €
Saving		67.740,00 €



Costs saved through the use of KM Micro	67.740 €
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Note: These values are for example purposes only!

KM MICRO™

Crossreference Carbide Insert

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Crossreference to other KMT Catalogs for Inserts G2-G3

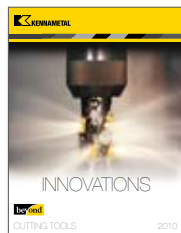
FOR REQUIRED INSERTS REVIEW KENNAMETAL...

... TURNING TOOLING



insert style	Lathe 8010
SCREW-ON	Pg A100-A133
KENLOC™	Pg A2-A73
A4	Pg D72-D79
A3	Pg D32-D35
A2	Pg D12-D16
TOP NOTCH™ GROOVING	Pg D106-D121
TOP NOTCH™ THREADING	Pg E10-E19
LT - LAYDOWN THREADING	Pg E40-E59

... INNOVATIONS 2010



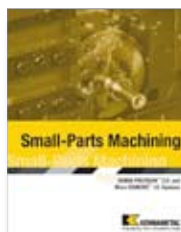
insert style	Innovations 2010
KENLOC™	PG C2-C19
A4™	PG C20-C22

... OD TOOLING



insert style	OD Tooling.... A07-297
SCREW-ON	Pg 6-9

... SMALL PART MACHINING



insert style	Small Part Machining A-08-01277
KENAPRECISION	Pg 8-14
MICRO KENBORE	Pg 18-19

... MICRO-MACHINING PRODUCTIVITY SOLUTIONS 2090



insert style	Micro-Machining Productivity Solutions 2090
SCREW-ON	Pg 134-138

Metalcutting Safety

IMPORTANT SAFETY INSTRUCTIONS

Read before using the tools in this catalog!

Projectile and Fragmentation Hazards

Modern metalcutting operations involve high spindle and cutter speeds and high temperatures and cutting forces. Hot metal chips may fly off the workpiece during metalcutting. Although cutting tools are designed and manufactured to withstand high-cutting forces and temperatures, they can sometimes fragment, particularly if they are subjected to over-stress, severe impact, or other abuse.

To avoid injury:

- Always wear appropriate personal protective equipment, including safety goggles, when operating metalcutting machines or working nearby.
- Always make sure all machine guards are in place.

Breathing and Skin Contact Hazards:

Grinding carbide or other advanced cutting tool materials produce dust or mist containing metallic particles. Breathing this dust or mist — especially over an extended period — can cause temporary or permanent lung disease or make existing medical conditions worse. Contact with this dust or mist can irritate eyes, skin, and mucous membranes and may make existing skin conditions worse.

To avoid injury:

- Always wear breathing protection and safety goggles when grinding.
- Provide ventilation control and collect and properly dispose of dust, mist, or sludge from grinding.
- Avoid skin contact with dust or mist.

For more information, read the applicable Material Safety Data Sheet provided by Kennametal and consult General Industry Safety and Health Regulations, Part 1910, Title 29 of the Code of Federal Regulations.

These safety instructions are general guidelines. Many variables affect machining operations. It is impossible to cover every specific situation. The technical information included in this catalog and recommendations on machining practices may not apply to your particular operation. For more information, consult Kennametal's Metalcutting Safety booklet, available free from Kennametal at 724.539.5747 or fax 724.539.5439. For specific product safety and environmental questions, contact our Corporate Environmental Health and Safety Office at 724.539.5066 or fax 724.539.5372.

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