

KM™ Quick Change

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KM™ Quick Change

KM™ Quick Change Tooling is a central component in achieving dramatic improvement in machine and cutting tool use. It's the choice of manufacturers requiring maximum machine output.

The necessary tasks of changing, setting up, and gaging tools create an excess of machine downtime. For small batch manufacturing operations requiring these frequent setups, KM™ Quick Change Tooling is the most efficient method for reducing lost time and improving the overall quality of the machining process by generating greater productivity and increasing profits.

Aside from Quick Change Clamping units, KM™ has other economical means to improving machine utility. For example, Shrink Fit technology and Hydraulic Chucks are other methods offered for Quick Change Tooling.

There's no better way to begin maximizing production than switching to KM™ Quick Change Tooling. Whether you're looking to purchase a new machine or to gain greater output from your current equipment, Kennametal offers a variety of methods to upgrade your tooling system. The cost of these improvements will be justified by time saved, production increased, and profits.

The KM™ portfolio has three distinctive sub-families, KM Micro™ and KM™ Mini, KM-TS™ (ISO), and KM4X™:

KM Micro and KM Mini: This unique quick-change system is specially designed to support and mount on Swiss-style turning centers, gang machines, and smaller lathes.

KM-TS: The ISO 26622 quick-change tooling system delivers the greatest value to customers by maximizing down time and gaining optimum productivity with rigidity, accuracy, and enabling pre-gaging off line. This tooling system supports both lathe and machining centers.

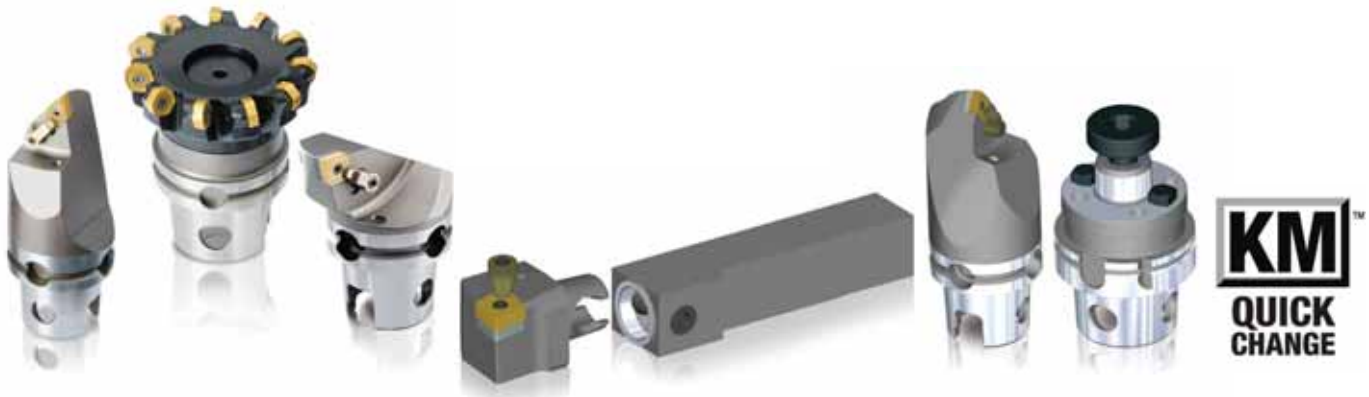
KM4X: The next generation of KM offers higher clamping forces and interference levels that lead to a robust connection and extremely high stiffness and bending load capacity resulting in unmatched performance from both lathe and machining centers.



Uniquely Designed

A uniquely designed clamping mechanism is the driving force of KM™ Quick Change Tooling technology, which is designed around a single shank tapered at a shallow angle.

Using a simple mechanism involving lock rods and a ball track, a high clamping force is generated from a minimal amount of input force. This design is universal, and enables faster tool changes, reducing downtime.





Extremely Rigid

The most heavy-duty, rigid modular quick-change tooling available on the market today. The strength of the metal-to-metal locking device is extremely rigid, reducing vibration between components.



Reliability

Not only is KM™ Quick Change Tooling faster and more economical, it's also more reliable. The rigid coupling design enables a high degree of accuracy and repeatability. Low activation forces and decreased vibration provide longer life for clamping units and protect the mechanism in the event of a crash. Clamp strength enables operators to run machines at high maximum speeds without loss of force after continuous use.



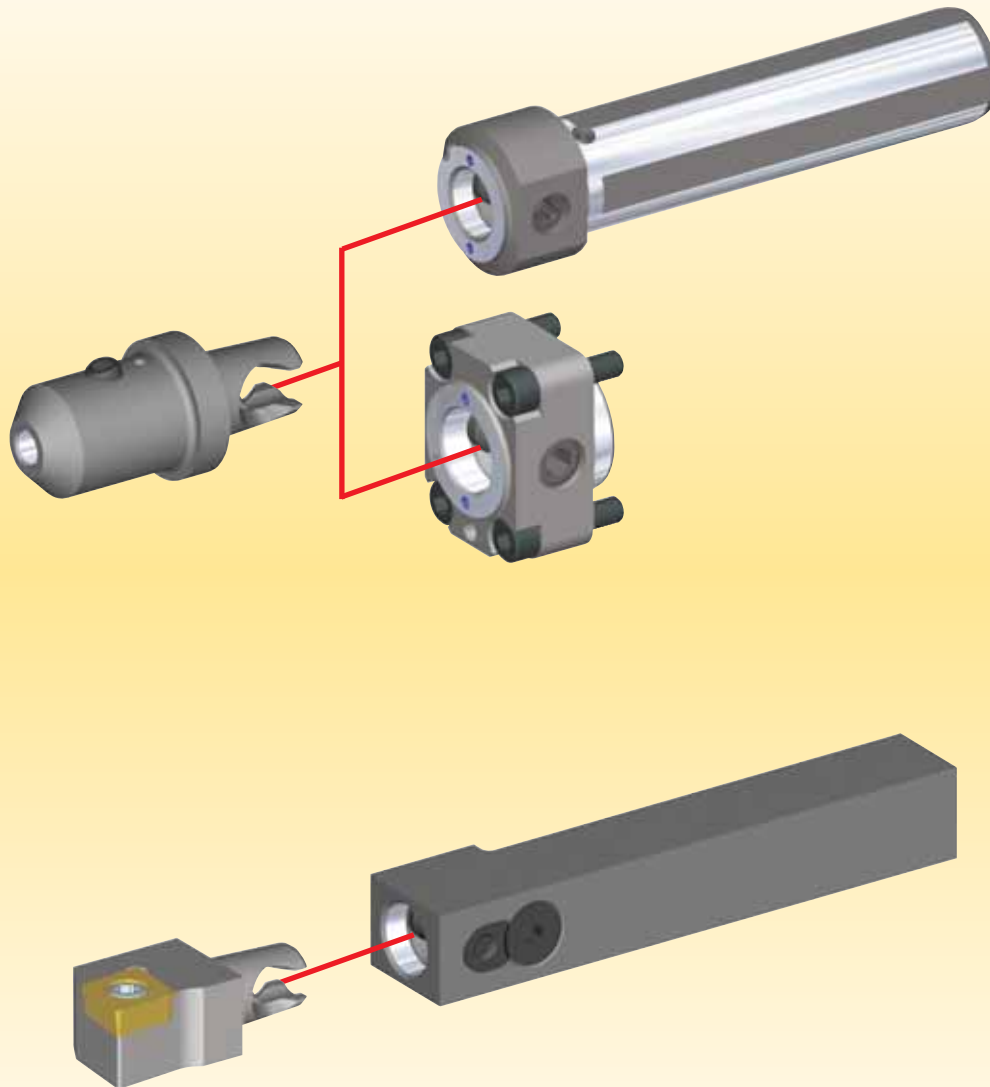
Versatility

The KM™ System is a true modular system. It has been designed for all metalcutting operations and provides a standard platform for use throughout your shop. The KM™ clamping mechanism is designed to be used on all types of manufacturing equipment. Available in manual, VDI, KM-LOC II™, automatic, and rotating spindles.



KM Micro™ — Quick-Change Tooling System

Kennametal has developed yet another revolutionary quick-change tooling system. The KM Micro tooling system is a further development of the internationally renowned KM™ system, but is a smaller, more compact version. It is an outstanding quick-change tooling system utilizing face and taper contact design.



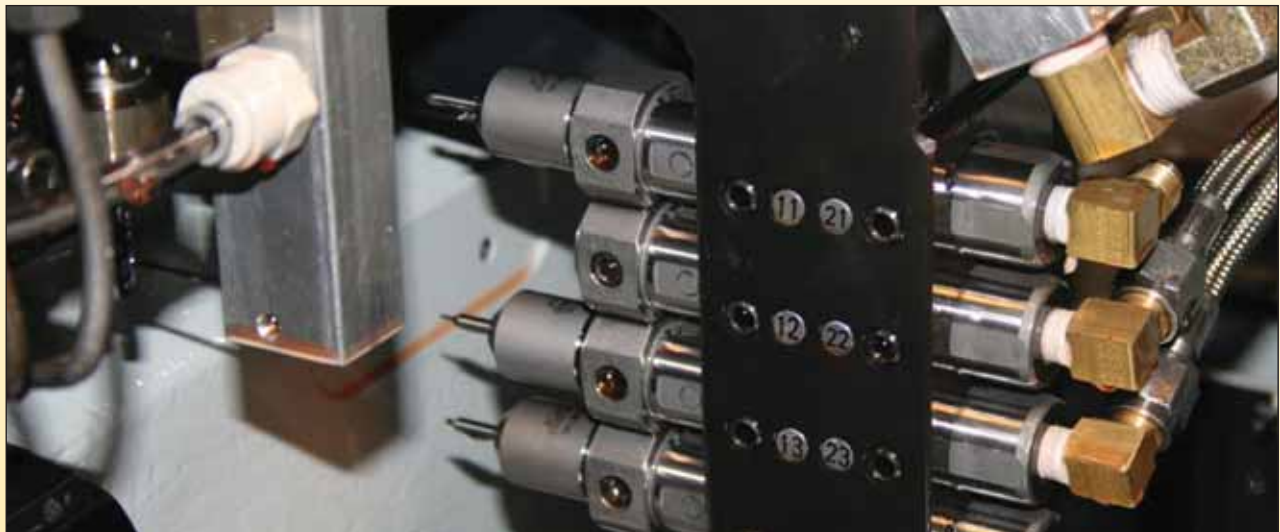
What is KM Micro™ and KM Mini™?

The KM Micro and KM Mini system have been specially designed for use with automatic lathes, as well as smaller universal lathes. The quick-change cutting 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.

- Reduce indexing and setup times by 66%.
- 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 a comprehensive range of KM Micro and KM Mini solutions to meet any requirement.

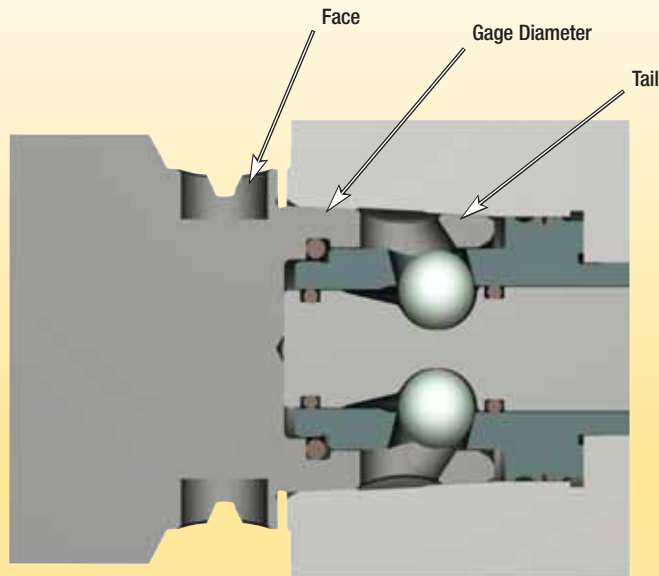


KM Mechanism

The KM Quick Change clamp is a self-locking system with a mechanical amplification of 3:1 to 7:1. This system is effective because it locks by having three contact areas, and the mechanism is sealed with Viton® O-rings to prevent component contamination.

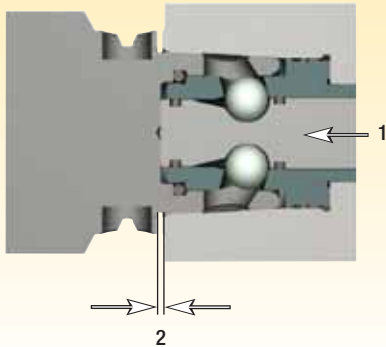
When in the locked position, there is increased interference between contact surfaces, resulting in superior rigidity. Because the face and taper contact within the unit is simultaneous, this provides accurate radial and axial repeatability. Elastic deformation provides greater static and dynamic stiffness.

Three effective contact areas:



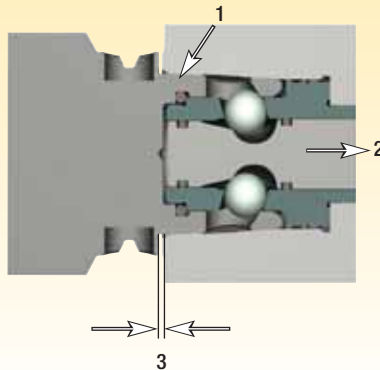
Load/Release Position

- 1. Bump-off force
- 2. Bump-off



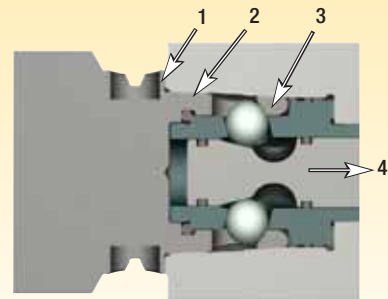
First Contact Position

- 1. Point of first contact
- 2. Clamping force
- 3. Stand-off



Locked Position

- 1. Face contact
- 2. Interference at gage line
- 3. Tail contact
- 4. Clamping force



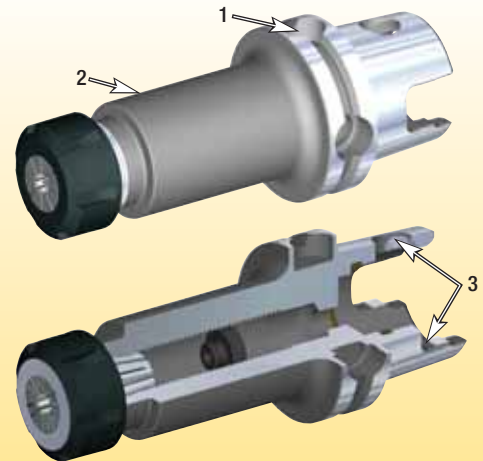
KM Today

All KM Quick Change tooling is made from H13 high-strength steel and comes in a silver satin finish. After the parts are heat treated, qualified pads are machined into the part, which increases the repeatability of the clamping mechanism. KM is an ISO standard (26622).

The addition of the ATC configuration and data carrier capability provides machine tool builders with one standard KM design. Integrating these components also enables customers to use data carriers to record tool offsets and tool life information on the tool.

KM-TS Standardized System

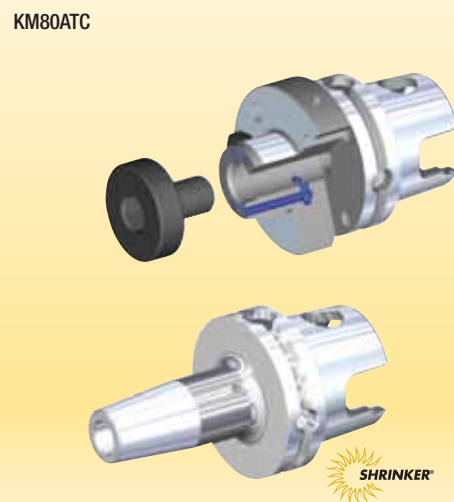
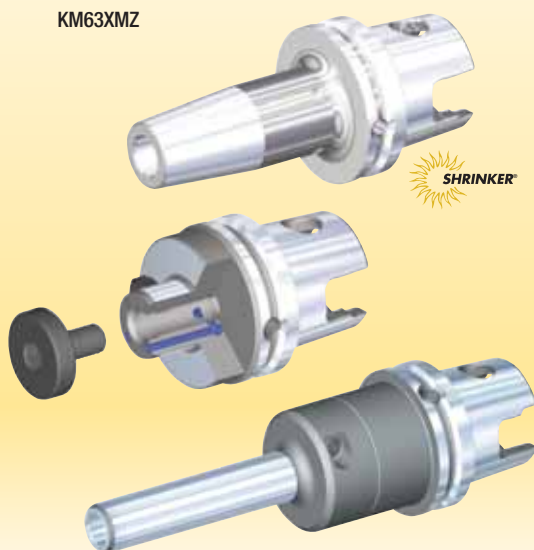
1. **Addition of ATC configuration and data carrier capability:**
 - a. Provides machine tool builders with one standard KM design.
 - b. Enables customers to use data carriers to record tool offsets and tool life information on the tool.
2. **H13 high-strength steel, silver satin finish.**
3. **Qualification after heat-treat process:**
 - a. Heat-treated, qualified pads are machined into the part, increasing the repeatability.
 - b. Qualification of the ball tracks after heat treat.



KM Specific Systems

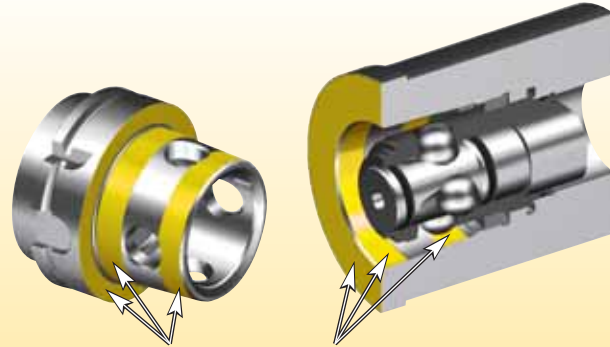
KM63XMZ™ — Designed and used exclusively on Mazak® INTEGREX® Mark IV Series, i-Series, and J-Series machines.

KM80ATC™ — Designed for and used on Giddings & Lewis™ VTLs.



KM4X — The Next Generation Spindle Connection System

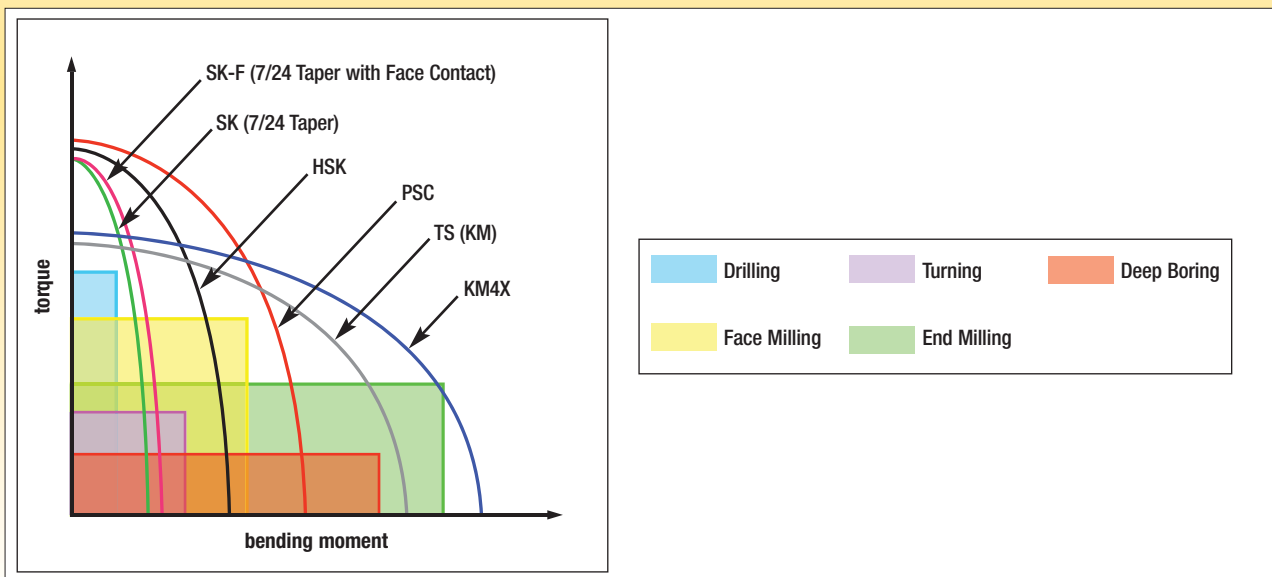
- Heavy-duty, rigid configuration with evenly distributed clamping force.
- Simple design enables front-loaded spindle configuration.
- Balanced-by-design for high spindle speed capacity.
- Capable of performing in a wide range of operations from low speed, high torque to high speed, low torque.



KM4X three-surface contact for improved stability and accuracy. Optimized clamping force distribution and interference fit provides higher stiffness.

The graph below represents the load capacity of HSK, PSC, and KM4X. The shaded areas represent the typical requirements for heavy duty in various machining processes. KM4X is the only system that can deliver the torque and bending required to achieve high-performance machining.

Some systems may be able to transmit considerable amount of torque, but the cutting forces also generate bending moments that will exceed the interface's limits before torque limits are exceeded.



Choosing What's Right

When machining tough materials like titanium, cutting speeds are relatively low due to thermal effects on cutting tools. In response, machine tool builders have improved stiffness and damping on spindles and machine structures over the years. Spindles have been designed with abundant torque at low rotational speeds. Nevertheless, the spindle connection remains the weak link in the system.

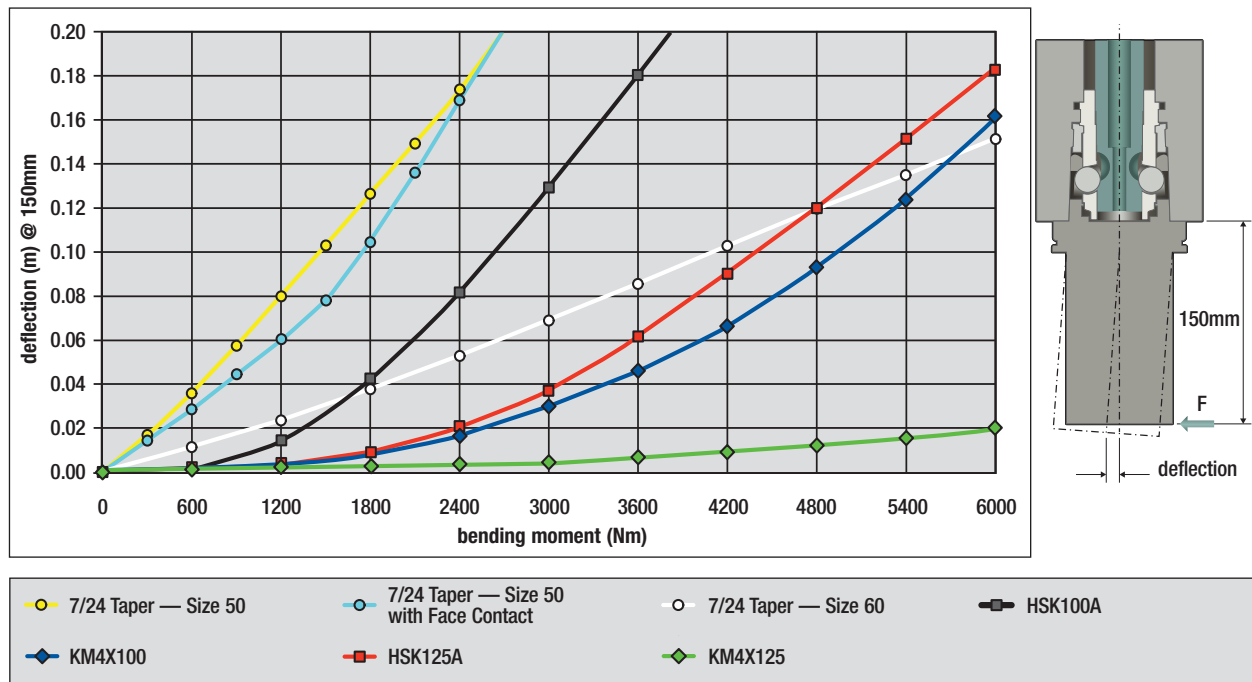
The spindle connection must provide torque and bending capacity compatible with the machine tool specifications and the requirements for higher productivity. It becomes obvious that in end-milling applications where the projection lengths are typically greater, the limiting factor is bending capacity of the spindle interface.

With more materials that are tougher to machine and require considerably higher cutting forces from the machine tool, choosing wisely on the spindle interface to maximize cutting edge performance is the key to success.

The KM spindle connections greatly outperform the conventional 7/24 steep taper and its face taper contact derivative. HSK and PSC systems with their greater stiffness advantages help minimize undesirable vibrations, gaining the best possible productivity from the machine tool. The KM4X is the best large, heavy-duty spindle connection, where optimal rigidity is necessary. It has superb balance between bending and torsion capabilities from the machine tool.

As an example, an indexable helical cutter with 250mm projection from spindle face and 80mm in diameter generates 4620 Nm of bending moment and less than 900 Nm of torque.

Chart shows a comparison of Steep Taper with and without face contact, HSK, and KM4X.



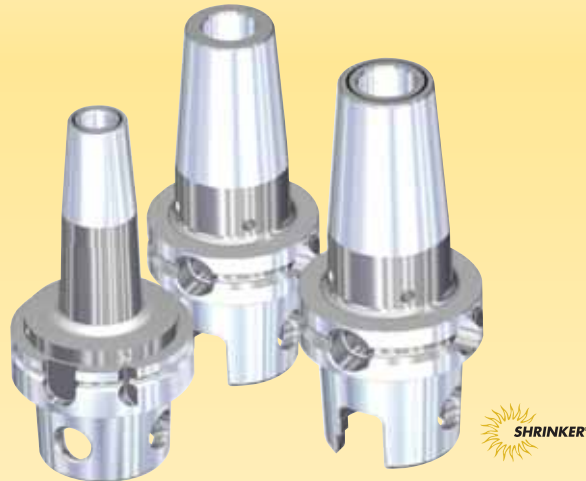
Milling and Holemaking

Shrink Fit Technology

How it works...

Heat shrinking is not new technology in the tooling industry, but only recently has it been applied to quick-change toolholding systems. Shrink fitting works by having toolholders with an internal bore that is slightly smaller than the connecting end of a cutting shank.

When the toolholder is heated, the bore expands and the shank is able to slip inside the bore. As the toolholder cools, it shrinks, clamping the two pieces together. This creates evenly distributed pressure with minimal vibration between the toolholder and shank that resembles a monoblock tool.



Advantages of Shrink Fit Tooling:

- Evenly distributed pressure 360° along the length of the cutting tool.
- Slim and short toolholder designs can be achieved due to the lack of moveable parts.
- Absolute symmetry of the grip provides the best possible balance for high-speed operations.
- Stronger clamping force than collet or hydraulic chucks.
- Can be repeated thousands of times.
- Capable of greater speeds and feeds.
- Adapts to various shank types.
- Increased productivity.

Hydraulic Chucks

Kennametal Hydraulic Chucks provide optimum performance when clamping full-cylindrical straight shanks such as solid carbide drills and end mills. Turning a piston pressurizes hydraulic fluid, which expands a thin-walled membrane along the length of the clamping bore.

This creates a secure grip that reduces vibration and eliminates micro-cracking on cutting tools. All chucks are capable of utilizing reducer sleeves to maximize their versatility. Hydraulic chucks require virtually no maintenance, aside from routinely cleaning the bore and removing any grease.



Slim Line

Slim-shaped hydraulic chucks for universal use with maximum precision.



Standard/HP Line

Prebalanced chucks with an external screw for radial adjustments. This eliminates the need for removing cutting tools to make fine adjustments.

Collet Chucks



TG Collet Series

A single angle collet that grips 1:3 tightening torque versus grip torque without a stop screw.

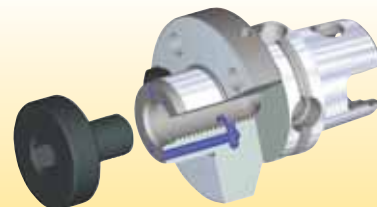


ER Collet Series

An international standard-style collet that can be used in machining applications such as milling, reaming, tapping, and grinding.

Shell Mill Adapters

All units come standard with a new coolant to the cutting edge capability. This improves tool life and chip control. Shell mill adapters are available in extended lengths and a range of small mounting diameters.



Selection Guide for KM Clamping Systems

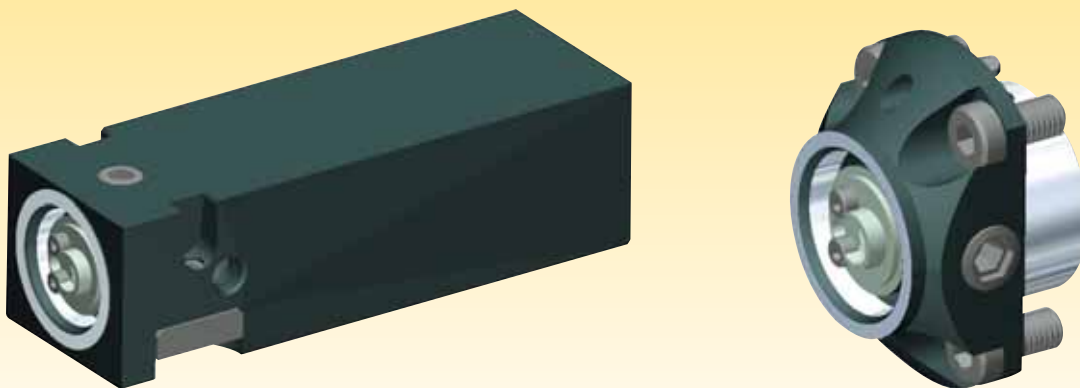
There are several things to consider before choosing the correct KM clamping mechanism. Manufacturers should take an account of how much time is spent setting up a machine or changing the tool. Customers should know if they are comfortable with using a torque wrench regularly, as well.

Other issues may arise when considering the machine tool mounting configurations needed to maximize production and cut downtime. KM clamping has options for manufacturers to upgrade their existing machinery and customize it to fit their needs.

KM Manual Clamping Units

KM Manual Quick Change Tooling is the most economical way to reduce costly downtime caused by setup and tool change. With approximately three turns of a readily accessible activation screw, a specified amount of torque is generated, locking the device. KM Manual Clamping Units accept internal and external cutting tools, as well as left- and right-handed tools.

The units also enable tools to be inverted if necessary. Variants of machine tool mounting configurations for KM Manual Quick Change Tooling include flange mounts, square, round, and VDI shanks.



KM-LOC II™ Clamping Units

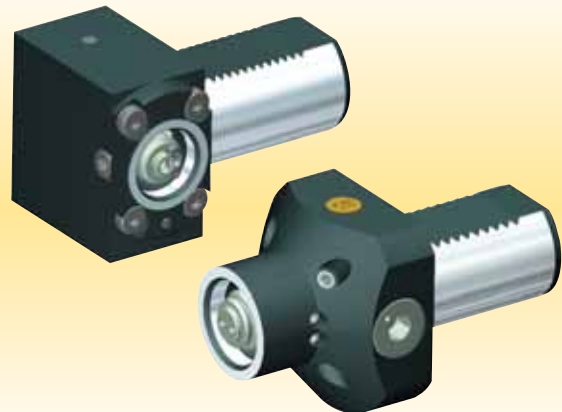
KM-LOC II Quick Change units have an increased mechanical advantage of up to 7:1. Due to the compact styling of these units, users are able to mount the clamping unit directly into the machine turret. KM-LOC II units require less activation torque when clamping tools, which reduces the overall stress on the component's clamping mechanism.

The KM-LOC II Quick Change system is available in various square shank sizes that have a 40–50% greater wedge surface area than comparable units. The cartridge style of these units enables the user to manufacture their own machine-specific blocks. A flange style is available as well.



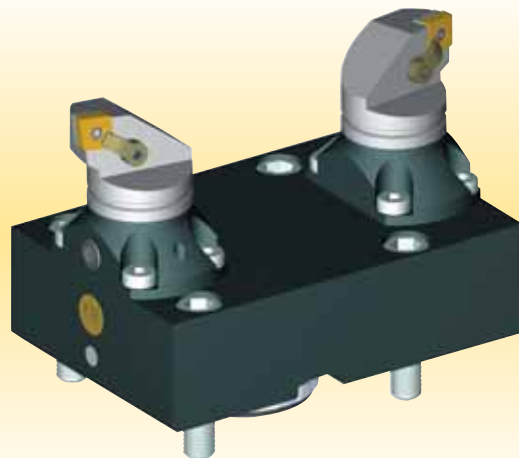
VDI to KM Clamping Units

KM Quick Change lets users upgrade VDI tooling without the need to modify their machines. This is because the KM clamping units act as a direct replacement for standard VDI tooling. VDI-style units are available to be used with KM Manual, KM-LOC, and KM-LOC II clamping units.



Builder-Specific Blocks

There are a variety of builder-specific blocks offered that provide customers a way to easily modify and upgrade their current tooling system to the KM Quick Change. These blocks are supported by Mori Seiki®, Mazak®, Hardinge™, Daewoo™, Nakamura-Tome™, Okuma®, HAAS, and other machine builders.



The KM Mechanical Advantage

A comparatively increased mechanical advantage is one of the central reasons why the KM Quick Change Tooling system is superior to other tooling methods. The high mechanical advantage is achieved through the system's rigid interference fit that is generated by additional forces in the clamping mechanism. A clamping device with greater than ordinary mechanical advantage offers many benefits in regard to tool life, downtime, and overall machine cost.

In the following sections, you'll find expanded information about the KM Quick Change Tooling system's mechanical advantage and how enhanced levels of these forces make Kennametal tooling superior to other quick-change systems.

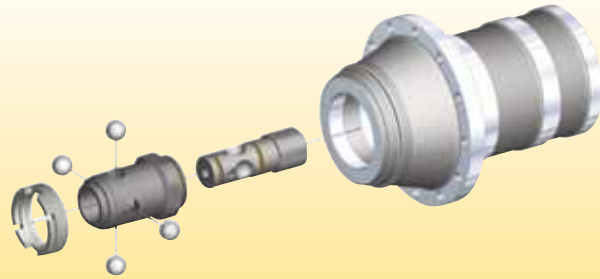
Front-Loading Spindle Design

The KM Advantage

KM spindle designs are front loading; this enables easy access to the KM spindle if repairs are necessary.

The Competitor Disadvantage

Most other spindle systems are not a front-load design, and when repairs are necessary, the entire spindle must be removed. This causes the machine to be down for an extended period of time.



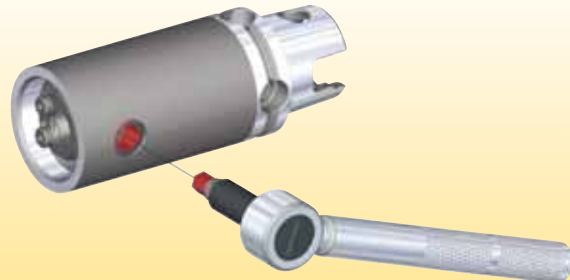
Side-Activated Tools

The KM Advantage

All KM extensions and reducers are side activated. This enables you to change tools without disassembling the entire setup.

The Competitor Disadvantage

Competing modular systems do not offer side activation. For these systems, you must completely disassemble tooling in order to change cutting units.



Mechanical Advantage in Clamping Force

The KM Advantage

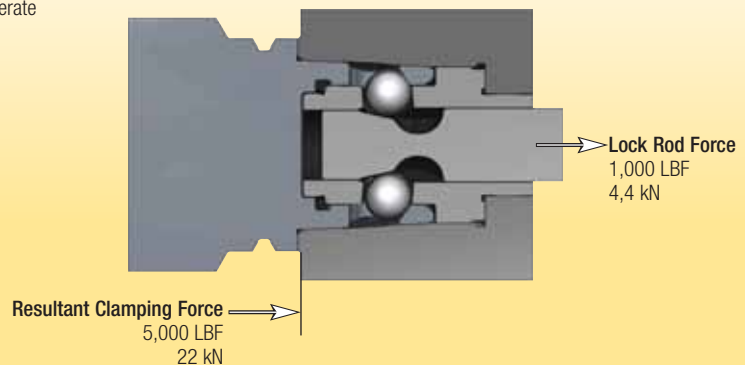
The KM design is an interference fit that enables the KM system to generate 4:1 and upwards of 7:1 mechanical advantage in clamping force.

The Competitor Disadvantage

CV, BT, HSK, and PSC mechanisms require a high degree of pull-back force to generate clamping force. The design generates a high amount of pent-up force within the spindle. When a crash occurs, the forces are released and could possibly damage the entire spindle mechanism.

Mechanical Advantage Provides:

- Lower tool release forces.
- Smaller clamping mechanism envelope.



Machine Utilization Strategy (MUS)

Tool change and setup/gaging can significantly decrease production time. Kennametal recommends the implementation of a Machine Utilization Strategy (MUS). This system incorporates the products, technologies, and procedures that generate the maximum utility from capital equipment.

Listed below are the products and services Kennametal recommends to provide the most time and cost savings, which are principle to the MUS.



This manufacturing strategy hastens every aspect of the production process from the machine to the tool room. It will improve tool maintenance, increase machining time and productivity, and decrease non-conforming percentages.

To learn more, **scan here.**
For instructions on how to scan,
please see page xxxiii.



1. KM Quick Change Tooling

Reduces downtime and increases productivity by cutting the time spent on tool change and setup.

2. Advanced Cutting Tool Materials

Increase production through the utilization of the most advanced cutting tools that enable machines to run longer and faster between tool changes.

3. Tool Kitting

Provides all the tooling (fixturing included) required to complete a production run or shift operation.

4. Pregaged Tooling

Eliminates measuring cuts from the setup process, reduces the risk of human error at the machine control, and provides a quick and efficient method for changing worn tools.

5. Advanced Tool Management Systems

Specifically designed to facilitate the effective management of cutting tools but are equally capable of controlling other types of inventory and consumable goods.

ISO 26622

The power of Kennametal

Kennametal is a world leader in the development, manufacture, application, and supply of metalcutting tools and services — and the undisputed top global maker of mining and highway-construction tooling. No matter what your industry, Kennametal will significantly boost your manufacturing competitiveness.

Our products are proven to significantly increase machining productivity and competitiveness, as well as generate cost-savings of up to 30% annually. Our unique Productivity Worksheet can calculate just how much time and money Kennametal KM™ Quick Change products can save. Enter your data to see how Kennametal can maximize your competitiveness!



Benefits of the Productivity Worksheet:

- See documented savings of 10–30% in machining costs.
- Uses your unique data to compare current productivity to potential savings.
- Relative and flexible to your specific machines and operation rates.
- Highlights how lost time can cost your business.
- Tracks weaknesses in machining setup that can reduce production time.
- Proves the Machine Utilization Strategy (MUS) is the ultimate way to optimize performance.

The way to increase productivity is simple — complete the Productivity Worksheet and see how much Kennametal could be saving you. If you're impressed by the increase in manufacturing productivity that the calculations show, contact us. Our application experts are accessible when you need them and will work with you to solve production problems. Switching to Kennametal will bring about the manufacturing capability and profits your business needs to strengthen customer loyalty and thrive in an increasingly competitive marketplace.



KM Tooling Increase Your Productivity

Issued by: _____

Machine Manufacturer: _____ Date: _____

Hourly Cost for Machine: _____ Model and Year: _____

Step 1 • Enter number of setups on machine per shift:

Step 2 • Enter number of shifts per day:

Step 3 • Enter number of insert changes per shift:


Step 4 • Enter set-up time for conventional tooling (minutes):

 - **KM Quick Change Tooling***

=

time savings (minutes)

Step 5 • Enter insert change time (minutes):

 -

=

Step 6 • Enter trial cut time (minutes):

 -

=

Step 7 • Multiply the number of shifts per day (see Step 2) by number of days per year the machine will be used.

 shifts per day

 x days per year

=

 shifts per year

Step 8 • Multiply the number of insert changes per shift (see Step 3) by the number of shifts per year (see Step 7).

 insert changes per shift

 x shifts per year

=

 insert changes per year

Step 9 • Multiply the number of insert changes per year (see Step 8) by the % of required trial cuts.

 insert changes per year

 x % required trial cuts

=

 trial cuts per year

Annual Time Savings with KM Quick Change Tooling Package
Step 10 • Enter shifts per year from Step 7.

 number

 x time savings (minutes)

=

 total (minutes)

Step 11 • Enter insert changes per year from Step 8.

 x

=

Step 12 • Enter trial cuts per year from Step 9.

 x

=

18,000
18,000 minutes divided by 60 minutes = 300 hours

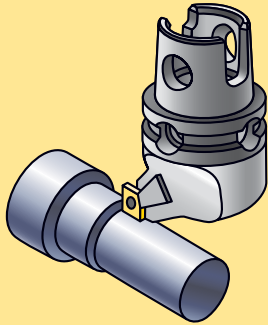
total hours saved		hourly machine cost		annual \$\$ saved**
<input type="text" value="300"/>	x	<input type="text" value="\$50.00"/>	=	<input type="text" value="\$15,000.00"/>

*Data provided by your Authorized Kennametal Representative. **Annual savings per machine. Multiply by number of machines to see total overall annual savings.

KM Quick Change Toolholder Options

KM Micro™ KM12 • KM1612 KM16 • KM2016	KM™ Mini KM20 • KM2520 KM25 • KM3225	KM32TS • KM40TS KM50TS • KM63TS KM80TS	KM63XMZ	KM80ATC	KM4X100

External Turning



M-Clamping

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Kenclamp™

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C-Clamping

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Top Notch™ Profiling

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Top Notch™ Turning (TNT)

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	KM40TS		
	KM50TS		
	KM63TS		
	KM80TS		
	KM63XMZ		
	KM80ATC		
	KM4X100		

STA, ETA, and 45° TA Square Shank Adapters

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	KM4X100		Pages: A591–A592

Indicates "Not Available".

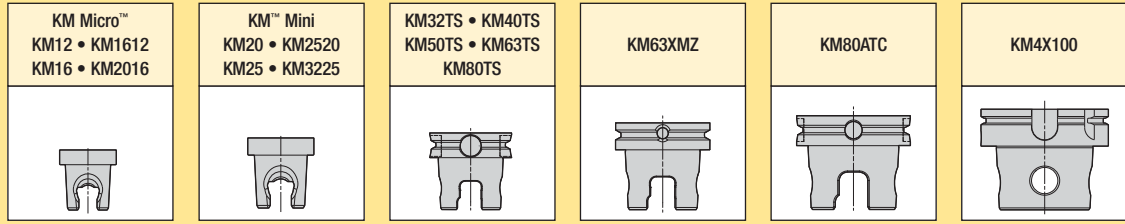
KM Micro™ KM12 • KM1612 KM16 • KM2016	KM™ Mini KM20 • KM2520 KM25 • KM3225	KM32TS • KM40TS KM50TS • KM63TS KM80TS	KM63XMZ	KM80ATC	KM4X100	KM Quick Change Toolholder Options

Internal Turning		M-Clamping		P-Clamping																																									
			<table border="1"> <tr><td>KM1612</td><td rowspan="2"></td></tr> <tr><td>KM2016</td></tr> <tr><td>KM2520</td><td>Pages: A168, A171–A174</td></tr> <tr><td>KM3225</td><td>Pages: A166–A174</td></tr> <tr><td>KM32TS</td><td>Pages: A240–A241</td></tr> <tr><td>KM40TS</td><td>Pages: A314–A316</td></tr> <tr><td>KM50TS</td><td>Pages: A392–A396</td></tr> <tr><td>KM63TS</td><td>Pages: A481–A487</td></tr> <tr><td>KM80TS</td><td rowspan="2"></td></tr> <tr><td>KM63XMZ</td></tr> <tr><td>KM80ATC</td></tr> <tr><td>KM4X100</td></tr> </table>	KM1612		KM2016	KM2520	Pages: A168, A171–A174	KM3225	Pages: A166–A174	KM32TS	Pages: A240–A241	KM40TS	Pages: A314–A316	KM50TS	Pages: A392–A396	KM63TS	Pages: A481–A487	KM80TS		KM63XMZ	KM80ATC	KM4X100		<table border="1"> <tr><td>KM1612</td><td rowspan="2"></td></tr> <tr><td>KM2016</td></tr> <tr><td>KM2520</td><td>Pages: A175–A176</td></tr> <tr><td>KM3225</td><td>Pages: A175–A176</td></tr> <tr><td>KM32TS</td><td>Pages: A242–A243</td></tr> <tr><td>KM40TS</td><td>Pages: A317–A319</td></tr> <tr><td>KM50TS</td><td>Pages: A397–A398</td></tr> <tr><td>KM63TS</td><td>Pages: A488–A491</td></tr> <tr><td>KM80TS</td><td></td></tr> <tr><td>KM63XMZ</td><td>Pages: A565–A566</td></tr> <tr><td>KM80ATC</td><td rowspan="2"></td></tr> <tr><td>KM4X100</td></tr> </table>	KM1612		KM2016	KM2520	Pages: A175–A176	KM3225	Pages: A175–A176	KM32TS	Pages: A242–A243	KM40TS	Pages: A317–A319	KM50TS	Pages: A397–A398	KM63TS	Pages: A488–A491	KM80TS		KM63XMZ	Pages: A565–A566	KM80ATC
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KM63TS	Pages: A488–A491																																												
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S-Clamping		Tunable System KM™		Top Notch™ Profiling																																									
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KM80ATC																																													
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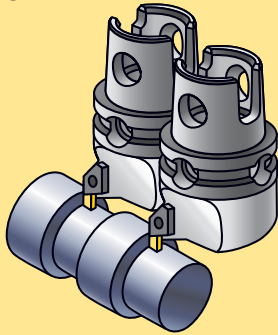
External Cut-Off		A2™		A3™/A4™																																														
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KM12	Page: A87																																																	
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KM4X100																																																		

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KM Quick Change Toolholder Options



External Grooving



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On-Edge Grooving

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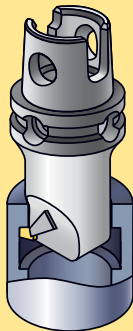
A3™/A4™

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Kenna Precision™

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Internal Grooving



Top Notch™ Grooving

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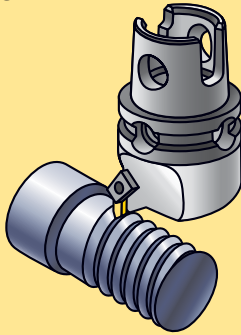
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KM4X100			

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External Threading



Top Notch™ Threading

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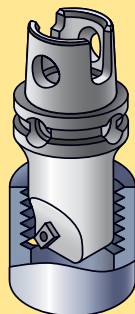
LT Threading

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On-Edge Threading

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Internal Threading



Top Notch™ Threading

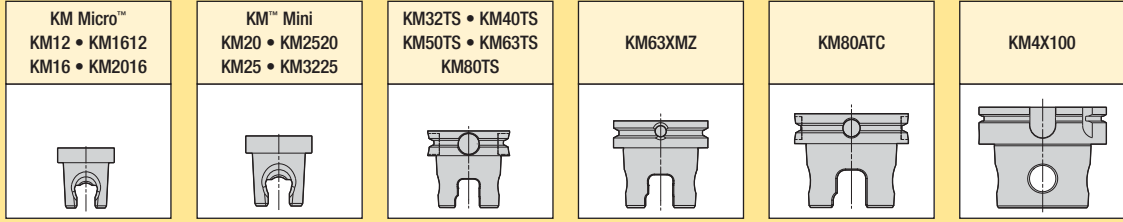
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LT Threading

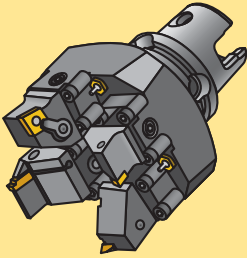
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KM80ATC		

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KM Quick Change Toolholder Options



External Multi-Tasking



4X STA – KM™

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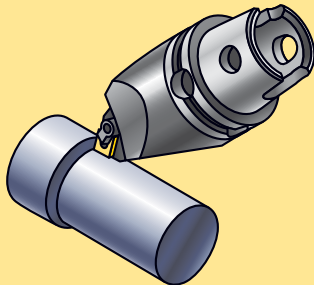
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2X/4X STA – Square Shanks

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External Centerline



M-Clamping

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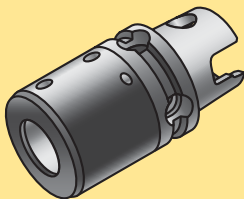
KM™ Reducers

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Turning Adapters



Boring Bar Adapters

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Boring Bar Sleeves

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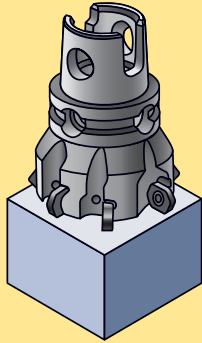
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Milling



Shrink Fit

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	KM63XMZ	
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TG Collet Chucks

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	KM80TS	
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Slim Line Hydraulic

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Hydraulic Chucks

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	KM63XMZ	

ER Collet Chucks

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	KM80TS	
	KM63XMZ	

DA Collet Chucks

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Whistle Notch™ Adapters

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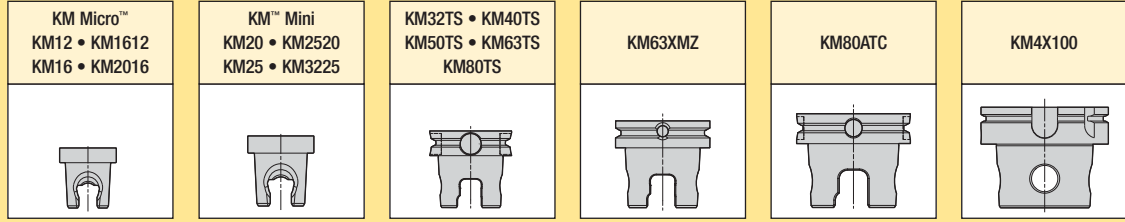
End Mill Adapters

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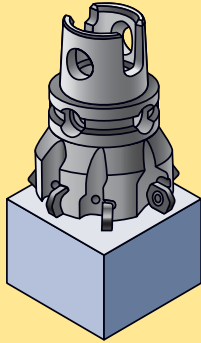
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KM Quick Change Toolholder Options



Milling (continued)



Tunable Shell Mill Adapters

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Shell Mill Adapters

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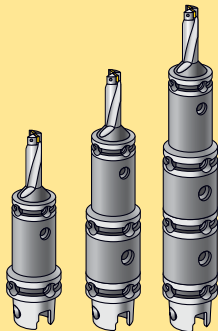
Combi-Shell Mill Adapters

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Modular Extensions and Reducers



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	KM80ATC	
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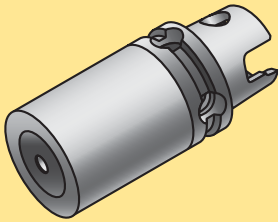
PSC to KM Modular

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	PSC80	Page: A619

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Auxiliary



Blanks

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Timing Heads

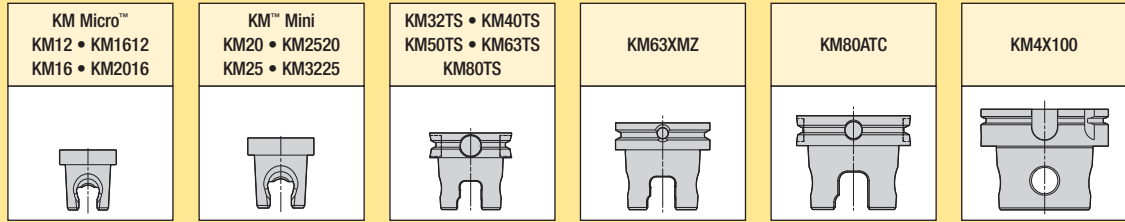
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	KM80ATC	
KM4X100		

Tumble Block

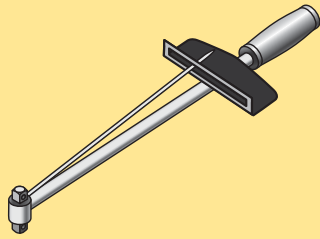
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KM4X100		

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KM Quick Change Toolholder Options



Accessories



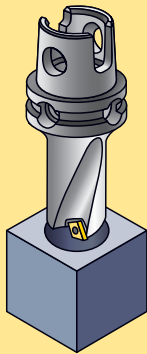
Torque Wrenches

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Presetter Shanks

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Drilling



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TG Collet Chucks

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	KM80ATC	Page: A610
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ER Collet Chucks

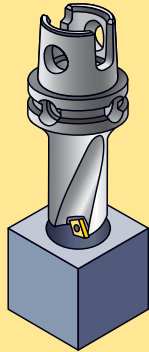
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	KM32TS	Pages: A254–A255
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	KM50TS	Page: A414
	KM63TS	Pages: A504–A505
	KM80TS	Pages: A542–A544
	KM63XMZ	Pages: A580–A581
	KM80ATC	Page: A611
	KM4X100	Page: A627

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KM Micro™ KM12 • KM1612 KM16 • KM2016	KM™ Mini KM20 • KM2520 KM25 • KM3225	KM32TS • KM40TS KM50TS • KM63TS KM80TS	KM63XMZ	KM80ATC	KM4X100	KM Quick Change Toolholder Options

Drilling (continued)



DA Collet Chucks

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	KM80TS		
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Drill Chucks

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	KM3225		
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Whistle Notch™ Adapters

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	KM80TS		
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KM80ATC			
KM4X100			

Romicron™

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	KM3225		
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	KM63XMZ		
	KM80ATC		
	KM4X100		

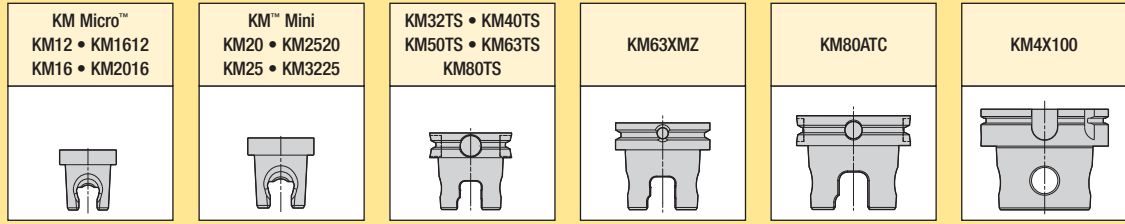
Drill Fix™ Adapters

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	KM63XMZ		
KM80ATC			
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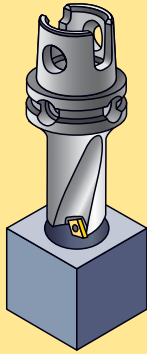
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KM Quick Change Toolholder Options



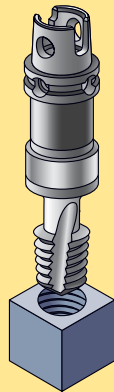
Drilling (continued)



Jacobs/DIN

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	KM40TS	
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Tapping



Solid Tapping

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RC Rapid Change

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	KM40TS	
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	KM63XMZ	
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	KM4X100	

TG Collet Chucks

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	KM3225	
	KM32TS	
	KM40TS	
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ER Collet Chucks

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KM80ATC	Page: A611	
KM4X100	Page: A627	

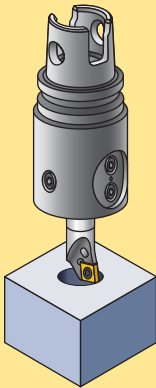
DA Collet Chucks

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	KM3225	
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	KM40TS	
	KM50TS	
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	KM80TS	
	KM63XMZ	
	Pages: A256–A257	
	Pages: A332–A333	
	Pages: A416–A417	
	KM80ATC	
	KM4X100	

Indicates "Not Available".

KM Micro™ KM12 • KM1612 KM16 • KM2016	KM™ Mini KM20 • KM2520 KM25 • KM3225	KM32TS • KM40TS KM50TS • KM63TS KM80TS	KM63XMZ	KM80ATC	KM4X100	KM Quick Change Toolholder Options

Boring



ModBORE™																			
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KM1612																			
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KM80TS																			
KM63XMZ																			
KM80ATC																			
KM4X100																			

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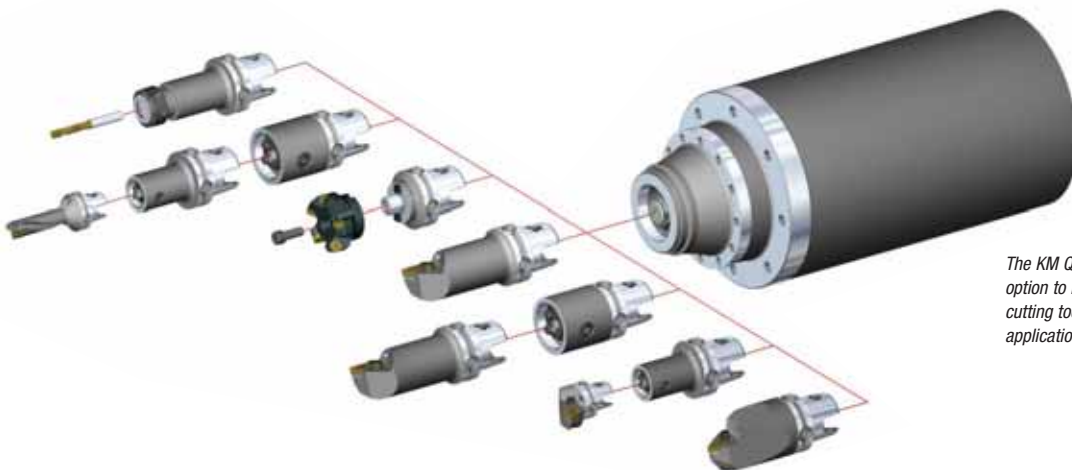
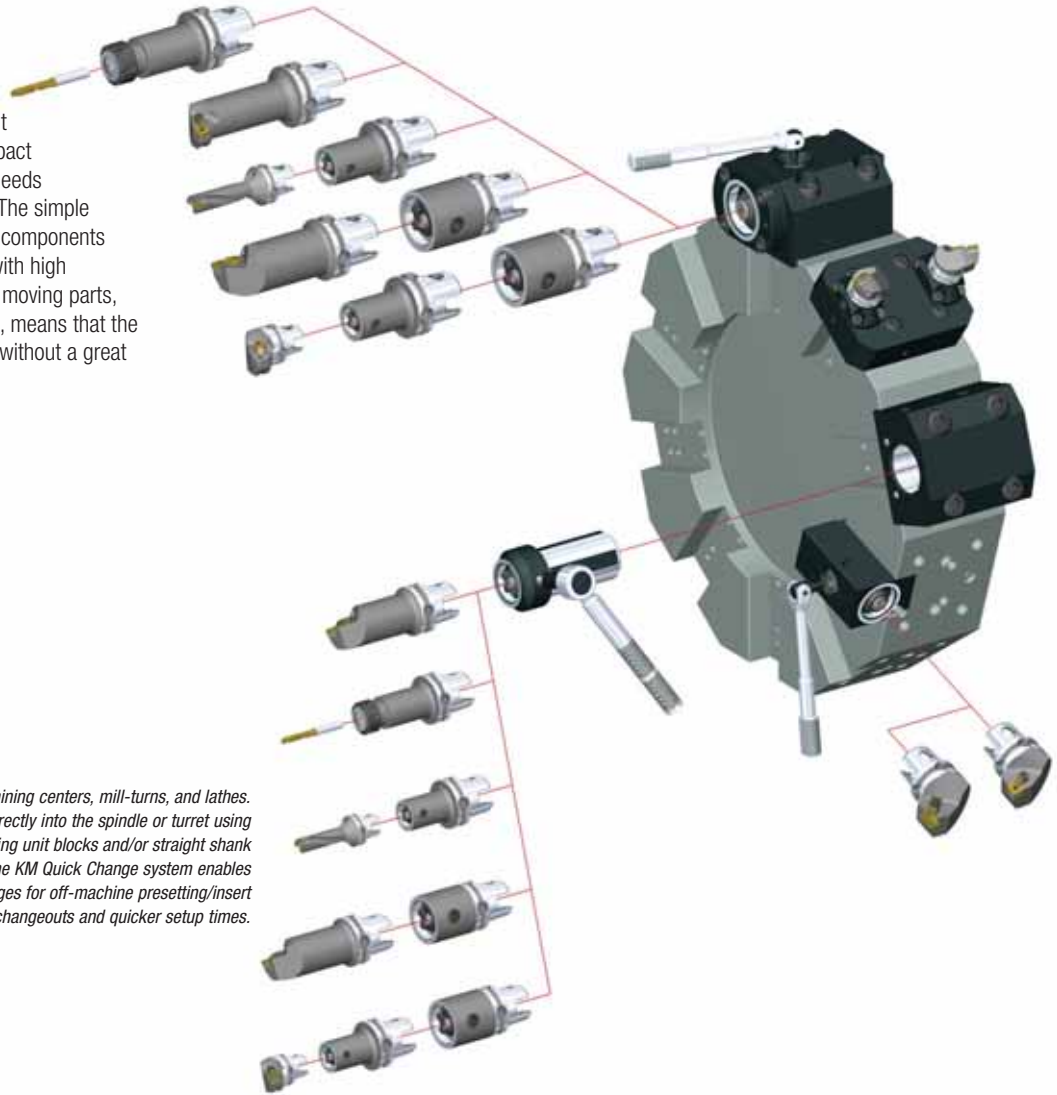
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Conversion and Clamping System

Clamping Units

KM™ offers a variety of different clamping designs to suit manufacturing needs. Each unit design comes in a portfolio of compact options to further diversify tooling needs across a multitude of applications. The simple design of the units utilizes minimal components to create a strong clamping force with high mechanical advantage. Having few moving parts, and requiring a low activation force, means that the KM Quick Change Clamps operate without a great deal of maintenance or error.

One system for machining centers, mill-turns, and lathes. Can be integrated directly into the spindle or turret using standardized clamping unit blocks and/or straight shank conversions to KM. The KM Quick Change system enables speedy tool changes for off-machine presetting/insert changeouts and quicker setup times.



The KM Quick Change modular system offers the option to build a combination of many possible cutting tool lengths for best rigidity for the application, optimizing costs and inventory.

Manual and Automatic Clamping Units



KM Manual Square Shank Replacements



KM Manual Round Shanks



KM Manual Flange Mounts



Rapid/Rapid Plus



KM-LOC II™ Square Shanks



KM-LOC II Round Shanks



KM-LOC II VDI Axial



KM Automatic Static

KM Manual Clamping Units

- Simple, compact design for use in many applications.
- Single- or four-pin clamping designs.
- Torque values used to clamp/unclamp tooling — 2-1/2 turns to activate.
- Available options: square shank, straight shank, flange mount, VDI, extensions/reducers, and machine tool blocks.

KM Rapid/Rapid Plus

- Simple and very compact design.
- Cam activation lock/unlock.
- Preferred for stationary applications.
- Low activation force required.
- Available style: Flange mount, VDI shank and mounting cartridge

KM-LOC™ Clamping Units

- First generation of turn-to-turn clamping units.
- Low activation torque required.
- Stop-to-stop activation.
- Cam-driven spring pack.
- KM-LOC clamping units are available in a limited portfolio to meet the needs of previous installations.

KM-LOC II Clamping Units

- Newest design in positive stop clamping units.
- Compact design with fewer components.
- Virtually maintenance free.
- Increased clamping force.
- Available options: flange cartridge, boring cartridge, straight shank, and VDI.
- 100 bar (1,500 psi) coolant capability.

Automatic Spring Packs

NACA, RACA Units

- Based on VDI turret concept.
- Common release point.
- Flexible turret.
- Right-angle mechanism.

KM80 XGL Design

- Compact and rigid.
- More than 14,000 lbs of clamping force.

Rotating Spindle Cartridge

- Easily incorporated into machine tool applications.
- Over 5:1 mechanical clamping force.
- Front-loading design for easy access maintenance that reduces downtime.
- No gripping fingers or retention knobs to reduce long-term performance.

Toolholding Systems



45° Centerline



Multi-station



Single-Square Shank Adapters



Cutting Units



Boring Bar Adapters



Shrink Fit Toolholders



Slim Line Hydraulic Chucks



Single-Angle Collet Chucks



Drills



KM Reducers

Clamping Units

KM offers a variety of different clamping designs to suit manufacturing needs. Each unit design comes in a portfolio of compact options to further diversify tooling needs across a multitude of applications.

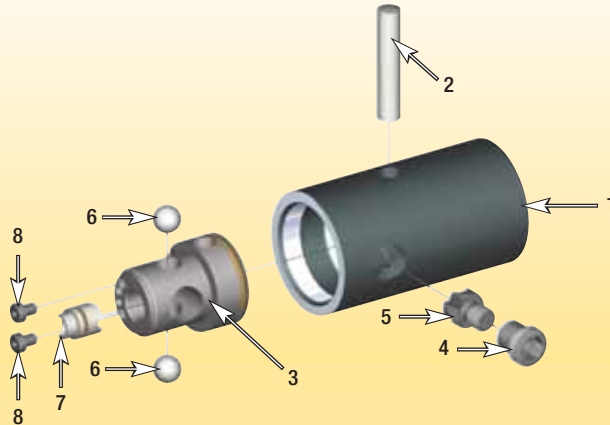
The simple design of the units utilizes minimal components to create a strong clamping force with high mechanical advantage. Having few moving parts and requiring a low activation force, means that the KM Quick Change clamps operate without a great deal of maintenance or error.

Manual Clamping Units

- Simple, compact design for use in many applications.
- Single- or four-pin clamping mechanisms.
- Torque values used to clamp/unclamp tooling — 2-1/2 turns to activate.
- Available options: square shank, straight shank, flange mount, VDI, extensions/reducers, and machine tool blocks.

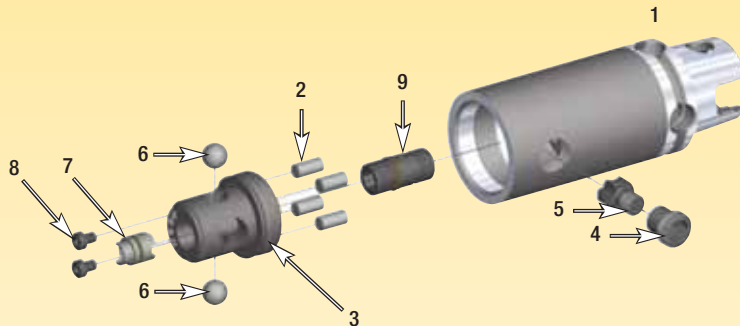
Single-Pin Design

1. Steel Body
2. Canister Pin
3. Canister
4. Torque Screw
5. Lockrod
6. Locking Balls
7. Bump-Off Pin
8. Bump-Off Pin Screws



Four-Pin Design

1. Steel Body
2. Canister Pin (4x)
3. Canister
4. Torque Screw
5. Lockrod
6. Locking Balls
7. Bump-Off Pin
8. Bump-Off Pin Screws
9. Canister Screw

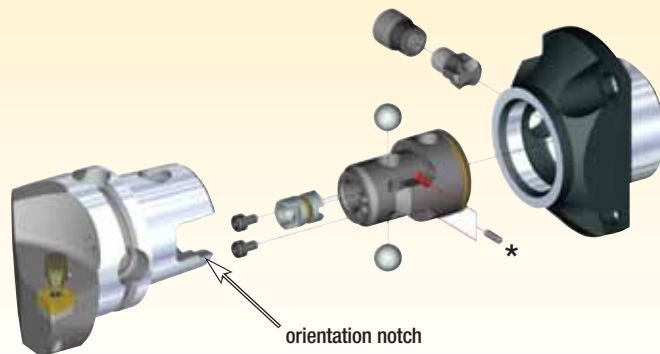


Error-Proofing Capability for KM Manual Clamping Units

KM Manual units must be disassembled in order to be error proofed. After disassembling the unit, you will find two holes within the canister. To error-proof the unit, insert a metric slotted pin* into one of the holes within the canister. Reassemble, and the clamping unit is now error-proofed.

*Metric Slotted Pins:

- KM40TS — 3mm x 6mm long.
- KM50TS — 4mm x 8mm long.
- KM63TS — 5mm x 10mm long.
- KM80TS — 5mm x 10mm long.
- KM63XMZ — 5mm x 10mm long.
- KM80ATC — 5mm x 10mm long.

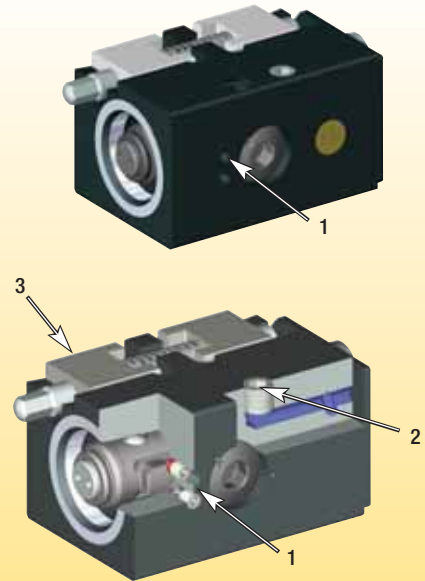


KM-LOC II™ Clamping Units

- Newest design in turn-to-turn clamping.
- Compact design with fewer components.
- Single- and two-piece designs.
- Virtually maintenance free.
- Increased clamping force.
- Available options: flange cartridge, boring cartridge, straight shank, and VDI.
- 100 bar (1,500 psi) coolant.

1. Error Proofing
2. Coolant Port
3. Locking Wedges

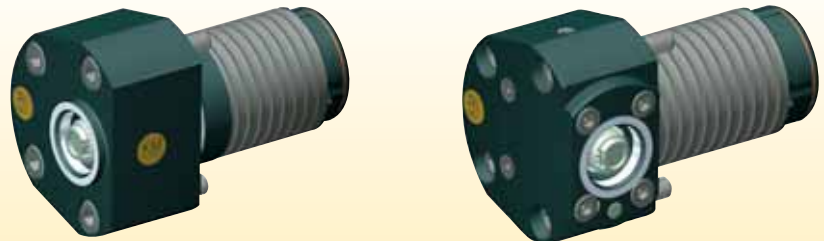
KM-LOC II clamping units offer an increased mechanical advantage of up to 7:1. They require less activation torque, which creates less stress on the clamp's components. The readily adaptable design of the KM-LOC II clamping unit enables the device's user to manufacture the tool block as they choose.



Automatic Spring Packs

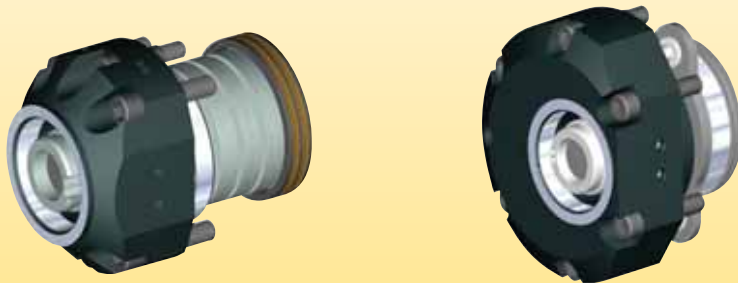
NACA, RACA Units

- Based on VDI turret concept.
- Common release point.
- Flexible turret.
- Axial and right-angle mechanism.
- Clamping force provided by disk spring package.



KM80 XGL Static

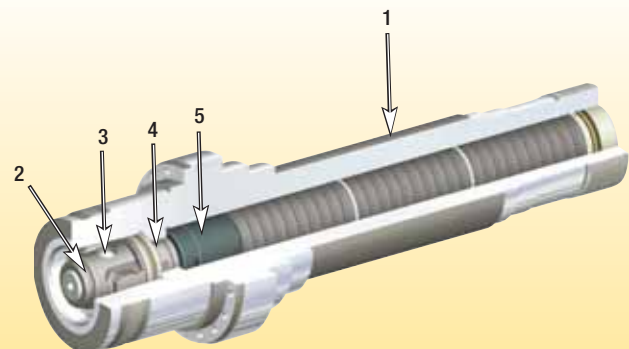
- Compact and rigid.
- More than 14,000 lbs of clamping force.
- Clamping force provided by disk spring package.



Rotating Spindle

- Easily incorporated into machine tool applications.
- Over 5:1 mechanical clamping force.
- Front-loading design for easy access maintenance that reduces downtime.
- No gripping fingers or retention knobs to reduce long-term performance.

1. KM Spindle Cartridge
2. Canister
3. Clamping Balls
4. Lockrod
5. Canister Nut


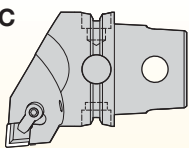
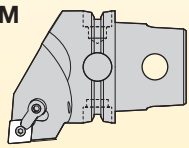
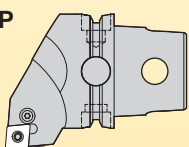
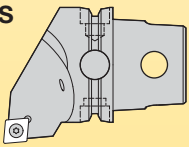








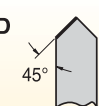
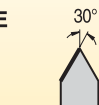
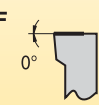

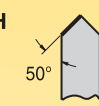
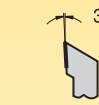
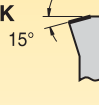
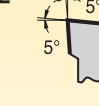


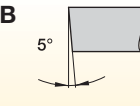
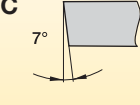
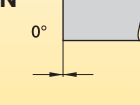

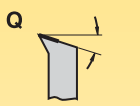
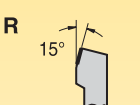
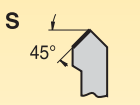
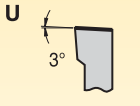
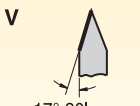
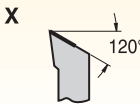


How Do Catalog Numbers Work?

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.



KM63TSPCLNR1204

KM	63	TS	P	C	L	N
KM Quick Change	System Size	Feature	Insert Holding Method	Insert Shape	Toolholder Style	Insert Clearance Angle
	<p>40 = 40mm 50 = 50mm 63 = 63mm 80 = 80mm 100 = 100mm</p> 	<p>TS XMZ ATC 4X</p>	<p>C  C-Clamping Top clamping by clamping finger for inserts without hole</p> <p>M  M-Clamping Top and hole clamping for inserts with hole</p> <p>P  P-Clamping Insert clamping by toggle lever for insert with hole</p> <p>S  S-Clamping Center clamping by screw for inserts with hole</p>	<p>C  80°</p> <p>D  55°</p> <p>K  55°</p> <p>R </p> <p>S  90°</p> <p>T  60°</p> <p>V  35°</p> <p>W  80°</p>	<p>D  45°</p> <p>E  30°</p> <p>F  0°</p> <p>G  0°</p> <p>H  50°</p> <p>J  3°</p> <p>K  15°</p> <p>L  5°</p> <p>N  63°</p> <p>P  27° 30'</p>	<p>B  5°</p> <p>C  7°</p> <p>N  0°</p> <p>P  11°</p> <p>Q  17° 30'</p> <p>R  15°</p> <p>S  45°</p> <p>U  3°</p> <p>V  17° 30'</p> <p>X  120°</p>

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



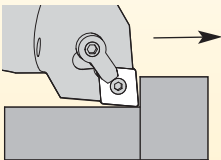
KM63TSPCLNR1204

R

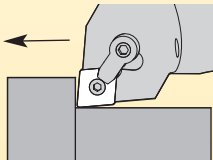
Hand of Tool

R = Right hand
L = Left hand
N = Neutral

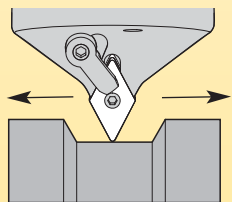
R



L



N



12

Insert Size
Cutting Edge
Length L10

MX

Additional
Information

MX =
Ceramic
inserts

04

Insert
Thickness

03 = .125"
T3 = .156"
04 = .188"
06 = .250"
07 = .312"

Gage
Length

30 = 30mm
45 = 45mm
120 = 120mm

Special
Features

Y = Mazak®
INTEGREX®
M = Metric

Metric

IC	C	D	K	R	S	T	V	W
3,97		04		03	03	06		
4,76	04	05		04	04	08	08	S3
5,56	05	06	03	05	05	09	09	03
6,00				06				
6,35	06	07	04	06	06	11	11	04
7,94	08	09	05	07	07	13	13	05
8,00				08			11	
9,52	09	11	06	09	09	16	16	06
9,52								
10,00				10				
11,11	11	13	07	11	11	19	19	07
12,00				12				
12,70	12	15	08	12	12	22	22	08
14,29	14	17	09	14	14	24	24	09
15,88	16	19	10	15	15	27	27	10
16,00				16				
17,46	17	21	11	17	17	30	30	11
19,05	19	23	13	19	19	33	33	13
20,00				20				
22,22	22	27	15	22	22	38	38	15
25,00				25				
25,40	25	31	17	25	25	44	44	17
31,75	32	38	21	31	31	54	54	21
32,00				32				

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.



KM63TSS32GMCLNR1204

KM

KM Quick Change

63

System Size

- 40 = 40mm
- 50 = 50mm
- 63 = 63mm
- 80 = 80mm
- 100 = 100mm



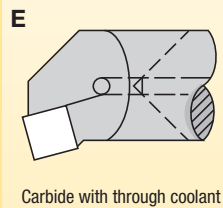
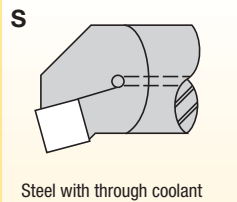
TS

Feature

- TS
- XMZ
- ATC
- 4X

S

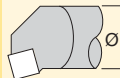
Bar Type



32

Bar Diameter

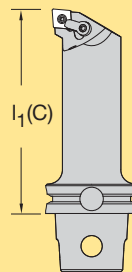
- 10 = 10mm
- 12 = 12mm
- 16 = 16mm
- 20 = 20mm
- 25 = 25mm
- 32 = 32mm
- 40 = 40mm
- 50 = 50mm



G

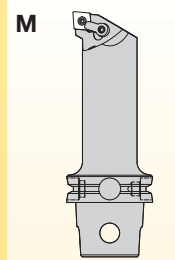
Bar Gage Length

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

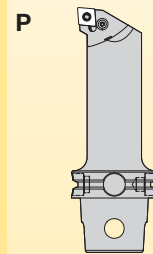


M

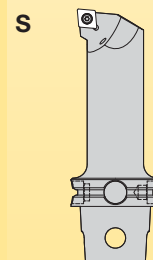
Insert Holding Method



M-Clamping
Top and hole clamping for inserts with hole



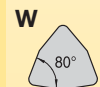
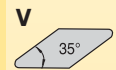
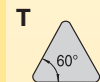
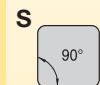
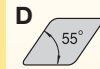
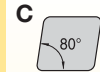
P-Clamping
Insert clamping by toggle lever for insert with hole



S-Clamping
Center clamping by screw for inserts with hole

C

Insert Shape



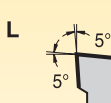
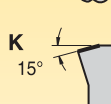
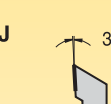
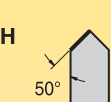
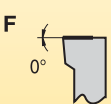
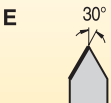
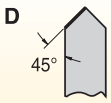
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM63TSS32GMCLNR1204

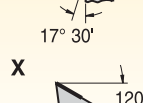
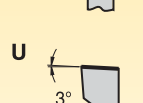
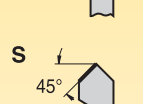
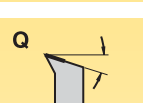
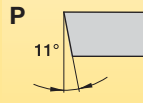
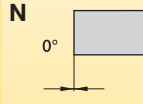
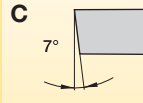
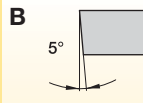
L

Toolholder Style or Lead Angle



N

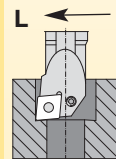
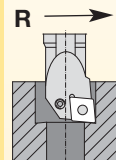
Insert Clearance Angle



R

Hand of Tool

R = Right hand
L = Left hand



12

Insert Size Cutting Edge Length L10

04

Insert Thickness

- 03 = .125"
- T3 = .156"
- 04 = .188"
- 06 = .250"
- 07 = .312"

Special Features

- Y = Mazak® INTEGREX®
- M = Metric

Metric

IC	C	D	K	R	S	T	V	W
3,97		04		03	03	06		
4,76	04	05		04	04	08	08	S3
5,56	05	06	03	05	05	09	09	03
6,00				06				
6,35	06	07	04	06	06	11	11	04
7,94	08	09	05	07	07	13	13	05
8,00				08			11	
9,52	09	11	06	09	09	16	16	06
9,52								
10,00				10				
11,11	11	13	07	11	11	19	19	07
12,00				12				
12,70	12	15	08	12	12	22	22	08
14,29	14	17	09	14	14	24	24	09
15,88	16	19	10	15	15	27	27	10
16,00				16				
17,46	17	21	11	17	17	30	30	11
19,05	19	23	13	19	19	33	33	13
20,00				20				
22,22	22	27	15	22	22	38	38	15
25,00				25				
25,40	25	31	17	25	25	44	44	17
31,75	32	38	21	31	31	54	54	21
32,00				32				

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.



KM63TSNSR3

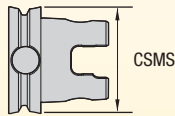
KM

KM
Quick
Change

63

System
Size

- 40 = 40mm
- 50 = 50mm
- 63 = 63mm
- 80 = 80mm
- 100 = 100mm



TS

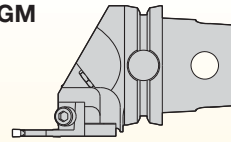
Feature

- TS
- XMZ
- ATC
- 4X

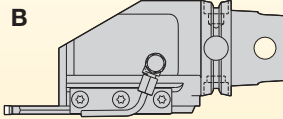
N

Insert
Holding Method

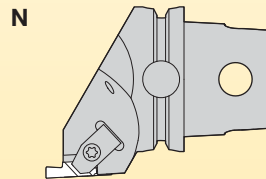
KGM



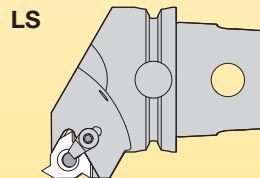
A3™/A4™
Modular grooving



A2™
Deep grooving and cut-off



Top Notch™
Grooving and threading

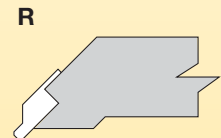
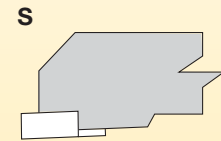
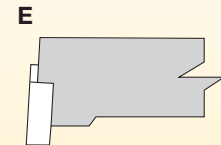


LT Threading

S

Insert
Location

- E = End mount
- S = Side mount
- R = Angle mount



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



KM63TSNSR3

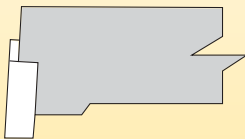
R

Hand of Tool

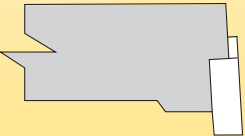
R = Right hand
L = Left hand

End mount

R

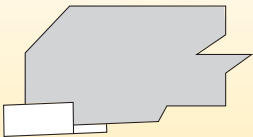


L

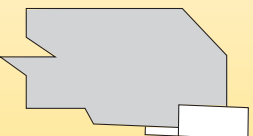


Side mount

R



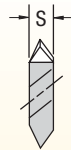
L



3

Insert Size

Top Notch™

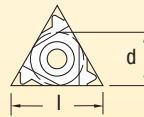


N = Insert size

2	3,18
3	4,95
4	6,48
5	9,65
6	11,13

LT Threading

I = Cutting edge length



I	d (IC)
16	9,52
22	12,70
27	15,88

A2, A3, and A4

seat size
1
1B
2
2B
3
4
5

KGM

cartridge size
50
65

Additional Information

E = External only
N = Internal only

Special Features

Y = Mazak®
INTEGREX®
M = Metric

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.



KM63TSS32LNER3

KM

KM
Quick
Change

63

System
Size

- 40 = 40mm
- 50 = 50mm
- 63 = 63mm
- 80 = 80mm
- 100 = 100mm



TS

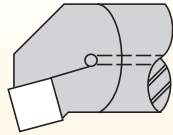
Feature

- TS
- XMZ
- ATC
- 4X

S

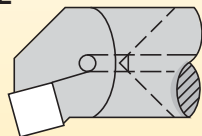
Bar
Type

S



Steel with through coolant

E

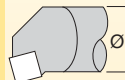


Carbide with through coolant

32

Bar
Diameter

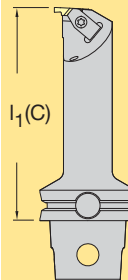
- 10 = 10mm
- 12 = 12mm
- 16 = 16mm
- 20 = 20mm
- 25 = 25mm
- 32 = 32mm
- 40 = 40mm
- 50 = 50mm



L

Bar Gage
Length

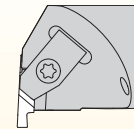
C	50
D	60
E	70
F	80
G	90
H	100
J	110
K	125
L	140
M	150
N	160
P	170
Q	180
R	200
S	250
T	300
U	350
V	400
W	450
Y	500
X	Special



N

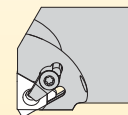
Insert
Holding
Method

N



Top Notch™
Grooving and
threading

LS



LT Threading

E

Insert
Location

E



E = End mount

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



KM63TSS32LNER3

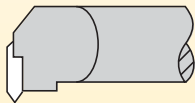
R

Hand of Tool

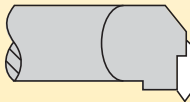
R = Right hand
L = Left hand

End mount

R



L

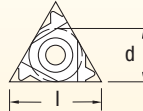
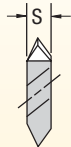


3

Insert Size

N = Insert size

I = Cutting edge length



N	S	I	d (IC)
2	3,18	11	6,35
3	4,95	16	9,52
4	6,48	22	12,70
5	9,65	27	15,88
6	11,13	—	—

Additional Information

E = External
N = Internal

Special Features


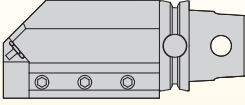
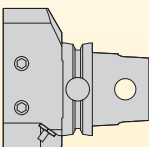
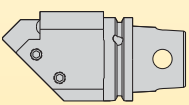
Y = Mazak®
INTEGREX®
M = Metric

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.



KM63TSSTAL

KM	63	TS		STA	L	
KM Quick Change	System Size	Feature	Variance	Toolholder Style	Hand of Tool	Special Features
	<p>40 = 40mm 50 = 50mm 63 = 63mm 80 = 80mm 100 = 100mm</p> 	<p>TS XMZ ATC 4X</p>	<p>2X 4X 45</p>	<p>STA</p>  <p>Side mount</p> <p>ETA</p>  <p>End mount</p> <p>TA</p>  <p>45° Mount</p>	<p>L = Left hand R = Right hand</p>	<p>Y = Mazak® INTEGREX®</p>

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



KM63TSTG100100M

KM

KM Quick Change

63

System Size

- 40 = 40mm
- 50 = 50mm
- 63 = 63mm
- 80 = 80mm
- 100 = 100mm

TS

Feature

- TS
- XMZ
- ATC
- 4X

TG

Toolholder Style

100

Toolholder Style Size

Varies according to toolholder style

100

Tool Gage Length

100 = 100mm

M

Metric

Y

Special Features

Y = Mazak® INTEGREGX®

- | | |
|--|--|
| BN = Blank | JT = Jacobs taper adapter |
| CS = Combi shell mill adapter | MT = Morse taper adapter |
| DA = Double-angle collet chuck | P = Spindle plug |
| DAT = Drill adapter | RDC = Drill chuck |
| DFX = Indexable drill | S = KM extensions-reducers |
| DFT = Indexable drill | SMC = Shell mill adapter with coolant |
| EM = Weldon® end mill adapter | SSF = Adapter for straight shanks with flat (drills) |
| ER = DIN 6499 single-angle collet chuck | ST = Solid tap adapter |
| ES = KM offset extensions | SWN = Whistle Notch™ 2° — short — not to DIN standard |
| GB = Gage bar | TC = Tension-compression tap adapter |
| HC = Hydraulic chuck — Standard Line | TG = Tremendous Grip single-angle collet chuck |
| HCSL = Hydraulic chuck — Slim Line | TT = Shrink Fit thermo toolholder |
| HCSLT = Hydraulic chuck — Slim Line — Trend | WD = Whistle Notch with drill |
| HPHC = Hydraulic chuck — high performance | WN = Whistle Notch (2° metric; 5° inch) |
| HPMC = Milling chuck — high performance | WN/EM = Whistle Notch — Weldon chuck |

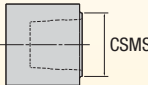
How Do Catalog Numbers Work?

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.



KM12NCMSS



KM	12	N	C	M	SS
Kennametal Modular	System Size	Version	Clamping Unit	Control	Type
KM Micro™ and KM™ Mini Quick Change Tooling Systems	12 = 12mm 16 = 16mm 20 = 20mm 25 = 25mm 	N = Neutral L = Left hand R = Right hand E = Offset		M = Manual A = Automatic	E = Carbide round shank S = Round shank SEF = Extended flange mount SF = Flange mount SS = Round shank with shoulders

Looking for a product that's not shown in this catalog?
Check the Kennametal website!



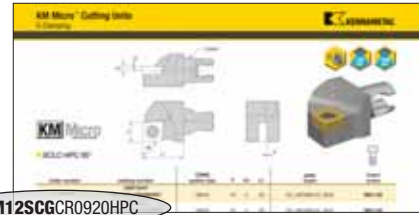
Tooling Systems

Online product catalog available 24/7

Visit <http://www.kennametal.com/toolingsystems/> to browse our electronic catalog any time you're looking for Kennametal's best tooling solutions. It's fast, free, and always available. The online e-catalog is updated weekly with products and solutions for milling, turning, holmaking, and tooling systems applications.

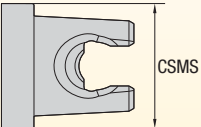
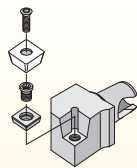
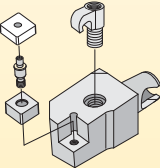

























































How Do Catalog Numbers Work?

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.



KM12SCGCR0920HPC



KM	12	S	C	G																		
Kennametal Modular	System Size	Clamping System	Insert Shape	Cutting Unit Shape																		
KM Micro™ and KM™ Mini Quick Change Tooling Systems	<p>12 = 12mm 16 = 16mm 20 = 20mm 25 = 25mm</p> 	<p>S</p>  <p>S-Clamping Clamped from above with a screw for indexable inserts with hole</p> <p>M</p>  <p>M-Clamping Clamped from above and through hole with using a pin for indexable inserts with hole</p>	<p>C </p> <p>D </p> <p>K </p> <p>S </p> <p>W </p> <p>V </p>	<table border="0"> <tr> <td>A </td> <td>M </td> </tr> <tr> <td>D </td> <td>N </td> </tr> <tr> <td>E </td> <td>P </td> </tr> <tr> <td>F </td> <td>Q </td> </tr> <tr> <td>G </td> <td>R </td> </tr> <tr> <td>H </td> <td>S </td> </tr> <tr> <td>J </td> <td>U </td> </tr> <tr> <td>K </td> <td>V </td> </tr> <tr> <td>L </td> <td>X Special Version</td> </tr> </table>	A 	M 	D 	N 	E 	P 	F 	Q 	G 	R 	H 	S 	J 	U 	K 	V 	L 	X Special Version
A 	M 																					
D 	N 																					
E 	P 																					
F 	Q 																					
G 	R 																					
H 	S 																					
J 	U 																					
K 	V 																					
L 	X Special Version																					

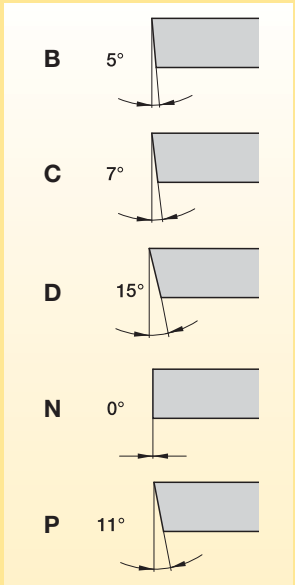
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM12SCGCR0920HPC

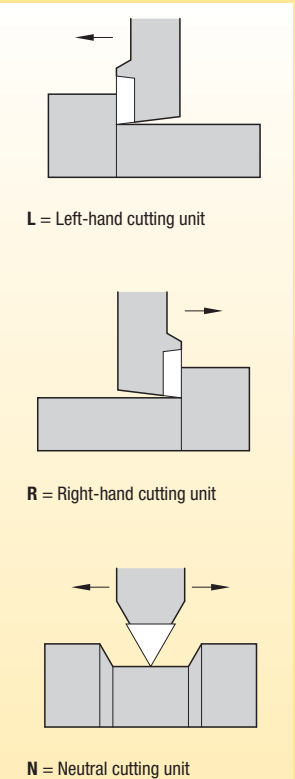
C

Clearance Angle



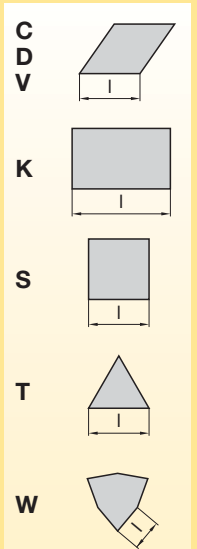
R

Direction



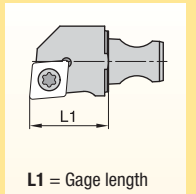
09

Insert Size



20

Gage Length



HPC

Coolant

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

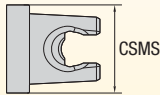
Kennametal
Modular

KM Micro™
and KM™ Mini
Quick Change
Tooling Systems

1612

System Size

1612 = Ø 16mm
2016 = Ø 20mm
2520 = Ø 25mm
3225 = Ø 32mm



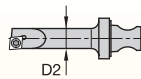
S

Boring Bar
Features

S = Tool steel
E = Carbide

04

Shank
Diameter

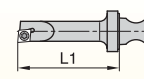


The code is shank diameter D2. Ignore digits after the decimal point.

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

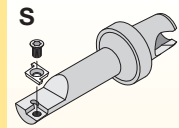
Gage
Length



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

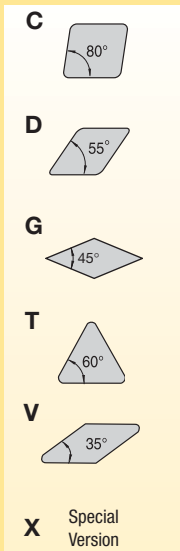
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM1612S0424SCLDR04S

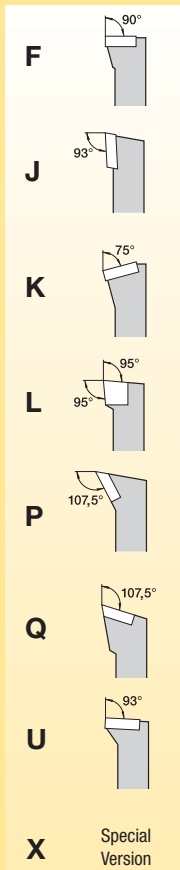
C

Insert Shape



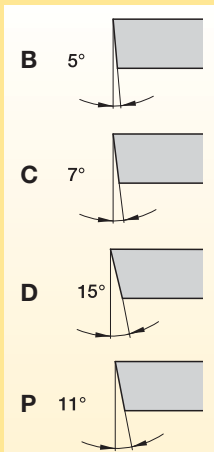
L

Cutting Unit Shape



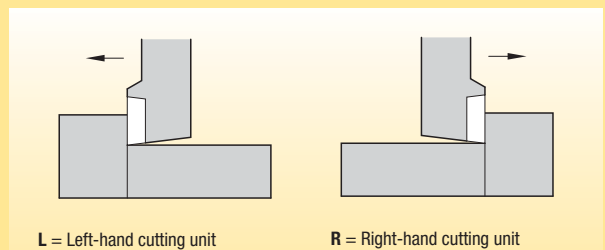
D

Clearance Angle



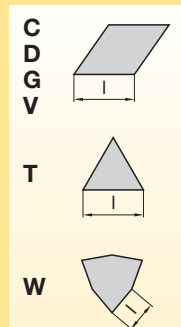
R

Direction



04

Insert Size



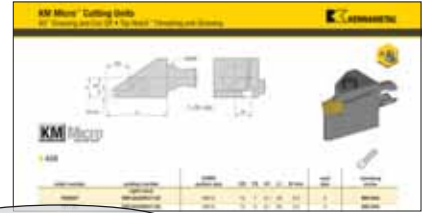
S

Clamping Access



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

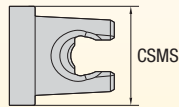
Kennametal
Modular

KM Micro™
and KM™ Mini
Quick Change
Tooling Systems

12

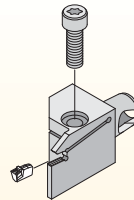
System Size

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

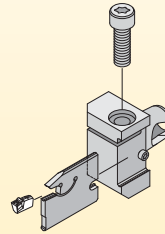


A3

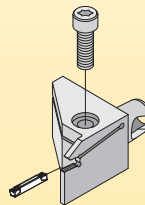
Clamping Systems



A3 = Deep grooving



A2 = Cut-off



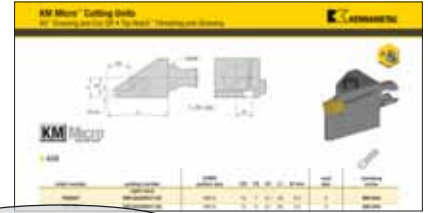
A4 = Grooving

S

Holder Version

- S = Side mount
- E = End mount

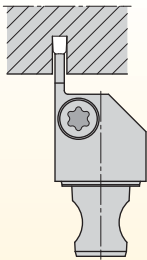
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



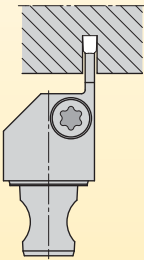
KM12A3SR31130

R

Direction



R = Right hand



L = Left hand

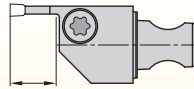
3

Insert Seat Size

insert seat size
1
1B
2
2B
3
4
5

11

Cutting Depth



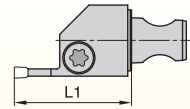
07 = 7mm

11 = 11mm

16 = 16mm

30

Gage Length



L1 = Gage length

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%

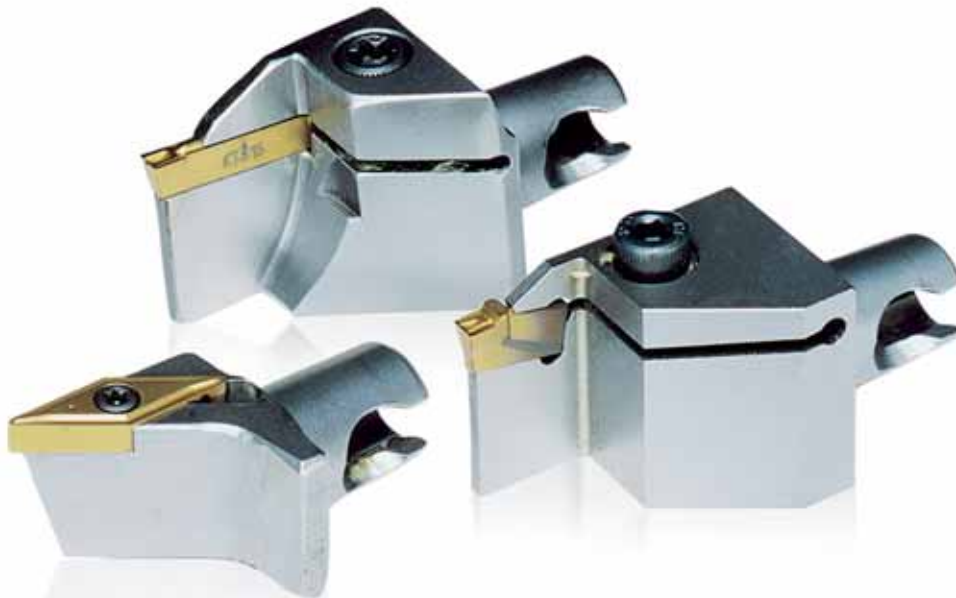
The KM Micro and KM Mini systems have been specially designed for use with automatic lathes, as well as smaller universal lathes. The quick-change cutter heads reduce indexing and setup times on machines by up to 66%.

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

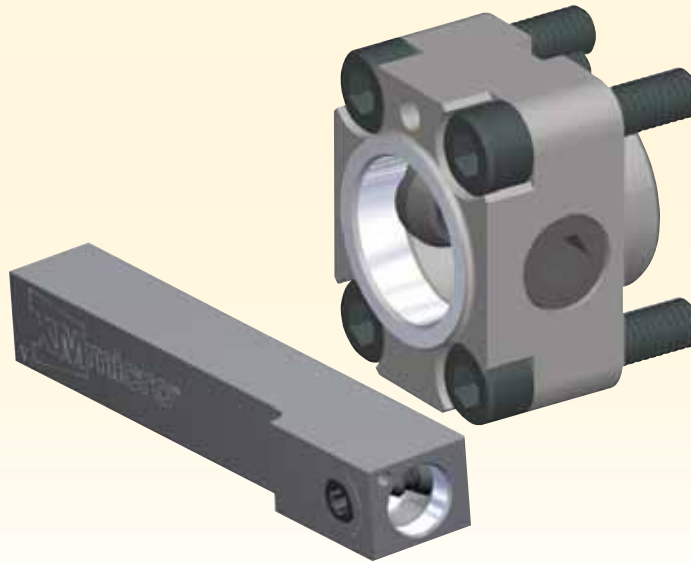
The new KM Micro and KM Mini square shank adapters can be installed quickly and easily in existing tool block adapters. Existing clamp-type toolholders are replaced by KM Micro and KM Mini adapters with the same dimensions, and the machine is then ready for use.

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.

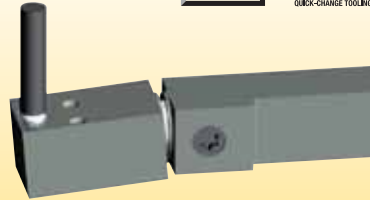


KM Micro and KM Mini

1	<p>Step 1: Typical Swiss tool block.</p> <p>Difficult to change the insert.</p>	
2	<p>Step 2: Change the cutting unit, not the insert!</p> <p>Actual tool change.</p>	

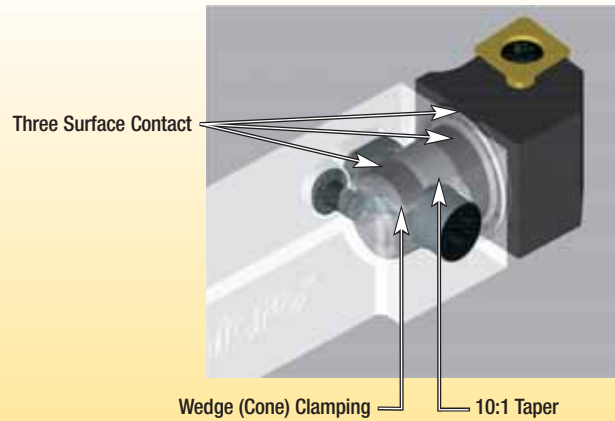
Selection Guide for KM™ Clamping Systems

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

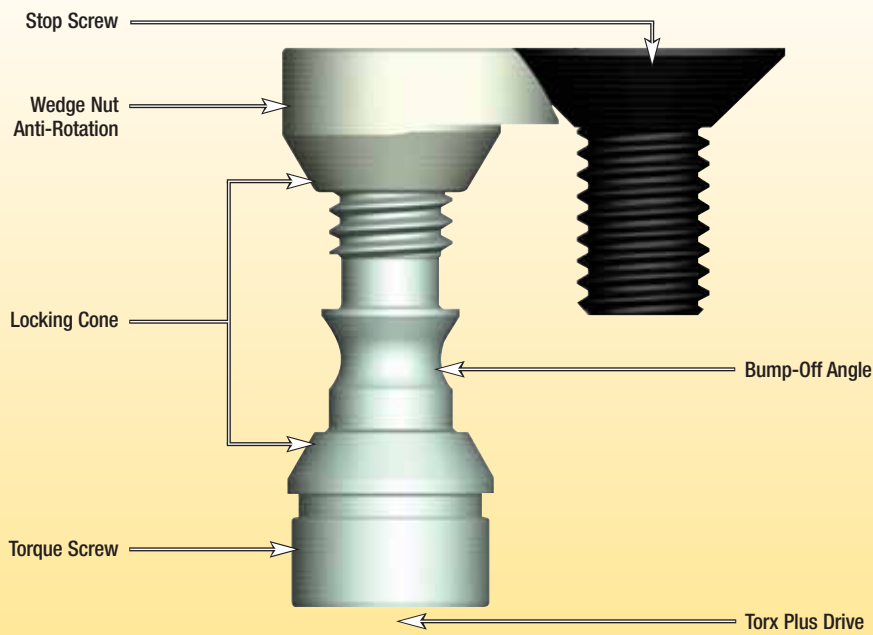


Taper Features

- 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.



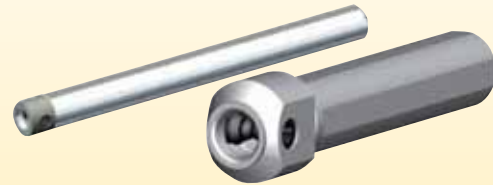
Mechanism Features



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

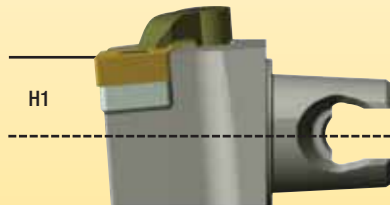
The KM1612/KM2016/KM2520/KM3225 is the I.D. end-working tooling product line to complement the KM12™/KM16™/KM20™/KM25™ O.D. turning tooling product line.

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

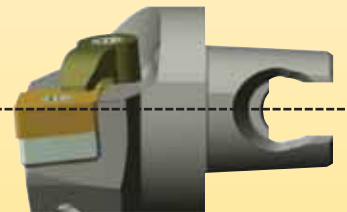


Round Shank Clamping Units

The major difference is center height location of the insert:





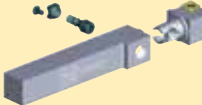


KM12/KM16/KM20/KM25
Square shank cutting units.
Insert is above centerline.



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

Type

Square shank

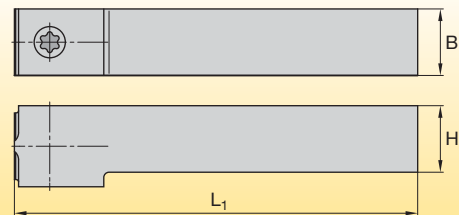
12

Shank Height

H = Shank height
B = Shank width
L₁ = Shank length

12

Shank Width



100

Shank Length

SS

Type

SS = Square shank with shoulders

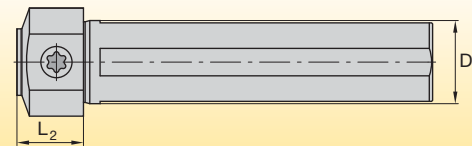
19

Shank Diameter

D = Shank diameter
L₂ = Shoulder length

14

Shoulder Length



SF

Type

SF = Flange mount
SEF = Extended flange mount

27

Flange Width

B₂ = Flange width



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



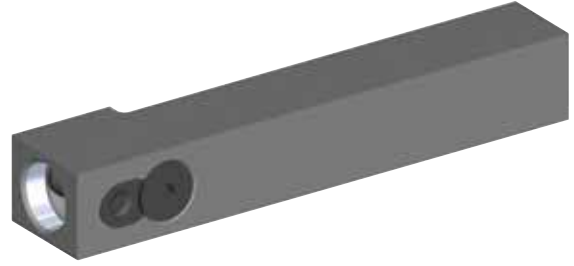
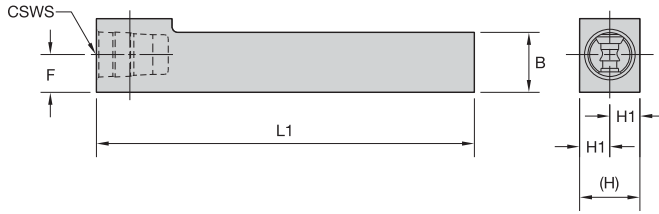
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



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>			





KM Micro Clamping Units

■ NCM • Metric

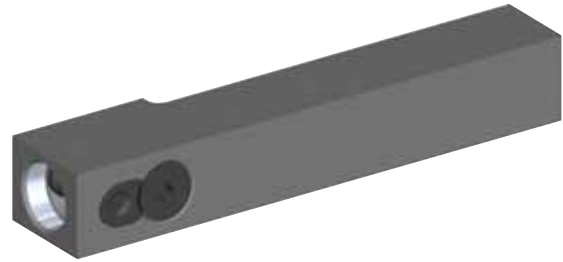
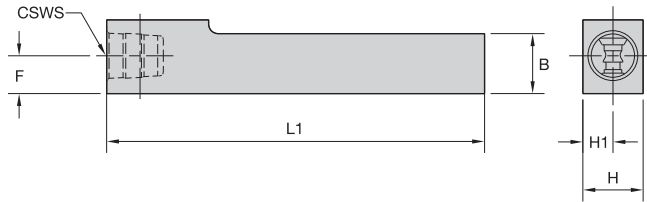


order number	catalog number	CSWS system size	B	H	H1	F	L1	spare parts package	wrench size actuation screw	Nm
1922492	KM12NCM1212100	KM12	12,00	11,95	6,00	8,00	100,00	KM12NAPKG	25 IP	7-8
2238505	KM16NCM1616100	KM16	16,00	16,00	8,00	10,00	100,00	KM16NAPKG	27 IP	10-11

■ NCM • Inch



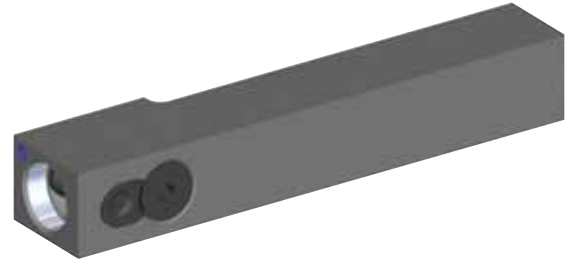
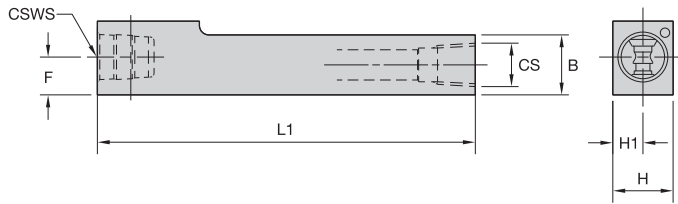
order number	catalog number	CSWS system size	B	H	H1	F	L1	spare parts package	wrench size actuation screw	ft. lbs.
2238506	KM16NCM10400	KM16	.600	.600	.310	.390	4.000	KM16NAPKG	27 IP	7-8



■ 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



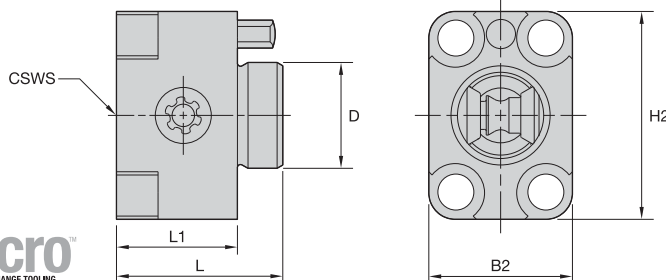
KM Micro Clamping Units


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

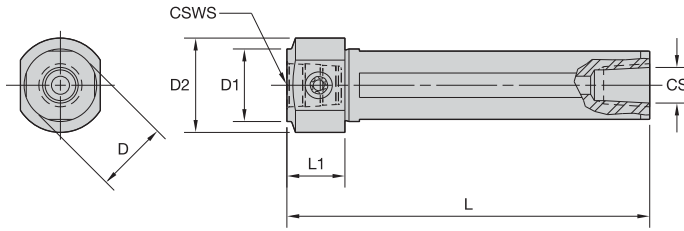
R/LCM-HPC • Inch


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

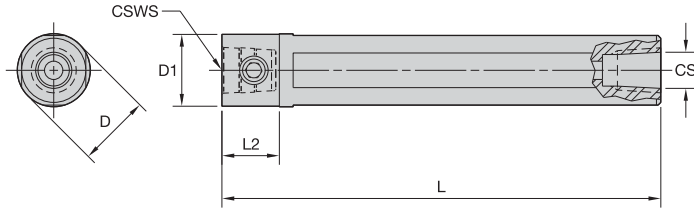


order number	catalog number	CSWS system size	CS	D	D1	D2	L	L1	spare parts package	wrench size actuation screw	Nm
2439977	KM1612NCMSS1614	KM1612	1/8-27 NPT	16	16	22	100	14	KM12NRPKG	25 IP	7-8
1925739	KM1612NCMSS1914	KM1612	1/8-27 NPT	19	16	25	100	14	KM12NRPKG	25 IP	7-8
2439981	KM1612NCMSS2014	KM1612	1/8-27 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



■ NCM-S • Metric

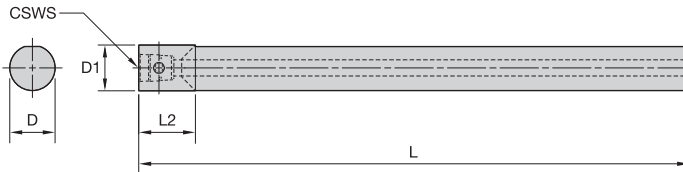


order number	catalog number	CSWS system size	CS	D	D1	L	L2	spare parts package	wrench size actuation screw	Nm
3016744	KM2016NCMS20	KM2016	1/8 - 27 NPT	20	20	230	20	KM16NRPKG	27 IP	10-11

■ 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

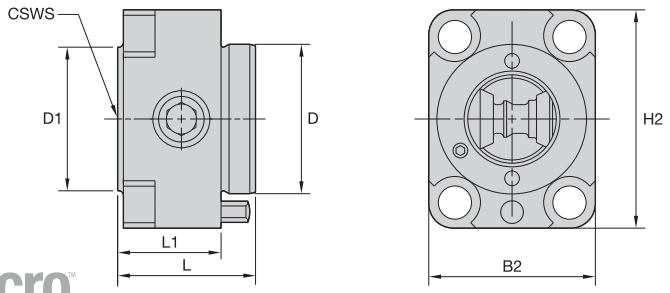


order number	catalog number	CSWS system size	D	D1	L	L2	spare parts package	wrench size actuation screw	Nm
3016721	KM2016NCME12	KM2016	19	20	243,56	25,00	KM16NRPKG	27 IP	10-11

■ 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.

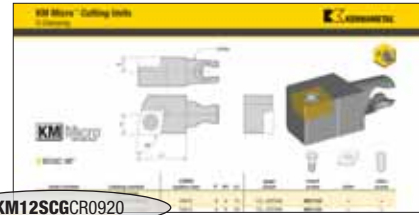
Experience the advantages at your Authorized Kennametal Distributor or at www.kennametal.com.

www.kennametal.com



How Do Catalog Numbers Work?

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.



KM12SCGCR0920



KM

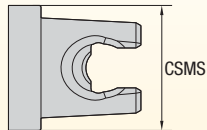
Kennametal
Modular

KM Micro™ Quick Change
tooling system

12

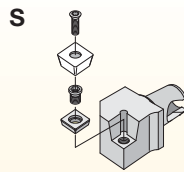
System
Size

12 = Ø 12 x 12mm
16 = Ø 16 x 16mm

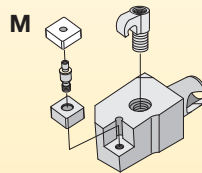


S

Clamping
System



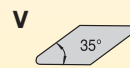
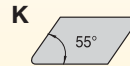
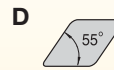
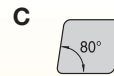
S-Clamping
Clamped from above with
a screw for indexable
inserts with hole



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

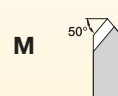
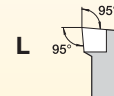
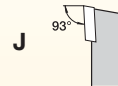
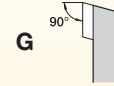
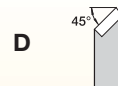
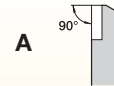
C

Insert
Shape

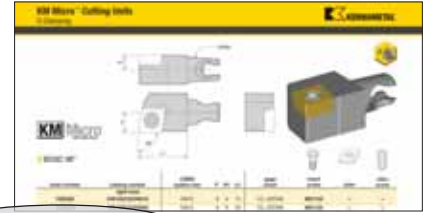


G

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>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

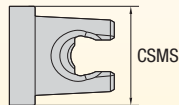
Kennametal
Modular

KM Micro™
and KM™ Mini
Quick Change
tooling systems

12

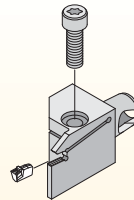
System Size

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

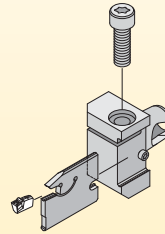


A3

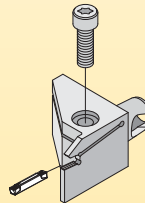
Clamping Systems



A3 = Deep grooving



A2 = Cut-off



A4 = Grooving

S

Holder Version

S = Side mount
 E = End mount

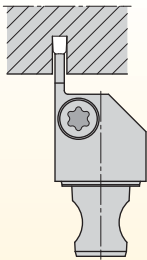
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



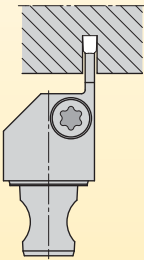
KM12A3SR31130

R

Direction



R = Right hand



L = Left hand

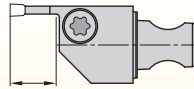
3

Insert Seat Size

insert seat size
1
1B
2
2B
3
4
5

11

Cutting Depth



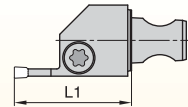
07 = 7mm

11 = 11mm

16 = 16mm

30

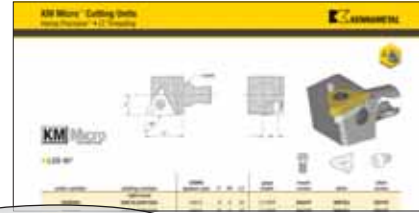
Gage Length



L1 = Gage length

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

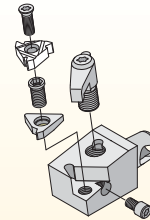
12

System
Size

12 = Ø 12 x 12mm
16 = Ø 16 x 16mm

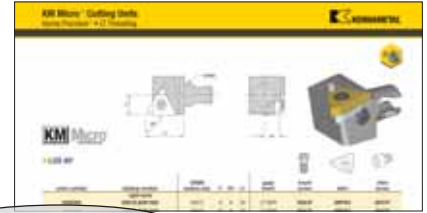
LS

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

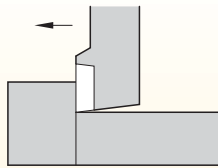
S

Application

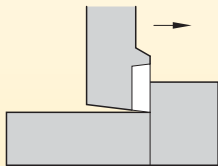
E = End mount
S = Side mount

R

Direction



L = Left-hand cutting unit

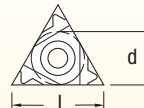


R = Right-hand cutting unit

16

Insert Size

l = Cutting edge length



l	d (IC)
11	6,35
16	9,52
22	12,70
27	15,88

20

Gage Length

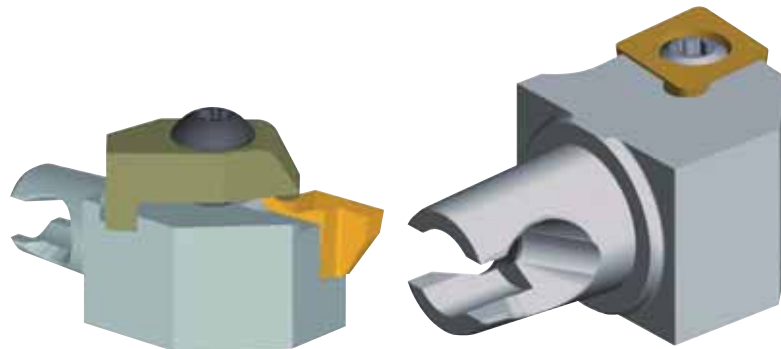
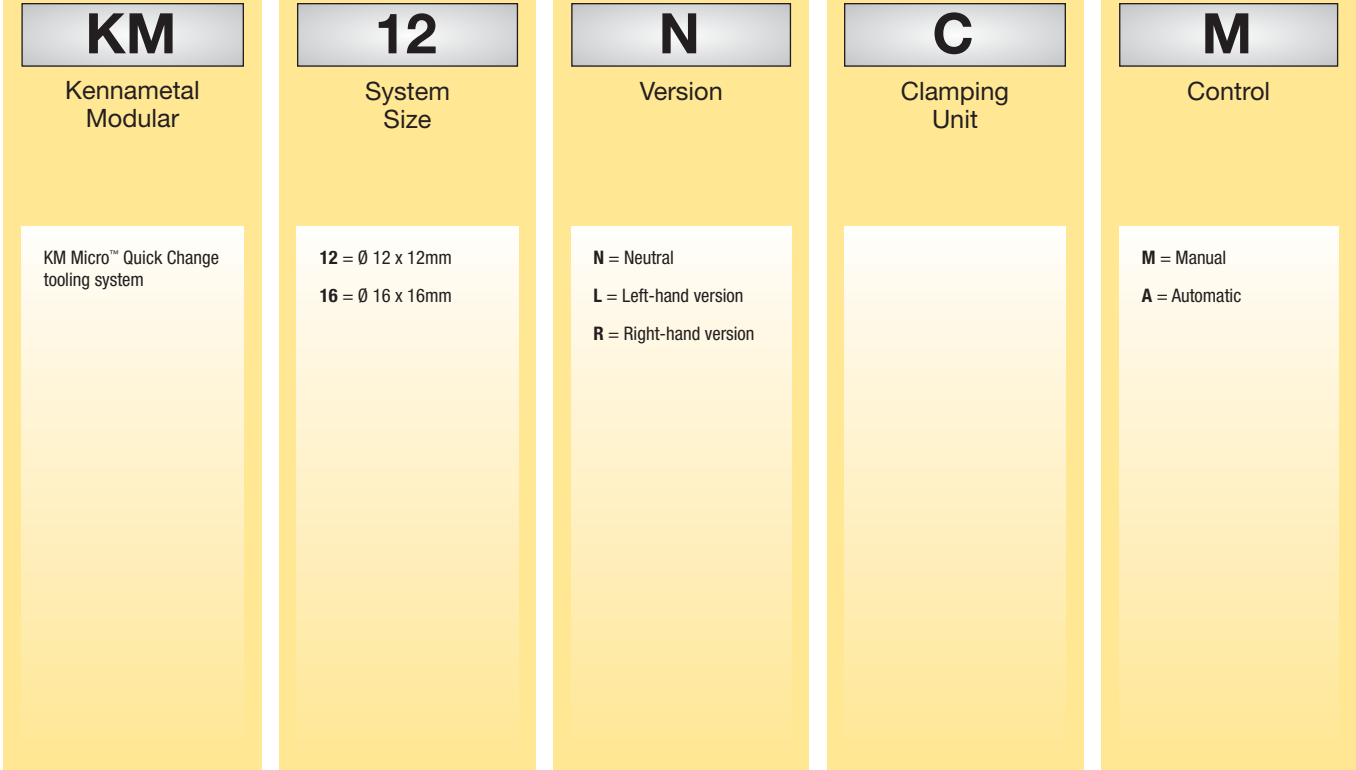
L₁ = Gage length

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.



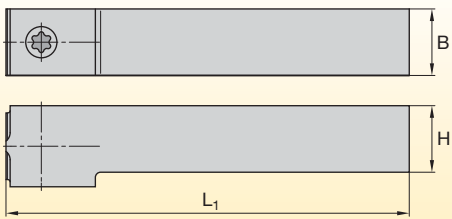
KM12NCM1212100HPC

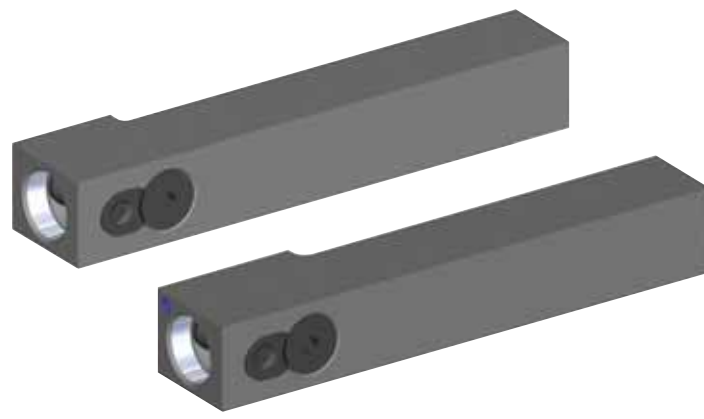


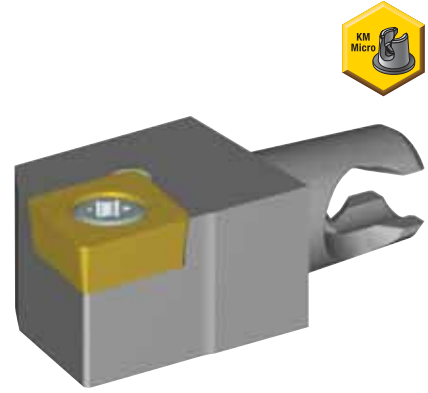
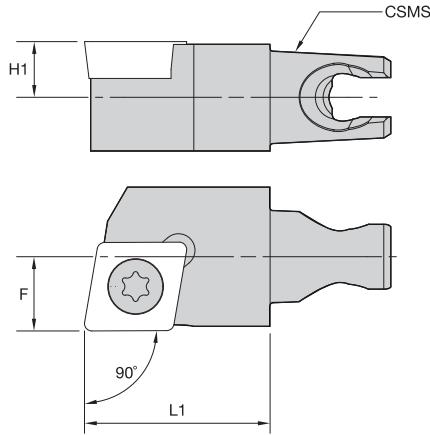
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



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> 			

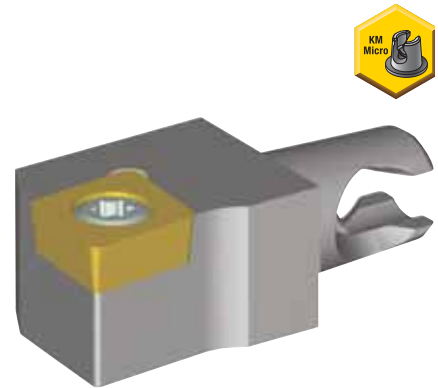
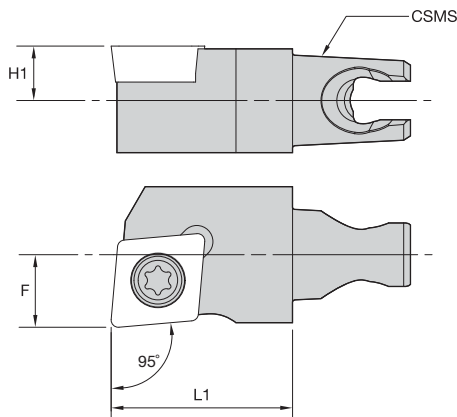




■ SCGC 90°



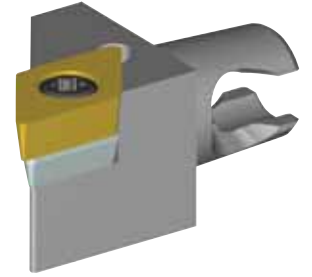
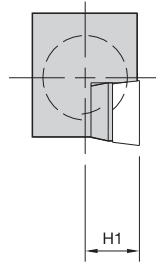
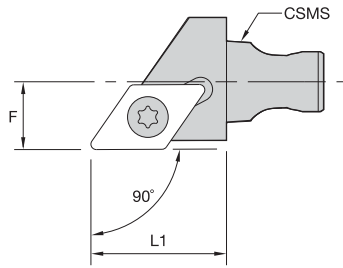
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
right hand									
1920382	KM12SCGCR0915	KM12	8	6	15	CC..09T308	MS1155	—	—
2226229	KM12SCGCR0920	KM12	8	6	20	CC..09T308	MS1155	—	—
1831207	KM16SCGCR0920	KM16	10	8	20	CC..09T308	MS1156	SKCP343	SRS3
left hand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



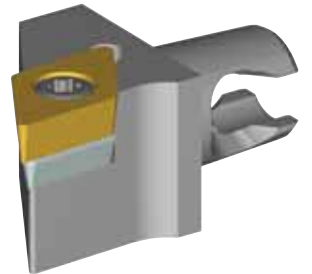
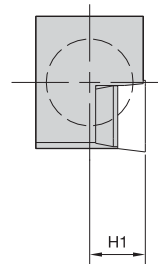
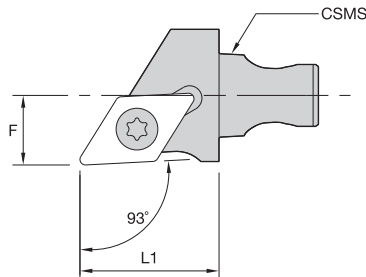
■ SCLC 95°



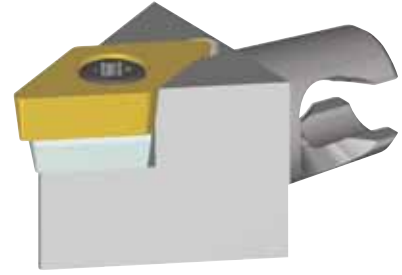
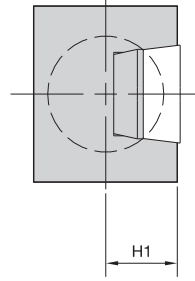
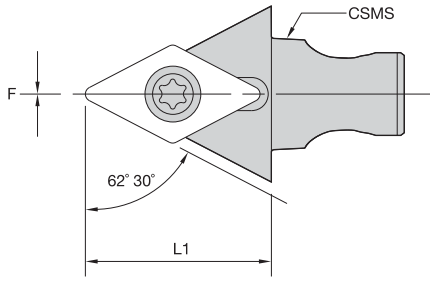
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
right hand									
1920413	KM12SCLCR0915	KM12	8	6	15	CC..09T308	MS1155	—	—
2226231	KM12SCLCR0920	KM12	8	6	20	CC..09T308	MS1155	—	—
1831206	KM16SCLCR0920	KM16	10	8	20	CC..09T308	MS1156	SKCP343	SRS3
left hand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

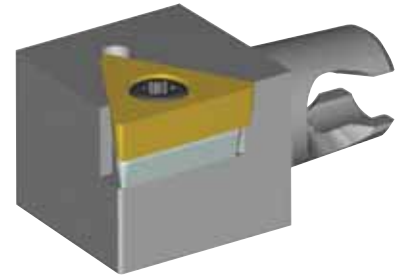
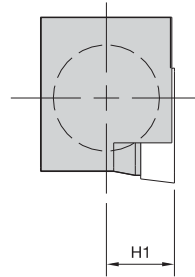
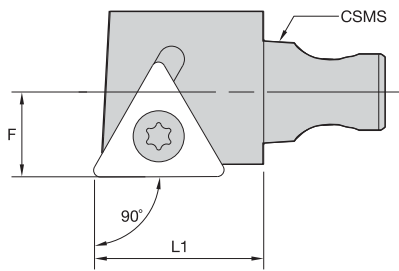

order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
	right hand								
1925810	KM12SDJCR1120	KM12	8	6	20	DC..11T308	MS1155	—	—
1831209	KM16SDJCR1120	KM16	10	8	20	DC..11T308	MS1156	SKDP343	SRS3
	left hand								
1925811	KM12SDJCL1120	KM12	8	6	20	DC..11T308	MS1155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



■ SDPC 62° 30'



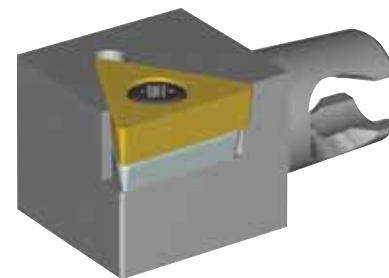
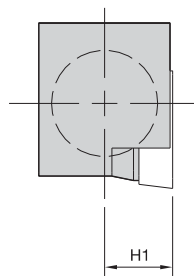
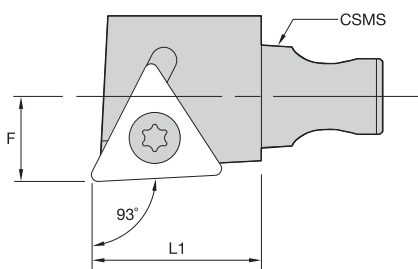
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
2226253	KM12SDPCN1120	KM12	0	6	20	DC..11T308	MS1155	—	—
2226254	KM16SDPCN1120	KM16	0	8	20	DC..11T308	MS1156	SKDP343	SRS3



■ STGC 90°



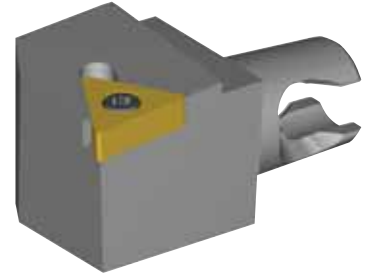
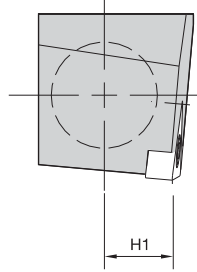
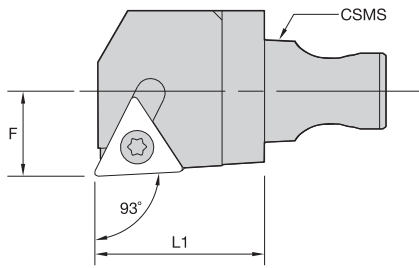
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
	right hand								
2226255	KM12STGCR1120	KM12	8	6	20	TC..110204	MS1153	—	—
1831211	KM16STGCR1120	KM16	10	8	20	TC..110204	MS1153	—	—
1831212	KM16STGCR1620	KM16	10	8	20	TC..16T308	MS1156	SKTP343	SRS3
	left hand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



■ STJC 93°



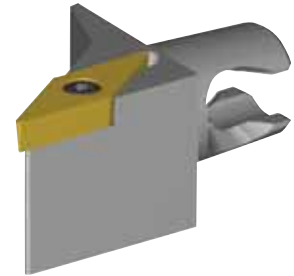
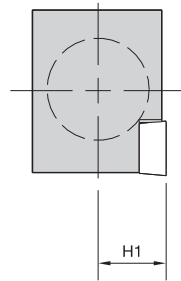
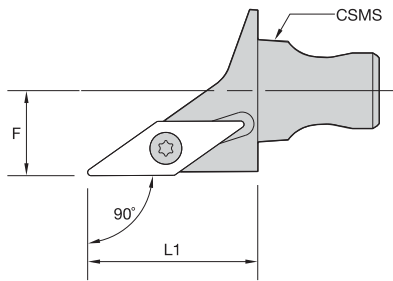
order number	catalog number	CSMS system size	F H1 L1			gage insert	insert screw	shim	shim screw
			F	H1	L1				
	right hand								
1925817	KM12STJCR1115	KM12	8	6	15	TC..110204	MS1153	—	—
2226257	KM12STJCR1120	KM12	8	6	20	TC..110204	MS1153	—	—
1831213	KM16STJCR1120	KM16	10	8	20	TC..110204	MS1153	—	—
1831214	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°



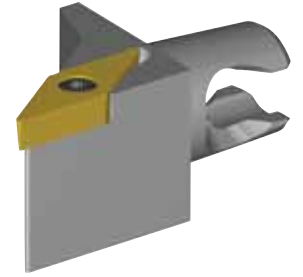
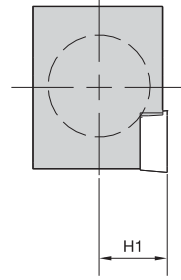
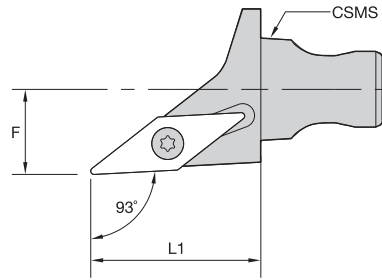
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
1884833	right hand KM16STJNR11	KM16	10	8	20	T221N	S1990
1898054	left hand KM16STJNL11	KM16	10	8	20	T221N	S1990



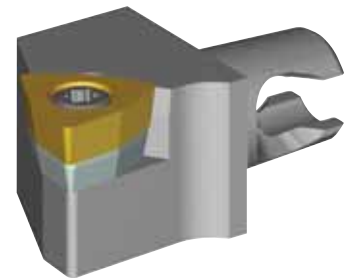
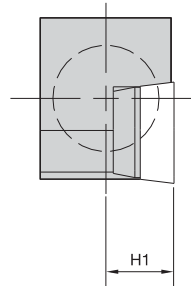
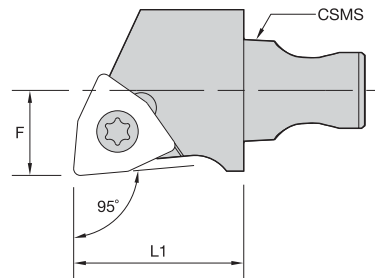
■ SVGB 90°



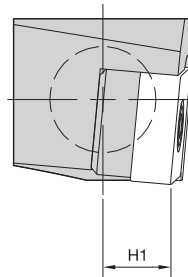
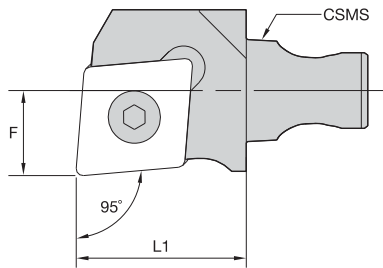
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
1925821	right hand KM12SVGBR1120	KM12	8	6	20	VB..110304	MS1153
2226259	KM16SVGBR1120	KM16	10	8	20	VB..110304	MS1153
1831215	KM16SVGBR1630	KM16	10	8	30	VB..160408	MS1155
1925822	left hand KM12SVGBL1120	KM12	8	6	20	VB..110304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

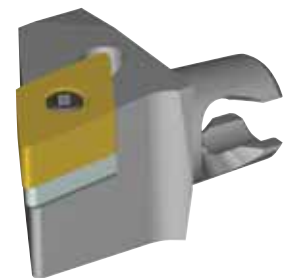
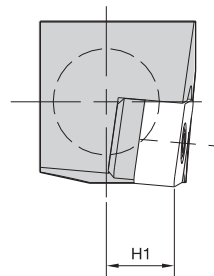
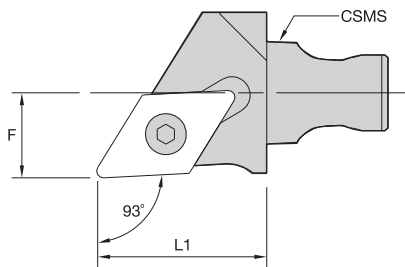

order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw	shim	shim screw
right hand									
1925824	KM12SWLCR0615	KM12	8	6	15	WC..06T308	MS1155	—	—
2226261	KM12SWLCR0620	KM12	8	6	20	WC..06T308	MS1155	—	—
1851771	KM16SWLCR0620	KM16	10	8	20	WC..06T308	MS1156	SKWP343	SRS3
left hand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



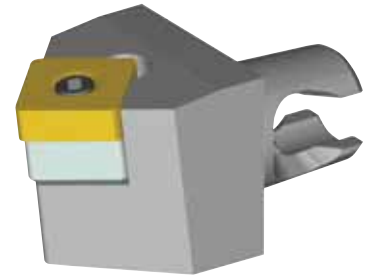
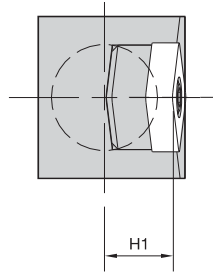
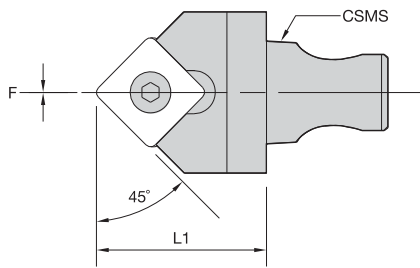
■ MDJN 93°



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



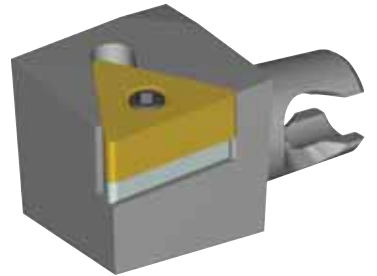
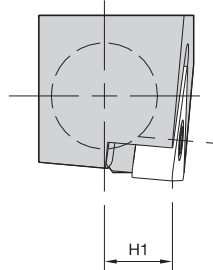
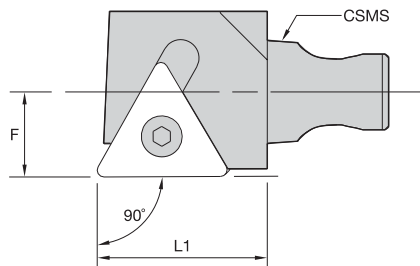
KM Micro Cutting Units



■ MSDN 45°



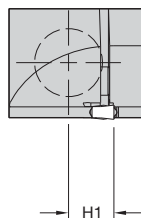
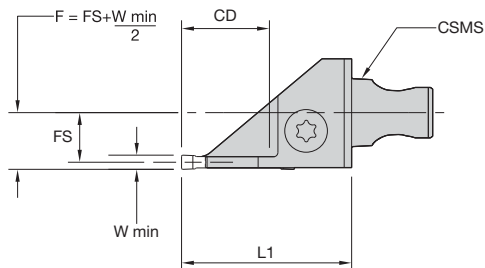
order number	catalog number	CSMS system size	F	H1	L1	gage insert	shim	lock pin
2226269	KM16MSDNN0920	KM16	0	8	20	SN..090308	ISSN332	KLM34L



■ MTGN 90°



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



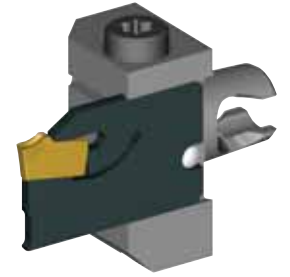
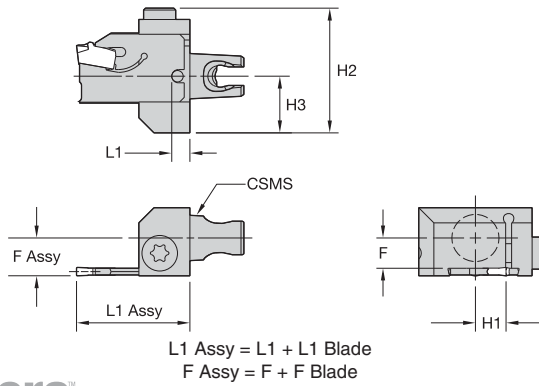
KM Micro Cutting Units

■ 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.

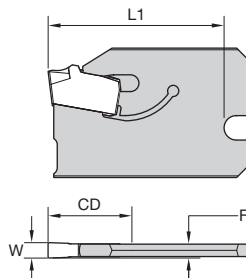


■ BS



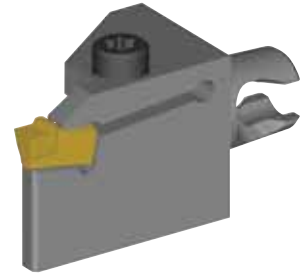
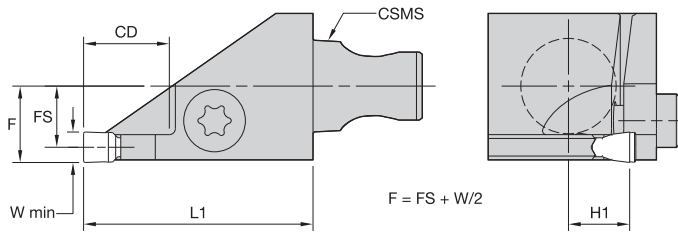
order number	catalog number	CSMS system size	F	H1	H2	H3	L1	clamping screw
1925842	right hand KM12BSR	KM12	5,936	6,1	31,3	15,3	4,8	MS1898PKG
1831217	KM16BSR left hand	KM16	8,012	8,1	33,0	15,0	4,8	MS1898PKG
1925843	KM12BSL	KM12	5,936	6,1	31,3	15,3	4,8	MS1898PKG
1851793	KM16BSL	KM16	8,012	8,1	33,0	15,0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

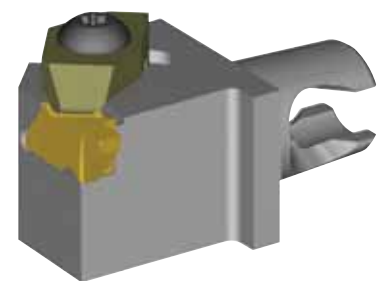
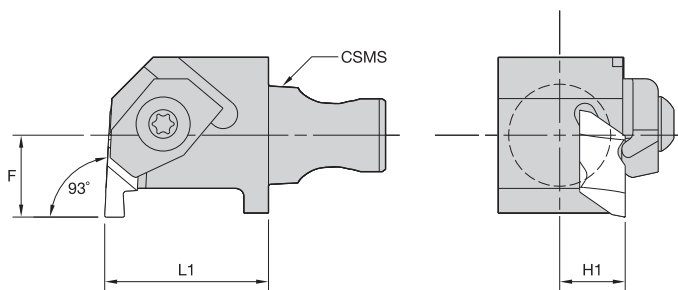


■ A3S



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

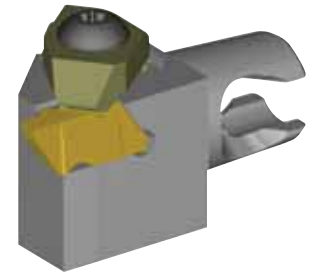
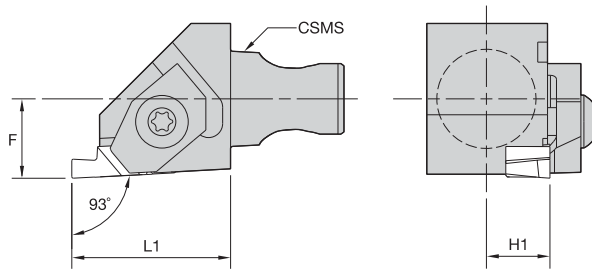
NOTE: W min supplied for reference only. See the Kennametal Innovations Master Catalog Cutting Tools 2013 for actual insert width. Always match seat size of insert to seat size of holder.



■ NE 93°



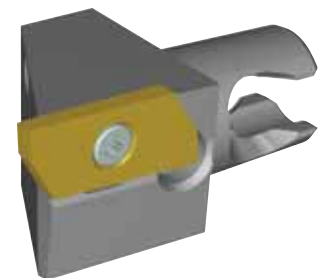
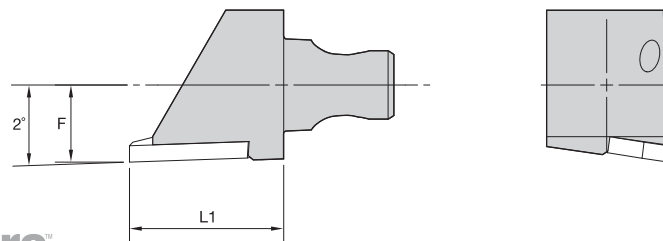
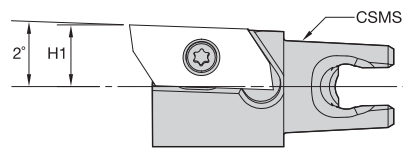
order number	catalog number	CSMS system size	F	H1	L1	gage insert	clamp	clamping screw
1884834	KM16NER220	KM16	10	8	20	NG2L	CM147	MS1200
1898053	KM16NEL220	KM16	10	8	20	NG2R	CM146	MS1200



■ NS 93°



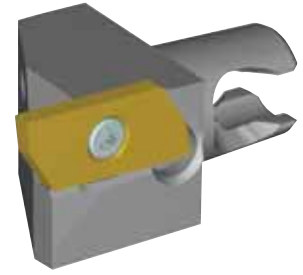
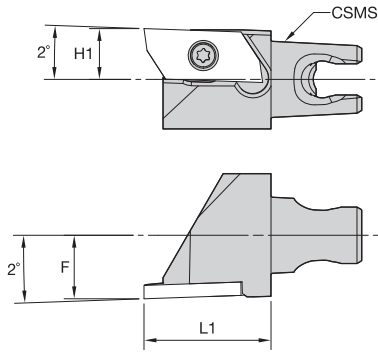
order number	catalog number	CSMS system size	F	H1	L1	gage insert	clamp	clamping screw
right hand								
1920416	KM12NSR220	KM12	8	6	20	NG2R	CM146	MS1200
1831203	KM16NSR220	KM16	10	8	20	NG2R	CM146	MS1200
1831204	KM16NSR330	KM16	10	8	30	NG3R	CM168	MS1220
left hand								
1925830	KM12NSL220	KM12	8	6	20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



■ WSJ 2°



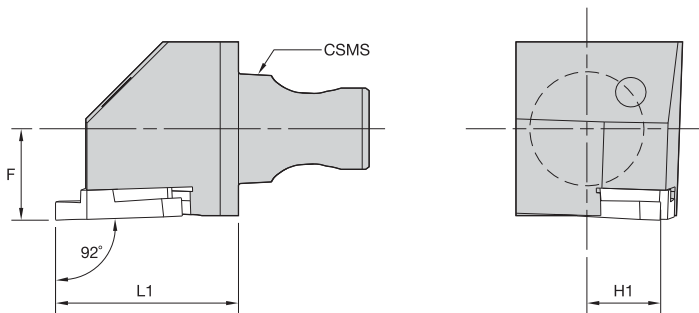
order number	catalog number	CSMS system size	F	H1	L1	gage insert	clamping screw
right hand							
3851787	KM12WSJ15ER20	KM12	8	6	20	KPJ15ER...	MS1969PKG
3522575	KM16WSJ15ER20	KM16	10	8	20	KPJ15ER...	MS1969PKG
left hand							
3851786	KM12WSJ15EL20	KM12	8	6	20	KPJ15EL...	MS1969PKG
3522574	KM16WSJ15EL20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



■ WSK 2°



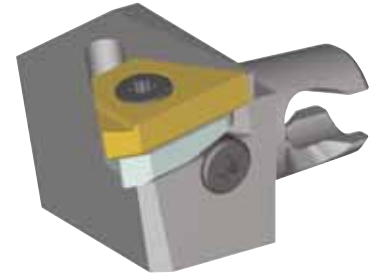
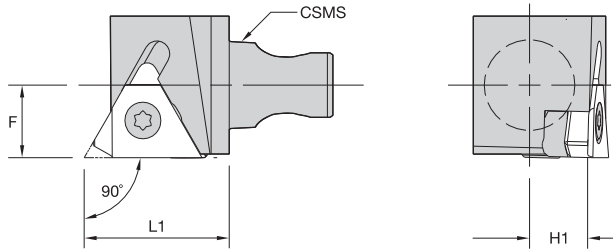
order number	catalog number	CSMS system size	F	H1	L1	gage insert	clamping screw
	right hand						
3851789	KM12WSK15ER20	KM12	8	6	20	KPK15ER...	MS1969PKG
3522577	KM16WSK15ER20	KM16	10	8	20	KPK15ER...	MS1969PKG
	left hand						
3851788	KM12WSK15EL20	KM12	8	6	20	KPK15EL...	MS1969PKG
3522576	KM16WSK15EL20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

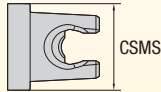
Kennametal
Modular

KM Micro™
Quick Change
tooling system

1612

System
Size

1612 = Ø 16mm
2016 = Ø 20mm



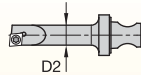
S

Boring Bar
Features

S = Tool steel

04

Shank
Diameter

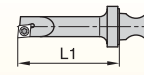


The code is shank diameter D2. Ignore digits after the decimal point.

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

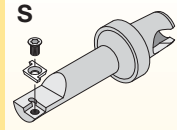
Gage
Length



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

S

Clamping
System







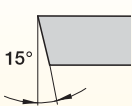
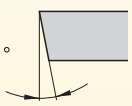
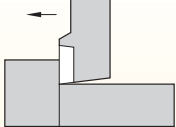
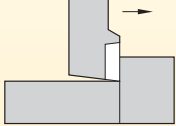
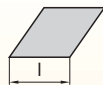

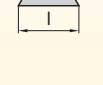
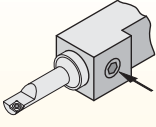
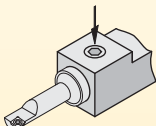


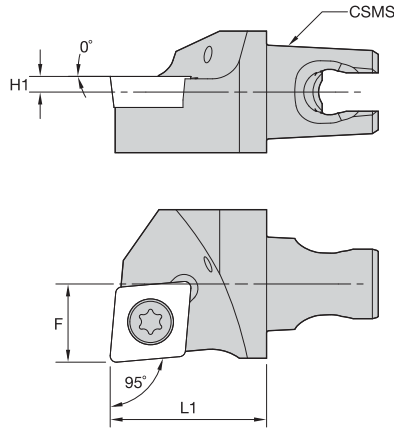
S-Clamping
Clamped from above
with a screw for
indexable inserts

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



KM1612S0424SCLDR04S

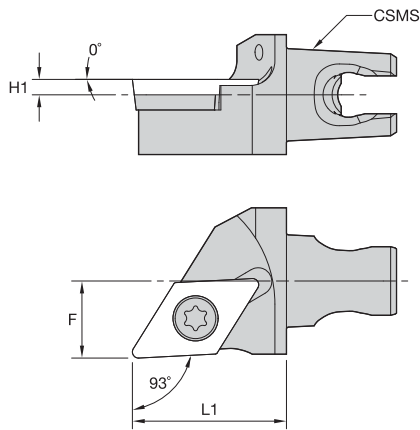
C	L	D	R	04	S
Insert Shape	Cutting Unit Shape	Clearance Angle	Direction	Insert Size	Clamping Access
<p>C </p> <p>G </p> <p>T </p>	<p>F </p> <p>J </p> <p>L </p> <p>X Special Version</p>	<p>D </p> <p>P </p>	<p></p> <p>L = Left-hand cutting unit</p> <p></p> <p>R = Right-hand cutting unit</p>	<p>C </p> <p>G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



■ SCLC-HPC 95°



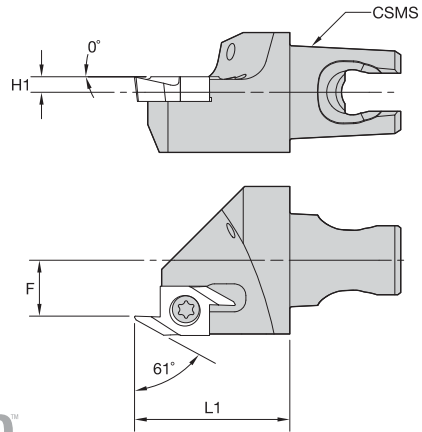
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
3180670	right hand KM16SCLCR0920HPC	KM16	10	2	20	CC..09T308/CC..3252	MS1155
3180671	left hand KM16SCLCL0920HPC	KM16	10	2	20	CC..09T308/CC..3252	MS1155



■ 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



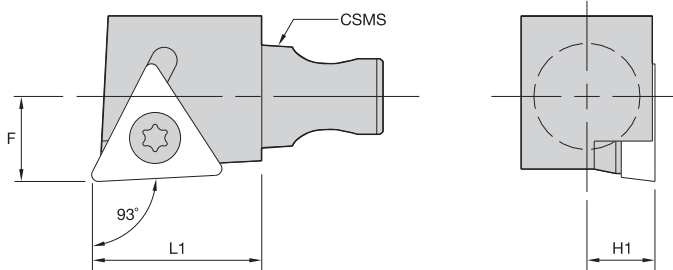
KM Micro Cutting Units



■ SSP-HPC 61°



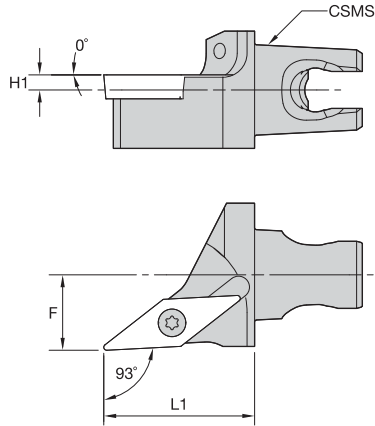
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
3180664	right hand KM16SSPR0620HPC	KM16	7	2	20	S10P0603R010/S10P22R004	CSTB25PKG
3180665	left hand KM16SSPL0620HPC	KM16	7	2	20	S10P0603L010/S10P22L004	CSTB25PKG



■ STJC-HPC 93°



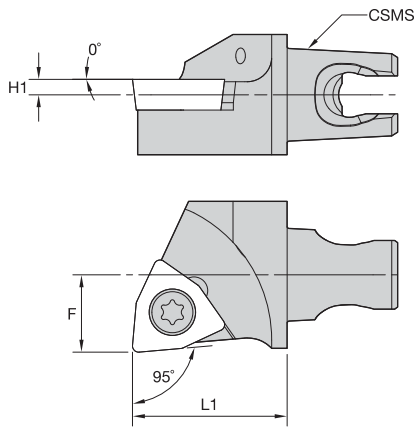
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
3180666	right hand KM16STJCR1620HPC	KM16	10	2	20	TC..16T308/TC..3252	MS1155
3180667	left hand KM16STJCL1620HPC	KM16	10	2	20	TC..16T308/TC..3252	MS1155



■ SVJB-HPC 93°



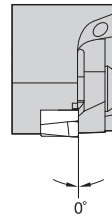
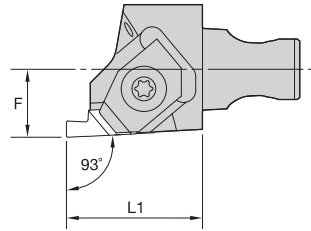
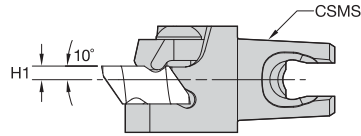
order number	catalog number	CSMS system size	F	H1	L1	gage insert	insert screw
	right hand						
3180672	KM16SVJBR1120HPC	KM16	10	2	20	VB..110304/VB..221	MS1153
	left hand						
3180673	KM16SVJBL1120HPC	KM16	10	2	20	VB..110304/VB..221	MS1153



■ 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



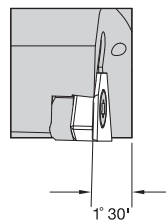
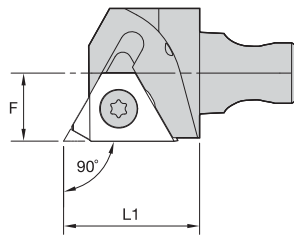
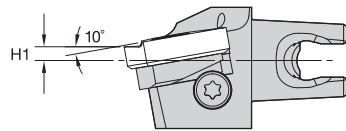
KM Micro Cutting Units



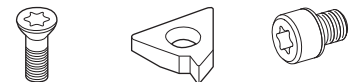
■ NS-HPC



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.



KM1612S0424SCLDR04S



KM

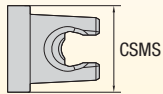
Kennametal
Modular

KM Micro™
Quick Change
tooling system

1612

System
Size

1612 = Ø 16mm
2016 = Ø 20mm



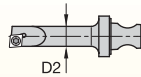
S

Boring Bar
Features

S = Tool steel

04

Shank
Diameter

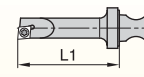


The code is shank diameter D2. Ignore digits after the decimal point.

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

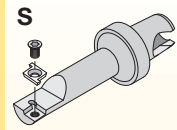
Gage
Length



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

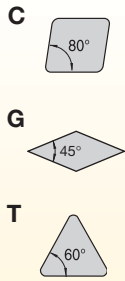
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



KM1612S0424SCLDR04S

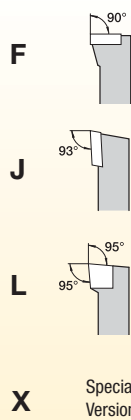
C

Insert Shape



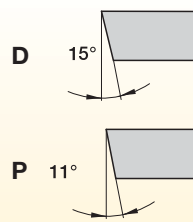
L

Cutting Unit Shape



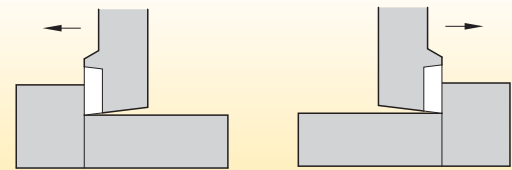
D

Clearance Angle



R

Direction

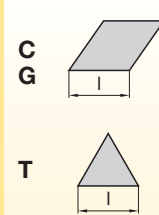


L = Left-hand cutting unit

R = Right-hand cutting unit

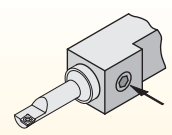
04

Insert Size

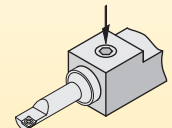


S

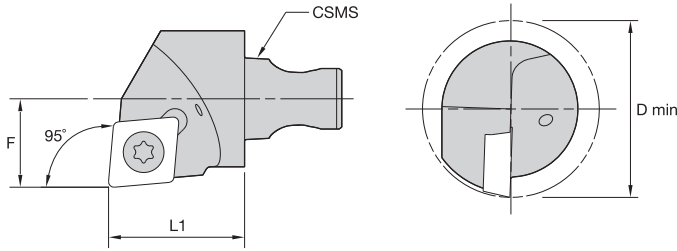
Clamping Access



S = Side access



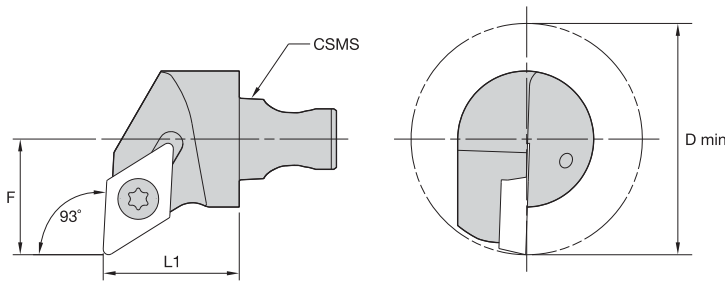
T = Top access



■ 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



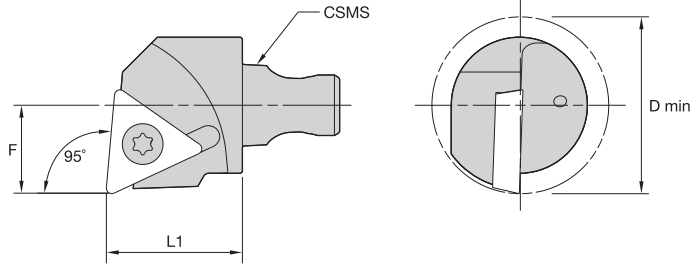
■ SDUP 93°



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



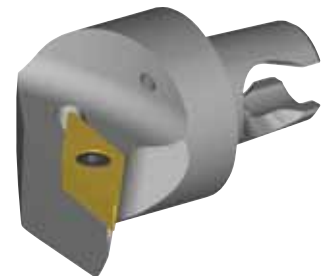
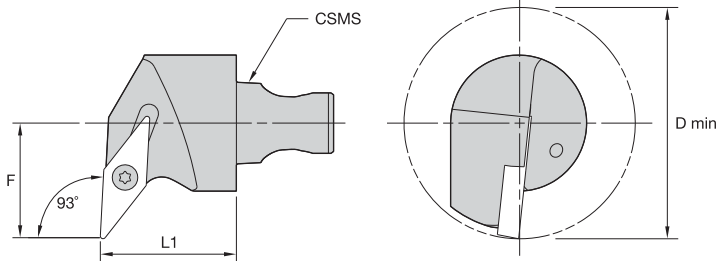
KM Micro Cutting Units



■ STLP 95°



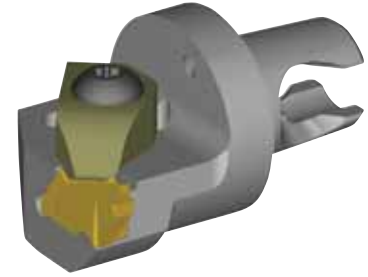
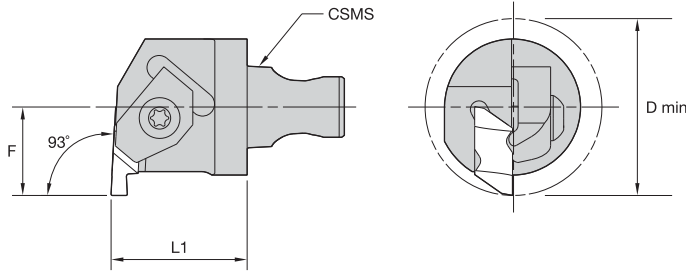
order number	catalog number	CSMS system size	D min	F	L1	gage insert	insert screw
3016753	right hand KM2016STLPR1620	KM2016	25	13	20	TP..16T308/TP..3252	MS1155
3016754	left hand KM2016STLPL1620	KM2016	25	13	20	TP..16T308/TP..3252	MS1155



■ 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



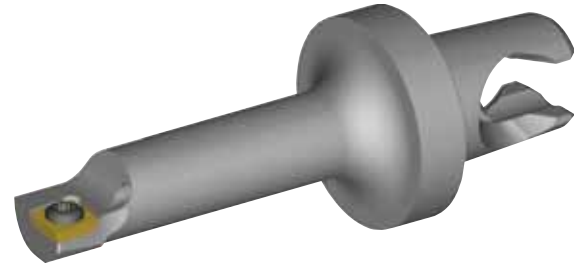
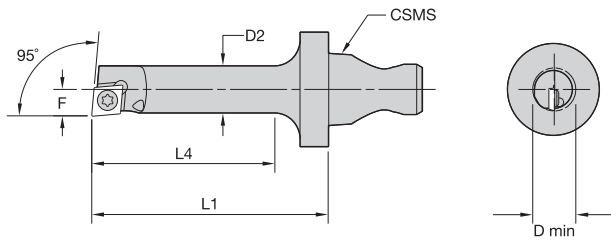
■ NE



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



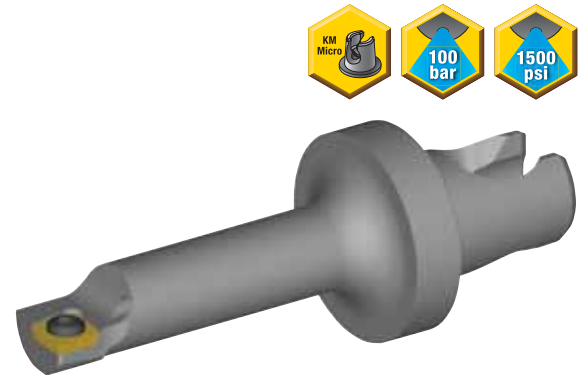
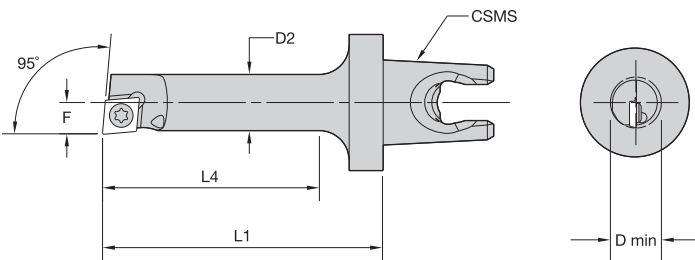
KM Micro Internal Cutting Units



■ SCLD-S 95°



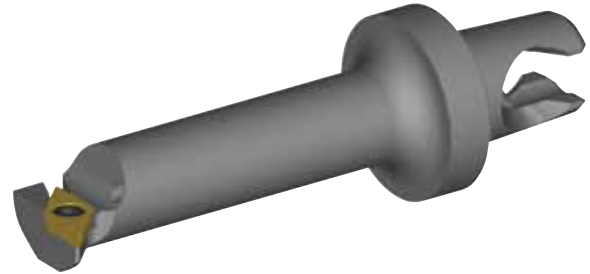
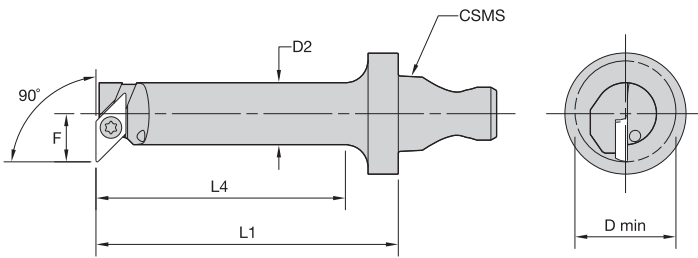
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253213	KM1612S0424SCLDRS4S	KM1612	4,77	4,22	2,42	24	17	CD..S4T002/CD..120605	CC09
2253215	KM1612S0528SCLDRS4S	KM1612	5,78	5,16	2,95	28	21	CD..S4T002/CD..120605	CC11
2253217	KM1612S0633SCLDRS4S	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°



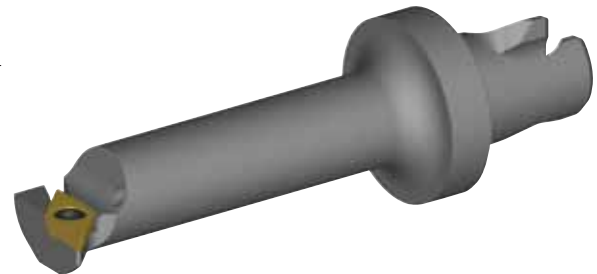
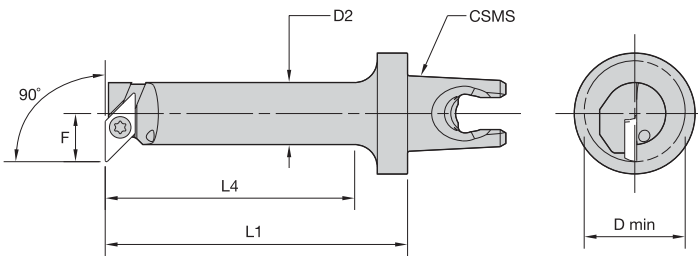
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253219	KM1612S0424SCLDRS4T	KM1612	4,77	4,22	2,40	24	17	CD..S4T002/CD..120605	CC09
2253221	KM1612S0528SCLDRS4T	KM1612	5,78	5,16	2,95	28	21	CD..S4T002/CD..120605	CC11
2253223	KM1612S0633SCLDRS4T	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°



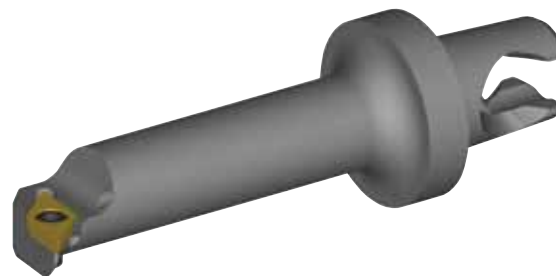
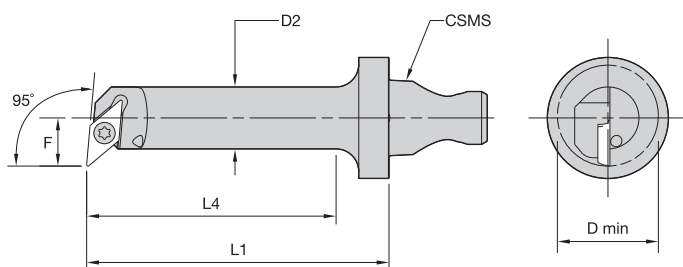
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253225	KM1612S0633SGFPR05S	KM1612	9,14	6,6	5,58	33	26,4	GP..050102/GP.505	CT15
2253227	KM1612S0840SGFPR05S	KM1612	10,72	8,2	6,37	40	33,0	GP..050102/GP.505	CT15
left hand									
2253226	KM1612S0633SGFPL05S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



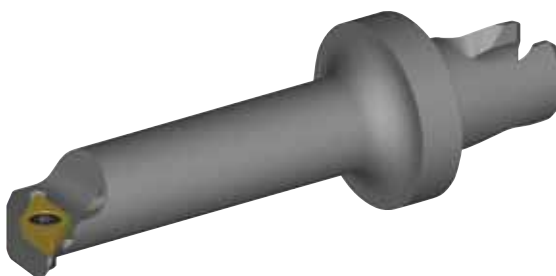
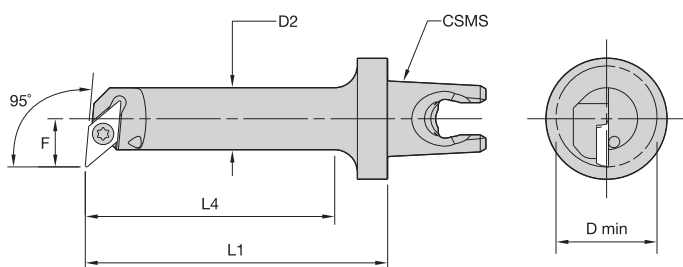
KM Micro Internal Cutting Units



■ SGLP-S 95°



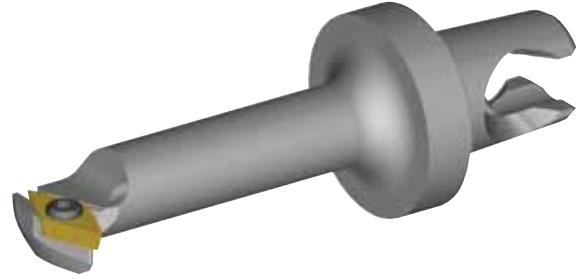
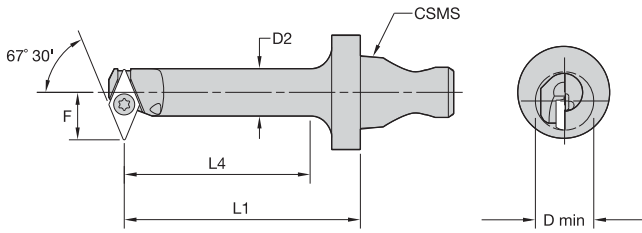
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253233	KM1612S0633SGLPR05S	KM1612	9,14	6,60	5,58	33	26	GP..050102/GP..12105	CT15
2253235	KM1612S0840SGLPR05S	KM1612	10,72	8,20	6,37	40	33	GP..050102/GP..12105	CT15
left hand									
2253234	KM1612S0633SGLPL05S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



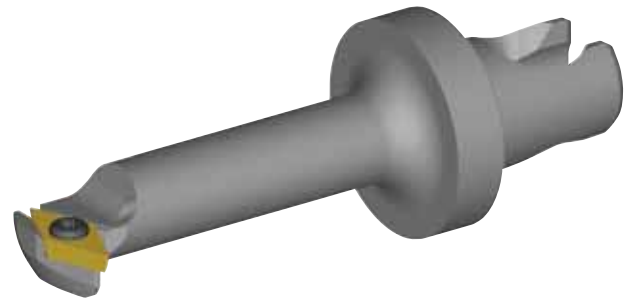
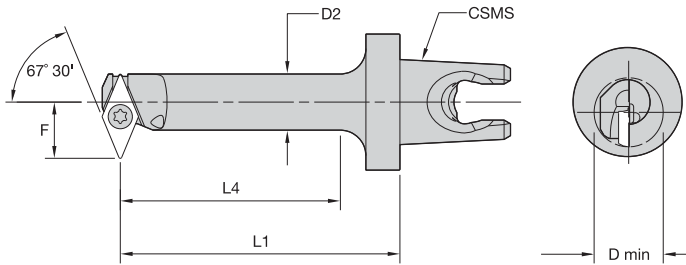
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253237	KM1612S0633SGLPR05T	KM1612	9,14	6,60	5,58	33	26	GP..050102/GP..12105	CT15
2253239	KM1612S0840SGLPR05T	KM1612	10,72	8,20	6,37	40	33	GP..050102/GP..12105	CT15
left hand									
2253238	KM1612S0633SGLPL05T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



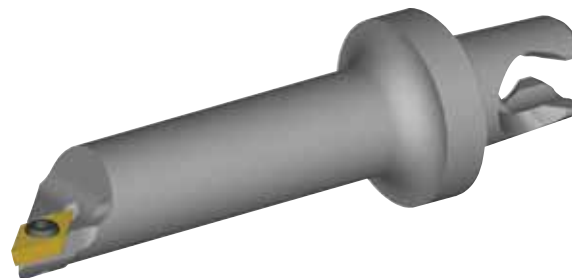
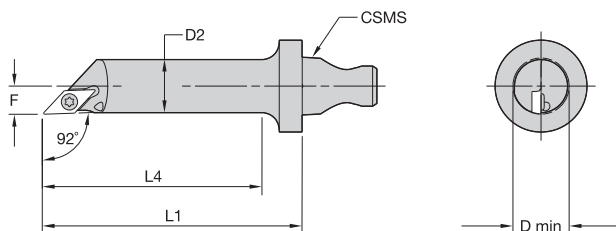
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
	right hand								
2253288	KM1612S0633SGXPR05S	KM1612	10,16	6,6	6,61	33	26	GP..050102/GP..12105	CT15
	left hand								
2253289	KM1612S0633SGXPL05S	KM1612	10,16	6,6	6,61	33	26	GP..050102/GP..12105	CT15



■ 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



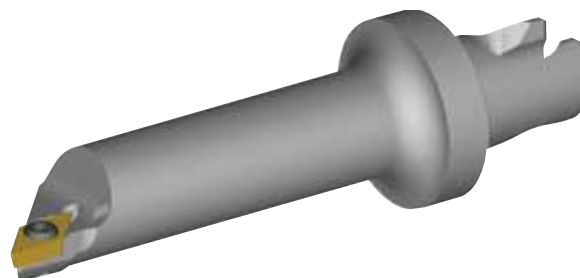
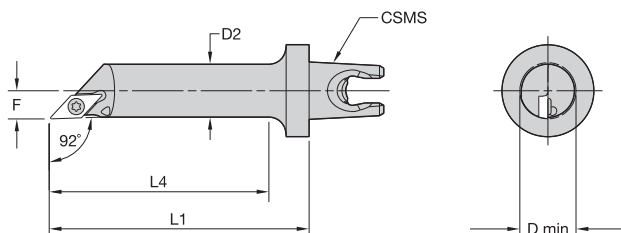
KM Micro Internal Cutting Units



■ SGJP-S 92°



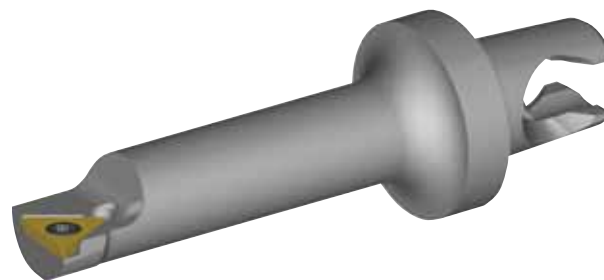
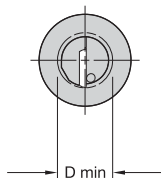
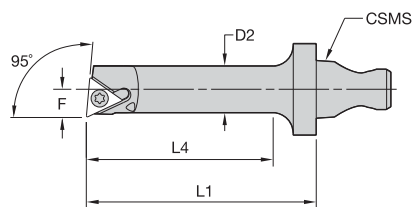
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253243	KM1612S0840SGJPR05S	KM1612	8,68	8,20	4,34	40	33	GP..050102/GP..12105	CT11
2253247	KM1612S0945SGJPR05S	KM1612	9,75	9,25	4,89	45	38	GP..050102/GP..12105	CT11
left hand									
2253244	KM1612S0840SGJPL05S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



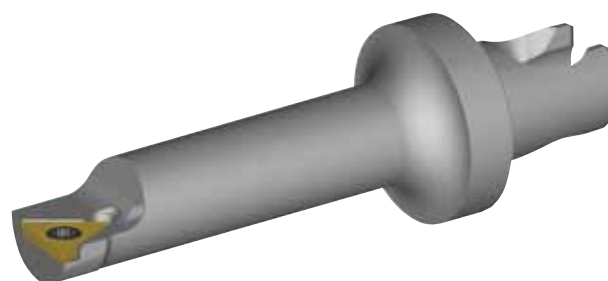
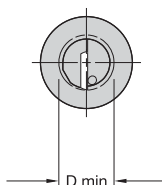
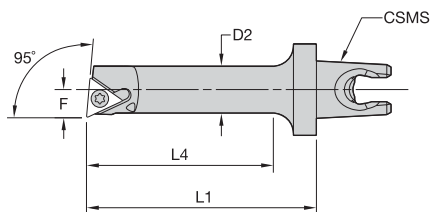
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253249	KM1612S0840SGJPR05T	KM1612	8,68	8,20	4,34	40	33	GP..050102/GP..12105	CT11
2253251	KM1612S0945SGJPR05T	KM1612	9,75	9,25	4,89	45	38	GP..050102/GP..12105	CT11
left hand									
2253250	KM1612S0840SGJPL05T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



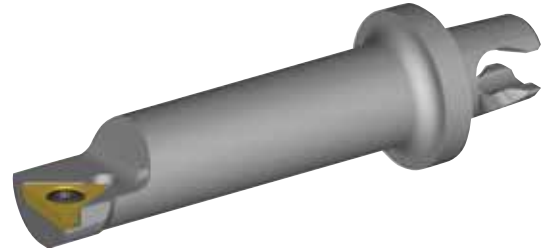
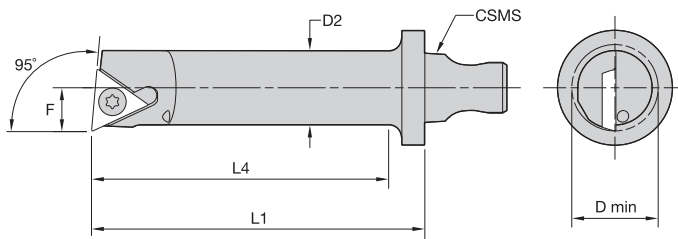
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
	right hand								
2253253	KM1612S0633STLDR07S	KM1612	7,06	6,2	3,71	33	26	TD..07S1202/TD..130805	FC11
2253255	KM1612S0840STLDR07S	KM1612	9,14	8,2	4,80	40	33	TD..07S1202/TD..130805	FC11
	left hand								
2253254	KM1612S0633STLDL07S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



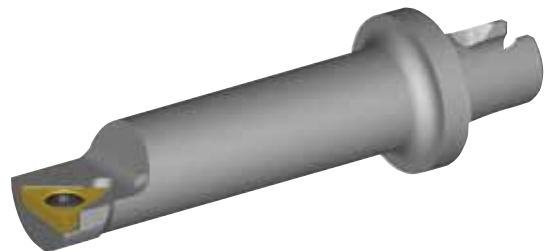
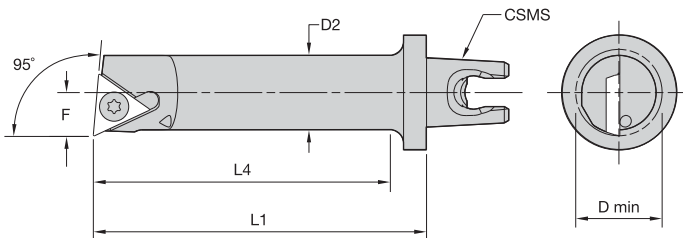
KM Micro Internal Cutting Units



■ STLP-S 95°



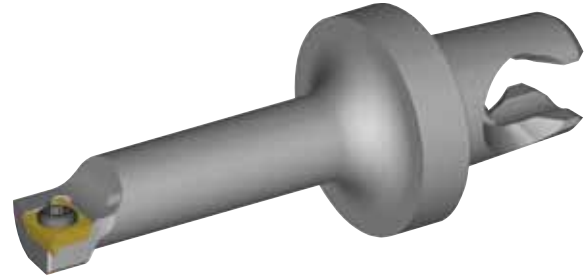
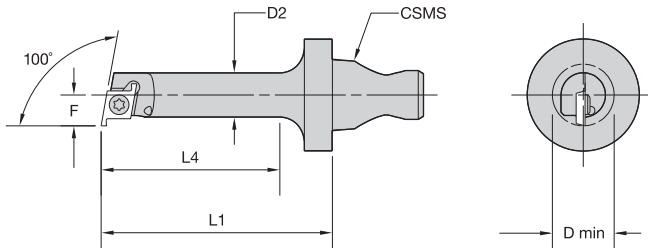
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2253261	KM1612S1046STLPR11S	KM1612	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2253263	KM2016S1046STLPR11S	KM2016	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2253265	KM2016S1358STLPR11S	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°



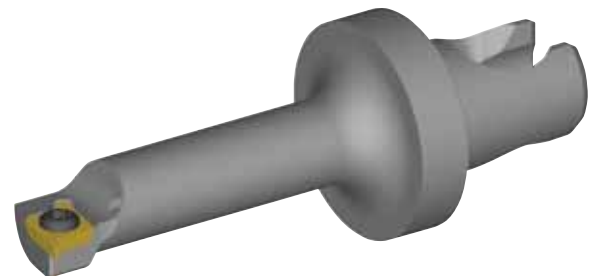
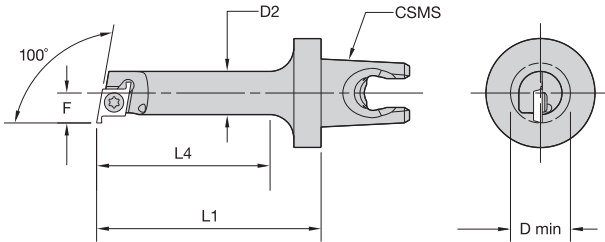
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2250067	KM1612S1046STLPR11T	KM1612	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2250069	KM2016S1046STLPR11T	KM2016	11,15	10,21	5,79	46	41	TP.110202/TP..21505	QC21
2250071	KM2016S1358STLPR11T	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°



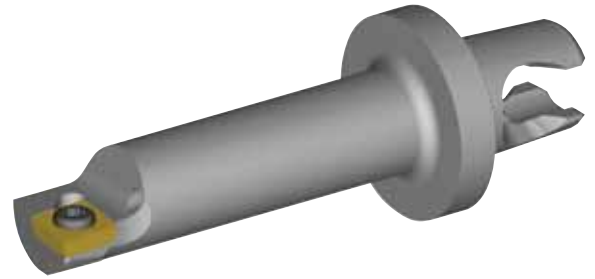
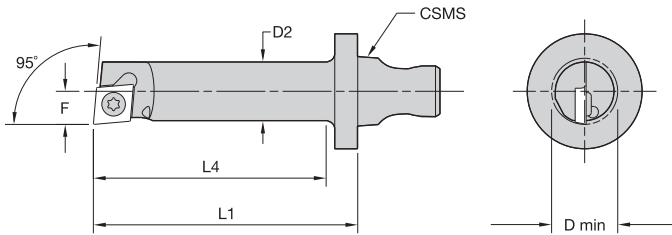
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
	right hand								
2250073	KM1612S0529SCXDRS	KM1612	6,93	5,56	3,91	29	22	CD.50302R	CC11
2250074	KM1612S0633SCXDRS	KM1612	7,82	6,35	4,40	33	26	CD.50302R	CC11



■ 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



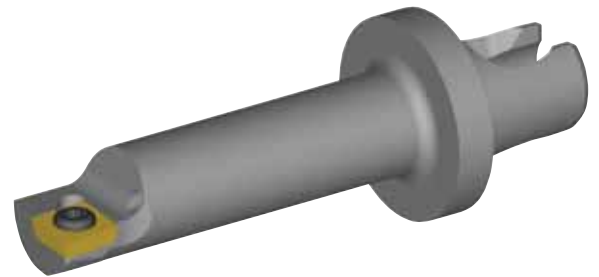
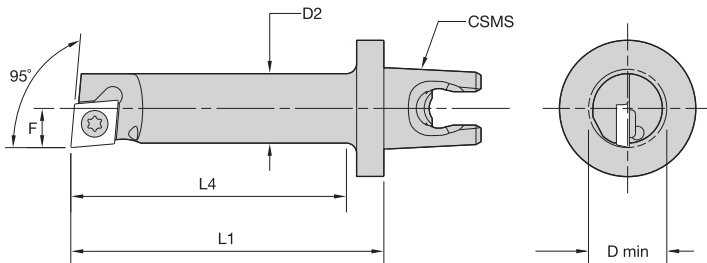
KM Micro Internal Cutting Units



■ SCXP-S 95°



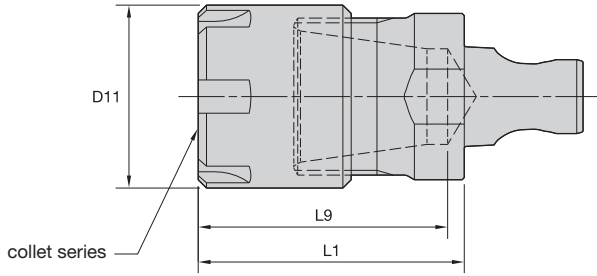
order number	catalog number	CSMS system size	D min	D2	F	L1	L4	gage insert	insert screw
right hand									
2250039	KM1612S1046SCXPRS	KM1612	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15
2250041	KM2016S1046SCXPRS	KM2016	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15
left hand									
2250040	KM1612S1046SCXPLS	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	KM1612S1046SCXPLT	KM1612	11,10	10,21	5,75	46	41	CP..06T102/CP..21205	QC15
2250066	KM2016S1046SCXPLT	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

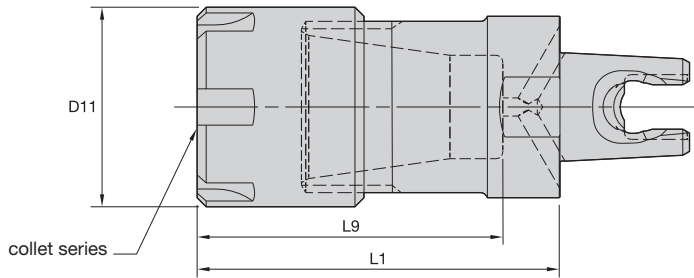
■ ER



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.

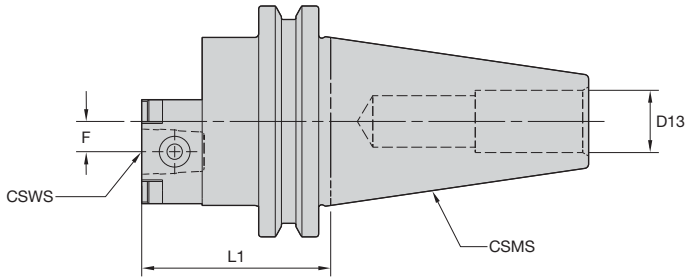
Locknut wrench must be ordered separately.

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.

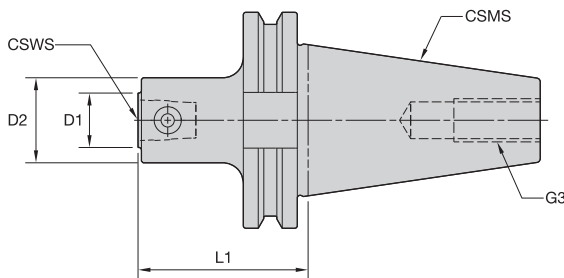


ECTRA • Offset



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.



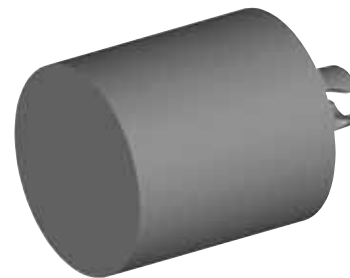
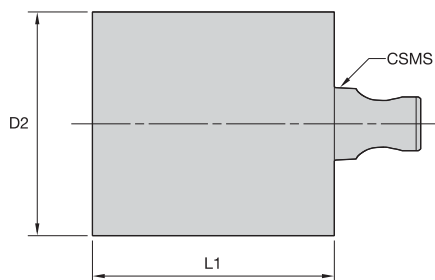
TRA • On Center



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.

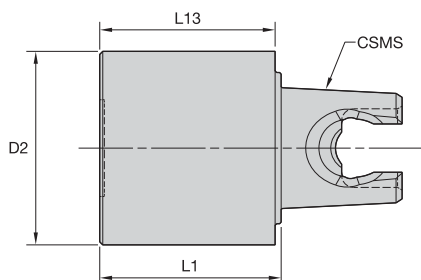
- Machinable front 38–42 HRC.



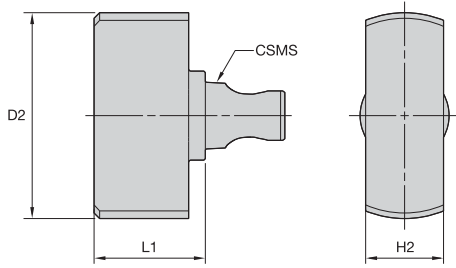
KM Micro Shank Tools

■ 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



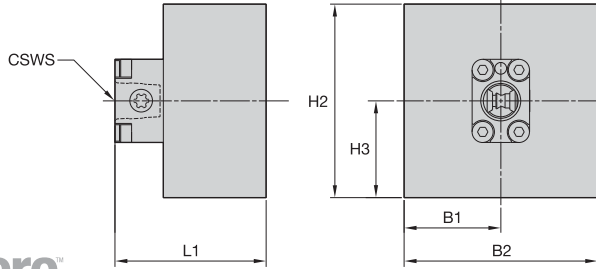
KM Micro Shank Tools

■ 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



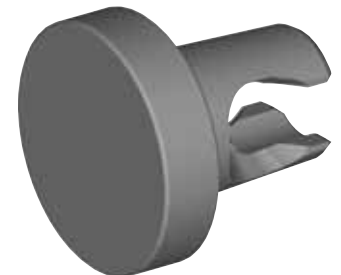
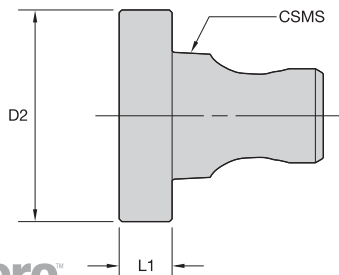
KM Micro Shank Tools



■ 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	CSWS system size	D2	L1
1925848	KM12P	KM12	12	5
3397220	KM1612P	KM1612	16	5
1851741	KM16P	KM16	16	5
3397219	KM2016P	KM2016	20	5

KM™ Mini • Quick Change Tooling System



Primary Application

The KM Mini coupling offers a very rigid joint with a high degree of repeatability while maintaining a very compact envelope. This permits a high degree of versatility without sacrificing cutting performance.

Features and Benefits

Features

- KM Mini 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 mechanism design consists of two components: the torque screw and the wedge nut.
- Precise and repeatable cutting edge position is in both directions of cut
- Maximum possible surface contact between the clamping mechanism and the cutting unit.
- Designed around a short 10:1 tapered shank.
- The taper is self-centering to promote easy tool loading and unloading.



Advantages

- Reduce downtime, increase productivity.
- Replaces conventional square-shank tooling.
- No machine modifications required.
- KM™ Mini is ideal for machines up to 30 hp (22 kW).

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.



KM20NCM2020100



KM

Kennametal
Modular

KM™ Mini Quick Change
tooling system

20

System
Size

20 = 20 x 20mm
26 = 25 x 25mm

N

Version

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

C

Clamping
Unit

M

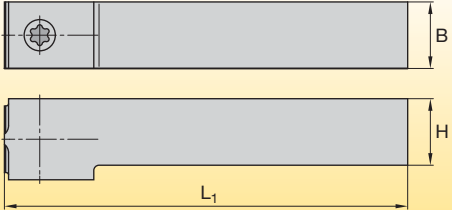
Control

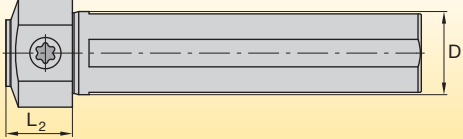
M = Manual
A = Automatic

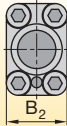
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.

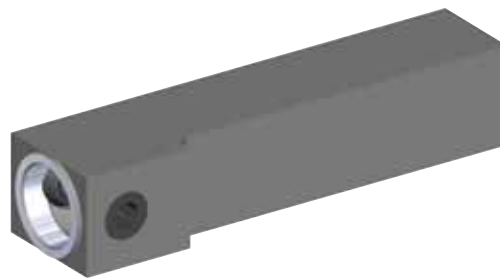
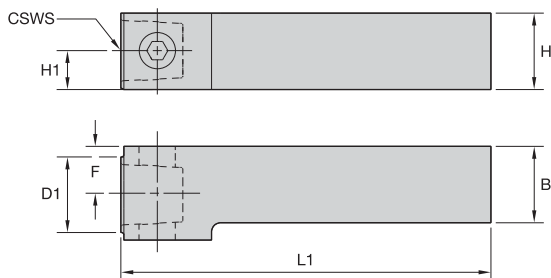


KM20NCM2020100

	20	20	100
Type	Shank Height	Shank Width	Shank Length
Square Shank	<p>H = Shank height B = Shank width L₁ = Shank length</p> 		

SS	20	25
Type	Shank Diameter	Shoulder Length
SS = Square shank with shoulders	<p>D = Shank diameter L₂ = Shoulder length</p> 	

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



KM Mini Clamping Units

■ R/L CM • Metric

order number	catalog number	CSWS system size	D1 mm	L1 mm	F mm	B mm	H mm	H1 mm					
	right hand												
3482938	KM20RCM2020100	KM20	20	100	3.937	13	.492	20	.787	20	.787	10	.413
	left hand												
3482939	KM20LCM2020100	KM20	20	100	3.937	13	.492	20	.787	20	.787	10	.413

■ R/L CM • Inch

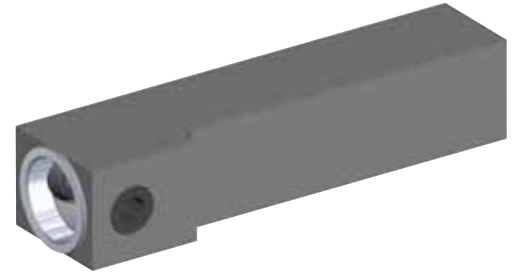
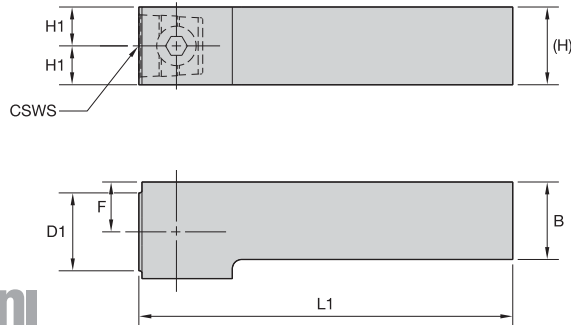
order number	catalog number	CSWS system size	D1 mm	L1 mm	F mm	B mm	H mm	H1 mm					
	right hand												
2385942	KM25RCM16382	KM25	25	97	3.819	16	.630	25	1.000	25	1.000	13	.508
	left hand												
2386034	KM25RCM16482	KM25	25	122	4.819	16	.630	25	1.000	25	1.000	13	.508
	right hand												
2386033	KM25LCM16382	KM25	25	97	3.819	16	.630	25	1.000	25	1.000	13	.508
2265206	KM25LCM16482	KM25	25	122	4.819	16	.630	25	1.000	25	1.000	13	.508

■ Spare Parts



catalog number	spare parts package	wrench size	actuation screw	Nm	ft. lbs.
right hand					
KM20RCM2020100	KM20NAPKG		5mm	19-22	14-16
KM25RCM16382	KM25NAPKG		6mm	34-40	25-30
KM25RCM16482	KM25NAPKG		6 mm	34-40	25-30
left hand					
KM20LCM2020100	KM20NAPKG		5mm	19-22	14-16
KM25LCM16382	KM25NAPKG		6mm	34-40	25-30
KM25LCM16482	KM25NAPKG		6mm	34-40	25-30

NOTE: For torque wrench, see page L52–L53.


■ NCM • Metric

order number	catalog number	CSWS system size	D1		L1	F		H		H1		B	
			mm	mm	in	mm	in	mm	in	mm	in	mm	in
2277879	KM25NCM2525120	KM25	25	120	4.724	16	.630	25	.984	13	.492	25	.984

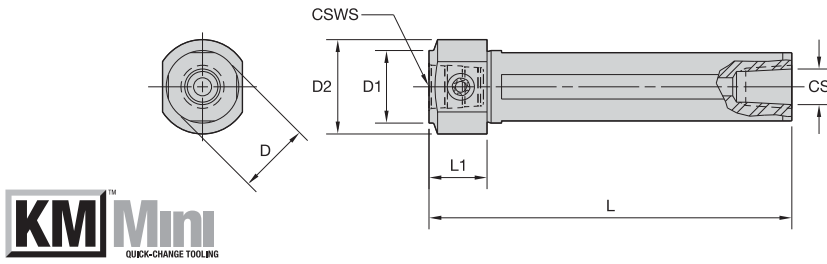
■ NCM • Inch

order number	catalog number	CSWS system size	D1		L1	F		H		H1		B	
			mm	mm	in	mm	in	mm	in	mm	in	mm	in
3482940	KM20NCM12352	KM20	20	89	3.516	13	.493	19	.750	10	.375	19	.750

■ Spare Parts


catalog number	spare parts package	wrench size actuation screw		Nm	ft. lbs.
		mm	in		
KM20NCM12352	KM20NAPKG	5mm		19-22	14-16
KM25NCM2525120	KM25NAPKG	6mm		34-40	25-30

NOTE: For torque wrench, see page L52–L53.



■ **NCM-SS • Round Shank • Metric**

order number	catalog number	CSWS system size	D1 mm	D mm	D in	D2 mm	D2 in	L mm	L in	L1 mm	L1 in	CS
3483039	KM2520NCMSS2025	KM2520	25	20	.787	28	1.102	90	3.543	25	.984	1/8-27 NPT
2594730	KM3225NCMSS2525	KM3225	32	25	.984	36	1.417	90	3.543	25	.984	1/4-18 NPT
2656549	KM3225NCMSS3225	KM3225	32	32	1.260	44	1.732	90	3.543	25	.984	1/4-18 NPT
2656550	KM3225NCMSS4025	KM3225	32	40	1.575	50	1.969	90	3.543	25	.984	1/4-18 NPT

■ **Spare Parts**



catalog number	spare parts package	wrench size actuation screw	Nm	ft. lbs.
KM2520NCMSS2025	KM2520NRPKG	5mm	19-22	14-16
KM3225NCMSS2525	KM3225NRPKG	6mm	34-40	25-30
KM3225NCMSS3225	KM3225NRPKG	6mm	34-40	25-30
KM3225NCMSS4025	KM3225NRPKG	6mm	34-40	25-30

■ **NCM-SS • Round Shank • Inch**

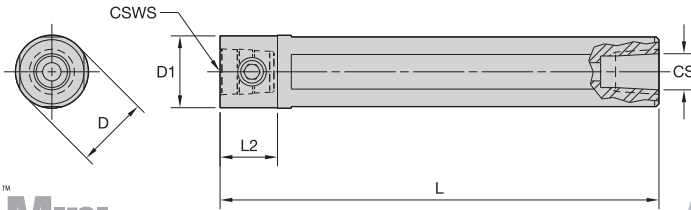
order number	catalog number	CSWS system size	D1 mm	D mm	D in	D2 mm	D2 in	L mm	L in	L1 mm	L1 in	CS
3483040	KM2520NCMSS12098	KM2520	25	19	.750	28	1.102	90	3.543	25	.984	1/4-18 NPT
2594729	KM3225NCMSS16098	KM3225	32	25	1.000	36	1.417	90	3.543	25	.984	1/4-18 NPT
2656547	KM3225NCMSS20098	KM3225	32	32	1.250	44	1.732	90	3.543	25	.984	1/4-18 NPT
2656548	KM3225NCMSS24098	KM3225	32	38	1.500	50	1.969	90	3.543	25	.984	1/4-18 NPT

■ **Spare Parts**



catalog number	spare parts package	wrench size actuation screw	Nm	ft. lbs.
KM2520NCMSS12098	KM2520NRPKG	5mm	19-22	14-16
KM3225NCMSS16098	KM3225NRPKG	6mm	34-40	25-30
KM3225NCMSS20098	KM3225NRPKG	6mm	34-40	25-30
KM3225NCMSS24098	KM3225NRPKG	6mm	34-40	25-30

NOTE: For torque wrench, see page L52–L53.


■ NCM-S • Round Shank • Metric

order number	catalog number	CSWS system size	D1 mm	D mm	D in	L mm	L in	L2 mm	L2 in	CS
3483037	KM2520NCMS25	KM2520	25	25	.984	150	5.906	20	.787	1/4-18 NPT
2541837	KM3225NCMS32	KM3225	32	32	1.260	220	8.661	25	.984	1/4-18 NPT

■ Spare Parts


catalog number	spare parts package	wrench size	actuation screw	Nm
KM2520NCMS25	KM2520NRPKG	5mm		19-22
KM3225NCMS32	KM3225NRPKG	6mm		34-40

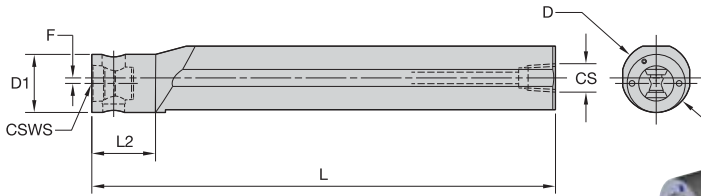
■ NCM-S • Round Shank • Inch

order number	catalog number	CSWS system size	D1 mm	D mm	D in	L mm	L in	L2 mm	L2 in	CS
3483038	KM2520NCMS16	KM2520	25	25	1.000	153	6.016	20	.787	1/4-18 NPT
2541835	KM3225NCMS20	KM3225	32	32	1.250	171	6.750	25	.984	1/4-18 NPT

■ Spare Parts


catalog number	spare parts package	wrench size	actuation screw	ft. lbs.
KM2520NCMS16	KM2520NRPKG	5mm		14-16
KM3225NCMS20	KM3225NRPKG	6mm		25-30

NOTE: For torque wrench, see page L52–L53.



■ ECM-S • Round Shank, Offset • Metric

order number	catalog number	CSWS system size	D1 mm	D mm	in	L mm	in	L2 mm	in	F mm	in	CS
2541836	KM3225ECMS40	KM3225	32	40	1.575	270	10.630	35	1.378	4	.157	1/4-18 NPT

■ Spare Parts



catalog number	spare parts package	wrench size actuation screw	Nm
KM3225ECMS40	KM3225NRPKG	6mm	34-40

■ ECM-S • Round Shank, Offset • Inch

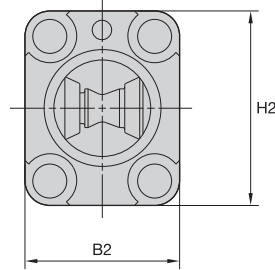
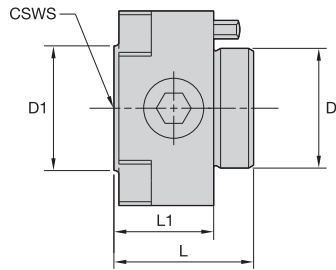
order number	catalog number	CSWS system size	D1 mm	D mm	in	L mm	in	L2 mm	in	F mm	in	CS
2541730	KM3225ECMS24	KM3225	32	38	1.500	254	10.000	35	1.378	3	.120	1/4-18 NPT

■ Spare Parts



catalog number	spare parts package	wrench size actuation screw	ft. lbs.
KM3225ECMS24	KM3225NRPKG	6mm	25-30

NOTE: For torque wrench, see page L52–L53.



■ NCM-SF • Flange Mount

order number	catalog number	CSWS system size	D1		D		L		L1		B2		H2	
			mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
3482941	KM20NCMSF2434	KM20	20	.787	18	.709	24	.945	18	.709	24	.945	33	1.299
2386035	KM25NCMSF3140	KM25	25	.984	24	.945	28	1.102	20	.787	31	1.221	39	1.535

■ Spare Parts

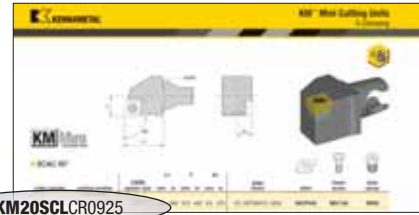


catalog number	spare parts package	wrench size actuation screw	Nm	ft. lbs.
KM20NCMSF2434	KM2520NRPKG	5mm	19-22	14-16
KM25NCMSF3140	KM25NRPKG	6mm	34-40	25-30

NOTE: For torque wrench, see page L52–L53.
For mounting controls, see page M70.

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.



KM20SCLCR0925



KM

Kennametal
Modular

KM™ Mini Quick Change
tooling system

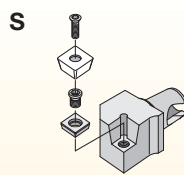
20

System
Size

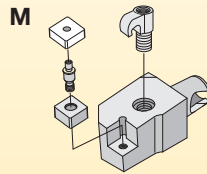
20 = Ø 20 x 20mm
25 = Ø 25 x 25mm

S

Clamping
System



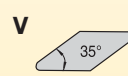
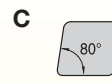
S-Clamping
Clamped from above with
a screw for indexable
inserts with hole



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

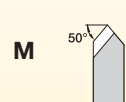
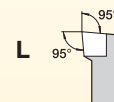
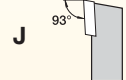
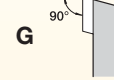
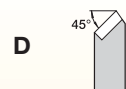
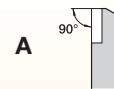
C

Insert
Shape

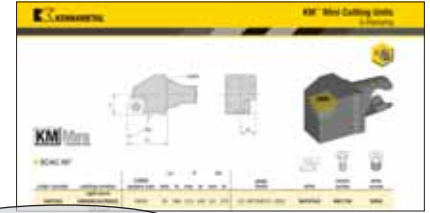


L

Cutting Unit
Shape



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



KM20SCLCR0925

C	R	09	25
Clearance Angle	Direction	Insert Size	Gage Length
<p>B 5°</p> <p>C 7°</p> <p>N 0°</p> <p>P 11°</p>	<p>L = Left-hand cutting unit</p> <p>R = Right-hand cutting unit</p> <p>N = Neutral cutting unit</p>	<p>C</p> <p>D</p> <p>V</p> <p>K</p> <p>S</p> <p>T</p> <p>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.



KM20A3SR31635



KM

Kennametal
Modular

KM™ Mini Quick Change
tooling system

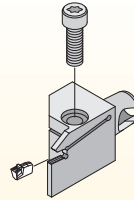
20

System
Size

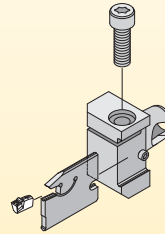
12 = Ø 12 x 12mm
16 = Ø 16 x 16mm

A3

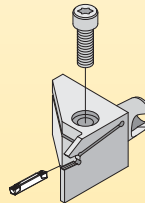
Clamping
Systems



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.

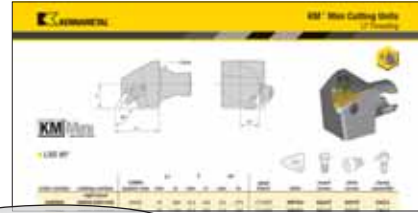


KM20A3SR31635

R	3	16	35								
Direction	Insert Seat Size	Cutting Depth	Gage Length								
<p>R = Right hand</p> <p>L = Left hand</p>	<table border="1"> <thead> <tr> <th>insert seat size</th> </tr> </thead> <tbody> <tr><td>1</td></tr> <tr><td>1B</td></tr> <tr><td>2</td></tr> <tr><td>2B</td></tr> <tr><td>3</td></tr> <tr><td>4</td></tr> <tr><td>5</td></tr> </tbody> </table>	insert seat size	1	1B	2	2B	3	4	5	<p>07 = 7mm 11 = 11mm 16 = 16mm</p>	<p>L1 = Gage length</p>
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.



KM20LSR1625



KM

Kennametal
Modular

KM™ Mini Quick Change
tooling system

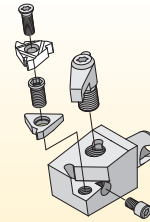
20

System
Size

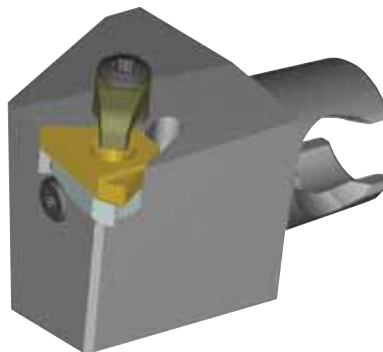
20 = Ø 20 x 20mm
 25 = Ø 25 x 25mm

LS

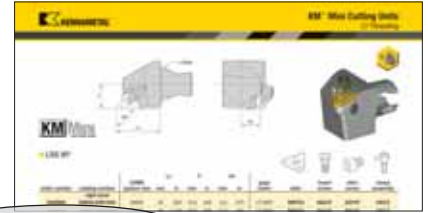
Clamping
Systems



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.



KM20LSSR1625

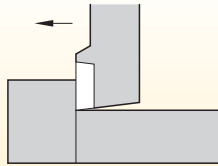
S

Location

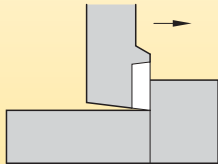
E = End mount
S = Side mount

R

Direction



L = Left-hand cutting unit



R = Right-hand cutting unit

16

Insert Size

I = Cutting edge length

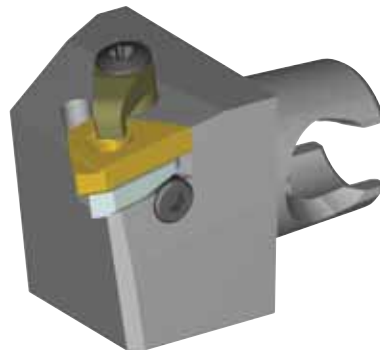


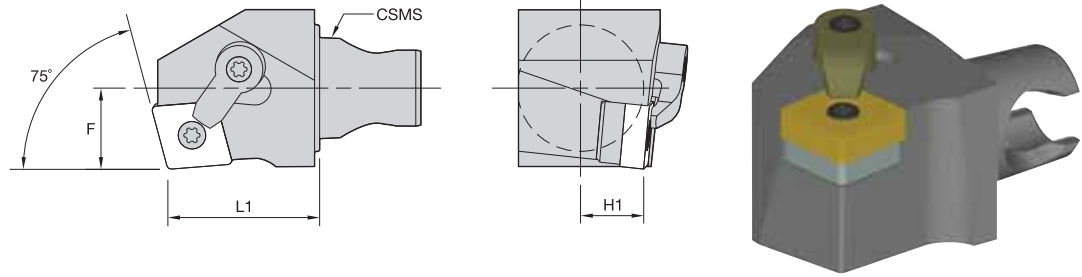
I	d (IC)
11	6,35
16	9,52
22	12,70
27	15,88

25

Gage Length

L₁ = Gage length

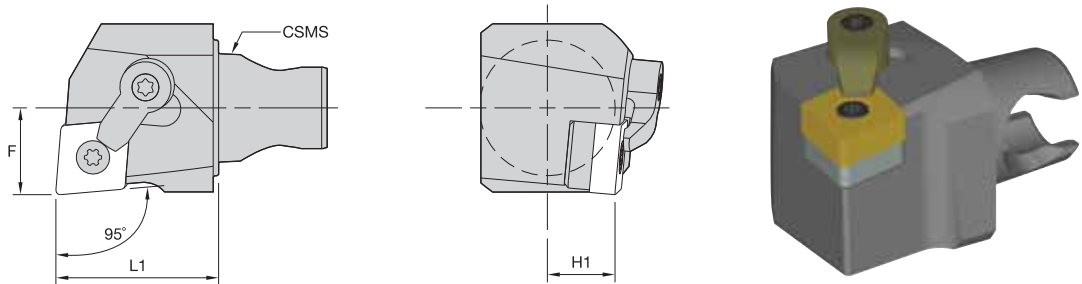




■ MCKN 75°



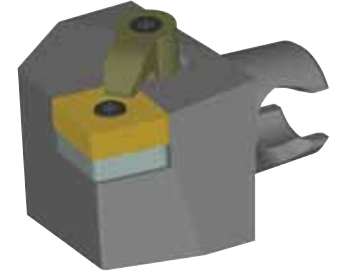
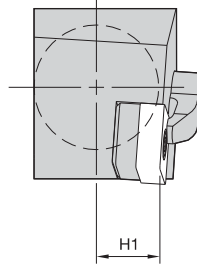
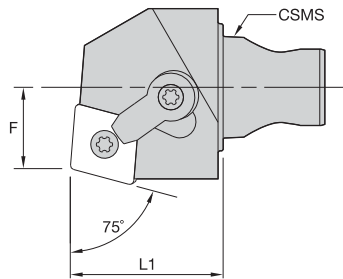
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
3487534	KM20MCKNR1225	KM20	25	.984	12,5	.492	9,5	.375	CN..120408/CN..432	ICSN432	KLM46	CKM20LP	STCM11
2398793	KM25MCKNR1230	KM25	30	1.181	16,0	.630	12,5	.492	CN..120408/CN..432	ICSN433	KLM4615IP	CKM20LP	STCM1115IP
left hand													
3487533	KM20MCKNL1225	KM20	25	.984	12,5	.492	9,5	.375	CN..120408/CN..432	ICSN432	KLM46	CKM20LP	STCM11
2398794	KM25MCKNL1230	KM25	30	1.181	16,0	.630	12,5	.492	CN..120408/CN..432	ICSN433	KLM4615IP	CKM20LP	STCM1115IP



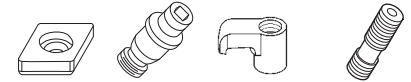
■ MCLN 95°



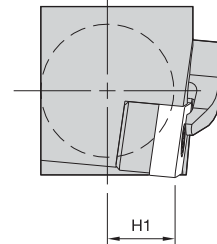
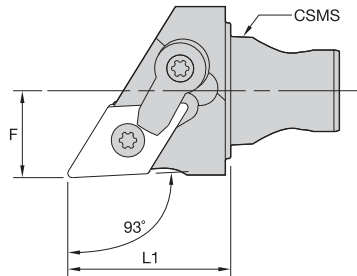
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
3487520	KM20MCLNR0925	KM20	25	.984	12,5	.492	9,5	.375	CN..090308/CN..322	ICSN332	KLM34L	CKM7LP	STCM9
3487522	KM20MCLNR1225	KM20	25	.984	12,5	.492	9,5	.375	CN..120408/CN..432	ICSN432	KLM46	CKM20LP	STCM11
2265207	KM25MCLNR1230	KM25	30	1.181	16,0	.630	12,5	.492	CN..120408/CN..432	ICSN433	KLM4615IP	CKM20LP	STCM1115IP
left hand													
3487519	KM20MCLNL0925	KM20	25	.984	12,5	.492	9,5	.375	CN..090308/CN..322	ICSN332	KLM34L	CKM7LP	STCM9
3487521	KM20MCLNL1225	KM20	25	.984	12,5	.492	9,5	.375	CN..120408/CN..432	ICSN432	KLM46	CKM20LP	STCM11
2398795	KM25MCLNL1230	KM25	30	1.181	16,0	.630	12,5	.492	CN..120408/CN..432	ICSN433	KLM4615IP	CKM20LP	STCM1115IP



■ MCRN 75°



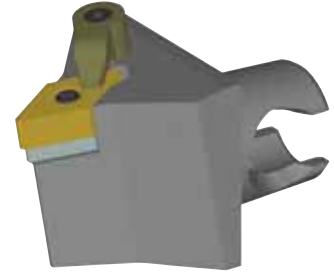
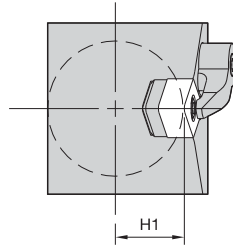
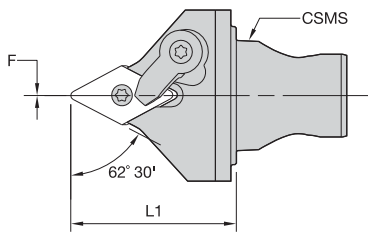
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
2398796	KM25MCRNR1230	KM25	30	1.181	16	.630	12,5	.492	CN..120408/CN..432	ICSN433	KLM4615IP	CKM20LP	STCM1115IP
left hand													
2398797	KM25MCRNL1230	KM25	30	1.181	16	.630	12,5	.492	CN..120408/CN..432	ICSN433	KLM4615IP	CKM20LP	STCM1115IP



■ MDJN 93°



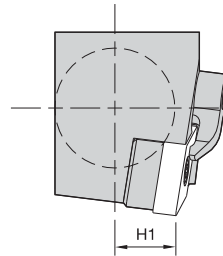
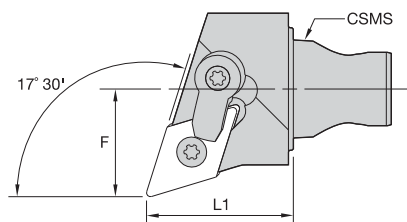
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
3487536	KM20MDJNR1125	KM20	25	.984	12,5	.492	9,5	.375	DN..110408/DN..332	IDSN322	KLM34L	CKM7LP	STCM9
3487538	KM20MDJNR150425	KM20	25	.984	12,5	.492	9,5	.375	DN..150408/DN..432	IDSN442	KLM46L	CKM7LP	STCM9
3487540	KM20MDJNR150625	KM20	25	.984	12,5	.492	9,5	.375	DN..150608/DN..442	IDSN432	KLM46L	CKM7LP	STCM9
3176217	KM25MDJNR1130	KM25	30	1.181	16,0	.630	12,5	.492	DN..110408/DN..332	IDSN322	KLM34LT9PKG	CKM7LP	STCM9T9
2398798	KM25MDJNR150430	KM25	30	1.181	16,0	.630	12,5	.492	DN..150408/DN..432	IDSN442	KLM46L15IP	CKM20LP	STCM1115IP
3397312	KM25MDJNR150630	KM25	30	1.181	16,0	.630	12,5	.492	DN..150608/DN..442	IDSN432	KLM46L	CKM23LP	STCM11
left hand													
3487535	KM20MDJNL1125	KM20	25	.984	12,5	.492	9,5	.375	DN..110408/DN..332	IDSN322	KLM34L	CKM7LP	STCM9
3487537	KM20MDJNL150425	KM20	25	.984	12,5	.492	9,5	.375	DN..150408/DN..432	IDSN442	KLM46L	CKM7LP	STCM9
3487539	KM20MDJNL150625	KM20	25	.984	12,5	.492	9,5	.375	DN..150608/DN..442	IDSN432	KLM46L	CKM7LP	STCM9
3176218	KM25MDJNL1130	KM25	30	1.181	16,0	.630	12,5	.492	DN..110408/DN..332	IDSN322	KLM34LT9PKG	CKM7LP	STCM9T9
2398799	KM25MDJNL150430	KM25	30	1.181	16,0	.630	12,5	.492	DN..150408/DN..432	IDSN442	KLM46L15IP	CKM20LP	STCM1115IP
3397311	KM25MDJNL150630	KM25	30	1.181	16,0	.630	12,5	.492	DN..150608/DN..442	IDSN432	KLM46L	CKM23LP	STCM11



■ MDPN 62° 30'



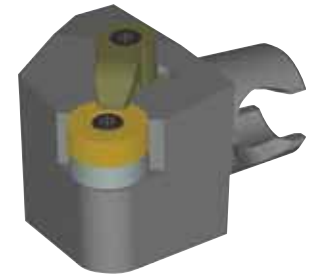
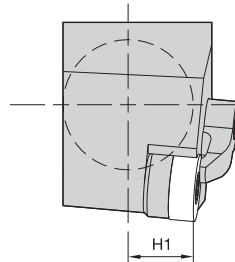
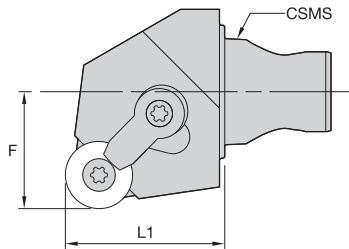
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
2398800	KM25MDPNN1130	KM25	30	1.181	0,0	.000	12,5	.492	DN..110408/DN..332	IDSN322	KLM34LT9PKG	CKM7LP	STCM9T9



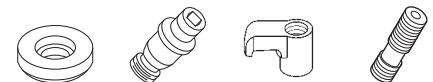
■ MDQN 107° 30'



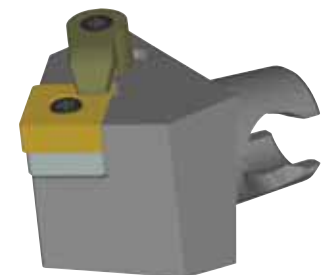
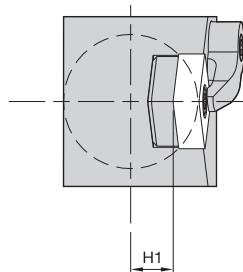
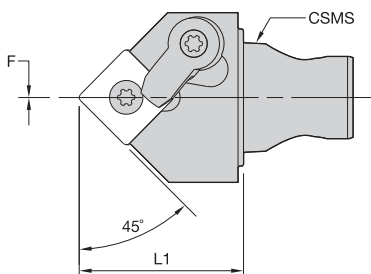
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
2398801	right hand	KM25	30	1.181	22	.866	12,5	.492	DN..150408/DN..432	IDSN442	KLM46L15IP	CKM20LP	STCM1115IP
	left hand												
2398802	KM25MDQNL150430	KM25	30	1.181	22	.866	12,5	.492	DN..150408/DN..432	IDSN442	KLM46L15IP	CKM20LP	STCM1115IP



■ MRGN 0°



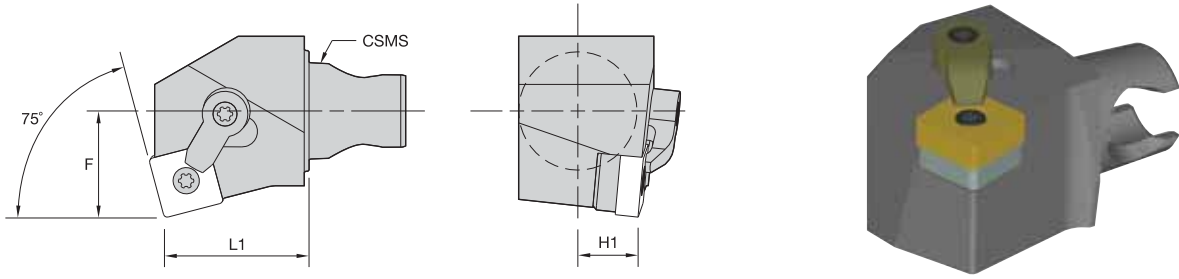
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
2629139	KM25MRGNR0930	KM25	30	1.181	16	.630	12,5	.492	RN..090300/RN..32	IRSN33	KLM34LT9PKG	CKM7LP	STCM9T9
2398803	KM25MRGNR1230	KM25	30	1.181	22	.866	12,5	.492	RN..120400/RN..43	IRSN43	KLM4615IP	CKM20LP	STCM1115IP
left hand													
2629140	KM25MRGNL0930	KM25	30	1.181	16	.630	12,5	.492	RN..090300/RN..32	IRSN33	KLM34LT9PKG	CKM7LP	STCM9T9
2398804	KM25MRGNL1230	KM25	30	1.181	22	.866	12,5	.492	RN..120400/RN..43	IRSN43	KLM4615IP	CKM20LP	STCM1115IP



■ MSDN 45°



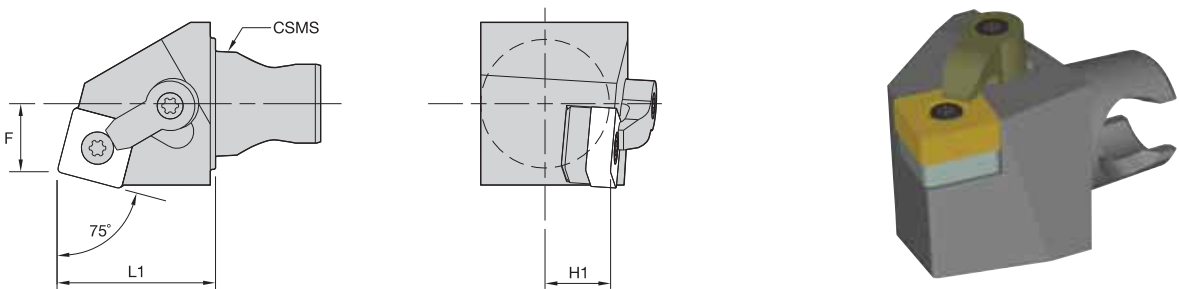
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
2398805	KM25MSDNN1230	KM25	30	1.181	0	.000	12,5	.492	SN..120408/SN..432	ISSN433	KLM4615IP	CKM20LP	STCM1115IP



■ MSKN 75°



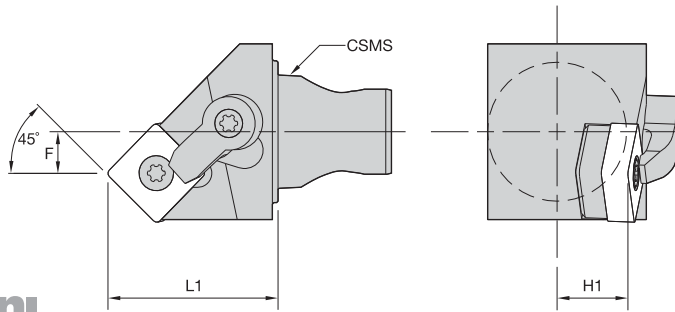
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
	right hand												
2398806	KM25MSKNR1230	KM25	30	1.181	22	.866	12,5	.492	SN..120408/SN..432	ISSN433	KLM4615IP	CKM20LP	STCM1115IP
	left hand												
2398807	KM25MSKNL1230	KM25	30	1.181	22	.866	12,5	.492	SN..120408/SN..432	ISSN433	KLM4615IP	CKM20LP	STCM1115IP



■ MSRN 75°



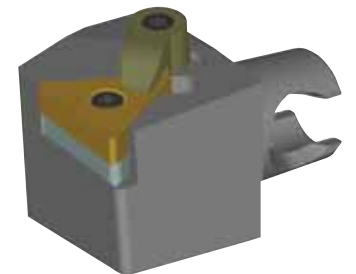
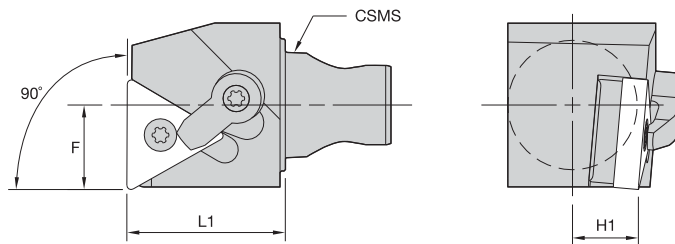
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
	right hand												
2398808	KM25MSRNR1230	KM25	30	1.181	13	.512	12,5	.492	SN..120408/SN..432	ISSN433	KLM4615IP	CKM20LP	STCM1115IP
	left hand												
2398809	KM25MSRNL1230	KM25	30	1.181	13	.512	12,5	.492	SN..120408/SN..432	ISSN433	KLM4615IP	CKM20LP	STCM1115IP



■ MSSN 45°



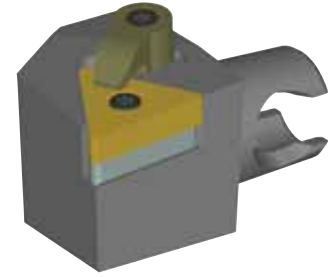
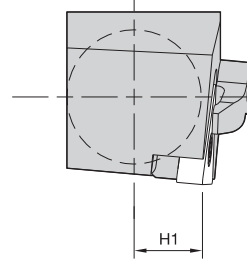
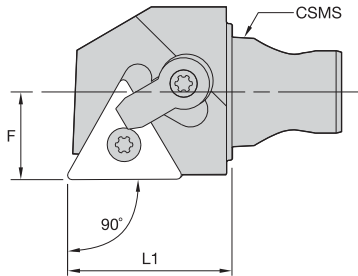
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
	right hand												
2398810	KM25MSSNR1230	KM25	30,0	1.181	7,35	.289	12,5	.492	SN..120408/SN..432	ISSN433	KLM4615IP	CKM20LP	STCM1115IP
	left hand												
2398811	KM25MSSNL1230	KM25	30,0	1.181	7,35	.289	12,5	.492	SN..120408/SN..432	ISSN433	KLM4615IP	CKM20LP	STCM1115IP



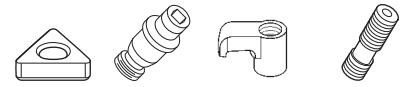
■ MTFN 90°



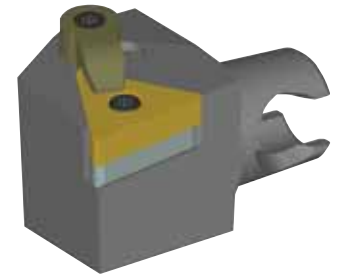
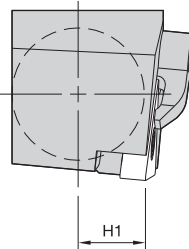
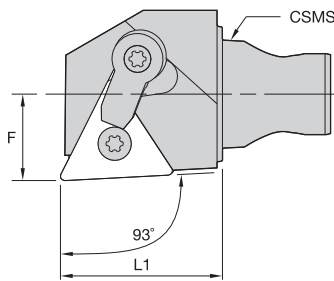
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
	right hand												
2655560	KM25MTFNR1630	KM25	30	1.181	16	.630	12,5	.492	TN..160408/TN..332	ITSN323	KLM34L9IP	CKM20LP	STCM119IP
2398812	KM25MTFNR2230	KM25	30	1.181	16	.630	12,5	.492	TN..220408/TN..432	ITSN433	KLM4615IP	CKM20LP	STCM1115IP
	left hand												
2655561	KM25MTFNL1630	KM25	30	1.181	16	.630	12,5	.492	TN..160408/TN..332	ITSN323	KLM34L9IP	CKM20LP	STCM119IP
2398813	KM25MTFNL2230	KM25	30	1.181	16	.630	12,5	.492	TN..220408/TN..432	ITSN433	KLM4615IP	CKM20LP	STCM1115IP



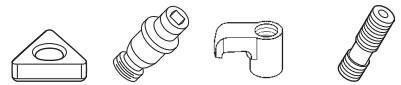
■ **MTGN 90°**



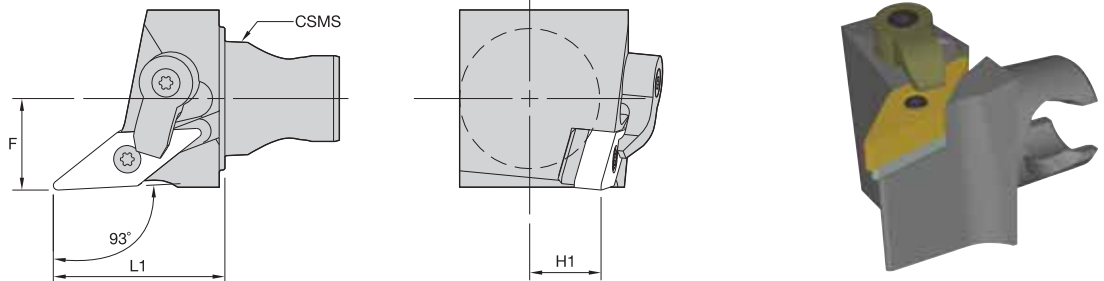
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
3487542	KM20MTGNR1625	KM20	25	.984	12,5	.492	9,5	.375	TN..160408/TN..332	ITSN322	KLM34L	CKM7LP	STCM9
2655562	KM25MTGNR1630	KM25	30	1.181	16,0	.630	12,5	.492	TN..160408/TN..332	ITSN323	KLM34L9IP	CKM20LP	STCM119IP
2398814	KM25MTGNR2230	KM25	30	1.181	16,0	.630	12,5	.492	TN..220408/TN..432	ITSN433	KLM4615IP	CKM20LP	STCM1115IP
left hand													
3487541	KM20MTGNL1625	KM20	25	.984	12,5	.492	9,5	.375	TN..160408/TN..332	ITSN322	KLM34L	CKM7LP	STCM9
2655593	KM25MTGNL1630	KM25	30	1.181	16,0	.630	12,5	.492	TN..160408/TN..332	ITSN323	KLM34L9IP	CKM20LP	STCM119IP
2398815	KM25MTGNL2230	KM25	30	1.181	16,0	.630	12,5	.492	TN..220408/TN..432	ITSN433	KLM4615IP	CKM20LP	STCM1115IP



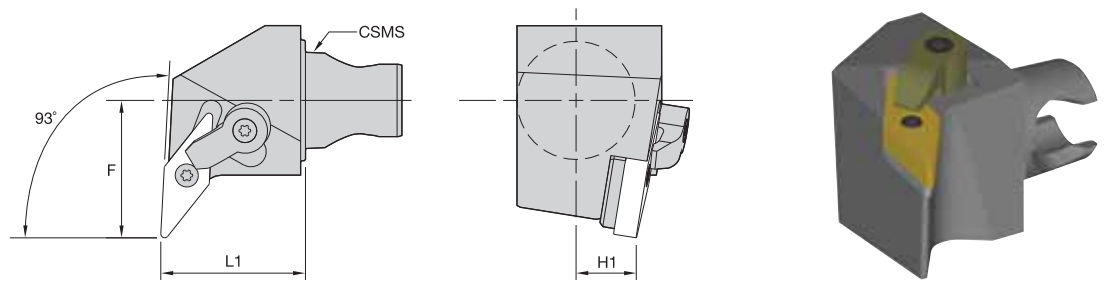
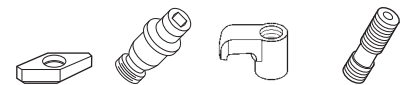
■ **MTJN 93°**



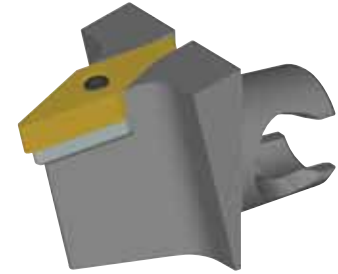
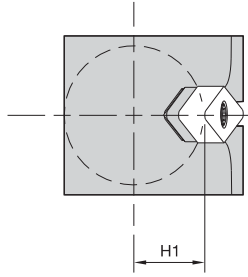
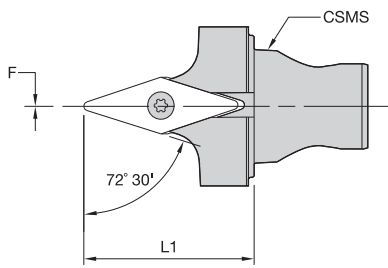
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
2655594	KM25MTJNR1630	KM25	30	1.181	16	.630	12,5	.492	TN..160408/TN..332	ITSN323	KLM34L9IP	CKM20LP	STCM119IP
2398816	KM25MTJNR2230	KM25	30	1.181	16	.630	12,5	.492	TN..220408/TN..432	ITSN433	KLM4615IP	CKM20LP	STCM1115IP
left hand													
2655595	KM25MTJNL1630	KM25	30	1.181	16	.630	12,5	.492	TN..160408/TN..332	ITSN323	KLM34L9IP	CKM20LP	STCM119IP
2398817	KM25MTJNL2230	KM25	30	1.181	16	.630	12,5	.492	TN..220408/TN..432	ITSN433	KLM4615IP	CKM20LP	STCM1115IP


MVJN 93°


order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
3487548	KM20MVJNR1630	KM20	30	1.181	12,5	.492	9,5	.375	VN..160408/VN..332	IVSN322	KLM34L	CKM7LP	STCM9
2398818	KM25MVJNR1630	KM25	30	1.181	16,0	.630	12,5	.492	VN..160408/VN..332	IVSN322	KLM34L9IP	CKM20LP	STCM119IP
left hand													
3487547	KM20MVJNL1630	KM20	30	1.181	12,5	.492	9,5	.375	VN..160408/VN..332	IVSN322	KLM34L	CKM7LP	STCM9
2398819	KM25MVJNL1630	KM25	30	1.181	16,0	.630	12,5	.492	VN..160408/VN..332	IVSN322	KLM34L9IP	CKM20LP	STCM119IP

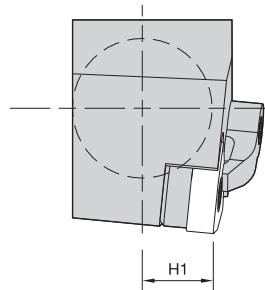
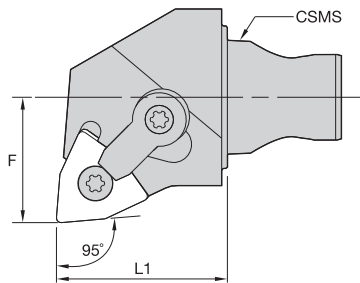

MVUN 93°


order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
2398820	KM25MVUNR1630	KM25	30	1.181	28,5	1.122	12,5	.492	VN..160408/VN..332	IVSN322	KLM34L9IP	CKM20LP	STCM119IP
left hand													
2398821	KM25MVUNL1630	KM25	30	1.181	28,5	1.122	12,5	.492	VN..160408/VN..332	IVSN322	KLM34L9IP	CKM20LP	STCM119IP



■ MVVN 72° 30'

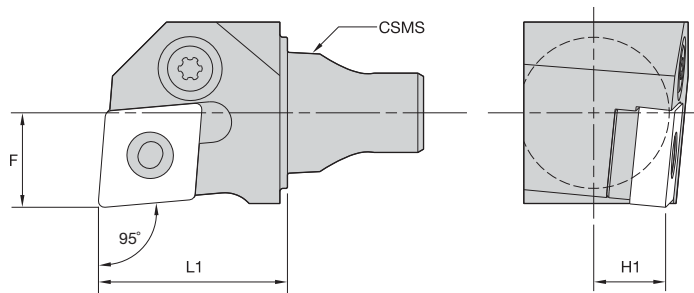
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin
			mm	in	mm	in	mm	in			
2398822	KM25MVVN1630	KM25	30	1.181	0	.000	12,5	.492	VN..160408/VN..332	IVSN322	KLM34L9IP



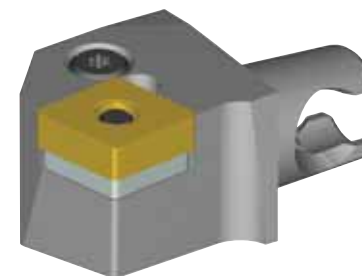
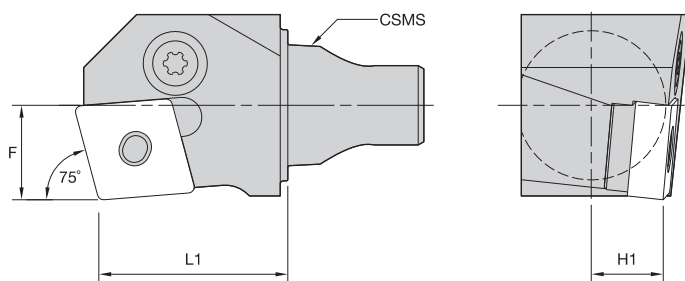
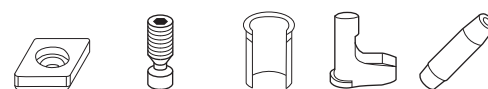
■ MWLN 95°

order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
3487544	KM20MWLNR0625	KM20	25	.984	12,5	.492	9,5	.375	WN..060408/WN..332	IWSN322	KLM34L	CKM7LP	STCM9
3487550	KM20MWLNR0825	KM20	25	.984	12,5	.492	9,5	.375	WN..080408/WN..432	IWSN433	KLM46	CKM7LP	STCM9
2398823	KM25MWLNR0830	KM25	30	1.181	22,0	.866	12,5	.492	WN..080408/WN..432	IWSN433	KLM4615IP	CKM20LP	STCM1115IP
left hand													
3487543	KM20MWLNL0625	KM20	25	.984	12,5	.492	9,5	.375	WN..060408/WN..332	IWSN322	KLM34L	CKM7LP	STCM9
3487549	KM20MWLNL0825	KM20	25	.984	12,5	.492	9,5	.375	WN..080408/WN..432	IWSN433	KLM46	CKM7LP	STCM9
2398824	KM25MWLNL0830	KM25	30	1.181	22,0	.866	12,5	.492	WN..080408/WN..432	IWSN433	KLM4615IP	CKM20LP	STCM1115IP

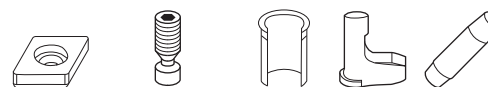


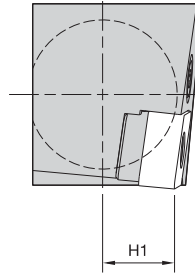
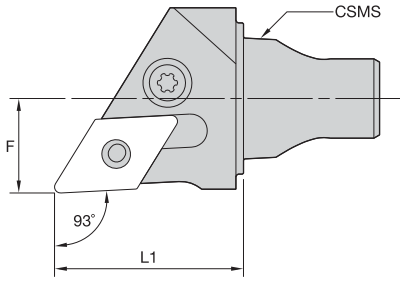

■ PCLN 95°

order number	catalog number	L1		F		H1		gage insert	shim	lever screw	shim pin	toggle lever	punch
		mm	in	mm	in	mm	in						
	right hand												
3397169	KM20PCLNR1225	25,00	.984	12,5	.492	9,5	.375	CN..120408/CN..432	512.112	514.123	513.023	511.023	515.018
	left hand												
3397168	KM20PCLNL1225	25,00	.984	12,5	.492	9,5	.375	CN..120408/CN..432	512.112	514.123	513.023	511.023	515.018


■ PCKN 75°

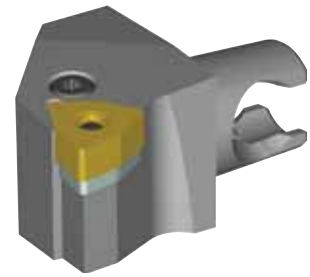
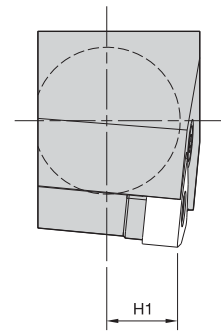
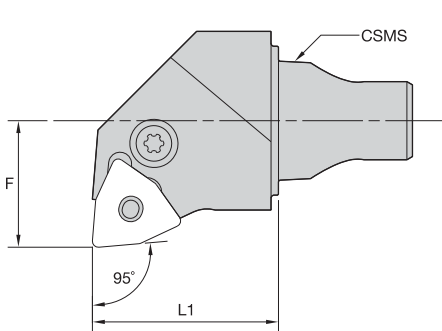
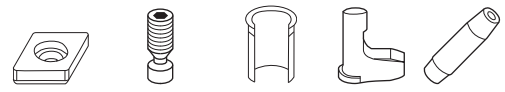
order number	catalog number	L1		F		H1		gage insert	shim	lever screw	shim pin	toggle lever	punch
		mm	in	mm	in	mm	in						
	right hand												
3397171	KM20PCKNR1225	25	.984	12,5	.492	9,5	.375	CN..120408/CN..432	512.112	514.123	513.023	511.023	515.018
	left hand												
3397170	KM20PCKNL1225	25	.984	12,5	.492	9,5	.375	CN..120408/CN..432	512.112	514.123	513.023	511.023	515.018





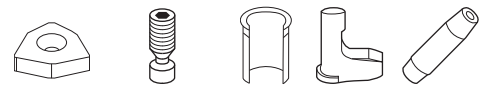
■ PDJN 93°

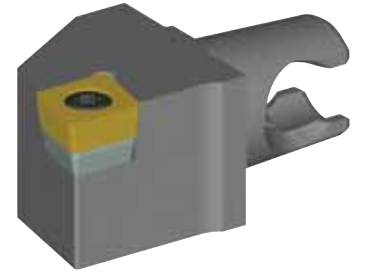
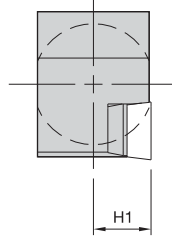
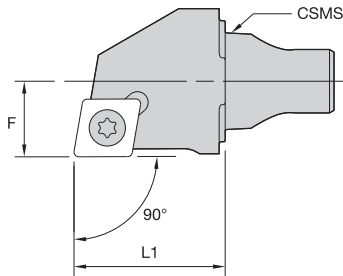
order number	catalog number	L1		F		H1		gage insert	shim	lever screw	shim pin	toggle lever	punch
		mm	in	mm	in	mm	in						
3397213	right hand KM20PDJNR1125	25	.984	12,5	.492	9,5	.375	DN..110408/DN..332	512.060	514.118	513.060	511.060	515.018
3397172	left hand KM20PDJNL1125	25	.984	12,5	.492	9,5	.375	DN..110408/DN..332	512.060	514.118	513.060	511.060	515.018



■ PVLN 95°

order number	catalog number	L1		F		H1		gage insert	shim	lever screw	shim pin	toggle lever	punch
		mm	in	mm	in	mm	in						
3397215	right hand KM20PVLNR0625	25	.984	17,0	.669	9,5	.375	WN..060408/WN..332	512.134	514.118	513.018	511.018	515.018
3397214	left hand KM20PVLNL0625	25	.984	17,0	.669	9,5	.375	WN..060408/WN..332	512.134	514.118	513.018	511.018	515.018

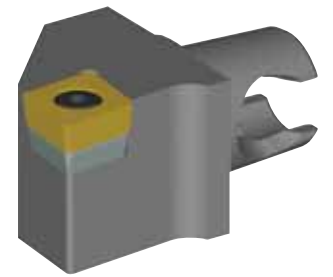
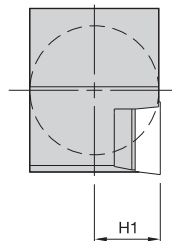
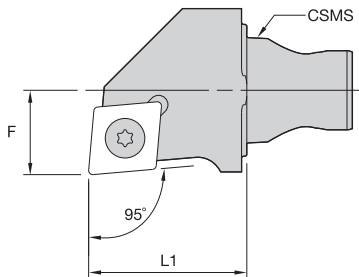




■ SCAC 90°



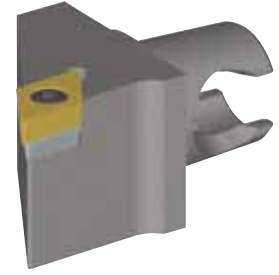
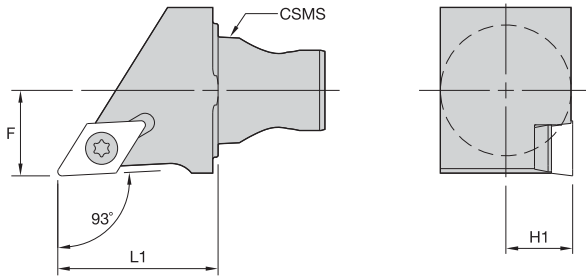
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
	right hand											
3487553	KM20SCACR0925	KM20	25	.984	12,5	.492	9,5	.375	CC..09T308/CC..3252	SKCP343	MS1156	SRS3
	left hand											
3487512	KM20SCACL0925	KM20	25	.984	12,5	.492	9,5	.375	CC..09T308/CC..3252	SKCP343	MS1156	SRS3



■ SCLC 95°



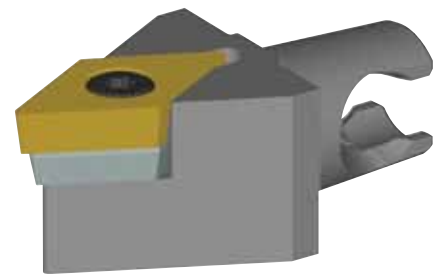
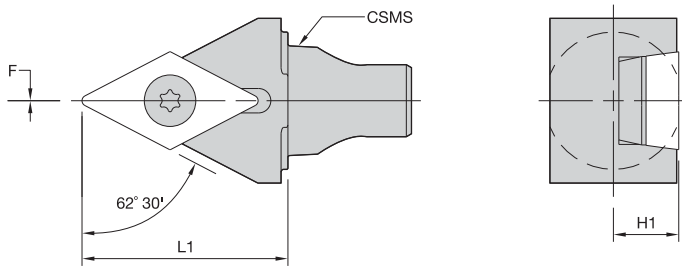
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
	right hand											
3487555	KM20SCLCR0925	KM20	25	.984	12,5	.492	9,5	.375	CC..09T308/CC..3252	SKCP343	MS1156	SRS3
3487557	KM20SCLCR1225	KM20	25	.984	12,5	.492	9,5	.375	CC..120408/CC..432	SKCP453	MS1158	SRS4
2399472	KM25SCLCR0930	KM25	30	1.181	16,0	.630	12,5	.492	CC..09T308/CC..3252	SKCP343	MS1156	SRS3
2399474	KM25SCLCR1230	KM25	30	1.181	16,0	.630	12,5	.492	CC..120408/CC..432	SKCP453	MS1158	SRS4
	left hand											
3487554	KM20SCLCL0925	KM20	25	.984	12,5	.492	9,5	.375	CC..09T308/CC..3252	SKCP343	MS1156	SRS3
3487556	KM20SCLCL1225	KM20	25	.984	12,5	.492	9,5	.375	CC..120408/CC..432	SKCP453	MS1158	SRS4
2399473	KM25SCLCL0930	KM25	30	1.181	16,0	.630	12,5	.492	CC..09T308/CC..3252	SKCP343	MS1156	SRS3
2399475	KM25SCLCL1230	KM25	30	1.181	16,0	.630	12,5	.492	CC..120408/CC..432	SKCP453	MS1158	SRS4



■ SDJC 93°



order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
right hand												
3487495	KM20SDJCR1125	KM20	25	.984	12,5	.492	9,5	.375	DC..11T308/DC..3252	SKDP343	MS1156	SRS3
3487497	KM20SDJCR1525	KM20	25	.984	12,5	.492	9,5	.375	DC..150408/DC..432	.SKDP453	MS1158	SRS4
2399476	KM25SDJCR1130	KM25	30	1.181	16,0	.630	12,5	.492	DC..11T308/DC..3252	SKDP343	MS1156	SRS3
left hand												
3487494	KM20SDJCL1125	KM20	25	.984	12,5	.492	9,5	.375	DC..11T308/DC..3252	SKDP343	MS1156	SRS3
3487496	KM20SDJCL1525	KM20	25	.984	12,5	.492	9,5	.375	DC..150408/DC..432	SKDP453	MS1158	SRS4
2399477	KM25SDJCL1130	KM25	30	1.181	16,0	.630	12,5	.492	DC..11T308/DC..3252	SKDP343	MS1156	SRS3



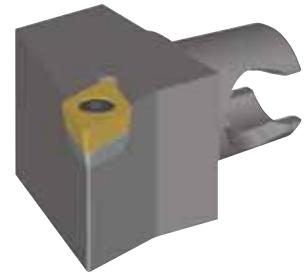
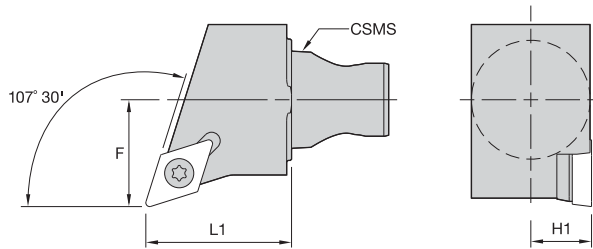
■ SDPC 62° 30'



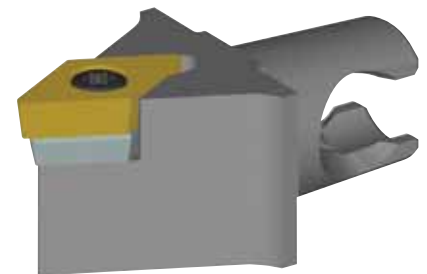
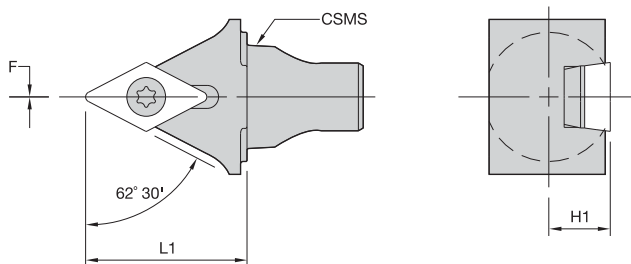
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
3487508	KM20SDPCN1530	KM20	30	1.181	0	.000	9,5	.375	DC..150408/DC..432	SKDP453	MS1158	SRS4
2399478	KM25SDPCN1130	KM25	30	1.181	0	.000	12,5	.492	DC..11T308/DC..3252	SKDP343	MS1156	SRS3



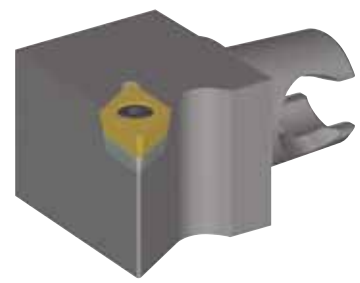
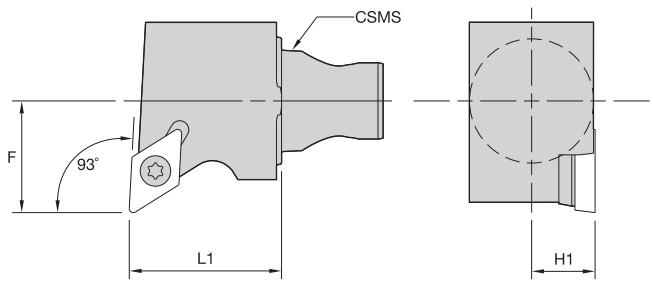
KM Mini Cutting Units


■ SDQC 107° 30'


order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
right hand												
3487499	KM20SDQCR1125	KM20	25	.984	17	.669	9,5	.375	DC..11T308/DC..3252	SKDP343	MS1156	SRS3
3487501	KM20SDQCR1525	KM20	25	.984	17	.669	9,5	.375	DC..150408/DC..432	SKDP453	MS1158	SRS4
2399479	KM25SDQCR1130	KM25	30	1.181	22	.866	12,5	.492	DC..11T308/DC..3252	SKDP343	MS1156	SRS3
left hand												
3487498	KM20SDQCL1125	KM20	25	.984	17	.669	9,5	.375	DC..11T308/DC..3252	SKDP343	MS1156	SRS3
3487500	KM20SDQCL1525	KM20	25	.984	17	.669	9,5	.375	DC..150408/DC..432	SKDP453	MS1158	SRS4
2399480	KM25SDQCL1130	KM25	30	1.181	22	.866	12,5	.492	DC..11T308/DC..3252	SKDP343	MS1156	SRS3


■ SDNC 62° 30'

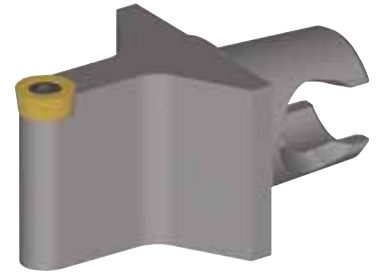
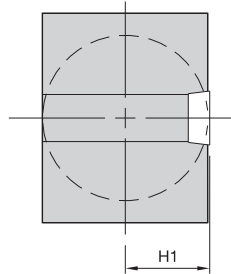
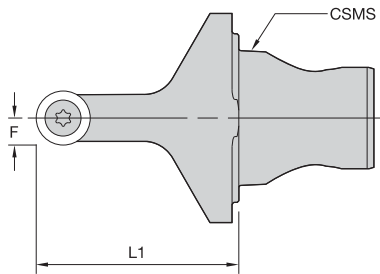

order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
3487506	KM20SDNCN1125	KM20	25	.984	0	.000	9,5	.375	DC..11T308/DC..3252	SKDP343	MS1156	SRS3
3487507	KM20SDNCN1530	KM20	30	1.181	0	.000	9,5	.375	DC..150408/DC..432	SKDP453	MS1158	SRS4



■ SDUC 93°



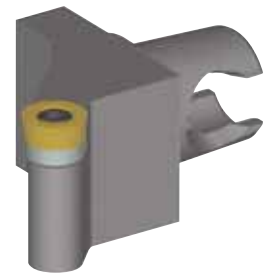
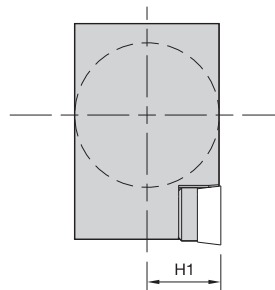
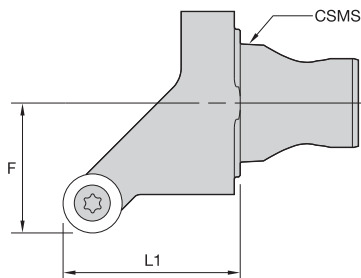
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
	right hand											
2399481	KM25SDUCR1130	KM25	30	1.181	22	.866	12,5	.492	DC..11T308/DC..3252	SKDP343	MS1156	SRS3
	left hand											
2399482	KM25SDUCL1130	KM25	30	1.181	22	.866	12,5	.492	DC..11T308/DC..3252	SKDP343	MS1156	SRS3



■ SRDC 0°



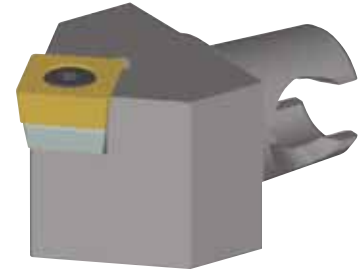
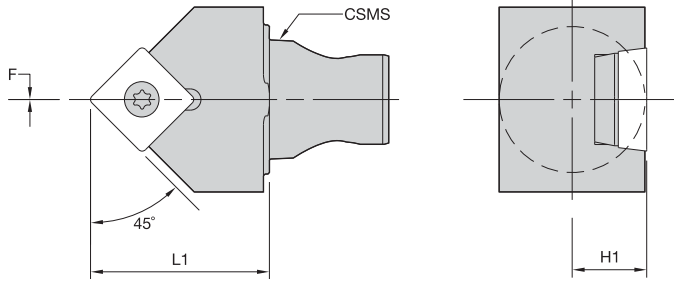
order number	catalog number	CSMS system size	L1		F		H1		gage insert	insert screw
			mm	in	mm	in	mm	in		
2399483	KM25SRDCN0830	KM25	30	1.181	4	.158	12,5	.492	RC..0803M0	MS1154



■ SRGC 90°



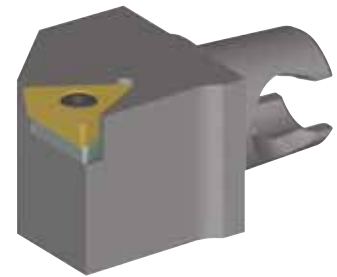
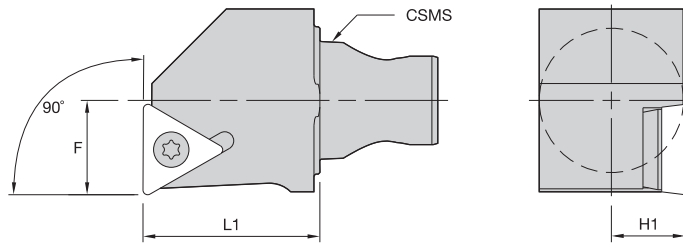
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
2399484	right hand	KM25	30	1.181	22	.866	12,5	.492	RC..10T3M0	SKRN100300	MS1156	SRS3
	left hand											
2399485	KM25SRGCL1030	KM25	30	1.181	22	.866	12,5	.492	RC..10T3M0	SKRN100300	MS1156	SRS3



■ SSDC 45°



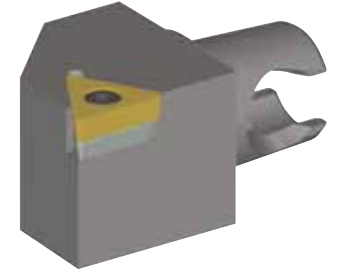
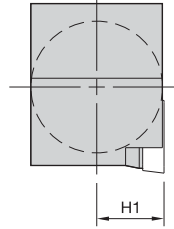
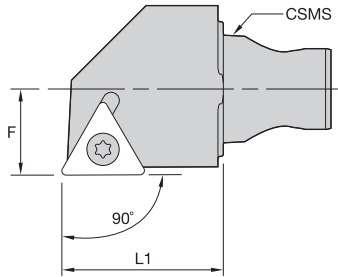
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
2399486	KM25SSDCN1230	KM25	30	1.181	0	.000	12,5	.492	SC..120408/SC..432	SKSP453	MS1158	SRS4






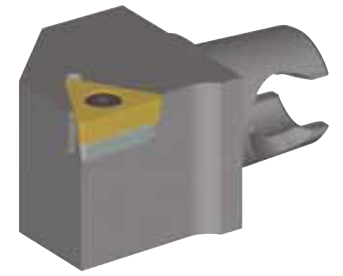
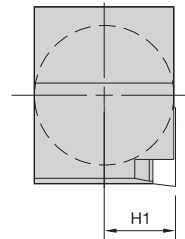
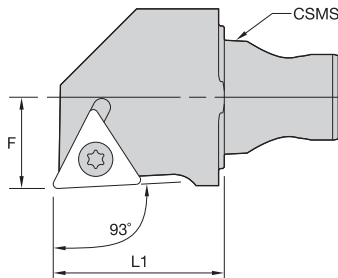
■ STFC 90°






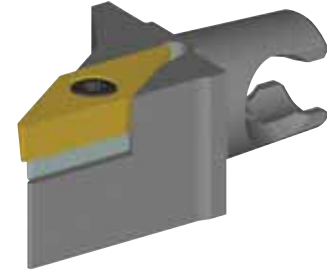
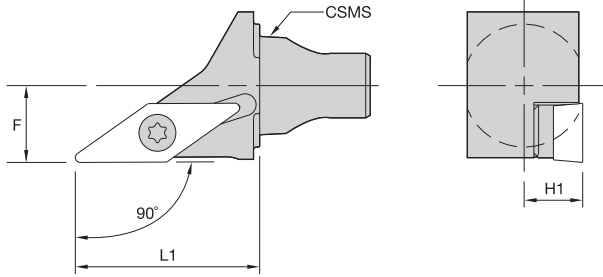
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
2399487	KM25STFCR1630	KM25	30	1.181	16	.630	12,5	.492	TC..16T308/TC..3252	SKTP343	MS1156	SRS3
2399488	KM25STFCL1630	KM25	30	1.181	16	.630	12,5	.492	TC..16T308/TC..3252	SKTP343	MS1156	SRS3


■ STGC 90°

order number	catalog number	CSMS system size	L1		F		H1		gage insert	 shim	 insert screw	 shim screw
			mm	in	mm	in	mm	in				
right hand												
3487559	KM20STGCR1625	KM20	25	.984	12,5	.492	9,5	.375	TC..16T308/TC..3252	SKTP343	MS1156	SRS3
2399489	KM25STGCR1630	KM25	30	1.181	16,0	.630	12,5	.492	TC..16T308/TC..3252	SKTP343	MS1156	SRS3
left hand												
3487558	KM20STGCL1625	KM20	25	.984	12,5	.492	9,5	.375	TC..16T308/TC..3252	SKTP343	MS1156	SRS3
2399490	KM25STGCL1630	KM25	30	1.181	16,0	.630	12,5	.492	TC..16T308/TC..3252	SKTP343	MS1156	SRS3


■ STJC 93°

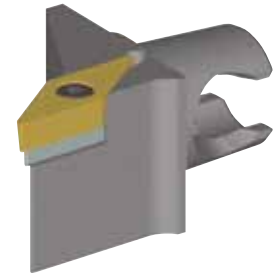
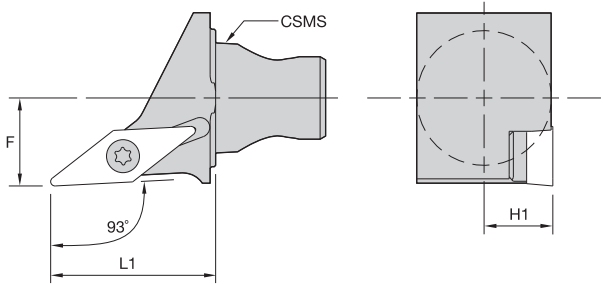
order number	catalog number	CSMS system size	L1		F		H1		gage insert	 shim	 insert screw	 shim screw
			mm	in	mm	in	mm	in				
right hand												
3487561	KM20STJCR1625	KM20	25	.984	12,5	.492	9,5	.375	TC..16T308/TC..3252	SKTP343	MS1156	SRS3
2399491	KM25STJCR1630	KM25	30	1.181	16,0	.630	12,5	.492	TC..16T308/TC..3252	SKTP343	MS1156	SRS3
left hand												
3487560	KM20STJCL1625	KM20	25	.984	12,5	.492	9,5	.375	TC..16T308/TC..3252	SKTP343	MS1156	SRS3
2399492	KM25STJCL1630	KM25	30	1.181	16,0	.630	12,5	.492	TC..16T308/TC..3252	SKTP343	MS1156	SRS3



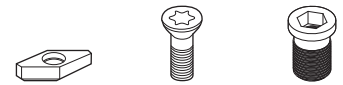
■ **SVAB 90°**



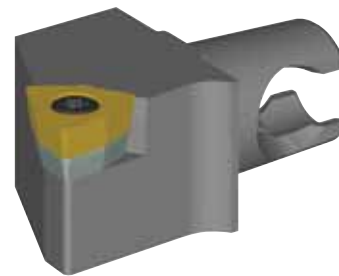
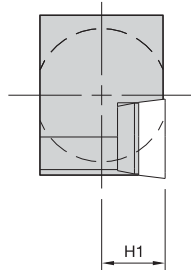
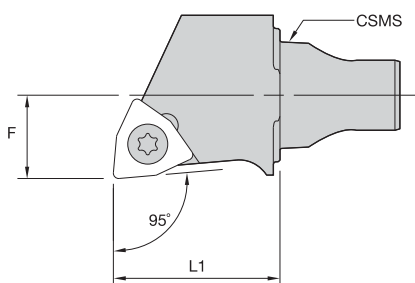
order number	catalog number	CSMS system size	L1 mm	L1 in	F mm	F in	H1 mm	H1 in	gage insert	shim	insert screw	shim screw
	right hand											
3487563	KM20SVABR1630	KM20	30	1.181	12,5	.492	9,5	.375	VB..160408/VB..332	SKVN343	MS1156	SRS3
	left hand											
3487562	KM20SVABL1630	KM20	30	1.181	12,5	.492	9,5	.375	VB..160408/VB..332	SKVN343	MS1156	SRS3



■ **SVJB 93°**



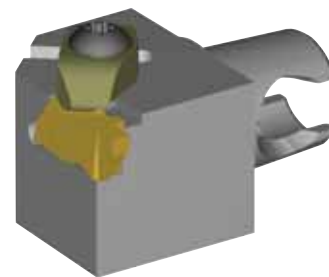
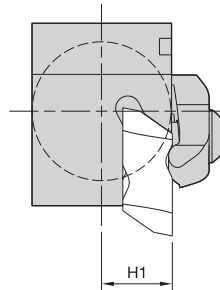
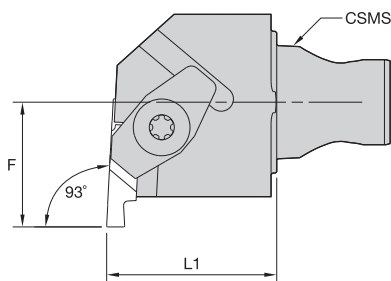
order number	catalog number	CSMS system size	L1 mm	L1 in	F mm	F in	H1 mm	H1 in	gage insert	shim	insert screw	shim screw
	right hand											
3487565	KM20SVJBR1125	KM20	25	.984	12,5	.492	9,5	.375	VB..110304/VB..221	—	MS1153	—
3487567	KM20SVJBR1630	KM20	30	1.181	12,5	.492	9,5	.375	VB..160408/VB..332	SKVN343	MS1156	SRS3
3397261	KM25SVJBL1130	KM25	30	1.181	16,0	.630	12,5	.492	VB..110304/VB..221	—	MS1153	—
3397262	KM25SVJBR1130	KM25	30	1.181	16,0	.630	12,5	.492	VB..110304/VB..221	—	MS1153	—
3365589	KM25SVJBR1630	KM25	30	1.181	16,0	.630	12,5	.492	VB..160408/VB..332	SKVN343	MS1156	SRS3
	left hand											
3487564	KM20SVJBL1125	KM20	25	.984	12,5	.492	9,5	.375	VB..110304/VB..221	—	MS1153	—
3487566	KM20SVJBL1630	KM20	30	1.181	12,5	.492	9,5	.375	VB..160408/VB..332	SKVN343	MS1156	SRS3
3365590	KM25SVJBL1630	KM25	30	1.181	16,0	.630	12,5	.492	VB..160408/VB..332	SKVN343	MS1156	SRS3



■ SWLC 95°



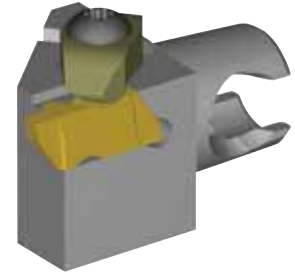
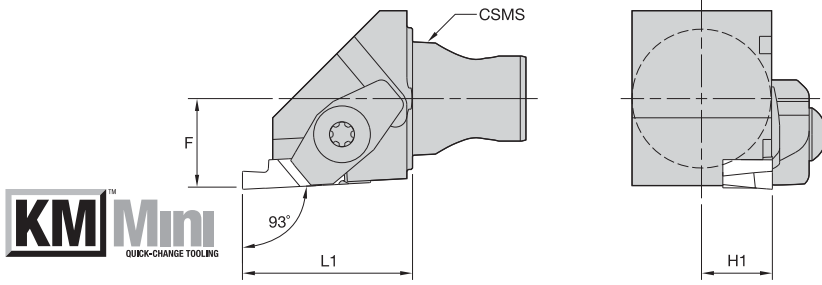
order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw
			mm	in	mm	in	mm	in				
	right hand											
3487569	KM20SWLCR0625	KM20	25	.984	12,5	.492	9,5	.375	WC..06T308/WC..3252	SKWP343	MS1156	SRS3
	left hand											
3487568	KM20SWLCL0625	KM20	25	.984	12,5	.492	9,5	.375	WC..06T308/WC..3252	SKWP343	MS1156	SRS3



■ NE 93° • End Mount



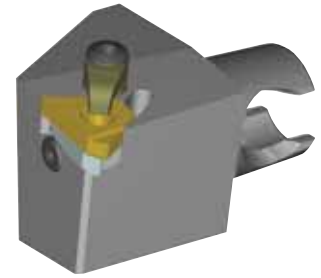
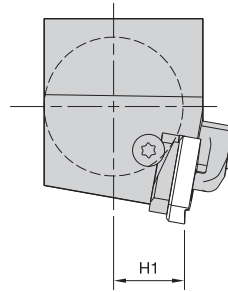
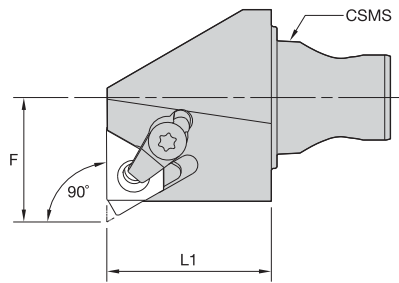
order number	catalog number	CSMS system size	L1		F		H1		gage insert	clamp	clamp screw
			mm	in	mm	in	mm	in			
	right hand										
3483036	KM20NER225	KM20	25	.984	17	.669	9,5	.375	NG2L	CM75	MS1200
3483034	KM20NER325	KM20	25	.984	17	.669	9,5	.375	NG3L	CM73LP	MS524
2399462	KM25NER230	KM25	30	1.181	22	.866	12,5	.492	NG2L	CM75	MS1200
2399494	KM25NER330	KM25	30	1.181	22	.866	12,5	.492	NG3L	CM73LP	MS2111
2399496	KM25NER430	KM25	30	1.181	24	.945	12,5	.492	NG4L	CM73LP	MS2111
	left hand										
3483035	KM20NEL225	KM20	25	.984	17	.669	9,5	.375	NG2R	CM74	MS1200
3483033	KM20NEL325	KM20	25	.984	17	.669	9,5	.375	NG3R	CM72LP	MS524
2399493	KM25NEL230	KM25	30	1.181	22	.866	12,5	.492	NG2R	CM74	MS1200
2399495	KM25NEL330	KM25	30	1.181	22	.866	12,5	.492	NG3R	CM72LP	MS2111
2399497	KM25NEL430	KM25	30	1.181	24	.945	12,5	.492	NG4R	CM72LP	MS2111



■ NS 93° • Side Mount

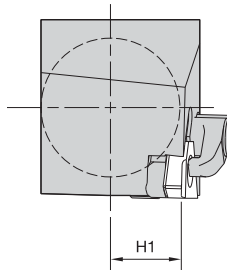
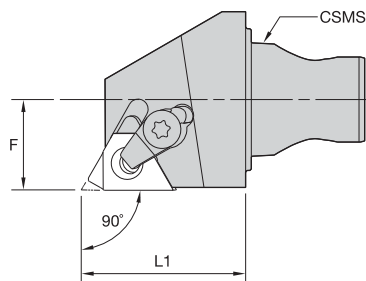
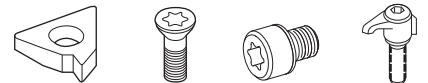


order number	catalog number	CSMS system size	L1		F		H1		gage insert	clamp	clamp screw
			mm	in	mm	in	mm	in			
right hand											
3483030	KM20NSR230	KM20	30	1.181	12,5	.492	9,5	.375	NG2R	CM74	MS1200
3483028	KM20NSR330	KM20	30	1.181	12,5	.492	9,5	.375	NG3R	CM72LP	MS524
2399498	KM25NSR230	KM25	30	1.181	16,0	.630	12,5	.492	NG2R	CM74	MS1200
2399500	KM25NSR330	KM25	30	1.181	16,0	.630	12,5	.492	NG3R	CM72LP	MS2111
2399502	KM25NSR430	KM25	30	1.181	16,0	.630	12,5	.492	NG4R	CM212LP	MS2111
left hand											
3483029	KM20NSL230	KM20	30	1.181	12,5	.492	9,5	.375	NG2L	CM75	MS1200
3483027	KM20NSL330	KM20	30	1.181	12,5	.492	9,5	.375	NG3L	CM73LP	MS524
2399499	KM25NSL230	KM25	30	1.181	16,0	.630	12,5	.492	NG2L	CM75	MS1200
2399501	KM25NSL330	KM25	30	1.181	16,0	.630	12,5	.492	NG3L	CM73LP	MS2111
2399503	KM25NSL430	KM25	30	1.181	16,0	.630	12,5	.492	NG4L	CM213LP	MS2111


■ LSE 90°

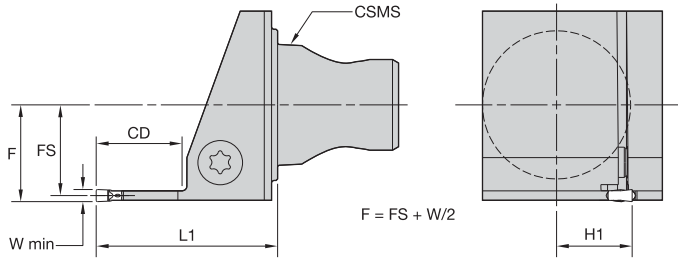

order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw	clamp assembly
			mm	in	mm	in	mm	in					
right hand													
3482966	KM20LSER1625	KM20	25	.984	17	.669	9,5	.375	LT16EL	SMYI3	SSA3T	SSY3T	CKC3
2399506	KM25LSER1630	KM25	30	1.181	22	.866	12,5	.492	LT16EL	SMYI3	SSA3T	SSY3T	CKC3
left hand													
3482965	KM20LSEL1625	KM20	25	.984	17	.669	9,5	.375	LT16ER	SMYE3	SSA3T	SSY3T	CKC3
2399507	KM25LSEL1630	KM25	30	1.181	22	.866	12,5	.492	LT16ER	SMYE3	SSA3T	SSY3T	CKC3

NOTE: Cutting units are supplied with insert screw and clamp assembly. However, tools are designed to use either the insert screw or the clamp assembly, not both.


■ LSS 90°


order number	catalog number	CSMS system size	L1		F		H1		gage insert	shim	insert screw	shim screw	clamp assembly
			mm	in	mm	in	mm	in					
right hand													
3482968	KM20LSSR1625	KM20	25	.984	12,5	.492	9,5	.375	LT16ER	SMYE3	SSA3T	SSY3T	CKC3
2399504	KM25LSSR1630	KM25	30	1.181	16,0	.630	12,5	.492	LT16ER	SMYE3	SSA3T	SSY3T	CKC3
3176219	KM25LSSR2230	KM25	30	1.181	16,0	.630	12,5	.492	LT22ER	SMYE4	SSA4T	SSY4T	CKC4
left hand													
3482967	KM20LSSL1625	KM20	25	.984	12,5	.492	9,5	.375	LT16EL	SMYI3	SSA3T	SSY3T	CKC3
2399505	KM25LSSL1630	KM25	30	1.181	16,0	.630	12,5	.492	LT16EL	SMYI3	SSA3T	SSY3T	CKC3
3176220	KM25LSSL2230	KM25	30	1.181	16,0	.630	12,5	.492	LT22EL	SMYI4	SSA4T	SSY4T	CKC4

NOTE: Cutting units are supplied with insert screw and clamp assembly. However, tools are designed to use either the insert screw or the clamp assembly, not both.





■ A4SM • Side Mount

order number	catalog number	CSMS system size	seat size	L1		FS		W min		H1		CD	
				mm	in	mm	in	mm	in	mm	in		
right hand													
3482929	KM20A4SMR011330	KM20	1.5	30	1.181	11,8	.463	1,5	.059	9,5	.375	13,5	.53
3482931	KM20A4SMR021430	KM20	2	30	1.181	11,5	.453	2,0	.079	9,5	.375	14,0	.55
3482935	KM20A4SMR031430	KM20	3	30	1.181	11,0	.433	3,0	.118	9,5	.375	14,0	.55
3482937	KM20A4SMR041430	KM20	4	30	1.181	10,5	.413	4,0	.157	9,5	.375	14,0	.55
3482933	KM20A4SMR2B1430	KM20	2B	30	1.181	11,3	.443	2,5	.098	9,5	.375	14,0	.55
3377363	KM25A4SMR011330	KM25	1	30	1.181	15,3	.600	1,5	.059	12,5	.492	13,5	.53
3377291	KM25A4SMR021430	KM25	2	30	1.181	15,0	.591	2,0	.079	12,5	.492	14,0	.55
2399464	KM25A4SMR031430	KM25	3	30	1.181	14,5	.571	3,0	.118	12,5	.492	14,0	.55
2399466	KM25A4SMR041430	KM25	4	30	1.181	14,0	.551	4,0	.157	12,5	.492	14,0	.55
2399468	KM25A4SMR051935	KM25	5	35	1.378	13,5	.531	5,0	.197	12,5	.492	19,0	.75
3377289	KM25A4SMR2B1430	KM25	2B	30	1.181	14,8	.581	2,5	.098	12,5	.492	14,0	.55
left hand													
3482928	KM20A4SML011330	KM20	1.5	30	1.181	11,8	.463	1,5	.059	9,5	.375	13,5	.53
3482930	KM20A4SML021430	KM20	2	30	1.181	11,5	.453	2,0	.079	9,5	.375	14,0	.55
3482934	KM20A4SML031430	KM20	3	30	1.181	11,0	.433	3,0	.118	9,5	.375	14,0	.55
3482936	KM20A4SML041430	KM20	4	30	1.181	10,5	.413	4,0	.157	9,5	.375	14,0	.55
3482932	KM20A4SML2B1430	KM20	2B	30	1.181	11,3	.443	2,5	.098	9,5	.375	14,0	.55
3377292	KM25A4SML011330	KM25	1	30	1.181	15,3	.600	1,5	.059	12,5	.492	13,5	.53
3377290	KM25A4SML021430	KM25	2	30	1.181	15,0	.591	2,0	.079	12,5	.492	14,0	.55
2399465	KM25A4SML031430	KM25	3	30	1.181	14,5	.571	3,0	.118	12,5	.492	14,0	.55
2399467	KM25A4SML041430	KM25	4	30	1.181	14,0	.551	4,0	.157	12,5	.492	14,0	.55
2399469	KM25A4SML051935	KM25	5	35	1.378	13,5	.531	5,0	.197	12,5	.492	19,0	.75
3377288	KM25A4SML2B1430	KM25	2B	30	1.181	14,8	.581	2,5	.098	12,5	.492	14,0	.55

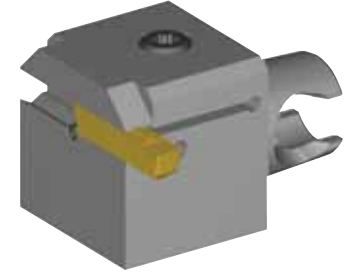
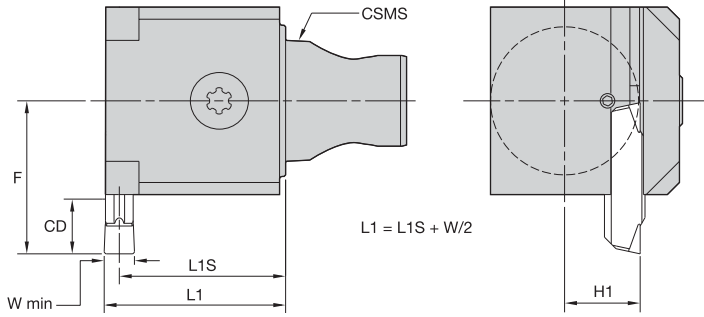
(continued)

(A4SM • Side Mount continued)

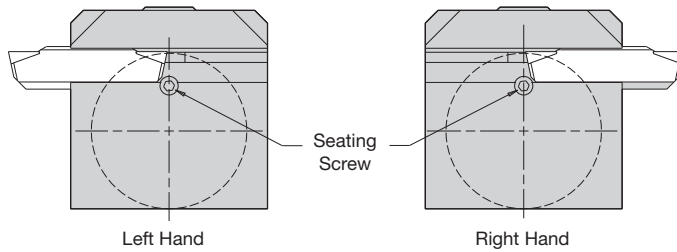
■ Spare Parts

catalog number	 clamp screw	 clamp screw
right hand		
KM20A4SMR011330	MS1156	—
KM20A4SMR021430	MS1160	—
KM20A4SMR031430	MS1160	—
KM20A4SMR041430	MS1160	—
KM20A4SMR2B1430	MS1160	—
KM25A4SMR011330	MS1156	—
KM25A4SMR021430	MS1160	—
KM25A4SMR031430	—	MS2091
KM25A4SMR041430	—	MS2091
KM25A4SMR051935	—	MS2091
KM25A4SMR2B1430	MS1160	—
left hand		
KM20A4SML011330	MS1156	—
KM20A4SML021430	MS1160	—
KM20A4SML031430	MS1160	—
KM20A4SML041430	MS1160	—
KM20A4SML2B1430	MS1160	—
KM25A4SML011330	MS1156	—
KM25A4SML021430	MS1160	—
KM25A4SML031430	—	MS2091
KM25A4SML041430	—	MS2091
KM25A4SML051935	—	MS2091
KM25A4SML2B1430	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 accepts 2B inserts.
 Seat size 2 cutting units accepts 2 or 2B inserts.



A4EN Insert Mounting



A4EN-style cutting units can be used for either left- or right-hand applications.



■ A4EN • End Mount

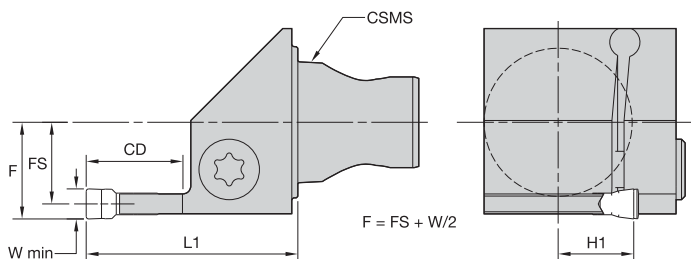
order number	catalog number	CSMS system size	seat size	L1S		F		W min		H1		CD	
				mm	in	mm	in	mm	in	mm	in		
2399470	KM25A4ENN040730	KM25	4	28	1.102	23	.906	4,0	.157	12,5	.492	7	.276
2399471	KM25A4ENN050930	KM25	5	28	1.083	25	.996	5,0	.197	12,5	.492	9	.354

■ Spare Parts



catalog number	clamp screw
KM25A4ENN040730	MS2091
KM25A4ENN050930	MS2091

NOTE: A4EN-style cutting units are designed without steel support for face grooving capacity. Cutting feed recommendations should be reduced by 25–30%.
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.

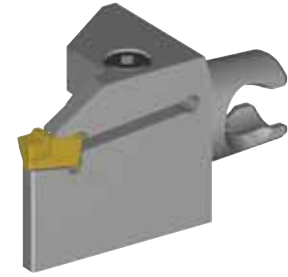
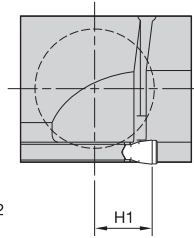
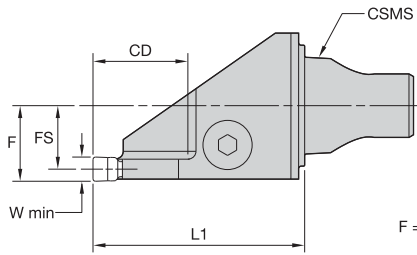

■ A3SS • Deep Groove

order number	catalog number	CSMS system size	seat size	L1		FS		W min		H1		CD	
				mm	in	mm	in	mm	in	mm	in	mm	in
right hand													
2399513	KM25A3SSR031635	KM25	3	35,0	1.378	15	.571	3	.12	12,5	.492	16	.63
2399515	KM25A3SSR041635	KM25	4	34,9	1.374	14	.551	4	.16	12,5	.492	16	.63
2399517	KM25A3SSR042645	KM25	4	45,0	1.772	14	.551	4	.16	12,5	.492	26	1.02
2399519	KM25A3SSR051635	KM25	5	35,0	1.378	14	.531	5	.20	12,5	.492	16	.63
2399521	KM25A3SSR052645	KM25	5	45,0	1.772	14	.531	5	.20	12,5	.492	26	1.02
left hand													
2399514	KM25A3SSL031635	KM25	3	35,0	1.378	15	.571	3	.12	12,5	.492	16	.63
2399516	KM25A3SSL041635	KM25	4	34,9	1.374	14	.551	4	.16	12,5	.492	16	.63
2399518	KM25A3SSL042645	KM25	4	45,0	1.772	14	.551	4	.16	12,5	.492	26	1.02
2399520	KM25A3SSL051635	KM25	5	35,0	1.378	14	.531	5	.20	12,5	.492	16	.63
2399522	KM25A3SSL052645	KM25	5	45,0	1.772	14	.531	5	.20	12,5	.492	26	1.02

■ Spare Parts


catalog number	clamp screw
right hand	
KM25A3SSR031635	MS1944
KM25A3SSR041635	MS1595
KM25A3SSR042645	MS1595
KM25A3SSR051635	MS1595
KM25A3SSR052645	MS1595
left hand	
KM25A3SSL031635	MS1944
KM25A3SSL041635	MS1595
KM25A3SSL042645	MS1595
KM25A3SSL051635	MS1595
KM25A3SSL052645	MS1595

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.



■ A3SC • Cut-Off

order number	catalog number	CSMS system size	seat size	L1		FS		W min		H1		CD	
				mm	in	mm	in	mm	in	mm	in		
	right hand												
3482925	KM20A3SCR031635	KM20	3	35	1.378	11,00	.433	3,0	.118	9,5	.375	16	.63
3482927	KM20A3SCR041635	KM20	4	35	1.378	10,50	.413	4,0	.157	9,5	.375	16	.63
	left hand												
3482924	KM20A3SCL031635	KM20	3	35	1.378	11,00	.433	3,0	.118	9,5	.375	16	.63
3482926	KM20A3SCL041635	KM20	4	35	1.378	10,50	.413	4,0	.157	9,5	.375	16	.63

■ Spare Parts

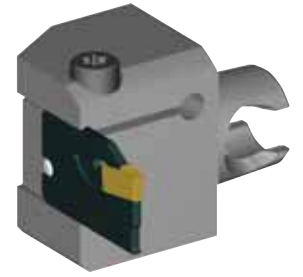
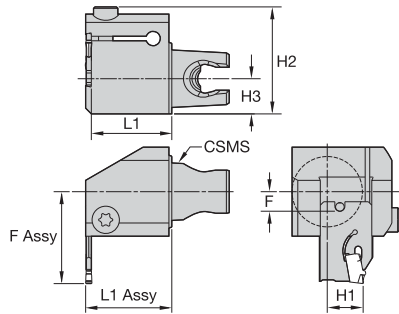
catalog number	clamp screw
right hand	
KM20A3SCR031635	MS1322
KM20A3SCR041635	MS1322
left hand	
KM20A3SCL031635	MS1322
KM20A3SCL041635	MS1322



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.



KM Mini Cutting Units



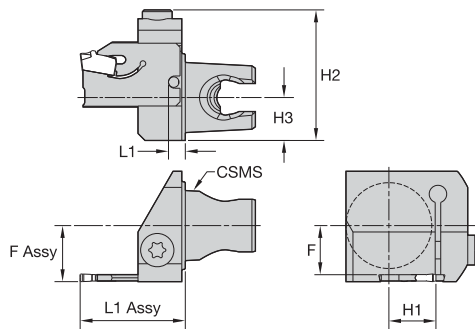
L1 Assy = L1 + F Blade
F Assy = F + L1 Blade

■ BE • End Mount



order number	catalog number	CSMS system size	L1		F		H1		H2		H3		clamp screw	cartridge 1
			mm	in	mm	in	mm	in	mm	in				
2426882	right hand	KM25	28	1.103	6,8	.268	12,5	.492	37,3	1.466	12,3	.482	MS1898PKG	A2BHSN19X...
	KM25BER													
2427293	left hand	KM25	28	1.103	6,8	.268	12,5	.492	37,3	1.466	12,3	.482	MS1898PKG	A2BHSN19X...
	KM25BEL													

NOTE: For blades, see page A162.



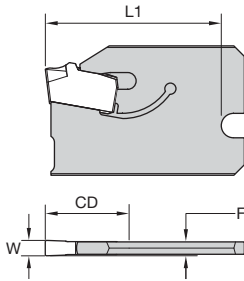
L1 Assy = L1 + L1 Blade
F Assy = F + F Blade

■ BS • Side Mount



order number	catalog number	CSMS system size	L1		F		H1		H2		H3		clamp screw	cartridge 1
			mm	in	mm	in	mm	in	mm	in				
2426880	right hand	KM25	4,8	.189	14	.552	12,5	.492	37,3	1.466	12,3	.482	MS1898PKG	A2BHSN19X...
	KM25BSR													
2426881	left hand	KM25	4,8	.189	14	.552	12,5	.492	37,3	1.466	12,3	.482	MS1898PKG	A2BHSN19X...
	KM25BSL													

NOTE: For 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



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- Versatile as a collet chuck with the use of reduction sleeves.

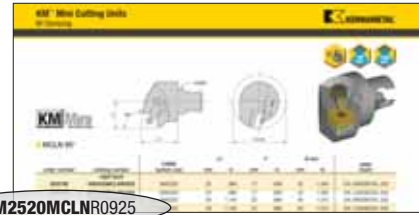
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www.kennametal.com



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.



KM2520MCLNR0925



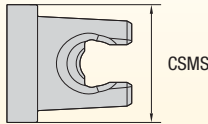
KM

Kennametal
Modular

2520

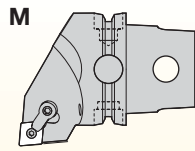
System
Size

2520 = 25mm
3225 = 32mm



M

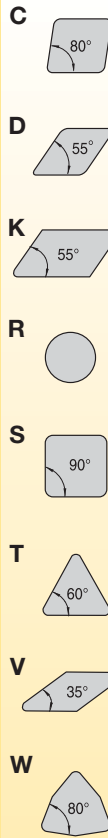
Insert Holding
Method



M-Clamping
Top and/or hole clamping
for inserts with hole

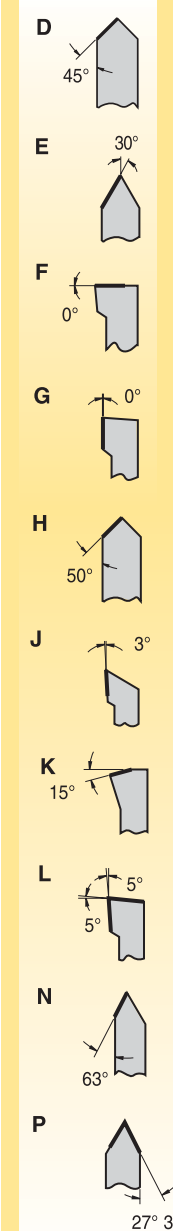
C

Insert
Shape



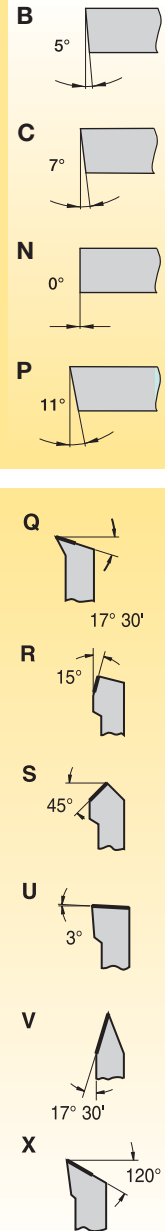
L

Toolholder
Style

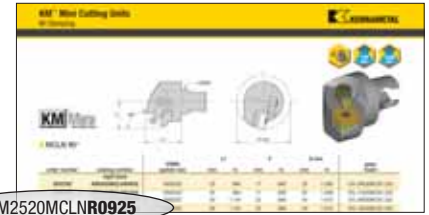


N

Insert
Clearance
Angle



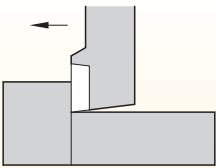
By referencing this easy-to-use guide, you can identify the correct product to meet your needs.



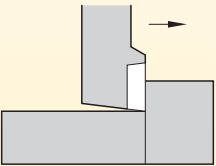
KM2520MCLNR0925

R

Hand of Tool



L = Left-hand cutting unit



R = Right-hand cutting unit

09

Insert Size
Cutting Edge
Length L10

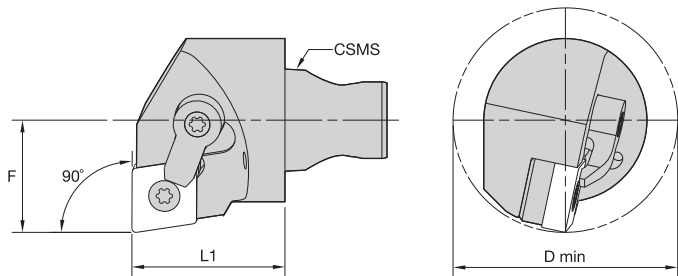
Metric

IC	C	D	K	R	S	T	V	W
3,97		04		03	03	06		
4,76	04	05		04	04	08	08	S3
5,56	05	06	03	05	05	09	09	03
6,00				06				
6,35	06	07	04	06	06	11	11	04
7,94	08	09	05	07	07	13	13	05
8,00				08			11	
9,52	09	11	06	09	09	16	16	06
9,52								
10,00				10				
11,11	11	13	07	11	11	19	19	07
12,00				12				
12,70	12	15	08	12	12	22	22	08
14,29	14	17	09	14	14	24	24	09
15,88	16	19	10	15	15	27	27	10
16,00				16				
17,46	17	21	11	17	17	30	30	11
19,05	19	23	13	19	19	33	33	13
20,00				20				
22,22	22	27	15	22	22	38	38	15
25,00				25				
25,40	25	31	17	25	25	44	44	17
31,75	32	38	21	31	31	54	54	21
32,00				32				

25

Gage
Length

- 25 = 25mm
- 30 = 30mm
- 45 = 45mm
- 120 = 120mm



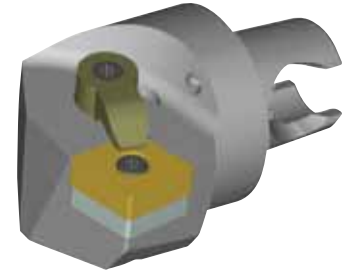
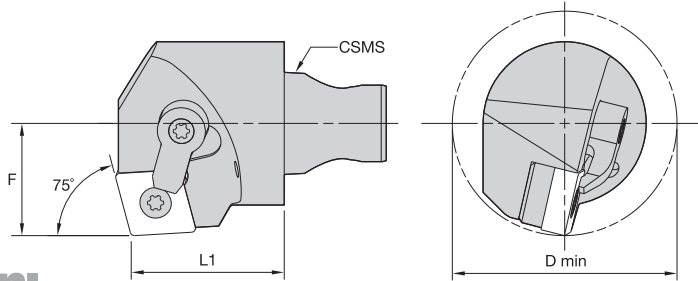
■ **MCFN 90°**



order number	catalog number	CSMS system size	L1		F		D min		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
	right hand												
2527431	KM3225MCFNR1230	KM3225	30	1.181	22	.866	40	1.575	CN..120408/CN..432	ICSN432	KLM4615IP	CKM20LP	STCM1115IP
	left hand												
2527432	KM3225MCFNL1230	KM3225	30	1.181	22	.866	40	1.575	CN..120408/CN..432	ICSN432	KLM4615IP	CKM20LP	STCM1115IP







KM Mini Cutting Units

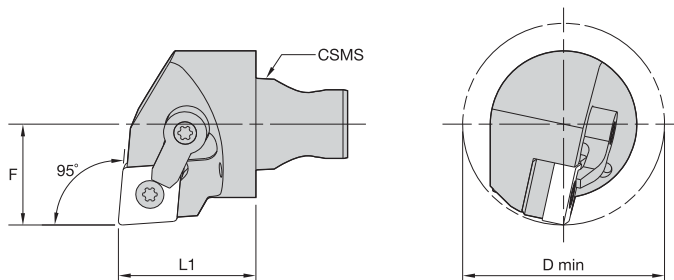


MCKN 75°

order number	catalog number	CSMS system size	L1		F		D min		gage insert
			mm	in	mm	in	mm	in	
	right hand								
2527433	KM3225MCKNR1230	KM3225	30	1.181	22	.866	40	1.57	CN..120408/CN..432
	left hand								
2527434	KM3225MCKNL1230	KM3225	30	1.181	22	.866	40	1.57	CN..120408/CN..432

Spare Parts

catalog number	 shim	 lock pin	 clamp	 clamp screw
right hand KM3225MCKNR1230	ICSN432	KLM4615IP	CKM20LP	STCM1115IP
left hand KM3225MCKNL1230	ICSN432	KLM4615IP	CKM20LP	STCM1115IP



■ MCLN 95°

order number	catalog number	CSMS system size	L1		F		D min		gage insert
			mm	in	mm	in	mm	in	
right hand									
3503780	KM2520MCLNR0925	KM2520	25	.984	17	.669	32	1.260	CN..090308/CN..332
3503782	KM2520MCLNR1225	KM2520	25	.984	17	.669	32	1.260	CN..120408/CN..432
2527435	KM3225MCLNR0930	KM3225	30	1.181	22	.866	40	1.575	CN..090308/CN..322
2527437	KM3225MCLNR1230	KM3225	30	1.181	22	.866	40	1.575	CN..120408/CN..432
left hand									
3503779	KM2520MCLNL0925	KM2520	25	.984	17	.669	32	1.260	CN..090308/CN..332
3503781	KM2520MCLNL1225	KM2520	25	.984	17	.669	32	1.260	CN..120408/CN..432
2527436	KM3225MCLNL0930	KM3225	30	1.181	22	.866	40	1.575	CN..090308/CN..322
2527438	KM3225MCLNL1230	KM3225	30	1.181	22	.866	40	1.575	CN..120408/CN..432

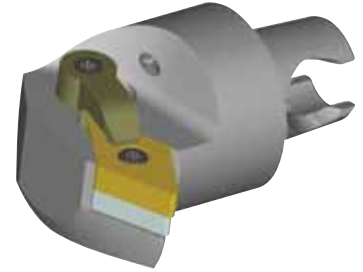
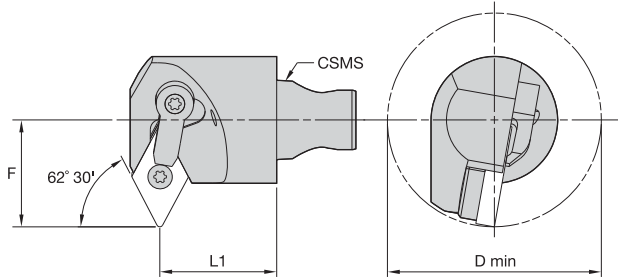
■ Spare Parts



catalog number	shim	lock pin	clamp	clamp screw
right hand				
KM2520MCLNR0925	—	KLM33	CKM7LP	STCM38
KM2520MCLNR1225	—	KLM43	CKM20LP	STCM35
KM3225MCLNR0930	ICSN332	KLM34LT9PKG	CKM7LP	STCM9T9
KM3225MCLNR1230	ICSN432	KLM4615IP	CKM20LP	STCM1115IP
left hand				
KM2520MCLNL0925	—	KLM33	CKM7LP	STCM38
KM2520MCLNL1225	—	KLM43	CKM20LP	STCM35
KM3225MCLNL0930	ICSN332	KLM34LT9PKG	CKM7LP	STCM9T9
KM3225MCLNL1230	ICSN432	KLM4615IP	CKM20LP	STCM1115IP



KM Mini Cutting Units



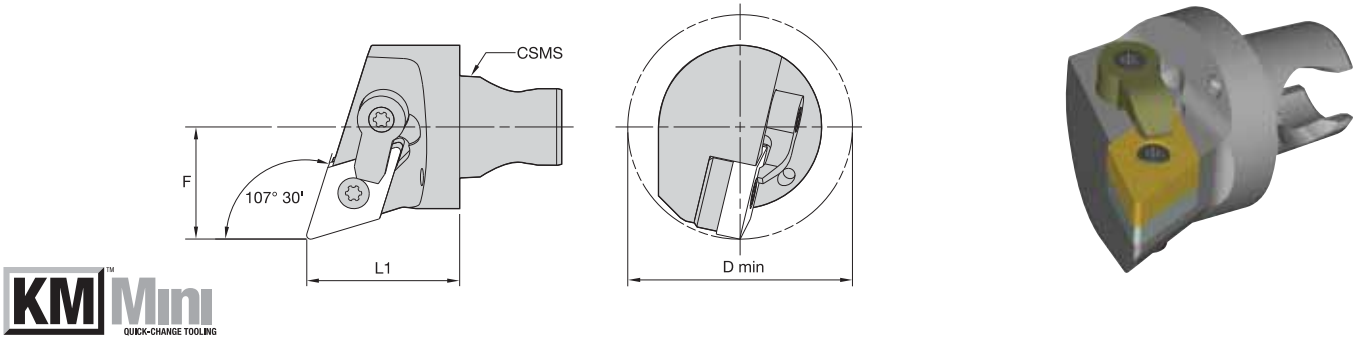
■ MDPN 62° 30'

order number	catalog number	CSMS system size	L1		F		D min		gage insert
			mm	in	mm	in	mm	in	
	right hand								
2527441	KM3225MDPNR1130	KM3225	30	1.181	22	.866	40	1.57	DN..110408/DN..332
2527439	KM3225MDPNR150430	KM3225	30	1.181	27	1.063	50	1.97	DN..150408/DN..432
	left hand								
2527442	KM3225MDPNL1130	KM3225	30	1.181	22	.866	40	1.57	DN..110408/DN..332
2527440	KM3225MDPNL150430	KM3225	30	1.181	27	1.063	50	1.97	DN..150408/DN..432

■ Spare Parts



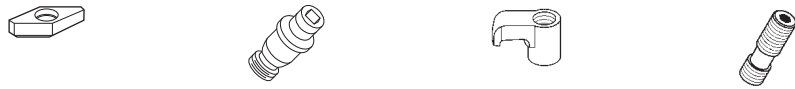
catalog number	shim	lock pin	clamp	clamp screw
right hand				
KM3225MDPNR1130	IDSN322	KLM34LT9PKG	CKM7LP	STCM9T9
KM3225MDPNR150430	IDSN432	KLM4615IP	CKM23LP	STCM1115IP
left hand				
KM3225MDPNL1130	IDSN322	KLM34LT9PKG	CKM7LP	STCM9T9
KM3225MDPNL150430	IDSN432	KLM4615IP	CKM23LP	STCM1115IP



■ MDQN 107° 30'

order number	catalog number	CSMS system size	L1		F		D min		gage insert
			mm	in	mm	in	mm	in	
	right hand								
2527445	KM3225MDQNR1130	KM3225	30	1.181	22	.866	40	1.57	DN..110408/DN..332
2527443	KM3225MDQNR150430	KM3225	30	1.181	22	.866	40	1.57	DN..150408/DN..432
	left hand								
2527446	KM3225MDQNL1130	KM3225	30	1.181	22	.866	40	1.57	DN..110408/DN..332
2527444	KM3225MDQNL150430	KM3225	30	1.181	22	.866	40	1.57	DN..150408/DN..432

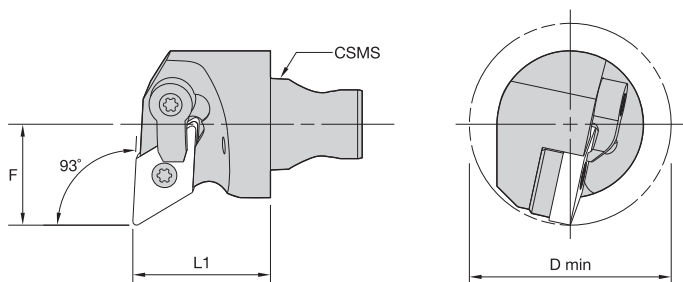
■ Spare Parts



catalog number	shim	lock pin	clamp	clamp screw
right hand				
KM3225MDQNR1130	IDSN322	KLM34LT9PKG	CKM7LP	STCM9T9
KM3225MDQNR150430	IDSN432	KLM4615IP	CKM20LP	STCM1115IP
left hand				
KM3225MDQNL1130	IDSN322	KLM34LT9PKG	CKM7LP	STCM9T9
KM3225MDQNL150430	IDSN432	KLM4615IP	CKM20LP	STCM1115IP



KM Mini Cutting Units



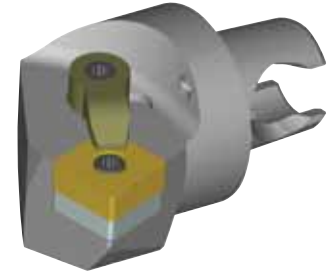
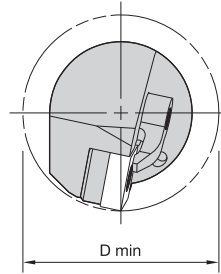
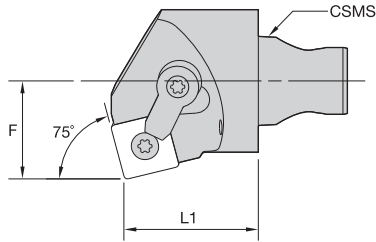
■ MDUN 93°

order number	catalog number	CSMS system size	L1		F		D min		gage insert
			mm	in	mm	in	mm	in	
right hand									
3503814	KM2520MDUNR1125	KM2520	25	.984	17	.669	32	1.26	DN..110408/DN..332
3503816	KM2520MDUNR1525	KM2520	25	.984	17	.669	32	1.26	DN..150408/DN..432
2527449	KM3225MDUNR1130	KM3225	30	1.181	22	.866	40	1.57	DN..110408/DN..332
2527447	KM3225MDUNR150430	KM3225	30	1.181	22	.866	40	1.57	DN..150408/DN..432
left hand									
3503813	KM2520MDUNL1125	KM2520	25	.984	17	.669	32	1.26	DN..110408/DN..332
3503815	KM2520MDUNL1525	KM2520	25	.984	17	.669	32	1.26	DN..150408/DN..432
2527450	KM3225MDUNL1130	KM3225	30	1.181	22	.866	40	1.57	DN..110408/DN..332
2527448	KM3225MDUNL150430	KM3225	30	1.181	22	.866	40	1.57	DN..150408/DN..432

■ Spare Parts







catalog number	shim	lock pin	clamp	clamp screw
right hand				
KM2520MDUNR1125	—	KLM33L	CKM7LP	STCM38
KM2520MDUNR1525	—	KLM43	—	—
KM3225MDUNR1130	IDSN322	KLM34LT9PKG	CKM7LP	STCM9T9
KM3225MDUNR150430	IDSN432	KLM4615IP	CKM20LP	STCM1115IP
left hand				
KM2520MDUNL1125	—	KLM33L	CKM7LP	STCM38
KM2520MDUNL1525	—	KLM43	—	—
KM3225MDUNL1130	IDSN322	KLM34LT9PKG	CKM7LP	STCM9T9
KM3225MDUNL150430	IDSN432	KLM4615IP	CKM20LP	STCM1115IP



■ MSKN 75°

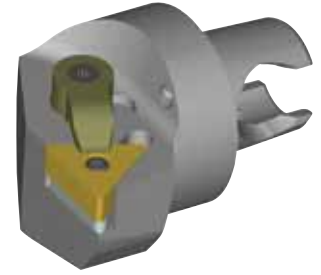
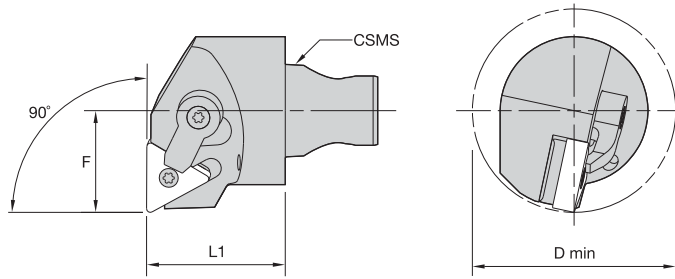
order number	catalog number	CSMS system size	L1		F		D min		gage insert
			mm	in	mm	in	mm	in	
	right hand								
3503818	KM2520MSKNR1225	KM2520	25	.984	17	.669	32	1.26	SN..120408/SN..432
2527451	KM3225MSKNR1230	KM3225	30	1.181	22	.866	40	1.57	SN..120408/SN..432
	left hand								
3503817	KM2520MSKNL1225	KM2520	25	.984	17	.669	32	1.26	SN..120408/SN..432
2527452	KM3225MSKNL1230	KM3225	30	1.181	22	.866	40	1.57	SN..120408/SN..432

■ Spare Parts

catalog number	 shim	 lock pin	 clamp	 clamp screw
right hand				
KM2520MSKNR1225	—	KLM43	CKM20LP	STCM11
KM3225MSKNR1230	ISSN432	KLM4615IP	CKM20LP	STCM1115IP
left hand				
KM2520MSKNL1225	—	KLM43	CKM20LP	STCM11
KM3225MSKNL1230	ISSN432	KLM4615IP	CKM20LP	STCM1115IP



KM Mini Cutting Units



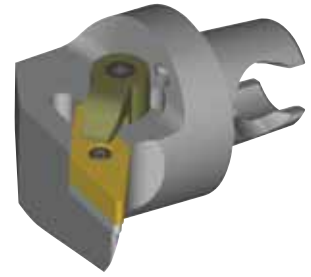
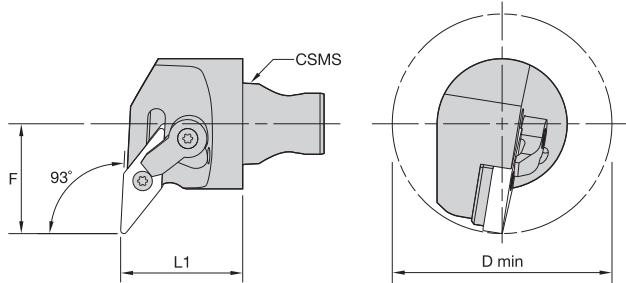
■ MTFN 90°

order number	catalog number	CSMS system size	L1		F		D min		gage insert
			mm	in	mm	in	mm	in	
right hand									
3503820	KM2520MTFNR1625	KM2520	25	.984	17	.669	32	1.26	TN..160408/TN..332
2527453	KM3225MTFNR1630	KM3225	30	1.181	22	.866	40	1.57	TN..160408/TN..332
2527455	KM3225MTFNR2230	KM3225	30	1.181	22	.866	40	1.57	TN..220408/TN..432
left hand									
3503819	KM2520MTFNL1625	KM2520	25	.984	17	.669	32	1.26	TN..160408/TN..332
2527454	KM3225MTFNL1630	KM3225	30	1.181	22	.866	40	1.57	TN..160408/TN..332
2527456	KM3225MTFNL2230	KM3225	30	1.181	22	.866	40	1.57	TN..220408/TN..432

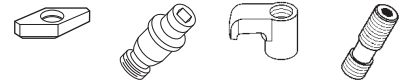
■ Spare Parts



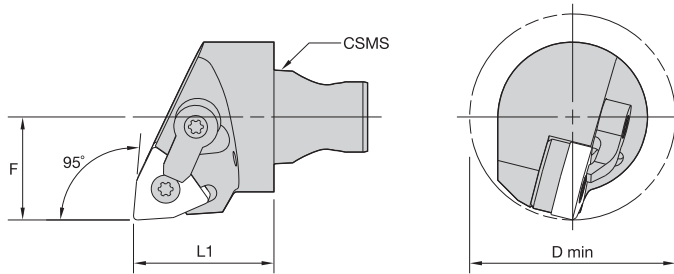
catalog number	shim	lock pin	clamp	clamp screw
right hand				
KM2520MTFNR1625	—	KLM33L	CKM7LP	STCM38
KM3225MTFNR1630	ITSN323	KLM34L9IP	CKM20LP	STCM119IP
KM3225MTFNR2230	ITSN433	KLM4615IP	CKM20LP	STCM1115IP
left hand				
KM2520MTFNL1625	—	KLM33L	CKM7LP	STCM38
KM3225MTFNL1630	ITSN323	KLM34L9IP	CKM20LP	STCM119IP
KM3225MTFNL2230	ITSN433	KLM4615IP	CKM20LP	STCM1115IP



■ MVUN 93°



order number	catalog number	CSMS system size	L1		F		D min		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
3503822	KM2520MVUNR1625	KM2520	25	.984	22	.866	40	1.57	VN..160408/VN..332	—	KLM33L	CKM7LP	STCM38
2527457	KM3225MVUNR1630	KM3225	30	1.181	27	1.063	50	1.97	VN..160408/VN..332	IVSN322	KLM34L9IP	CKM20LP	STCM119IP
left hand													
3503821	KM2520MVUNL1625	KM2520	25	.984	22	.866	40	1.57	VN..160408/VN..332	—	KLM33L	CKM7LP	STCM38
2527458	KM3225MVUNL1630	KM3225	30	1.181	27	1.063	50	1.97	VN..160408/VN..332	IVSN322	KLM34L9IP	CKM20LP	STCM119IP



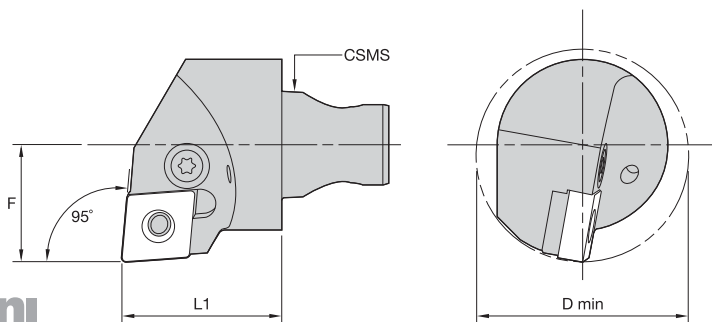
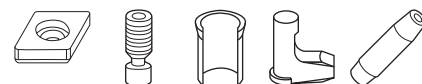
■ MWLN 95°



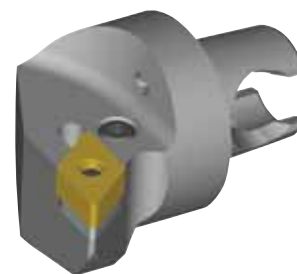
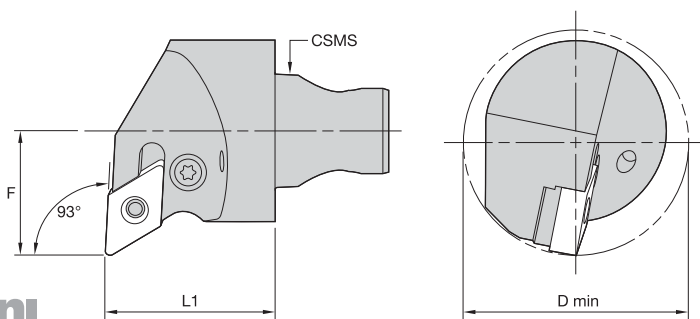
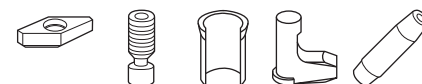
order number	catalog number	CSMS system size	L1		F		D min		gage insert	shim	lock pin	clamp	clamp screw
			mm	in	mm	in	mm	in					
right hand													
3503824	KM2520MWLNR0625	KM2520	25	.984	17	.669	32	1.26	WN..060408/WN.332	—	KLM33	CKM7LP	STCM38
3503826	KM2520MWLNR0825	KM2520	25	.984	17	.669	32	1.26	WN..080408/WN..432	—	KLM43	CKM7LP	STCM38
2527459	KM3225MWLNR0830	KM3225	30	1.181	22	.866	40	1.57	WN..080408/WN..432	IWSN433	KLM4615IP	CKM20LP	STCM1115IP
left hand													
3503823	KM2520MWLNL0625	KM2520	25	.984	17	.669	32	1.26	WN..060408/WN.332	—	KLM33	CKM7LP	STCM38
3503825	KM2520MWLNL0825	KM2520	25	.984	17	.669	32	1.26	WN..080408/WN..432	—	KLM43	CKM7LP	STCM38
2527460	KM3225MWLNL0830	KM3225	30	1.181	22	.866	40	1.57	WN..080408/WN..432	IWSN433	KLM4615IP	CKM20LP	STCM1115IP



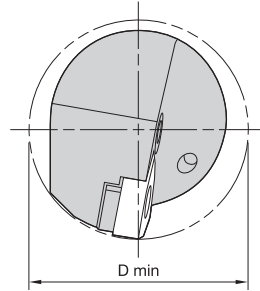
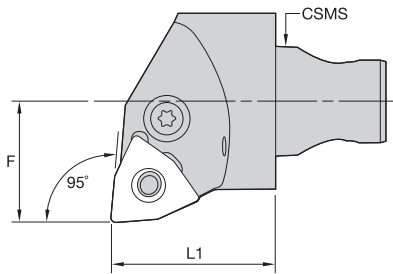
KM Mini Cutting Units


■ PCLN 95°


order number	catalog number	CSMS system size	L1		F		D min		gage insert	shim	lever screw	shim pin	toggle lever	punch
			mm	in	mm	in	mm	in						
right hand														
3482970	KM2520PCLNR1225	KM2520	25	.984	17	.669	32	1.26	CN..120408/CN..432	—	514.122	—	511.022	—
2527461	KM3225PCLNR1230	KM3225	30	1.181	22	.866	40	1.57	CN..120408/CN..432	512.112	514.123	513.023	511.023	515.018
left hand														
3482969	KM2520PCLNL1225	KM2520	25	.984	17	.669	32	1.26	CN..120408/CN..432	—	514.122	—	511.022	—
2527462	KM3225PCLNL1230	KM3225	30	1.181	22	.866	40	1.57	CN..120408/CN..432	512.112	514.123	513.023	511.023	515.018


■ PDUN 93°


order number	catalog number	CSMS system size	L1		F		D min		gage insert	shim	lever screw	shim pin	toggle lever	punch
			mm	in	mm	in	mm	in						
right hand														
3482972	KM2520PDUNR1125	KM2520	25	.984	17	.669	32	1.26	DN..110408/DN..332	512.060	514.118	513.060	511.060	515.018
2527463	KM3225PDUNR1130	KM3225	30	1.181	22	.866	40	1.57	DN..110408/DN..332	512.060	514.118	513.060	511.060	515.018
left hand														
3482971	KM2520PDUNL1125	KM2520	25	.984	17	.669	32	1.26	DN..110408/DN..332	512.060	514.118	513.060	511.060	515.018
2527464	KM3225PDUNL1130	KM3225	30	1.181	22	.866	40	1.57	DN..110408/DN..332	512.060	514.118	513.060	511.060	515.018



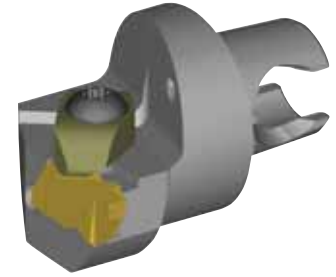
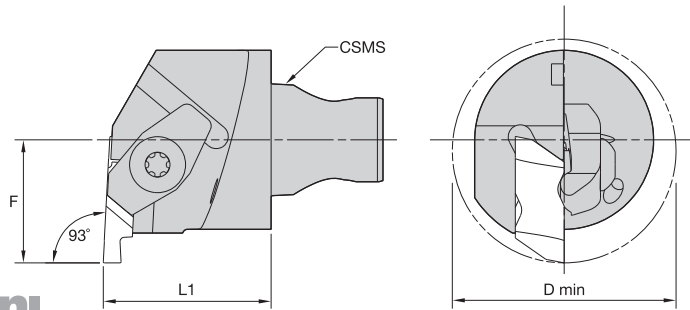
■ PWLN 95°



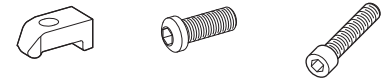
order number	catalog number	CSMS system size	L1		F		D min		gage insert	shim	lever screw	shim pin	toggle lever	punch
			mm	in	mm	in	mm	in						
right hand														
3483024	KM2520PWLNR0625	KM2520	25	.984	17	.669	32	1.26	WN..060408/WN..332	—	514.112	—	511.030	—
left hand														
2527465	KM3225PWLNR0830	KM3225	30	1.181	22	.866	40	1.57	WN..080408/WN..432	512.135	514.123	513.023	511.023	515.018
right hand														
3483023	KM2520PWLNL0625	KM2520	25	.984	17	.669	32	1.26	WN..060408/WN..332	—	514.112	—	511.030	—
left hand														
2527466	KM3225PWLNL0830	KM3225	30	1.181	22	.866	40	1.57	WN..080408/WN..432	512.135	514.123	513.023	511.023	515.018



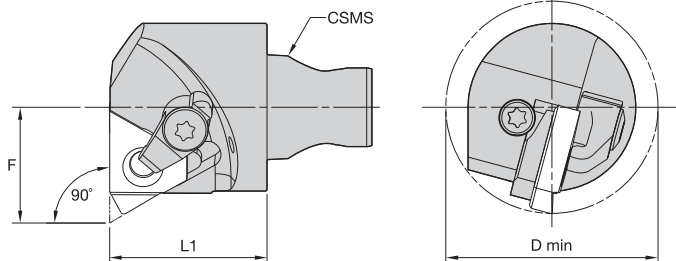
KM Mini Cutting Units



■ NE 93° • End Mount



order number	catalog number	CSMS system size	L1		F		D min		gage insert	clamp	clamp screw	clamp screw
			mm	in	mm	in	mm	in				
right hand												
3546332	KM2520NER230	KM2520	30	1.181	17	.669	32	1.26	NG2L	CM75	—	MS1488
3546644	KM2520NER330	KM2520	30	1.181	17	.669	34	1.34	NG3L	CM73LP	—	MS1489
2527467	KM3225NER230	KM3225	30	1.181	22	.866	40	1.57	NG2L	CM75	—	MS1488
2387557	KM3225NER330	KM3225	30	1.181	22	.866	40	1.57	NG3L	CM73LP	MS2111	—
2527470	KM3225NER430	KM3225	30	1.181	27	1.063	50	1.97	NG4L	CM73LP	MS2111	—
left hand												
3546331	KM2520NEL230	KM2520	30	1.181	17	.669	32	1.26	NG2R	CM74	—	MS1488
3546643	KM2520NEL330	KM2520	30	1.181	17	.669	34	1.34	NG3R	CM72LP	—	MS1489
2527468	KM3225NEL230	KM3225	30	1.181	22	.866	40	1.57	NG2R	CM74	—	MS1488
2527469	KM3225NEL330	KM3225	30	1.181	22	.866	40	1.57	NG3R	CM72LP	MS2111	—
2527471	KM3225NEL430	KM3225	30	1.181	27	1.063	50	1.97	NG4R	CM72LP	MS2111	—



■ LSE • 90°



order number	catalog number	CSMS system size	L1		F		D min		gage insert	shim	insert screw	shim screw	clamp assembly
			mm	in	mm	in	mm	in					
right hand													
3505968	KM2520LSER1625	KM2520	25	.984	17	.669	32	1.26	LT16NR	SMY13	SSA3T	SSY3T	CKC3
3505970	KM2520LSER2225	KM2520	25	.984	17	.669	32	1.26	LT22NR	SMY14	SSA4T	SSY4T	CKC4
2527474	KM3225LSER1630	KM3225	30	1.181	22	.866	40	1.57	LT16NR	SMY13	SSA3T	SSY3T	CKC3
2527472	KM3225LSER2230	KM3225	30	1.181	22	.866	40	1.57	LT22NR	SMY14	SSA4T	SSY4T	CKC4
left hand													
3505967	KM2520LSEL1625	KM2520	25	.984	17	.669	32	1.26	LT16NL	SMYE3	SSA3T	SSY3T	CKC3
3505969	KM2520LSEL2225	KM2520	25	.984	17	.669	32	1.26	LT22NL	SMYE4	SSA4T	SSY4T	CKC4
2527475	KM3225LSEL1630	KM3225	30	1.181	22	.866	40	1.57	LT16NL	SMYE3	SSA3T	SSY3T	CKC3
2527473	KM3225LSEL2230	KM3225	30	1.181	22	.866	40	1.57	LT22NL	SMYE4	SSA4T	SSY4T	CKC4

NOTE: Cutting units are supplied with insert screw and clamp assembly. However, tools are designed to use either the insert screw or the clamp assembly, not both.



More than just the right tool • the ultimate solution.

That's **Beyond BLAST™**



That's **Different Thinking.**

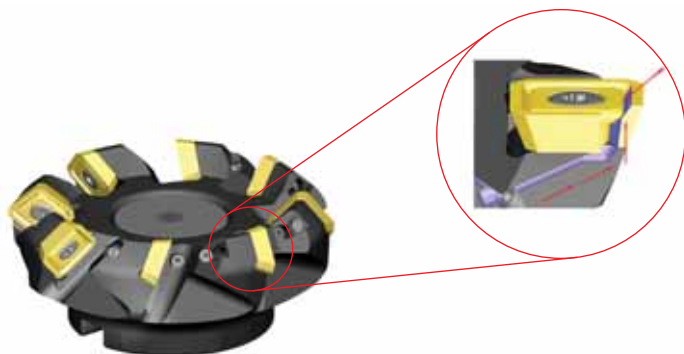
At Kennametal, innovation follows vision. Our revolutionary products and services are inspired by asking “what if?” The solutions that follow — like our Beyond BLAST through-coolant inserts — deliver remarkable results in the world’s most demanding machining environments.

A cutting-edge insert that delivers coolant precisely at the cutting edge. Now that’s Different Thinking. That’s Kennametal.

To learn more about your productivity gains using Beyond BLAST technology, visit www.kennametal.com.

Milling

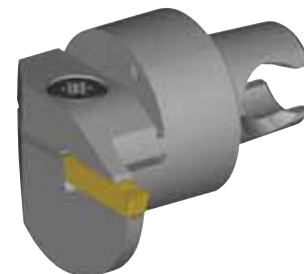
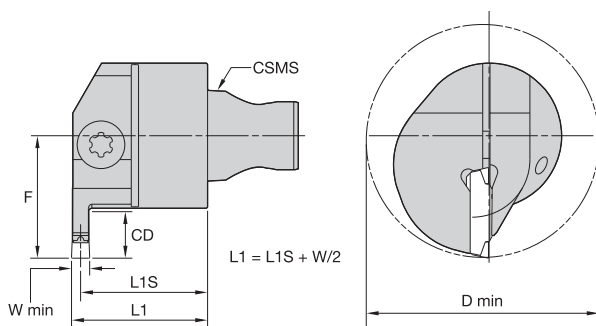
- Beyond BLAST technology uses low-pressure conditions to offer many of the high-pressure performance benefits.
- Delivers superior performance on titanium, using either high- or low-pressure coolant systems.
- Effective thermal management results in reduced cutting temperatures, improved lubricity, superior chip control, and longer tool life.
- Beyond BLAST for milling increases tool life by up to 300% compared with conventional coolant delivery systems.



beyond™ BLAST™

To learn more, **scan here.**
For instructions on how to scan,
please see page xxxiii.







■ A4EM • End Mount

order number	catalog number	CSMS system size	seat size	L1S		F		D min		W min		CD	
				mm	in	mm	in	mm	in	mm	in		
right hand													
3503887	KM2520A4EMR0108M25	KM2520	1	24	.955	22	.866	40	1.57	1,50	.059	8	.32
3503885	KM2520A4EMR0208M25	KM2520	2	24	.945	22	.866	40	1.57	2,00	.079	8	.32
3503871	KM2520A4EMR0308M25	KM2520	3	24	.925	22	.866	40	1.57	3,00	.118	8	.32
3503869	KM2520A4EMR0408M25	KM2520	4	23	.906	22	.866	40	1.57	4,00	.157	8	.32
3503883	KM2520A4EMR2B08M25	KM2520	2B	24	.935	22	.866	40	1.57	2,50	.098	8	.32
2527482	KM3225A4EMR0310M30	KM3225	3	29	1.122	27	1.063	50	1.97	3,00	.118	10	.40
2527484	KM3225A4EMR0410M30	KM3225	4	28	1.102	27	1.063	50	1.97	4,00	.157	10	.40
2527488	KM3225A4EMR0510M30	KM3225	5	28	1.083	27	1.063	50	1.97	5,00	.197	10	.40
left hand													
3503886	KM2520A4EML0108M25	KM2520	1	24	.955	22	.866	40	1.57	1,50	.059	8	.32
3503884	KM2520A4EML0208M25	KM2520	2	24	.945	22	.866	40	1.57	2,00	.079	8	.32
3503870	KM2520A4EML0308M25	KM2520	3	24	.925	22	.866	40	1.57	3,00	.118	8	.32
3503868	KM2520A4EML0408M25	KM2520	4	23	.906	22	.866	40	1.57	4,00	.157	8	.32
3503872	KM2520A4EML2B08M25	KM2520	2B	24	.935	22	.866	40	1.57	2,50	.098	8	.32
2527483	KM3225A4EML0310M30	KM3225	3	29	1.122	27	1.063	50	1.97	3,00	.118	10	.40
2527485	KM3225A4EML0410M30	KM3225	4	28	1.102	27	1.063	50	1.97	4,00	.157	10	.40
2527489	KM3225A4EML0510M30	KM3225	5	28	1.083	27	1.063	50	1.97	5,00	.197	10	.40

(continued)

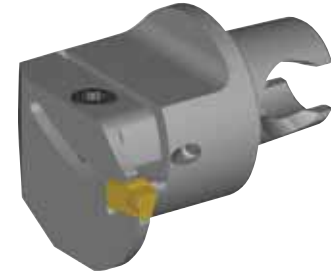
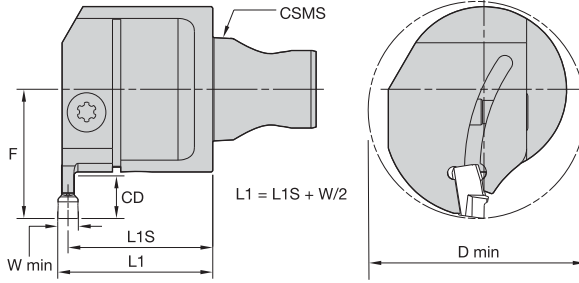
(A4EM • End Mount continued)

■ Spare Parts

catalog number	 clamp screw	 clamp screw
right hand		
KM2520A4EMR0108M25	MS1156	—
KM2520A4EMR0208M25	—	MS1160
KM2520A4EMR0308M25	—	MS1161
KM2520A4EMR0408M25	—	MS1161
KM2520A4EMR2B08M25	—	MS1160
KM3225A4EMR0310M30	MS2069	—
KM3225A4EMR0410M30	MS2069	—
KM3225A4EMR0510M30	MS2069	—
left hand		
KM2520A4EML0108M25	MS1156	—
KM2520A4EML0208M25	—	MS1160
KM2520A4EML0308M25	—	MS1161
KM2520A4EML0408M25	—	MS1161
KM2520A4EML2B08M25	—	MS1160
KM3225A4EML0310M30	MS2069	—
KM3225A4EML0410M30	MS2069	—
KM3225A4EML0510M30	MS2069	—

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 accepts 2B inserts. Seat size 2 cutting units accepts 2 or 2B inserts.

KM Mini Cutting Units



■ A3ES • End Mount

order number	catalog number	CSMS system size	seat size	L1S		F		D min		W min		CD	
				mm	in	mm	in	mm	in	mm	in		
right hand													
3503893	KM2520A3ESR0308M25	KM2520	3	24	.925	22	.866	40,0	1.575	3,0	.118	8	.32
3503891	KM2520A3ESR0408M25	KM2520	4	23	.906	22	.866	40,0	1.575	4,0	.157	8	.32
3503889	KM2520A3ESR0510M25	KM2520	5	23	.886	24	.945	40,0	1.575	5,0	.197	10	.39
2527476	KM3225A3ESR0305M30	KM3225	3	29	1.122	22	.866	40,0	1.575	3,0	.118	5	.21
2527478	KM3225A3ESR0408M30	KM3225	4	28	1.102	25	.984	42,0	1.654	4,0	.157	8	.32
2527480	KM3225A3ESR0510M30	KM3225	5	28	1.083	27	1.063	45,0	1.772	5,0	.197	10	.40
left hand													
3503892	KM2520A3ESL0308M25	KM2520	3	24	.925	22	.866	40,0	1.575	3,0	.118	8	.32
3503890	KM2520A3ESL0408M25	KM2520	4	23	.906	22	.866	40,0	1.575	4,0	.157	8	.32
3503888	KM2520A3ESL0510M25	KM2520	5	23	.886	24	.945	40,0	1.575	5,0	.197	10	.39
2527477	KM3225A3ESL0305M30	KM3225	3	29	1.122	22	.866	40,0	1.575	3,0	.118	5	.21
2527479	KM3225A3ESL0408M30	KM3225	4	28	1.102	25	.984	42,0	1.654	4,0	.157	8	.32
2527481	KM3225A3ESL0510M30	KM3225	5	28	1.083	27	1.063	45,0	1.772	5,0	.197	10	.40

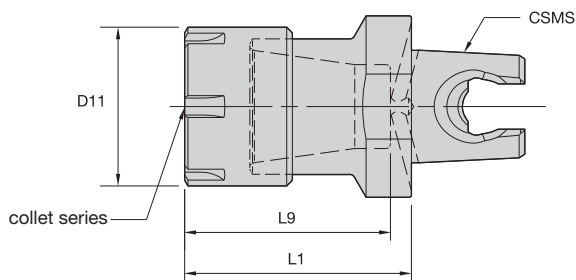
■ Spare Parts



catalog number	clamp screw
right hand	
KM2520A3ESR0308M25	MS2064
KM2520A3ESR0408M25	MS2064
KM2520A3ESR0510M25	MS1162
left hand	
KM2520A3ESL0308M25	MS2064
KM2520A3ESL0408M25	MS2064
KM2520A3ESL0510M25	MS1162
KM3225A3ESL0305M30	MS2064
KM3225A3ESL0408M30	MS2064
KM3225A3ESL0510M30	MS2062

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.

- Grip (2:1 advantage).



KM Mini Shank Tools



ER Collet Series	Collet Capacity			
	mm		inch	
	min	max	min	max
ER16	0,5	10,0	.02	.41
ER20	0,5	13	.02	.50
ER25	1,0	16,0	.04	.63

ER

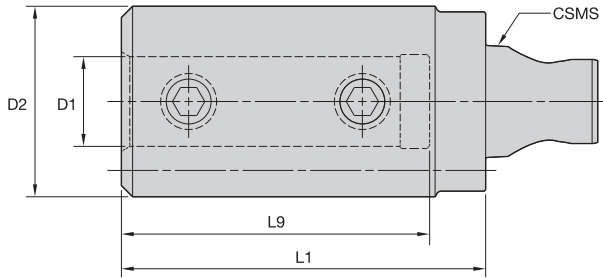
order number	catalog number	CST collet series	CSMS system size	D11		L1		L9		counterbore collet torque (Nm)	straight collet torque (Nm)
				mm	in	mm	in	mm	in		
2527514	KM3225ER1635	ER16	KM3225	22	.866	35	1.378	33,2	1.307	24,0	56,0
2527516	KM3225ER2040	ER20	KM3225	28	1.102	40	1.575	36,3	1.429	28,0	80,0
2527515	KM3225ER2545	ER25	KM3225	42	1.654	45	1.772	38,8	1.528	104,0	104,0

Spare Parts



catalog number	locknut	locknut wrench	locknut wrench	Nm	ft. lbs.
KM3225ER1635	LER16M	ER16WEM	—	24	17
KM3225ER2040	LER20M	ER20WEM	—	28	20
KM3225ER2545	LNER25M	—	ER25WM	104	77

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 pages L16–L17.
 ER standard straight-bore collets, see page J50.
 ER tap collets, see pages J58–J59.
 ER TCT tension-only tap collets, see page J60.



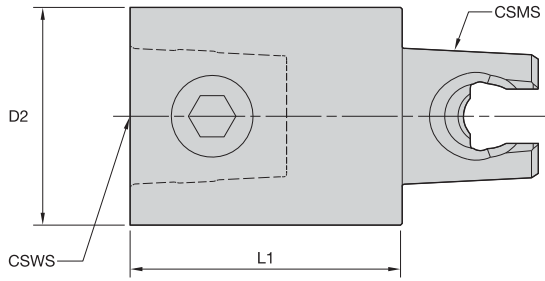
■ BA • Boring Bar Adapter • Metric

order number	catalog number	CSMS system size	D1	D2	L1	L9	clamp screw	clamp screw	wrench size clamp screw	Nm
2527505	KM3225BA0645M	KM3225	6	32	45	36	MS734	—	2,5mm	4
3507964	KM2520BA0645M	KM2520	6	25	45	36	—	MS1272	2,5mm	4
3507963	KM2520BA0845M	KM2520	8	25	45	36	—	MS1272	2,5mm	4
2527506	KM3225BA0845M	KM3225	8	32	45	36	MS734	—	2,5mm	4
3505972	KM2520BA1055M	KM2520	10	30	55	48	—	MS-1879	4mm	15
2527507	KM3225BA1055M	KM3225	10	32	55	48	MS1205	MS-1879	4mm	15
2527508	KM3225BA1260M	KM3225	12	32	60	52	MS1205	MS-1879	4mm	15
3505971	KM2520BA1260M	KM2520	12	32	60	52	—	MS-1879	4mm	15
2527509	KM3225BA1665M	KM3225	16	34	65	55	MS1205	—	5mm	25
2527510	KM3225BA2070M	KM3225	20	37	70	58	MS1205	—	5mm	25

■ BA • Boring Bar Adapter • Inch

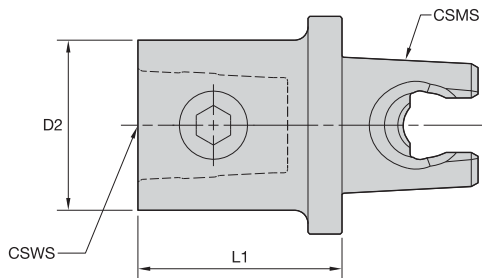
order number	catalog number	CSMS system size	D1	D2	L1	L9	clamp screw	wrench size clamp screw	ft. lbs.
3507967	KM2520BA04217	KM2520	1/4	.98	1.378	1.06	—	3/32	2
3507966	KM2520BA06217	KM2520	3/8	1.10	2.165	1.89	S841PKG	1/8	5
3507965	KM2520BA08236	KM2520	1/2	1.26	2.362	2.05	S850	5/32	11
2527490	KM3225BA06217	KM3225	3/8	1.26	2.165	1.89	MS1205	1/8	5
2527491	KM3225BA08236	KM3225	1/2	1.26	2.362	2.05	S850	5/32	11
2527492	KM3225BA10256	KM3225	5/8	1.34	2.559	2.13	S861	3/16	15
2527503	KM3225BA12276	KM3225	3/4	1.46	2.756	2.28	S861	3/16	15

NOTE: Do not overtighten clamp screw; use torque recommendations above.
Supplied with clamp screw.
Clamp screw wrench not included.


KM Mini Shank Tools

S • KM Extension

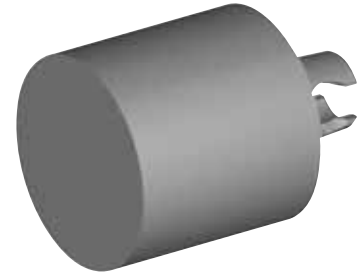
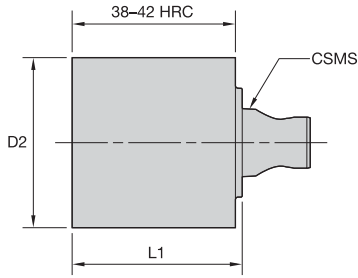

order number	catalog number	CSMS system size	CSWS system size	D2		L1		wrench size			spare parts package
				mm	in	mm	in	actuation screw	Nm	ft. lbs.	
3483042	KM2520S2525	KM2520	KM2520	25	.98	25	.984	5mm	19-22	14-16	KM2520NRPKG
3483043	KM2520S2550	KM2520	KM2520	25	.98	50	1.969	5mm	19-22	14-16	KM2520NRPKG
2541964	KM3225S3240	KM3225	KM3225	32	1.26	40	1.575	6mm	34-40	25-30	KM3225NRPKG
2541965	KM3225S3260	KM3225	KM3225	32	1.26	60	2.362	6mm	34-40	25-30	KM3225NRPKG

NOTE: For torque wrench, see pages L52–L53.


S • KM Reducer

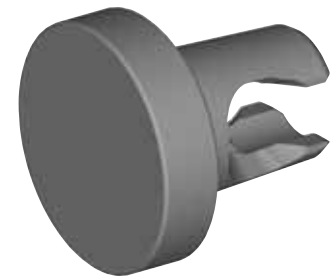
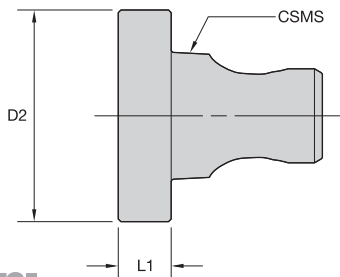

order number	catalog number	CSMS system size	CSWS system size	D2		L1		wrench size			spare parts package
				mm	in	mm	in	actuation screw	Nm	ft. lbs.	
3483044	KM2520S201630	KM2520	KM2016	20	.79	30	1.181	27 IP	10-11	7-8	KM16NRPKG
3397325	KM3225S161230	KM3225	KM1612	16	.63	30	1.181	25 IP	7-8	5-6	KM12NRPKG
3397324	KM3225S201630	KM3225	KM2016	20	.79	30	1.181	27 IP	10-11	7-8	KM16NRPKG
3397323	KM3225S252030	KM3225	KM2520	25	.98	30	1.181	5mm	19-22	14-16	KM2520NRPKG

NOTE: For torque wrench, see pages L52–L53.



■ **BN • Blank**

order number	catalog number	CSMS system size	D2		L1		hardness range
			mm	in	mm	in	
3518531	KM20BN4040	KM20	40	1.575	40	1.575	38 - 42 RW C
3503896	KM2520BN5050	KM2520	50	1.969	50	1.969	38 - 42 RW C
2427296	KM25BN5050	KM25	50	1.969	50	1.969	38 - 42 RW C
2656551	KM3225BN5050	KM3225	50	1.969	50	1.969	38 - 42 RW C

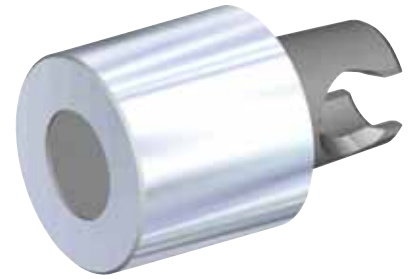
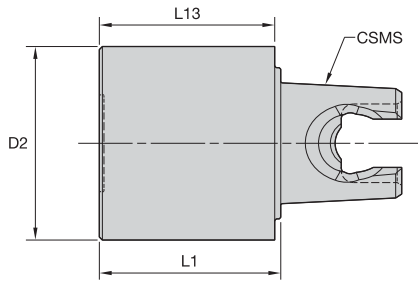


■ **P • Plug**

order number	catalog number	CSMS system size	D2		L1	
			mm	in	mm	in
3662590	KM20P	KM20	20	.787	5	.197
3662591	KM2520P	KM2520	25	.984	5	.197
2427295	KM25P	KM25	25	.984	5	.197
2906995	KM3225P	KM3225	32	1.260	5	.197

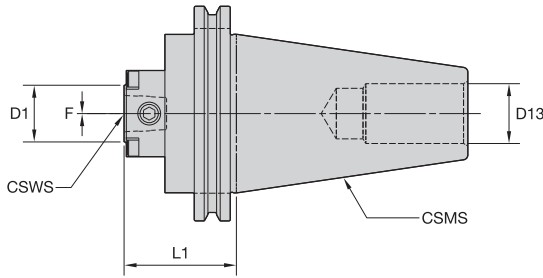


KM Mini Shank Tools



■ GB • Gage Bar

order number	catalog number	CSMS system size	D2		L1		L13	
			mm	in	mm	in	mm	in
3518635	KM20GB2525	KM20	25	.984	25	.984	25	.984
2427297	KM25GB3230	KM25	32	1.260	30	1.181	29	1.142

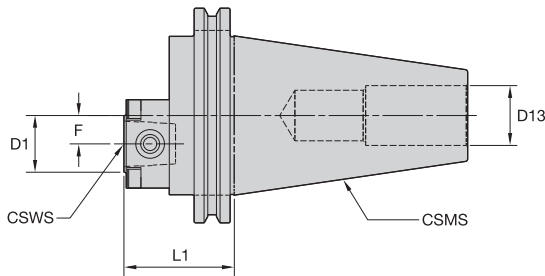


■ **TRA • Centered**



order number	catalog number	CSMS system size	CSWS system size	D1		D13		L1		F		KM spare parts package	wrench size		
				mm	in	mm	in	mm	in	mm	in		actuation screw	Nm	ft. lbs.
3449331	CV50KM3225TRA	CV50	KM3225	32	1.260	26	1.039	50	1.969	0,0	.000	KM3225NRPKG	6mm	34-40	25-30
3503898	DV40KM2520TRA	DV40	KM2520	25	.984	18	.693	50	1.969	0,0	.000	KM2520NRPKG	5mm	19-22	14-16
3449332	DV40KM3225TRA	DV40	KM3225	32	1.260	18	.693	50	1.969	0,0	.000	KM3225NRPKG	6mm	34-40	25-30

NOTE: These are only intended to be used in a presetter fixture.



■ **ECTRA • Offset**

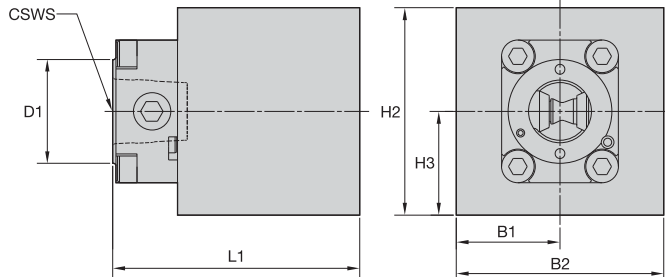


order number	catalog number	CSMS system size	CSWS system size	D1		D13		L1		F		KM spare parts package	wrench size		
				mm	in	mm	in	mm	in	mm	in		actuation screw	Nm	ft. lbs.
3518634	CV50KM20ECTRA	CV50	KM20	20	.787	26	1.014	50	1.969	9,5	.375	KM2520NRPKG	5mm	19-22	14-16
2427294	CV50KM25ECTRA	CV50	KM25	25	.984	26	1.039	50	1.969	12,5	.492	KM25NRPKG	6mm	34-40	25-30
3518633	DV40KM20ECTRA	DV40	KM20	20	.787	19	.728	50	1.969	9,5	.375	KM2520NRPKG	5mm	19-22	14-16

NOTE: These are only intended to be used in a presetter fixture.



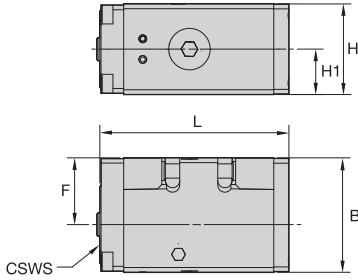
KM Mini Shank Tools



■ TB • Tumble Block



order number	catalog number	CSWS system size	D1		L1		H2		H3		B2		B1		spare parts package	wrench size actuation screw		
			mm	in	mm	in	mm	in	mm	in	mm	in	mm	in		mm	Nm	ft. lbs.
3503897	KM2520TB	KM2520	25	.984	76,20	3.000	64	2.520	32	1.260	64	2.520	32,00	1.260	KM2520NRPKG	5mm	19-22	14-16
3449353	KM3225TB	KM3225	32	1.260	76,20	3.000	64	2.520	32	1.260	64	2.520	32,00	1.260	KM3225NRPKG	6mm	34-40	25-30



■ **CLS • Square Shank • Metric**

order number	catalog number	CSWS system size	B	F	H	H1	L	wrench size actuation screw
1024718	right hand KM32CLSR2050K	KM32	48	28	40,0	20,0	90,0	6mm
1024719	left hand KM32CLSL2050K	KM32	48	28	40,0	20,0	90,0	6mm

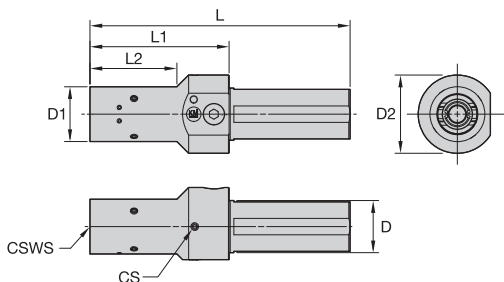
■ **CLS • Square Shank • Inch**

order number	catalog number	CSWS system size	B	F	H	H1	L	wrench size actuation screw
1024682	right hand KM32CLSR1250B	KM32	1.890	1.102	1.500	.75	3.122	6mm
1024714	KM32CLSR1250C	KM32	1.890	1.102	1.500	.75	3.622	6mm
1024716	KM32CLSR1650C	KM32	1.890	1.102	2.000	1.00	3.622	6mm

■ **Wedge Tightening Torque**

catalog number	KM size	torque range (Nm)	torque range (ft. lbs.)	wedge hex size
KM32CLSR/L...	32	14-18	10-14	4mm

NOTE: For technical information, see page M1.
For actuation wrench, see page L53.

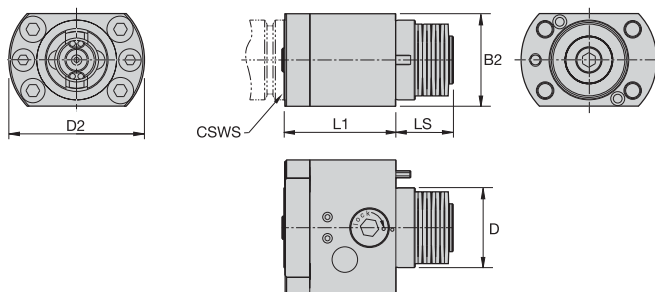

■ CLN-SS • Round Shank • Metric

order number	catalog number	CSWS system size	D	D1	D2	L1	L	L2	CS	wrench size actuation screw
1279247	KM32CLNSS3255	KM32	32	32	45	55	125	18	RP1/8	6mm
1145081	KM40CLNSS5070	KM40	50	40	63	70	155	20	RP1/8	8mm
1145073	KM50CLNSS5080	KM50	50	50	63	80	190	25	RP1/8	10mm
1145087	KM63CLNSS6090	KM63	60	63	90	90	229	30	RP1/8	10mm

■ CLN-SS • Round Shank • Inch

order number	catalog number	CSWS system size	D	D1	D2	L1	L	L2	CS	wrench size actuation screw
1330758	KM32CLNSS20217	KM32	1.25	1.260	1.77	2.165	4.92	.69	1/8-27 NPSC	6mm
1330759	KM32CLNSS24217	KM32	1.50	1.260	2.01	2.165	4.92	.69	1/8-27 NPSC	6mm
1145079	KM40CLNSS32274	KM40	2.00	1.575	2.48	2.737	6.10	.79	1/8-27 NPSC	8mm
1145072	KM50CLNSS40316	KM50	2.50	1.969	3.15	3.156	7.47	.98	1/8-27 NPSC	10mm
1145088	KM63CLNSS60160	KM63	2.36	2.480	3.54	6.299	11.78	3.94	1/8-27 NPSC	10mm
1145084	KM63CLNSS40630	KM63	2.50	2.480	3.54	6.299	11.78	3.94	1/8-27 NPSC	10mm
1145086	KM63CLNSS48630	KM63	3.00	2.480	3.54	6.299	11.78	3.94	1/8-27 NPSC	10mm

NOTE: For technical information, see page M1.
 For actuation wrench, see page L53.


■ CLNS-EF • Flange Mount, Side Access • Metric

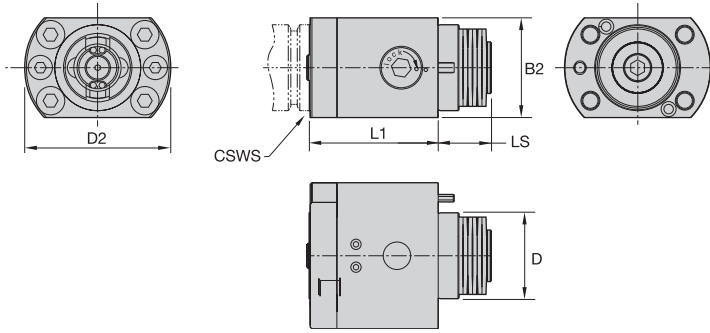
order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1330780	KM32CLNSEF	KM32	32	60	40	50	28,3	6mm	MS1936
1024679	KM40CLNSEF	KM40	40	70	48	55	41,4	8mm	DWG MS1365
1024646	KM50CLNSEF	KM50	50	85	58	70	46,6	10mm	DWG MS1585


■ CLNS-EF • Flange Mount, Side Access • Inch

order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1330780	KM32CLNSEF	KM32	1.260	2.36	1.58	1.969	1.11	6mm	MS1936
1024679	KM40CLNSEF	KM40	1.575	2.76	1.89	2.165	1.63	8mm	DWG MS1365
1024646	KM50CLNSEF	KM50	1.969	3.35	2.28	2.756	1.83	10mm	DWG MS1585



NOTE: For technical information, see page M1.
 For mounting dimensions, see page M56.
 For actuation wrench, see page L53.



■ CLNT-EF • Flange Mount, Top Access • Metric

order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1330781	KM32CLNTEF	KM32	32	60	40	55	23,3	6mm	MS1936
1024681	KM40CLNTEF	KM40	40	70	48	60	36,4	8mm	DWG MS1365
1024680	KM50CLNTEF	KM50	50	85	58	75	41,6	10mm	DWG MS1585

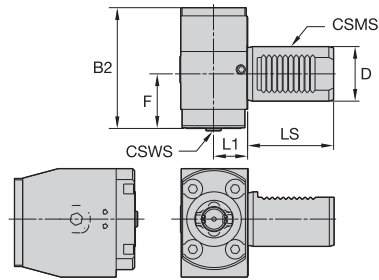


■ CLNT-EF • Flange Mount, Top Access • Inch

order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1330781	KM32CLNTEF	KM32	1.260	2.36	1.57	2.165	.92	6mm	MS1936
1024681	KM40CLNTEF	KM40	1.575	2.76	1.89	2.362	1.43	8mm	DWG MS1365
1024680	KM50CLNTEF	KM50	1.969	3.35	2.28	2.953	1.64	10mm	DWG MS1585



NOTE: For technical information, see page M1.
For mounting dimensions, see page M56.
For actuation wrench, see page L53.

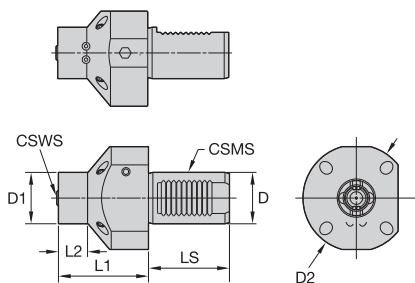

■ CLRR/L • VDI Right Angle • Metric

order number	catalog number	CSWS system size	CSMS system size	D	F	B2	L1	LS	wrench size actuation screw
right hand									
1324688	KM32CLRRVDI3035	KM32	VDI30	30	35	80,0	23	55	6mm
1145076	KM40CLRRVDI4040	KM40	VDI40	40	40	88,5	25	63	8mm
1145069	KM50CLRRVDI5050	KM50	VDI50	50	50	113,0	30	78	10mm
1145089	KM63CLRRVDI6060	KM63	VDI60	60	60	122,5	37	94	10mm
left hand									
1330776	KM32CLRLVDI3035	KM32	VDI30	30	35	80,0	23	55	6mm
1145077	KM40CLRLVDI4040	KM40	VDI40	40	40	88,5	25	63	8mm
1145070	KM50CLRLVDI5050	KM50	VDI50	50	50	113,0	30	78	10mm
1145091	KM63CLRLVDI6060	KM63	VDI60	60	60	122,5	37	94	10mm

■ CLRR/L • VDI Right Angle • Inch

order number	catalog number	CSWS system size	CSMS system size	D	F	B2	L1	LS	wrench size actuation screw
right hand									
1324688	KM32CLRRVDI3035	KM32	VDI30	1.181	1.378	3.15	.906	2.17	6mm
1145076	KM40CLRRVDI4040	KM40	VDI40	1.575	1.575	3.48	.984	2.48	8mm
1145069	KM50CLRRVDI5050	KM50	VDI50	1.969	1.969	4.45	1.181	3.07	10mm
1145089	KM63CLRRVDI6060	KM63	VDI60	2.362	2.362	4.82	1.457	3.70	10mm
left hand									
1330776	KM32CLRLVDI3035	KM32	VDI30	1.181	1.378	3.15	.906	2.17	6mm
1145077	KM40CLRLVDI4040	KM40	VDI40	1.575	1.575	3.48	.984	2.48	8mm
1145070	KM50CLRLVDI5050	KM50	VDI50	1.969	1.969	4.45	1.181	3.07	10mm
1145091	KM63CLRLVDI6060	KM63	VDI60	2.362	2.362	4.82	1.457	3.70	10mm

NOTE: For technical information, see page M1.
 For actuation wrench, see page L53.



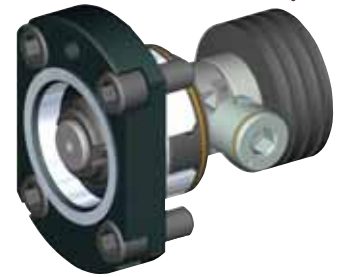
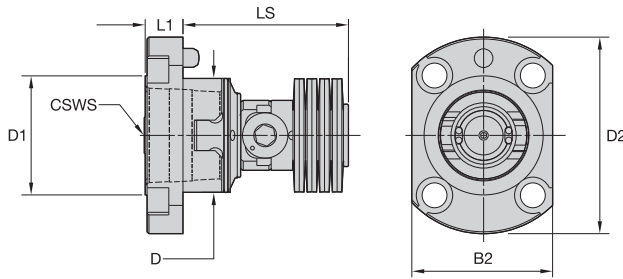
■ CLAN/V • VDI • Metric

order number	catalog number	CSWS system size	CSMS system size	D1	D	D2	L1	L2	L3	wrench size actuation screw
right hand										
1228680	KM32CLANVDI3060	KM32	VDI30	32	30	68	60	20	55	6mm
1145074	KM40CLANVDI4070	KM40	VDI40	40	40	83	70	23	63	8mm
1145067	KM50CLANVDI5080	KM50	VDI50	50	50	98	80	25	78	10mm
1145093	KM63CLANVDI60160	KM63	VDI60	63	60	123	160	100	94	10mm
1145092	KM63CLANVDI6090	KM63	VDI60	63	60	123	90	30	94	10mm
left hand										
1145075	KM40CLAVVDI4070	KM40	VDI40	40	40	83	70	23	63	8mm
1145068	KM50CLAVVDI5080	KM50	VDI50	50	50	98	80	25	78	10mm
1145095	KM63CLAVVDI60160	KM63	VDI60	63	60	123	160	100	94	10mm
1145094	KM63CLAVVDI6090	KM63	VDI60	63	60	123	90	30	94	10mm

■ CLAN/V • VDI • Inch

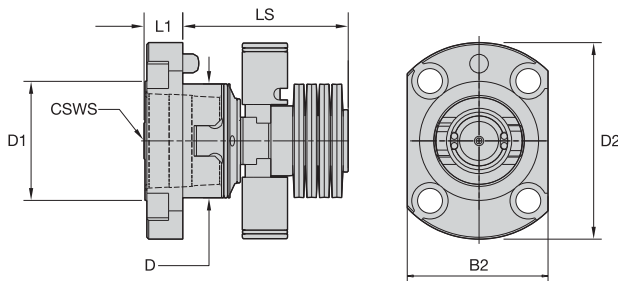
order number	catalog number	CSWS system size	CSMS system size	D1	D	D2	L1	L2	L3	wrench size actuation screw
right hand										
1228680	KM32CLANVDI3060	KM32	VDI30	1.26	1.181	2.68	2.362	.79	2.17	6mm
1145074	KM40CLANVDI4070	KM40	VDI40	1.57	1.575	3.27	2.756	.91	2.48	8mm
1145067	KM50CLANVDI5080	KM50	VDI50	1.97	1.969	3.86	3.150	.98	3.07	10mm
1145093	KM63CLANVDI60160	KM63	VDI60	2.48	2.362	4.84	6.299	3.94	3.70	10mm
1145092	KM63CLANVDI6090	KM63	VDI60	2.48	2.362	4.84	3.543	1.18	3.70	10mm
left hand										
1145075	KM40CLAVVDI4070	KM40	VDI40	1.57	1.575	3.27	2.756	.91	2.48	8mm
1145068	KM50CLAVVDI5080	KM50	VDI50	1.97	1.969	3.86	3.150	.98	3.07	10mm
1145095	KM63CLAVVDI60160	KM63	VDI60	2.48	2.362	4.84	6.299	3.94	3.70	10mm
1145094	KM63CLAVVDI6090	KM63	VDI60	2.48	2.362	4.84	3.543	1.18	3.70	10mm

NOTE: For technical information, see page M1.
For actuation wrench, see page L53.


■ SA-CLNS • Sub-Assembly • Side Access

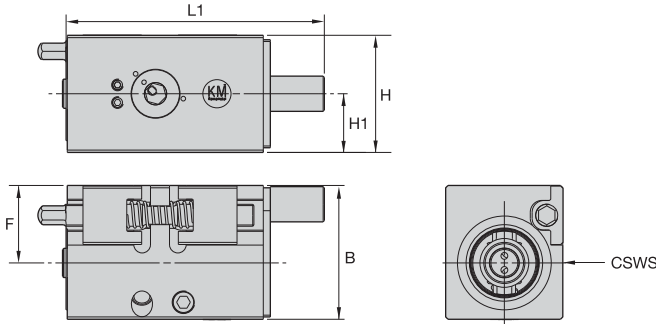
order number	catalog number	CSWS system size	D	D1	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1092017	SA32CLNS2812	KM32	32	32	60	40	12	66,2	6mm	MS1575PKG
1018161	SA40CLNS4008	KM40	41	40	74	46	14	71,6	8mm	—
1024677	SA40CLNS4012	KM40	41	40	74	46	14	80,7	8mm	—
1018163	SA50CLNS5008	KM50	51	50	85	58	16	89,0	10mm	—
1018159	SA50CLNS5012	KM50	51	50	85	58	16	100,2	10mm	—
1150162	SA63CLNS5012	KM63	60	63	104	75	20	107,2	10mm	MS1085PKG
1150163	SA63CLNS6008	KM63	60	63	104	75	20	96,4	10mm	MS1085PKG
1150164	SA63CLNS6012	KM63	60	63	104	75	20	107,9	10mm	MS1085PKG

NOTE: For technical information, see page M1.
 For actuation wrench, see page L53.
 Supplied unassembled.


■ SA • Sub-Assembly • Top Access

order number	catalog number	CSWS system size	D	D1	D2	B2	L1	LS	wrench size actuation screw
1092019	SA32CLNT2812	KM32	32	32	60	40	12	66,2	6mm
1092020	SA32CLNT2818	KM32	32	32	60	40	12	75,1	6mm
1018162	SA40CLNT4008	KM40	41	40	74	46	14	71,6	8mm
1024678	SA40CLNT4012	KM40	41	40	74	46	14	80,7	8mm
1018214	SA50CLNT5008	KM50	51	50	85	58	16	89,0	10mm
1018160	SA50CLNT5012	KM50	51	50	85	58	16	100,2	10mm
1150166	SA63CLNT6008	KM63	60	63	104	75	20	96,4	10mm
1176388	SA63CLNT6012	KM63	60	63	104	75	20	107,9	10mm

NOTE: For technical information, see page M1.
 For actuation wrench, see page L53.
 Supplied unassembled.



■ CL2S • Square Shank • Metric

order number	catalog number	CSWS system size	B	F	H	H1	L1	wrench size actuation screw
right hand								
1785187	KM40CL2SR2560M	KM40	57	33	50	25	110	8mm
1785188	KM40CL2SR3260P	KM40	57	33	64	32	130	8mm
2044928	KM50CL2SR2575M	KM50	70	40	50	25	100	10mm
2044930	KM50CL2SR3275P	KM50	70	40	64	32	120	10mm
2044942	KM63CL2SR3290P	KM63	85	47	64	32	110	10mm
left hand								
1785189	KM40CL2SL2560M	KM40	57	33	50	25	110	8mm
1785190	KM40CL2SL3260P	KM40	57	33	64	32	130	8mm
2044929	KM50CL2SL2575M	KM50	70	40	50	25	100	10mm
2044931	KM50CL2SL3275P	KM50	70	40	64	32	120	10mm
2044943	KM63CL2SL3290P	KM63	85	47	64	32	110	10mm

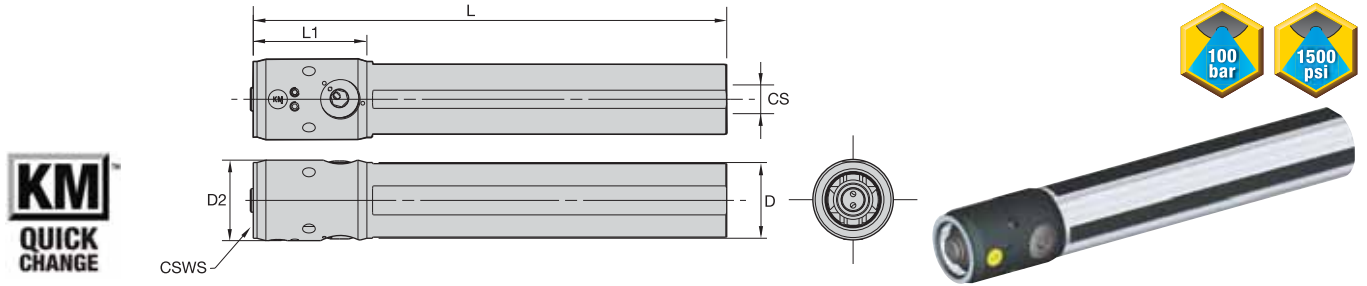
■ CL2S • Square Shank • Inch

order number	catalog number	CSWS system size	B	F	H	H1	L1	wrench size actuation screw
right hand								
1785156	KM40CL2SR1260B	KM40	2.244	1.299	1.50	.75	2.925	8mm
1785157	KM40CL2SR1660C	KM40	2.244	1.299	2.00	1.00	3.425	8mm
1785158	KM40CL2SR1660D	KM40	2.244	1.299	2.00	1.00	4.425	8mm
1785159	KM40CL2SR2060D	KM40	2.244	1.299	2.50	1.25	4.425	8mm
2044920	KM50CL2SR1675D	KM50	2.756	1.575	2.00	1.00	4.031	10mm
2044922	KM50CL2SR2075D	KM50	2.756	1.575	2.50	1.25	4.031	10mm
2044938	KM63CL2SR2090E	KM63	3.347	1.850	2.50	1.25	4.638	10mm
left hand								
1785161	KM40CL2SL1260B	KM40	2.244	1.299	1.50	.75	2.925	8mm
1785162	KM40CL2SL1660C	KM40	2.244	1.299	2.00	1.00	3.425	8mm
1785183	KM40CL2SL1660D	KM40	2.244	1.299	2.00	1.00	4.425	8mm
1785184	KM40CL2SL2060D	KM40	2.244	1.299	2.50	1.25	4.425	8mm
2044921	KM50CL2SL1675D	KM50	2.756	1.575	2.00	1.00	4.031	10mm
2044923	KM50CL2SL2075D	KM50	2.756	1.575	2.50	1.25	4.031	10mm
2044939	KM63CL2SL2090E	KM63	3.347	1.850	2.50	1.25	4.638	10mm

■ Wedge Tightening Torque

catalog number	KM size	torque range (Nm)	torque range (ft. lbs.)	wedge hex size
KM40CL2SR/L1260B	40	41-46	30-34	6mm
KM40CL2SR/L...	40	58-64	43-47	7mm
KM50CL2SR/L1675D KM50CL2SR/L2575M	50	58-64	43-47	7mm
KM50CL2SR/L2075D KM50CL2SR/L3275P	50	79-84	58-62	8mm
KM63CL2SR/L.....	63	79-84	58-62	8mm

NOTE: For technical information, see page M1.
For actuation wrench, see page L53.

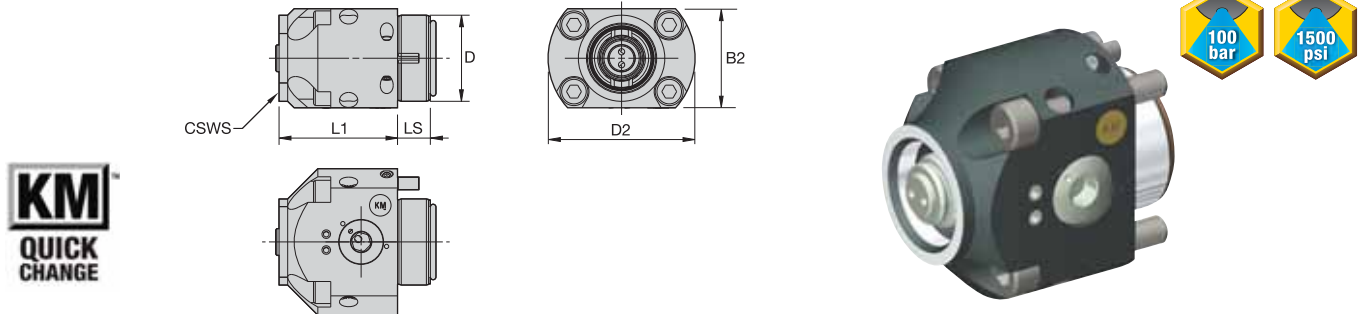

■ CL2N-SS • Round Shank • Metric

order number	catalog number	CSWS system size	D	D2	L1	L	CS	wrench size	actuation screw
1785191	KM40CL2NSS4060	KM40	40	42,5	60	250	RP3/8	8mm	
2044932	KM50CL2NSS5075	KM50	50	52,5	75	300	RP3/8	10mm	
2044944	KM63CL2NSS6085	KM63	60	64,5	85	350	RP3/8	10mm	

■ CL2N-SS • Round Shank • Inch

order number	catalog number	CSWS system size	D	D2	L1	L	CS	wrench size	actuation screw
1785185	KM40CL2NSS24236	KM40	1.500	1.673	2.362	10.000	3/8-18 NPSC	8mm	
2044924	KM50CL2NSS32295	KM50	2.000	2.067	2.953	12.000	3/8-18 NPSC	10mm	
2044940	KM63CL2NSS40335	KM63	2.500	2.539	3.346	14.000	3/8-18 NPSC	10mm	

NOTE: For technical information, see page M1.
 For actuation wrench, see page L53.

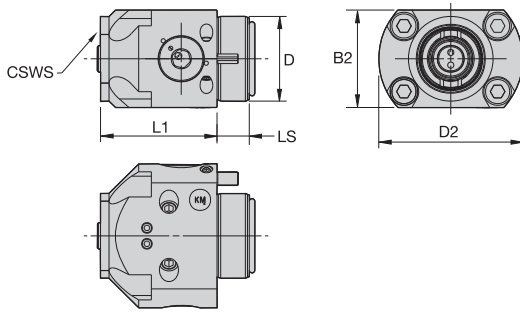

■ CL2NS-EF • Flange Mount, Side Access • Metric

order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size	actuation screw	mounting screw
1785153	KM40CL2NSEF	KM40	40	68	46	55	15.2	8mm		DWG MS1277
2044926	KM50CL2NSEF	KM50	50	84	58	65	20.0	10mm		DWG MS1494
2044936	KM63CL2NSEF	KM63	63	102	76	80	20.0	10mm		MS1252

■ CL2NS-EF • Flange Mount, Side Access • Inch

order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size	actuation screw	mounting screw
1785153	KM40CL2NSEF	KM40	1.575	2.68	1.81	2.165	.60	8mm		DWG MS1277
2044926	KM50CL2NSEF	KM50	1.969	3.31	2.28	2.559	.79	10mm		DWG MS1494
2044936	KM63CL2NSEF	KM63	2.480	4.02	2.99	3.150	.79	10mm		MS1252

NOTE: For technical information, see page M1.
 For mounting dimensions, see page M53.
 For actuation wrench, see page L53.



■ CL2NT-EF • Flange Mount, Top Access • Metric



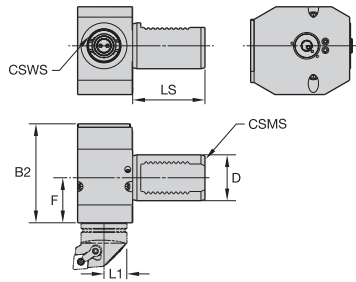
order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1785032	KM40CL2NTEF	KM40	40	68	46	55	15,2	8mm	DWG MS1277
2044927	KM50CL2NTEF	KM50	50	84	58	65	20,0	10mm	DWG MS1494
2044937	KM63CL2NTEF	KM63	63	102	76	80	20,0	10mm	MS1252

■ CL2NT-EF • Flange Mount, Top Access • Inch



order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1785032	KM40CL2NTEF	KM40	1.57	2.677	1.811	2.165	.600	8mm	DWG MS1277
2044927	KM50CL2NTEF	KM50	1.97	3.307	2.284	2.559	.787	10mm	DWG MS1494
2044937	KM63CL2NTEF	KM63	2.48	4.016	2.992	3.150	.787	10mm	MS1252

NOTE: For technical information, see page M1.
For mounting dimensions, see page M53.
For actuation wrench, see page L53.

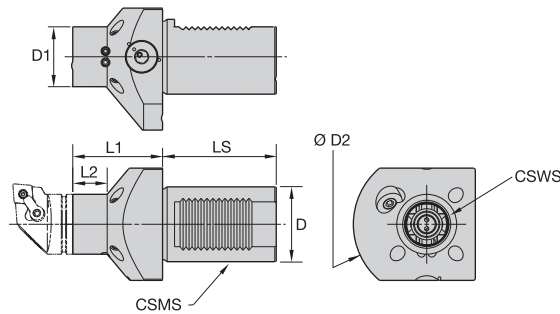

■ CL2RR/L • VDI Right Angle • Metric

order number	catalog number	CSWS system size	CSMS system size	D	F	B2	L1	LS	wrench size actuation screw
right hand									
1785233	KM40CL2RRVDI4040	KM40	VDI40	40	40	87	25	63	8mm
1785236	KM40CL2RRVDI5040	KM40	VDI50	50	40	87	25	78	8mm
left hand									
1785234	KM40CL2RLVDI4040	KM40	VDI40	40	40	87	25	63	8mm
1785240	KM40CL2RLVDI5040	KM40	VDI50	50	40	87	25	78	8mm

■ CL2RR/L • VDI Right Angle • Inch

order number	catalog number	CSWS system size	CSMS system size	D	F	B2	L1	LS	wrench size actuation screw
right hand									
1785233	KM40CL2RRVDI4040	KM40	VDI40	1.575	1.575	3.43	.984	2.48	8mm
1785236	KM40CL2RRVDI5040	KM40	VDI50	1.969	1.575	3.43	.984	3.07	8mm
left hand									
1785234	KM40CL2RLVDI4040	KM40	VDI40	1.575	1.575	3.43	.984	2.48	8mm
1785240	KM40CL2RLVDI5040	KM40	VDI50	1.969	1.575	3.43	.984	3.07	8mm

NOTE: For technical information, see page M1.
 For actuation wrench, see page L53.

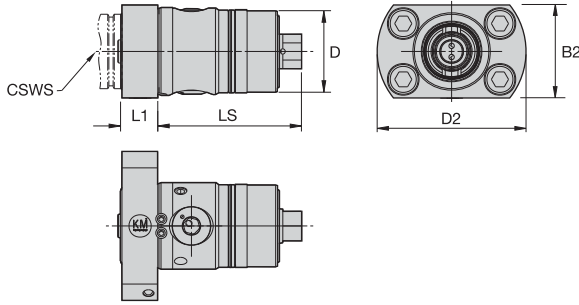

■ CL2AN/V • VDI Axial • Metric

order number	catalog number	CSWS system size	CSMS system size	D1	D	D2	L1	L2	LS	wrench size actuation screw
right hand										
1785241	KM40CL2ANVDI4060	KM40	VDI40	40	40	83	60	23	63	8mm

■ CL2AN/V • VDI Axial • Inch

order number	catalog number	CSWS system size	CSMS system size	D1	D	D2	L1	L2	LS	wrench size actuation screw
right hand										
1785241	KM40CL2ANVDI4060	KM40	VDI40	1.575	1.575	3.27	2.362	.91	2.48	8mm

NOTE: For technical information, see page M1.
 For actuation wrench, see page L53.



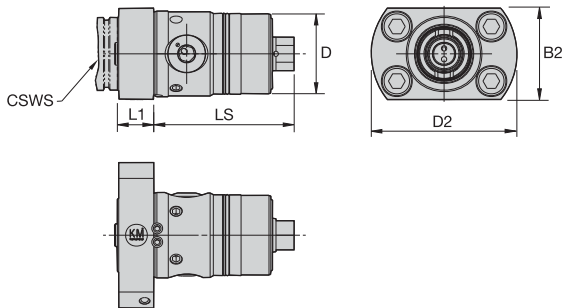
■ CL2NS-BC • Boring Cartridge, Side Access • Metric

order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1785155	KM40CL2NSBC3216B	KM40	47	80	50	20	77,2	8mm	MS1234
1908331	KM50CL2NSBC4010B	KM50	58	96	64	22	86,7	10mm	MS1085PKG
1920417	KM63CL2NSBC5010B	KM63	74	122	78	30	99,5	10mm	MS1239

■ CL2NS-BC • Boring Cartridge, Side Access • Inch

order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1785155	KM40CL2NSBC3216B	KM40	1.850	3.15	1.97	.787	3.04	8mm	MS1234
1908331	KM50CL2NSBC4010B	KM50	2.293	3.78	2.52	.866	3.41	10mm	MS1085PKG
1920417	KM63CL2NSBC5010B	KM63	2.913	4.80	3.07	1.181	3.92	10mm	MS1239

NOTE: For technical information, see page M1.
For mounting dimensions, see page M57.
For actuation wrench, see page L53.



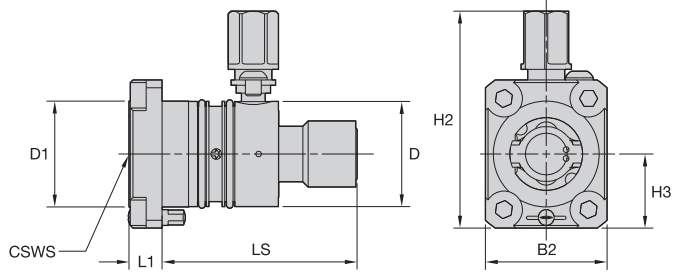
■ CL2NT-BC • Boring Cartridge, Top Access • Metric

order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1785154	KM40CL2NTBC3216B	KM40	47	80	50	20	77,2	8mm	MS1234
2044919	KM50CL2NTBC4010B	KM50	58	96	64	22	86,7	10mm	MS1085PKG
1962610	KM63CL2NTBC5010B	KM63	74	122	78	30	99,5	10mm	MS1239

■ CL2NT-BC • Boring Cartridge, Top Access • Inch

order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw
1785154	KM40CL2NTBC3216B	KM40	1.850	3.15	1.97	.787	3.04	8mm	MS1234
2044919	KM50CL2NTBC4010B	KM50	2.293	3.78	2.52	.866	3.41	10mm	MS1085PKG
1962610	KM63CL2NTBC5010B	KM63	2.913	4.80	3.07	1.181	3.92	10mm	MS1239

NOTE: For technical information, see page M1.
For mounting dimensions, see page M57.
For actuation wrench, see page L53.

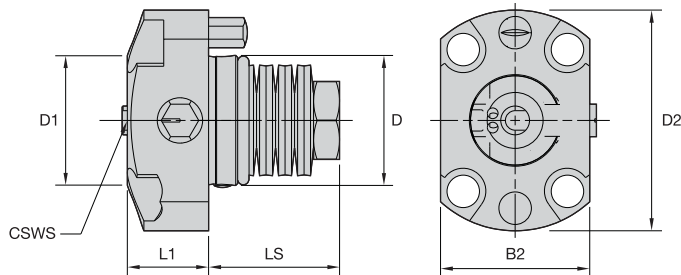

■ RPNT-F • Flange Mount, Rapid Plus, Top Access • Metric

order number	catalog number	CSWS system size	D	D1	B2	H2	H3	L1	LS	wrench size actuation screw	mounting screw
2018139	KM40RPNTF	KM40	40	40	46	56	28	13	80,0	17mm	12148781500
2018140	KM50RPNTF	KM50	50	50	58	67	34	15	105,0	22mm	12147658400
2033465	KM63RPNTF	KM63	63	63	72	90	45	16	120,0	22mm	—

■ RPNT-F • Flange Mount, Rapid Plus, Top Access • Inch

order number	catalog number	CSWS system size	D	D1	B2	H2	H3	L1	LS	wrench size actuation screw	mounting screw
2018139	KM40RPNTF	KM40	1.57	1.575	1.811	2.205	28,000	.492	3.15	17mm	12148781500
2018140	KM50RPNTF	KM50	1.97	1.969	2.283	2.638	33,500	.591	4.13	22mm	12147658400
2033465	KM63RPNTF	KM63	2.48	2.480	2.835	3.543	45,000	.630	4.72	22mm	—

NOTE: For technical information, see page M1.
 For mounting dimensions, see page M55.
 For actuation wrench, see page L58.

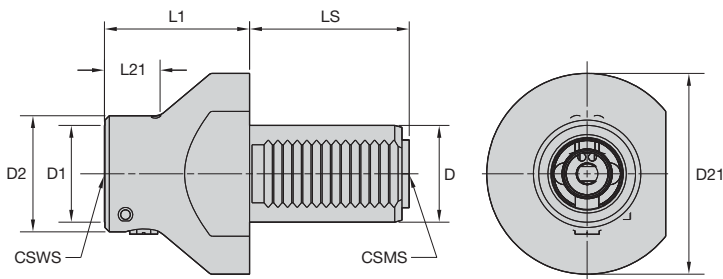

■ RNS-EF • Flange Mount, Rapid, Side Access • Metric

order number	catalog number	CSWS system size	D	D1	D2	B2	L1	LS	wrench size actuation screw	mounting screw
2012922	KM40RNSEF	KM40	40	40	68	46	25	39,3	10mm	12146021000
2032936	KM50RNSEF	KM50	50	50	90	58	32	44,9	12mm	12147625400
2033075	KM63RNSEF	KM63	63	63	102	72	40	48,5	17mm	12146021100

■ RNS-EF • Flange Mount, Rapid, Side Access • Inch

order number	catalog number	CSWS system size	D	D1	D2	B2	L1	LS	wrench size actuation screw	mounting screw
2012922	KM40RNSEF	KM40	1.575	1.57	2.68	1.81	.984	1.55	10mm	12146021000
2032936	KM50RNSEF	KM50	1.969	1.97	3.54	2.28	1.260	1.77	12mm	12147625400
2033075	KM63RNSEF	KM63	2.480	2.48	4.02	2.83	1.575	1.91	17mm	12146021100

NOTE: For technical information, see page M1.
 For mounting dimensions, see page M54.
 For actuation wrench, see page L58.



■ RA R/L • VDI Axial • Metric

order number	catalog number	CSWS system size	CSMS system size	D1	D	D2	D21	L1	L21	LS	wrench size actuation screw
right hand											
2012951	KM40RARVDI4060	KM40	VDI40	40	40	48	83	60	23	63	10mm
2012989	KM40RARVDI5060	KM40	VDI50	40	50	48	98	60	23	78	10mm
2013887	KM50RARVDI4070	KM50	VDI40	50	40	60	83	70	32	63	12mm
left hand											
2012947	KM40RALVDI4060	KM40	VDI40	40	40	48	83	60	23	63	10mm
2032938	KM50RALVDI4070	KM50	VDI40	50	40	60	83	70	32	63	12mm

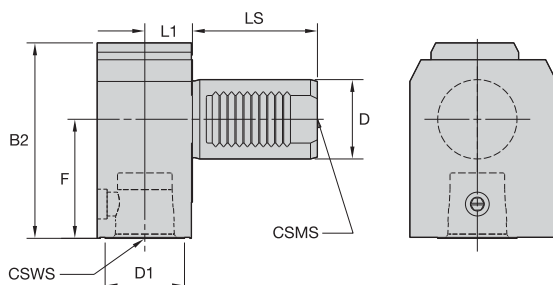
■ RA R/L • VDI Axial • Inch

order number	catalog number	CSWS system size	CSMS system size	D	D1	D2	D21	L1	L21	LS	wrench size actuation screw
right hand											
2012951	KM40RARVDI4060	KM40	VDI40	1.575	1.575	1.89	3.268	2.362	.906	2.48	10 mm
2012989	KM40RARVDI5060	KM40	VDI50	1.969	1.575	1.89	3.858	2.362	.906	3.07	10 mm
2013887	KM50RARVDI4070	KM50	VDI40	1.575	1.969	2.36	3.268	2.756	1.260	2.48	12 mm
left hand											
2012947	KM40RALVDI4060	KM40	VDI40	1.575	1.575	1.89	3.268	2.362	.906	2.48	10 mm
2032938	KM50RALVDI4070	KM50	VDI40	1.575	1.969	2.36	3.268	2.756	1.260	2.48	12 mm

NOTE: For technical information, see page M1.
For actuation wrench, see page L58.



KM Rapid Clamping Units

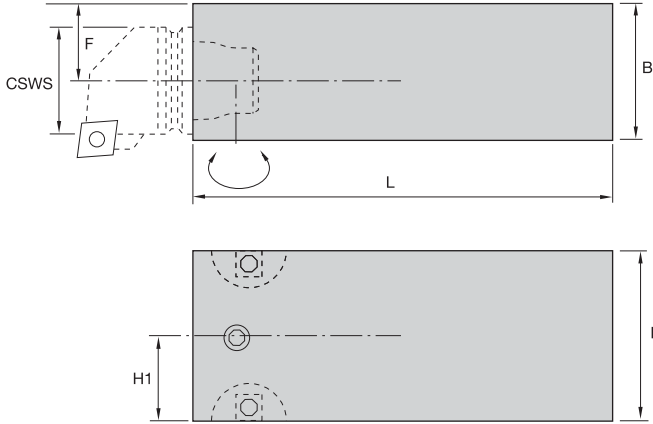

■ RRR/L-VDI • Right-Angle • Metric

order number	catalog number	CSWS system size	CSMS system size	D	D1	F	B2	L1	LS	wrench size actuation screw
right hand										
2012949	KM40RRRVDI4040	KM40	VDI40	40	40	40	79	25	63	10mm
2012950	KM40RRRVDI4060	KM40	VDI40	40	40	60	99	25	63	10mm
2012987	KM40RRRVDI5040	KM40	VDI50	50	40	40	82	25	78	10mm
left hand										
2013892	KM50RRRVDI5050	KM50	VDI50	50	50	50	106	30	78	12mm
2012945	KM40RRLVDI4040	KM40	VDI40	40	40	40	79	25	63	10mm
2032759	KM40RRLVDI4060	KM40	VDI40	40	40	60	99	25	63	10mm

■ RRR/L-VDI • Right-Angle • Inch

order number	catalog number	CSWS system size	CSMS system size	D	D1	F	B2	L1	LS	wrench size actuation screw
right hand										
2012949	KM40RRRVDI4040	KM40	VDI40	1.575	40,000	1.575	3.09	.984	2.48	10mm
2012950	KM40RRRVDI4060	KM40	VDI40	1.575	40,000	2.362	3.88	.984	2.48	10mm
2012987	KM40RRRVDI5040	KM40	VDI50	1.969	40,000	1.575	3.23	.984	3.07	10mm
left hand										
2013892	KM50RRRVDI5050	KM50	VDI50	1.969	50,000	1.969	4.17	1.181	3.07	12mm
2012945	KM40RRLVDI4040	KM40	VDI40	1.575	40,000	1.575	3.09	.984	2.48	10mm
2032759	KM40RRLVDI4060	KM40	VDI40	1.575	40,000	2.362	3.88	.984	2.48	10mm

NOTE: For technical information, see page M1.
 For actuation wrench, see page L58.



■ **NCM • Square Shank Replacement • Metric**

order number	catalog number	CSWS system size	B	F	H	H1	L	wrench size actuation screw	spare parts package	Nm
1021574	KM32NCM4040	KM32	40	23	40	20	125	5mm	KM32PKG3S	8-11
1021575	KM32NCM5040	KM32	40	23	50	25	125	5mm	KM32PKG3S	8-11
1021641	KM40NCM5044	KM40	44	23	50	25	150	6mm	KM40PKG3S	12-16
1021640	KM40NCM6444	KM40	44	23	64	32	150	6mm	KM40PKG3S	12-16
1021748	KM50NCM6454	KM50	54	28	64	32	150	10mm	KM50PKG3S	27-34

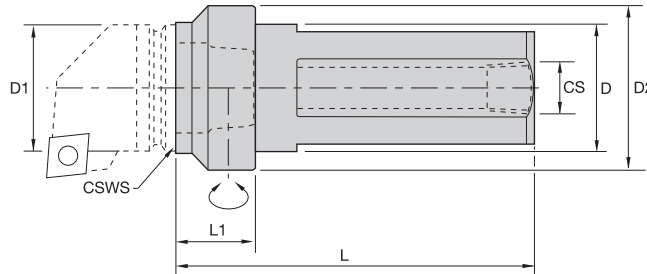
■ **NCM • Square Shank Replacement • Inch**

order number	catalog number	CSWS system size	B	F	H	H1	L	wrench size actuation screw	spare parts package	ft. lbs.
1021531	KM32NCM2425	KM32	1.562	.884	1.50	.75	5.00	5mm	KM32PKG3S	6-8
1021532	KM32NCM3225	KM32	1.562	.884	2.00	1.00	5.00	5mm	KM32PKG3S	6-8
1021637	KM40NCM3228	KM40	1.750	.937	2.00	1.00	6.00	6mm	KM40PKG3S	9-12
1021638	KM40NCM4028	KM40	1.750	.937	2.50	1.25	6.00	6mm	KM40PKG3S	9-12
1021746	KM50NCM4034	KM50	2.125	1.122	2.50	1.25	6.00	10mm	KM50PKG3S	20-25

■ **Wedge Tightening Torque**

KM size CSWS	torque (Nm)	torque ft. lbs.
32	16	12
40	34	25
50	48	35

NOTE: For technical information, see page M1.
For torque wrench, see page L52.

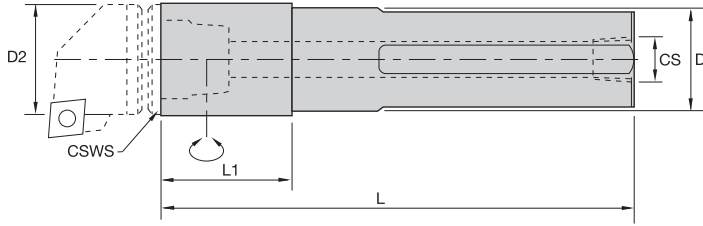

■ NCM-SS • Round Shank, Standard Length • Metric


order number	catalog number	CSWS system size	D	D1	D2	L1	L	CS	wrench size actuation screw	spare parts package	Nm
1144817	KM32NCMSS3225	KM32	32	32	40	25	90	RP3/8	5mm	KM32PKG3L	8-11
1144818	KM32NCMSS4025	KM32	40	32	50	25	90	RP3/8	5mm	KM32PKG3L	8-11
1144830	KM40NCMSS4025	KM40	40	40	50	25	110	RP3/8	6mm	KM40PKG3L	12-16
1144831	KM40NCMSS5025	KM40	50	40	63	25	110	RP3/8	6mm	KM40PKG3L	12-16
1144848	KM50NCMSS5032	KM50	50	50	63	32	142	RP3/8	10mm	KM50PKG3L	27-34
1144847	KM50NCMSS6032	KM50	60	50	80	32	142	RP3/8	10mm	KM50PKG3L	27-34

■ NCM-SS • Round Shank, Standard Length • Inch


order number	catalog number	CSWS system size	D	D1	D2	L1	L	CS	wrench size actuation screw	spare parts package	ft. lbs.
1144815	KM32NCMSS20100	KM32	1.25	1.260	1.57	1.000	3.54	3/8-18NPT	5mm	KM32PKG3L	6-8
1144816	KM32NCMSS24100	KM32	1.50	1.260	1.97	1.000	3.54	3/8-18NPT	5mm	KM32PKG3L	6-8
1144829	KM40NCMSS24100	KM40	1.50	1.575	1.97	1.000	4.33	3/8-18NPT	6mm	KM40PKG3L	9-12
1148349	KM40NCMSS28100	KM40	1.75	1.575	2.48	1.000	4.33	3/8-18NPT	6mm	KM40PKG3L	9-12
1117705	KM40NCMSS32100	KM40	2.00	1.575	2.48	1.000	4.33	3/8-18NPT	6mm	KM40PKG3L	9-12
1085675	KM50NCMSS32125	KM50	2.00	1.969	2.48	1.250	5.59	3/8-18NPT	10mm	KM50PKG3L	20-25
1144846	KM50NCMSS40125	KM50	2.50	1.969	3.15	1.250	5.59	3/8-18NPT	10mm	KM50PKG3L	20-25
1144798	KM63NCMSS40162	KM63	2.50	2.480	3.15	1.625	5.96	3/8-18NPT	12mm	KM63PKG3L	35-40

NOTE: For technical information, see page M1.
 For torque wrench, see page L52.



■ NCM-S • Round Shank, Extended Length • Metric



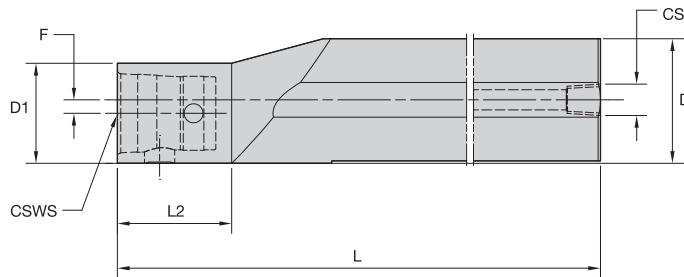
order number	catalog number	CSWS system size	D2	D	L1	L	CS	wrench size actuation screw	spare parts package	Nm
1021533	KM32NCMS32P	KM32	32	32	38	170	RP3/8	5mm	KM32PKG3S	8-11
1021578	KM32NCMS32R	KM32	32	32	38	200	RP3/8	5mm	KM32PKG3S	8-11
1021635	KM40NCMS40S	KM40	40	40	44	250	RP3/8	6mm	KM40PKG3S	12-16
1021744	KM50NCMS50T	KM50	50	50	52	300	RP3/8	10mm	KM50PKG3S	27-34
1021525	KM63NCMS60U	KM63	63	60	72	350	RP3/8	12mm	KM63PKG3S	47-54

■ NCM-S • Round Shank, Extended Length • Inch



order number	catalog number	CSWS system size	D2	D	L1	L	CS	wrench size actuation screw	spare parts package	ft. lbs.
1021530	KM32NCMS20	KM32	1.26	1.25	1.50	6.75	3/8-18NPT	5mm	KM32PKG3S	6-8
1021636	KM40NCMS24	KM40	1.57	1.50	1.75	10.00	3/8-18NPT	6mm	KM40PKG3S	9-12
1021747	KM50NCMS32	KM50	1.97	2.00	2.05	12.00	3/8-18NPT	10mm	KM50PKG3S	20-25
1021528	KM63NCMS40	KM63	2.48	2.50	2.83	14.00	3/8-18NPT	12mm	KM63PKG3S	35-40

NOTE: For technical information, see page M1.
For torque wrench, see page L52.



■ **ECM-S • Round Shank, Offset Extended Length • Metric**



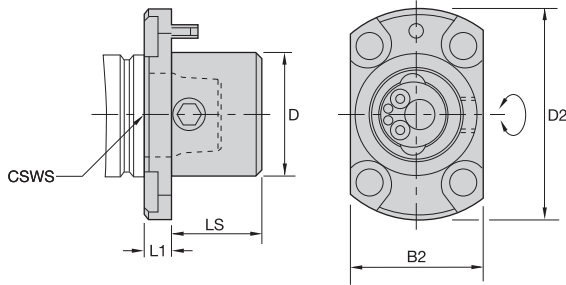
order number	catalog number	CSWS system size	D1	D	F	L2	L	CS	wrench size actuation screw	spare parts package	Nm
1021699	KM40ECMS50S	KM40	40	50	5	45	250	RP3/8	6mm	KM40PKG3S	12-16
1021745	KM50ECMS60U	KM50	50	60	5	52	350	RP3/8	10mm	KM50PKG3S	27-34
1021526	KM63ECMS80W	KM63	63	80	8	72	450	RP3/8	12mm	KM63PKG3S	47-54

■ **ECM-S • Round Shank, Offset Extended Length • Inch**



order number	catalog number	CSWS system size	D1	D	F	L2	L	CS	wrench size actuation screw	spare parts package	ft. lbs.
1021698	KM40ECMS32	KM40	1.57	2.00	.21	1.77	10.00	3/8-18 NPT	6mm	KM40PKG3S	9-12
1021703	KM50ECMS40	KM50	1.97	2.50	.27	2.05	14.00	3/8-18 NPT	10mm	KM50PKG3S	20-25
1021527	KM63ECMS48	KM63	2.48	3.00	.26	2.83	17.00	3/8-18 NPT	12mm	KM63PKG3S	35-40

NOTE: For technical information, see page M1.
For torque wrench, see page L52.



■ NCM-F • Flange Mount, Standard Length • Metric



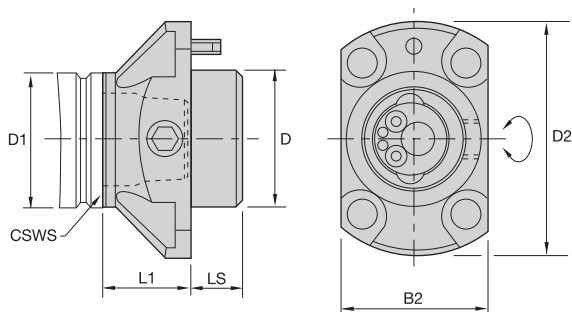
order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw	spare parts package	Nm
1144814	KM32NCMF	KM32	32	54	36	7,5	24,5	5mm	MS1347	KM32PKG3S	8-11
1013675	KM40NCMF	KM40	40	68	44	10,0	30,0	6mm	MS1217	KM40PKG3S	12-16
1144845	KM50NCMF	KM50	50	84	55	12,0	38,0	10mm	MS1361	KM50PKG3S	27-34
1083015	KM63NCMF	KM63	63	102	72	15,0	45,0	12mm	MS1460	KM63PKG3S	47-54
1144800	KM80NCMF	KM80	80	132	90	18,5	57,0	14mm	DWG MS1599	KM80PKG3S	79-85

■ NCM-F • Flange Mount, Standard Length • Inch



order number	catalog number	CSWS system size	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw	spare parts package	ft. lbs.
1144814	KM32NCMF	KM32	1.260	2.13	1.42	.295	.96	5mm	MS1347	KM32PKG3S	6-8
1013675	KM40NCMF	KM40	1.575	2.68	1.73	.394	1.18	6mm	MS1217	KM40PKG3S	9-12
1144845	KM50NCMF	KM50	1.969	3.31	2.17	.472	1.50	10mm	MS1361	KM50PKG3S	20-25
1083015	KM63NCMF	KM63	2.480	4.02	2.84	.591	1.77	12mm	MS1460	KM63PKG3S	35-40
1144800	KM80NCMF	KM80	3.150	5.20	3.54	.728	2.24	14mm	DWG MS1599	KM80PKG3S	58-63

NOTE: For technical information, see page M1.
For mounting dimensions, see page M52.
For torque wrench, see page L52.

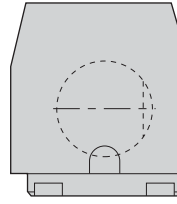
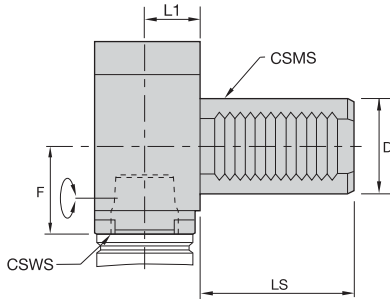

■ NCM-EF • Flange Mount, Extended Length • Metric


order number	catalog number	CSWS system size	D1	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw	spare parts package	Nm
1021576	KM32NCMEF	KM32	32	32	54	36	20	12	5mm	MS1347	KM32PKG3L	8-11
1021642	KM40NCMEF	KM40	40	40	68	44	25	15	6mm	MS1217	KM40PKG3L	12-16
1021749	KM50NCMEF	KM50	50	50	84	55	30	20	10mm	MS1361	KM50PKG3L	27-34
1021753	KM63NCMEF	KM63	63	63	102	72	40	20	12mm	MS1460	KM63PKG3L	47-54
1144799	KM80NCMEF	KM80	80	80	132	90	50	25	14mm	DWG MS1599	KM80PKG3L	79-85
2420366	KM100NCMEF	KM100	100	100	167	112	56	32	17mm	—	—	100-120

■ NCM-EF • Flange Mount, Extended Length • Inch


order number	catalog number	CSWS system size	D1	D	D2	B2	L1	LS	wrench size actuation screw	mounting screw	spare parts package	ft. lbs.
1021576	KM32NCMEF	KM32	1.260	1.260	2.13	1.42	.787	.47	5mm	MS1347	KM32PKG3L	6-8
1021642	KM40NCMEF	KM40	1.575	1.575	2.68	1.73	.984	.59	6mm	MS1217	KM40PKG3L	9-12
1021749	KM50NCMEF	KM50	1.969	1.969	3.31	2.17	1.181	.79	10mm	MS1361	KM50PKG3L	20-25
1021753	KM63NCMEF	KM63	2.480	2.480	4.02	2.84	1.575	.79	12mm	MS1460	KM63PKG3L	35-40
1144799	KM80NCMEF	KM80	3.150	3.150	5.20	3.54	1.969	.98	14mm	DWG MS1599	KM80PKG3L	58-63
2420366	KM100NCMEF	KM100	3.937	3.937	6.57	4.41	2.205	1.26	17mm	—	—	75-85

NOTE: For technical information, see page M1.
 For mounting dimensions, see page M53.
 For torque wrench, see page L52.



■ R/LCM • VDI • Right-Angle • Metric



order number	catalog number	CSWS system size	CSMS system size	D	F	L1	LS	wrench size actuation screw	spare parts package	Nm
right hand										
1144801	KM32RCMVDI3035	KM32	VDI30	30	35	23	55	5mm	KM32PKG3S	8-11
2420312	KM40RCMVDI3035	KM40	VDI30	30	35	25	55	6mm	KM40PKG3L	12-16
1144824	KM40RCMVDI4040	KM40	VDI40	40	40	25	63	6mm	KM40PKG3S	12-16
1144825	KM40RCMVDI5040	KM40	VDI50	50	40	25	78	6mm	KM40PKG3S	12-16
1144842	KM50RCMVDI4050	KM50	VDI40	40	50	30	63	10mm	KM50PKG3S	27-34
1144841	KM50RCMVDI5050	KM50	VDI50	50	50	30	78	10mm	KM50PKG3S	27-34
1144856	KM63RCMVDI6060	KM63	VDI60	60	60	37	94	12mm	KM63PKG3S	47-54
left hand										
2420363	KM40LCMVDI3035	KM40	VDI30	30	35	25	55	6mm	KM40PKG3L	12-16
1144827	KM40LCMVDI4040	KM40	VDI40	40	40	25	63	6mm	KM40PKG3S	12-16
2420370	KM40LCMVDI4060	KM40	VDI40	40	60	25	63	6mm	KM40PKG3L	12-16
1144828	KM40LCMVDI5040	KM40	VDI50	50	40	25	78	6mm	KM40PKG3S	12-16
1144844	KM50LCMVDI4050	KM50	VDI40	40	50	30	63	10mm	KM50PKG3S	27-34
1144843	KM50LCMVDI5050	KM50	VDI50	50	50	30	78	10mm	KM50PKG3S	27-34
1144857	KM63LCMVDI6060	KM63	VDI60	60	60	37	94	12mm	KM63PKG3S	47-54

■ R/LCM • VDI • Right-Angle • Inch



order number	catalog number	CSWS system size	CSMS system size	D	F	L1	LS	wrench size actuation screw	spare parts package	ft. lbs.
right hand										
1144801	KM32RCMVDI3035	KM32	VDI30	1.181	1.378	.906	2.17	5mm	KM32PKG3S	6-8
2420312	KM40RCMVDI3035	KM40	VDI30	1.181	1.378	.984	2.17	6mm	KM40PKG3L	9-12
1144824	KM40RCMVDI4040	KM40	VDI40	1.575	1.575	.984	2.48	6mm	KM40PKG3S	9-12
1144825	KM40RCMVDI5040	KM40	VDI50	1.969	1.575	.984	3.07	6mm	KM40PKG3S	9-12
1144842	KM50RCMVDI4050	KM50	VDI40	1.575	1.969	1.181	2.48	10mm	KM50PKG3S	20-25
1144841	KM50RCMVDI5050	KM50	VDI50	1.969	1.969	1.181	3.07	10mm	KM50PKG3S	20-25
1144856	KM63RCMVDI6060	KM63	VDI60	2.362	2.362	1.457	3.70	12mm	KM63PKG3S	35-40
left hand										
2420363	KM40LCMVDI3035	KM40	VDI30	1.181	1.378	.984	2.17	6mm	KM40PKG3L	9-12
1144827	KM40LCMVDI4040	KM40	VDI40	1.575	1.575	.984	2.48	6mm	KM40PKG3S	9-12
2420370	KM40LCMVDI4060	KM40	VDI40	1.575	2.362	.984	2.48	6mm	KM40PKG3L	9-12
1144828	KM40LCMVDI5040	KM40	VDI50	1.969	1.575	.984	3.07	6mm	KM40PKG3S	9-12
1144844	KM50LCMVDI4050	KM50	VDI40	1.575	1.969	1.181	2.48	10mm	KM50PKG3S	20-25
1144843	KM50LCMVDI5050	KM50	VDI50	1.969	1.969	1.181	3.07	10mm	KM50PKG3S	20-25
1144857	KM63LCMVDI6060	KM63	VDI60	2.362	2.362	1.457	3.70	12mm	KM63PKG3S	35-40

NOTE: For technical information, refer to page M1.
For torque wrench, see page L52.



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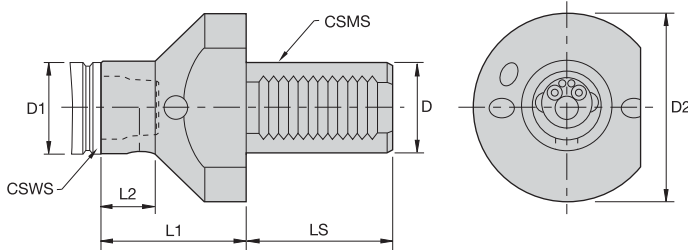
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■ R/L • CMI • VDI • Axial • Metric



order number	catalog number	CSWS system size	CSMS system size	D1	D	D2	L1	L2	LS	wrench size actuation screw	spare parts package	Nm
right hand												
1329141	KM32RCMIVDI30100	KM32	VDI30	32	30	68	100	70	55	5mm	KM32PKG3S	8-11
1144821	KM32RCMIVDI3050	KM32	VDI30	32	30	68	50	20	55	5mm	KM32PKG3S	8-11
1144823	KM32RCMIVDI40100	KM32	VDI40	32	40	83	100	70	63	5mm	KM32PKG3S	8-11
1144822	KM32RCMIVDI4050	KM32	VDI40	32	40	83	50	20	63	5mm	KM32PKG3S	8-11
2420364	KM40RCMIVDI3050	KM40	VDI30	40	30	68	50	23	55	6mm	KM40PKG3S	12-16
1144840	KM40RCMIVDI40120	KM40	VDI40	40	40	83	120	83	63	6mm	KM40PKG3S	12-16
1144837	KM40RCMIVDI4060	KM40	VDI40	40	40	83	60	23	63	6mm	KM40PKG3S	12-16
1144839	KM40RCMIVDI50120	KM40	VDI50	40	50	98	120	83	78	6mm	KM40PKG3S	12-16
1144838	KM40RCMIVDI5060	KM40	VDI50	40	50	98	60	23	78	6mm	KM40PKG3S	12-16
1144851	KM50RCMIVDI40140	KM50	VDI40	50	40	83	140	95	63	10mm	KM50PKG3S	27-34
1144853	KM50RCMIVDI4070	KM50	VDI40	50	40	83	70	25	63	10mm	KM50PKG3S	27-34
1144854	KM50RCMIVDI50140	KM50	VDI50	50	50	98	140	95	78	10mm	KM50PKG3S	27-34
1144852	KM50RCMIVDI5070	KM50	VDI50	50	50	98	70	25	78	10mm	KM50PKG3S	27-34
1144809	KM63RCMIVDI50160	KM63	VDI50	63	50	98	160	110	78	12mm	KM63PKG3S	47-54
1144807	KM63RCMIVDI5080	KM63	VDI50	63	50	98	80	30	78	12mm	KM63PKG3S	47-54
1144859	KM63RCMIVDI60160	KM63	VDI60	63	60	123	160	110	94	12mm	KM63PKG3S	47-54
1144858	KM63RCMIVDI6080	KM63	VDI60	63	60	123	80	30	94	12mm	KM63PKG3S	47-54
left hand												
1312285	KM32LCMIVDI40100	KM32	VDI40	32	40	83	100	70	63	5mm	KM32PKG3S	8-11
1144820	KM32LCMIVDI4050	KM32	VDI40	32	40	83	50	20	63	5mm	KM32PKG3S	8-11
1144836	KM40LCMIVDI40120	KM40	VDI40	40	40	83	120	83	63	6mm	KM40PKG3S	12-16
1144833	KM40LCMIVDI4060	KM40	VDI40	40	40	83	60	23	63	6mm	KM40PKG3S	12-16
1144835	KM40LCMIVDI50120	KM40	VDI50	40	50	98	120	83	78	6mm	KM40PKG3S	12-16
1144834	KM40LCMIVDI5060	KM40	VDI50	40	50	98	60	23	78	6mm	KM40PKG3S	12-16
1144797	KM50LCMIVDI40140	KM50	VDI40	50	40	83	140	95	63	10mm	KM50PKG3S	27-34
1144850	KM50LCMIVDI4070	KM50	VDI40	50	40	83	70	25	63	10mm	KM50PKG3S	27-34
1144849	KM50LCMIVDI5070	KM50	VDI50	50	50	98	70	25	78	10mm	KM50PKG3S	27-34
1144810	KM63LCMIVDI50160	KM63	VDI50	63	50	98	160	110	78	12mm	KM63PKG3S	47-54
1144808	KM63LCMIVDI5080	KM63	VDI50	63	50	98	80	30	78	12mm	KM63PKG3S	47-54
1144861	KM63LCMIVDI60160	KM63	VDI60	63	60	123	160	110	94	12mm	KM63PKG3S	47-54
1144860	KM63LCMIVDI6080	KM63	VDI60	63	60	123	80	30	94	12mm	KM63PKG3S	47-54

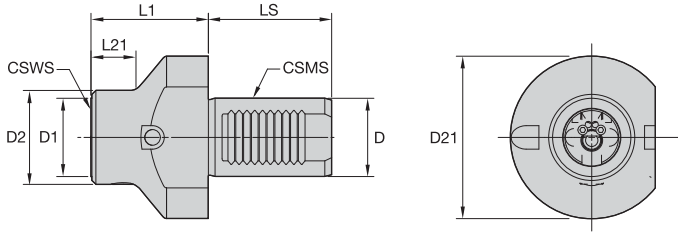
(continued)

(R/L • CMI • VDI • Axial continued)

■ R/L • CMI • VDI • Axial • Inch


order number	catalog number	CSWS system size	CSMS system size	D1	D	D2	L1	L2	LS	wrench size actuation screw	spare parts package	ft. lbs.
right hand												
1329141	KM32RCMIVDI30100	KM32	VDI30	1.26	1.181	2.677	3.94	2.76	2.17	5mm	KM32PKG3S	6-8
1144821	KM32RCMIVDI3050	KM32	VDI30	1.26	1.181	2.677	1.97	.79	2.17	5mm	KM32PKG3S	6-8
1144823	KM32RCMIVDI40100	KM32	VDI40	1.26	1.575	3.268	3.94	2.76	2.48	5mm	KM32PKG3S	6-8
1144822	KM32RCMIVDI4050	KM32	VDI40	1.26	1.575	3.268	1.97	.79	2.48	5mm	KM32PKG3S	6-8
2420364	KM40RCMIVDI3050	KM40	VDI30	1.57	1.181	2.677	1.97	.91	2.17	6mm	KM40PKG3S	9-12
1144840	KM40RCMIVDI40120	KM40	VDI40	1.57	1.575	3.268	4.72	3.27	2.48	6mm	KM40PKG3S	9-12
1144837	KM40RCMIVDI4060	KM40	VDI40	1.57	1.575	3.268	2.36	.91	2.48	6mm	KM40PKG3S	9-12
1144839	KM40RCMIVDI50120	KM40	VDI50	1.57	1.969	3.858	4.72	3.27	3.07	6mm	KM40PKG3S	9-12
1144838	KM40RCMIVDI5060	KM40	VDI50	1.57	1.969	3.858	2.36	.91	3.07	6mm	KM40PKG3S	9-12
1144851	KM50RCMIVDI40140	KM50	VDI40	1.97	1.575	3.268	5.51	3.74	2.48	10mm	KM50PKG3S	20-25
1144853	KM50RCMIVDI4070	KM50	VDI40	1.97	1.575	3.268	2.76	.98	2.48	10mm	KM50PKG3S	20-25
1144854	KM50RCMIVDI50140	KM50	VDI50	1.97	1.969	3.858	5.51	3.74	3.07	10mm	KM50PKG3S	20-25
1144852	KM50RCMIVDI5070	KM50	VDI50	1.97	1.969	3.858	2.76	.98	3.07	10mm	KM50PKG3S	20-25
1144809	KM63RCMIVDI50160	KM63	VDI50	2.48	1.969	3.858	6.30	4.33	3.07	12mm	KM63PKG3S	35-40
1144807	KM63RCMIVDI5080	KM63	VDI50	2.48	1.969	3.858	3.15	1.18	3.07	12mm	KM63PKG3S	35-40
1144859	KM63RCMIVDI60160	KM63	VDI60	2.48	2.362	4.843	6.30	4.33	3.70	12mm	KM63PKG3S	35-40
1144858	KM63RCMIVDI6080	KM63	VDI60	2.48	2.362	4.843	3.15	1.18	3.70	12mm	KM63PKG3S	35-40
left hand												
1312285	KM32LCMIVDI40100	KM32	VDI40	1.26	1.575	3.268	3.94	2.76	2.48	5mm	KM32PKG3S	6-8
1144820	KM32LCMIVDI4050	KM32	VDI40	1.26	1.575	3.268	1.97	.79	2.48	5mm	KM32PKG3S	6-8
1144836	KM40LCMIVDI40120	KM40	VDI40	1.57	1.575	3.268	4.72	3.27	2.48	6mm	KM40PKG3S	9-12
1144833	KM40LCMIVDI4060	KM40	VDI40	1.57	1.575	3.268	2.36	.91	2.48	6mm	KM40PKG3S	9-12
1144835	KM40LCMIVDI50120	KM40	VDI50	1.57	1.969	3.858	4.72	3.27	3.07	6mm	KM40PKG3S	9-12
1144834	KM40LCMIVDI5060	KM40	VDI50	1.57	1.969	3.858	2.36	.91	3.07	6mm	KM40PKG3S	9-12
1144797	KM50LCMIVDI40140	KM50	VDI40	1.97	1.575	3.268	5.51	3.74	2.48	10mm	KM50PKG3S	20-25
1144850	KM50LCMIVDI4070	KM50	VDI40	1.97	1.575	3.268	2.76	.98	2.48	10mm	KM50PKG3S	20-25
1144849	KM50LCMIVDI5070	KM50	VDI50	1.97	1.969	3.858	2.76	.98	3.07	10mm	KM50PKG3S	20-25
1144810	KM63LCMIVDI50160	KM63	VDI50	2.48	1.969	3.858	6.30	4.33	3.07	12mm	KM63PKG3S	35-40
1144808	KM63LCMIVDI5080	KM63	VDI50	2.48	1.969	3.858	3.15	1.18	3.07	12mm	KM63PKG3S	35-40
1144861	KM63LCMIVDI60160	KM63	VDI60	2.48	2.362	4.843	6.30	4.33	3.70	12mm	KM63PKG3S	35-40
1144860	KM63LCMIVDI6080	KM63	VDI60	2.48	2.362	4.843	3.15	1.18	3.70	12mm	KM63PKG3S	35-40

 NOTE: For technical information, see page M1.
 For torque wrench, see page L52.



■ RCML • Axial VDI, Large Body Diameter • Metric



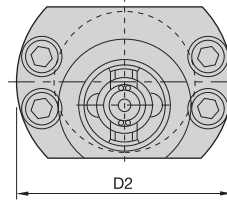
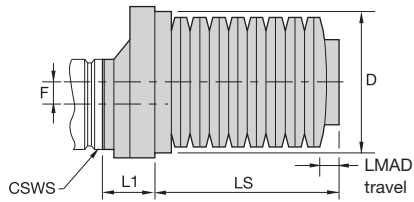
order number	catalog number	CSWS system size	CSMS system size	D1	D2	D	L1	L21	LS	D21	wrench size actuation screw	spare parts package	Nm
2032697	KM32RCMLVDI2050	KM32	VDI20	32	38	20	50	20	40	50	5 mm	KM32PKG3L	8-11
2032703	KM32RCMLVDI4060	KM32	VDI40	32	38	40	60	21	63	83	5 mm	KM32PKG3L	8-11
2013052	KM40RCMLVDI3050	KM40	VDI30	40	48	30	50	23	55	68	6 mm	KM40PKG3L	12-16
2013076	KM40RCMLVDI40120	KM40	VDI40	40	48	40	120	83	63	83	6 mm	KM40PKG3L	12-16
2013075	KM40RCMLVDI4060	KM40	VDI40	40	48	40	60	23	63	83	6 mm	KM40PKG3L	12-16
2032762	KM40RCMLVDI50120	KM40	VDI50	40	48	50	120	77	78	98	6 mm	KM40PKG3L	12-16
2013079	KM40RCMLVDI5060	KM40	VDI50	40	48	50	60	17	78	98	6 mm	KM40PKG3L	12-16
2032763	KM40RCMLVDI6080	KM40	VDI60	40	48	60	80	42	94	123	6 mm	KM40PKG3L	12-16
2032952	KM50RCMLVDI40120	KM50	VDI40	50	60	40	120	87	63	83	10 mm	KM50PKG3L	27-34
2032951	KM50RCMLVDI4060	KM50	VDI40	50	60	40	60	30	63	83	10 mm	KM50PKG3L	27-34
2032954	KM50RCMLVDI50140	KM50	VDI50	50	60	50	140	97	78	98	10 mm	KM50PKG3L	27-34
2032953	KM50RCMLVDI5070	KM50	VDI50	50	60	50	70	32	78	98	10 mm	KM50PKG3L	27-34
2033100	KM63RCMLVDI60160	KM63	VDI60	63	75	60	160	112	94	123	12 mm	KM63PKG3L	47-54

■ RCML • Axial VDI, Large Body Diameter • Inch



order number	catalog number	CSWS system size	CSMS system size	D1	D2	D	L1	L21	LS	D21	wrench size actuation screw	spare parts package	ft. lbs.
2032697	KM32RCMLVDI2050	KM32	VDI20	1.260	1.50	.787	1.969	.79	1.57	1.97	5 mm	KM32PKG3L	6-8
2032703	KM32RCMLVDI4060	KM32	VDI40	1.260	1.50	1.575	2.362	.83	2.48	3.27	5 mm	KM32PKG3L	6-8
2013052	KM40RCMLVDI3050	KM40	VDI30	1.575	1.89	1.181	1.969	.91	2.17	2.68	6 mm	KM40PKG3L	9-12
2013076	KM40RCMLVDI40120	KM40	VDI40	1.575	1.89	1.575	4.724	3.27	2.48	3.27	6 mm	KM40PKG3L	9-12
2013075	KM40RCMLVDI4060	KM40	VDI40	1.575	1.89	1.575	2.362	.91	2.48	3.27	6 mm	KM40PKG3L	9-12
2032762	KM40RCMLVDI50120	KM40	VDI50	1.575	1.89	1.969	4.724	3.03	3.07	3.86	6 mm	KM40PKG3L	9-12
2013079	KM40RCMLVDI5060	KM40	VDI50	1.575	1.89	1.969	2.362	.67	3.07	3.86	6 mm	KM40PKG3L	9-12
2032763	KM40RCMLVDI6080	KM40	VDI60	1.575	1.89	2.362	3.150	1.65	3.70	4.84	6 mm	KM40PKG3L	9-12
2032952	KM50RCMLVDI40120	KM50	VDI40	1.969	2.36	1.575	4.724	3.43	2.48	3.27	10 mm	KM50PKG3L	20-25
2032951	KM50RCMLVDI4060	KM50	VDI40	1.969	2.36	1.575	2.362	1.18	2.48	3.27	10 mm	KM50PKG3L	20-25
2032954	KM50RCMLVDI50140	KM50	VDI50	1.969	2.36	1.969	5.512	3.82	3.07	3.86	10 mm	KM50PKG3L	20-25
2032953	KM50RCMLVDI5070	KM50	VDI50	1.969	2.36	1.969	2.756	1.26	3.07	3.86	10 mm	KM50PKG3L	20-25
2033100	KM63RCMLVDI60160	KM63	VDI60	2.480	2.95	2.362	6.299	4.41	3.70	4.84	12 mm	KM63PKG3L	35-40

NOTE: For technical information, see page M1.
For torque wrench, see page L52.


■ NCA • DS • Axial Disk Spring Unit • Metric

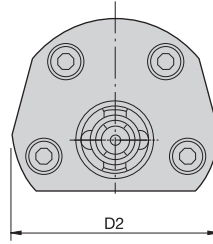
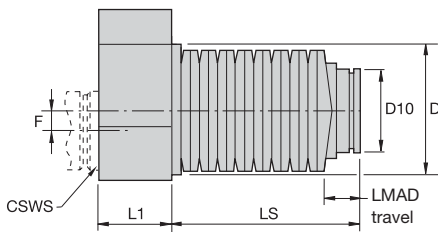
order number	catalog number	CSWS system size	D	F	L1	LS	D2	LMAD travel
1021579	KM32NCADS16T	KM32	51	8	16,0	66	78	5,08
1021697	KM40NCADS40	KM40	62	10	40,0	53	114	5,60
1021750	KM50NCADS50	KM50	78	11	50,0	74	138	7,62

■ NCA • DS • Axial Disk Spring Unit • Inch

order number	catalog number	CSWS system size	D	F	L1	LS	D2	LMAD travel
1021579	KM32NCADS16T	KM32	2.007	.315	.630	2.60	3.07	.200
1021697	KM40NCADS40	KM40	2.439	.394	1.575	2.09	4.49	.220
1021750	KM50NCADS50	KM50	3.069	.433	1.969	2.92	5.43	.300

■ Actuating Force

catalog number	actuating force (kN)	actuating force (lbs)
KM32NCADS16T	14,2	3200
KM40NCADS40	16,9	3800
KM50NCADS50	26	6000



■ NACA • DS • Axial Disk Spring Unit • Metric

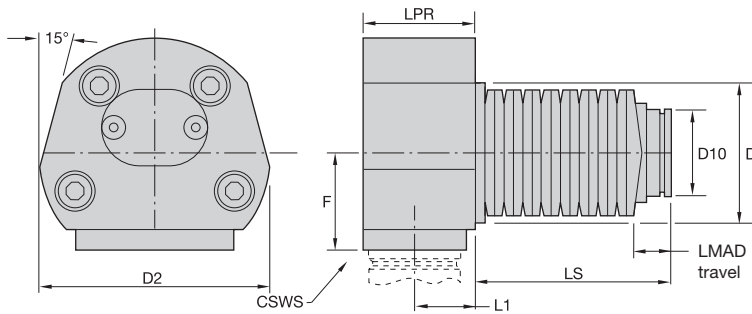
order number	catalog number	CSWS system size	D	D10	F	L1	LS	D2	LMAD travel
1021700	KM40NACADS55	KM40	62	38	10	55	90	100	6,50
1021702	KM40NACADS55DT	KM40	62	55	10	55	90	100	5,64
1021752	KM50NACADS70DT	KM50	72	65	11	70	111	120	7,62
1021529	KM63NACADS85DT	KM63	85	75	12	85	145	140	9,00

■ NACA • DS • Axial Disk Spring Unit • Inch

order number	catalog number	CSWS system size	D	D10	F	L1	LS	D2	LMAD travel
1021700	KM40NACADS55	KM40	2.441	1.496	.394	2.165	3.53	3.94	.256
1021702	KM40NACADS55DT	KM40	2.439	2.159	.394	2.165	3.53	3.94	.222
1021752	KM50NACADS70DT	KM50	2.833	2.553	.433	2.756	4.36	4.72	.300
1021529	KM63NACADS85DT	KM63	3.345	2.947	.472	3.346	5.71	5.51	.354

■ Actuating Force

catalog number	actuating force (kN)	actuating force (lbs)
KM40NACADS55DT	16,9	3800
KM50NACADS70DT	18	4000
KM63NACADS85DT	27	6000


■ RACA • DS • Right-Angle Disk Spring Unit • Metric

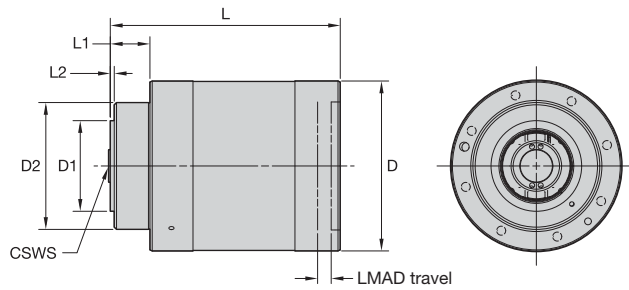
order number	catalog number	CSWS system size	D	D10	F	L1	LPR	LS	D2	LMAD travel
1021701	KM40RACADS40DT	KM40	62	55	40,0	28	52	94	100	10,67
1021524	KM63RACADS60DT	KM63	85	75	60,0	42	80	150	140	14,00

■ RACA • DS • Right-Angle Disk Spring Unit • Inch

order number	catalog number	CSWS system size	D	D10	F	L1	LPR	LS	D2	LMAD travel
1021701	KM40RACADS40DT	KM40	2.441	2.16	1.575	1.102	2.047	3.70	3.94	.420
1021524	KM63RACADS60DT	KM63	3.347	2.95	2.362	1.654	3.150	5.91	5.51	.551

■ Actuating Force

system size	actuating force (kN)	actuating force (lbs)
KM40	12,5	2800
KM50	39,5	8875

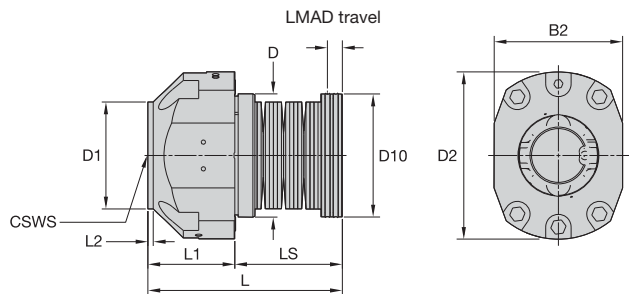


■ XGL • KM80 Rotating • Metric

order number	catalog number	CSWS system size	D1	D2	D	L1	L2	L	LMAD travel	kg
2247834	KM80XGL1062756	KM80	80	112	150	35	3,5	203	12	21,81
2452550	KM80XGL1560573	KM80	80	112	150	35	3,5	203	12	21,81

■ XGL • KM80 Rotating • Inch

order number	catalog number	CSWS system size	D1	D2	D	L1	L2	L	LMAD travel	lbs
2247834	KM80XGL1062756	KM80	3.15	4.41	5.906	1.378	.14	7.99	.472	48.08
2452550	KM80XGL1560573	KM80	3.15	4.41	5.906	1.378	.14	7.99	.472	48.08



■ XGL • KM80 Static • Metric

order number	catalog number	CSWS system size	D1	D	D10	D2	L1	LS	L	L2	B2	LMAD travel	kg
3449440	KM80XGL1724179	KM80	80	92	92,0	125	65	80,00	145,00	4	96	11,19	6,77
1954766	KM80XGL1064593	KM80	80	108	101,4	165	60	62,75	122,75	2	140	11,00	11,07
2500998	KM80XGL1555011	KM80	80	108	101,4	165	60	62,75	122,75	2	140	11,00	11,07

■ XGL • KM80 Static • Inch

order number	catalog number	CSWS system size	D1	D	D10	D2	L1	LS	L	L2	B2	LMAD travel	lbs
3449440	KM80XGL1724179	KM80	3.15	3.622	3.622	4.92	2.559	3.15	5.71	.16	3.78	.440	14.92
1954766	KM80XGL1064593	KM80	3.15	4.253	3.992	6.50	2.362	2.47	4.83	.06	5.49	.433	24.35
2500998	KM80XGL1555011	KM80	3.15	4.253	3.992	6.50	2.362	2.47	4.83	.06	5.49	.433	24.35