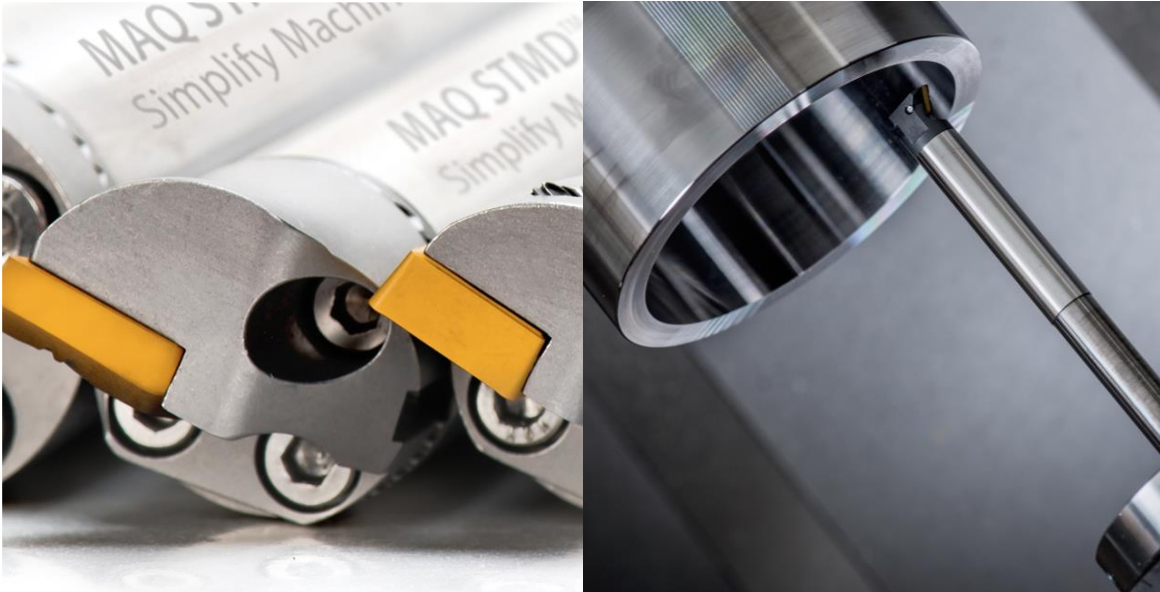


MAQ Catalog



MAQ AB
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Sweden

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All about plug and produce

SELF-TUNING

Remove vibration Adding simplicity, MAQ STMD™ Self-Tuning Mass Damper tools are easy to use and improve cutting tool performance out of the box: Plug & Produce. No Maintenance. No Tuning. Parts Manufacturers, Machine Tool Builders and Cutting Tool Manufacturers can simplify their machining with MAQ STMD and get these benefits. Vibration in machining usually means damaged parts and poor surface quality, potentially destroying cutting inserts and dramatically increasing production costs. MAQ provides a new method for mass dampening in the tool body to minimize movement and neutralize vibration.

Simplify Your Machining with MAQ STMD™

Absorbing vibrations is the Key Physics & Chemistry Working Together

Machining operations using high length to diameter (L/D) ratio tools have the most prominent vibration issues. MAQ provides vibration damped toolholders which has an invention to extract the vibration energy from the cutting tool body to control the machine tool vibration problem. The new approach has a Self-Tuning mass damper in the toolholder body, and it automatically adjust itself as vibration occurs. In mass damped tool holds the challenge is the change of vibration frequency on machining tools due to the cutting condition changes (tool wear, wearing joints, variation of workpiece materials, etc.). For these reasons, leading competitor's products in the market require the optimized tuning of the mass damper to ensure performance. The out of tuning condition could make the vibration problem even worse, instead of controlled. With MAQ Self-Tuning mass damper in the tool holders, the spring elements on the mass dampers automatically adjust its stiffness according to the machining tool's vibration frequency. The unique self-tuning property enables MAQ damped machining tools outperform the solutions on the market providing better surface finish and higher process reliability. MAQ damped machining tools boost the productivity through simplify machining, as you do not need any tuning, and it works at any set up you have in your production facility.

Remove vibration Adding simplicity

MAQ provides a new innovative technology that takes vibration technologies to this century. The new technology does not use liquid (Oil) inside and does not need any adjustment (tuning) during the operation. MAQ's new approach has a self-tuning mass damper in the toolholder body, and it automatically adjust itself as vibration occurs.

Where to use MAQ technology of self-tuning mass tools?

Aerospace manufacturing, Automotive manufacturing, Oil and gas manufacturing, Medical components manufacturing, Die and mold manufacturing, Power generation systems manufacturing and Wind power manufacturing.

How can you benefit using MAQ technology?

MAQ covers a larger L/D ratio range. When the competition needs 4 tools to cover from 4XD to 15XD, MAQ uses only 3 tools. MAQ turning tools will reduce your cycle time and tool cost investment. When tested in comparison, MAQ allows higher cutting speed and wider selection of feed rate and better surface finish. All this provides you with a productivity improvement when using MAQ self-tuning mass damper technology in Turning and Milling.

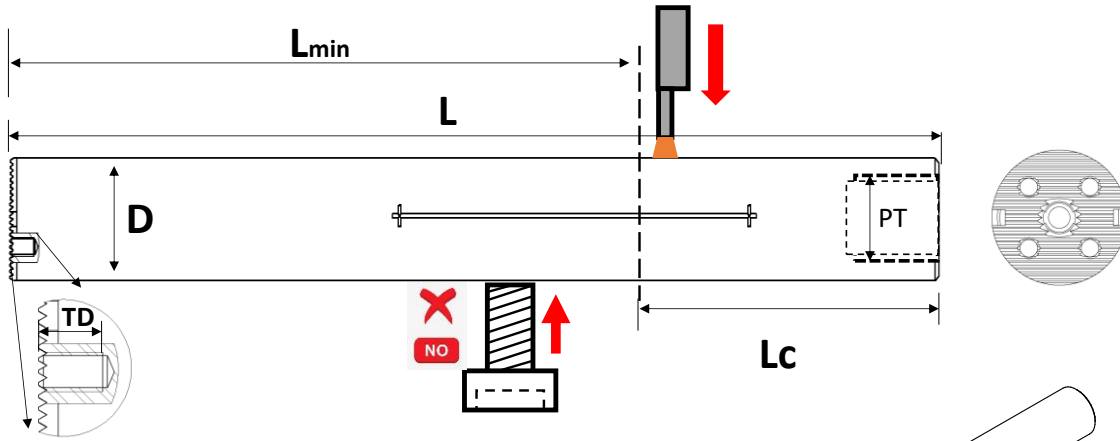
Qilin Fu
CTO @MAQ AB
www.maqab.com

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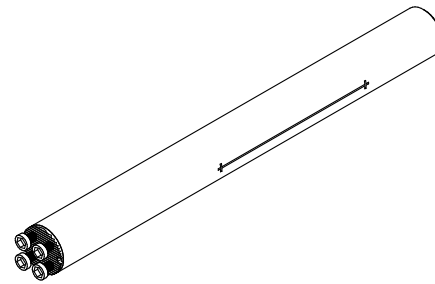
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Turning tools:

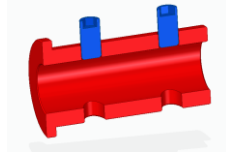
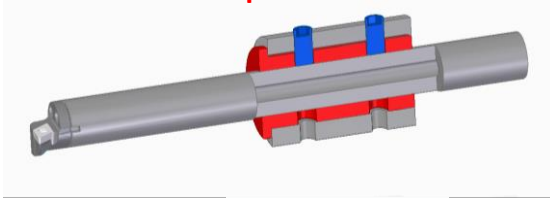
Straight holder (without clamping feature) with SL (Serration Lock) interface:



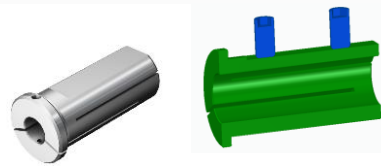
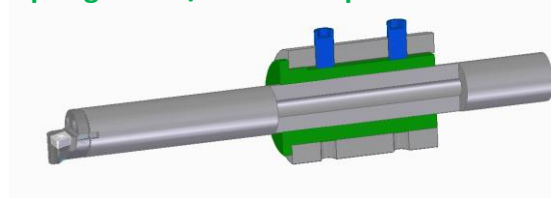
- L – total length
- L_{min} – minimum total length after cutting
- L_c – recommended clamping length
- D – diameter
- PT – pipe thread
- TD – thread depth




Direct screw clamp



Spring sleeve/collet clamp




Straight holder in mm with SL interface:

Standard: Metric (with exchangeable heads)										
Art. Nr	D (mm)	L (mm)	Lmin (mm)	Lc (mm)	Screws	TD (mm)	PT	Adapter	Material	
STMD™ M12-144	12	144	144	36	M2X8 or 14	5.5	NA	SL12	Carbide ⁵	0.18
STMD™ M16-170	16	170	117	48	M3X8	5.5	G ¼	SL16	Steel	0.25
STMD™ M16-204	16	204	204	48	M3X8	5.5	G 1/8 ¹	SL16	Carbide ⁵	0.50
STMD™ M16-268	16	268	268	48	M3X8	5.5	G 1/8 ¹	SL16	Carbide ⁵	0.75
STMD™ M20-200	20	200	137	60	M3X8	5.5	G ¼	SL20	Steel	0.50
STMD™ M20-260	20	260	260	60	M3X8	5.5	G ¼ ²	SL20	Carbide ⁵	1.00
STMD™ M20-340	20	340	340	60	M3X8	5.5	G ¼ ²	SL20	Carbide ⁵	1.50
STMD™ M25-255	25	255	180	75	M4X9	6.5	G ¼	SL25	Steel	1.10
STMD™ M25-330	25	330	255	75	M4X9	6.5	G ¼	SL25	Steel	1.70
STMD™ M25-430	25	430	430	75	M4X9	6.5	G ¼ ³	SL25	Carbide ⁵	3.20
STMD™ M32-320	32	320	213	96	M5X12	10	G ½	SL32	Steel	2.10
STMD™ M32-416	32	416	309	96	M5X12	10	G ½	SL32	Steel	3.50
STMD™ M32-544	32	544	544	96	M5X12	10	G ¼ ⁴	SL32	Carbide ⁵	6.40
STMD™ M40-408 1C	40	408	260	120	M6X14	10	G ½	SL40	Steel	3,90
STMD™ M40-408 3C	40	408	260	120	M6X14	10	G ½	SL40	Steel	3,90
STMD™ M40-528 1C	40	528	312	120	M6X14	10	G ½	SL40	Steel	5.00
STMD™ M40-528 3C	40	528	312	120	M6X14	10	G ½	SL40	Steel	5.00
STMD™ M50-518-40	50	520	324	150	M6X14	10	G ¾	SL40	Steel	8,00
STMD™ M50-518-50	50	518	322	150	M8X14	12	G ¾	SL50	Steel	8,00
STMD™ M50-660-40	50	662	384	150	M6X14	10	G ¾	SL40	Steel	9.40
STMD™ M50-660-50	50	660	382	150	M8X14	12	G ¾	SL50	Steel	9.40
STMD™ M60-628-40	60	630	424	180	M6X14	10	G ¾	SL40	Steel	13.6
STMD™ M60-628-60	60	628	422	180	M8X14	12	G ¾	SL60	Steel	13.6
STMD™ M60-808-40	60	810	484	180	M6X14	10	G ¾	SL40	Steel	16,4
STMD™ M60-808-60	60	808	482	180	M8X14	12	G ¾	SL60	Steel	16,4

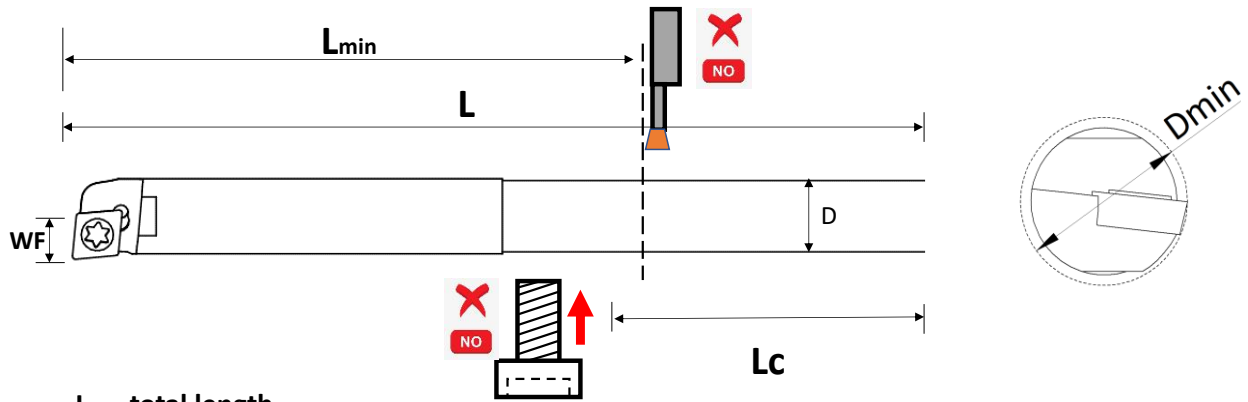
Delivery time: 2-3 days, all tools delivered with three clamping screws and an Allen wrench.
G ¼¹ – with a coolant adapter M12x1- G ⅛,
G ¼² – with a coolant adapter M16x1- G ¼,
G ¼³ – with a coolant adapter M20x1- G ¼
Carbide⁴ – Carbide back end joined with steel

Straight holder in inch with SL interface:

Standard: Inch (with exchangeable heads)										
Art. Nr	D (inch)	L (inch)	Lmin (inch)	Lc (inch)	Screws	PT	TD (mm)	Adapter	Material	
STMD I 1/2-5.7	0.50	5.7	5.7	1.41	M2X8 or 14	NA	5.5	SL12	Carbide ⁴	0.10
STMD I 5/8-6.7	0.625	6.7	4.6	1.88	M3X8	G ¼	5.5	SL16	Steel	0.25
STMD I 5/8-8.0	0.625	8.0	8.0	1.88	M3X8	G ⅙ ¹	5.5	SL16	Carbide ⁴	0.50
STMD I 5/8-10.6	0.625	10.6	10.6	1.88	M3X8	G ⅙ ¹	5.5	SL16	Carbide ⁴	0.75
STMD I 3/4-7.9	0.75	7.9	5.4	2.25	M3X8	G ¼	5.5	SL20	Steel	0.50
STMD I 3/4-10.3	0.75	10.2	10.2	2.25	M3X8	G ¼ ²	5.5	SL20	Carbide ⁴	1.00
STMD I 3/4-13.4	0.75	13.4	13.4	2.25	M3X8	G ¼ ²	5.5	SL20	Carbide ⁴	1.50
STMD I 1-10	1.00	10.0	7.1	3.00	M4X9	G ¼	6.5	SL25	Steel	1.10
STMD I 1-13	1.00	13.0	8.1	3.00	M4X9	G ¼	6.5	SL25	Steel	1.70
STMD I 1-16.9	1.00	16.9	16.9	3.00	M4X9	G ¼ ³	6.5	SL25	Carbide ⁴	3.20
STMD I 1 1/4-12.6	1.25	12.6	8.4	3.75	M5X12	G ½	10	SL32	Steel	2.10
STMD I 1 1/4-16.4	1.25	16.4	12.2	3.75	M5X14	G ½	10	SL32	Steel	3.50
STMD I 1 1/4-21.4	1.25	21.4	21.4	3.75	M5X14	G ¼ ⁴	10	SL32	Carbide ⁵	6.40
STMD I 1 1/2-16.0-1C	1.50	16.0	10.2	4,72	M6X14	G ½	10	SL40	Steel	3.90
STMD I 1 1/2-16.0-3C	1.50	16.0	10.2	4,72	M6X14	G ½	10	SL40	Steel	3.90
STMD I 1 1/2-20.8-1C	1.50	20.8	12.3	4,72	M6X14	G ½	10	SL40	Steel	5.00
STMD I 1 1/2-20.8-3C	1.50	20.8	12.3	4,72	M6X14	G ½	10	SL40	Steel	5.00
STMD I 2-20.4-SL40	2.00	20.4	12.7	5.90	M6X14	G ¾	10	SL40	Steel	8.00
STMD I 2-20.4-SL50	2.00	20.4	12.7	5.90	M8X14	G ¾	10	SL50	Steel	8.00
STMD I 2-26.0-SL40	2.00	26.0	15.0	5.90	M6X14	G ¾	10	SL40	Steel	9.40
STMD I 2-26.0-SL50	2.00	26.0	15.0	5.90	M8X14	G ¾	10	SL50	Steel	9.40
STMD I 2 1/2-24.7-SL40	2.50	24.7	16.7	7.10	M6X14	G ¾	12	SL40	Steel	13.60
STMD I 2 1/2-24.7-SL60	2.50	24.7	16.7	7.10	M8X14	G ¾	10	SL60	Steel	13.60
STMD I 2 1/2-31.8-SL40	2.50	31.8	19.1	7.10	M6X14	G ¾	12	SL40	Steel	16.40
STMD I 2 1/2-31.8-SL60	2.50	31.8	19.1	7.10	M8X14	G ¾	10	SL60	Steel	16.40

Delivery time: 2-3 days, all tools delivered with three clamping screws and an Allen wrench.
 G ⅙¹ – with a coolant adapter M12x1- G ⅙
 G ¼² – with a coolant adapter M16x1- G ¼
 G ¼³ – with a coolant adapter M20x1- G ¼
 Carbide⁴ – Carbide back end joined with steel

Straight holder with cutter heads 10xD (Metric):



- L** – total length
- L_{min}** – minimum total length after cutting
- L_c** – recommended clamping length
- D** – diameter
- WF** – distance from cutting point to centre with master insert

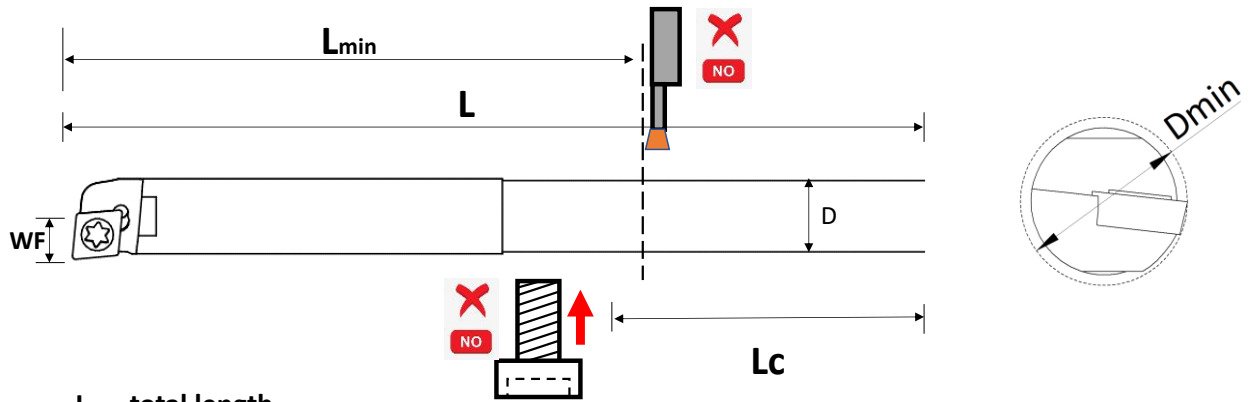
Art. Nr	D (mm)	L (mm)	Workable length ³ (mm)	L _{min} (mm)	L _c (mm)	WF (mm)	Coolant	DMIN1 (mm)	Master insert	Insert screw	Material	KG
STMD M10-150 SDUCR	10	160 ¹	70-110	160	30	9	No	15	DCMT 070204	IS M2.5x6.0	Carbide ²	0.20
STMD M10-150 SCLCR	10	160 ¹	70-110	160	30	6,1	No	12	CCMT 060204	IS M2.5x6.0	Carbide ²	0.20
STMD M10-150 STFCR	10	160 ¹	70-110	160	30	6,8	No	13	TCMT 090204	IS M2.2x5.0	Carbide ²	0.20
STMD M12-180 SDUCR	12	192 ¹	84-132	192	36	8,9	Yes	16	DCMT 070204	IS M2.5x6.0	Carbide ²	0.30
STMD M12-180 SCLCR	12	192 ¹	84-132	192	36	8,5	Yes	16	CCMT 060204	IS M2.5x6.0	Carbide ²	0.30
STMD M12-180 STFCR	12	192 ¹	84-132	192	36	9	Yes	16	TCMT 090204	IS M2.2x5.0	Carbide ²	0.30

160¹, 192¹ – total length to the cutting point

Carbide² – Carbide back end joined with steel

Workable length³ – measured from the cutting edge to the clamping end.

Straight holder with cutter heads 10xD (Inch):



L – total length

L_{min} – minimum total length after cutting

L_c – recommended clamping length

D – diameter

WF – distance from cutting point to centre with master insert

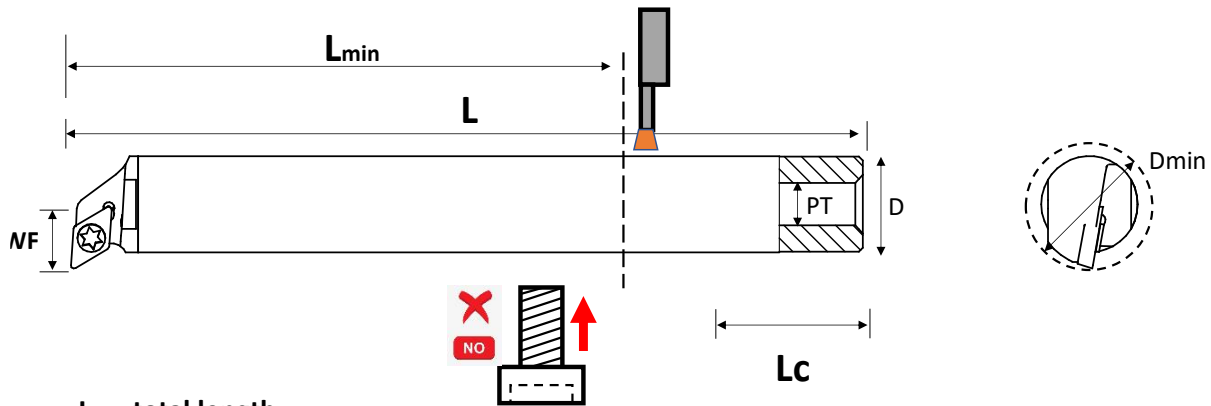
Art. Nr	D (inch)	L (inch)	Workable length ³ (inch)	L _{min} (inch)	L _c (inch)	WF (inch)	Coolant	DMIN1 (mm)	Master insert	Insert screw	Material	KG
STMD I 3/8-5.9 SDUCR	3/8	5.9 ¹	2.625-4.125	5.9 ¹	1.18	0.35	No	0.59	DCMT 070204	IS M2.5x6.0	Carbide ²	0.20
STMD I 3/8-5.9 SLCR	3/8	5.9 ¹	2.625-4.125	5.9 ¹	1.18	0.24	No	0.47	CCMT 060204	IS M2.5x6.0	Carbide ²	0.20
STMD I 3/8-5.9 STFCR	3/8	5.9 ¹	2.625-4.125	5.9 ¹	1.18	0.27	No	0.51	TCMT 090204	IS M2.2x5.0	Carbide ²	0.20
STMD I ½ -7.1 SDUCR	½	7.1 ¹	3.500-5.500	7.1 ¹	1.42	0.35	Yes	0.63	DCMT 070204	IS M2.5x6.0	Carbide ²	0.30
STMD I ½ -7.1 SLCR	½	7.1 ¹	3.500-5.500	7.1 ¹	1.42	0.33	Yes	0.63	CCMT 060204	IS M2.5x6.0	Carbide ²	0.30
STMD I ½ -7.1 STFCR	½	7.1 ¹	3.500-5.500	7.1 ¹	1.42	0.35	Yes	0.63	TCMT 090204	IS M2.2x5.0	Carbide ²	0.30

5.9¹, 7.1¹ – total length to the cutting point

Carbide² – Carbide back end joined with steel

Workable length³ – measured from the cutting edge to the clamping end.

Straight holder with cutter heads 3-6xD (Metric):



L – total length


L_{min} – minimum total length after cutting

L_c – recommended clamping length

D – diameter

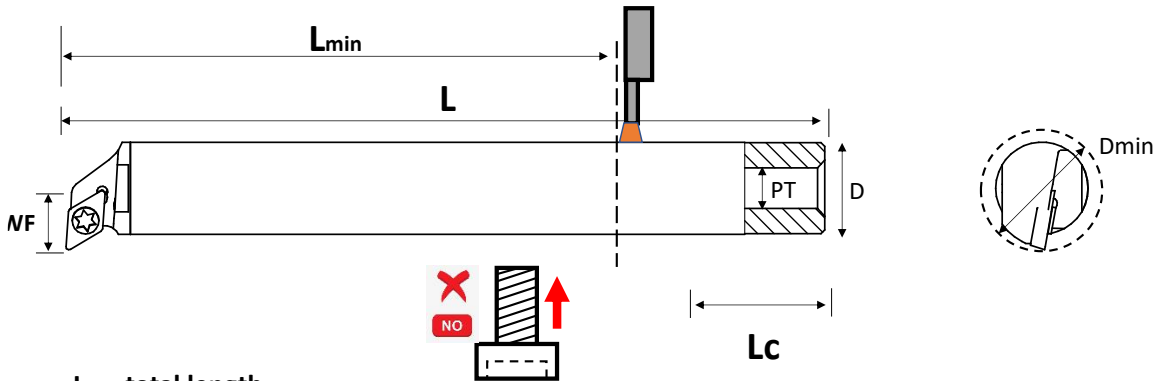
WF – distance from cutting point to centre with master insert

PT – coolant inlet

Art. Nr	D (mm)	L (mm)	Workable length ¹ (mm)	L _{min} (mm)	L _c (mm)	WF (mm)	Coolant	DMIN1 (mm)	Master insert	Insert screw	PTI	
STMD M12-108 SDUCR	12	120	36-72	72	36	9	Yes	16	DCMT 070204	IS M2.5x6.0	NA	0.1 kg
STMD M16-138 SDUCR	16	149	48-96	96	48	11	Yes	20	DCMT 070204	IS M2.5x6.0	G ¼	0.2 kg
STMD M20-160 SDUCR	20	174	60-120	120	60	13	Yes	25	DCMT 11T304	IS M3.5x10.0	G ¼	0.4 kg
STMD M25-205 SDUCR	25	205	75-150	155	75	17	Yes	32	DCMT 11T304	IS M3.5x10.0	G ¼	0.6 kg
STMD M32-256 SDUCR	32	277	128-192	192	96	22	Yes	40	DCMT 11T304	IS M3.5x10.0	G ½	1.2 kg
STMD M40-320 SDUCR	32	343	160-240	240	120	27	Yes	50	DCMT 11T304	IS M3.5x10.0	G ½	2.4 kg
STMD M12-108 SCLCR	12	120	36-72	72	36	8,5	Yes	16	CCMT 060204	IS M2.5x6.0	NA	0.1 kg
STMD M16-138 SCLCR	16	149	48-96	96	48	11	Yes	20	CCMT 060204	IS M2.5x6.0	G ¼	0.2 kg
STMD M20-160 SCLCR	20	174	60-120	120	60	13	Yes	25	CCMT 09T304	IS M3.5x10.0	G ¼	0.4 kg
STMD M25-205 SCLCR	25	205	75-150	155	75	17	Yes	32	CCMT 09T304	IS M3.5x10.0	G ¼	0.6 kg
STMD M32-256 SCLCR	32	277	128-192	192	96	22	Yes	40	CCMT 09T304	IS M3.5x10.0	G ½	1.2 kg
STMD M40-320 SCLCR	32	343	160-240	240	120	27	Yes	50	CCMT 09T304	IS M3.5x10.0	G ½	2.4 kg
STMD M12-108 STFCR	12	120	36-72	72	36	9	Yes	16	TCMT 090204	IS M2.2x5.0	NA	0.1 kg
STMD M16-138 STFCR	16	149	48-96	96	48	11	Yes	20	TCMT 090204	IS M2.2x5.0	G ¼	0.2 kg
STMD M20-160 STFCR	20	174	60-120	120	60	13	Yes	25	TCMT 110304	IS M2.5x8.0	G ¼	0.4 kg
STMD M25-205 STFCR	25	205	75-150	155	75	17	Yes	32	TCMT 110304	IS M2.5x8.0	G ¼	0.6 kg
STMD M32-256 STFCR	32	277	128-192	192	96	22	Yes	40	TCMT 16T304	IS M3.5x10.0	G ½	1.2 kg
STMD M40-320 STFCR	32	343	160-240	240	120	27	Yes	50	TCMT 16T 304	IS M3.5x10.0	G ½	2.4 kg

Workable length¹ – measured from the cutting edge to the clamping end.

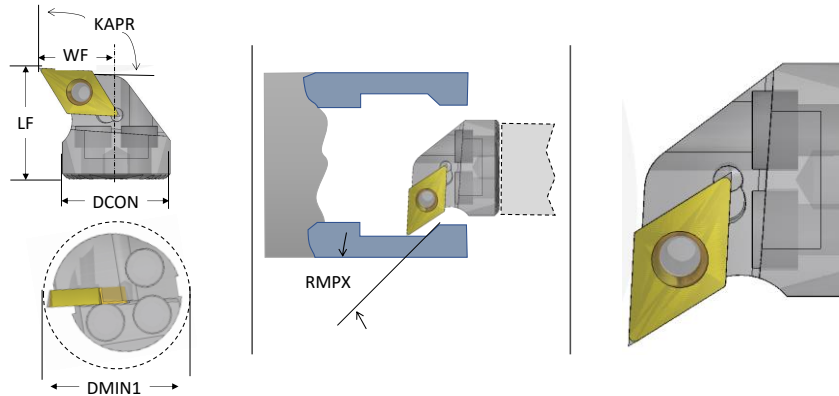
Straight holder with cutter heads 3-6xD (Inch):



- L** – total length
- L_{min}** – minimum total length after cutting
- L_c** – recommended clamping length
- D** – diameter
- WF** – distance from cutting point to centre with master insert
- PT** – coolant inlet

Art. Nr	D (inch)	L (inch)	Workable length ¹ (mm)	Lmin (inch)	Lc (inch)	WF (inch)	Coolant	DMIN1 (inch)	Master insert	Insert screw	PTI	KG
STMD i ½ -4.3 SDUCR	½	4.7	1.500-3.000	2.8	1.4	0.35	Yes	0.63	DCMT 070204	IS M2.5x6.0	NA	0.1 kg
STMD i 5/8 – 5.4 SDUCR	5/8	5.9	1.875-3.750	3.8	1.9	0.43	Yes	0.78	DCMT 070204	IS M2.5x6.0	G ¼	0.2 kg
STMD i ¾ - 6.3 SDUCR	¾	6.8	2.250-4.500	4.7	2.4	0.51	Yes	0.98	DCMT 11T304	IS M3.5x10.0	G ¼	0.4 kg
STMD i 1-8.1 SDUCR	1	8.1	3.000-6.000	6.1	2.9	0.67	Yes	1.26	DCMT 11T304	IS M3.5x10.0	G ¼	0.6 kg
STMD i 1 ¼ -10.1 SDUCR	1 ¼	10.9	3.750-7.500	7.6	3.8	0.86	Yes	1.57	DCMT 11T304	IS M3.5x10.0	G ½	1.2 kg
STMD i 1 ½-12.6 SDUCR	1 ½	13.5	4.500-9.000	9.4	4.7	1.06	Yes	1.96	DCMT 11T304	IS M3.5x10.0	G ½	2.4 kg
STMD i ½ -4.3 SCLCR	½	4.7	1.500-3.000	2.8	1.4	0.33	Yes	0.63	CCMT 060204	IS M2.5x6.0	NA	0.1 kg
STMD i 5/8 – 5.4 SCLCR	5/8	5.9	1.875-3.750	3.8	1.9	0.43	Yes	0.78	CCMT 060204	IS M2.5x6.0	G ¼	0.2 kg
STMD i ¾ - 6.3 SCLCR	¾	6.8	2.250-4.500	4.7	2.4	0.51	Yes	0.98	CCMT 09T304	IS M3.5x10.0	G ¼	0.4 kg
STMD i 1-8.1 SCLCR	1	8.1	3.000-6.000	6.1	2.9	0.67	Yes	1.26	CCMT 09T304	IS M3.5x10.0	G ¼	0.6 kg
STMD i 1 ¼ -10.1 SCLCR	1 ¼	10.9	3.750-7.500	7.6	3.8	0.86	Yes	1.57	CCMT 09T304	IS M3.5x10.0	G ½	1.2 kg
STMD i 1 ½-12.6 SCLCR	1 ½	13.5	4.500-9.000	9.4	4.7	1.06	Yes	1.96	CCMT 09T304	IS M3.5x10.0	G ½	2.4 kg
STMD i ½ -4.3 STFCR	½	4.7	1.500-3.000	2.8	1.4	0.35	Yes	0.63	CCMT 060204	IS M2.2x5.0	NA	0.1 kg
STMD i 5/8 – 5.4 STFCR	5/8	5.9	1.875-3.750	3.8	1.9	0.43	Yes	0.78	TCMT 090204	IS M2.2x5.0	G ¼	0.2 kg
STMD i ¾ - 6.3 STFCR	¾	6.8	2.250-4.500	4.7	2.4	0.51	Yes	0.98	TCMT 110304	IS M2.5x8.0	G ¼	0.4 kg
STMD i 1-8.1 STFCR	1	8.1	3.000-6.000	6.1	2.9	0.67	Yes	1.26	TCMT 110304	IS M2.5x8.0	G ¼	0.6 kg
STMD i 1 ¼ -10.1 STFCR	1 ¼	10.9	3.750-7.500	7.6	3.8	0.86	Yes	1.57	TCMT 16T304	IS M3.5x10.0	G ½	1.2 kg
STMD i 1 ½-12.6 STFCR	1 ½	13.5	4.500-9.000	9.4	4.7	1.06	Yes	1.96	TCMT 16T 304	IS M3.5x10.0	G ½	2.4 kg

Workable length³ – measured from the cutting edge to the clamping end.



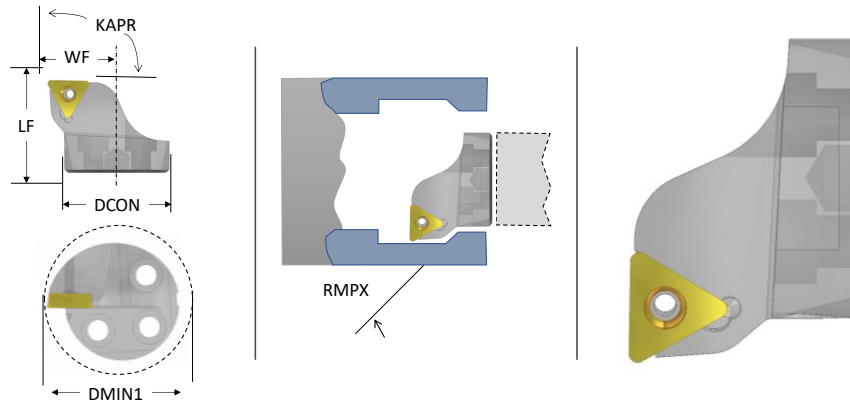
Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Master insert	Insert screw	KG
SDUCL-12	SL 12	16	14	9	93	27	DCMT 070204	IS M2.5x8.0	0.01
SDUCR-12	SL 12	16	14	9	93	27	DCMT 070204	IS M2.5x8.0	0.01
SDUCL-16-5/8	SL 16	20	16	11	93	27	DCMT 070204	IS M2.5x8.0	0.01
SDUCR-16-5/8	SL 16	20	16	11	93	27	DCMT 070204	IS M2.5x8.0	0.01
SDUCL-20-3/4	SL 20	25	20	13	93	27	DCMT 11T304	IS M3.5x10.0	0.02
SDUCR-20-3/4	SL 20	25	20	13	93	27	DCMT 11T304	IS M3.5x10.0	0.02
SDUCL-25-1	SL 25	32	22	17	93	27	DCMT 11T304	IS M3.5x10.0	0.04
SDUCR-25-1	SL 25	32	22	17	93	27	DCMT 11T304	IS M3.5x10.0	0.04
SDUCL-32-1 1/4	SL 32	40	27	22	93	27	DCMT 11T304	IS M3.5x10.0	0.07
SDUCR-32-1 1/4	SL 32	40	27	22	93	27	DCMT 11T304	IS M3.5x10.0	0.07
SDUCR-40-1 ½ P¹	SL 40	50	32	27	93	27	DCMT 11T304	IS M3.5x10.0	0,14
SDUCL-40-1 ½ CP²	SL 40	50	32	27	93	27	DCMT 11T304	IS M3.5x10.0	0,14
SDUCR-40-1 ½ CP²	SL 40	50	32	27	93	27	DCMT 11T304	IS M3.5x10.0	0,14

All cutter heads are delivered with the insert clamp screw.

¹ Peripheral coolant only, works for SL40 connection with 3C

² Central and Peripheral coolant exits, works with SL40 connection with both 1C and 3C

End effectors for SL adapters STFCL, STFCL:



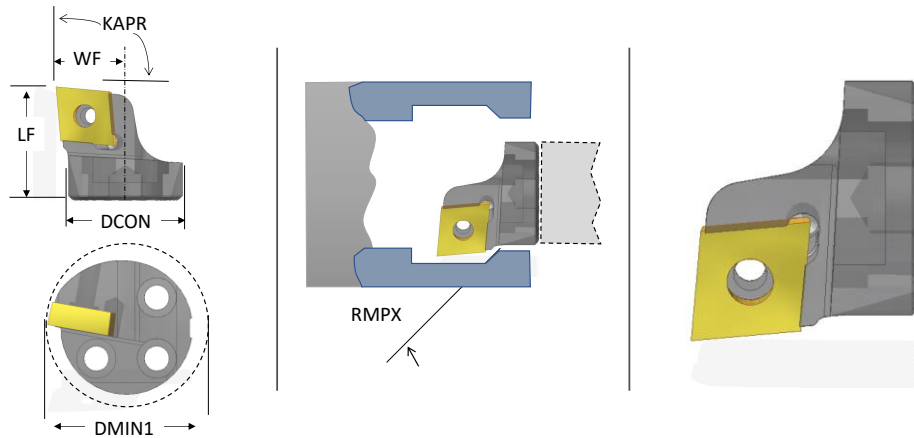
Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Master insert	Insert screw	KG
STFCL-12	SL 12	16	14	9	91	NA	TCMT 090204	IS M2.2x5.0	0.01
STFCR-12	SL 12	16	14	9	91	NA	TCMT 090204	IS M2.2x5.0	0.01
STFCL-16-5/8	SL 16	20	16	11	91	NA	TCMT 090204	IS M2.2x5.0	0.01
STFCR-16-5/8	SL 16	20	16	11	91	NA	TCMT 090204	IS M2.2x5.0	0.01
STFCL-20-3/4	SL 20	25	20	13	91	NA	TCMT 110304	IS M2.5x8.0	0.02
STFCR-20-3/4	SL 20	25	20	13	91	NA	TCMT 110304	IS M2.5x8.0	0.02
STFCL-25-1	SL 25	32	22	17	91	NA	TCMT 110304	IS M2.5x8.0	0.04
STFCR-25-1	SL 25	32	22	17	91	NA	TCMT 110304	IS M2.5x8.0	0.04
STFCL-32-1 1/4	SL 32	40	27	22	91	NA	TCMT 16T304	IS M3.5x10.0	0.07
STFCR-32-1 1/4	SL 32	40	27	22	91	NA	TCMT 16T304	IS M3.5x10.0	0.07
STFCR-40-1 1/2 P ¹	SL 40	50	32	27	91	NA	TCMT 16T304	IS M3.5x10.0	0,14
STFCL-40-1 1/2 CP ²	SL 40	50	32	27	91	NA	TCMT 16T304	IS M3.5x10.0	0,14
STFCR-40-1 1/2 CP ²	SL 40	50	32	27	91	NA	TCMT 16T304	IS M3.5x10.0	0,14

All cutter heads are delivered with the insert clamp screw.

¹ Peripheral coolant only, works for SL40 connection with 3C

² Central and Peripheral coolant exits, works with SL40 connection with both 1C and 3C

End effectors for SL adapters SCLCR, SCLCL:



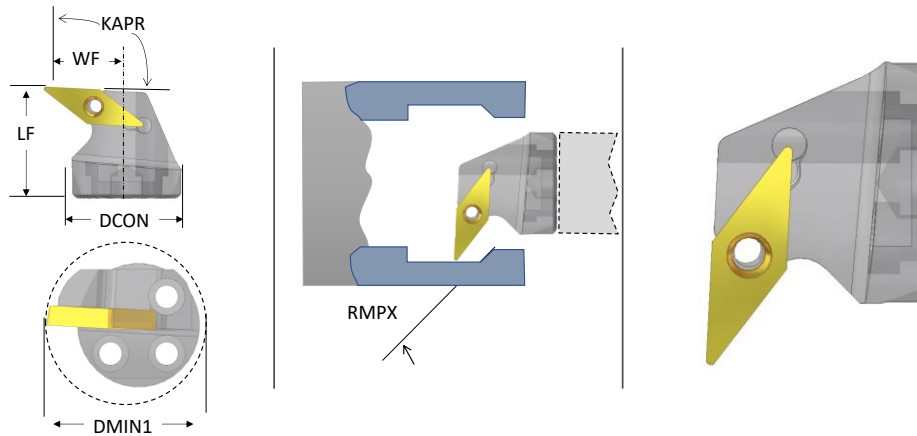
Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMP X (°)	Master Insert	Insert screw	KG
SCLCL-12	SL 12	16	14.4	10	95	NA	CCMT 060204	IS M2.5x6.0	0.01
SCLCR-12	SL 12	16	14.4	10	95	NA	CCMT 060204	IS M2.5x6.0	0.01
SCLCL-16-5/8	SL 16	20	15.4	11	95	NA	CCMT 060204	IS M2.5x6.0	0.01
SCLCR-16-5/8	SL 16	20	15.4	11	95	NA	CCMT 060204	IS M2.5x6.0	0.01
SCLCL-20-3/4	SL 20	25	19.1	13	95	NA	CCMT 09T304	IS M3.5x10.0	0.02
SCLCR-20-3/4	SL 20	25	19.1	13	95	NA	CCMT 09T304	IS M3.5x10.0	0.02
SCLCL-25-1	SL 25	32	21.1	17	95	NA	CCMT 09T304	IS M3.5x10.0	0.04
SCLCR-25-1	SL 25	32	21.1	17	95	NA	CCMT 09T304	IS M3.5x10.0	0.04
SCLCL-32-1 ¼	SL 32	40	24.1	22	95	NA	CCMT 09T304	IS M3.5x10.0	0.07
SCLCR-32-1 ¼	SL 32	40	24.1	22	95	NA	CCMT 09T304	IS M3.5x10.0	0.07
SCLCR-40-1 ½ P¹	SL 40	50	25.1	27	95	NA	CCMT 09T304	IS M3.5x10.0	0.14
SCLCL-40-1 ½ CP¹	SL 40	50	25.1	27	95	NA	CCMT 120404	IS M4.0x15.0	0.14
SCLCR-40-1 ½ CP²	SL 40	50	25.1	27	95	NA	CCMT 120404	IS M4.0x15.0	0.14

All cutter heads are delivered with the insert clamp screw.

¹ Peripheral coolant only, works for SL40 connection with 3C

² Central and Peripheral coolant exits, works with SL40 connection with both 1C and 3C

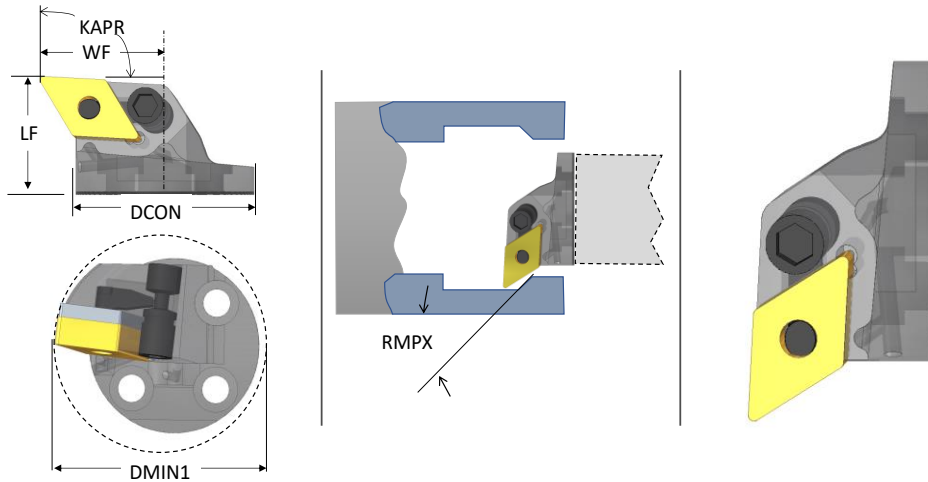
End effectors for SL adapters SVUCR, SVUCL:



Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Master Insert	Insert screw	
SVUCL-20-3/4	SL 20	27	20.5	15	93	45	VCMT 110304	IS M2.5x8.0	0.02
SVUCR-20-3/4	SL 20	27	20.5	15	93	45	VCMT 110304	IS M2.5x8.0	0.02
SVUCL-25-1	SL 25	33	20.5	18	93	45	VCMT 110304	IS M2.5x8.0	0.04
SVUCR-25-1	SL 25	33	20.5	18	93	45	VCMT 110304	IS M2.5x8.0	0.04

All cutter heads are delivered with the insert clamp screw.

End effectors for SL adapters PDUNR:

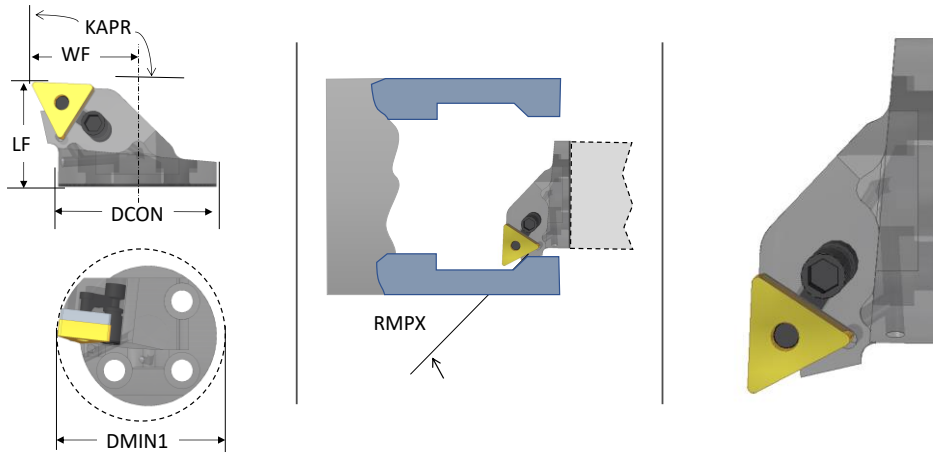


Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Insert	Slot screw	Level	Shim	
PDUNR 40-1 ½ CP¹	SL 40	50	26	27	93	27	DNMG 1506XX	M8x1x21	LV4	PS DNMG 1506	0.14

All cutter heads are delivered with the insert clamp screw.

¹ Central and Peripheral coolant exits, works with SL40 connection with both 1C and 3C

End effectors for SL adapters PTFNR:

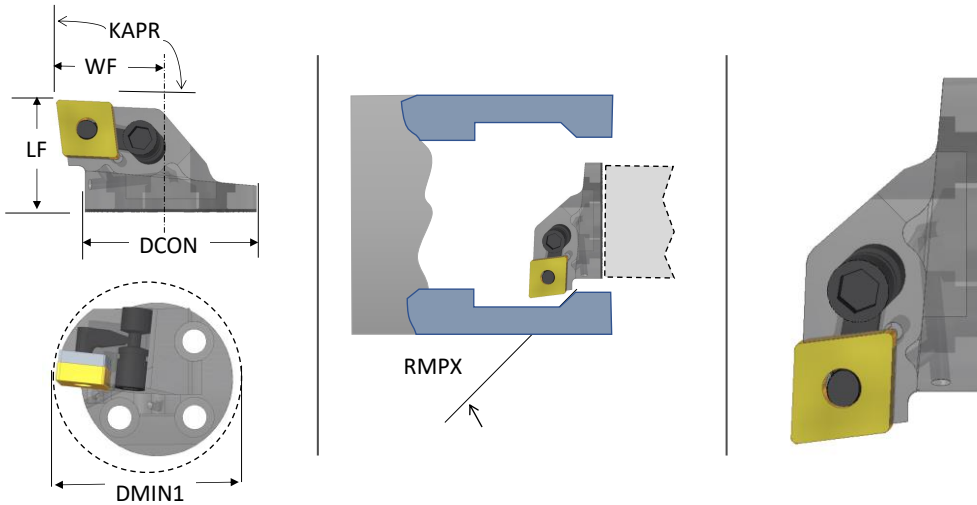


Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Insert	Slot screw	Level	Shim	KG
PTFNR 40-1 ½ CP ¹	SL 40	50	26	27	91	NA	TNMG 1604XX	M6x1x17	LV3	PS TNMG 1604	0.14

All cutter heads are delivered with the insert clamp screw.

¹ Central and Peripheral coolant exits, works with SL40 connection with both 1C and 3C

End effectors for SL adapters PCLNR:

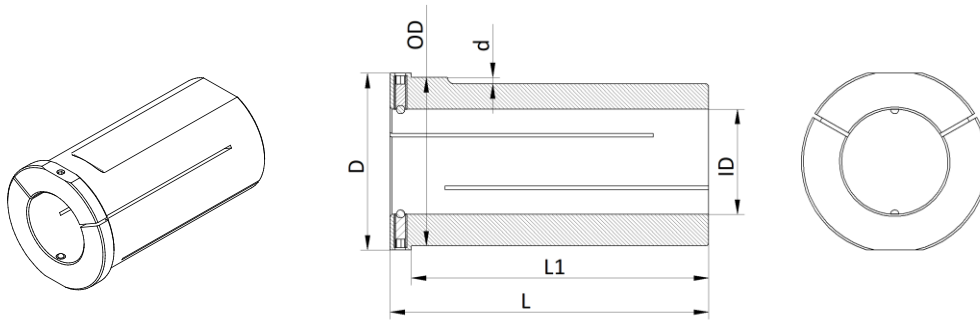


Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Insert	Slot screw	Level	Shim	KG
PCLNR 40-1 ½ CP ¹	SL 40	50	26	27	95	NA	CNMG 1204XX	M8x1x21	LV4	PS CNMG 1204	0.14

All cutter heads are delivered with the insert clamp screw.

¹ Central and Peripheral coolant exits, works with SL40 connection with both 1C and 3C

Reduction sleeves (Metric)



Art. Nr	OD g6 (mm)	ID H7 (mm)	L (mm)	D (mm)	L1 (mm)	d (mm)
RS 40-32	40	32	75	43	70	1.5
RS 40-25	40	25	75	42	70	1.5
RS 40-20	40	20	75	42	70	1.5
RS 40-16	40	16	75	42	70	1.5
RS 40-12	40	12	75	42	70	1.5
RS 40-10	40	10	75	42	70	1.5
RS 32-25	32	25	65	37	60	1
RS 32-20	32	20	65	37	60	1
RS 32-16	32	16	65	37	60	1
RS 32-12	32	12	65	37	60	1
RS 32-10	32	10	65	37	60	1

Reduction sleeves (Inch)

Art. Nr	OD g6 (inch)	ID H7 (inch)	L (inch)	D (inch)	L1 (inch)	d (inch)
RS 1 ½ - 1 ¼ ¹	1 ½	1 ¼	2.95	1.69	2.76	0.06
RS 1 ½ - 1 ¹	1 ½	1	2.95	1.65	2.76	0.06
RS 1 ½ - ¾ ¹	1 ½	¾	2.95	1.65	2.76	0.06
RS 1 ½ - 5/8 ¹	1 ½	5/8	2.95	1.65	2.76	0.06
RS 1 ½ - ½ ¹	1 ½	½	2.95	1.65	2.76	0.06
RS 1 ½ - 3/8 ¹	1 ½	3/8	2.95	1.65	2.76	0.06
RS 1 ¼ - 1 ¹	1 ¼	1	2.56	1.46	2.36	0.04
RS 1 ¼ - ¾ ¹	1 ¼	¾	2.56	1.46	2.36	0.04
RS 1 ¼ - 5/8 ¹	1 ¼	5/8	2.56	1.46	2.36	0.04
RS 1 ¼ - ½ ¹	1 ¼	½	2.56	1.46	2.36	0.04
RS 1 ¼ - 3/8 ¹	1 ¼	3/8	2.56	1.46	2.36	0.04

Digital protractor (angle inclinometer)



Art. Nr	Width (mm)	Length (mm)	Height (mm)	Weight (g)	Battery	Lightning
IP54/65 protractor*	26	57	55	85	AA, 2 pcs	Yes

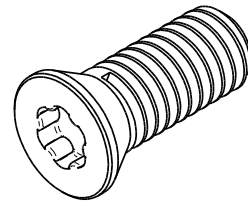
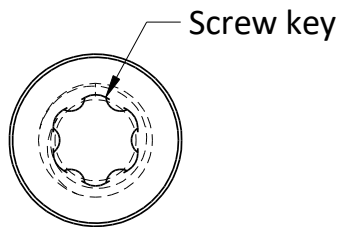
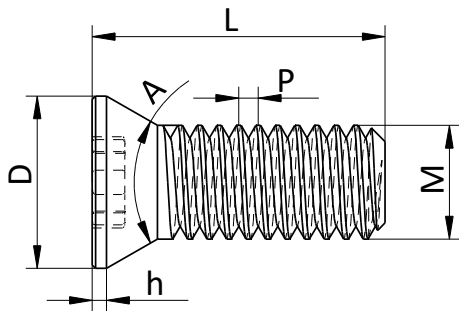
* Depending on the stock situation, the shipped product is either IP54 or IP65.

* Delivered with a magnet with power of 4.8 kg for easier alignment of machining tools.

* Delivered without batteries

Screws and accessories

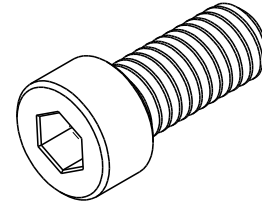
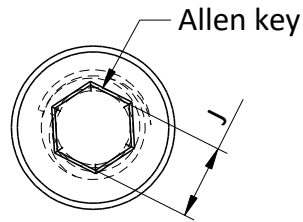
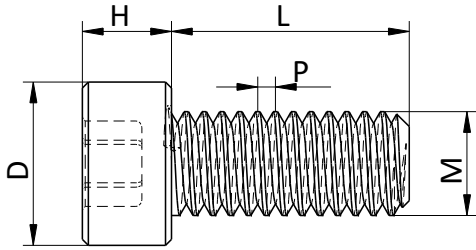
Insert screws



Art. Nr	Designation	Thread M	D (mm)	L (mm)	A (°)	P (mm)	h (mm)	Torx Key
IS M2.2x5.0	M2.2x5.0xD3.0xP0.45	M2.2	3.0	5.0	60	0.45	0.8	T7
IS M2.5x6.0	M2.5x6.0xD3.6xP0.45	M2.5	3.6	6.0	55	0.45	0.6	T8
IS M2.5x8.0	M2.5x8.0xD3.6xP0.45	M2.5	3.6	8.0	55	0.45	0.6	T8
IS M3.5x10.0	M3.5x10.0xD5.3xP0.60	M3.5	5.3	10.0	60	0.60	1.2	T15
IS M4.0x15.0	M4.0x15.0xD7.0xP0.70	M4.0	7.0	15.0	60	0.70	NA	T15

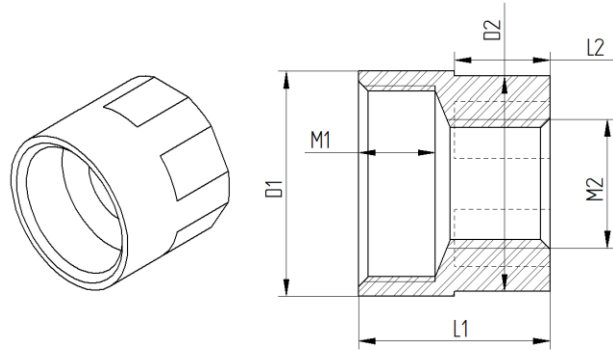
Cutter head screws

Standard: DIN 912



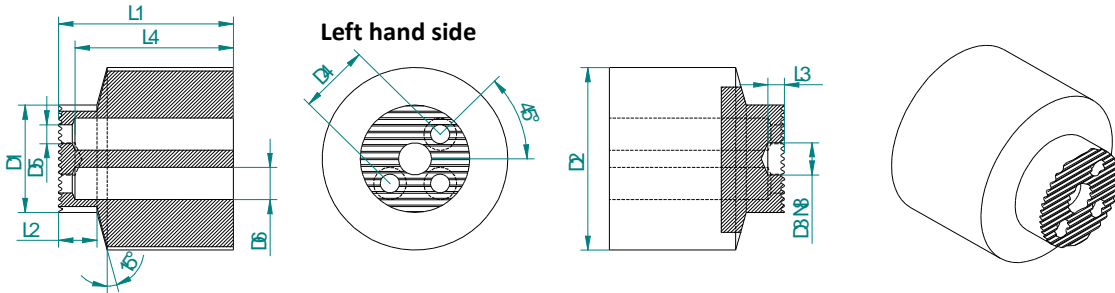
Art. Nr	Thread M	D (mm)	L (mm)	H (mm)	P (mm)	Key (mm)	Suitable for
HS M2x8	M2	3.8	8	2	0.4	Allen key A/F 1.5	SL12
HS M2x14	M2	3.8	14	2	0.4	Allen key A/F 1.5	SL12
HS M3x8	M3	5.5	8	3	0.5	Allen key A/F 2.5	SL16, SL20
HS M4x9	M4	7	9	4	0.7	Allen key A/F 3	SL25
HS M5x12	M5	8.5	12	5	0.8	Allen key A/F 4	SL32
HS M6x14	M6	10	14	6	1	Allen key A/F 5	SL40
HS M8x14	M8	13	14	8	1.25	Allen key A/F 6	SL50, SL50

Coolant adapters for carbide bars



Art. Nr	M1	M2	L1	L2	D1	D2	Works for
CA M12x1 G ½	M12x1	G ½	16	8	14	13	STMD M16-204, STMD M16-268 STMD™ I 5/8-8.0, STMD™ I 5/8-10.6
CA M16x1 G ¾	M16x1	G ¾	20	10	18	16	STMD M20-260, STMD M20-340 STMD™ I 3/4-10.3, STMD™ I 3/4-13.4
CA M20x1 G 1	M20x1	G 1	20	10	23	22	STM M25-340, STMD™ I 1-16.9
CA M24x1 G 1 ¼	M24x1	G 1 ¼	30	15	30	28	STMD M32-544

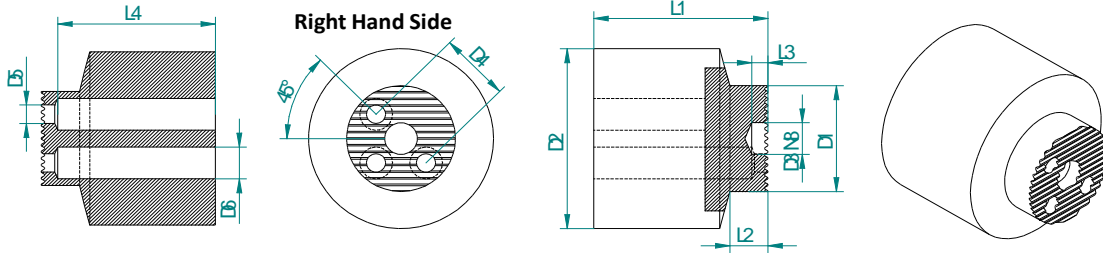
SL Blanks Left Hand Side:



Art. Nr	D1 (mm)	D2 (mm)	D3 N8** (mm)	D4 (mm)	D5 (mm)	D6 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)
SL12-20-20 L	12	20	4	7.4	2.5	4	20	7	3	17
SL16-26-25 L	16	26	4	9.5	3.5	6	25	7	3	22
SL20-34-32 L	20	34	6	13	3.5	6	32	7	3	29
SL25-40-40 L	25	40	6	16	4.5	7.5	40	7	3	37
SL32-50-50 L	32	50	6	22	5.5	9	50	11	3	47
SL40-60-60 L	40	60	6	28	6.5	10.5	60	11	3	57
SL50-70-70 L	50	70	8	35	8.5	13.5	70	11	4	67

** : all SL blank parts will be supplied with a centering pin equivalenting the dimension

SL Blanks Right Hand Side:

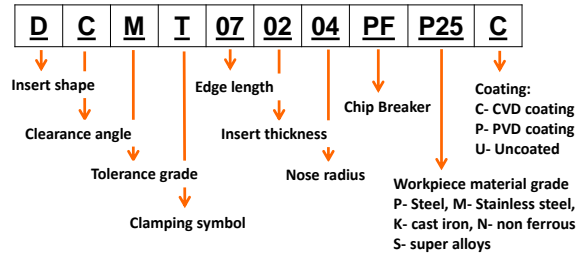


Art. Nr	D1 (mm)	D2 (mm)	D3 N8** (mm)	D4 (mm)	D5 (mm)	D6 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)
SL12-20-20 R	12	20	4	7.4	2.5	4	20	7	3	17
SL16-26-25 R	16	26	4	9.5	3.5	6	25	7	3	22
SL20-34-32 R	20	34	6	13	3.5	6	32	7	3	29
SL25-40-40 R	25	40	6	16	4.5	7.5	40	7	3	37
SL32-50-50 R	32	50	6	22	5.5	9	50	11	3	47
SL40-60-60 R	40	60	6	28	6.5	10.5	60	11	3	57
SL50-70-70 R	50	70	8	35	8.5	13.5	70	11	4	67

** : all SL blank parts will be supplied with a centering pin equivalenting the dimension

MAQ Certified Inserts

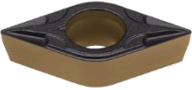
Order codes for inserts:




Positive insert

- in stock items minimum quantity 10 pcs
- ◆ Master insert for MAQ STMD tool holders

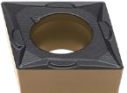
DCMT insert

	Article	P10C	P15C	P20C	P25C
	DCMT 070204-FP				●◆
	DCMT 11T304-FP				●◆

TCMT insert

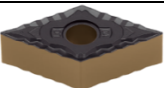
	Article	P10C	P15C	P20C	P25C
	TCMT 090204-FP				●◆
	TCMT 110304-FP				●◆
	TCMT 16T304-FP				●◆

CCMT insert

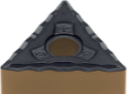
	Article	P10C	P15C	P20C	P25C
	CCMT 060204-FP				●◆
	CCMT 09T304-FP				●◆
	CCMT 120404-FP				●◆

Negative insert


DNMG insert

	Article	P05C	P10C	P15C	P25C
	DNMG 150604-LC				●◆

TNMG insert

	Article	P05C	P10C	P15C	P25C
	TNMG 160404-LC				●◆

CNMG insert

	Article	P05C	P10C	P15C	P25C
	CNMG 120404 LC				●◆