

INNOVATIONS
MASTER CATALOG

TOOLING SYSTEMS
2013

www.kennametal.com

 **KENNAMETAL®**

GENERAL ENGINEERING

TRANSPORTATION

www.kennametal.com



AEROSPACE & DEFENSE

EARTHWORKS

ENERGY

KM Micro and KM Mini Quick-Change Tooling Systems



Kennametal has developed yet another revolutionary quick-change tooling system. The KM Micro and KM Mini tooling systems are further developments of the internationally renowned KM™ system but are smaller, more compact versions.

Reduces Indexing and Setup Times by 66%

The KM Micro and KM Mini systems have 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 one to three 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

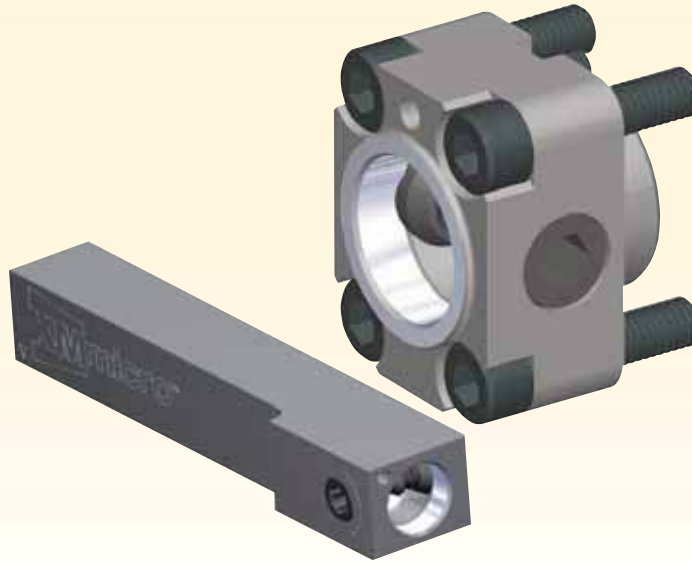
The new KM Micro and KM Mini square shank adapters can be installed quickly and easily in existing tool block adapters. Existing clamp-type toolholders are replaced by KM Micro and KM Mini adapters with the same dimensions, and the machine is then ready for use.

Kennametal provides you with a comprehensive range of KM Micro and KM Mini solutions to meet your requirements.



What are KM Micro and KM Mini?

They are a revolutionary quick-change tooling systems utilizing face and taper contact designs. The KM Micro and KM Mini tooling systems are designed for, but not limited to, the Swiss-style machine tool industry.



Step 1: Typical Swiss tool block.

Difficult to change the insert.

1



Step 2: Change the cutting unit, not the insert!

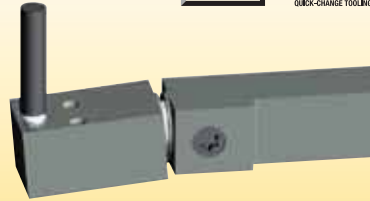
Actual tool change.

2



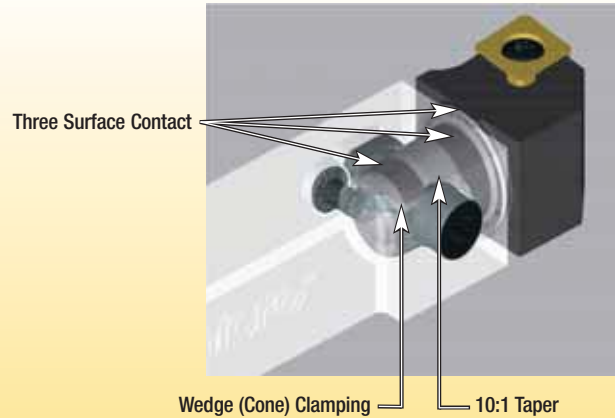
Selection Guide for KM™ Clamping Systems

Face and Taper Contact Systems Stiffness Depends on Interference Level and Clamping Force.

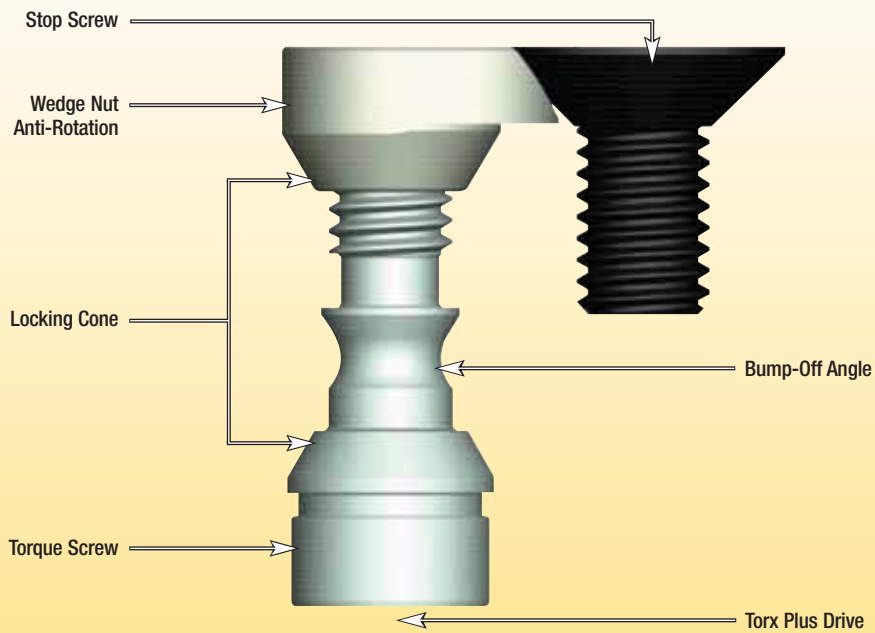


Taper Features

- Three Surface Contact — Provides bands at face, gage, and tail.
- 10:1 Taper Angle — Same as standard 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.



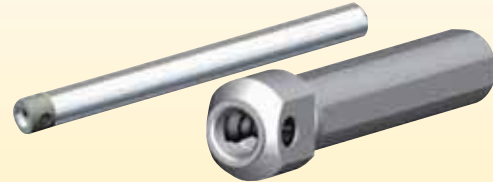
Mechanism Features



What is KM1612™/KM2016™/KM2520™/KM3225™ for I.D. Machining?

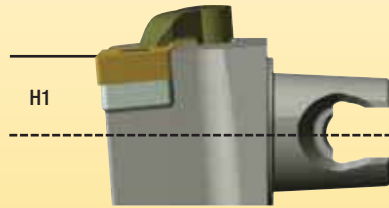
The KM1612/KM2016/KM2520/KM3225 is the I.D. end-working tooling product line to complement the KM12™/KM16™/KM20™/KM25™ O.D. turning tooling product line.

- Products are through-coolant capable.
- External tapers are the same as KM12/KM16/KM20/KM25.

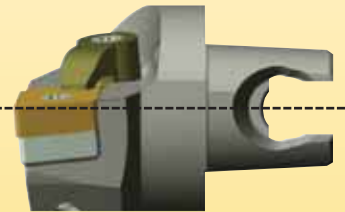


Round Shank Clamping Units

The major difference is center height location of the insert:




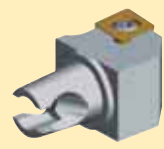



KM12/KM16/KM20/KM25
Square shank cutting units.
Insert is above centerline.



KM1612/KM2016/KM2520/KM3225
Centerline cutting units.
Insert is on centerline.

KM Micro and KM Mini • Features, Functions, and Advantages



features	functions	advantages
KM Micro and KM Mini are a compact quick-change tooling system.	<ul style="list-style-type: none"> The complete cutting unit (including indexable insert) can be easily changed. 	<ul style="list-style-type: none"> Indexable inserts can be changed outside the machine: <ul style="list-style-type: none"> 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.	<ul style="list-style-type: none"> Precise and repeatable cutting edge position is in both directions of cut. 	<ul style="list-style-type: none"> Test cuts are minimized or no longer required. Premeasured tools can be installed in the machine: <ul style="list-style-type: none"> Once the deviation/correction value has been specified, the tools are ready for use.
Mating taper clamping surfaces.	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Large contact surface increases interface life. High radial and center height repeatability. 
Simple, but highly effective, clamping mechanism.	<ul style="list-style-type: none"> Secure and release via a screw using a torque wrench: <ul style="list-style-type: none"> 6,75–8 Nm for KM12™; 3 turns 9,5–11 Nm for KM16™; 3 turns 19–22 Nm for KM20™ 34–40 Nm for KM25™ 	<ul style="list-style-type: none"> Cutting units can be easily changed. High clamping forces through low clamping torques.
Square shank adapters for standard tool blocks.	<ul style="list-style-type: none"> Clamping unit sizes in accordance with industrial standards. Fits standard tool adapters. Designed for: <ul style="list-style-type: none"> Fixed and sliding headstock machines. Small universal lathes. 	<p>This system does not require special tool adapters or adapter blocks for installation or replacement operations on your machine.</p>  <p>Square-shank adapter</p>
Universal flange clamping units are a versatile alternative to square shank adapters.	<ul style="list-style-type: none"> Flange attachment systems can also be retrofitted to existing machines. As a result, additional tool spaces can become available. 	<ul style="list-style-type: none"> Increased tool capacity (up to 3 additional tools per tool block). Increased rigidity and stability as clamp-type toolholder slots are not required.  <p>Flange attachment system</p>
Flange attachment units in a wide range of configurations with or without coolant facility.	<p>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.</p>	<ul style="list-style-type: none"> 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 MicroTM Quick Change Tooling System

A smaller, more compact version of the internationally renowned KMTM system.

- Quick-change cutter heads reduce indexing and setup times by 66%.
- Specially designed for use with automatic and smaller universal lathes.
- Unique flange attachment system increases machine tool capacity.
- KM Micro square-shank adapters can be installed quickly and easily in existing tool block adapters.

Experience the advantages at your Authorized Kennametal Distributor or at www.kennametal.com.

www.kennametal.com



KM Micro™ • Quick-Change Tooling System



Primary Application

- Quick-change cutter heads reduce indexing and setup times by 66%.
- Specially designed for use with automatic and smaller universal lathes.
- Unique flange attachment system increases machine tool capacity.
- KM Micro square-shank adapters can be installed quickly and easily in existing tool block adapters.

Features and Benefits

Features

- KM Micro is a compact quick-change tooling system.
- Face and taper surface contact between the cutting unit and clamping units.
- Mating taper clamping surfaces.
- Square-shank adapters for standard tool blocks.

Functions

- The complete cutting unit (including indexable insert) can be easily changed.
- Precise and repeatable cutting edge position is in both directions of cut.
- 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.
- Clamping unit sizes in accordance with industrial standards.
- Fits standard tool adapters.
- Designed for:
 - Fixed and sliding headstock machines.
 - Small universal lathes.



Advantages

- 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%.
- 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.

How Do Catalog Numbers Work?

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



KM12NCM1212100



KM

Kennametal
Modular

KM Micro™ Quick Change
tooling system

12

System
Size

12 = Ø 12 x 12mm
16 = Ø 16 x 16mm

N

Version

N = Neutral
L = Left-hand version
R = Right-hand version

C

Clamping
Unit

M

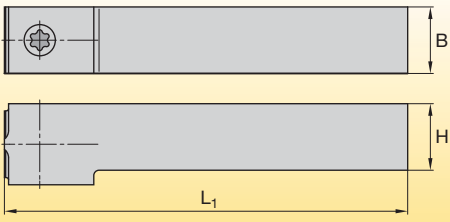
Control

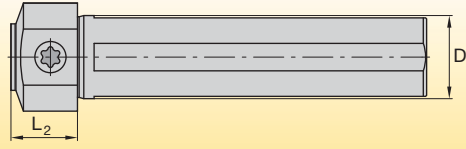
M = Manual
A = Automatic

By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM12NCM1212100

 	12	12	100
Type	Shank Height	Shank Width	Shank Length
Square shank	<p>H = Shank height B = Shank width L₁ = Shank length</p> 		

SS	19	14
Type	Shank Diameter	Shoulder Length
SS = Square shank with shoulders	<p>D = Shank diameter L₂ = Shoulder length</p> 	

SF	27
Type	Flange Width
SF = Flange mount SEF = Extended flange mount	<p>B₂ = Flange width</p> 

How Do Catalog Numbers Work?

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



KM12NCM1212100HPC



KM

Kennametal
Modular

KM Micro™ Quick Change
tooling system

12

System
Size

12 = Ø 12 x 12mm
16 = Ø 16 x 16mm

N

Version

N = Neutral
L = Left-hand version
R = Right-hand version

C

Clamping
Unit

M

Control

M = Manual
A = Automatic



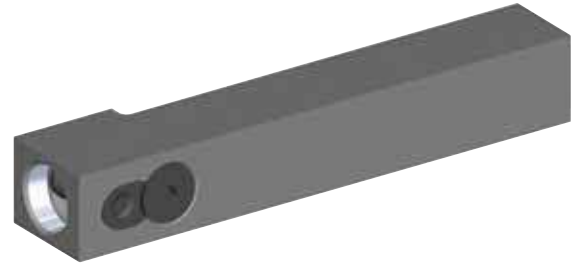
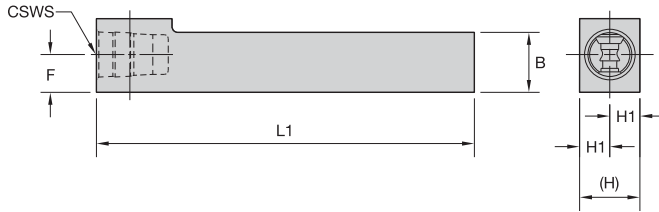
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM12NCM1212100HPC

	12	12	100	HPC
Type	Shank Height	Shank Width	Shank Length	Coolant
Square shank	<p>H = Shank height B = Shank width L₁ = Shank length</p>			





■ **NCM • Metric**

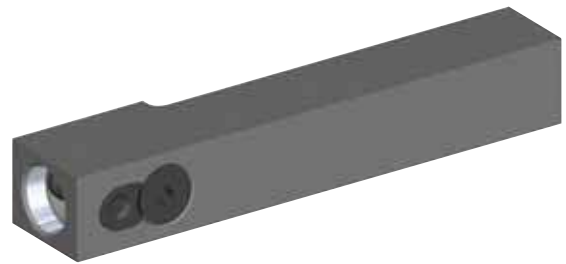
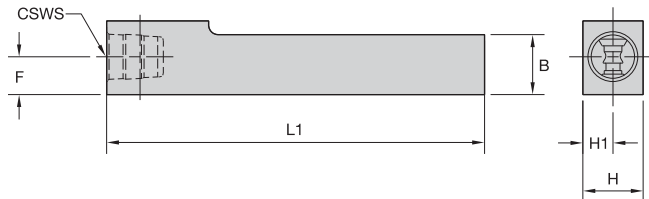


order number	catalog number	CSWS system size	B	H	H1	F	L1	spare parts package	wrench size actuation screw	Nm
1922492	KM12NCM1212100	KM12	12,00	11,95	6,00	8,00	100,00	KM12NAPKG	25 IP	7-8
2238505	KM16NCM1616100	KM16	16,00	16,00	8,00	10,00	100,00	KM16NAPKG	27 IP	10-11

■ **NCM • Inch**



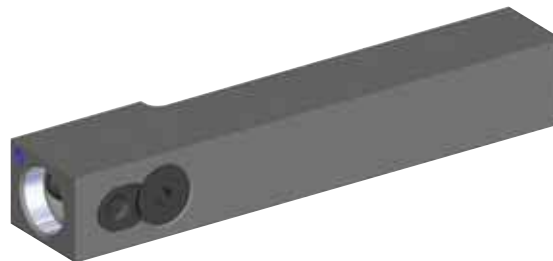
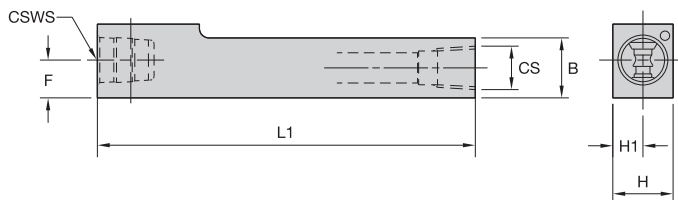
order number	catalog number	CSWS system size	B	H	H1	F	L1	spare parts package	wrench size actuation screw	ft. lbs.
2238506	KM16NCM10400	KM16	.600	.600	.310	.390	4.000	KM16NAPKG	27 IP	7-8



■ **R/LCM • Inch**



order number	catalog number	CSWS system size	B	H	H1	F	L1	spare parts package	wrench size actuation screw	ft. lbs.
1920380	right hand KM12RCM08400	KM12	.495	.500	.264	.315	4.000	KM12NAPKG	25 IP	5-6
1925740	left hand KM12LCM08400	KM12	.495	.500	.264	.310	4.000	KM12NAPKG	25 IP	5-6



KM Micro Clamping Units

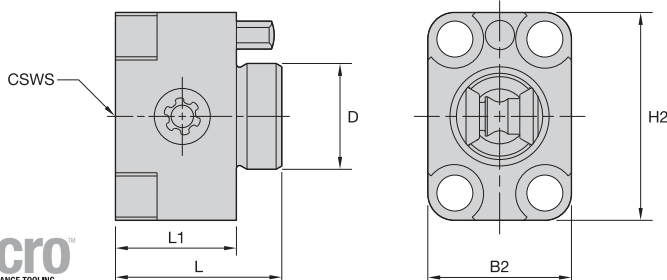


■ R/LCM-HPC • Metric

order number	catalog number	CSWS system size	B	H	H1	F	L1	CS	spare parts package	wrench size actuation screw	Nm
	right hand										
3397255	KM16RCM1616100HPC	KM16	16,00	16,00	8,0	10,00	100,00	1/8NPT	KM16NAPKG	27 IP	10-11
	left hand										
3397256	KM16LCM1616100HPC	KM16	16,00	16,00	8,0	10,00	100,00	1/8NPT	KM16NAPKG	27 IP	10-11

■ R/LCM-HPC • Inch

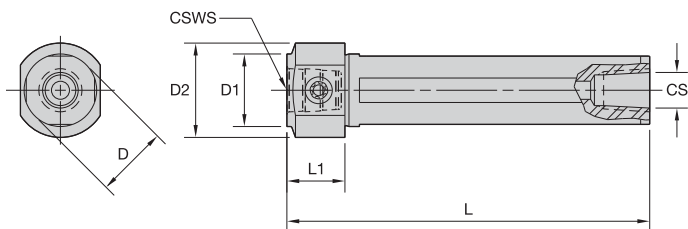
order number	catalog number	CSWS system size	B	H	H1	F	L1	CS	spare parts package	wrench size actuation screw	ft. lbs.
	right hand										
3134823	KM16RCM10400HPC	KM16	.620	.620	.310	.394	4.000	1/8NPT	KM16NAPKG	27 IP	7-8
	left hand										
3134824	KM16LCM10400HPC	KM16	.620	.620	.310	.394	4.000	1/8NPT	KM16NAPKG	27 IP	7-8



■ NCM-SF

order number	catalog number	CSWS system size	B2	D	H2	L	L1	spare parts package	wrench size actuation screw	Nm	ft. lbs.
1925741	KM12NCMSF1522	KM12	15,75	10	21,5	18	14	KM12NRPKG	25 IP	7-8	5-6
1898043	KM16NCMSF1928	KM16	19,00	14	27,5	22	16	KM16NRPKG	27 IP	10-11	7-8

NOTE: For mounting controls, see page M70.



■ NCM-SS • Metric

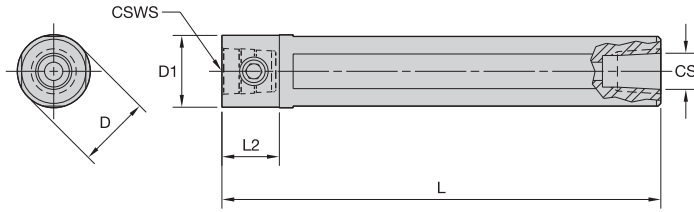


order number	catalog number	CSWS system size	CS	D	D1	D2	L	L1	spare parts package	wrench size actuation screw	Nm
2439977	KM1612NCMSS1614	KM1612	1/8-27 NPT	16	16	22	100	14	KM12NRPKG	25 IP	7-8
1925739	KM1612NCMSS1914	KM1612	1/8-27 NPT	19	16	25	100	14	KM12NRPKG	25 IP	7-8
2439981	KM1612NCMSS2014	KM1612	1/8-27 NPT	20	16	26	100	14	KM12NRPKG	25 IP	7-8
2439978	KM1612NCMSS2514	KM1612	1/4-18 NPT	25	16	31	100	14	KM12NRPKG	25 IP	7-8
2439979	KM2016NCMSS1616	KM2016	1/8-27 NPT	16	20	25	100	16	KM16NRPKG	27 IP	10-11
1898050	KM2016NCMSS2016	KM2016	1/8-27 NPT	20	20	26	100	16	KM16NRPKG	27 IP	10-11
1898051	KM2016NCMSS2216	KM2016	1/4-18 NPT	22	20	28	100	16	KM16NRPKG	27 IP	10-11
2439980	KM2016NCMSS2516	KM2016	1/4-18 NPT	25	20	31	100	16	KM16NRPKG	27 IP	10-11

■ NCM-SS • Inch



order number	catalog number	CSWS system size	CS	D		D1		D2		L		L1	spare parts package	wrench size actuation screw		ft. lbs.
				mm	in	mm	in	mm	in	mm	in			mm	in	
2439982	KM1612NCMSS08055	KM1612	—	12,7	.500	16	.630	20	.787	100	3.937	14	.551	KM12NRPKG	25 IP	5-6
1939520	KM1612NCMSS10055	KM1612	1/8-27 NPT	15,9	.625	16	.630	22	.866	100	3.937	14	.551	KM12NRPKG	25 IP	5-6
1925738	KM1612NCMSS12055	KM1612	1/8-27 NPT	19,1	.750	16	.630	25	.984	100	3.937	14	.551	KM12NRPKG	25 IP	5-6
2440003	KM2016NCMSS08063	KM2016	—	12,7	.500	20	.787	23	.906	100	3.937	16	.630	KM16NRPKG	27 IP	7-8
2440004	KM2016NCMSS10063	KM2016	1/8-27 NPT	15,9	.625	20	.787	25	.984	100	3.937	16	.630	KM16NRPKG	27 IP	7-8
1898048	KM2016NCMSS12063	KM2016	1/8-27 NPT	19,1	.750	20	.787	25	.984	100	3.937	16	.630	KM16NRPKG	27 IP	7-8
1898049	KM2016NCMSS16063	KM2016	1/4-18 NPT	25,4	1.000	20	.787	32	1.260	100	3.937	16	.630	KM16NRPKG	27 IP	7-8



KM Micro Clamping Units



■ **NCM-S • Metric**

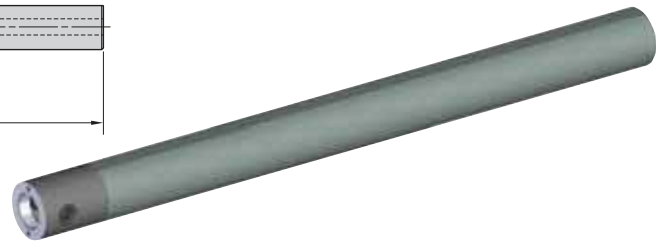
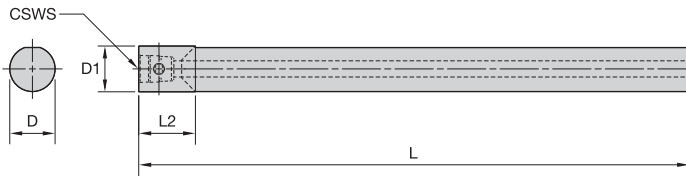


order number	catalog number	CSWS system size	CS	D	D1	L	L2	spare parts package	wrench size actuation screw	Nm
3016744	KM2016NCMS20	KM2016	1/8 - 27 NPT	20	20	230	20	KM16NRPKG	27 IP	10-11

■ **NCM-S • Inch**



order number	catalog number	CSWS system size	CS	D	D1	L	L2	spare parts package	wrench size actuation screw	ft. lbs.
3016743	KM2016NCMS12	KM2016	1/8 - 27 NPT	.75	.79	9.213	.787	KM16NRPKG	27 IP	7-8



■ **NCM-E • Carbide • Metric**

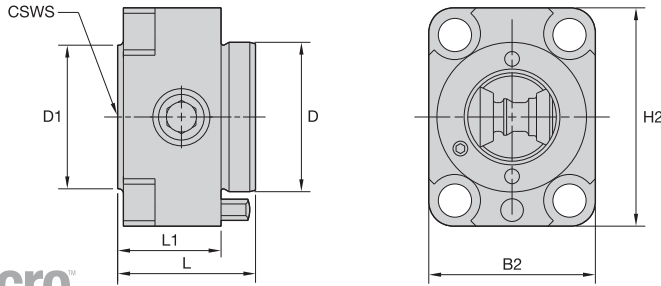


order number	catalog number	CSWS system size	D	D1	L	L2	spare parts package	wrench size actuation screw	Nm
3016721	KM2016NCME12	KM2016	19	20	243,56	25,00	KM16NRPKG	27 IP	10-11

■ **NCM-E • Carbide • Inch**



order number	catalog number	CSWS system size	D	D1	L	L2	spare parts package	wrench size actuation screw	ft. lbs.
3016721	KM2016NCME12	KM2016	.75	.79	9.589	.984	KM16NRPKG	27 IP	7-8



■ NCMSF



order number	catalog number	CSWS system size	B2	D	D1	H2	L1	L	spare parts package	wrench size actuation screw	Nm	ft. lbs.
3735627	KM1612NCMSF2127	KM1612	21	17	16	27	14	18	KM12NRPKG	25 IP	7-8	5-6
3735628	KM2016NCMSF2533	KM2016	25	20	20	33	16	22	KM16NRPKG	27 IP	10-11	7-8

NOTE: For mounting controls, see page M71.



KM4X™

The Next Generation Spindle Interface for Heavy-Duty Machining!

KM4X is designed to take on your most aggressive machining jobs. This next generation KM™ spindle interface should be your first choice for heavy-duty machining applications. It's especially suited for large structural components, like titanium aerospace components.

We engineered these rotating and static tool adaptors to handle 3x more bending capacity than similar competitive models.

What does this mean for you?

- Enables full use of machine and cutting tools for the highest productivity.
- Higher metal removal rates.
- Can retrofit to existing machines to boost throughput without buying new equipment.
- Ideal for aerospace and transportation industry machining jobs.

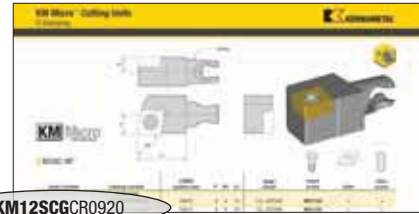
Experience the advantages at your Authorized Kennametal Distributor or at www.kennametal.com.

www.kennametal.com



How Do Catalog Numbers Work?

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KM12SCGCR0920



KM

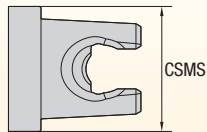
Kennametal
Modular

KM Micro™ Quick Change
tooling system

12

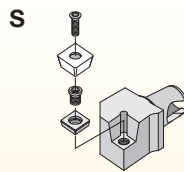
System
Size

12 = Ø 12 x 12mm
16 = Ø 16 x 16mm

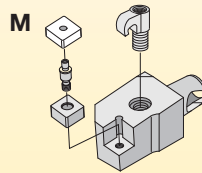


S

Clamping
System



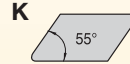
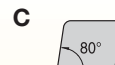
S-Clamping
Clamped from above with
a screw for indexable
inserts with hole



M-Clamping
Clamped from above and
through hole with using
a pin for indexable
inserts with hole

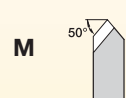
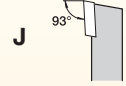
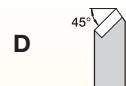
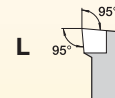
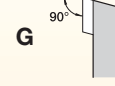
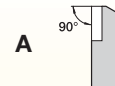
C

Insert
Shape

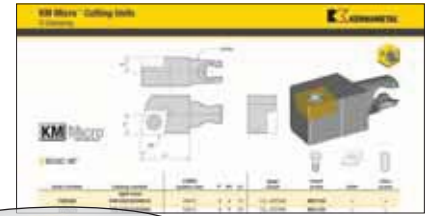


G

Cutting Unit
Shape



By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM12SCGCR0920

C	R	09	20
<p>Clearance Angle</p>	<p>Direction</p>	<p>Insert Size</p>	<p>Gage Length</p>
	<p>L = Left-hand cutting unit</p> <p>R = Right-hand cutting unit</p> <p>N = Neutral cutting unit</p>	<p>C D V K S T W</p>	<p>L1 = Gage length</p>

How Do Catalog Numbers Work?

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



KM12A3SR31130



KM

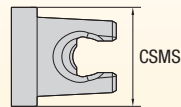
Kennametal
Modular

KM Micro™
and KM™ Mini
Quick Change
tooling systems

12

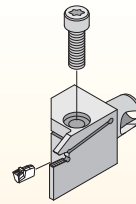
System Size

12 = 12mm
16 = 16mm
20 = 20mm
25 = 25mm

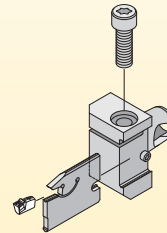


A3

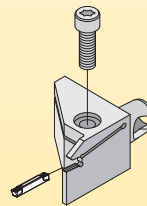
Clamping Systems



A3 = Deep grooving



A2 = Cut-off



A4 = Grooving

S

Holder Version

S = Side mount
E = End mount

By referencing this easy-to-use guide, you can identify the correct product to meet your needs.

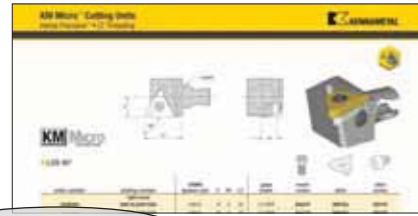


KM12A3SR31130

<div style="background-color: #cccccc; padding: 5px; font-weight: bold; font-size: 24px; margin-bottom: 5px;">R</div> <p>Direction</p> <div style="text-align: center;"> R = Right hand </div> <div style="text-align: center; margin-top: 20px;"> L = Left hand </div>	<div style="background-color: #cccccc; padding: 5px; font-weight: bold; font-size: 24px; margin-bottom: 5px;">3</div> <p>Insert Seat Size</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="padding: 5px;">insert seat size</th> </tr> </thead> <tbody> <tr><td style="text-align: center; padding: 5px;">1</td></tr> <tr><td style="text-align: center; padding: 5px;">1B</td></tr> <tr><td style="text-align: center; padding: 5px;">2</td></tr> <tr><td style="text-align: center; padding: 5px;">2B</td></tr> <tr><td style="text-align: center; padding: 5px;">3</td></tr> <tr><td style="text-align: center; padding: 5px;">4</td></tr> <tr><td style="text-align: center; padding: 5px;">5</td></tr> </tbody> </table>	insert seat size	1	1B	2	2B	3	4	5	<div style="background-color: #cccccc; padding: 5px; font-weight: bold; font-size: 24px; margin-bottom: 5px;">11</div> <p>Cutting Depth</p> <div style="text-align: center;"> 07 = 7mm 11 = 11mm 16 = 16mm </div>	<div style="background-color: #cccccc; padding: 5px; font-weight: bold; font-size: 24px; margin-bottom: 5px;">30</div> <p>Gage Length</p> <div style="text-align: center;"> L1 = Gage length </div>
insert seat size											
1											
1B											
2											
2B											
3											
4											
5											

How Do Catalog Numbers Work?

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



KM12LSSR1620



KM

Kennametal
Modular

KM Micro™ Quick Change
tooling system

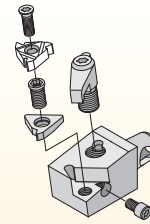
12

System
Size

12 = Ø 12 x 12mm
16 = Ø 16 x 16mm

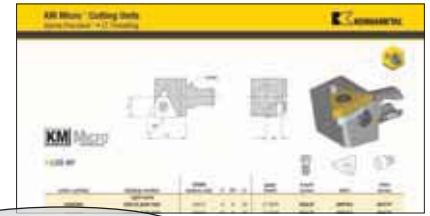
LS

Clamping
Systems

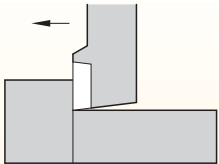
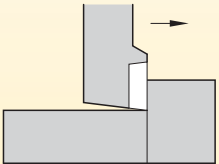



LT Threading = Clamped from above with
a screw

By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM12LSSR1620

<p>S</p> <p>Application</p> <p>E = End mount S = Side mount</p>	<p>R</p> <p>Direction</p>  <p>L = Left-hand cutting unit</p>  <p>R = Right-hand cutting unit</p>	<p>16</p> <p>Insert Size</p> <p>I = Cutting edge length</p>  <table border="1"> <thead> <tr> <th>I</th> <th>d (IC)</th> </tr> </thead> <tbody> <tr> <td>11</td> <td>6,35</td> </tr> <tr> <td>16</td> <td>9,52</td> </tr> <tr> <td>22</td> <td>12,70</td> </tr> <tr> <td>27</td> <td>15,88</td> </tr> </tbody> </table>	I	d (IC)	11	6,35	16	9,52	22	12,70	27	15,88	<p>20</p> <p>Gage Length</p> <p>L₁ = Gage length</p>
I	d (IC)												
11	6,35												
16	9,52												
22	12,70												
27	15,88												

How Do Catalog Numbers Work?

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



KM12NCM1212100HPC



KM

Kennametal
Modular

KM Micro™ Quick Change
tooling system

12

System
Size

12 = Ø 12 x 12mm
16 = Ø 16 x 16mm

N

Version

N = Neutral
L = Left-hand version
R = Right-hand version

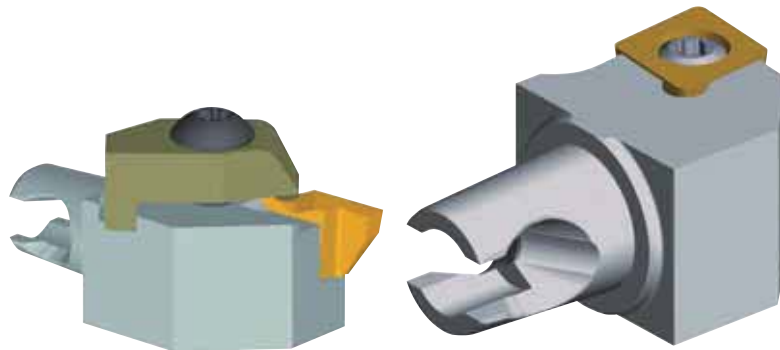
C

Clamping
Unit

M

Control

M = Manual
A = Automatic

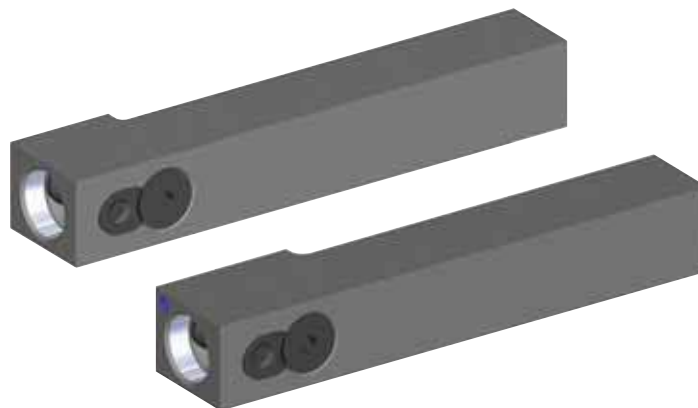


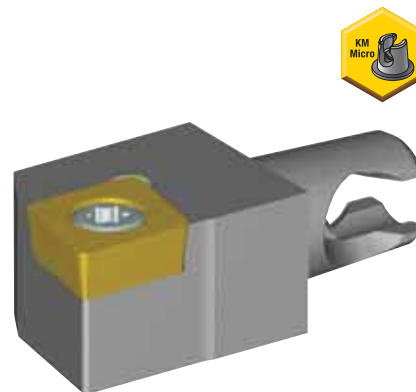
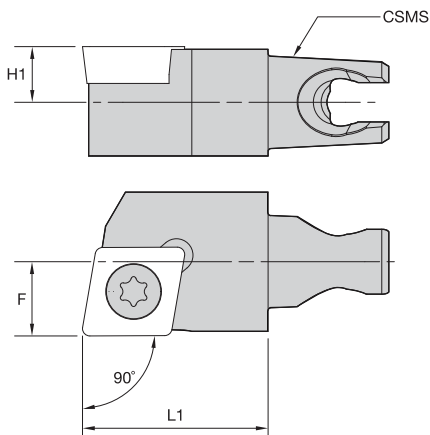
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM12NCM1212100HPC

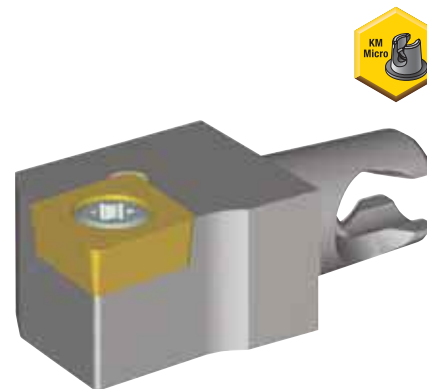
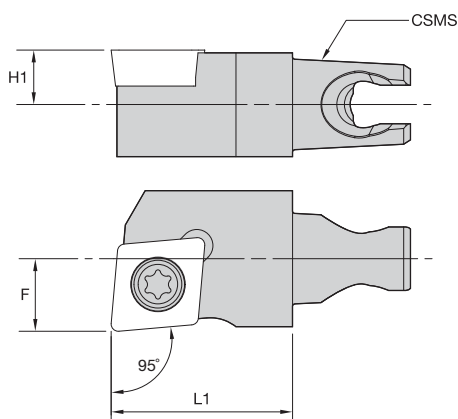
	12	12	100	HPC
Type	Shank Height	Shank Width	Shank Length	Coolant
Square shank	<p>H = Shank height B = Shank width L₁ = Shank length</p>			





■ SCGC 90°

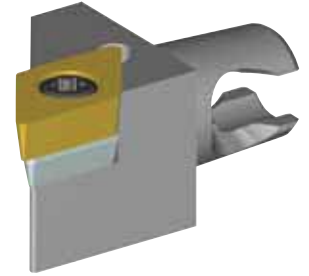
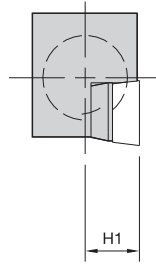
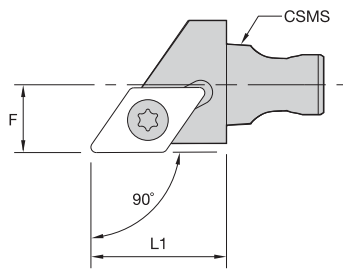
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
right hand									
1920382	KM12SCGCR0915	KM12	8	6	15	CC..09T308	MS1155	—	—
2226229	KM12SCGCR0920	KM12	8	6	20	CC..09T308	MS1155	—	—
1831207	KM16SCGCR0920	KM16	10	8	20	CC..09T308	MS1156	SKCP343	SRS3
left hand									
1925742	KM12SCGCL0915	KM12	8	6	15	CC..09T308	MS1155	—	—
2226230	KM12SCGCL0920	KM12	8	6	20	CC..09T308	MS1155	—	—
1846447	KM16SCGCL0920	KM16	10	8	20	CC..09T308	MS1156	SKCP343	SRS3



■ SCLC 95°

order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
right hand									
1920413	KM12SCLCR0915	KM12	8	6	15	CC..09T308	MS1155	—	—
2226231	KM12SCLCR0920	KM12	8	6	20	CC..09T308	MS1155	—	—
1831206	KM16SCLCR0920	KM16	10	8	20	CC..09T308	MS1156	SKCP343	SRS3
left hand									
1925805	KM12SCLCL0915	KM12	8	6	15	CC..09T308	MS1155	—	—
2226232	KM12SCLCL0920	KM12	8	6	20	CC..09T308	MS1155	—	—
1851750	KM16SCLCL0920	KM16	10	8	20	CC..09T308	MS1156	SKCP343	SRS3

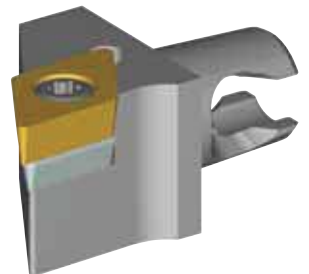
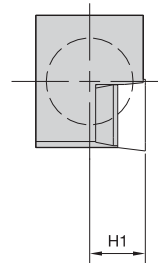
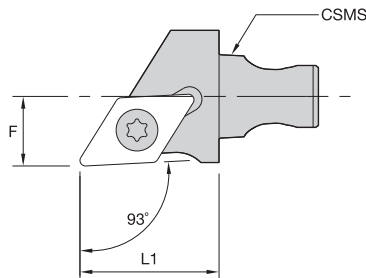




■ SDAC 90°



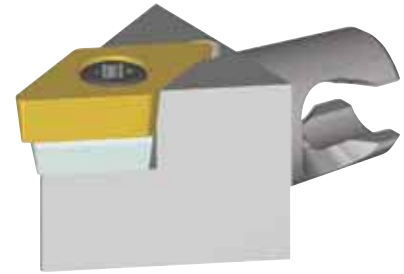
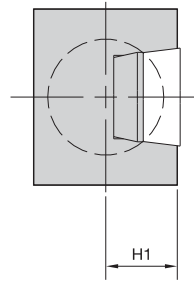
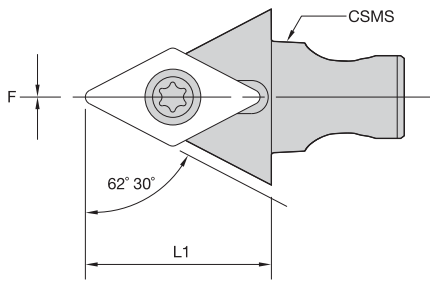
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
	right hand								
1920414	KM12SDACR1120	KM12	8	6	20	DC..11T308	MS1155	—	—
1831208	KM16SDACR1120	KM16	10	8	20	DC..11T308	MS1156	SKDP343	SRS3
	left hand								
1925809	KM12SDACL1120	KM12	8	6	20	DC..11T308	MS1155	—	—
1851752	KM16SDACL1120	KM16	10	8	20	DC..11T308	MS1156	SKDP343	SRS3



■ SDJC 93°



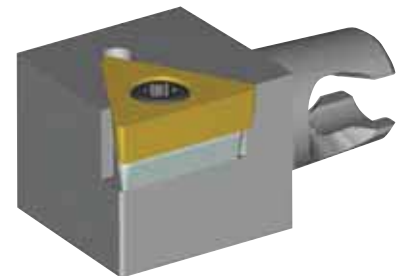
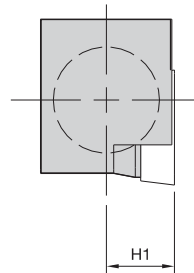
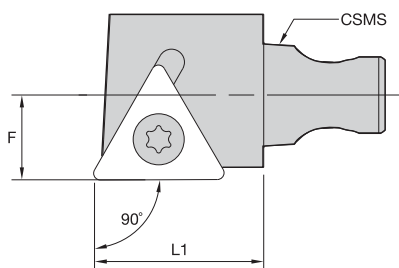
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
	right hand								
1925810	KM12SDJCR1120	KM12	8	6	20	DC..11T308	MS1155	—	—
1831209	KM16SDJCR1120	KM16	10	8	20	DC..11T308	MS1156	SKDP343	SRS3
	left hand								
1925811	KM12SDJCL1120	KM12	8	6	20	DC..11T308	MS1155	—	—
1851763	KM16SDJCL1120	KM16	10	8	20	DC..11T308	MS1156	SKDP343	SRS3



■ SDPC 62° 30'



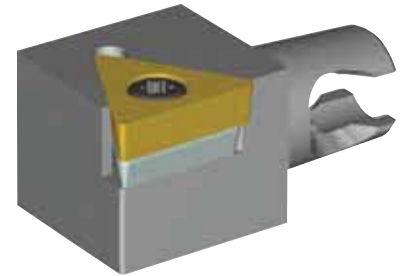
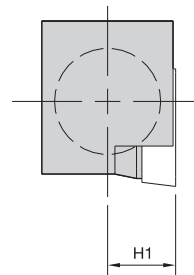
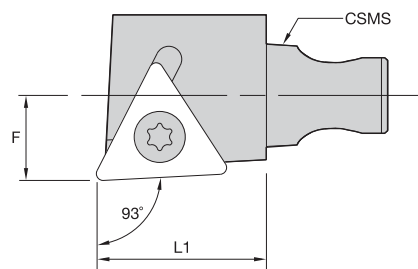
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
2226253	KM12SDPCN1120	KM12	0	6	20	DC..11T308	MS1155	—	—
2226254	KM16SDPCN1120	KM16	0	8	20	DC..11T308	MS1156	SKDP343	SRS3



■ STGC 90°



order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
	right hand								
2226255	KM12STGCR1120	KM12	8	6	20	TC..110204	MS1153	—	—
1831211	KM16STGCR1120	KM16	10	8	20	TC..110204	MS1153	—	—
1831212	KM16STGCR1620	KM16	10	8	20	TC..16T308	MS1156	SKTP343	SRS3
	left hand								
1925814	KM12STGCL1115	KM12	8	6	15	TC..110204	MS1153	—	—
2226256	KM12STGCL1120	KM12	8	6	20	TC..110204	MS1153	—	—
1851764	KM16STGCL1120	KM16	10	8	20	TC..110204	MS1153	—	—
1851765	KM16STGCL1620	KM16	10	8	20	TC..16T308	MS1156	SKTP343	SRS3



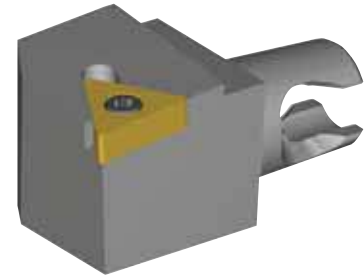
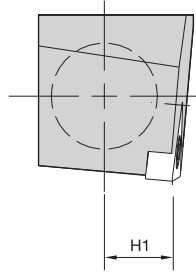
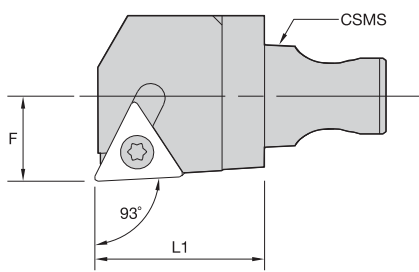
KM Micro Cutting Units



■ STJC 93°



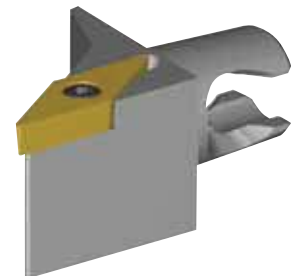
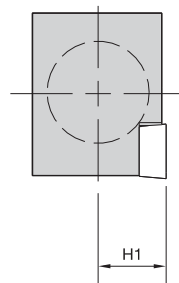
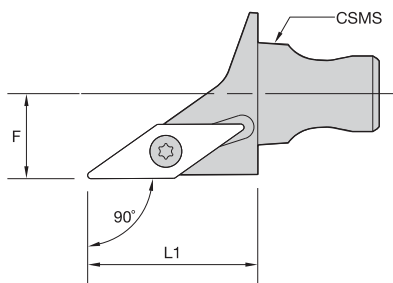
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
	right hand								
1925817	KM12STJCR1115	KM12	8	6	15	TC..110204	MS1153	—	—
2226257	KM12STJCR1120	KM12	8	6	20	TC..110204	MS1153	—	—
1831213	KM16STJCR1120	KM16	10	8	20	TC..110204	MS1153	—	—
1831214	KM16STJCR1620	KM16	10	8	20	TC..16T308	MS1156	SKTP343	SRS3
	left hand								
2226258	KM12STJCL1120	KM12	8	6	20	TC..110204	MS1153	—	—
1851766	KM16STJCL1120	KM16	10	8	20	TC..110204	MS1153	—	—
1851767	KM16STJCL1620	KM16	10	8	20	TC..16T308	MS1156	SKTP343	SRS3



■ STJN 93°



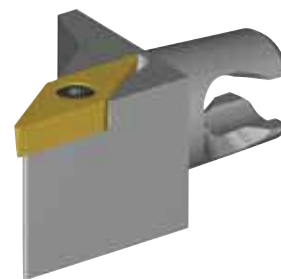
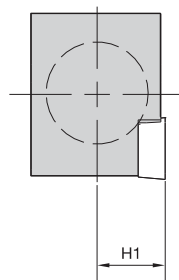
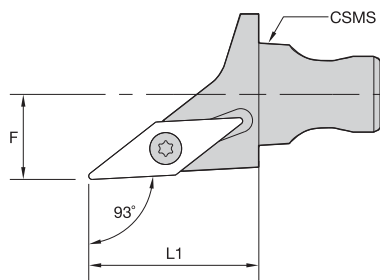
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
1884833	right hand KM16STJNR11	KM16	10	8	20	T221N	S1990
1898054	left hand KM16STJNL11	KM16	10	8	20	T221N	S1990



■ SVGB 90°



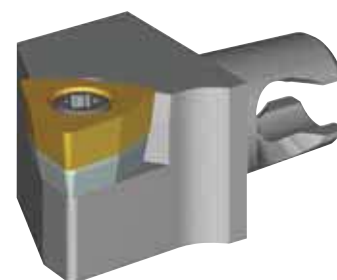
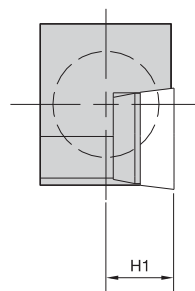
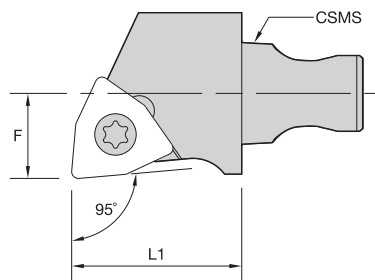
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
1925821	right hand KM12SVGBR1120	KM12	8	6	20	VB..110304	MS1153
2226259	KM16SVGBR1120	KM16	10	8	20	VB..110304	MS1153
1831215	KM16SVGBR1630	KM16	10	8	30	VB..160408	MS1155
1925822	left hand KM12SVGBL1120	KM12	8	6	20	VB..110304	MS1153
2226260	KM16SVGBL1120	KM16	10	8	20	VB..110304	MS1153
1851768	KM16SVGBL1630	KM16	10	8	30	VB..160408	MS1155



■ SVJB 93°



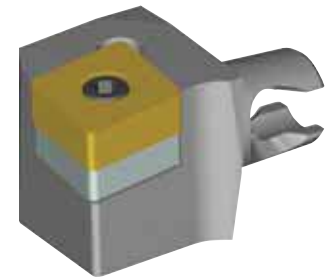
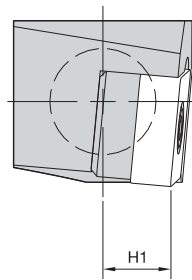
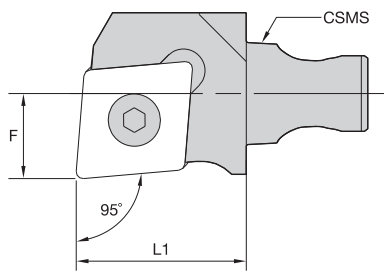
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
right hand							
1920381	KM12SVJBR1120	KM12	8	6	20	VB..110304	MS1153
1884683	KM16SVJBR1120	KM16	10	8	20	VB..110304	MS1153
1831216	KM16SVJBR1630	KM16	10	8	30	VB..160408	MS1155
left hand							
1925823	KM12SVJBL1120	KM12	8	6	20	VB..110304	MS1153
1898056	KM16SVJBL1120	KM16	10	8	20	VB..110304	MS1153
1851770	KM16SVJBL1630	KM16	10	8	30	VB..160408	MS1155



■ SWLC 95°



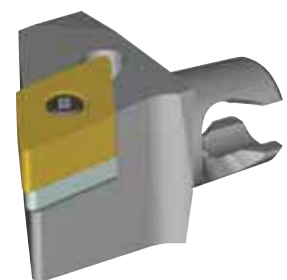
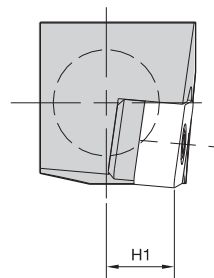
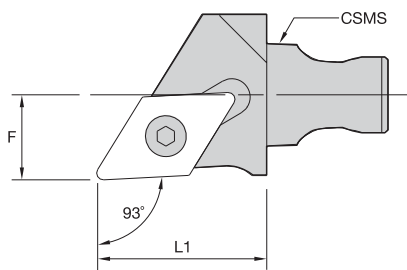
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
right hand									
1925824	KM12SWLCR0615	KM12	8	6	15	WC..06T308	MS1155	—	—
2226261	KM12SWLCR0620	KM12	8	6	20	WC..06T308	MS1155	—	—
1851771	KM16SWLCR0620	KM16	10	8	20	WC..06T308	MS1156	SKWP343	SRS3
left hand									
1925825	KM12SWLCL0615	KM12	8	6	15	WC..06T308	MS1155	—	—
2226262	KM12SWLCL0620	KM12	8	6	20	WC..06T308	MS1155	—	—
1851772	KM16SWLCL0620	KM16	10	8	20	WC..06T308	MS1156	SKWP343	SRS3



■ MCLN 95°



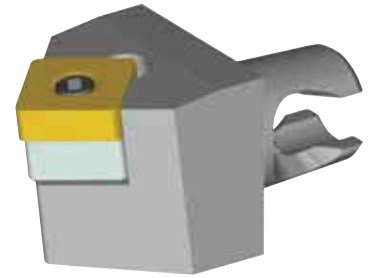
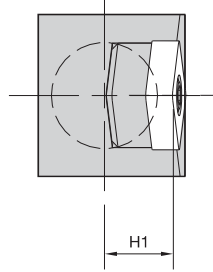
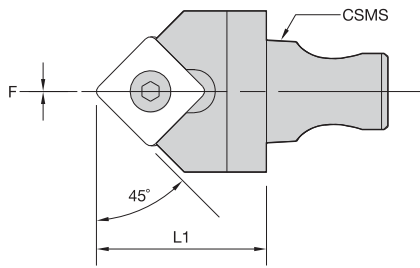
order number	catalog number	CSMS system size	F	H1	L1	gage insert	shim	lock pin
	right hand							
2226263	KM16MCLNR0920	KM16	10	8	20	CN..090308	ICSN332	KLM34L
2226265	KM16MCLNR1220	KM16	10	8	20	CN..090308	ICSN432	KLM46
	left hand							
2226264	KM16MCLNL0920	KM16	10	8	20	CN..090308	ICSN332	KLM34L
2226266	KM16MCLNL1220	KM16	10	8	20	CN..090308	ICSN432	KLM46



■ MDJN 93°



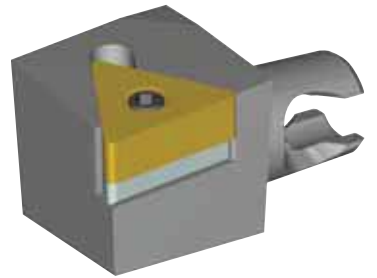
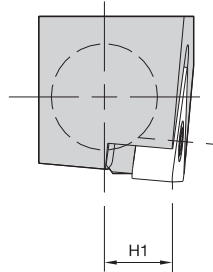
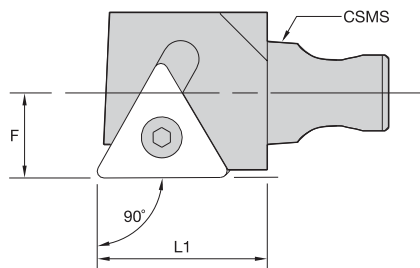
order number	catalog number	CSMS system size	F	H1	L1	gage insert	shim	lock pin
	right hand							
2226267	KM16MDJNR1120	KM16	10	8	20	DN..110408	IDSN322	KLM34L
	left hand							
2226268	KM16MDJNL1120	KM16	10	8	20	DN..110408	IDSN322	KLM34L



■ MSDN 45°



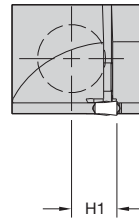
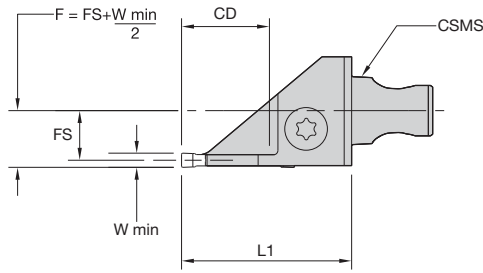
order number	catalog number	CSMS system size	F	H1	L1	gage insert	shim	lock pin
2226269	KM16MSDNN0920	KM16	0	8	20	SN..090308	ISSN332	KLM34L



■ MTGN 90°



order number	catalog number	CSMS system size	F	H1	L1	gage insert	shim	lock pin
2226270	right hand KM16MTGNR1620	KM16	10	8	20	TN..160408	ITSN322	KLM34L
2226271	left hand KM16MTGNL1620	KM16	10	8	20	TN..160408	ITSN322	KLM34L

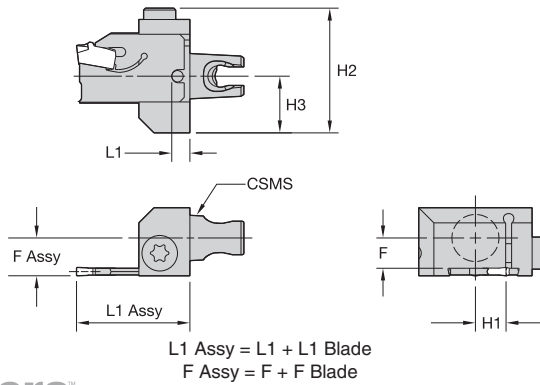


■ A4S



order number	catalog number	CSMS system size	CD	H1	FS	L1	W min	seat size	clamping screw	clamping screw
right hand										
3377362	KM12A4SCR011330	KM12	13,5	6	7,25	30	1,5	1	MS1156	—
3377360	KM12A4SCR021630	KM12	16,0	6	7,00	30	2,0	2	—	MS1944
2226288	KM12A4SCR031630	KM12	16,0	6	6,50	30	3,0	4	—	MS1944
3377284	KM16A4SCR011330	KM16	13,5	8	9,25	30	1,5	1	MS1156	—
3377202	KM16A4SCR021630	KM16	16,0	8	9,00	30	2,0	2	—	MS1160
2226282	KM16A4SCR031630	KM16	16,0	8	8,44	30	3,0	4	—	MS1944
3377200	KM16A4SCR2B1630	KM16	16,0	8	8,75	30	2,5	2B	—	MS1160
left hand										
3377361	KM12A4SCL011330	KM12	13,5	6	7,25	30	1,5	1	MS1156	—
3377359	KM12A4SCL021630	KM12	16,0	6	7,00	30	2,0	2	—	MS1944
2226289	KM12A4SCL031630	KM12	16,0	6	6,50	30	3,0	4	—	MS1944
3377283	KM16A4SCL011330	KM16	13,5	8	9,25	30	1,5	1	MS1156	—
3377201	KM16A4SCL021630	KM16	16,0	8	9,00	30	2,0	2	—	MS1160
2226283	KM16A4SCL031630	KM16	16,0	8	8,44	30	3,0	4	—	MS1944
3377199	KM16A4SCL2B1630	KM16	16,0	8	8,75	30	2,5	2B	—	MS1160

NOTE: W min supplied for reference only. See the Kennametal Innovations Master Catalog Cutting Tools 2013 for actual insert width.
Always match seat size of insert to seat size of holder.
Seat size 2B cutting units only accept 2B inserts. Seat size 2 cutting units accept size 2 or 2B inserts.

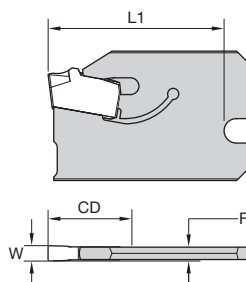


■ BS



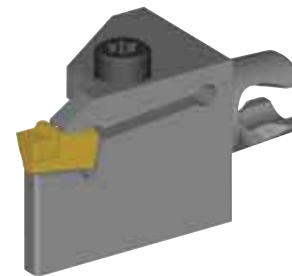
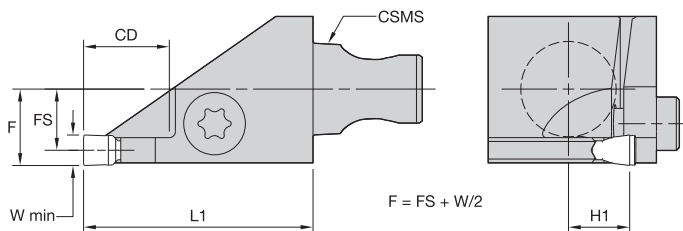
order number	catalog number	CSMS system size	F	H1	H2	H3	L1	clamping screw
1925842	right hand KM12BSR	KM12	5,936	6,1	31,3	15,3	4,8	MS1898PKG
1831217	KM16BSR left hand	KM16	8,012	8,1	33,0	15,0	4,8	MS1898PKG
1925843	KM12BSL	KM12	5,936	6,1	31,3	15,3	4,8	MS1898PKG
1851793	KM16BSL	KM16	8,012	8,1	33,0	15,0	4,8	MS1898PKG

NOTE: For A2 blades, see page A162.



■ A2BHSN

order number	catalog number	seat size	CD	W	F	L1
1984998	A2BHSN19X0116	1	16,0	1,6	1,7	25,2
1851800	A2BHSN19X0211	2	11,0	2,2	2,0	20,2
1851799	A2BHSN19X0216	2	16,0	2,2	2,0	25,2

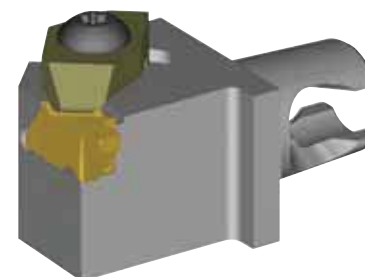
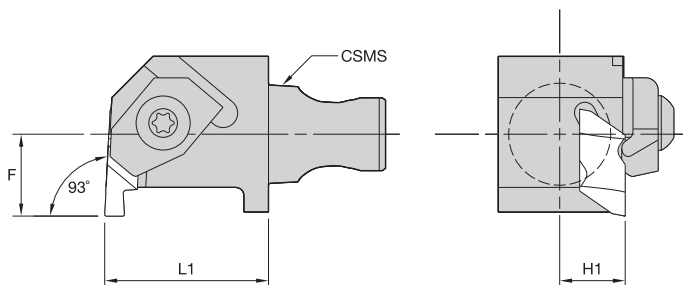


■ A3S



order number	catalog number	CSMS system size	CD	FS	H1	L1	W min	seat size	clamping screw
right hand									
1925837	KM12A3SR31130	KM12	12	7	6,1	30	3,0	3	MS1944
1917367	KM16A3SR31130	KM16	12	9	8,1	30	3,0	3	MS1944
1831218	KM16A3SR41130	KM16	12	8	8,0	30	4,0	4	MS1944
left hand									
1925861	KM12A3SL31130	KM12	12	7	6,1	30	3,0	3	MS1944
1925856	KM16A3SL31130	KM16	12	9	8,1	30	3,0	3	MS1944
1851798	KM16A3SL41130	KM16	12	8	8,0	30	4,0	4	MS1944

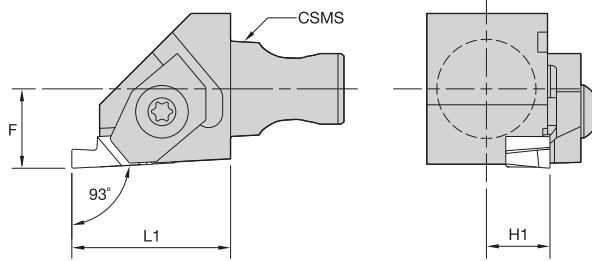
NOTE: W min supplied for reference only. See the Kennametal Innovations Master Catalog Cutting Tools 2013 for actual insert width. Always match seat size of insert to seat size of holder.



■ NE 93°



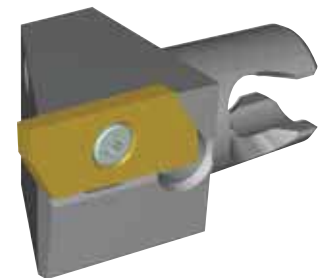
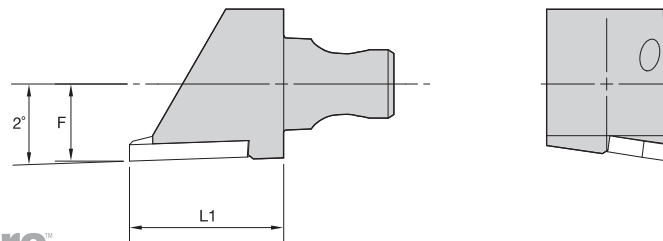
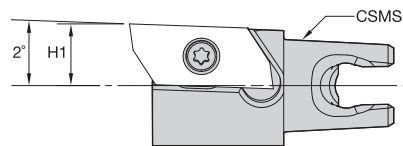
order number	catalog number	CSMS system size	F	H1	L1	gage insert	clamp	clamping screw
1884834	KM16NER220	KM16	10	8	20	NG2L	CM147	MS1200
1898053	KM16NEL220	KM16	10	8	20	NG2R	CM146	MS1200



■ NS 93°



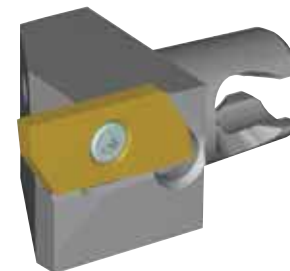
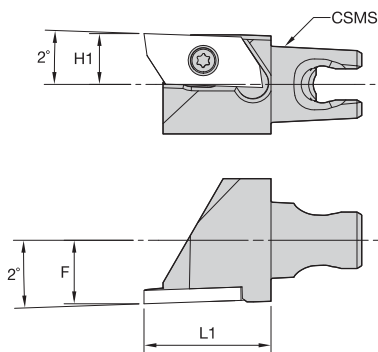
order number	catalog number	CSMS system size	F	H1	L1	gage insert	clamp	clamping screw
right hand								
1920416	KM12NSR220	KM12	8	6	20	NG2R	CM146	MS1200
1831203	KM16NSR220	KM16	10	8	20	NG2R	CM146	MS1200
1831204	KM16NSR330	KM16	10	8	30	NG3R	CM168	MS1220
left hand								
1925830	KM12NSL220	KM12	8	6	20	NG2L	CM147	MS1200
1846446	KM16NSL220	KM16	10	8	20	NG2L	CM147	MS1200
1851748	KM16NSL330	KM16	10	8	30	NG3L	CM169	MS1220



■ WSJ 2°



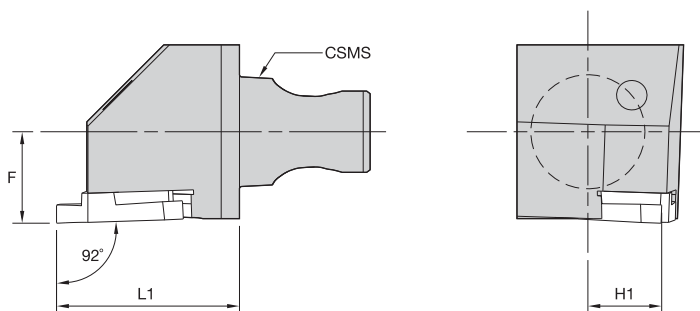
order number	catalog number	CSMS system size	F	H1	L1	gage insert	clamping screw
right hand							
3851787	KM12WSJ15ER20	KM12	8	6	20	KPJ15ER...	MS1969PKG
3522575	KM16WSJ15ER20	KM16	10	8	20	KPJ15ER...	MS1969PKG
left hand							
3851786	KM12WSJ15EL20	KM12	8	6	20	KPJ15EL...	MS1969PKG
3522574	KM16WSJ15EL20	KM16	10	8	20	KPJ15EL...	MS1969PKG



■ WSK 2°



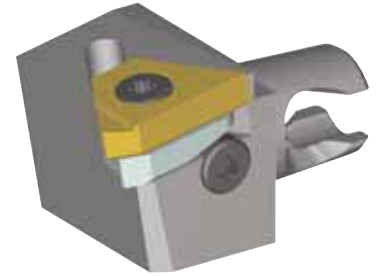
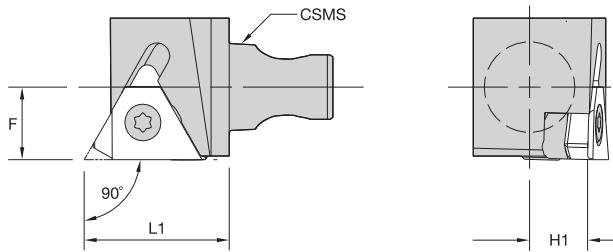
order number	catalog number	CSMS system size	F	H1	L1	gage insert	clamping screw
	right hand						
3851789	KM12WSK15ER20	KM12	8	6	20	KPK15ER...	MS1969PKG
3522577	KM16WSK15ER20	KM16	10	8	20	KPK15ER...	MS1969PKG
	left hand						
3851788	KM12WSK15EL20	KM12	8	6	20	KPK15EL...	MS1969PKG
3522576	KM16WSK15EL20	KM16	10	8	20	KPK15EL...	MS1969PKG



■ STG 92°



order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
	right hand						
1925831	KM12STGR1620	KM12	8	6	20	T20G1603R200/T20G32R079	CSTB4SDPKG
1892495	KM16STGR1620	KM16	10	8	20	T20G1603R200/T20G32R079	CSTB4SDPKG
	left hand						
1925832	KM12STGL1620	KM12	8	6	20	T20G1603L200/T20G32L079	CSTB4SDPKG
1898055	KM16STGL1620	KM16	10	8	20	T20G1603L200/T20G32L079	CSTB4SDPKG



■ LSS 90°



order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
	right hand								
2226280	KM12LSSR1620	KM12	8	6	20	LT16ER	SSA3T	SMYE3	SSY3T
2226290	KM16LSSR1620	KM16	10	8	20	LT16ER	SSA3T	SMYE3	SSY3T
	left hand								
2226281	KM12LSSL1620	KM12	8	6	20	LT16EL	SSA3T	SMYI3	SSY3T
2226291	KM16LSSL1620	KM16	10	8	20	LT16EL	SSA3T	SMYI3	SSY3T

How Do Catalog Numbers Work?

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



KM1612S0424SCLDR04S



KM

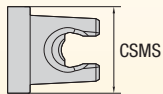
Kennametal
Modular

KM Micro™
Quick Change
tooling system

1612

System
Size

1612 = Ø 16mm
2016 = Ø 20mm



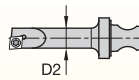
S

Boring Bar
Features

S = Tool steel

04

Shank
Diameter

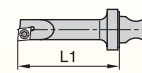


The code is shank diameter D2. Ignore digits after the decimal point.

If the shank diameter D2 code is a single digit, it is preceded by a 0 (zero). (e.g., for Ø 8mm = code 08).

24

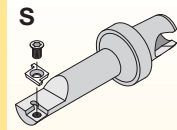
Gage
Length



The code is gage length L1. Ignore digits after the decimal point.

S

Clamping
System



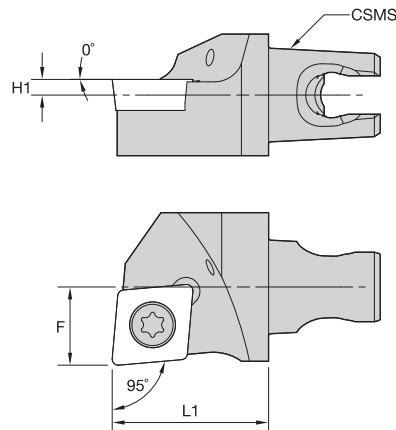
S-Clamping
Clamped from above
with a screw for
indexable inserts

By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM1612S0424SCLDR04S

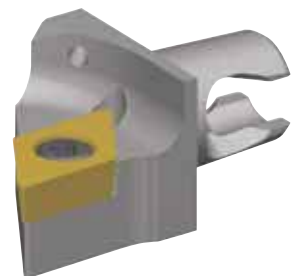
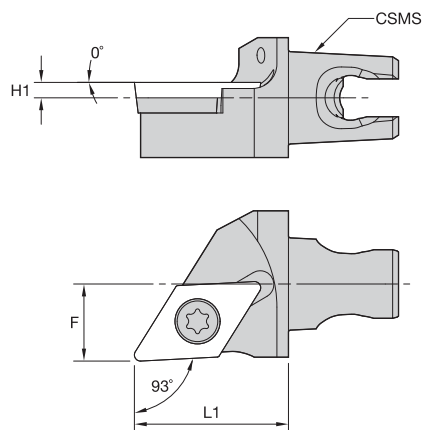
C	L	D	R	04	S
Insert Shape	Cutting Unit Shape	Clearance Angle	Direction	Insert Size	Clamping Access
<p>C </p> <p>G </p> <p>T </p>	<p>F </p> <p>J </p> <p>L </p> <p>X Special Version</p>	<p>D </p> <p>P </p>	<p></p> <p>L = Left-hand cutting unit</p> <p></p> <p>R = Right-hand cutting unit</p>	<p>C </p> <p>G</p> <p>T </p>	<p></p> <p>S = Side access</p> <p></p> <p>T = Top access</p>



■ SCLC-HPC 95°



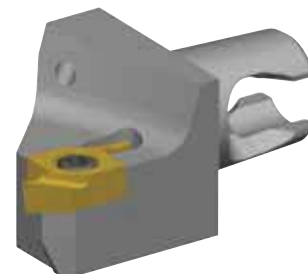
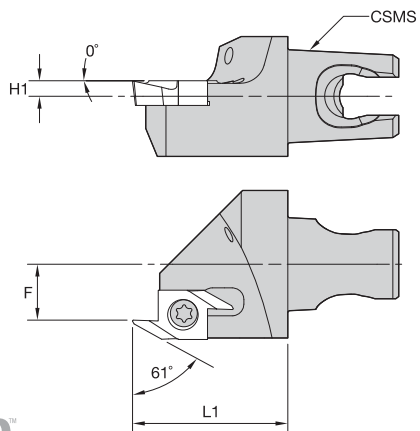
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
3180670	right hand KM16SCLCR0920HPC	KM16	10	2	20	CC..09T308/CC..3252	MS1155
3180671	left hand KM16SCLCL0920HPC	KM16	10	2	20	CC..09T308/CC..3252	MS1155



■ SDJC-HPC 93°



order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
3176692	right hand KM16SDJCR1120HPC	KM16	10	2	20	DC..11T308/DC..3252	MS1155
3180663	left hand KM16SDJCL1120HPC	KM16	10	2	20	DC..11T308/DC..3252	MS1155



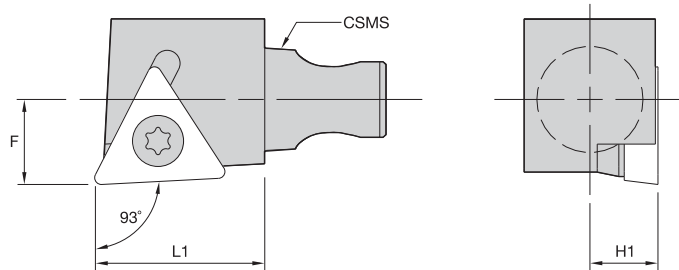
KM Micro Cutting Units



■ SSP-HPC 61°



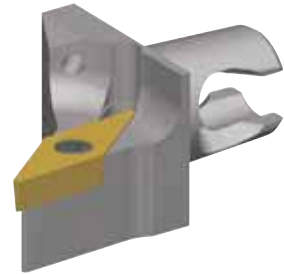
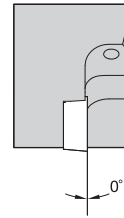
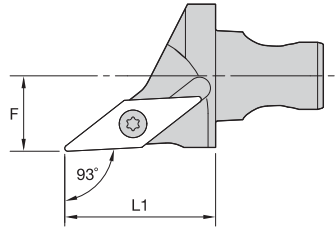
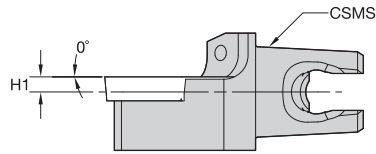
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
3180664	right hand KM16SSPR0620HPC	KM16	7	2	20	S10P0603R010/S10P22R004	CSTB25PKG
3180665	left hand KM16SSPL0620HPC	KM16	7	2	20	S10P0603L010/S10P22L004	CSTB25PKG



■ STJC-HPC 93°



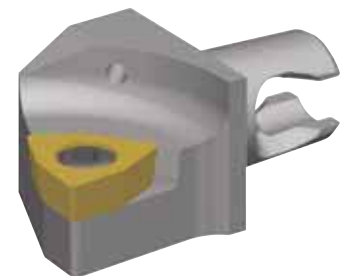
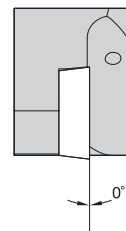
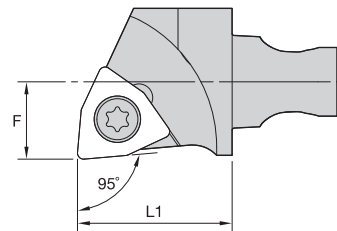
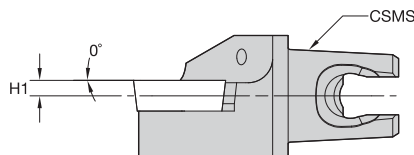
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
3180666	right hand KM16STJCR1620HPC	KM16	10	2	20	TC..16T308/TC..3252	MS1155
3180667	left hand KM16STJCL1620HPC	KM16	10	2	20	TC..16T308/TC..3252	MS1155



■ SVJB-HPC 93°



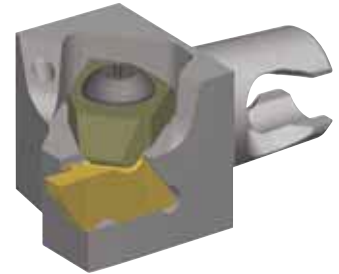
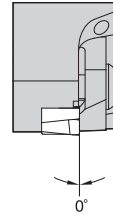
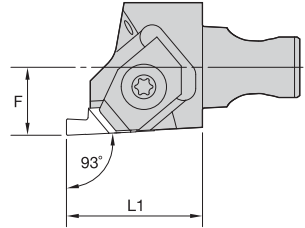
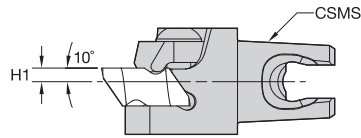
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
	right hand						
3180672	KM16SVJBR1120HPC	KM16	10	2	20	VB..110304/VB..221	MS1153
	left hand						
3180673	KM16SVJBL1120HPC	KM16	10	2	20	VB..110304/VB..221	MS1153



■ SWLC-HPC 95°



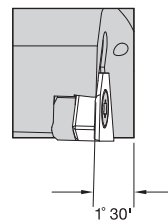
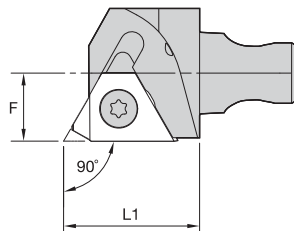
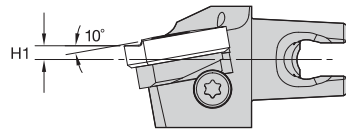
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
	right hand						
3180668	KM16SWLCR0620HPC	KM16	10	2	20	WC..06T308/WC..3252	MS1155
	left hand						
3180669	KM16SWLCL0620HPC	KM16	10	2	20	WC..06T308/WC..3252	MS1155



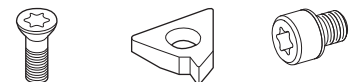
■ NS-HPC



order number	catalog number	CSMS system size	F	H1	L1	gage insert	clamp	clamping screw
3180674	right hand KM16NSR220HPC	KM16	10	2	20	NG2R	CM146	MS1200
3180675	left hand KM16NSL220HPC	KM16	10	2	20	NG2L	CM147	MS1200



■ LSS-HPC



order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
3180676	right hand KM16LSSR1620HPC	KM16	10	2	20	LT16ER	SSA3T	SMYE3	SSY3T
3180677	left hand KM16LSSL1620HPC	KM16	10	2	20	LT16EL	SSA3T	SMYI3	SSY3T

How Do Catalog Numbers Work?

Each character in our catalog number signifies a specific trait of that product. Use the following key columns and corresponding images to easily identify which attributes apply.



KM1612S0424S



KM

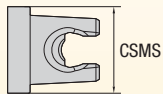
Kennametal
Modular

KM Micro™
Quick Change
tooling system

1612

System
Size

1612 = Ø 16mm
2016 = Ø 20mm



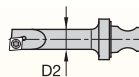
S

Boring Bar
Features

S = Tool steel

04

Shank
Diameter

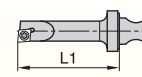


The code is shank diameter D2. Ignore digits after the decimal point.

If the shank diameter D2 code is a single digit, it is preceded by a 0 (zero). (e.g., for Ø 8mm = code 08).

24

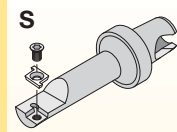
Gage
Length



The code is gage length L1. Ignore digits after the decimal point.

S

Clamping
System







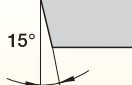

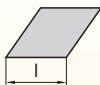

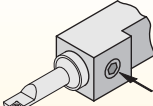
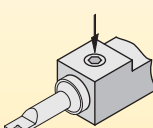
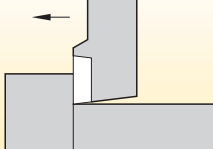
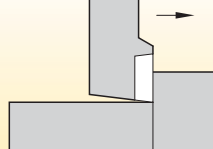


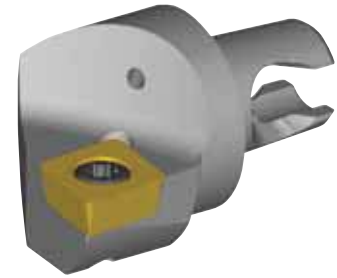
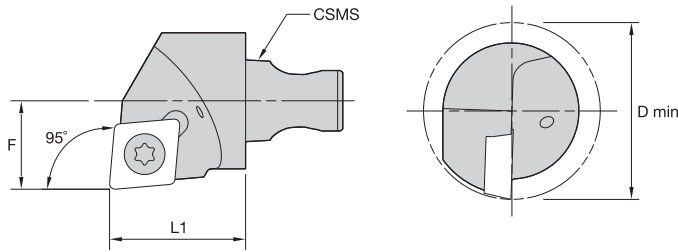
S-Clamping
Clamped from above
with a screw for
indexable inserts

By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM1612S0424SCLDR04S

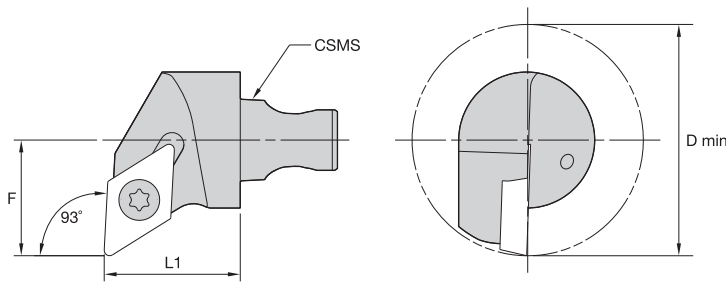
C	L	D	R	04	S
Insert Shape	Cutting Unit Shape	Clearance Angle	Direction	Insert Size	Clamping Access
<p>C </p> <p>G </p> <p>T </p>	<p>F </p> <p>J </p> <p>L </p> <p>X Special Version</p>	<p>D </p> <p>P </p>		<p>C G </p> <p>T </p>	<p></p> <p>S = Side access</p> <p></p> <p>T = Top access</p>
			<p></p> <p>L = Left-hand cutting unit</p> <p></p> <p>R = Right-hand cutting unit</p>		



■ SCLP 95°



order number	catalog number	CSMS system size	D min	F	L1	gage insert	insert screw
3016745	right hand KM2016SCLPR0920	KM2016	25	13	20	CP..09T308/CP..3252	MS1155
3016746	left hand KM2016SCLPL0920	KM2016	25	13	20	CP..09T308/CP..3252	MS1155



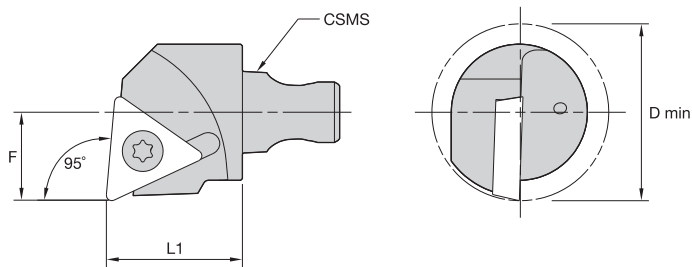
■ SDUP 93°



order number	catalog number	CSMS system size	D min	F	L1	gage insert	insert screw
3016747	right hand KM2016SDUPR1120	KM2016	32	17	20	DP..11T308/DP..3252	MS1155
3016748	left hand KM2016SDUPL1120	KM2016	32	17	20	DP..11T308/DP..3252	MS1155



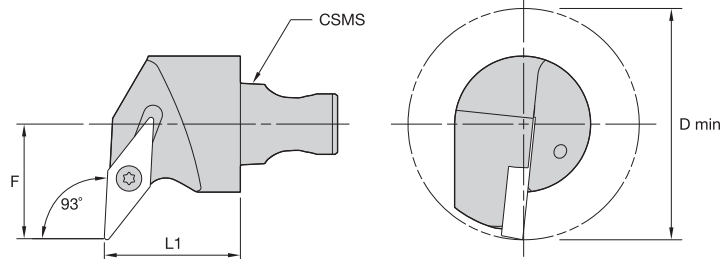
KM Micro Cutting Units



■ STLP 95°



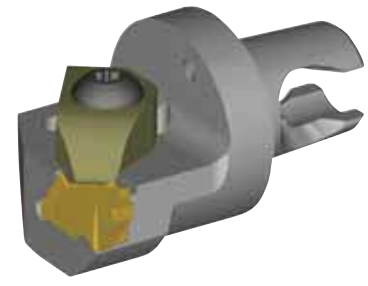
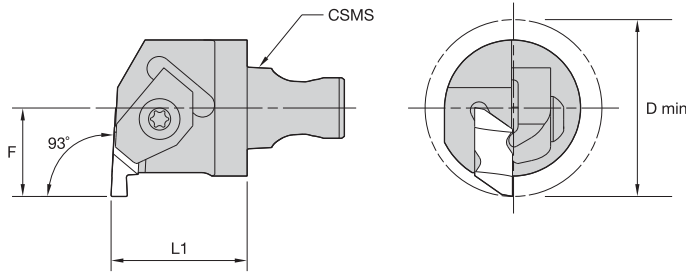
order number	catalog number	CSMS system size	D min	F	L1	gage insert	insert screw
3016753	right hand KM2016STLPR1620	KM2016	25	13	20	TP..16T308/TP..3252	MS1155
3016754	left hand KM2016STLPL1620	KM2016	25	13	20	TP..16T308/TP..3252	MS1155



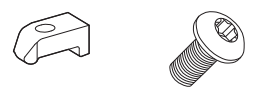
■ SVUB 93°



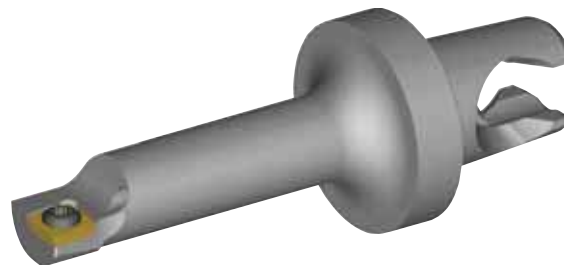
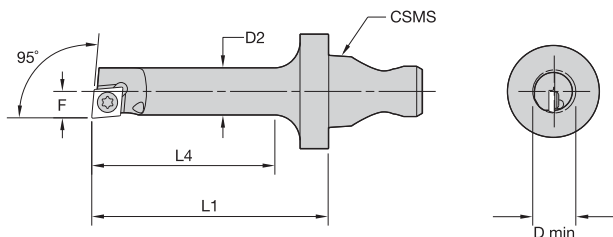
order number	catalog number	CSMS system size	D min	F	L1	gage insert	insert screw
3016749	right hand KM2016SVUBR1120	KM2016	32	17	20	VB..110304/VB..221	MS1153
3016750	left hand KM2016SVUBL1120	KM2016	32	17	20	VB..110304/VB..221	MS1153



■ NE



order number	catalog number	CSMS system size	D min	F	L1	gage insert	clamp	socket-head cap screw
3016751	right hand KM2016NER220	KM2016	25	13	20	NG2L	CM183	MS1200
3016752	left hand KM2016NEL220	KM2016	25	13	20	NG2R	CM182	MS1200



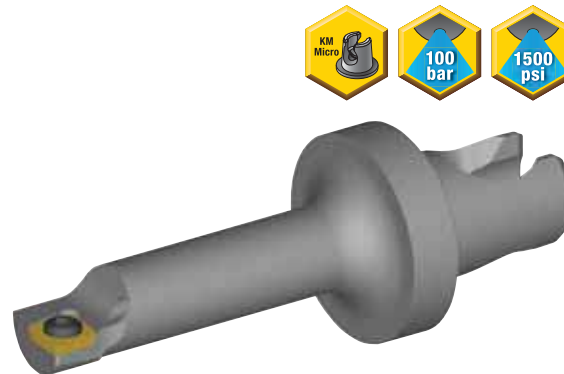
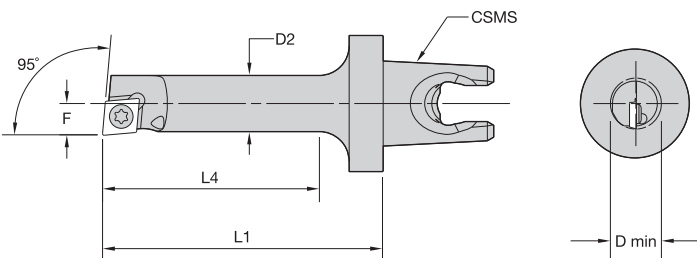
KM Micro Internal Cutting Units



■ SCLD-S 95°



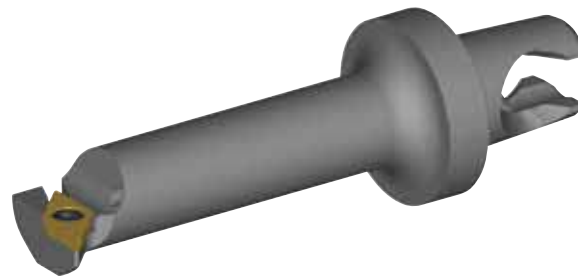
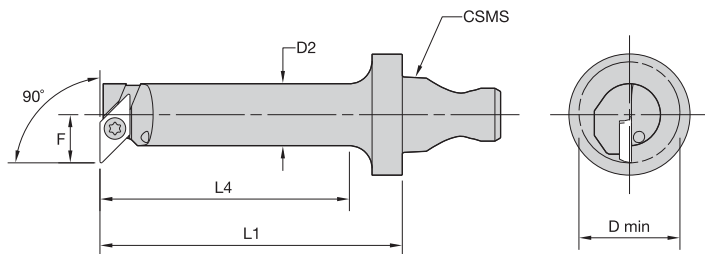
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253213	KM1612S0424SCLDRS4S	KM1612	4,77	4,22	2,42	24	17	CD..S4T002/CD..120605	CC09
2253215	KM1612S0528SCLDRS4S	KM1612	5,78	5,16	2,95	28	21	CD..S4T002/CD..120605	CC11
2253217	KM1612S0633SCLDRS4S	KM1612	7,09	6,20	3,73	33	25	CD..S4T002/CD..120605	CC11
left hand									
2253214	KM1612S0424SCLDLS4S	KM1612	4,77	4,22	2,40	24	17	CD..S4T002/CD..120605	CC09
2253216	KM1612S0528SCLDLS4S	KM1612	5,78	5,16	2,95	28	21	CD..S4T002/CD..120605	CC11
2253218	KM1612S0633SCLDLS4S	KM1612	7,09	6,20	3,73	33	25	CD..S4T002/CD..120605	CC11



■ SCLD-T 95°



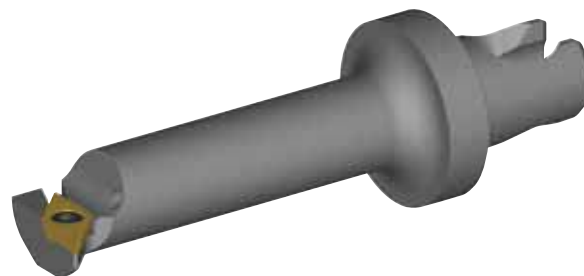
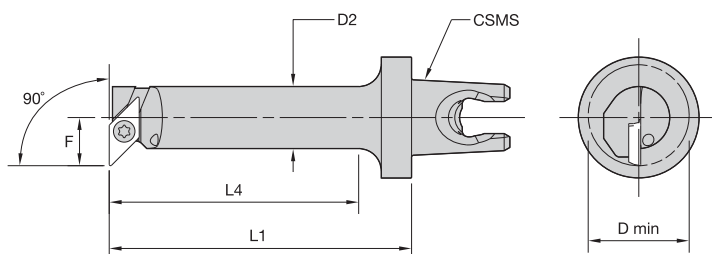
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253219	KM1612S0424SCLDRS4T	KM1612	4,77	4,22	2,40	24	17	CD..S4T002/CD..120605	CC09
2253221	KM1612S0528SCLDRS4T	KM1612	5,78	5,16	2,95	28	21	CD..S4T002/CD..120605	CC11
2253223	KM1612S0633SCLDRS4T	KM1612	7,09	6,20	3,73	33	25	CD..S4T002/CD..120605	CC11
left hand									
2253220	KM1612S0424SCLDLS4T	KM1612	4,77	4,22	2,40	24	17	CD..S4T002/CD..120605	CC09
2253222	KM1612S0528SCLDLS4T	KM1612	5,78	5,16	2,95	28	21	CD..S4T002/CD..120605	CC11
2253224	KM1612S0633SCLDLS4T	KM1612	7,09	6,20	3,73	33	25	CD..S4T002/CD..120605	CC11



■ SGFP-S 90°



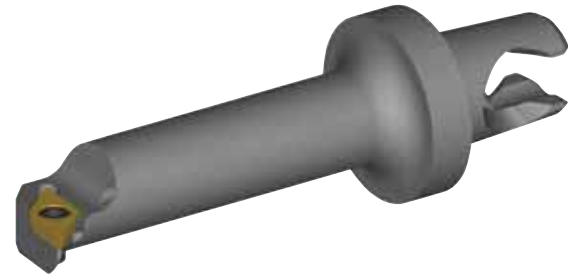
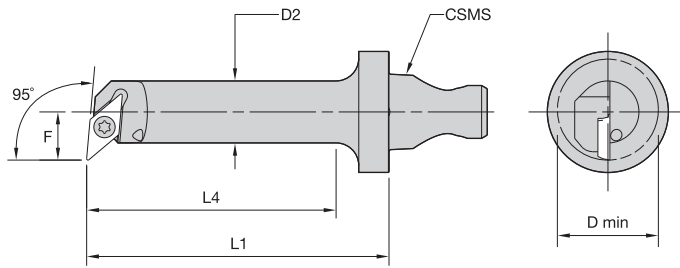
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253225	KM1612S0633SGFPR05S	KM1612	9,14	6,6	5,58	33	26,4	GP..050102/GP.505	CT15
2253227	KM1612S0840SGFPR05S	KM1612	10,72	8,2	6,37	40	33,0	GP..050102/GP.505	CT15
left hand									
2253226	KM1612S0633SGFPL05S	KM1612	9,14	6,6	5,58	33	26,4	GP..050102/GP..12105	CT15
2253228	KM1612S0840SGFPL05S	KM1612	10,72	8,2	6,37	40	33,0	GP..050102/GP..12105	CT15



■ SGFP-T 90°



order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253229	KM1612S0633SGFPR05T	KM1612	9,14	6,6	5,58	33	26,4	GP..050102/GP.505	CT15
2253231	KM1612S0840SGFPR05T	KM1612	10,72	8,2	6,37	40	33,0	GP..050102/GP.505	CT15
left hand									
2253230	KM1612S0633SGFPL05T	KM1612	9,14	6,6	5,58	33	26,4	GP..050102/GP.505	CT15
2253232	KM1612S0840SGFPL05T	KM1612	10,72	8,2	6,37	40	33,0	GP..050102/GP.505	CT15



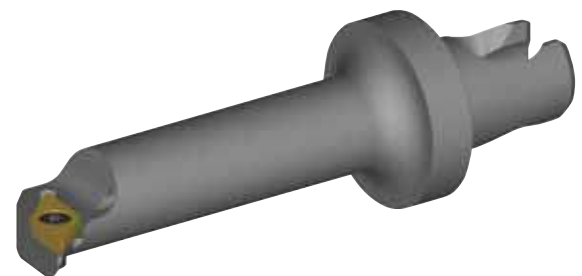
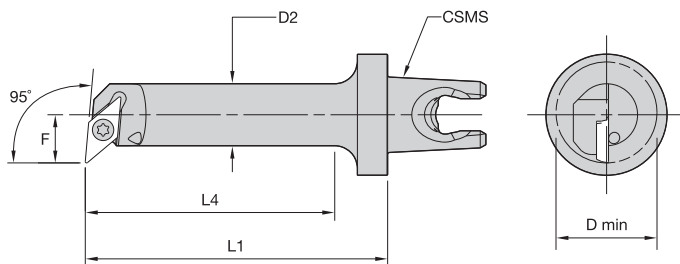
KM Micro Internal Cutting Units



■ SGLP-S 95°



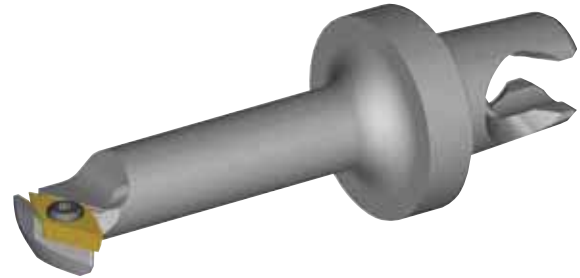
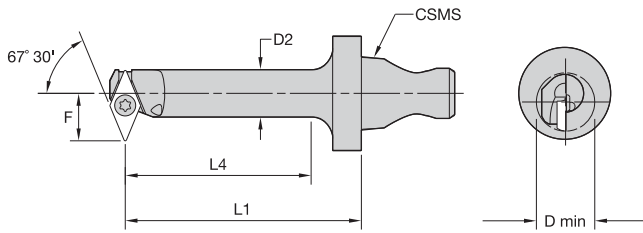
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
	right hand								
2253233	KM1612S0633SGLPR05S	KM1612	9,14	6,60	5,58	33	26	GP..050102/GP..12105	CT15
2253235	KM1612S0840SGLPR05S	KM1612	10,72	8,20	6,37	40	33	GP..050102/GP..12105	CT15
	left hand								
2253234	KM1612S0633SGLPL05S	KM1612	9,14	6,60	5,58	33	26	GP..050102/GP..12105	CT15
2253236	KM1612S0840SGLPL05S	KM1612	10,72	8,20	6,37	40	33	GP..050102/GP..12105	CT15



■ SGLP-T 95°



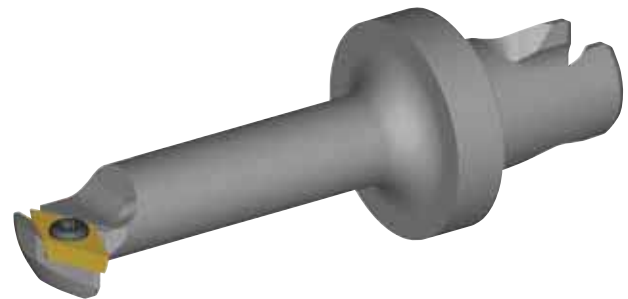
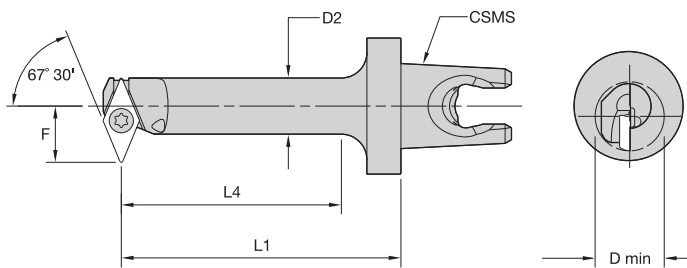
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
	right hand								
2253237	KM1612S0633SGLPR05T	KM1612	9,14	6,60	5,58	33	26	GP..050102/GP..12105	CT15
2253239	KM1612S0840SGLPR05T	KM1612	10,72	8,20	6,37	40	33	GP..050102/GP..12105	CT15
	left hand								
2253238	KM1612S0633SGLPL05T	KM1612	9,14	6,60	5,58	33	26	GP..050102/GP..12105	CT15
2253240	KM1612S0840SGLPL05T	KM1612	10,72	8,20	6,37	40	33	GP..050102/GP..12105	CT15



■ SGXP-S 67° 30'



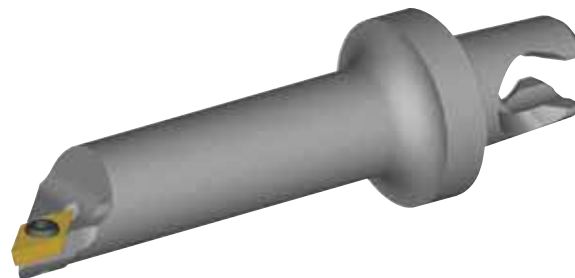
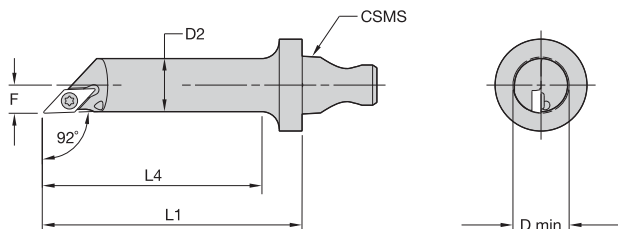
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
	right hand								
2253288	KM1612S0633SGXPR05S	KM1612	10,16	6,6	6,61	33	26	GP..050102/GP..12105	CT15
	left hand								
2253289	KM1612S0633SGXPL05S	KM1612	10,16	6,6	6,61	33	26	GP..050102/GP..12105	CT15



■ SGXP-T 67° 30'



order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
	right hand								
2253241	KM1612S0633SGXPR05T	KM1612	10,16	6,6	6,61	33	26	GP..050102/GP..505	CT15
	left hand								
2253242	KM1612S0633SGXPL05T	KM1612	10,16	6,6	6,61	33	26	GP..050102/GP..12105	CT15



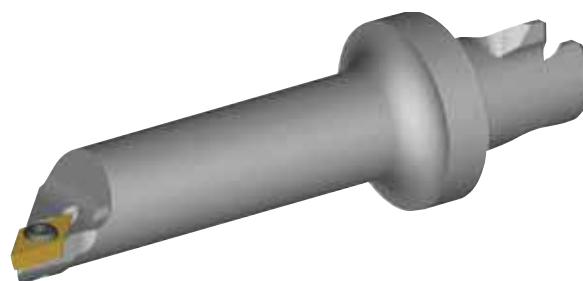
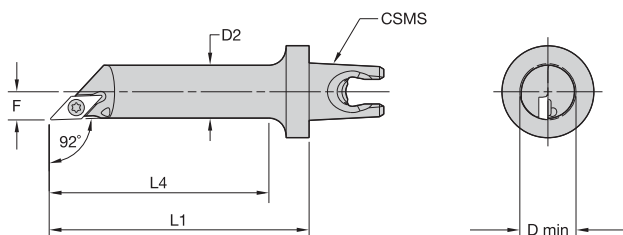
KM Micro Internal Cutting Units



■ SGJP-S 92°



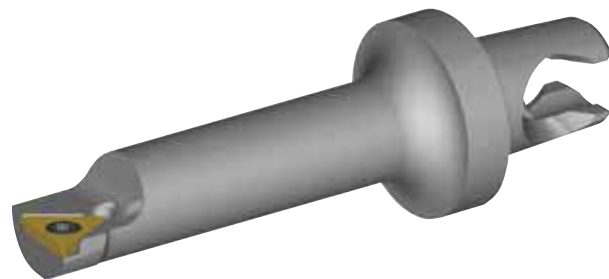
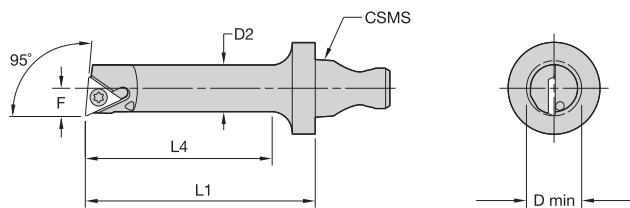
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253243	KM1612S0840SGJPR05S	KM1612	8,68	8,20	4,34	40	33	GP..050102/GP..12105	CT11
2253247	KM1612S0945SGJPR05S	KM1612	9,75	9,25	4,89	45	38	GP..050102/GP..12105	CT11
left hand									
2253244	KM1612S0840SGJPL05S	KM1612	8,68	8,20	4,34	40	33	GP..050102/GP..12105	CT11
2253248	KM1612S0945SGJPL05S	KM1612	9,75	9,25	4,89	45	38	GP..050102/GP..12105	CT11



■ SGJP-T 92°



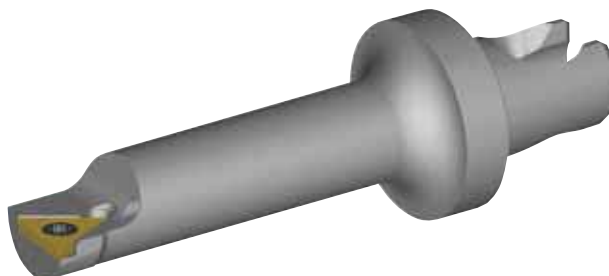
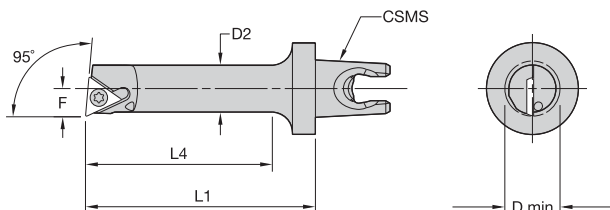
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253249	KM1612S0840SGJPR05T	KM1612	8,68	8,20	4,34	40	33	GP..050102/GP..12105	CT11
2253251	KM1612S0945SGJPR05T	KM1612	9,75	9,25	4,89	45	38	GP..050102/GP..12105	CT11
left hand									
2253250	KM1612S0840SGJPL05T	KM1612	8,68	8,20	4,34	40	33	GP..050102/GP..12105	CT11
2253252	KM1612S0945SGJPL05T	KM1612	9,75	9,25	4,89	45	38	GP..050102/GP..12105	CT11



■ **STLD-S 95°**



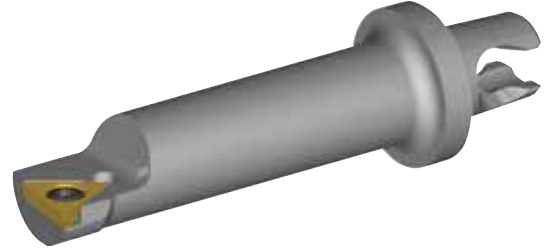
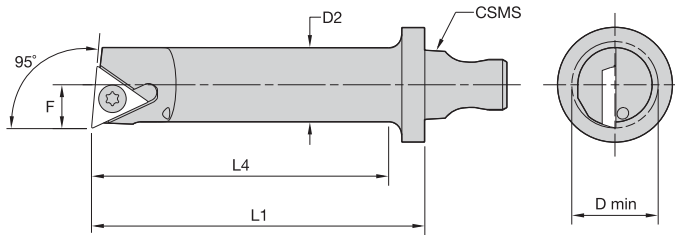
order number	catalog number	CSMS system size						gage insert	insert screw
		D min	D2	F	L1	L4			
right hand									
2253253	KM1612S0633STLDR07S	KM1612	7,06	6,2	3,71	33	26	TD..07S1202/TD..130805	FC11
2253255	KM1612S0840STLDR07S	KM1612	9,14	8,2	4,80	40	33	TD..07S1202/TD..130805	FC11
left hand									
2253254	KM1612S0633STLDL07S	KM1612	7,06	6,2	3,71	33	26	TD..07S1202/TD..130805	FC11
2253256	KM1612S0840STLDL07S	KM1612	9,14	8,2	4,80	40	33	TD..07S1202/TD..130805	FC11



■ **STLD-T 95°**



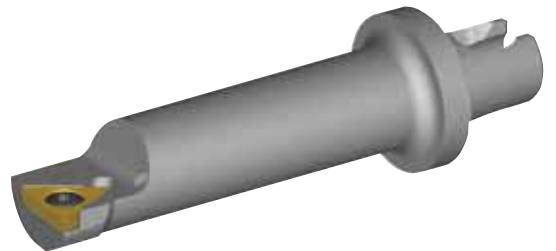
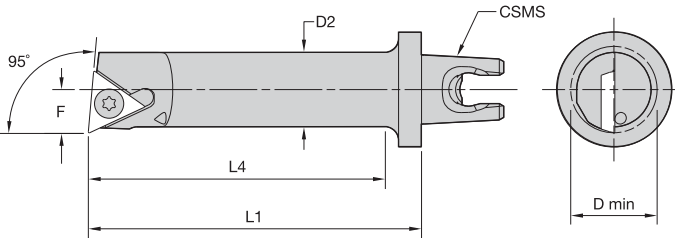
order number	catalog number	CSMS system size						gage insert	insert screw
		D min	D2	F	L1	L4			
right hand									
2253257	KM1612S0633STLDR07T	KM1612	7,06	6,2	3,71	33	26	TD..07T1202/TD..12807505	FC11
2253259	KM1612S0840STLDR07T	KM1612	9,14	8,2	4,80	40	33	TD..07T1202/TD..12807505	FC11
left hand									
2253258	KM1612S0633STLDL07T	KM1612	7,06	6,2	3,71	33	26	TD..07T1202/TD..12807505	FC11
2253260	KM1612S0840STLDL07T	KM1612	9,14	8,2	4,80	40	33	TD..07T1202/TD..12807505	FC11



■ STLP-S 95°



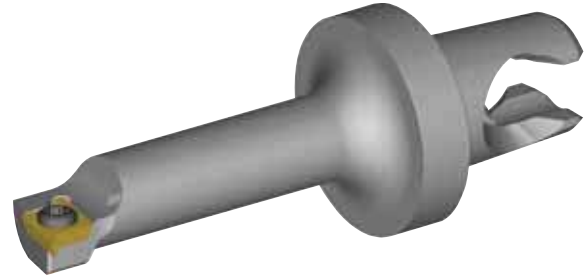
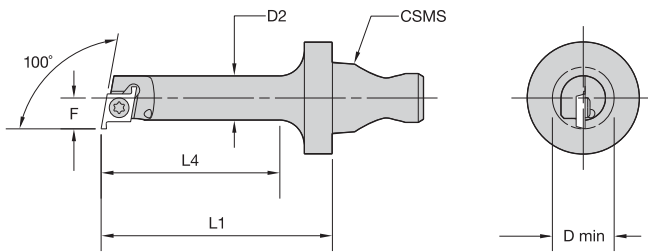
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253261	KM1612S1046STLPR11S	KM1612	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2253263	KM2016S1046STLPR11S	KM2016	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2253265	KM2016S1358STLPR11S	KM2016	14,25	12,95	7,52	58	52	TP.110202/TP..21505	QC21
left hand									
2253262	KM1612S1046STLPL11S	KM1612	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2253264	KM2016S1046STLPL11S	KM2016	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2253266	KM2016S1358STLPL11S	KM2016	14,25	12,95	7,52	58	52	TP.110202/TP..21505	QC21



■ STLP-T 95°



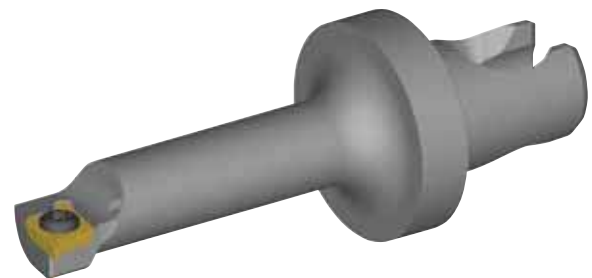
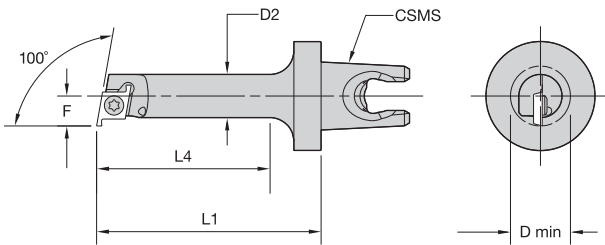
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2250067	KM1612S1046STLPR11T	KM1612	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2250069	KM2016S1046STLPR11T	KM2016	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2250071	KM2016S1358STLPR11T	KM2016	14,25	12,95	7,52	58	52	TP.110202/TP..21505	QC21
left hand									
2250068	KM1612S1046STLPL11T	KM1612	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2250070	KM2016S1046STLPL11T	KM2016	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2250072	KM2016S1358STLPL11T	KM2016	14,25	12,95	7,53	58	52	TP.110202/TP..21505	QC21



■ SCXD-S 100°



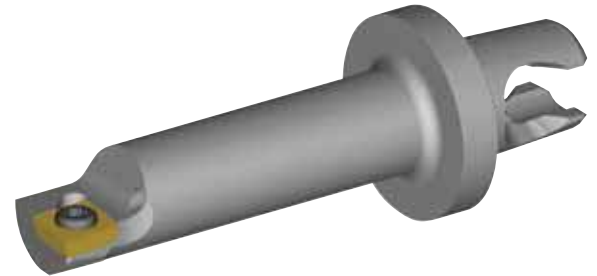
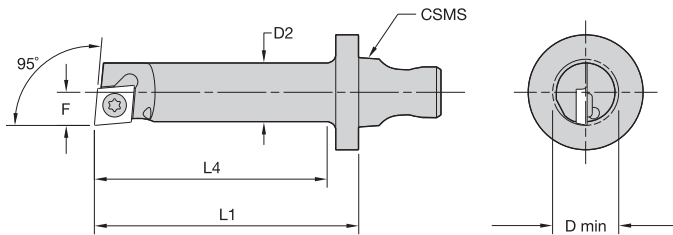
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
	right hand								
2250073	KM1612S0529SCXDRS	KM1612	6,93	5,56	3,91	29	22	CD.50302R	CC11
2250074	KM1612S0633SCXDRS	KM1612	7,82	6,35	4,40	33	26	CD.50302R	CC11



■ SCXD-T 100°



order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
	right hand								
2250037	KM1612S0529SCXDRT	KM1612	6,93	5,56	3,91	29	22	CD..40762/CD.120302	CC11
2250038	KM1612S0633SCXDRT	KM1612	7,82	6,35	4,40	33	26	CD..40762/CD.120302	CC11



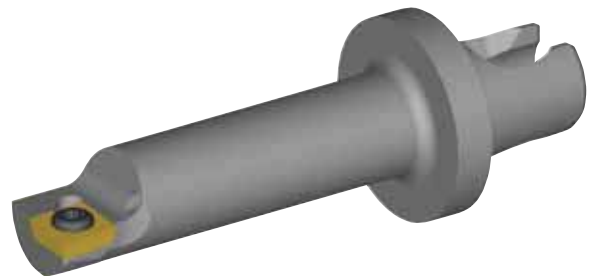
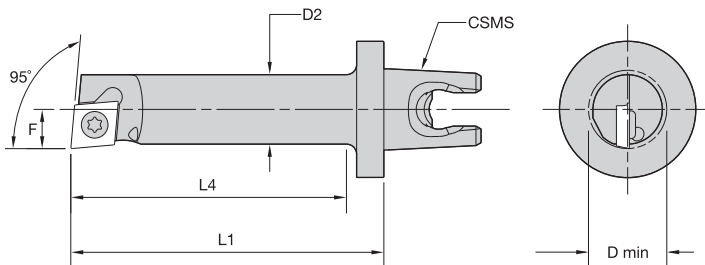
KM Micro Internal Cutting Units



■ SCXP-S 95°



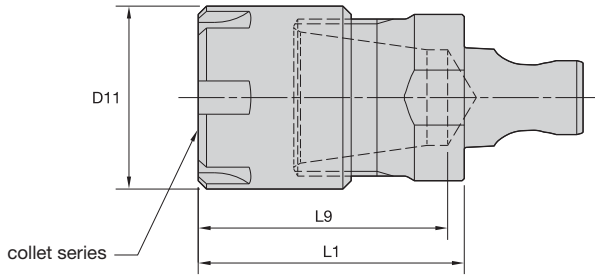
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2250039	KM1612S1046SCXPRS	KM1612	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15
2250041	KM2016S1046SCXPRS	KM2016	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15
left hand									
2250040	KM1612S1046SCXPLS	KM1612	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15
2250042	KM2016S1046SCXPLS	KM2016	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15



■ SCXP-T 95°



order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2250063	KM1612S1046SCXPRT	KM1612	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15
2250065	KM2016S1046SCXPRT	KM2016	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15
left hand									
2250064	KM1612S1046SCXPRT	KM1612	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15
2250066	KM2016S1046SCXPRT	KM2016	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15



ER collet series	Collet Capacity			
	mm		inch	
	min	max	min	max
ER8	0,5	5,0	.02	.20
ER11	0,5	7,0	.02	.28
ER16	0,5	10,0	.02	.41
ER20	0,5	13,0	.02	.50

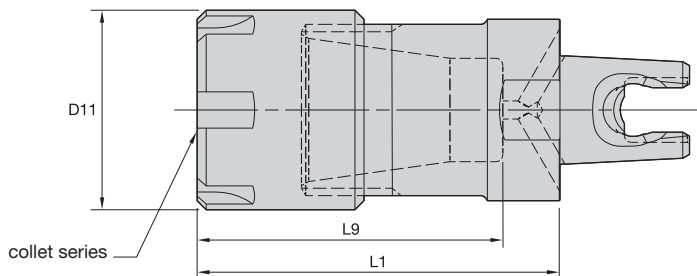
■ ER



order number	catalog number	CSMS system size	collet series	D11	L1	locknut	wrench	counterbore collet torque (Nm)	straight collet torque (Nm)
2607067	KM1612ER08017	KM1612	ER8	12	17	LER08M	ER08WEM	4.8	4.0
1925844	KM1612ER11020	KM1612	ER11	16	20	LER11M	ER11WEM	12.0	16.0
1925845	KM1612ER16032	KM1612	ER16	22	32	LER16M	ER16WEM	24.0	24.0
2607068	KM2016ER08017	KM2016	ER8	12	17	LER08M	ER08WEM	4.8	4.0
1898057	KM2016ER11020	KM2016	ER11	16	20	LER11M	ER11WEM	12.0	16.0
1898058	KM2016ER16032	KM2016	ER16	22	32	LER16M	ER16WEM	24.0	24.0
1925857	KM2016ER20035	KM2016	ER20	28	35	LER20M	ER20WEM	28.0	28.0

(continued)

(ER continued)



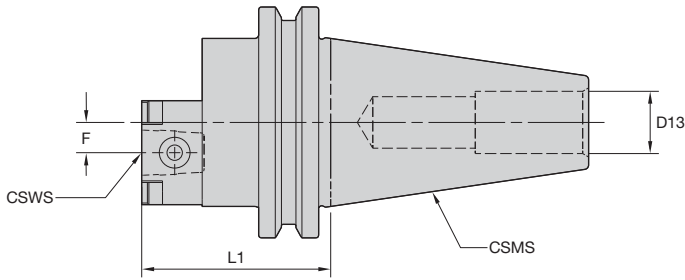
KM Micro Shank Tools

■ ER-C



order number	catalog number	CSMS system size	collet series	D11	L1	locknut	wrench	counterbore collet torque (Nm)	straight collet torque (Nm)
3741453	KM2016ER08025C	KM2016	ER08	12	25	LER08M	ER08WEM	4.8	4.0
3741454	KM2016ER11030C	KM2016	ER11	16	30	LER11M	ER11WEM	12.0	16.0
3741455	KM2016ER16040C	KM2016	ER16	22	40	LER16M	ER16WEM	24.0	24.0
3741456	KM2016ER20045C	KM2016	ER20	28	45	LER20M	ER20WEM	28.0	28.0

NOTE: Collet must be loaded into locknut first. Before loading into the chuck body, insert the cutting tool, then tighten to the recommended tightening torque.
 Collet chuck technical section, see page M98.
 Supplied with locknut.
 Locknut wrench must be ordered separately.
 Interchangeable coolant-style locknuts and coolant disks are available and must be ordered separately; see page L19.
 ER standard straight-bore collets, see page J50.
 ER tap collets, see pages J58-J59.
 ER TCT tension-only tap collets, see page J60.

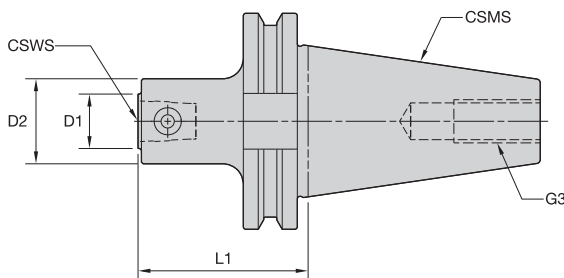


■ ECTRA • Offset



order number	catalog number	CSWS system size	CSMS system size	F	L1	D13	spare parts package	socket-head cap screw
2213872	CV40KM12ECTRA	KM12	CV40	6	40	16,47	KM12NRPKG	125.316
2213903	CV40KM16ECTRA	KM16	CV40	8	50	16,47	KM16NRPKG	MS319
2430343	CV50KM12ECTRA	KM12	CV50	6	40	—	KM12NRPKG	125.316
2430344	CV50KM16ECTRA	KM16	CV50	8	50	—	KM16NRPKG	MS319

NOTE: The CV40 and CV50 are only intended to be used in a presetter fixture.



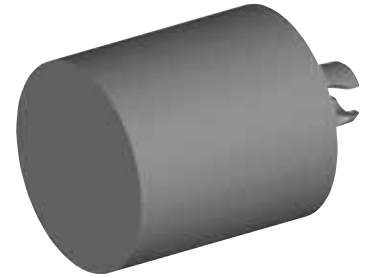
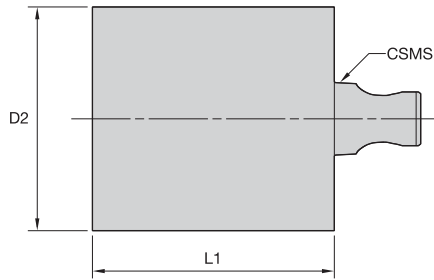
■ TRA • On Center



order number	catalog number	CSWS system size	CSMS system size	D1	D2	G3	L1	spare parts package
1925846	CV40KM12TRA	KM12	CV40	12	22	1/4-13 UNC	40	KM12NRPKG
1887781	CV40KM16TRA	KM16	CV40	16	25	1/4-13 UNC	50	KM16NRPKG

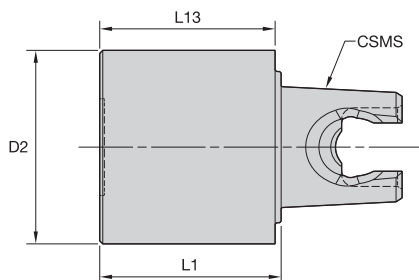
NOTE: The CV40 is only intended to be used in a presetter fixture.

- Machinable front 38–42 HRC.



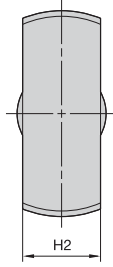
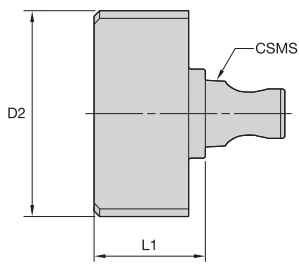
■ **BN • Blank**

order number	catalog number	CSMS system size	D2	L1	kg	lbs
1925849	KM12BN3133	KM12	31	33	0,19	.43
3836822	KM1612BN1650	KM1612	16	50	0,08	.18
3836820	KM1612BN2430	KM1612	24	30	0,11	.23
1851739	KM16BN3740	KM16	37	40	0,34	.74
3836821	KM2016BN2060	KM2016	20	60	0,15	.34
3836819	KM2016BN3035	KM2016	31	35	0,20	.44



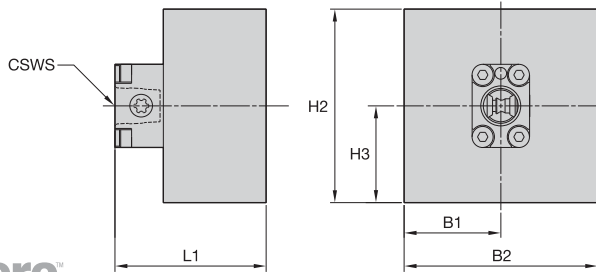
■ **GB • Gage Bar**

order number	catalog number	CSMS system size	D2	L1	L13	kg	lbs
2417677	KM12GB1620	KM12	16	20	19	0,04	.08
2417676	KM16GB2020	KM16	20	20	20	0,06	.13



■ TIM • Timing Head

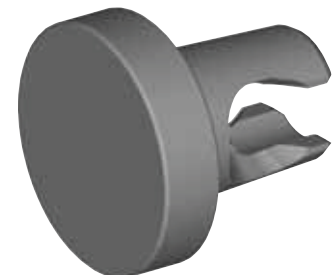
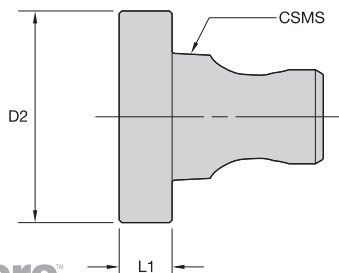
order number	catalog number	CSMS system size	D2	L1	H2
1925847	KM12TIM0915	KM12	31	15	9
1886774	KM16TIM1420	KM16	37	20	14



■ TB • Tumble Block



order number	catalog number	CSWS system size	B1	B2	H2	H3	L1	spare parts package	kg	lbs
2430347	KM12TB	KM12	32	64	64	32	50	KM12NRPKG	1,18	2.60
2430348	KM16TB	KM16	32	64	64	32	50	KM16NRPKG	1,13	2.49



■ P • Plug

order number	catalog number	CSMS system size	D2	L1
1925848	KM12P	KM12	12	5
3397220	KM1612P	KM1612	16	5
1851741	KM16P	KM16	16	5
3397219	KM2016P	KM2016	20	5