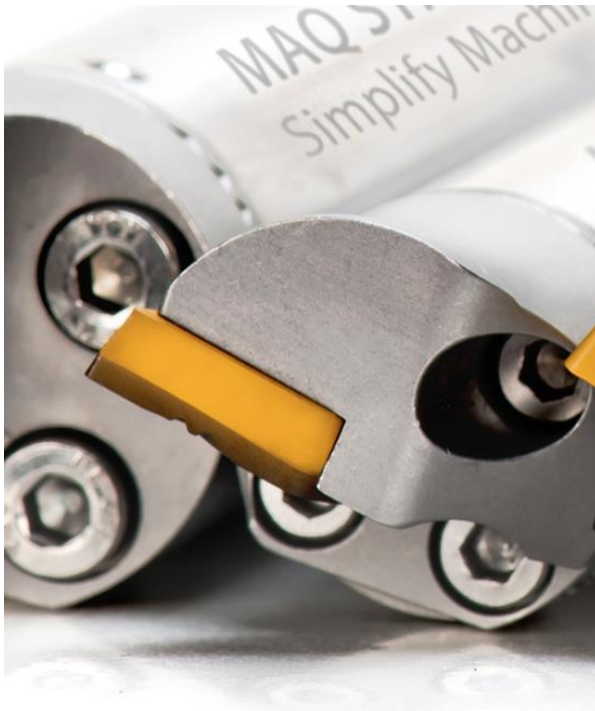


MAQ Catalog



MAQ AB
Stenhuggarvagen 1
132 38 Saltsjö-boo
Sweden

All about plug and play

Vibration in machining means damaged parts and surface, destroyed cutting inserts, and dramatically increased production costs. Machining operations using high length to diameter ratio tools (L/D) have the most prominent vibration issues, and let's not forgetting that short overhang tools also have the same problem but a bit less prominent. MAQ integrates a new approach to mass dampening in the tool body to extract the vibration energy from the cutting tool body to minimize the movement and neutralize the vibration problem.

The complex problem is the change of vibration frequency on cutting tools due to the cutting condition changes (tool wear, wearing joints, variation of work piece materials, changes of machining set up, etc.). For these reasons, leading competitor's products on the market require the optimized tuning of the cutting tools to ensure its performance. The out of tuning condition could make the vibration problem even worse, instead of improving.

What makes the MAQ products competitive is the self-tuning property. The spring elements adjust its stiffness according to the vibration frequency and overcome the problem of frequency changes. With its unique self-tuning property, MAQ tools outperform the solutions on the market and delivers the benefit to customers with better surface finish, better tolerance and higher process reliability. MAQ tools boost the productivity through simply machining, as you do not need any tuning, and it is truly 'Plug and Play'!

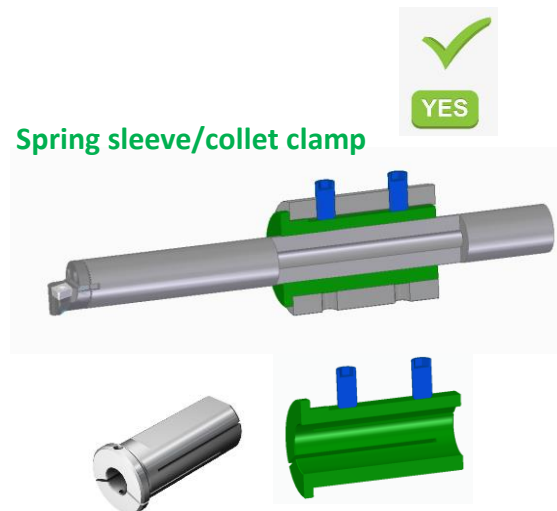
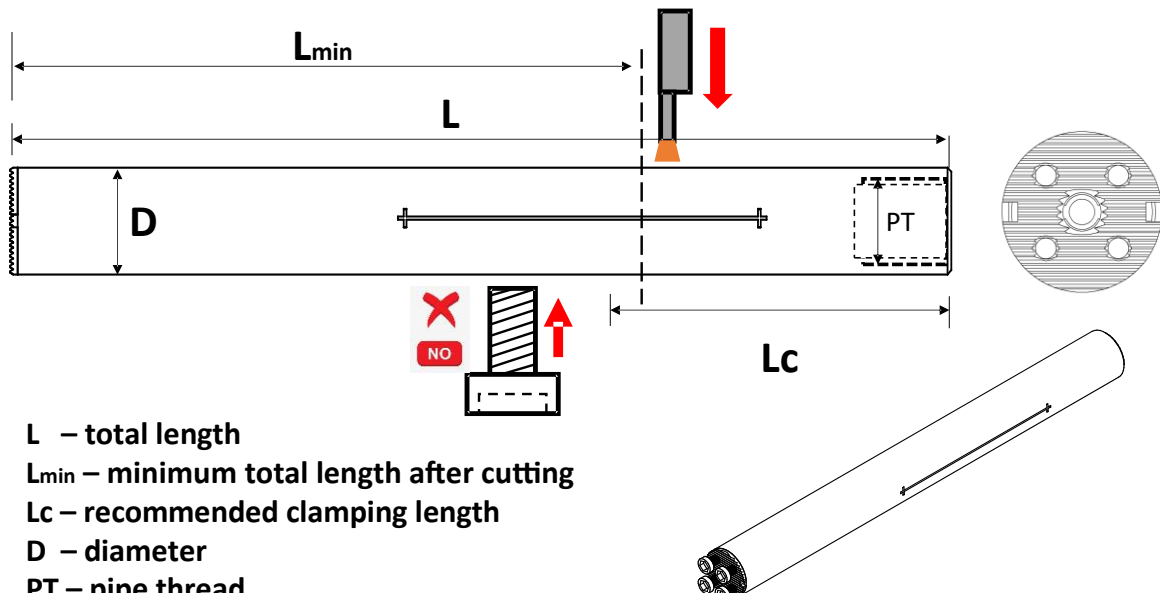
Qilin Fu

CTO @MAQ AB


www.maqab.com

Turning tools:

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




Straight holder in mm with SL interface:

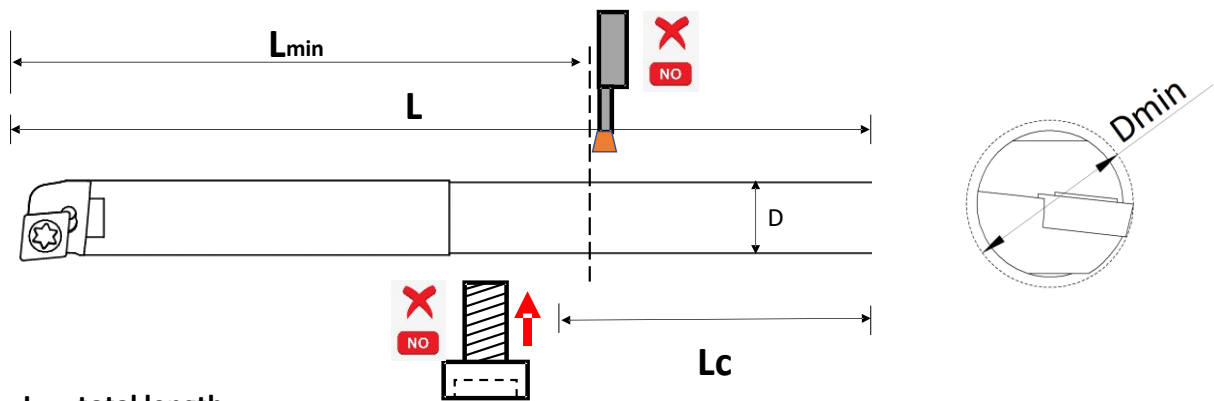
Standard: Metric (with exchangeable heads)									
Art. Nr	D (mm)	L (mm)	Lmin (mm)	Lc (mm)	Screws	PT	Adapter	Material	
STMD™ M12-144	12	144	144	36	M2X8 or 14	NA	SL12	Carbide ²	0.18
STMD™ M16-170	16	170	117	48	M3X8	G ¼	SL16	Steel	0.25
STMD™ M16-204	16	204	204	48	M3X8	NA	SL16	Carbide ²	0.50
STMD™ M16-268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

Delivery time: 2-3 days, all tools delivered with three clamping screws and an Allen wrench
 Carbide² – 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	Adapter	Material	 0.25
STMD™ I 5/8-6.7	0.625	6.7	4.6	1.875	M3X8	G ¼	SL16	Steel	0.25
STMD™ I 5/8-8.0	0.625	8.0	8.0	0.875	M3X8	NA	SL16	Carbide ¹	0.45
STMD™ I 3/4-7.9	0.75	7.9	5.4	2.25	M3X8	G ¼	SL20	Steel	0.50
STMD™ I 3/4-10.2	0.75	10.2	10.2	2.25	M3X8	NA	SL20	Carbide ¹	0.90
STMD™ I 1-10	1	10	7.1	3	M4X9	G ¼	SL25	Steel	1.10
STMD™ I 1-13	1	13	8.1	3	M4X9	G ¼	SL25	Steel	1.70
STMD™ I 1 1/4-12.6	1.25	12.6	8.4	3.75	M5X12	G ½	SL32	Steel	2.10
STMD™ I 1 1/4-16.4	1.25	16.4	12.2	3.75	M5X14	G ½	SL32	Steel	3.50
STMD™ I 1 1/2-16.1-40	1,50	16,1	10.2	4,72	M6X14	G ½	SL40	Steel	3,90
STMD™ I 2-20.4-40-40	2	20.4	11	5.90	M6X14	G ½	SL40	Steel	8,00
Delivery time: 2-3 days, all tools delivered with three clamping screws and an Allen wrench									
Carbide ¹ – Carbide back end joined with steel									

Straight holder with cutter heads:

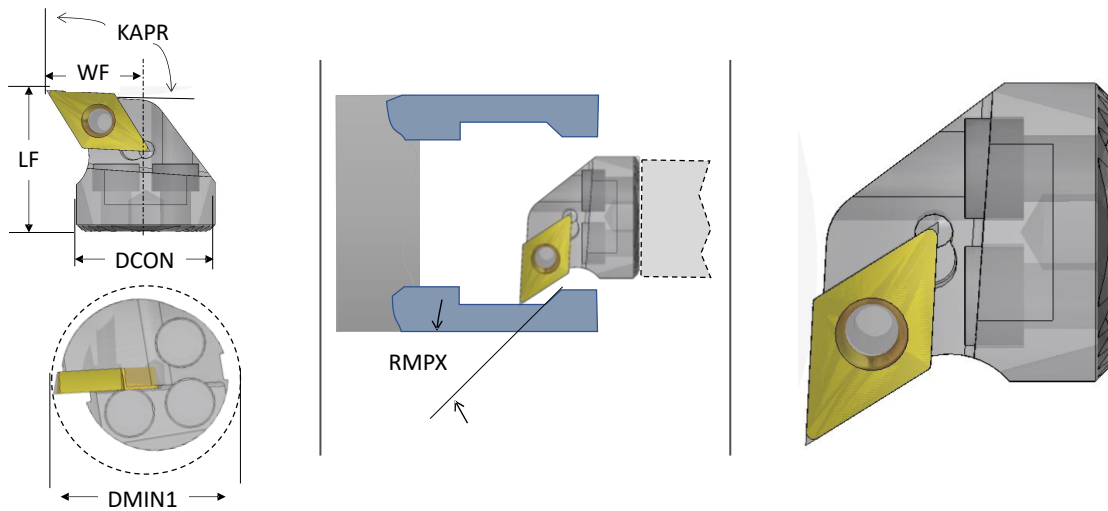



- L** – total length
- L_{min}** – minimum total length after cutting
- L_c** – recommended clamping length
- D** – diameter

Art. Nr	D (mm)	L (mm)	L _{min} (mm)	L _c (mm)	Coolant	D _{MIN1} (mm)	Master insert	Material	KG
STMD™ M10-150 SDUCR	10	160 ¹	160	30	No	15	DCMT 0702XX	Carbide ²	0.20
STMD™ M10-150 SCLCR	10	160 ¹	160	30	No	12	CCMT 0602XX	Carbide ²	0.20
STMD™ M10-150 STFCR	10	160 ¹	160	30	No	13	TCMT 0902XX	Carbide ²	0.20
STMD™ M12-180 SDUCR	12	192 ¹	192	36	Yes	16	DCMT 0702XX	Carbide ²	0.30
STMD™ M12-180 SCLCR	12	192 ¹	192	36	Yes	16	CCMT 0602XX	Carbide ²	0.30
STMD™ M12-180 STFCR	12	192 ¹	192	36	Yes	16	TCMT 0902XX	Carbide ²	0.30

160¹, 192¹ – total length to the cutting point
 Carbide² – Carbide back end joined with steel

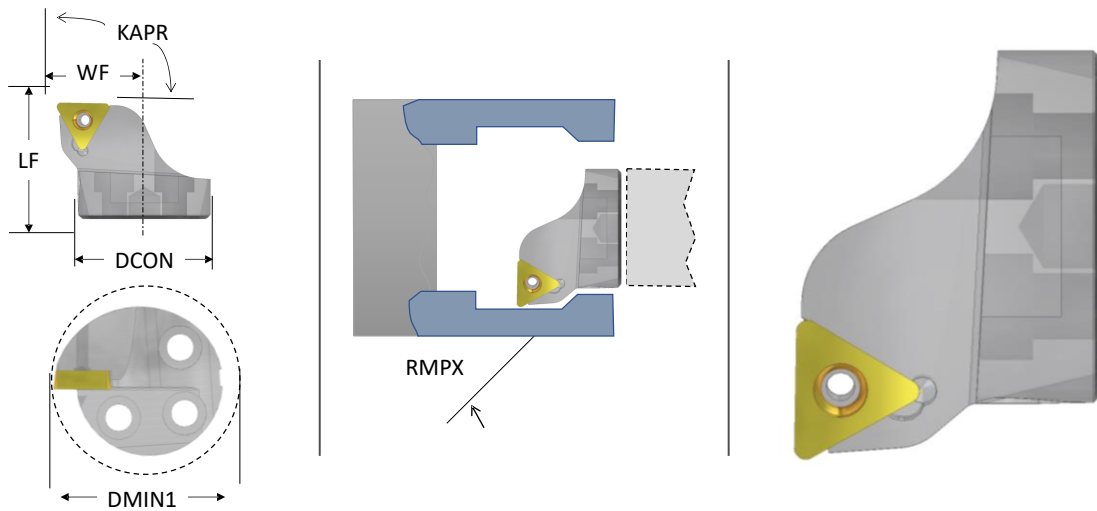
End effectors for SL adapters SDUCR:



Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Hand	Insert	
SDUCR-12	SL 12	16	14	9	93	27	R	DCMT 0702XX	0.01
SDUCR-16-5/8	SL 16	20	16	11	93	27	R	DCMT 0702XX	0.01
SDUCR-20-3/4	SL 20	25	20	13	93	27	R	DCMT 11T3XX	0.02
SDUCR-25-1	SL 25	32	22	17	93	27	R	DCMT 11T3XX	0.04
SDUCR-32-1 1/4	SL 32	40	27	22	93	27	R	DCMT 11T3XX	0.07
SDUCR-40-1 1/2	SL 40	50	32	27	93	27	R	DCMT 11T3XX	0,14

Delivery time: 2-3 days, all cutter heads are delivered with the insert clamp screw.

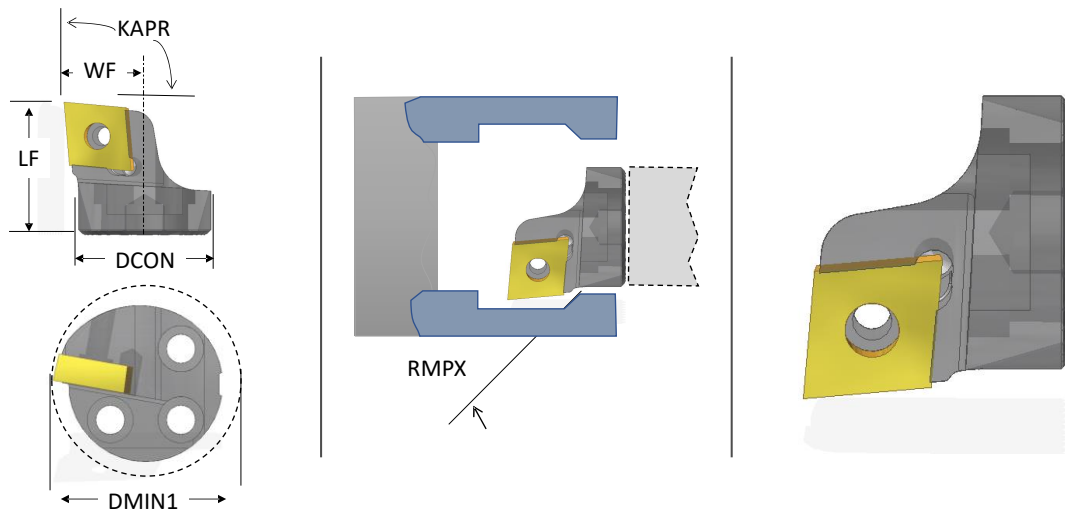
End effectors for SL adapters STFCR:




Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Hand	Insert	KG
STFCR-12	SL 12	16	14	9	91	NA	R	TCMT 0902XX	0.01
STFCR-16-5/8	SL 16	20	16	11	91	NA	R	TCMT 0902XX	0.01
STFCR-20-3/4	SL 20	25	20	13	91	NA	R	TCMT 1103XX	0.02
STFCR-25-1	SL 25	32	22	17	91	NA	R	TCMT 1103XX	0.04
STFCR-32-1 1/4	SL 32	40	27	22	91	NA	R	TCMT 16T3XX	0.07
STFCR-40-1 1/2	SL 40	50	32	27	91	NA	R	TCMT 16T3XX	0.14

Delivery time: 2-3 days, all cutter heads are delivered with the insert clamp screw.

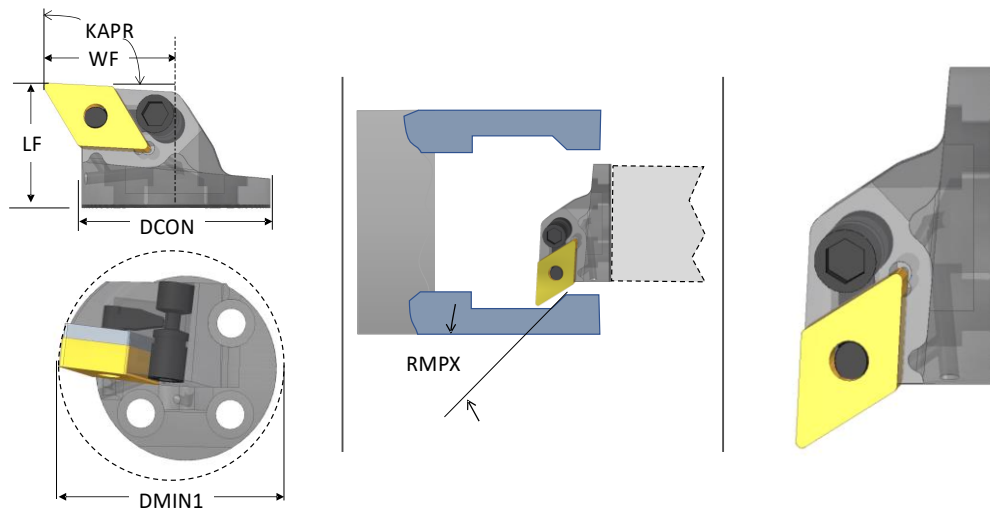
End effectors for SL adapters SCLCR:



Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Hand	Insert	
SCLCR-12	SL 12	16	14.4	10	95	NA	R	CCMT 0602XX	0.01
SCLCR-16-5/8	SL 16	20	15.4	11	95	NA	R	CCMT 0602XX	0.01
SCLCR-20-3/4	SL 20	25	19.1	13	95	NA	R	CCMT 09T3XX	0.02
SCLCR-25-1	SL 25	32	21.1	17	95	NA	R	CCMT 09T3XX	0.04
SCLCR-32-1 1/4	SL 32	40	24.1	22	95	NA	R	CCMT 09T3XX	0.07
SCLCR-40-1 1/2	SL 40	50	25.1	27	95	NA	R	CCMT 09T3XX	0.14

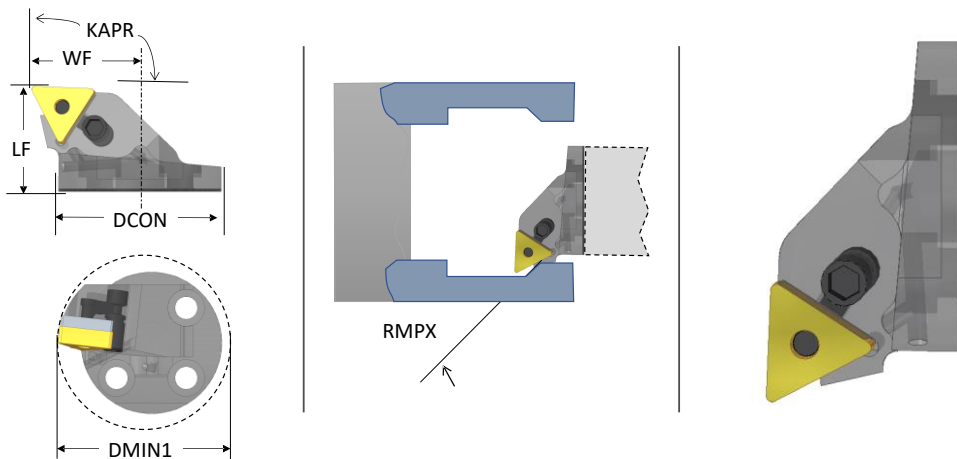
Delivery time: 2-3 days, all cutter heads are delivered with the insert clamp screw.

End effectors for SL adapters PDUNR:



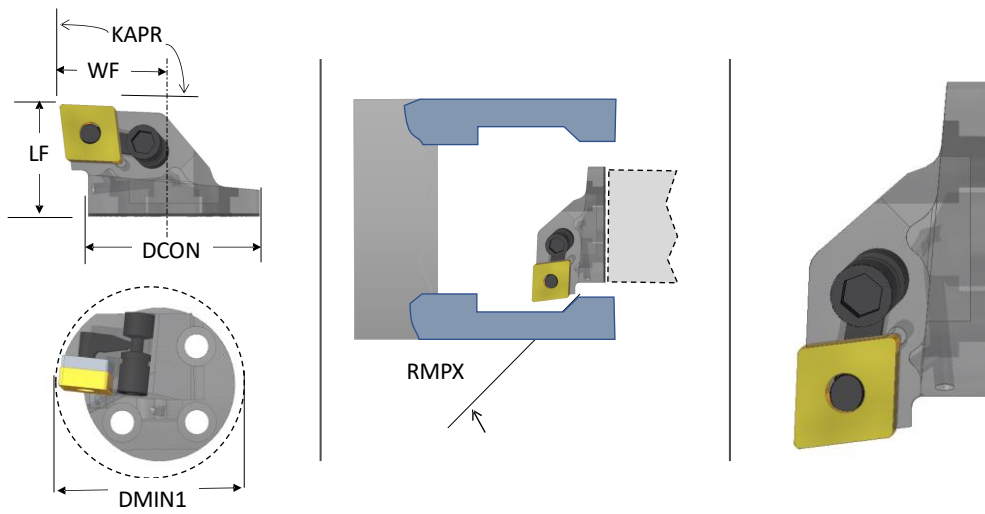
Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Hand	Insert	KG
PDUNR-40-1 1/2	SL 40	50	26	27	93	27	R	DNMG 1506XX	0,14
Delivery time: 2-3 days, all cutter heads are delivered with the insert clamp screw.									


End effectors for SL adapters PTFNR:



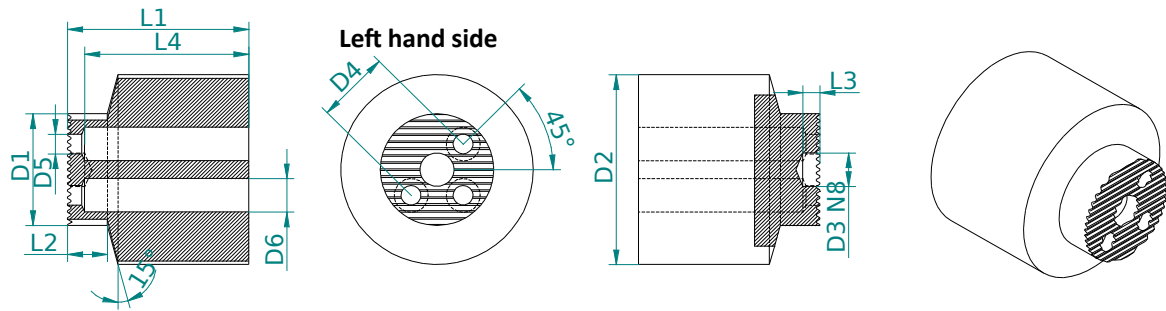
Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Hand	Insert	KG
PTFNR-40-1 1/2	SL 40	50	26	27	91	NA	R	TNMG 1604XX	0.14
Delivery time: 2-3 days, all cutter heads are delivered with the insert clamp screw.									

End effectors for SL adapters PCLNR:



Art. Nr	DCON (mm)	DMIN1 (mm)	LF (mm)	WF (mm)	KAPR (°)	RMPX (°)	Hand	Insert	 KG
PCLNR-40-1 1/2	SL 40	50	26	27	95	NA	R	CNMG 1204XX	0.14
Delivery time: 2-3 days, all cutter heads are delivered with the insert clamp screw.									

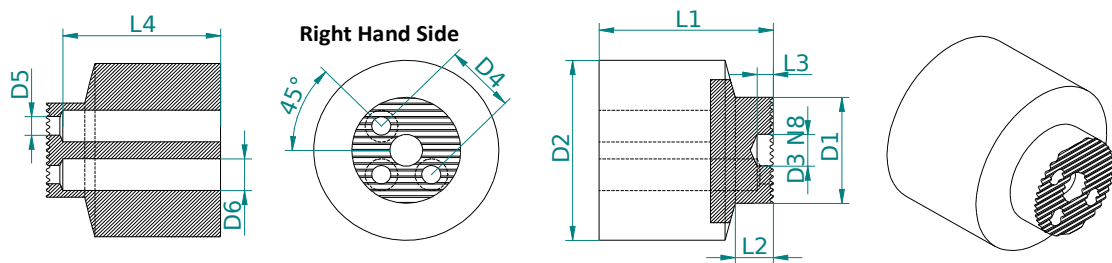
SL Blanks Left Hand Side:



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