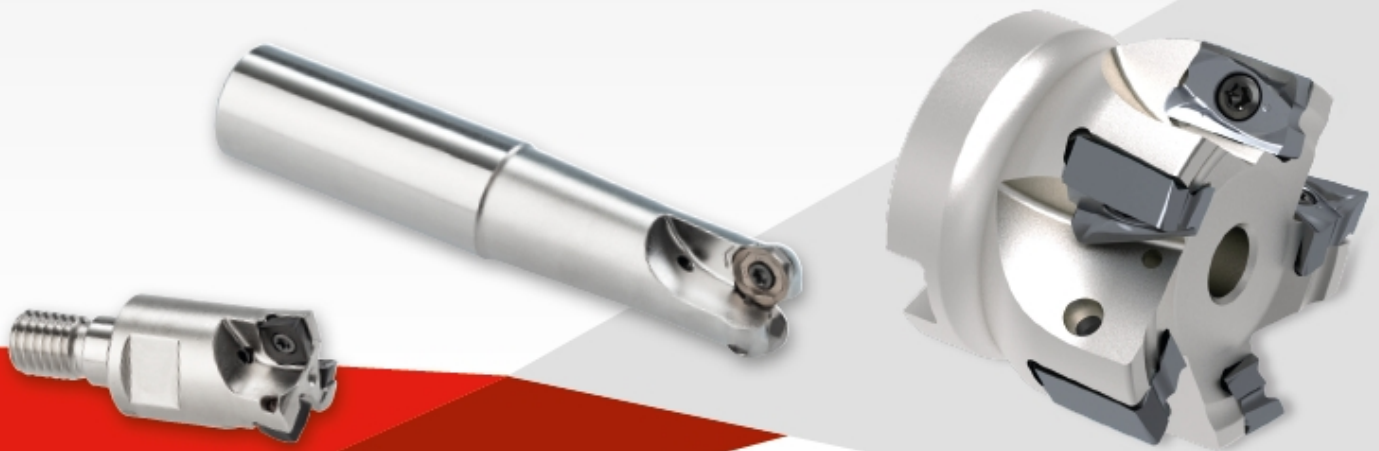


Tools and inserts for milling

Metric



***PROFI
LINE***



Hard material for your success

Hard materials in general and hard materials in particular are applied wherever tools or components are exposed to high wear. They improve the quality of the tools and parts, extend the life of the tool and ensure secure processes.

High pressure and temperature, the application of abrasive or aggressive materials, and the machining of hard materials are just some examples of factors that cause wear, and to which our hard materials and hard metals are resistant.

From carbide blanks and semifinished products to coated and packaged inserts or tool holders, e.g. for milling, turning, drilling, parting and grooving – all private label products satisfy individual customer needs and offer top quality.

The experts of the competence brand provide their partners with advice so that the right tooling solution can always be optimally positioned in the respective market segment. The products developed here are the benchmark in their industry in terms of both price and performance.

Our product portfolio

Milling



Drilling



Multicut

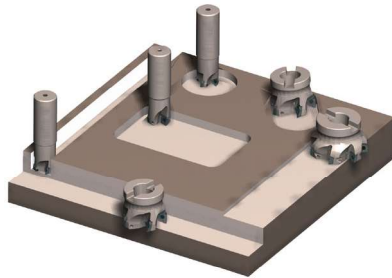


Turning

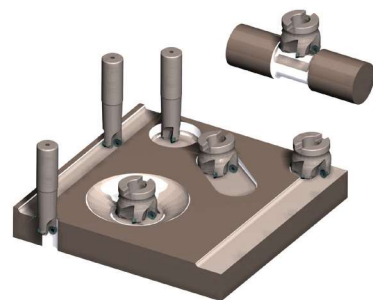


Grooving



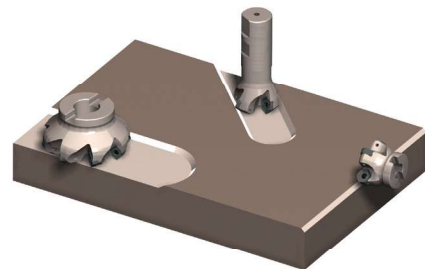


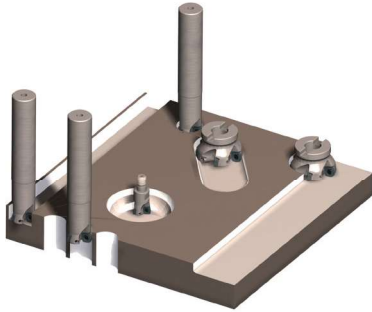
	Milling System	Page
Face milling	 HKPT06	P 34 – P 37
	 HPCT06	
	 HOKT06	P 38 – P 41
	 HOCT06	
	 SOKU12	P 42 – P 47
	 SOKU15	
	 HNKU08	P 48 – P 53
	 HOKU08	



	Milling System	Page
Form milling	 RP... / RD...10	P 54 – P 63
	 RP... / RD...12	
	 RP.X16	
	 RN.U / RO.U12	P 64 – P 69
	 RN.U / RO.U16	

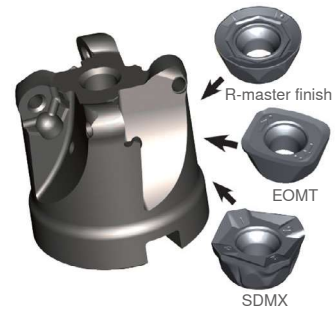
	Milling System	Page
Shouldering	 APKT10	P 10 – P 17
	 APKT16	
	 TOKX07	P 18 – P 23
	 TOKX09	
	 SDKT09	P 24 – P 29
	 SDHT09	
	 SDKT12	
	 SDHT12	P 30 – P 33
	 LNKU12	
	 LOKU12	





	Milling System	Page
High Feed Cutting	 XPLT07	P 70 – P 79
	 XDLT10	
	 XDLX10	
	 XOLT13	

	Milling System	Page
Multiple Applications	 SDMX11	P 80 – P 85
	 SDMX15	
	 RPMX / RPHX12	P 86 – P 91
	 RPMX / RPHX16	
	 EOMT12	P 92 – P 95



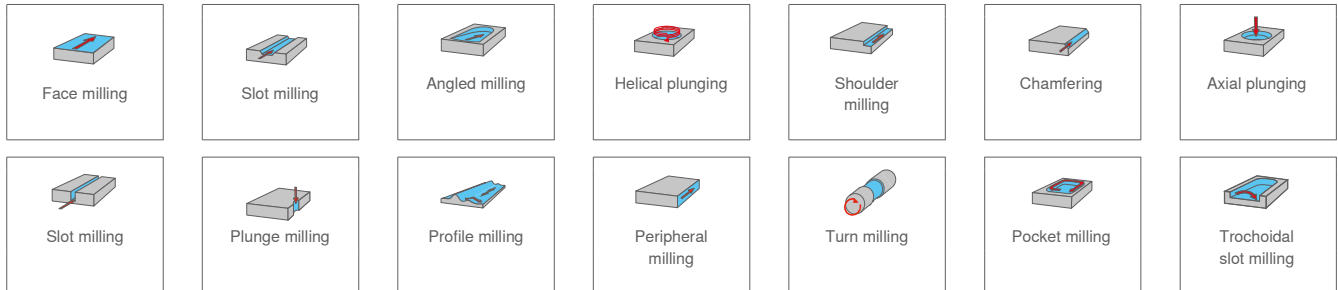
	Milling System	Page
Utility Milling	 TPK. 16	P 96 – P 99
	 TPK. 22	
	 SEK. 12	P 100 – P 103
	 SEK. 15	
	 SPK. 12	

	Page
Technical Data	P 104 – P 177
Technical Information – General	P 178 – P 192



Shouldering / Face milling

Possible applications



Application		Machining operations	Range	Page
Shouldering 2 x 90°			SSM-UA	P 10 – P 17
Shouldering 3 x 90°			SSM-T	P 18 – P 23
Shouldering 4 x 90°			SSM-S	P 24 – P 29
Shouldering 4 x 90°			DSM-L	P 30 – P 33
Face milling 6 x 45°			SSM-H	P 34 – P 41
Face milling 8 x 45°			DSM-S	P 42 – P 47
Face milling 12 x 45°			DSM-H	P 48 – P 53



Form milling / High feed cutting / Multiple applications

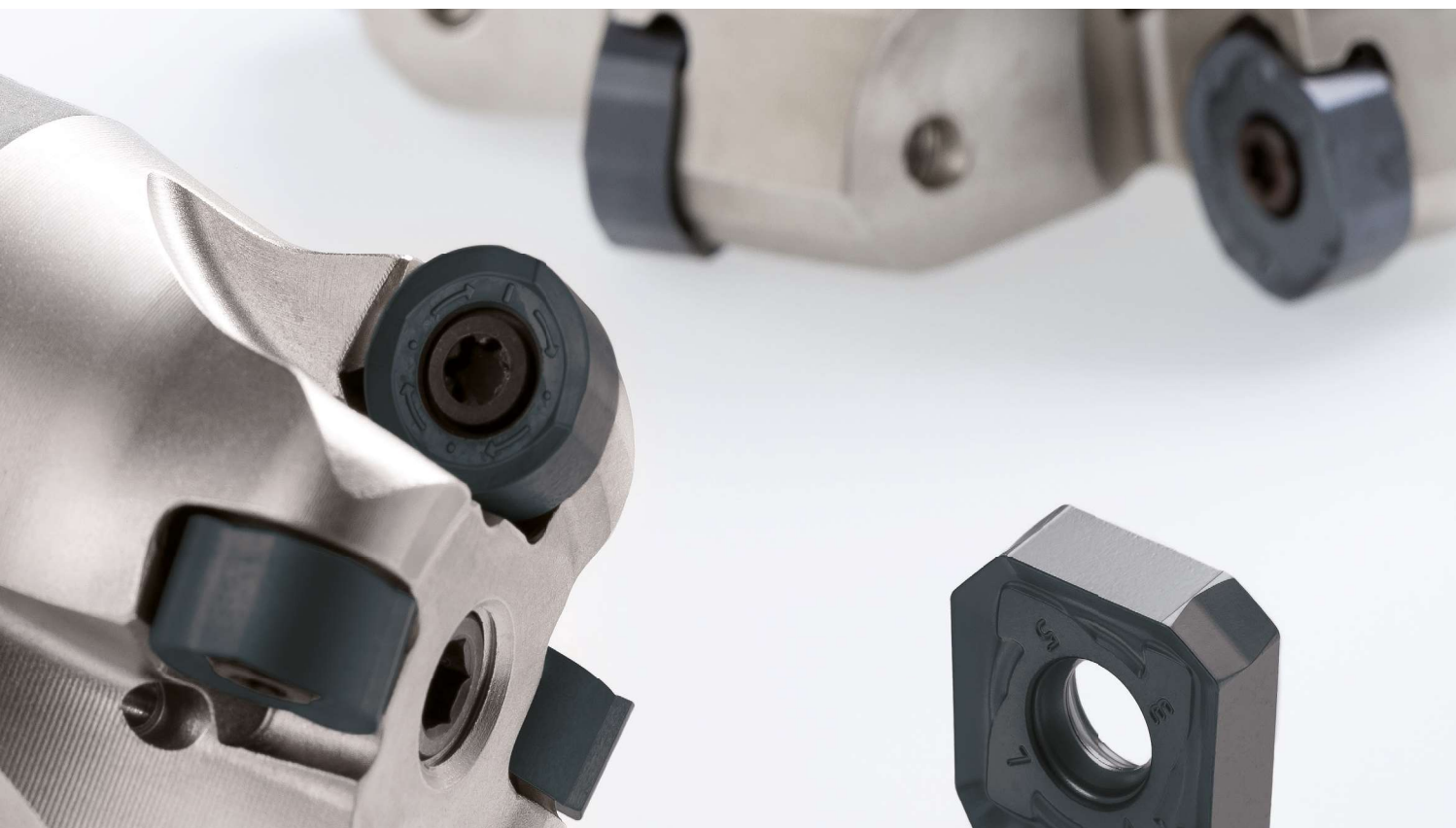
Application		Machining operations	Range	Page
Form milling			SSM-R	P 54 – P 63
Form milling			DSM-R	P 64 – P 69
High feed cutting			SSM-HFC	P 70 – P 79
Multiple applications			SSM-A.R	P 80 – P 84

Utility Milling

Application		Machining operations	Range	Page
Shouldering 3 x 90°			SSM-UT	P 96 – P 99
Face milling 4 x 45/75°			SSM-US	P 100 – P 103



Products









Overview APKT... APHT...

Application

1) Face milling



2) Slot milling



3) Peripheral milling



4) Axial plunging



5) Shoulder milling



6) Helical plunge milling



7) Pocket milling



8) Helical plunging



Chipbreaker

PC: Steel

MC: Stainless Steel

KC: Cast iron

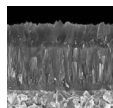
NC: Aluminium

RC: Specific radius

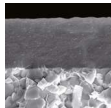
Grade

Standard grades

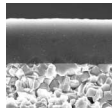
PMK30C ■



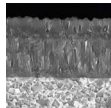
PM35P ■



MP40P ■



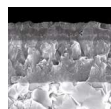
K15C ■



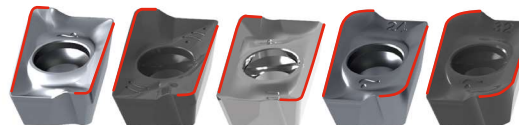
NK15S ■



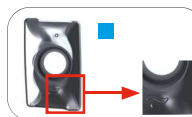
SM35C ■



2 effective cutting edges

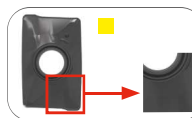


Which chipbreaker to use?



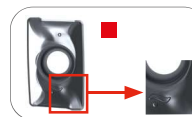
PC

Strong cutting edge for general steel applications and hard conditions milling.



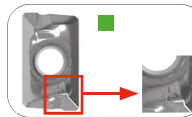
MC

Sharp cutting edge for general stainless steel applications and for finishing in steels.



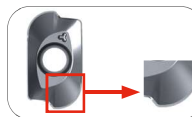
KC

Strong cutting edge for cast iron applications.



NC

Extremely sharp cutting edge for aluminium and non-ferrous metals.



RC

Specific radius.



Available range APKT10

Insert	Designation	Chipbreaker	Material number	Available
	APKT 1003PDER-PC PMK30C	...-PC	12384796	●
	APKT 1003PDER-PC PM35P	...-PC	14534961	●
	APKT 1003PDER-MC MP40P	...-MC	14534962	●
	APKT 1003PDER-MC SM35C	...-MC	11582506	●
	APKT 1003PDER-KC K15C	...-KC	14641285	●
	APHT 100302FR-NC NK15S	...-NC	14617035	●
	APHT 100304FR-NC NK15S	...-NC	14617031	●
	APHT 100308FR-NC NK15S	...-NC	11348849	●
	APKT 100308ER-RC PM35P	...-RC	12234997	●
	APKT 100308ER-RC MP40P	...-RC	14641330	●
	APKT 100308ER-RC K15C	...-RC		○
	APKT 100312ER-RC PM35P	...-RC	14652659	●
	APKT 100312ER-RC MP40P	...-RC	14652660	●
	APKT 100312ER-RC K15C	...-RC		○
	APKT 100316ER-RC PM35P	...-RC	14641303	●
	APKT 100316ER-RC MP40P	...-RC	14641333	●
	APKT 100316ER-RC K15C	...-RC		○
	APKT 100330ER-RC PM35P	...-RC	14641320	●
	APKT 100330ER-RC MP40P	...-RC	14641335	●
	APKT 100330ER-RC K15C	...-RC		○



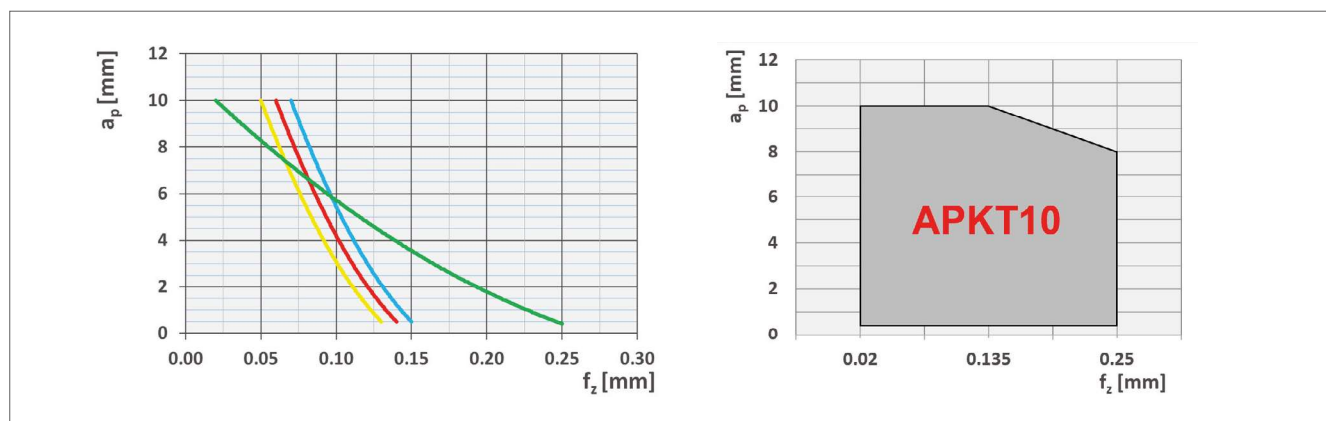
Body	Designation	Ø Milling cutter [mm]	z	Material number	Available
	C-SSM-UA10-12.R.01-B16-24-79	12	1	14655180	●
	C-SSM-UA10-16.R.02-B-25-80	16	2	12411773	●
	C-SSM-UA10-20.R.03-B-25-85	20	3	12411768	●
	C-SSM-UA10-25.R.04-B-32-95	25	4	12411777	●
	C-SSM-UA10-32.R.05-B-40-105	32	5	12411783	●
	G-SSM-UA10-16.R.02	16	2	14655181	●
	G-SSM-UA10-20.R.03	20	3	12411792	●
	G-SSM-UA10-25.R.04	25	4	12411797	●
	G-SSM-UA10-32.R.05	32	5	12411799	●
	A-SSM-UA10-40.R.04	40	4	14655178	●
	A-SSM-UA10-40.R.06	40	6	12630624	●
	A-SSM-UA10-50.R.05	50	5	14654216	●
	A-SSM-UA10-50.R.08	50	8	12630633	●
	A-SSM-UA10-63.R.06	63	6	14654218	●
	A-SSM-UA10-63.R.09	63	9	12630637	●
	A-SSM-UA10-80.R.07	80	7	14655179	●
	A-SSM-UA10-80.R.10	80	10	12630638	●
	A-SSM-UA10-100.R.12	100	12	12630640	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M2.5 x 5.6 – T08+ (only for C- + G-)	1.6	11114238	●
	M2.5 x 7.3 – T08+ (only for A-)	1.6	11114242	●



Cutting data APKT10

Starting parameters:



Grades and materials:

				Cutting data	
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P Steel	PC	PMK30C	220 – 60	0.07 – 0.15	10 – 0.5
	RC	PM35C		0.1 – 0.17	10 – 1.6
M Stainless steel	MC	MP40P	200 – 60	0.05 – 0.13	10 – 0.5
	RC	SM35C		0.1 – 0.17	10 – 1.6
K Cast iron	KC	K15C	320 – 100	0.1 – 0.17	10 – 0.5
	RC				
N Non-ferrous	NC	NK15S	< 2000	0.02 – 0.14	10 – 0.2



Available range APKT16

Insert	Designation	Chipbreaker	Material number	Available
	APKT 1604PDER-PC PMK30C	...-PC	14641339	●
	APKT 1604PDER-PC PM35C	...-PC	14534966	●
	APKT 1604PDER-MC MP40P	...-MC	14534968	●
	APKT 1604PDER-MC SM35C	...-MC	11582503	●
	APKT 1604PDER-KC K15C	...-KC	14641345	●
	APHT 1604PDFR-NC NK15S	...-NC	11348852	●
	APKT 160416ER-RC PM35P	...-RC	12067441	●
	APKT 160416ER-RC MP40P	...-RC	14641347	●
	APKT 160416ER-RC K15C	...-RC	14652661	●
	APKT 160424ER-RC PM35P	...-RC	12067437	●
	APKT 160424ER-RC MP40P	...-RC	14641349	●
	APKT 160424ER-RC K15C	...-RC		○
	APKT 160432ER-RC PM35P	...-RC	12067435	●
	APKT 160432ER-RC MP40P	...-RC	14641353	●
	APKT 160432ER-RC K15C	...-RC		○
	APKT 160440ER-RC PM35P	...-RC		○
	APKT 160440ER-RC MP40P	...-RC	14677925	●
	APKT 160440ER-RC K15C	...-RC		○
	APKT 160448ER-RC PM35P	...-RC	12314049	●
	APKT 160448ER-RC MP40P	...-RC	14641361	●
	APKT 160448ER-RC K15C	...-RC		○



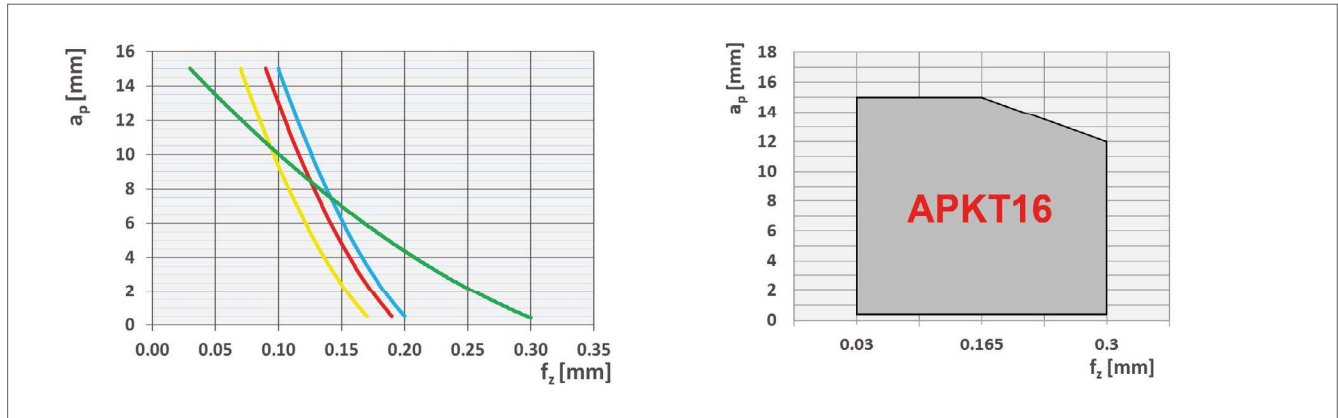
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-UA16-25.R.02-B-40-95	25	2	14655187	●
	C-SSM-UA16-32.R.03-B-40-105	32	3	12630641	●
	C-SSM-UA16-40.R.04-B-50-125	40	4	12630643	●
	G-SSM-UA16-25.R.02	25	2	14655190	●
	G-SSM-UA16-32.R.03	32	3	14655192	●
	G-SSM-UA16-40.R.04	40	4	14655184	●
	A-SSM-UA16-40.R.04	40	4	12630644	●
	A-SSM-UA16-50.R.05	50	5	12630646	●
	A-SSM-UA16-63.R.06	63	6	12630647	●
	A-SSM-UA16-80.R.07	80	7	14655176	●
	A-SSM-UA16-80.R.08	80	8	12630648	●
	A-SSM-UA16-100.R.09	100	9	12630649	●
	A-SSM-UA16-125.R.09	125	9	14655183	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 8.5 – T15 (only for Ø25 + Ø32)	5	11037484	●
	M4.0 x 11.0 – T15+	5	1345432	●
	Power screw M8.0 x 30.0 (only for A-SSM-UA16-40.R.04)	15	11036880	●



Cutting data APKT16

Starting parameters:



Grades and materials:

				Cutting data	
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P Steel	PC	PMK30C	220 – 60	0.1 – 0.2	15 – 0.5
	RC	PM35C		0.12 – 0.23	15 – 0.5
M Stainless steel	MC	MP40P	200 – 60	0.07 – 0.17	15 – 0.5
	RC	SM35C		0.12 – 0.23	15 – 0.5
K Cast iron	KC	K15C	320 – 100	0.12 – 0.23	15 – 0.5
	RC				
N Non-ferrous	NC	NK15S	< 2000	0.03 – 0.30	15 – 0.8





Overview TOKX

Application

1) Face milling



2) Angled milling



3) Helical plunging



4) Shoulder milling



5) Slot milling



6) Pocket milling



Chipbreaker

PC: Steel – Cast iron*

MC: Stainless Steel – Exotic* – Titanium*

3 effective cutting edges



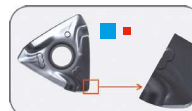
Customer benefits

- ▲ High precision 90° milling
- ▲ Low power consumption. maximum chip removal rate
- ▲ Chipbreaker optimised by FEM
- ▲ Soft cutting providing quiet machining and maximum spindle protection



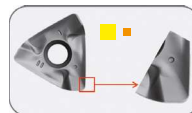
Result: Workpieces with clean surface, close tolerances and reduced formation of burrs, maximum service life of tool and insert.

Which chipbreaker to use?



PC

Strong cutting edge for general steel applications and hard conditions milling.



MC

Sharp cutting edge for general stainless steel applications and for finishing in steels.

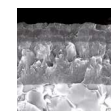
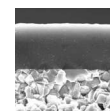
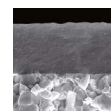
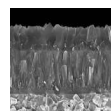
Grades

PMK30C

PM35P

MP40P

SM35C



* secondary application



Available range TOKX07

Insert	Designation	Chipbreaker	Material number	Available
	TOKX 070305PDER-PC PMK30C	...-PC	12193325	●
	TOKX 070305PDER-PC PM35P	...-PC	12069063	●
	TOKX 070305PDER-MC MP40P	...-MC	12120017	●
	TOKX 070305PDER-MC SM35C	...-MC	12069061	●
	TOKX 070308PDER-PC PMK30C	...-PC	12307051	●
	TOKX 070308PDER-PC PM35P	...-PC	12143629	●
	TOKX 070308PDER-MC MP40P	...-MC	12143626	●
	TOKX 070308PDER-MC SM35C	...-MC	12143628	●

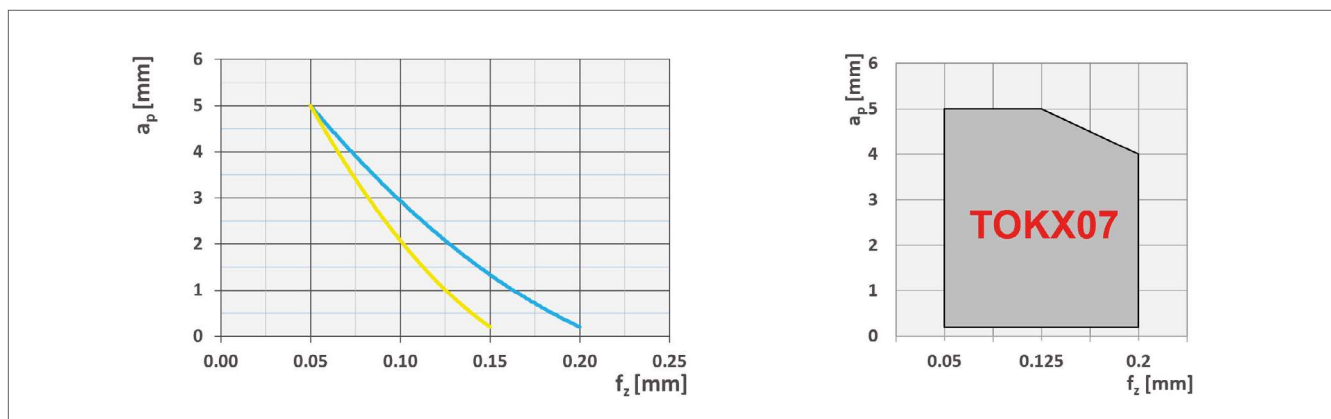
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-T07-20.R.03-B-25-77	20	3	12074285	●
	C-SSM-T07-25.R.04-B-34-90	25	4	11998760	●
	C-SSM-T07-32.R.05-B-40-102	32	5	12074282	●
	G-SSM-T07-20.R.03	20	3	12152218	●
	G-SSM-T07-25.R.04	25	4	12152220	●
	G-SSM-T07-32.R.05	32	5	12152223	●
	A-SSM-T07-40.R.05	40	5	12152214	●
	A-SSM-T07-50.R.06	50	6	12152215	○

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M2.5x6.0 – T08	1.2	24645	●



Cutting data TOKX07

Starting parameters:



Grades and materials:

			Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	PC	PMK30C	220 – 60	0.05 – 0.2	5 – 0.2
		PM35P			
M	MC	PM40P	200 – 60	0.05 – 0.15	5 – 0.2
		SM35C			



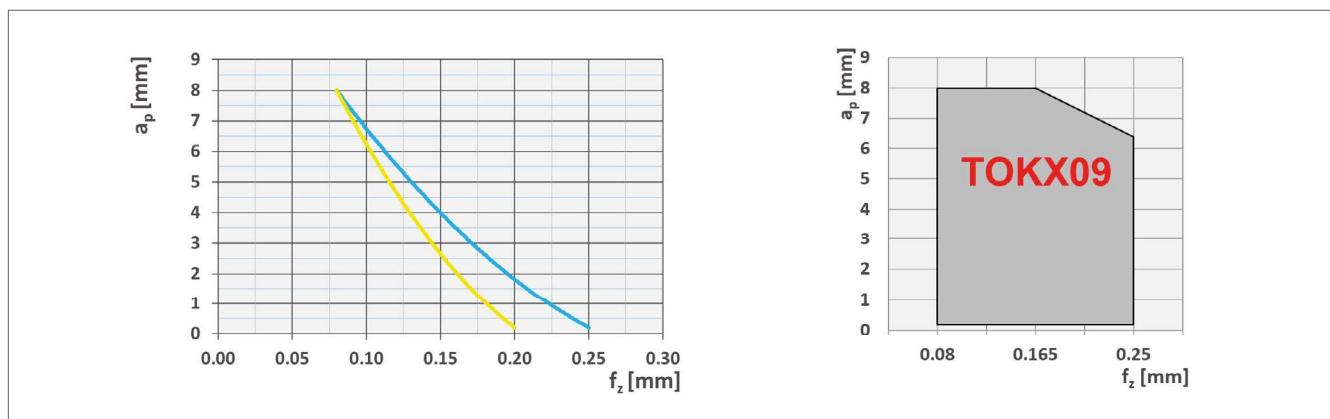
Available range TOKX09

Insert	Designation	Chipbreaker	Material number	Available	
	TOKX 09T308PDER-PC PMK30C	...-PC	12324207	●	
	TOKX 09T308PDER-PC PM35P	...-PC	12262506	●	
	TOKX 09T308PDER-MC MP40P	...-MC	12119996	●	
	TOKX 09T308PDER-MC SM35C	...-MC	12066590	●	
	TOKX 09T312PDER-PC PMK30C	...-PC	12378662	●	
	TOKX 09T312PDER-PC PM35P	...-PC	12376480	●	
	TOKX 09T312PDER-MC MP40P	...-MC	12143645	●	
	TOKX 09T312PDER-MC SM35C	...-MC	12143648	●	
	TOKX 09T316PDER-PC PMK30C	...-PC	12378664	●	
	TOKX 09T316PDER-PC PM35P	...-PC	12376489	●	
	TOKX 09T316PDER-MC MP40P	...-MC	12143637	●	
	TOKX 09T316PDER-MC SM35C	...-MC	12143639	●	
Body	Designation	ø Milling cutter	z	Material number	Available
 	C-SSM-T09-32.R.03-B-40-102	32	3	11869624	●
	A-SSM-T09-40.R.04	40	4	11987902	●
	A-SSM-T09-50.R.05	50	5	11987903	●
	A-SSM-T09-63.R.06	63	6	11987904	●
Spare parts	Designation	Torque moment [Nm]	Material number	Available	
 	M3.0 x 7.3 – T08	1.2	77613	●	
	Power screw M8.0 x 30.0 (only for A-SSM-T09-40.R.04)	15	11036880	●	



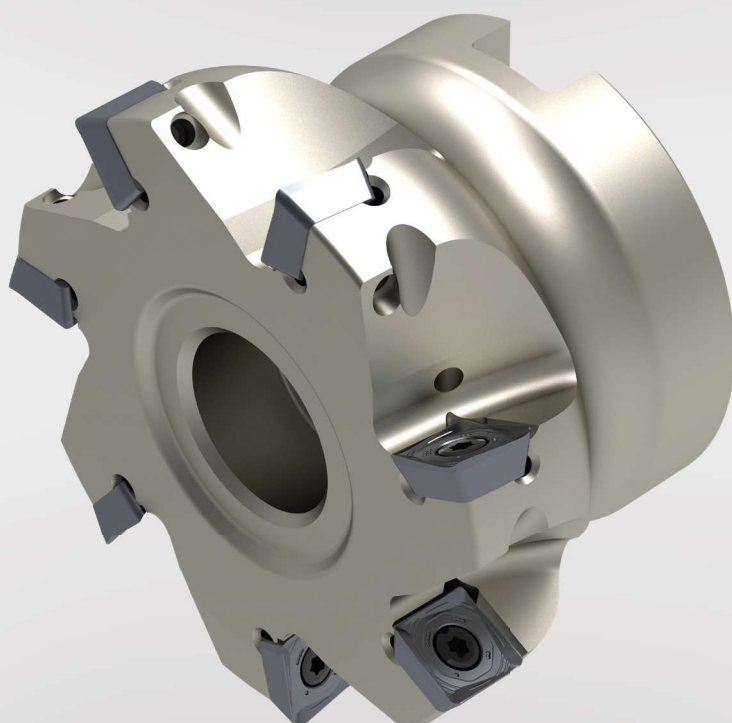
Cutting data TOKX09

Starting parameters:



Grades and materials:

Grades and materials:				Cutting data		
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.08 – 0.25	8 – 0.2
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.08 – 0.2	8 – 0.2
			SM35C			





Overview SDKT

Application

- 1) Face milling

- 2) Angled milling

- 3) Helical plunging

- 4) Shoulder milling

- 5) Slot milling

- 6) Peripheral milling

- 7) Trochoidal slot milling


Chipbreaker

PC: Steel
MC: Stainless Steel – Exotic* – Titanium*
KC: Cast iron
NC: Aluminium

4 effective cutting edges



Grades



Customer benefits

- ▲ High precision 90° milling
- ▲ Economic solution:
High chip volume on low power machines
Reduced cost per cutting edge compared to current insert solutions. (APKT and ADKT)
- ▲ Reduced machining costs:
Compared to APKT10: +20 % to +30 % in price
Advantage: up to 35 % cost reduction per cutting edge!

Which chipbreaker to use?

- | | |
|--|---|
|  | PC
Strong cutting edge for general steel applications and hard conditions milling. |
|  | MC
Sharp cutting edge for general stainless steel applications and for finishing in steels. |
|  | KC
Strong cutting edge for cast iron applications. |
|  | NC
Extremely sharp cutting edge for aluminum and non-ferrous metals. |

* secondary application



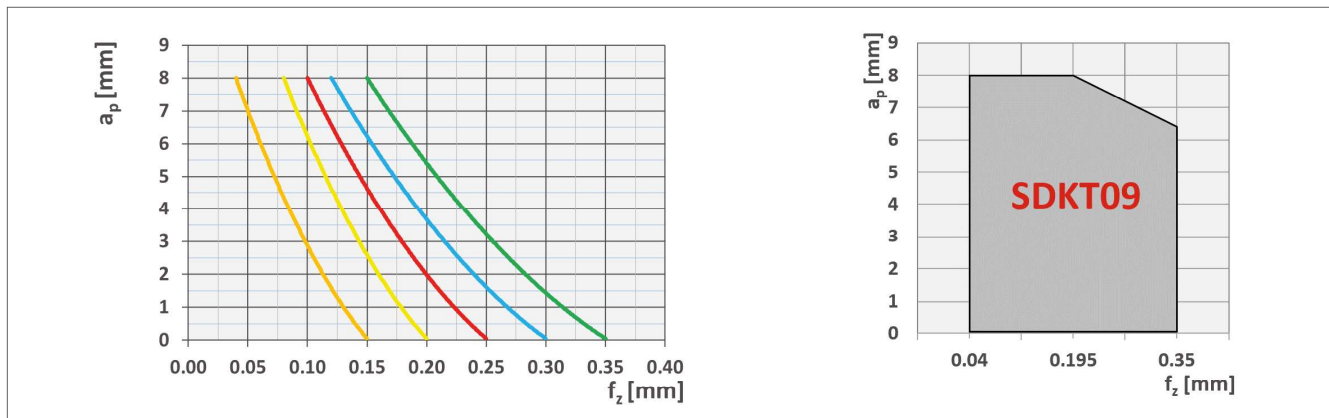
Available range SDKT09

Insert	Designation	Chipbreaker	Material number	Available	
	SDKT 09T308SR-PC PMK30C	...-PC	11979028	●	
	SDKT 09T308SR-PC PM35C	...-PC	11979030	●	
	SDKT 09T308SR-MC MP40P	...-MC	11979032	●	
	SDKT 09T308SR-MC SM35C	...-MC	11584645	●	
	SDKT 09T308SR-MC S35C	...-MC	11710895	●	
	SDKT 09T308SR-KC K15C	...-KC	12193340	●	
	SDHT 09T308FR-NC NK15S	...-NC	14652621	●	
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
  	C-SSM-S09-25.R.03-B-32-88	25	3	11596014	●
	C-SSM-S09-32.R.04-B-40-100	32	4	11596009	●
	G-SSM-S09-25.R.03	25	3	12272435	○
	G-SSM-S09-32.R.04	32	4	12272436	○
	A-SSM-S09-40.R.05	40	5	11596010	●
	A-SSM-S09-50.R.06	50	6	11584233	●
	A-SSM-S09-63.R.07	63	7	11596011	●
	A-SSM-S09-80.R.09	80	9	11596013	●
Spare parts	Designation	Torque moment [Nm]	Material number	Available	
	M3.0 x 7.3 – T08	1.2	77613	●	
	Power screw M8.0 x 30.0 (only for A-SSM-S09-40.R.04)	15	1036880	●	



Cutting data SDKT09

Starting parameters:



Grades and materials:

Cutting data

Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.12 – 0.3	8 – 0.05
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.08 – 0.2	8 – 0.05
			SM35C			
K	Cast iron	KC	K15C	320 – 100	0.1 – 0.25	8 – 0.05
N	Non-ferrous	NC	NK15S	< 2000	0.15 – 0.35	8 – 0.05
S	Heat resistant alloys	MC	SM35C	75 – 25	0.04 – 0.15	8 – 0.05
S	Titanium	NC	S35C			



Available range SDKT12

Insert	Designation	Chipbreaker	Material number	Available
	SDKT 120508SR-PC PMK30C	...-PC	12154549	●
	SDKT 120508SR-PC PM35P	...-PC	12062538	●
	SDKT 120508SR-MC MP40P	...-MC	12074525	●
	SDKT 120508SR-MC SM35C	...-MC	12067263	●
	SDKT 120508SR-MC S35C	...-MC	12071921	●
	SDKT 120508SR-KC K15C	...-KC	12154553	●
	SDHT 120508FR-NC NK15S	...-NC	14652623	●

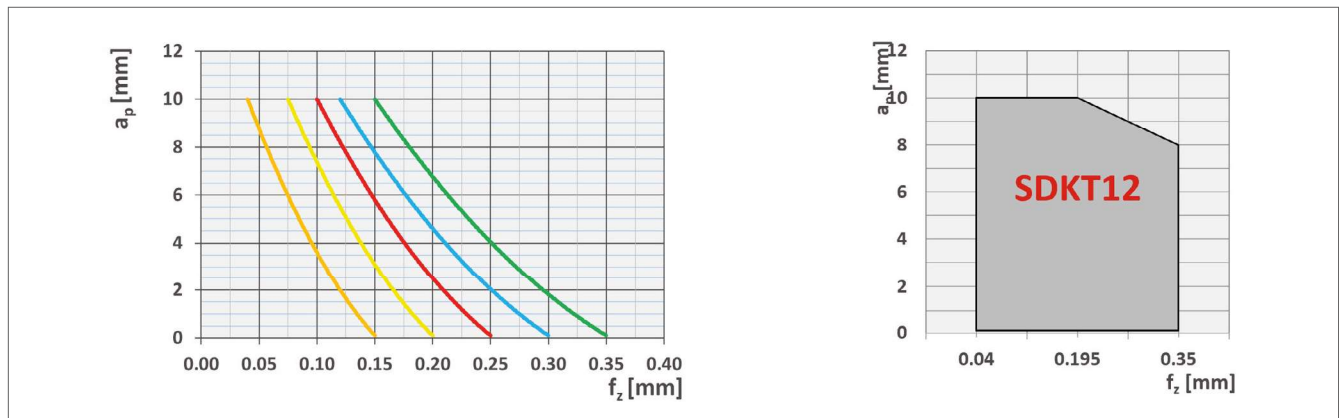
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-S12-32.R.03-B-40-100	32	3	12138258	●
	A-SSM-S12-40.R.04	40	4	11965069	●
	A-SSM-S12-50.R.05	50	5	11981629	●
	A-SSM-S12-63.R.06	63	6	12060728	●
	A-SSM-S12-80.R.07	80	7	12060727	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 8.5 – T15 (only for Ø32)	5	11037484	●
	M4.0 x 11 – T15+	5	1345432	●
	Power screw M8.0 x 30.0 (only for A-SSM-S12-40.R.04)	15	11036880	●



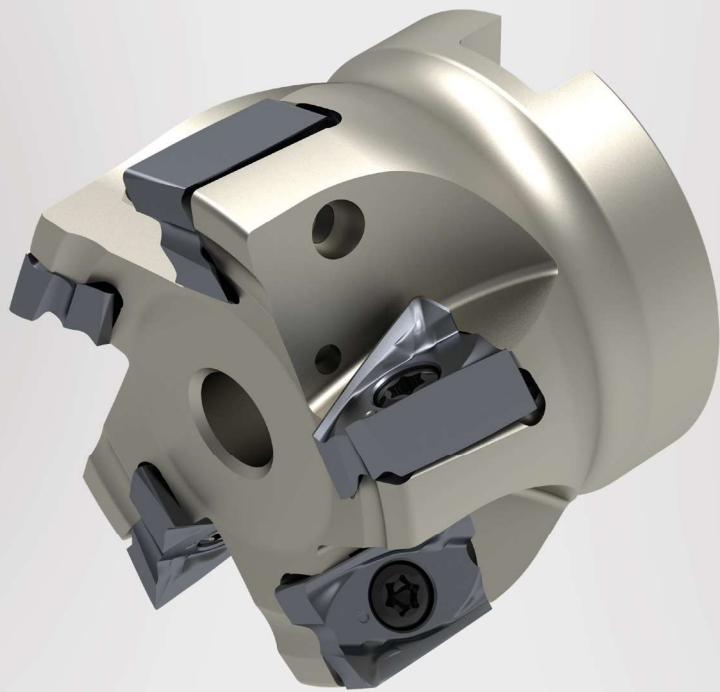
Cutting data SDKT12

Starting parameters:



Grades and materials:

				Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]	
P Steel	PC	PMK30C	220 – 60	0.12 – 0.3	10 – 0.1	
		PM35P				
M Stainless steel	MC	MP40P	200 – 60	0.08 – 0.2	10 – 0.1	
		SM35C				
K Cast iron	KC	K15C	320 – 100	0.1 – 0.25	10 – 0.1	
N Non-ferrous	NC	NK15S	< 2000	0.15 – 0.35	10 – 0.1	
S Heat resistant alloys	MC	SM35C	75 – 25	0.04 – 0.15	10 – 0.1	
S Titanium	MC	S35C				





Overview LNKU / LOKU

Application

- | | |
|--|--|
| 1) Face milling
 | 2) Angled milling
 |
| 3) Helical plunging
 | 4) Shoulder milling
 |
| 5) Slot milling
 | 6) Pocket milling
 |

Chipbreaker

PC: Steel – Cast iron*
MC: Stainless Steel – Exotic* – Titanium*
KC: Cast iron

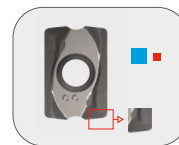
4 effective cutting edges



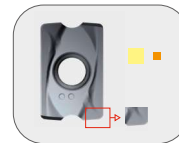
Customer benefits

- ▲ High precision 90° milling
- ▲ Low power consumption, maximum chip removal rate
- ▲ Chipbreaker optimised by FEM
- ▲ Soft cutting providing quiet machining and maximum spindle protection

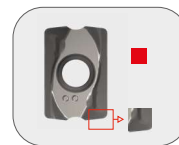
Which chipbreaker to use?



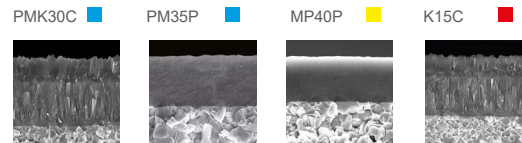
PC
 Strong cutting edge for general steel applications and hard conditions milling.



MC
 Sharp cutting edge for general stainless steel applications and for finishing in steels.



KC
 Strong cutting edge for cast iron applications.



* secondary application



Available range LNKU12 / LOKU 12

Insert	Designation	Chipbreaker	Material number	Available
	LNKU 120608ER-PC PMK30C	...-PC	12434604	●
	LNKU 120608ER-PC PM35P	...-PC	12158008	●
	LNKU 120608ER-MC MP40P	...-MC	12373789	●
	LNKU 120608ER-KC K15C	...-KC	14659156	●
	LOKU 120608ER-MC MP40P	...-MC	12373779	●
	LOKU 120608ER-SC SM35C	...-SC		○
	LOKU 120608ER-SC S35C	...-SC		○

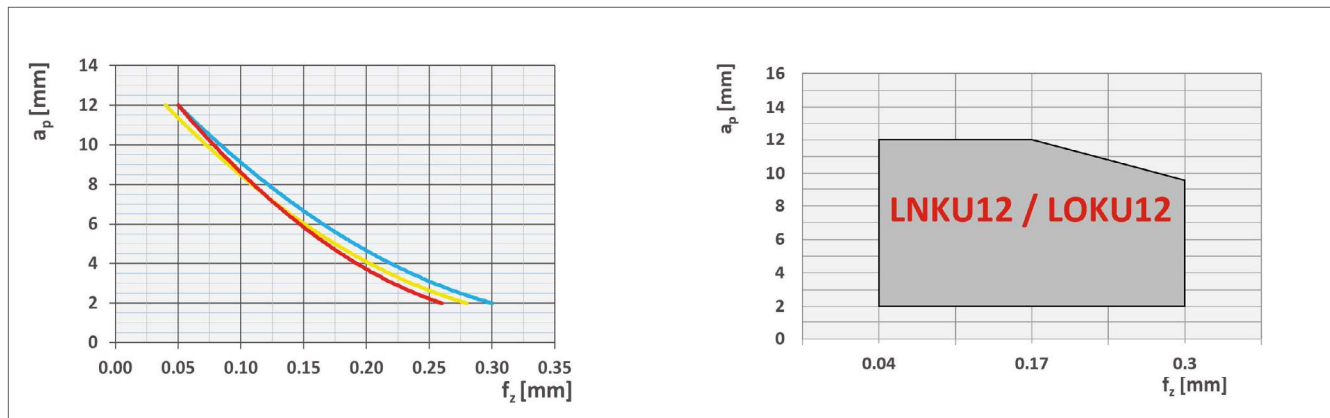
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-DSM-LO/LN12-40.R.04	40	4	14549248	●
	A-DSM-LO/LN12-50.R.05	50	5	12367555	●
	A-DSM-LO/LN12-63.R.06	63	6	12645968	●
	A-DSM-LO/LN12-80.R.07	80	7	12645971	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 11 – T15	5	11042274	●
	Power screw M10.0 x 31.0	20	11040298	●



Cutting data LNKU12 / LOKU 12

Starting parameters:



Grades and materials:

				Cutting data		
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.05 – 0.30	12 – 2.0
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.04 – 0.28	12 – 2.0
K	Cast iron	KC	K15C	320 – 100	0.05 – 0.26	12 – 2.0

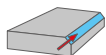
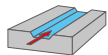
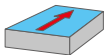




Overview HPKT... HPCT...

Application

- 1) Face milling 2) Slot milling 3) Chamfering



Chipbreaker

PC: Steel – Cast iron*

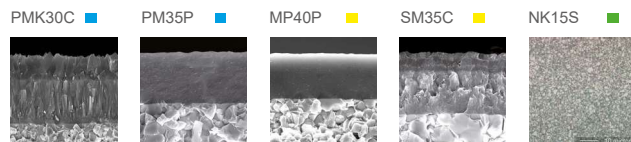
MC: Stainless Steel – Exotic* – Titanium*

NC: Aluminium and non-ferrous metals

6 effective cutting edges



Grades



Masterfinish

Extremely soft, spindle-friendly cut. The very positive cutting edge chipbreaker paired with the new chipbreaker designs revolutionizes milling on small to medium sized milling machines.



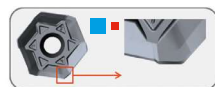
“Masterfinish technology”

Indexing 6 times



- ▲ Indexing of the insert without complete removal of the clamping screw is possible!
- ▲ Direct insert indexing saves valuable machine time.

Which chipbreaker to use?



PC

Strong cutting edge for general steel applications and hard conditions milling.



MC

Sharp cutting edge for general stainless steel applications and for finishing in steels.



NC

Extremely sharp cutting edge for aluminum and non-ferrous metals.

* secondary application



Available range HPKT... HPCT...

Insert	Designation	Chipbreaker	Material number	Available
	HPKT 0604AZER-PC PMK30C	...-PC	12193366	●
	HPKT 0604AZER-PC PM35P	...-PC	12193369	●
	HPKT 0604AZER-MC SM35C	...-MC	11526389	●
	HPCT 0604AZFR-NC NK15S	...-NC	14652610	●

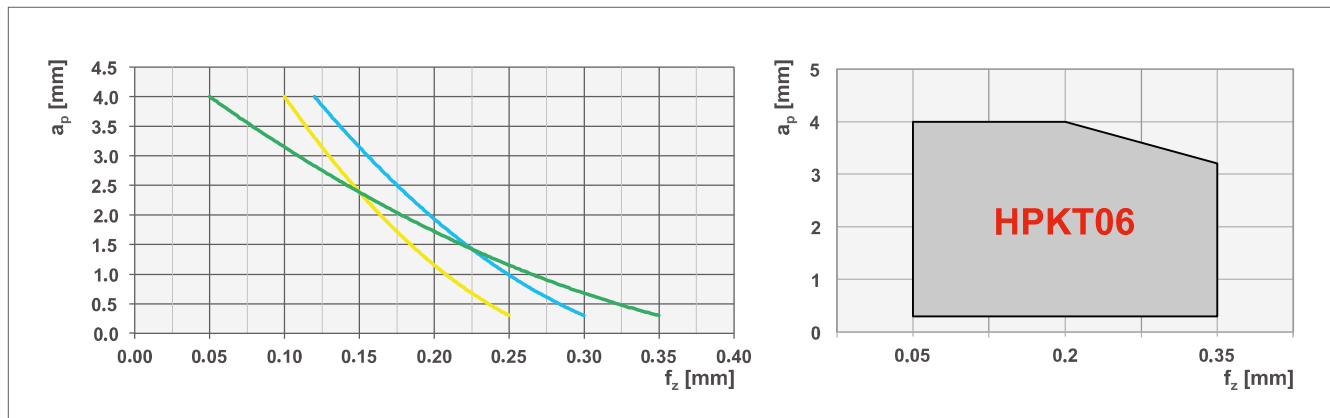
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
 	C-SSM-H06-40.R.04-B32-50-110	40	4	11520454	●
	A-SSM-H06-40.R.04	40	4	11520455	●
	A-SSM-H06-50.R.05	50	5	11520456	●
	A-SSM-H06-63.R.06	63	6	11520457	●
	A-SSM-H06-80.R.07	80	7	11520458	●
	A-SSM-H06-100.R.09	100	9	11520459	●
	A-SSM-H06-125.R.10	125	10	11520460	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
 	M4.0 x 11 – T15+	5	1345432	●
	Power screw M8.0 x 30.0 (only for A-SSM-H06-40.R.04)	15	11036880	●



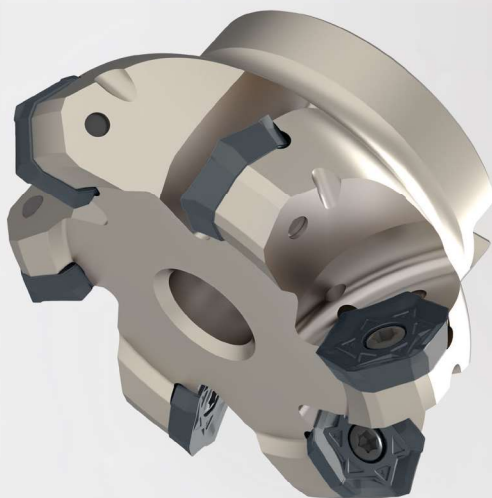
Cutting data HPKT... HPCT...

Starting parameters:



Grades and materials:

				Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]	
P	Steel	PC	PMK30C PM35P	220 – 60	0.12 – 0.3	4 – 0.3
M	Stainless steel	MC	SM35C	200 – 60	0.1 – 0.25	4 – 0.3
N	Non-ferrous	NC	NK15S	< 2000	0.05 – 0.35	4 – 0.3





Overview HOKT... HOCT...

Application

- 1) Face milling 2) Slot milling 3) Chamfering



Chipbreaker

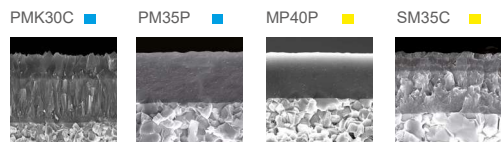
PC: Steel – Cast iron*

MC: Stainless Steel – Exotic* – Titanium*

6 effective cutting edges



Grades



Masterfinish

- ▲ Extremely soft, spindle-friendly cut. The very positive cutting edge chipbreaker paired with the new chipbreaker designs revolutionizes milling on small to medium sized milling machines.



“Masterfinish technology”

Indexing 6 times

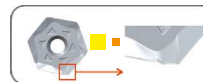


- ▲ Indexing of the insert without complete removal of the clamping screw is possible!
- ▲ Direct insert indexing saves valuable machine time.

Which chipbreaker to use?



PC
Strong cutting edge for general steel applications and hard conditions milling.



MC
Sharp cutting edge for general stainless steel applications and for finishing in steels.

* secondary application



Available range HOKT... HOCT...

Insert	Designation	Chipbreaker	Material number	Available
	HOKT 0604AZER-PC PMK30C	...-PC	11950674	●
	HOKT 0604AZER-PC PM35P	...-PC	11943817	●
	HOCT 0604AZER-MC MP40P	...-MC	14652624	●
	HOCT 0604AZER-MC SM35C	...-MC	12212264	●

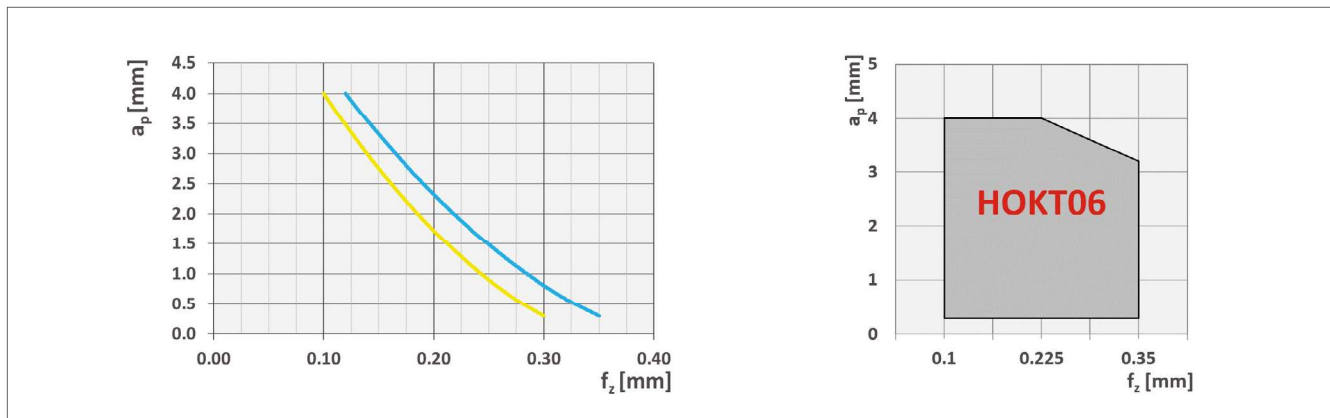
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
 	C-SSM-H06-40.R.04-B32-50-110	40	4	11520454	●
	A-SSM-H06-40.R.04	40	4	11520455	●
	A-SSM-H06-50.R.05	50	5	11520456	●
	A-SSM-H06-63.R.06	63	6	11520457	●
	A-SSM-H06-80.R.07	80	7	11520458	●
	A-SSM-H06-100.R.09	100	9	11520459	●
	A-SSM-H06-125.R.10	125	10	11520460	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
 	M4.0 x 11 – T15+	5	1345432	●
	Power screw M8.0 x 30.0 (only for A-SSM-H06-40.R.04)	15	11036880	●



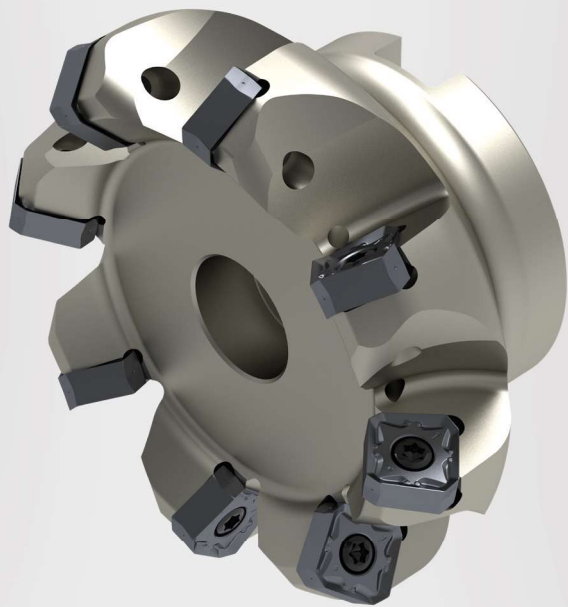
Cutting data HOKT... HOCT...

Starting parameters:



Grades and materials:

				Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]	
P Steel	PC	PMK30C	220 – 60	0.12 – 0.35	4 – 0.3	
		PM35P				
M Stainless steel	MC	MP40P	200 – 60	0.1 – 0.3	4 – 0.3	
		SM35C				

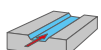




Overview SOKU

Application

- 1) Face milling 2) Slot milling 3) Chamfering



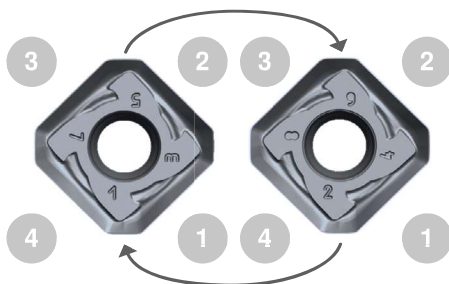
Chipbreaker

PC: Steel / Medium & roughing operations

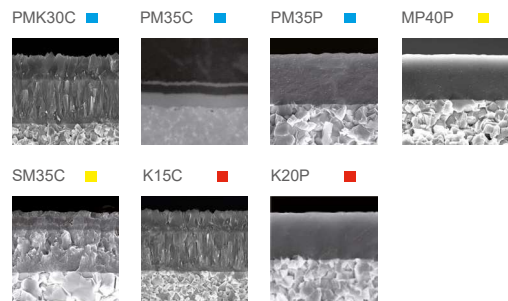
MC: Steel – Stainless Steel / Finishing

KC: Cast iron

Indexing 4 times and reversible

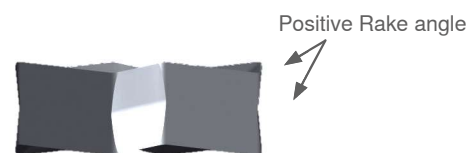


Grades



Customer benefits

- ▲ Masterfinish™ technology
- ▲ Double sided positive (positive rake angle)



Square double-sided insert!

Available in 2 dimensions

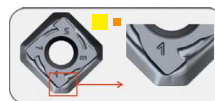


Which chipbreaker to use?



PC

Strong cutting edge for general steel applications and hard conditions milling.



MC

Sharp cutting edge for general stainless steel applications and for finishing in steels.



KC

Strong cutting edge for cast iron applications.



Available range SOKU12

Insert	Designation	Chipbreaker	Material number	Available
	SOKU 1205AZER-PC PMK30C	...-PC	12193374	●
	SOKU 1205AZER-PC PM35C	...-PC	12219854	●
	SOKU 1205AZER-PC PM35P	...-PC	12193377	●
	SOKU 1205AZER-MC MP40P	...-MC	11988963	●
	SOKU 1205AZER-MC SM35C	...-MC	11906808	●
	SOKU 1205AZER-KC K15C	...-KC		○
	SOKU 1205AZER-KC K20P	...-KC		○

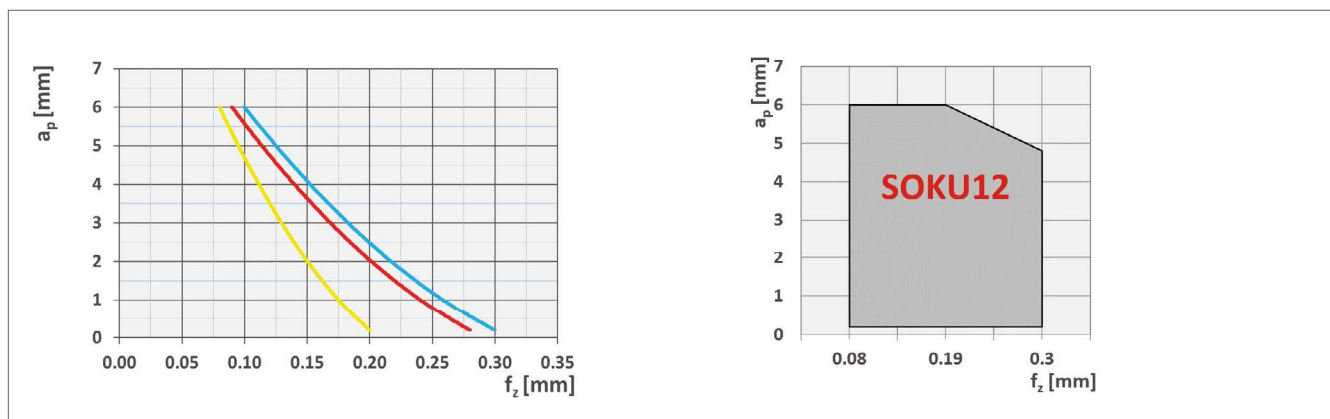
Body	Designation	Ø Milling cutter [mm]	z	Material number	Available
	A-DSM-S12-40.R.04	40	4	11939775	●
	A-DSM-S12-50.R.05	50	5	11909357	●
	A-DSM-S12-63.R.06	63	6	11939774	●
	A-DSM-S12-80.R.08	80	8	11939772	●
	A-DSM-S12-100.R.10	100	10	11939771	●
	A-DSM-S12-125.R.12	125	12	11939769	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 11.0 – T15	5	11042274	●



Cutting data SOKU12

Starting parameters:

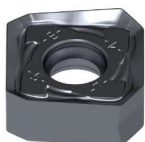


Grades and materials:

				Cutting data		
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.1 – 0.3	6 – 0.2
			PM35C			
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.08 – 0.2	6 – 0.2
			SM35C			
K	Cast iron	KC	K15C	320 – 100	0.08 - 0.45	6 – 0.2
			K20P			



Available range SOKU15

Insert	Designation	Chipbreaker	Material number	Available
	SOKU 1505AZER-PC PMK30C	...-PC	12237265	●
	SOKU 1505AZER-PC PM35P	...-PC	12193379	●
	SOKU 1505AZER-PC PM35C	...-PC	12219850	●
	SOKU 1505AZER-MC MP40P	...-MC	11979060	●
	SOKU 1505AZER-MC SM35C	...-MC	11526409	●
	SOKU 1505AZER-KC K15C	...-KC	12299379	●
	SOKU 1505AZER-KC K20P	...-KC	12145626	●

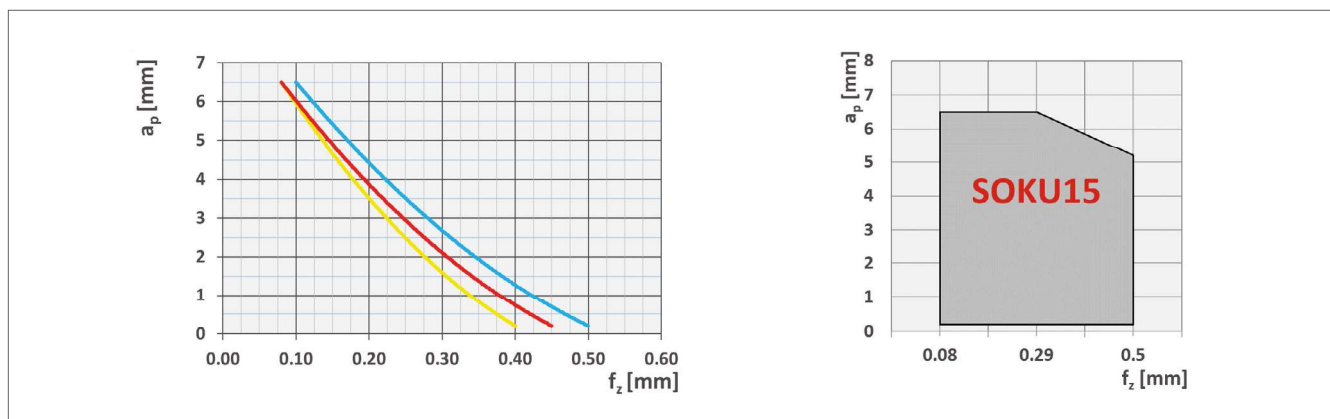
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-DSM-S15-40.R.04	40	4	11520461	●
	A-DSM-S15-50.R.04	50	4	11520462	●
	A-DSM-S15-63.R.05	63	5	11520463	●
	A-DSM-S15-80.R.06	80	6	11520464	●
	A-DSM-S15-100.R.07	100	7	11520465	●
	A-DSM-S15-125.R.08	125	8	11520466	●
	A-DSM-S15-160.R.10	160	10	11567193	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.5 x 13.0 – T20+	5	1345431	●
	Power screw M8.0 x 30.0 (only for A-DSM-S15.40.R.04)	15	11036880	●



Cutting data SOKU15

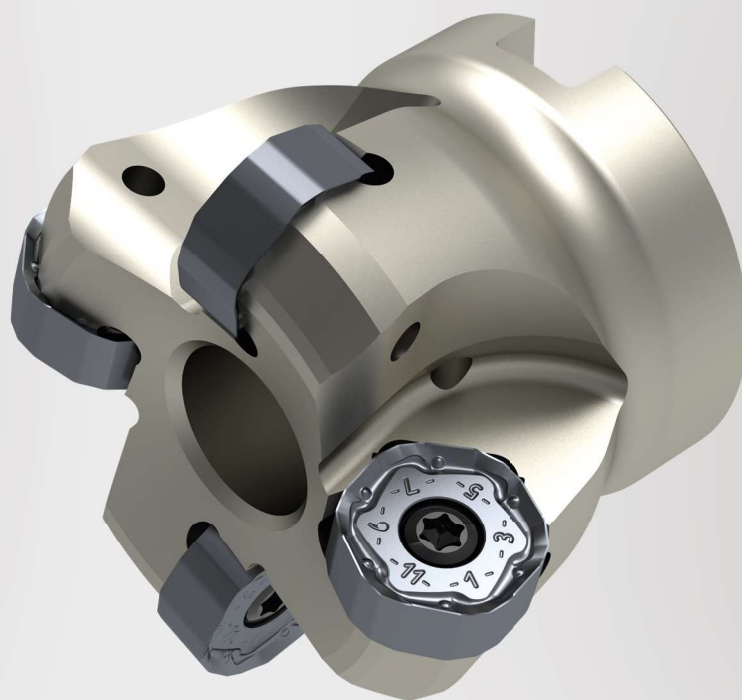
Starting parameters:



Grades and materials

Cutting data

Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.1 – 0.5	6.5 – 0.2
			PM35C			
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.08 – 0.4	6.5 – 0.2
			SM35C			
K	Cast iron	KC	K15C	320 – 100	0.08 – 0.45	6.5 – 0.2
			K20P			

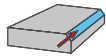
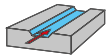




Overview HNKU / HOKU

Application

- 1) Face milling 2) Slot milling 3) Chamfering

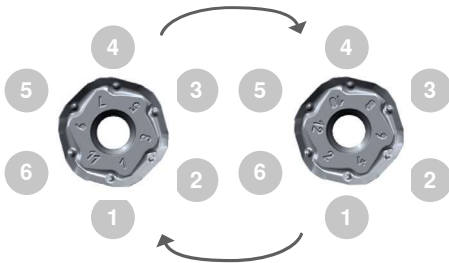


Chipbreaker

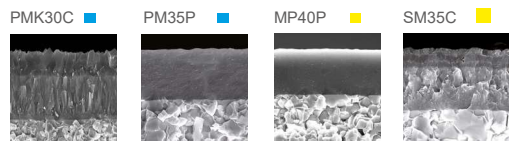
PC: Steel – Cast iron*

MC: Stainless Steel – Exotic* – Titanium*

Indexing 6 times and reversible



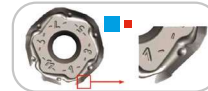
Grades



Customer benefits

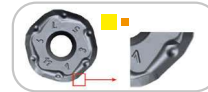
- ▲ Masterfinish geometry
- ▲ Maximised economy thanks to 12 cutting edges.

Which chipbreaker to use?



PC

Strong cutting edge for general steel applications and hard conditions milling.



MC

Sharp cutting edge for general stainless steel applications and for finishing in steels.

* secondary application



Available range HNKU

Insert	Designation	Chipbreaker	Material number	Available
	HNKU 0806AZER-PC PMK30C	...-PC	12193383	●
	HNKU 0806AZER-PC PM35P	...-PC	12193384	●
	HNKU 0806AZER-MC MP40P	...-MC		○
	HNKU 0806AZER-MC SM35C	...-MC	11887368	●

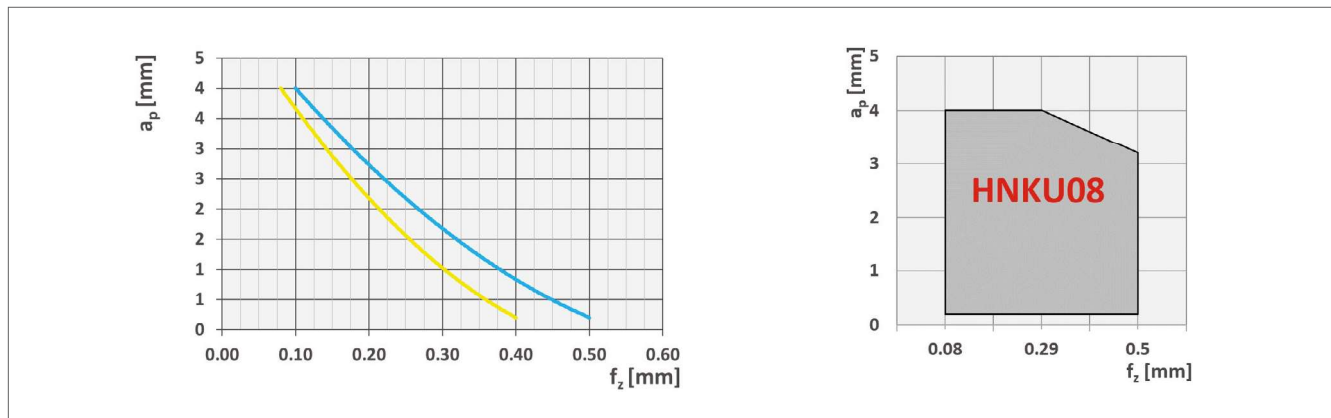
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-DSM-H08-40.R.04	40	4	11590448	●
	A-DSM-H08-50.R.04	50	4	11561804	●
	A-DSM-H08-63.R.05	63	5	11561802	●
	A-DSM-H08-80.R.06	80	6	11561800	●
	A-DSM-H08-100.R.08	100	8	12152205	●
	A-DSM-H08-125.R.09	125	9	12152207	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 11.0 – T15+	5	1345432	●



Cutting data HNKU

Starting parameters:



Grades and materials:

			Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P Steel	PC	PMK30C	220 – 60	0.1 – 0.5	4 – 0.2
		PMK35P			
M Stainless steel	MC	MP40P	200 – 60	0.08 – 0.4	4 – 0.2
		SM35C			



Available range HOKU

Insert	Designation	Chipbreaker	Material number	Available
	HOKU 0806AZER-PC PMK30C	...-PC	12623510	●
	HOKU 0806AZER-PC PM35P	...-PC	12623511	●
	HOKU 0806AZER-MC MP40P	...-MC	12630187	●
	HOKU 0806AZER-MC SM35C	...-MC	12623507	●

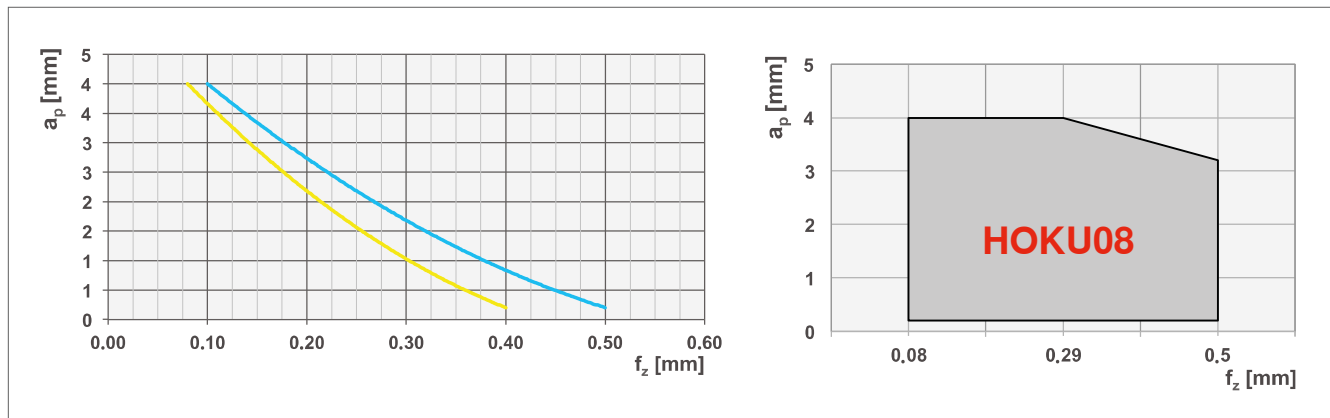
Body	Designation	Ø Milling cutter [mm]	z	Material number	Available
	A-DSM-H08-40.R.04	40	4	11590448	●
	A-DSM-H08-50.R.04	50	4	11561804	●
	A-DSM-H08-63.R.05	63	5	11561802	●
	A-DSM-H08-80.R.06	80	6	11561800	●
	A-DSM-H08-100.R.08	100	8	12152205	●
	A-DSM-H08-125.R.09	125	9	12152207	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 11.0 – T15+	5	1345432	●



Cutting data HOKU

Starting parameters:



Grades and materials:

Grades and materials:				Cutting data		
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.1 – 0.5	4 – 0.2
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.08 – 0.4	4 – 0.2
			SM35C			





Overview RPMX... RDHX... RPHX... RDHW...

Application

- | | |
|------------------------|-------------------------|
| 1) Face milling
 | 2) Angled milling
 |
| 3) Slot milling
 | 4) Pocket milling
 |
| 5) Profile milling
 | 6) Helical plunging
 |
| 7) Plunge milling
 | 8) Turn milling
 |

Chipbreaker

PC: Steel – Cast iron*

MC: Stainless Steel

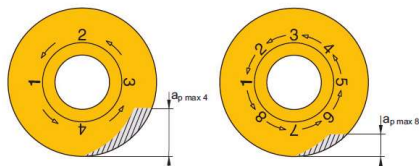
SC: Exotic – Titanium*

NC: Aluminium and non-ferrous metals

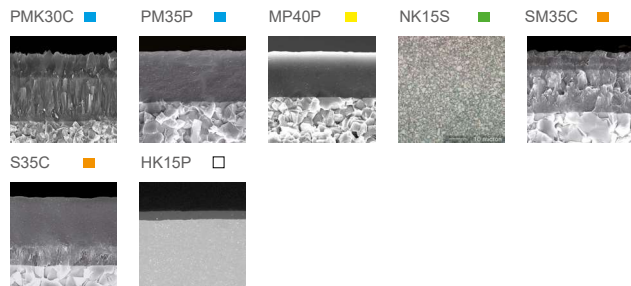
HC: Reinforced for hard materials

Indexing 4 or 8 times

8 facets for 4 or 8 indexing according to your d.o.c.



Grades



* secondary application

Customer benefits

- ▲ Indexing of the insert without complete removal of the clamping screw is possible!
- ▲ Direct insert indexing saves valuable machine time.



Available in 3 dimensions

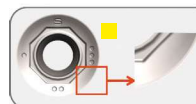


Which chipbreaker to use?



PC

Strong cutting edge for general steel applications and hard conditions milling.



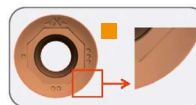
MC

Sharp cutting edge for general stainless steel applications and for finishing in steels.



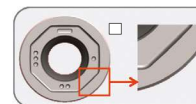
NC

Extremely sharp cutting edge for aluminum and non-ferrous metals.



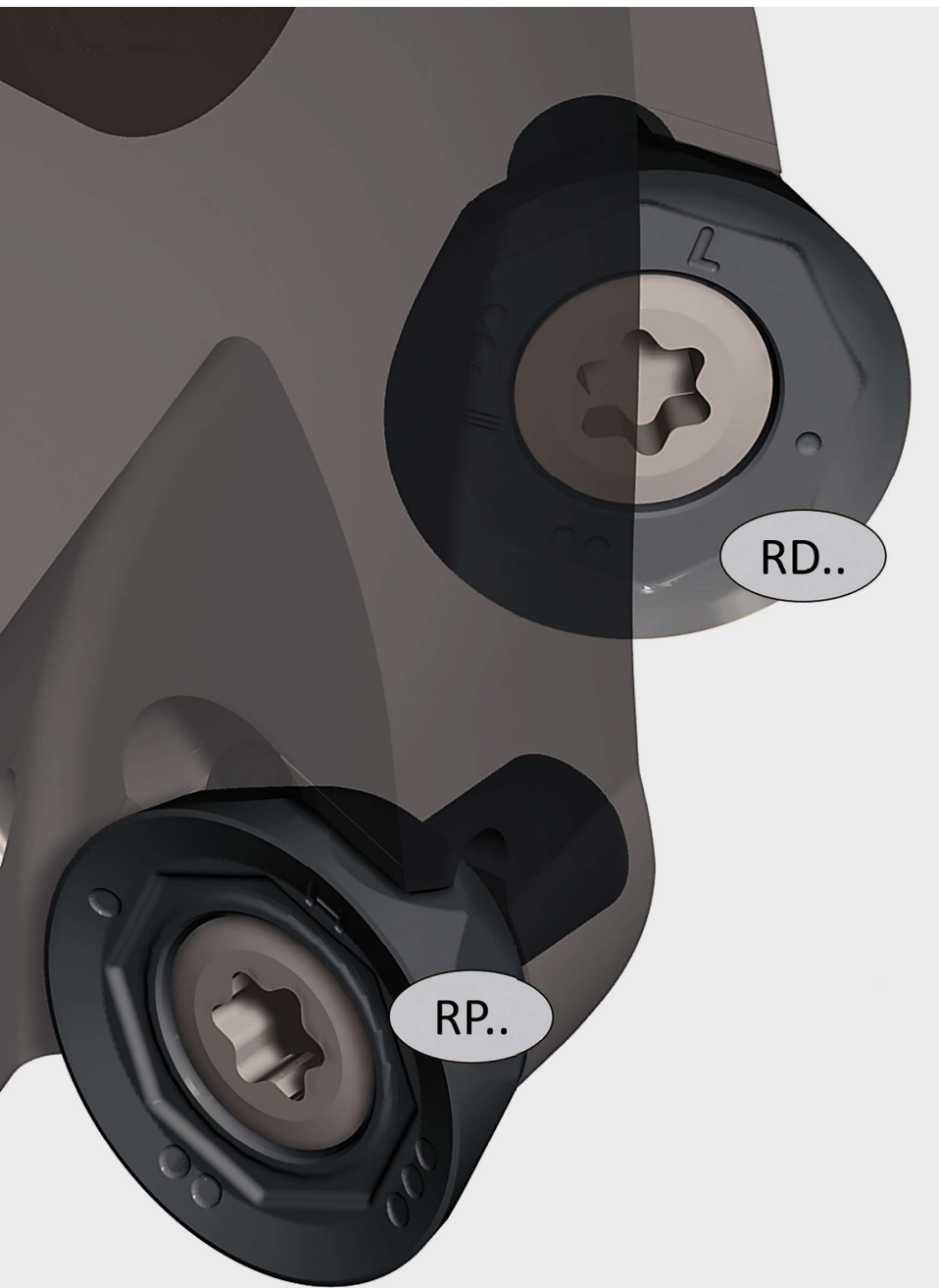
SC

Stable cutting edge for dedicated exotic materials and titanium.



HC

Strong reinforced cutting edge for hard material.



RD..

RP..



Overview RPMX... RDHX... RPHX... RDHW...

Flexibility – One tool for several round inserts

Optimised clearance angles for high performance milling operations.

11° (RP...): for Steel. Stainless steel. Cast iron and Exotic materials

15° (RD...): for Hard materials and non-ferrous metals.



RP...



RD...

NEW! Two different clearances and only ONE milling tool

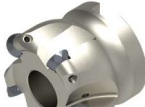
OPTION: Adapted clearance angles are also available on request



ROMX 1204 (1° to 16°)



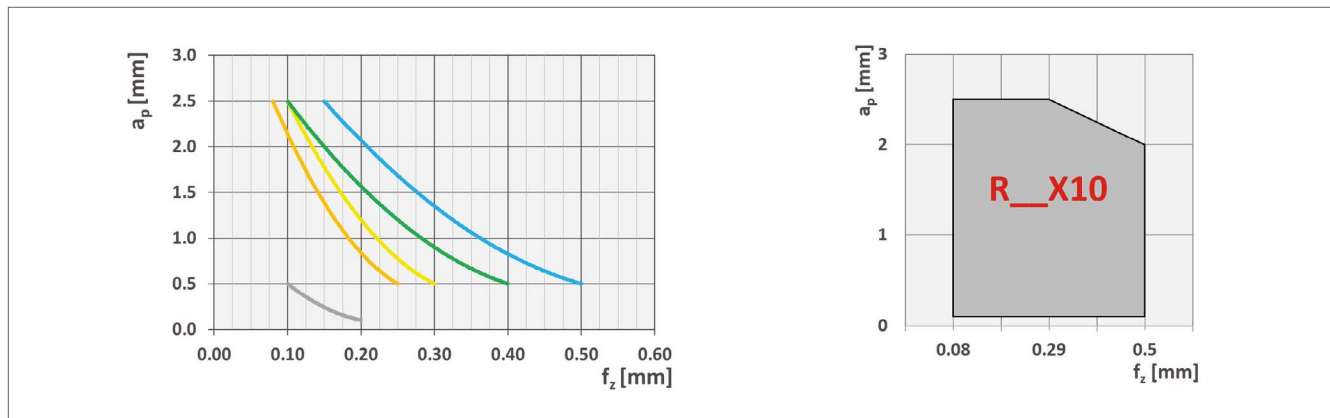
Available range R10

Insert	Designation	Chipbreaker	Material number	Available	
	RPMX 10T3MO-PC PMK30C	...-PC	11978869	●	
	RPMX 10T3MO-PC PM35P	...-PC	11978872	●	
	RPMX 10T3MO-MC PM40P	...-MC	11978876	●	
	RPMX 10T3MO-MC SM35C	...-MC	12193387	●	
	RDHX 10T3MO-NC NK15S	...-NC	14652613	●	
	RPHX 10T3MO-SC SM35C	...-SC	11678477	●	
	RPHX 10T3MO-SC S35C	...-SC	11678481	●	
	RDHW 10T3MO-HC HK15P	...-HC	11716131	●	
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
   	C-SSM-R10-20.R.02-A-50-102	20	2	11720312	●
	C-SSM-R10-20.R.02-A-50-165	20	2	11720313	●
	C-SSM-R10-25.R.03-A-60-116	25	3	11720314	●
	C-SSM-R10-25.R.03-A-60-165	25	3	11720315	●
	C-SSM-R10-32.R.04-A-70-130	32	4	11720318	●
	C-SSM-R10-32.R.04-A-70-165	32	4	11720321	●
	G-SSM-R10-20.R.02	20	2	11879525	○
	G-SSM-R10-25.R.03	25	3	11879526	○
	G-SSM-R10-32.R.04	32	4	11879532	●
	G-SSM-R10-35.R.04	35	4	14653979	●
	A-SSM-R10-40.R.04	40	4	11718403	●
	A-SSM-R10-42.R.05	42	5	14653976	●
	A-SSM-R10-50.R.05	50	5	11720322	●
Spare parts	Designation	Torque moment [Nm]	Material number	Available	
 	M3.0 x 7.5 – T10+	2	11689894	●	
	Power screw M8.0 x 30.0 (for A-SSM-R10-40.R.04 and for A-SSM-R10-42.R.04)	15	11036880	●	



Cutting data R10

Starting parameters:



Grades and materials:

				Cutting data		
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C PM35P	220 – 60	0.15 – 0.5	2.5 – 0.5
M	Stainless steel	MC	MP40P SM35C	200 – 60	0.1 – 0.3	2.5 – 0.5
N	Non-ferrous	NC	NK15S	< 2000	0.1 – 0.4	2.5 – 0.5
S	Heat-resistant alloys	SC	SM35C	75 – 25	0.08 – 0.25	2.5 – 0.5
S	Titanium	SC	S35C	75 – 25	0.08 – 0.25	2.5 – 0.5
H	Hard materials	HC	HK15P	180 – 100	0.1 – 0.2	0.5 – 0.1



Recommended!

$\varnothing$ [mm]	4 times		8 times
	a_p [mm]	$a_{p \max}$ [mm]	$a_{p \max}$ [mm]
10	2.5	4.5	1.4
12	3.0	5.5	1.7
16	4.0	7.5	2.3



Available range R12

Insert	Designation	Chipbreaker	Material number	Available
	RPMX 1204MO-PC PMK30C	...-PC	11979003	●
	RPMX 1204MO-PC PM35P	...-PC	11979006	●
	RPMX 1204MO-MC PM40P	...-MC	11979015	●
	RPMX 1204MO-MC SM35C	...-MC	12193389	●
	RDHX 1204MO-NC NK15S	...-NC	14652616	●
	RPHX 1204MO-SC SM35C	...-SC	11666768	●
	RPHX 1204MO-SC S35C	...-SC	11666769	●
	RDHW 1204MO-HC HK15P	...-HC	11716128	●

Body	Designation	Ø Milling cutter [mm]	z	Material number	Available
	C-SSM-R12-25.R.02-A-30-86	25	2	11720305	●
	C-SSM-R12-25.R.02-A-60-116	25	2	11720307	●
	C-SSM-R12-32.R.03-A-40-100	32	3	11720308	●
	C-SSM-R12-32.R.03-A-70-130	32	3	11720310	●
	G-SSM-R12-25.R.02	25	2	12156946	●
	G-SSM-R12-35.R.03	35	3	14653989	●
	A-SSM-R12-40.R.04	40	4	11596003	●
	A-SSM-R12-42.R.04	42	4	14653984	●
	A-SSM-R12-50.R.05	50	5	11667287	●
	A-SSM-R12-52.R.05	52	5	14427687	●
	A-SSM-R12-63.R.06	63	6	11667291	●
	A-SSM-R12-66.R.06	66	6	14653987	●
	A-SSM-R12-80.R.08	80	8	11707446	●
	A-SSM-R12-100.R.10	100	10	11707445	●

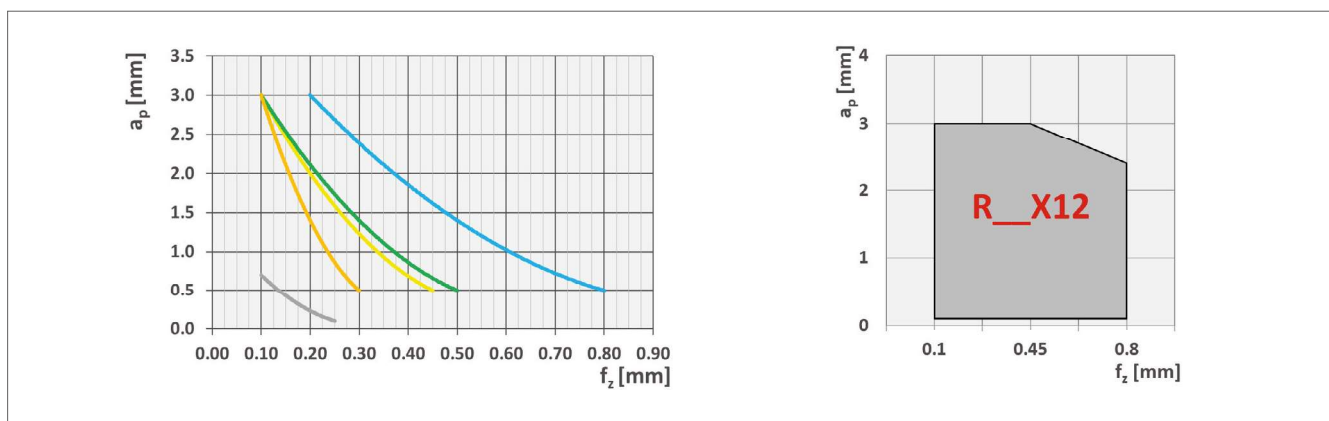
Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 8.5 – T15 (only for C- and G-)	5	11037484	●
	M4.0 x 11.0 – T15+ (only for A-)	5	1345432	●
	Power screw M8.0 x 30.0 (for A-SSM-R12-40.R.04 and for A-SSM-R12-42.R.04)	15	11036880	●

● available from stock, ○ available upon request



Cutting data R12

Starting parameters:



Grades and materials:

				Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]	
P Steel	PC	PMK30C PM35C	220 – 60	0.2 – 0.8	3 – 0.5	
M Stainless steel	MC	MP40P SM35C	200 – 60	0.1 – 0.45	3 – 0.5	
N Non-ferrous	NC	NK15C	< 2000	0.1 – 0.5	3 – 0.5	
S Heat-resistant alloys	SC	SM35C	75 – 25	0.1 – 0.3	3 – 0.5	
S Titanium	SC	S35C				
H Hard materials	HC	HK15P	180 – 100	0.1 – 0.25	0.7 – 0.1	

Recommended!

 $\varnothing$ [mm]	4 times		8 times
	a_p [mm]	$a_{p \max}$ [mm]	$a_{p \max}$ [mm]
10	2.5	4.5	1.4
12	3.0	5.5	1.7
16	4.0	7.5	2.3



Available range R16

Insert	Designation	Chipbreaker	Material number	Available
	RPMX 1605MO-PC PMK30C	...-PC	11979017	●
	RPMX 1605MO-PC PM35C	...-PC	11979021	●
	RPMX 1605MO-MC MP40P	...-MC	11979026	●
	RPMX 1605MO-MC SM35C	...-MC	12193449	●
	RDHX 1605MO-NC NK15S	...-NC		○
	RPHX 1605MO-SC SM35C	...-SC	11670391	●
	RPHX 1605MO-SC S35C	...-SC	11670392	●
	RDHW 1605MO- HC HK15P	...-HC		○

Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-SSM-R16-50.R.03	50	3	11739864	●
	A-SSM-R16-52.R.04	52	4	14653992	●
	A-SSM-R16-63.R.05	63	5	11739862	●
	A-SSM-R16-66.R.05	66	5	14653995	●
	A-SSM-R16-80.R.06	80	6	11739860	●
	A-SSM-R16-100.R.07	100	7	11739857	●
	A-SSM-R16-125.R.08	125	8	11739853	●

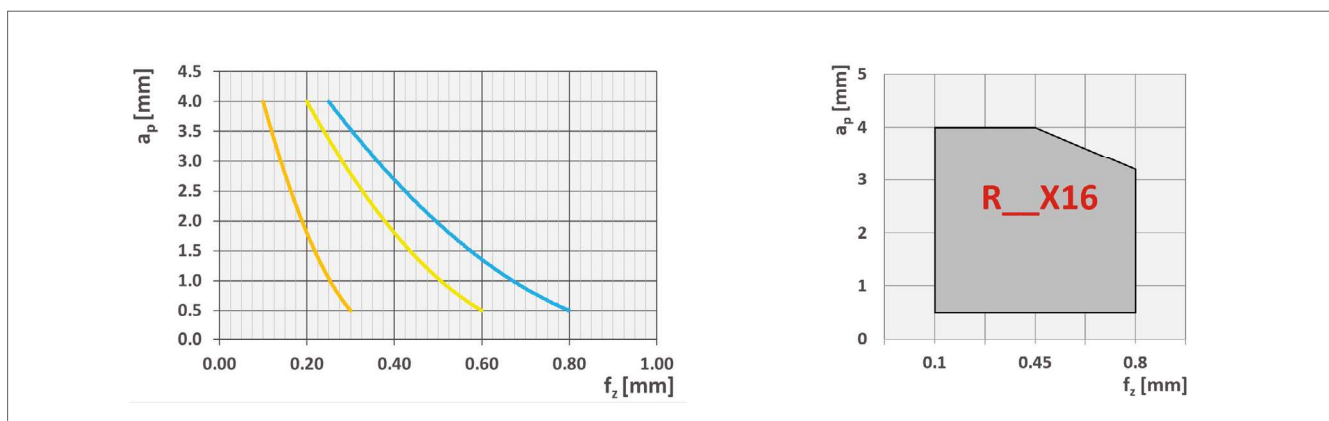
Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.5 x 13.0 – T20+	5	1345431	●
	Power screw M10.0 x 31.0 (for A-SSM-R16-50.R.03 and for A-SSM-R16-52.R.04)	20	11040298	●

● available from stock, ○ available upon request



Cutting data R16

Starting parameters:



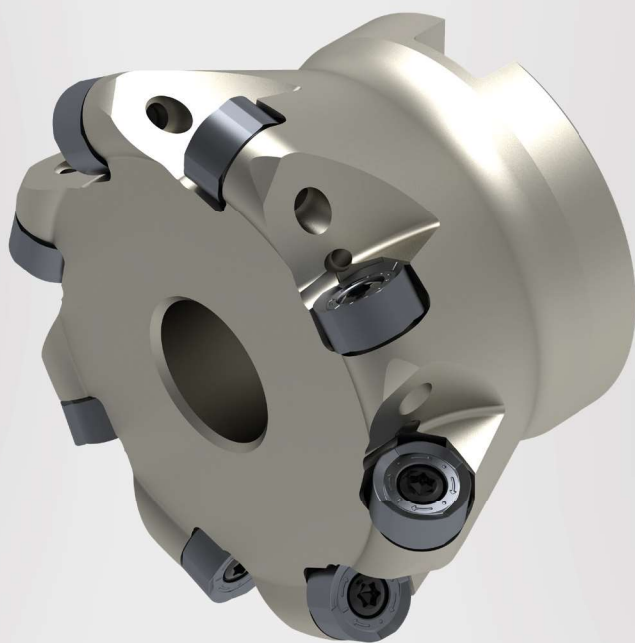
Grades and materials:

				Cutting data		
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.25 – 0.8	4 – 0.5
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.2 – 0.6	4 – 0.5
			SM35C			
S	Heat-resistant alloys	SC	SM35C	75 – 25	0.1 – 0.3	4 – 0.5
S	Titanium	SC	S35C			



Recommended!

$\varnothing$ [mm]	4 times		8 times
	a_p [mm]	$a_{p \max}$ [mm]	$a_{p \max}$ [mm]
10	2.5	4.5	1.4
12	3.0	5.5	1.7
16	4.0	7.5	2.3





Overview RNKU... ROHU...

Application

1) Face milling



2) Slot milling

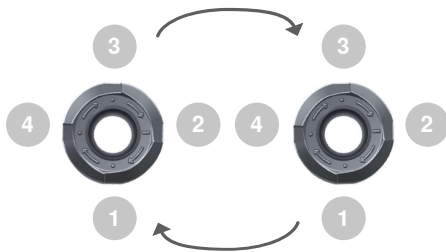


Chipbreaker

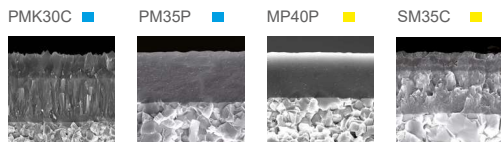
PC: Steel – Cast iron*

MC: Stainless Steel

Indexing 4 times and reversible



Grades



Customer benefits

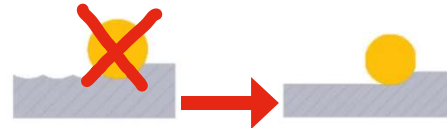
- ▲ Indexing of the insert without complete removal of the clamping screw is possible!
- ▲ Direct insert indexing saves valuable machine time.



Available in 2 dimensions



Best finishing



Cutting parameters: v_c 280m/ min. f 0.4 mm. a_p 0.5 mm

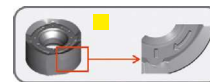
- ▲ The alliance of a round insert for the robustness and a surfacing insert for the finishing. The double sided insert has 4 minor cutting edges per side for a best surface finish.
- ▲ For example
 - Ra with a standard round insert: $3 \mu\text{m}$
 - Ra with the double-sided round insert: $1 \mu\text{m}$

Which chipbreaker to use?



PC

Strong cutting edge for general steel applications and hard conditions milling.

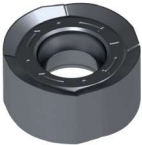


MC

Sharp cutting edge for general stainless steel applications and for finishing in steels.



Available range R12

Insert	Designation	Chipbreaker	Material number	Available
	RNKU 1204MOER-PC PMK30C	...-PC	11979067	●
	RNKU 1204MOER-PC PM35P	...-PC	11979068	●
	ROHU 1204MOER-MC MP40P	...-MC	12376587	●
	ROHU 1204MOER-MC SM35C	...-MC	12193450	●

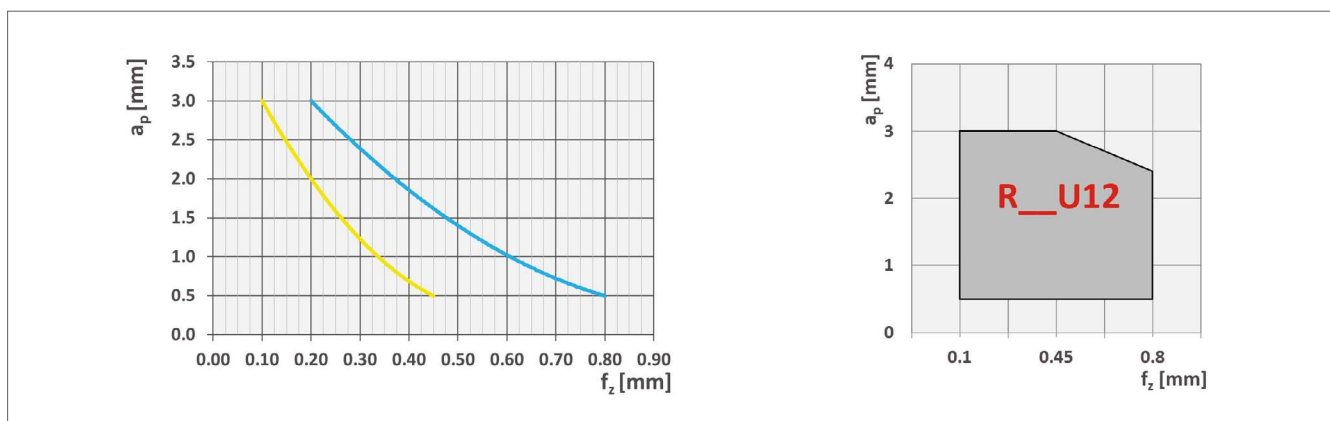
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
 	C-DSM-R12-32.R.03-A-70-131	32	3	11775976	●
	C-DSM-R12-32.R.03-A-70-165	32	3	11984880	●
	A-DSM-R12-40.R.04	40	4	11718939	●
	A-DSM-R12-50.R.05	50	5	11775978	●
	A-DSM-R12-63.R.06	63	6	11775977	●
	A-DSM-R12-80.R.08	80	8	11984879	●
	A-DSM-R12-100.R.10	100	10	11984878	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
 	Screw M4.0 x 11.0 – T15+	5	1345432	●
	Power screw M8.0 x 30.0 (only for A-DSM-R12-40.R.04)	15	11036880	●



Cutting data R12

Starting parameters:



Grades and materials:

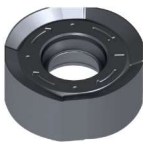
				Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]	
P Steel	PC	PMK30C	220 – 60	0.2 – 0.8	3 – 0.5	
		PM35P				
M Stainless steel	MC	MP40P	200 – 60	0.1 – 0.45	3 – 0.5	
		SM35C				

Recommended!

 $\varnothing$ [mm]	4 times		8 times
	a_p [mm]	$a_{p \max}$ [mm]	$a_{p \max}$ [mm]
12	3.0	5.5	1.7
16	4.0	7.5	2.3



Available range R16

Insert	Designation	Chipbreaker	Material number	Available
	RNKU 1605MOER-PC PMK30C	...-PC	12193454	●
	RNKU 1605MOER-PC PM35P	...-PC	12193465	●
	ROHU 1605MOER-MC MP40P	...-MC	14652625	●
	ROHU 1605MOER-MC SM35C	...-MC	12193480	●

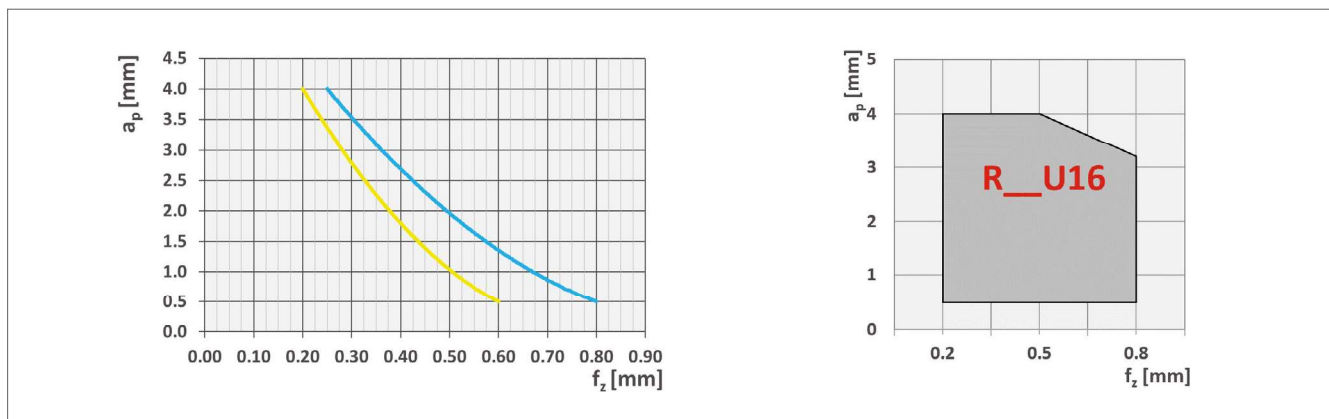
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-DSM-R16-50.R.03	50	3		○
	A-DSM-R16-63.R.05	63	5	11928824	●
	A-DSM-R16-80.R.06	80	6		○
	A-DSM-R16-100.R.07	100	7		○
	A-DSM-R16-125.R.08	125	8		○

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.5 x 13.0 – T20	5	188399	●
	Power screw M10.0 x 31.0 (only for A-DSM-R16-50.R.03)	20	11040298	●



Cutting data R16

Starting parameters:



Grades and materials:

			Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P Steel	PC	PMK30C	220 – 60	0.25 – 0.8	4 – 0.5
		PM35P			
M Stainless steel	MC	MP40P	200 – 60	0.2 – 0.6	4 – 0.5
		SM35C			

Recommended!

 $\varnothing$ [mm]	4 times		8 times
	a_p [mm]	$a_{p \max}$ [mm]	$a_{p \max}$ [mm]
12	3.0	5.5	1.7
16	4.0	7.5	2.3





Overview XPLT... XDLT... XDLX... XOLT...

Application

- | | |
|--|--|
| 1) Face milling
 | 2) Angled milling
 |
| 3) Helical plunging
 | 4) Plunge milling
 |
| 5) Profile milling
 | 6) Pocket milling
 |
| 7) Slot milling
 | |

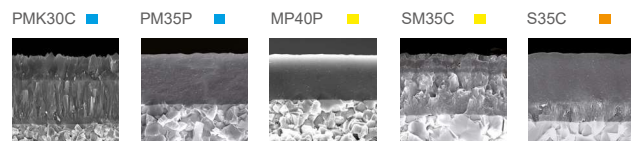
Chipbreaker

PC: Steel – Cast iron*
MC: Stainless Steel – Titanium*

4 effective cutting edges



Grades



Customer benefits

- ▲ With feed rates up to 3 mm / tooth and closely pitched tools, very high chip removal rates are achieved.
- ▲ Maximal tool life thanks to HyperCoat coating.
- ▲ Maximised economy thanks to 4 cutting edges.
- ▲ Reduced machining noise and vibration, light cutting geometries.
- ▲ Flexibility thanks to coolant holes with minimum quantity lubrication design.

Available in 3 dimensions



Which chipbreaker to use?



PC

Strong cutting edge for general steel applications and hard conditions milling.



MC

Sharp cutting edge for general stainless steel applications and for finishing in steels.



Available range HFC07

Insert	Designation	Chipbreaker	Material number	Available
	XPLT 070305SR-PC PMK30C	...-PC	12193481	●
	XPLT 070305SR-PC PM35P	...-PC	12193482	●
	XPLT 070305ER-MC MP40P	...-MC	14652649	●
	XPLT 070305ER-MC SM35C	...-MC	11869773	●
	XPLT 070305ER-MC S35C	...-MC	11869775	●

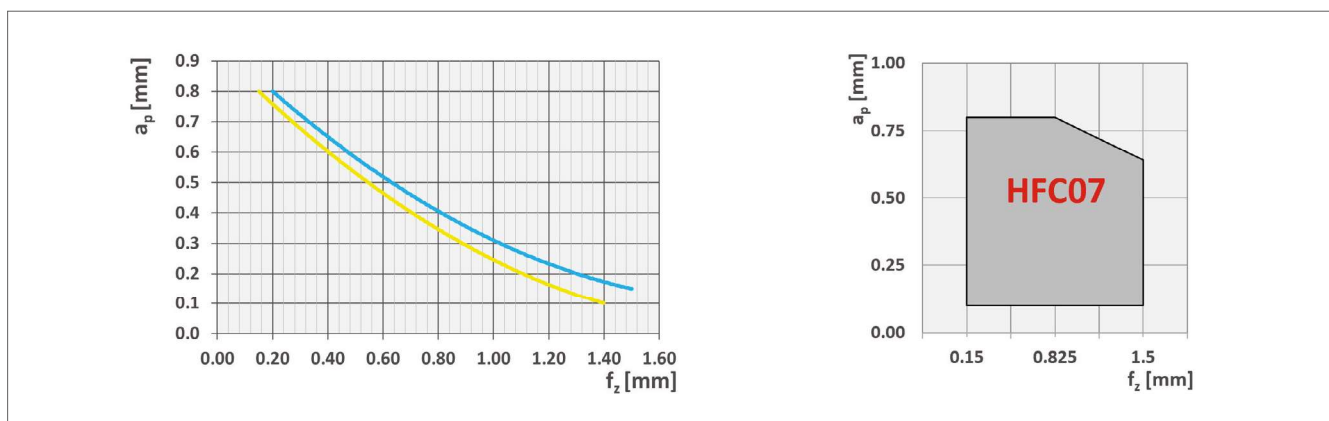
Body	Designation	Ø Milling cutter [mm]	z	Material number	Available
 	C-SSM-HFC07-16.R.02-A-50-200	16	2	11919179	●
	C-SSM-HFC07-20.R.03-A-50-200	20	3	11919180	●
	C-SSM-HFC07-25.R.04-A-50-200	25	4	11919182	●
	G-SSM-HFC07-16.R.02	16	2	11919183	●
	G-SSM-HFC07-20.R.03	20	3	11919184	●
	G-SSM-HFC07-25.R.04	25	4	11919185	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M2.5x5.0 – T08	1.2	76913	●



Cutting data HFC07

Starting parameters:



Grades and materials:

				Cutting data	
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P Steel	PC	PMK30C	220 – 60	0.2 – 1.5	0.8 – 0.15
		PM35P			
M Stainless steel	MC	MP40P	200 – 60	0.15 – 1.4	0.8 – 0.1
		SM35C			
		S35C			



Available range HFC10 – XDLT

Insert	Designation	Chipbreaker	Material number	Available
	XDLT 10T308SR-PC PMK30C	...-PC	12193485	●
	XDLT 10T308SR-PC PM35P	...-PC	12193487	●
	XDLT 10T308ER-MC MP40P	...-MC	14652626	●
	XDLT 10T308ER-MC SM35C	...-MC	11940752	●
	XDLT 10T308ER-MC S35C	...-MC	11940753	●

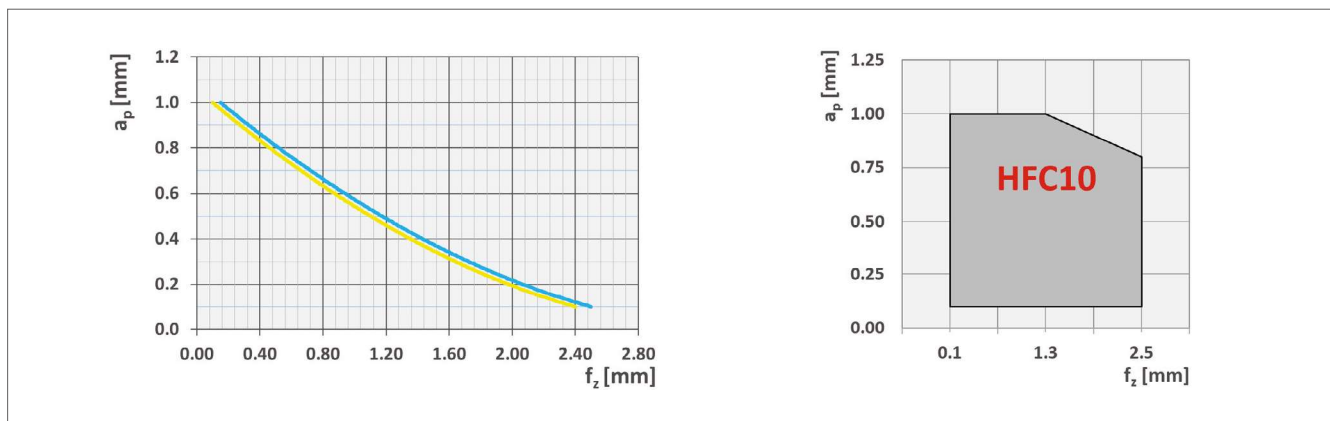
Body	Designation	Ø Milling cutter [mm]	z	Material number	Available
 	C-SSM-HFC10-25.R.03-A-50-125	25	3		○
	C-SSM-HFC10-25.R.03-A-50-225	25	3	11536252	●
	A-SSM-HFC10-40.R.04	40	4	11536253	●
	A-SSM-HFC10-50.R.05	50	5	11536255	●
	A-SSM-HFC10-63.R.06	63	6	11536256	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M3.5 x 7.2 – T15 (only for C-)	3.2	54976	●
	M3.5 x 8.6 – T15 (only for A-)	3.2	165795	●
	Power screw M8.0 x 30.0 (only for A-SSM-HFC-40.R.04)	15	11036880	●



Cutting data HFC10 – XDLT

Starting parameters:



Grades and materials:

				Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]	
P Steel	PC	PMK30C	220 – 60	0.15 – 2.5	1 – 0.1	
		PM35P				
M Stainless steel	MC	MP40P	200 – 60	0.1 – 2.4	1 – 0.1	
		SM35C				
		S35C				



Available range HFC10 – XDLX

Your advantages / benefits

- ▲ Reduced machining noise and vibration, light cutting geometry
- ▲ Maximized economy thanks to 4 cutting edges
- ▲ Same milling body as previous range
- ▲ Increased productivity
- ▲ Tool life increased



Insert	Designation	Chipbreaker	Material number	Available
	XDLX 10T308SR-PC PMK30C	...-PC	12308829	●
	XDLX 10T308SR-PC PM35P	...-PC	12248334	●
	XDLX 10T308SR-MC MP40P	...-MC	14652628	●
	XDLX 10T308SR-MC SM35C	...-MC	12188504	●

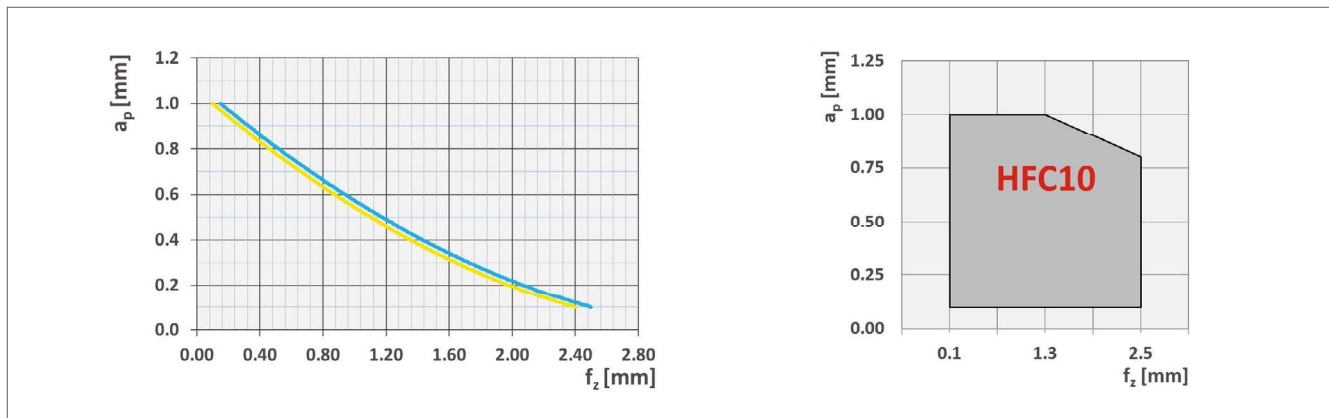
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-HFC10-25.R.03-A-50-125	25	3		○
	C-SSM-HFC10-25.R.03-A-50-225	25	3	11536252	●
	A-SSM-HFC10-40.R.04	40	4	11536253	●
	A-SSM-HFC10-50.R.05	50	5	11536255	●
	A-SSM-HFC10-63.R.06	63	6	11536256	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M3.5 x 7.2 – T15 (only for C-)	3.2	54976	●
	M3.5 x 8.6 – T15 (only for A-)	3.2	165795	●
	Power screw M8.0 x 30.0 (only for A-SSM-HFC-40.R.04)	15	11036880	●



Cutting data HFC10 – XDLX

Starting parameters:



Grades and materials:

				Cutting data		
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.15 – 2.5	1 – 0.1
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.1 – 2.4	1 – 0.1
			SM35C			
			S35C			



Available range HFC13

Insert	Designation	Chipbreaker	Material number	Available
	XOLT 130410SR-PC PMK30C	...-PC	12193499	●
	XOLT 130410SR-PC PM35P	...-PC	12193508	●
	XOLT 130410ER-MC MP40P	...-MC	14652630	●
	XOLT 130410ER-MC SM35C	...-MC	11940763	●
	XOLT 130410ER-MS S35C	...-MC	11940765	●

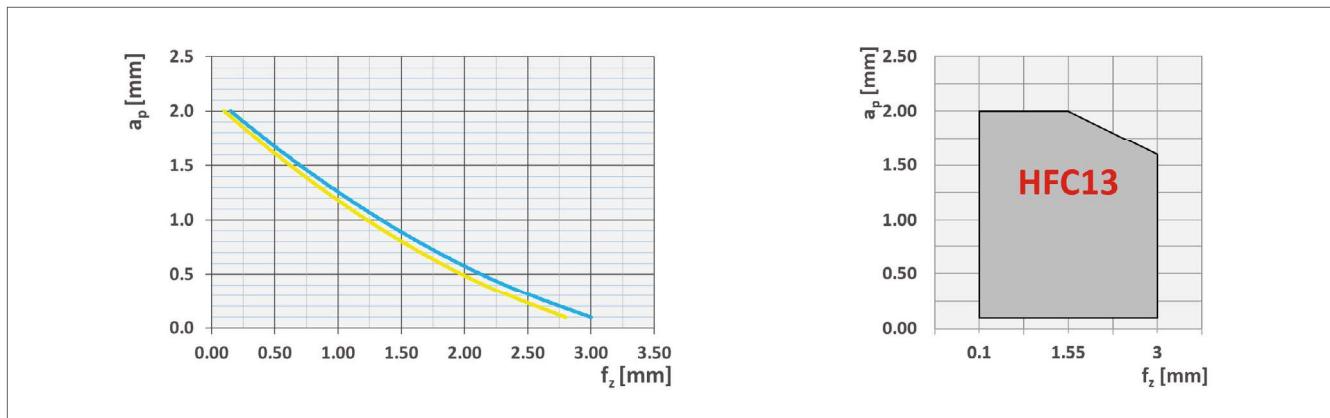
Body	Designation	Ø Milling cutter [mm]	z	Material number	Available
   	C-SSM-HFC13-35.R.03-A32-63-144	35	3		○
	C-SSM-HFC13-35.R.03-A32-63-250	35	3	11536246	●
	G-SSM-HFC13-35.R.03	35	3		○
	A-SSM-HFC13-50.R.04	50	4	11536249	●
	A-SSM-HFC13-63.R.05	63	5	11536248	●
	A-SSM-HFC13-80.R.07	80	7	11536247	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.5 x 10.5 – T20	5	106022	●



Cutting data HFC13

Starting parameters:

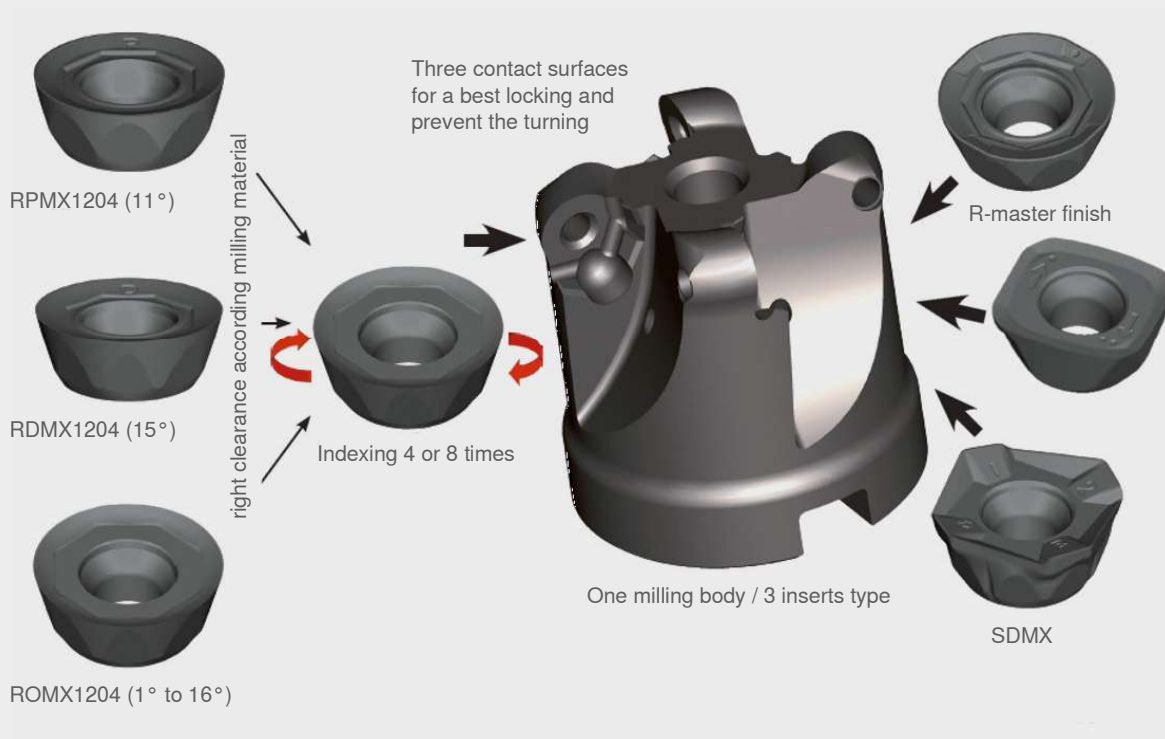


Grades and materials:

				Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]	
P Steel	PC	PMK30C	220 – 60	0.15 – 2.5	1 – 0.1	
		PM35P				
M Stainless steel	MC	MP40P	200 – 60	0.1 – 2.4	1 – 0.1	
		SM35C				
		S35C				

Standard application

Additional application





Overview SDMX

Application

1) Face milling



2) Angled milling



3) Slot milling



4) Chamfering



5) Profile milling



Chipbreaker

PC: Steel – Cast iron*

MC: Stainless Steel

4 effective cutting edges



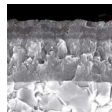
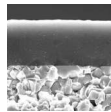
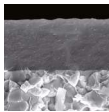
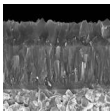
Grades

PMK30C ■

PM35P ■

MP40P ■

SM35C ■

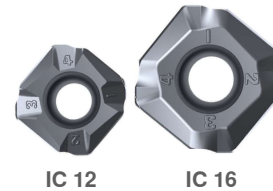


Customer benefits

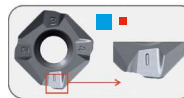
- ▲ Indexing of the insert without complete removal of the clamping screw is possible!
- ▲ Direct insert indexing saves valuable machine time.



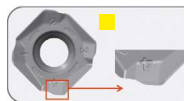
Available in 2 dimensions



Which chipbreaker to use?



PC
Strong cutting edge for general steel applications and hard conditions milling.



MC
Sharp cutting edge for general stainless steel applications and for finishing in steels.

* secondary application



Available range SDMX11

Insert	Designation	Chipbreaker	Material number	Available
	SDMX 1105AEER-PC PMK30C	...-PC	12193911	●
	SDMX 1105AEER-PC PM35P	...-PC	12193912	●
	SDMX 1105AEER-MC MP40P	...-MC	14652653	●
	SDMX 1105AEER-MC SM35C	...-MC	12193916	●

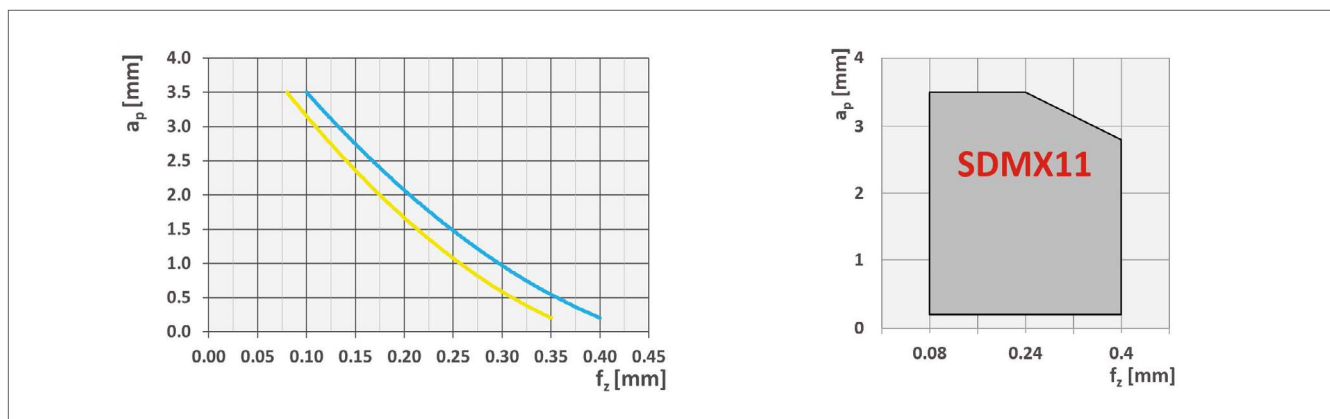
Body	Designation	Ø Milling cutter [mm]	z	Material number	Available
	C-SSM-R12-25.R.02-A-30-86	25	2	11720305	●
	C-SSM-R12-25.R.02-A-60-116	25	2	11720307	●
	C-SSM-R12-32.R.03-A-40-100	32	3	11720308	●
	C-SSM-R12-32.R.03-A-70-130	32	3	11720310	●
	G-SSM-R12-25.R.02	25	2	12156946	●
	G-SSM-R12-35.R.03	35	3	14653989	●
	A-SSM-R12-40.R.04	40	4	11596003	●
	A-SSM-R12-42.R.04	42	4	14653984	●
	A-SSM-R12-50.R.05	50	5	11667287	●
	A-SSM-R12-52.R.05	52	5	14427687	●
	A-SSM-R12-63.R.06	63	6	11667291	●
	A-SSM-R12-66.R.06	66	6	14653987	●
	A-SSM-R12-80.R.08	80	8	11707446	●
	A-SSM-R12-100.R.10	100	10	11707445	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 8.5 – T15 (only for C- and G-)	5	11037484	●
	M4.0 x 11.0 – T15+ (only for A-)	5	1345432	●
	Power screw M8.0 x 30.0 (for A-SSM-R12-40.R.04 and for A-SSM-R12-42.R.04)	15	11036880	●



Cutting data SDMX11

Starting parameters:



Grades and materials:

Grades and materials:				Cutting data		
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.1 – 0.4	3.5 – 0.2
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.08 – 0.35	3.5 – 0.2
			SM35C			



Available range SDMX15

Insert	Designation	Chipbreaker	Material number	Available
	SDMX 1506AEER-PC PMK30C	...-PC	12193917	●
	SDMX 1506AEER-PC PM35P	...-PC	12212274	●
	SDMX 1506AEER-MC MP40P	...-MC	14652655	●
	SDMX 1506AEER-MC SM35C	...-MC	12212268	●

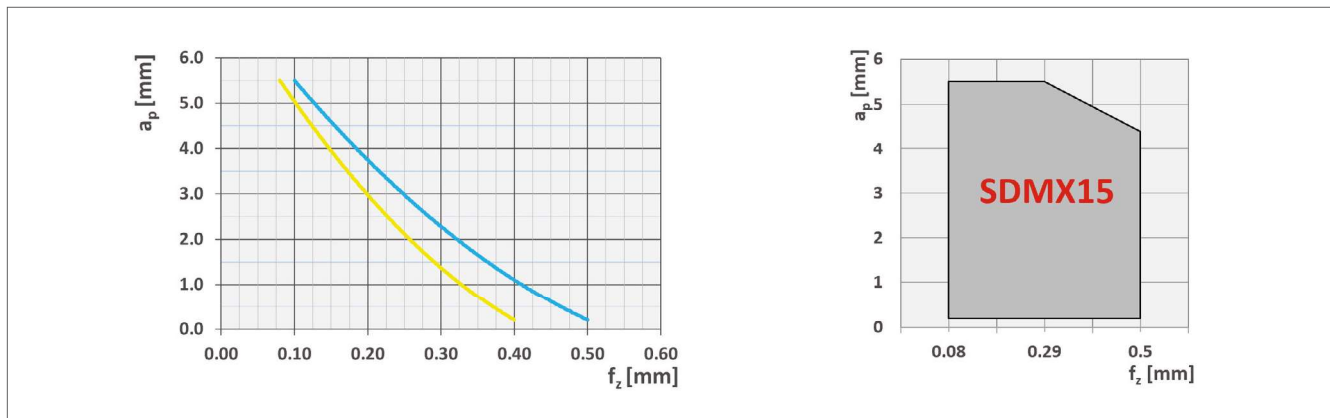
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-SSM-R16-50.R.03	50	3	11739864	●
	A-SSM-R16-52.R.04	52	4	14653992	●
	A-SSM-R16-63.R.05	63	5	11739862	●
	A-SSM-R16-66.R.05	66	5	14653995	●
	A-SSM-R16-80.R.06	80	6	11739860	●
	A-SSM-R16-100.R.07	100	7	11739857	●
	A-SSM-R16-125.R.08	125	8	11739853	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.5 x 13.0 – T20+	5	1345431	●
	Power screw M10.0 x 31.0 (for A-SSM-R16-50.R.03 and for A-SSM-R16-52.R.04)	20	11040298	●



Cutting data SDMX15

Starting parameters:



Grades and materials:

Grades and materials:				Cutting data		
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.1 – 0.5	5.5 – 0.2
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.08 – 0.4	5.5 – 0.2
			SM35C			





Overview RPMX-__F

Application

- 1) Face milling 
- 2) Angled milling 
- 3) Slot milling 
- 4) Chamfering 
- 5) Profile milling 

Chipbreaker

PCF: Steel – Cast iron* finishing

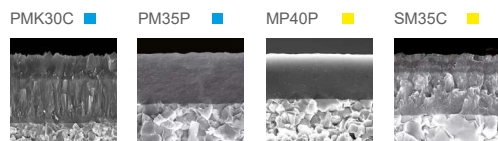
MCF: Stainless Steel, finishing

Indexing 4 / Master finish

4 cutting edges Master Finish for a best



Grades



* secondary application

Customer benefits

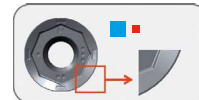
- ▲ Indexing of the insert without complete removal of the clamping screw is possible!
- ▲ Direct insert indexing saves valuable machine time.



Available in 2 dimensions

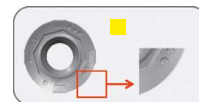


Which chipbreaker to use?



PCF

Strong cutting edge for general steel applications and hard conditions milling.



MCF

Sharp cutting edge for general stainless steel applications and for finishing in steels.



Available range R...X12-MF

Insert	Designation	Chipbreaker	Material number	Available
	RPMX 1204MO-PCF PMK30C	...-PCF	11988961	●
	RPMX 1204MO-PCF PM35P	...-PCF	11988960	●
	RPMX 1204MO-MCF MP40P	...-MCF	11988957	●
	RPMX 1204MO-MCF SM35C	...-MCF	12212285	●

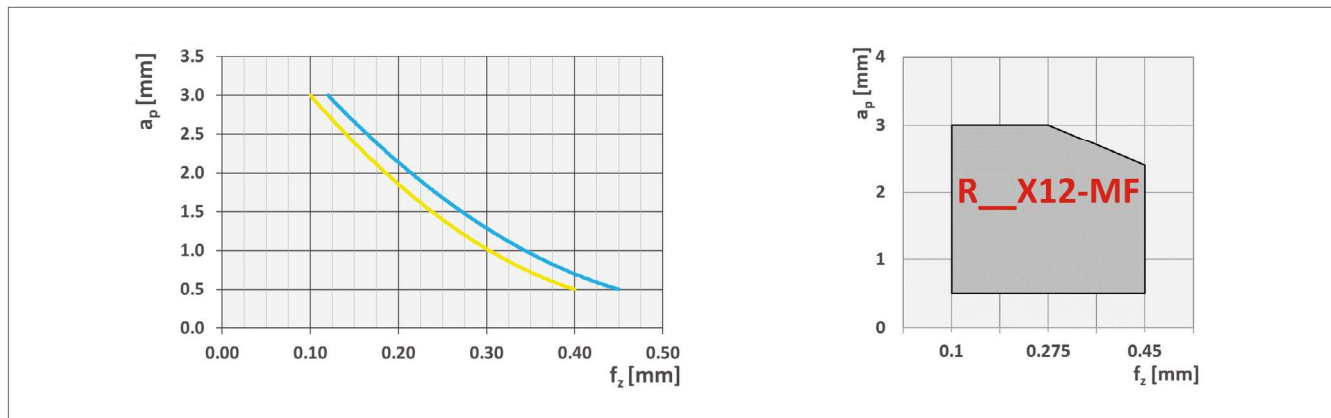
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-R12-25.R.02-A-30-86	25	2	11720305	●
	C-SSM-R12-25.R.02-A-60-116	25	2	11720307	●
	C-SSM-R12-32.R.03-A-40-100	32	3	11720308	●
	C-SSM-R12-32.R.03-A-70-130	32	3	11720310	●
	G-SSM-R12-25.R.02	25	2	12156946	●
	G-SSM-R12-35.R.03	35	3	14653989	●
	A-SSM-R12-40.R.04	40	4	11596003	●
	A-SSM-R12-42.R.04	42	4	14653984	●
	A-SSM-R12-50.R.05	50	5	11667287	●
	A-SSM-R12-52.R.05	52	5	14427687	●
	A-SSM-R12-63.R.06	63	6	11667291	●
	A-SSM-R12-66.R.06	66	6	14653987	●
	A-SSM-R12-80.R.08	80	8	11707446	●
	A-SSM-R12-100.R.10	100	10	11707445	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 8.5 – T15 (only for C- and G-)	5	11037484	●
	M4.0 x 11.0 – T15+ (only for A-)	5	1345432	●
	Power screw M8.0 x 30.0 (for A-SSM-R12-40.R.04 and for A-SSM-R12-42.R.04)	15	11036880	●



Cutting data R...X12-MF

Starting parameters:



Grades and materials:

				Cutting data	
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P Steel	PCF	PMK30C	220 – 60	0.12 – 0.45	3 – 0.5
		PM35P			
M Stainless steel	MCF	MP40P	200 – 60	0.1 – 0.4	3 – 0.5
		SM35C			

Recommended!



4 times

$\varnothing$ [mm]	a_p [mm]	$a_{p \max}$ [mm]
12	3.0	5.5
16	4.0	7.5



Available range R...X16-MF

Insert	Designation	Chipbreaker	Material number	Available
	RPMX 1605MO-PCF PMK30C	...-PCF	11988954	●
	RPMX 1605MO-PCF PM35P	...-PCF	11988952	●
	RPMX 1605MO-MCF MP40P	...-MCF	11988950	●
	RPMX 1605MO-MCF SM35C	...-MCF	12212286	●

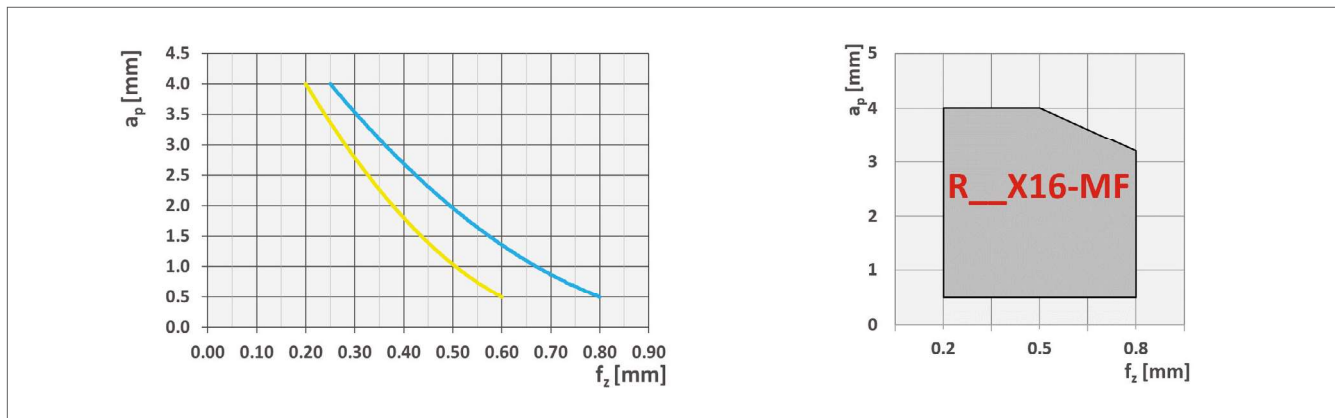
Body	Designation	Ø Milling cutter [mm]	z	Material number	Available
	A-SSM-R16-50.R.03	50	3	11739864	●
	A-SSM-R16-52.R.04	52	4	14653992	●
	A-SSM-R16-63.R.05	63	5	11739862	●
	A-SSM-R16-66.R.05	66	5	14653995	●
	A-SSM-R16-80.R.06	80	6	11739860	●
	A-SSM-R16-100.R.07	100	7	11739857	●
	A-SSM-R16-125.R.08	125	8	11739853	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.5 x 13.0 – T20+	5	1345431	●
	Power screw M10.0 x 31.0 (for A-SSM-R16-50.R.03 and for A-SSM-R16-52.R.04)	20	11040298	●



Cutting data R...X16-MF

Starting parameters:



Grades and materials:

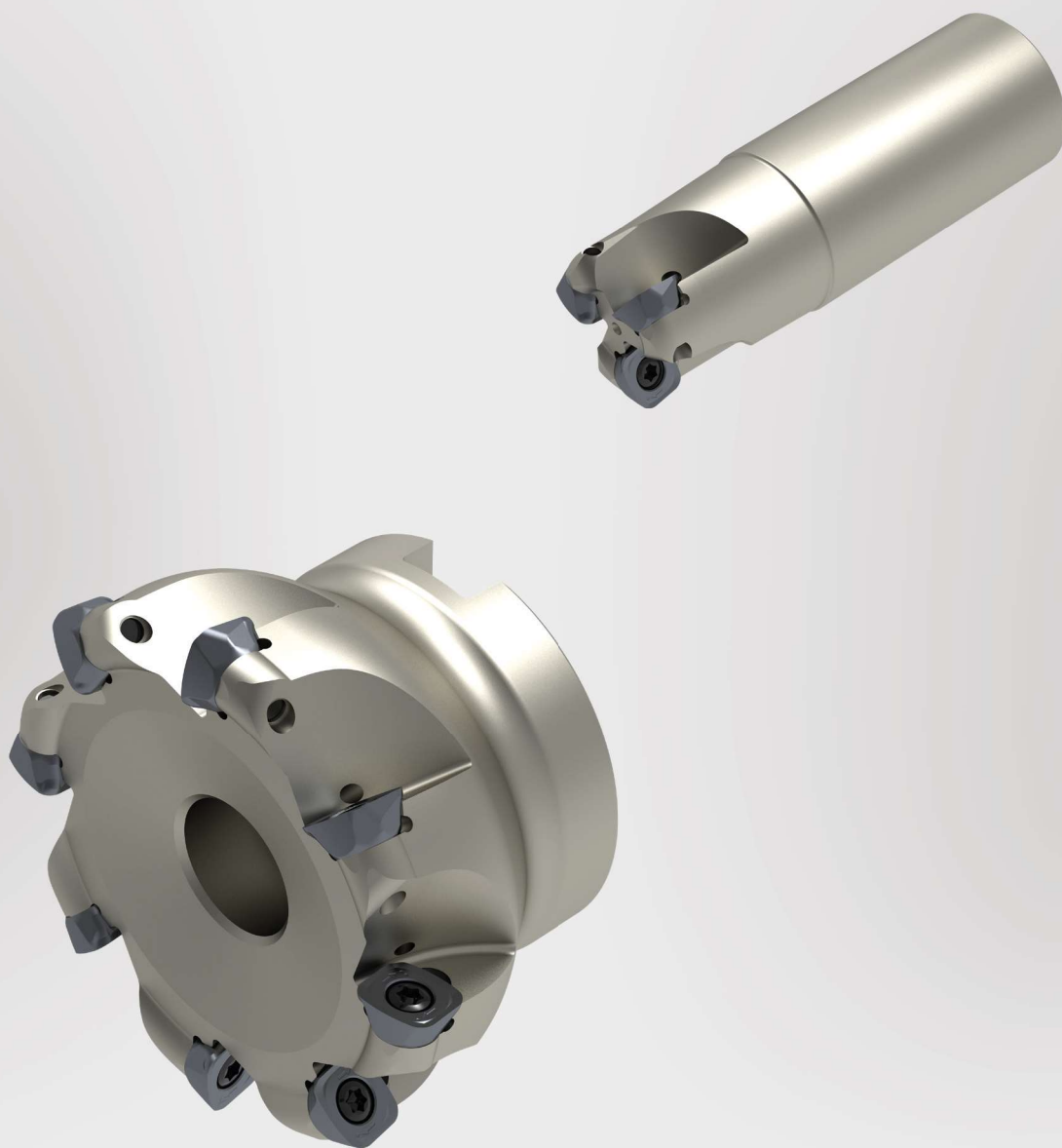
				Cutting data	
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P Steel	PCF	PMK30C	220 – 60	0.25 – 0.8	4 – 0.5
		PM35P			
M Stainless steel	MCF	MP40P	200 – 60	0.2 – 0.6	4 – 0.5
		SM35C			

Recommended!



4 times

$\varnothing$ [mm]	a_p [mm]	$a_{p \max}$ [mm]
12	3.0	5.5
16	4.0	7.5





Overview EOMT

Application

1) Face milling



2) Angled milling



3) Slot milling



4) Chamfering



5) Profile milling



Chipbreaker

PC: Steel – Cast iron*

MC: Stainless Steel

Indexing 2 times

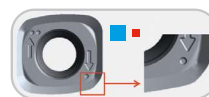


Customer benefits

- ▲ Indexing of the insert without complete removal of the clamping screw is possible!
- ▲ Direct insert indexing saves valuable machine time.

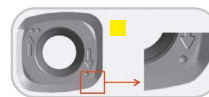


Which chipbreaker to use?



PC

Strong cutting edge for general steel applications and hard conditions milling.



MC

Sharp cutting edge for general stainless steel applications and for finishing in steels.

Grades

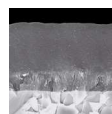
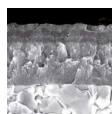
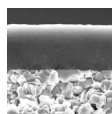
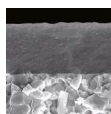
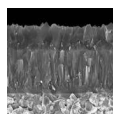
PMK30C ■

PM35P ■

PM40P ■

SM35C ■

S35C ■





Available range EOMT12

Insert	Designation	Chipbreaker	Material number	Available
	EOMT 120416-PC PMK30C	...-PC	12212261	●
	EOMT 120416-PC PM35P	...-PC	12212263	●
	EOMT 120416-MC PM40P	...-MC	14652658	●
	EOMT 120416-MC SM35C	...-MC	12212295	●
	EOMT 120416-MC S35C	...-MC		○

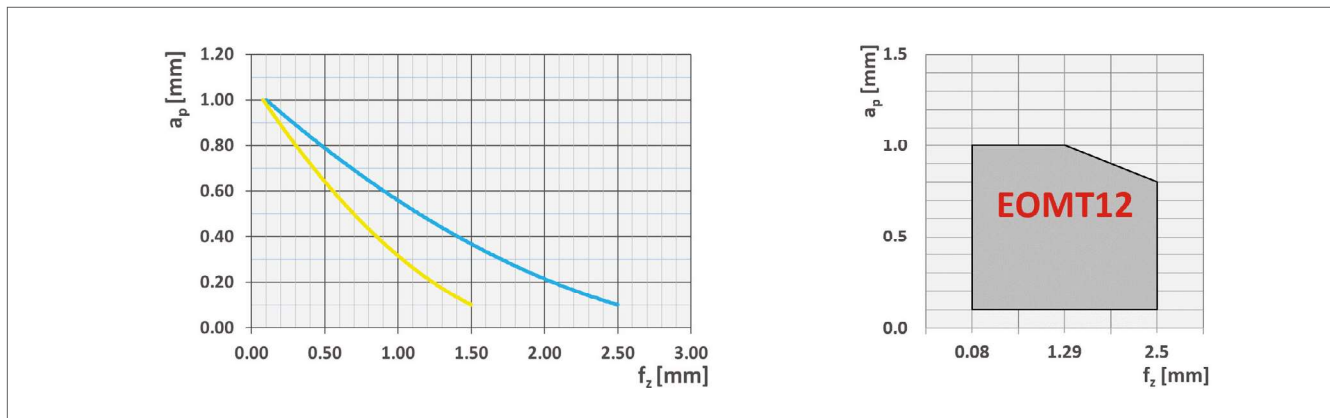
Body	Designation	Ø Milling cutter [mm]	z	Material number	Available
	C-SSM-R12-25.R.02-A-30-86	25	2	11720305	●
	C-SSM-R12-25.R.02-A-60-116	25	2	11720307	●
	C-SSM-R12-32.R.03-A-40-100	32	3	11720308	●
	C-SSM-R12-32.R.03-A-70-130	32	3	11720310	●
	G-SSM-R12-25.R.02	25	2	12156946	●
	G-SSM-R12-35.R.03	35	3	14653989	●
	A-SSM-R12-40.R.04	40	4	11596003	●
	A-SSM-R12-42.R.04	42	4	14653984	●
	A-SSM-R12-50.R.05	50	5	11667287	●
	A-SSM-R12-52.R.05	52	5	14427687	●
	A-SSM-R12-63.R.06	63	6	11667291	●
	A-SSM-R12-66.R.06	66	6	14653987	●
	A-SSM-R12-80.R.08	80	8	11707446	●
	A-SSM-R12-100.R.10	100	10	11707445	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 8.5 – T15 (only for C- and G-)	5	11037484	●
	M4.0 x 11.0 – T15+ (only for A-)	5	1345432	●
	Power screw M8.0 x 30.0 (for A-SSM-R12-40.R.04 and for A-SSM-R12-42.R.04)	15	11036880	●



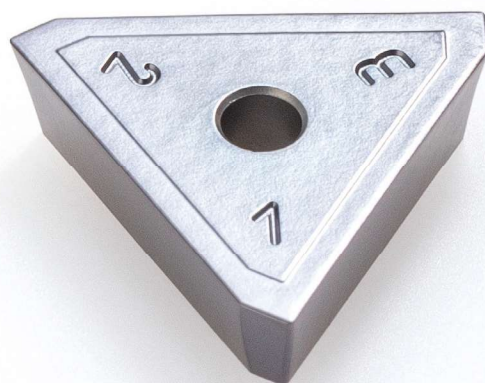
Cutting data EOMT12

Starting parameters:



Grades and materials:

				Cutting data	
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P Steel	PC	PMK30C	220 – 60	0.1 – 2.5	1 – 0.1
		PM35P			
M Stainless steel	MC	MP40P	200 – 60	0.08 – 1.5	1 – 0.1
		SM35C			





Overview TPKN... TPKR...

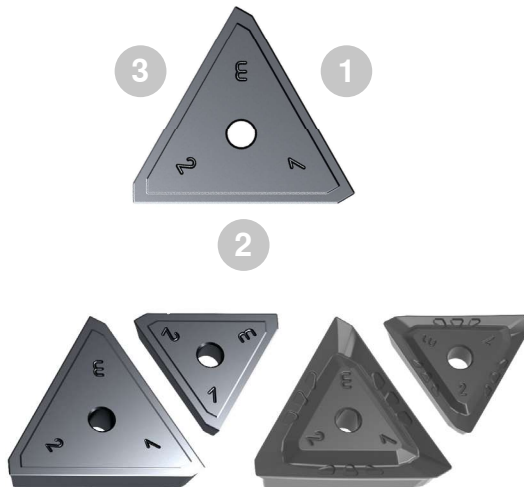
Application

- 1) Face milling 
- 2) Slot milling 
- 3) Peripheral milling 
- 4) Shoulder milling 

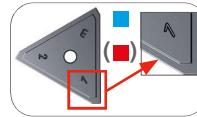
Chipbreaker

PC: Steel – Cast iron*
MC: Stainless Steel

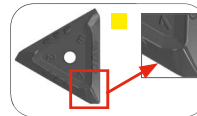
2 effective cutting edges



Which chipbreaker to use?



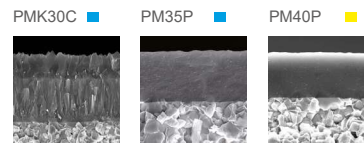
PC
 Strong cutting edge for general steel applications and hard conditions milling.



MC
 Sharp cutting edge for general stainless steel applications and for finishing in steels.

Grade

Standard grades



* secondary application

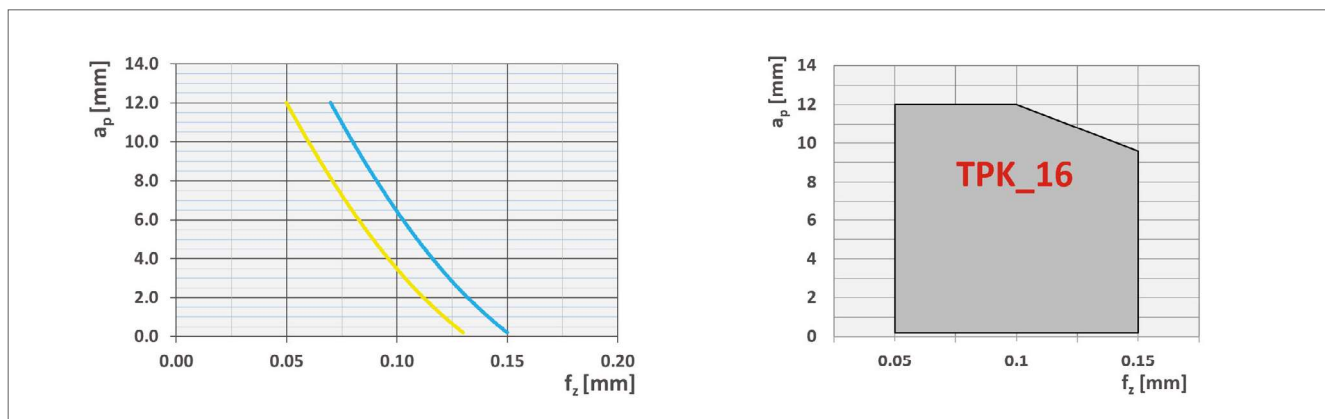


Available range TPKN / TPKR 16

Insert	Designation	Chipbreaker	Material number	Available
	TPKN 1603PDR-PC PMK30C	...-PC		○
	TPKN 1603PDR-PC PM35P	...-PC		○
	TPKR 1603PDR-MC MP40P	...-MC		○

Cutting data TPKN / TPKR 16

Starting parameters:



Grades and materials:

Material group	Chipbreaker	Grade	Cutting data		
			v_c [m/min]	f_z [mm]	a_p [mm]
P Steel	PC	PMK30C PM35P	220 – 60	0.7 – 0.15	12 – 0.2
M Stainless steel	MC	CMP40P	200 – 60	0.05 – 0.13	12 – 0.2

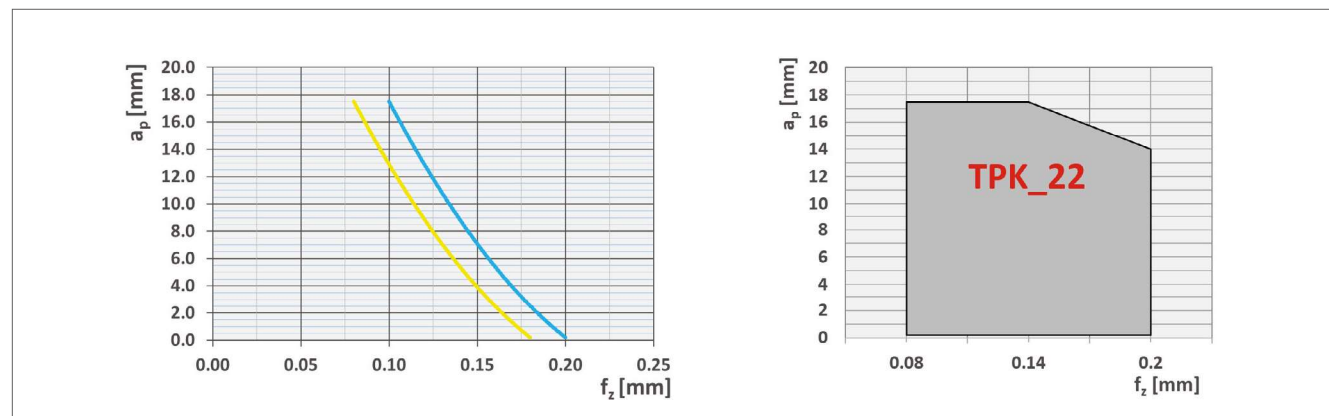


Available range TPKN / TPKR 22

Insert	Designation	Chipbreaker	Material number	Available
	TPKN 2204PDR-PC PMK30C	...-PC		○
	TPKN 2204PDR-PC PM35P	...-PC		○
	TPKR 2204PDR-MC MP40P	...-MC		○

Cutting data TPKN / TPKR 22

Starting parameters:



Grades and materials:

			Cutting data		
Material group	Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P Steel	PC	PMK30C	220 – 60	0.1 – 0.2	17.5 – 0.2
		PM35P			
M Stainless steel	MC	MP40P	200 – 60	0.08 – 0.18	17.5 – 0.2





Overview SEK... SPK...

Application

1) Face milling



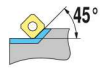
2) Slot milling



3) Chamfering (only SEK...)



4) Slot 45° (only SEK...)



5) Slot 75° (only SPK...)

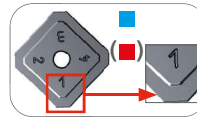


Chipbreaker

PC: Steel – Cast iron*

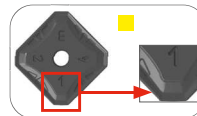
MC: Stainless Steel

Which chipbreaker to use?



PC

Strong cutting edge for general steel applications and hard conditions milling.



MC

Sharp cutting edge for general stainless steel applications and for finishing in steels.

Grade

Standard grades

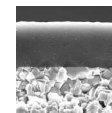
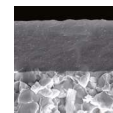
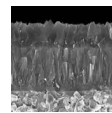
PMK30C



PM35P



MP40P



4 effective cutting edges



* secondary application

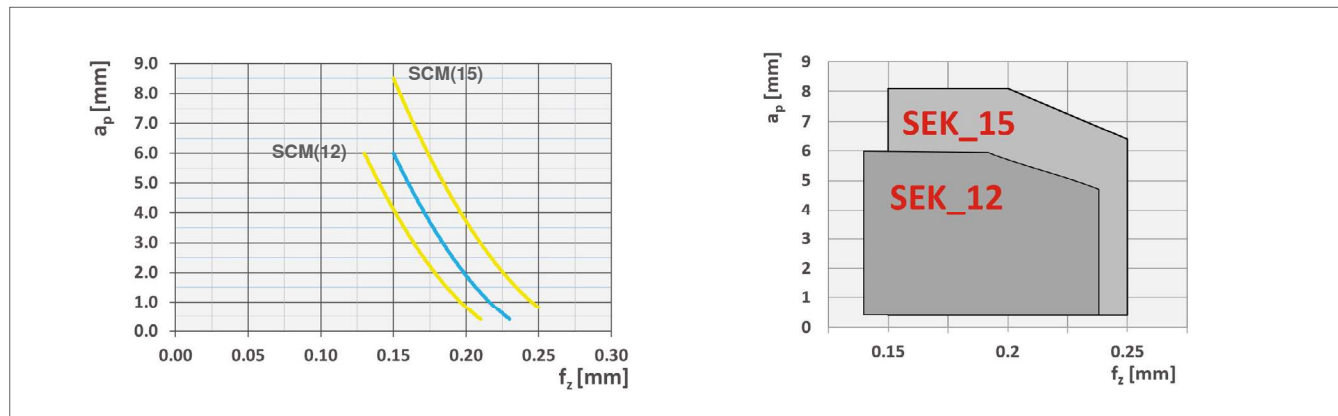


Available range SEK_12 / 15

Insert	Designation	Chipbreaker	Material number	Available
	SEKN 1203AFSN-PC PMK30C	...-PC		○
	SEKN 1203AFSN-PC PM35P	...-PC		○
	SEKR 1203AFSN-MC MP40P	...-MC		○
	SEKR 1504AFSN-MC MP40P	...-MC		○

Cutting data SEK_12 / 15

Starting parameters:



Grades and materials:

		Cutting data			
Material group		Chipbreaker	Grade	v_c [m/min]	a_p [mm]
P Steel		PC (12)	PMK30C	220 – 60	6 – 0.4
		PC (15)	PM35P		8.5 – 0.8
M Stainless steel		MC (12)	MP40P	200 – 60	6 – 0.4
		MC (15)			8.5 – 0.8

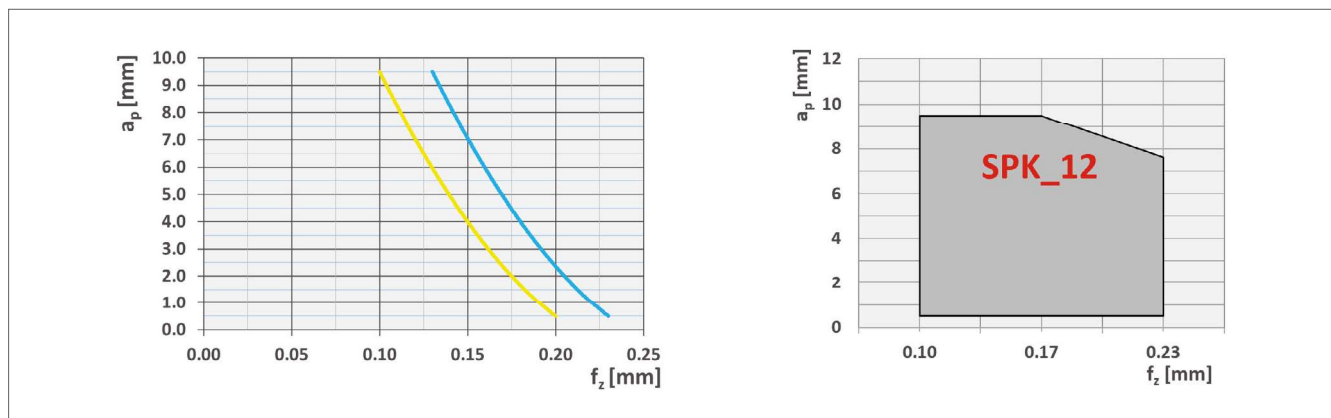


Available range SPK_12

Insert	Designation	Chipbreaker	Material number	Available
	SPKN 1203EDTR-PC PMK30C	...-PC		○
	SPKN 1203EDTR-PC PM35P	...-PC		○
	SPKR 1203EDER-MC MP40P	...-MC		○

Cutting data SPK_12

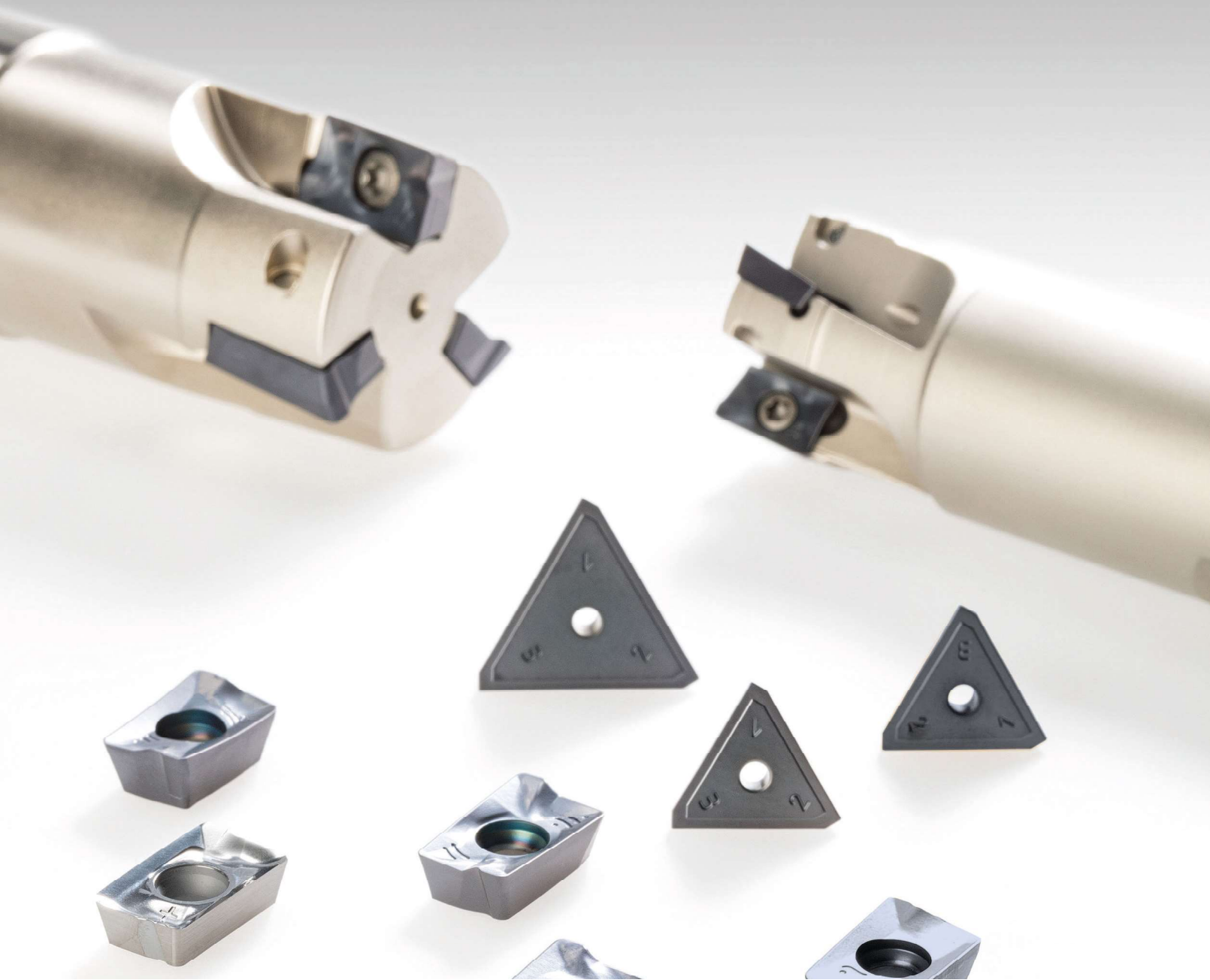
Starting parameters:



Grades and materials:

				Cutting data		
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	PC	PMK30C	220 – 60	0.15 – 0.23	9.5 – 0.5
			PM35P			
M	Stainless steel	MC	MP40P	200 – 60	0.1 – 0.2	9.5 – 0.5

Technical Data



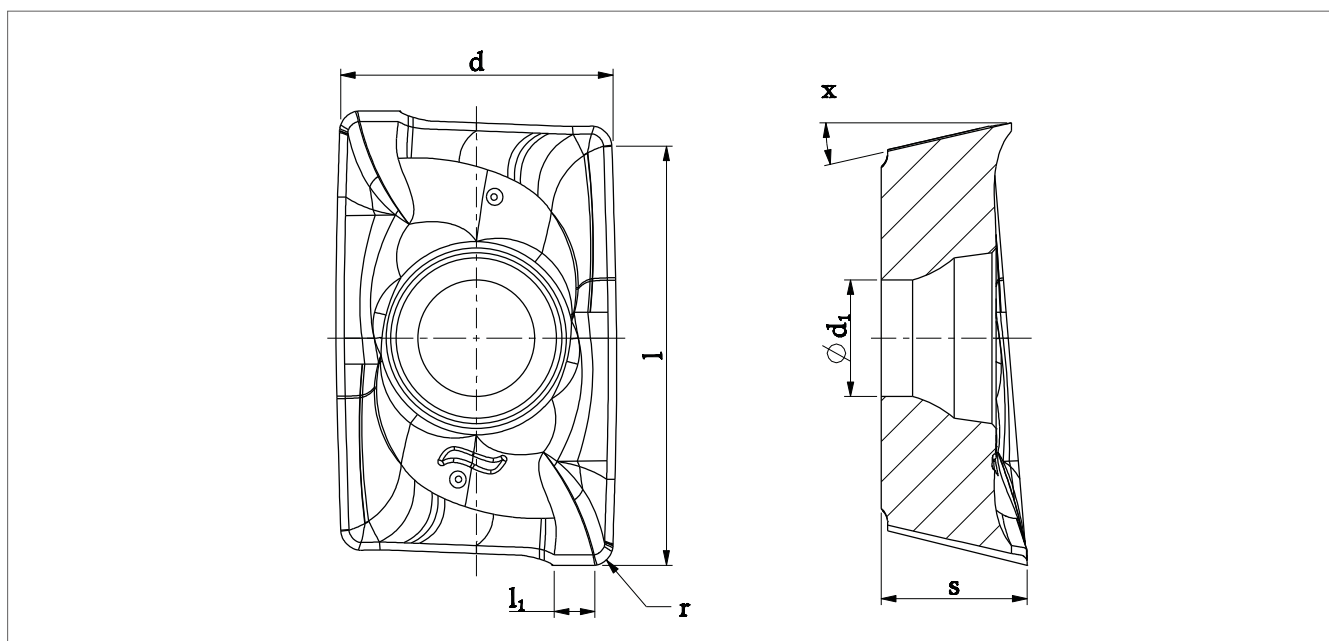






SSM-A / Shouldering 2 x 90°

Insert (APKT / APHT 10)

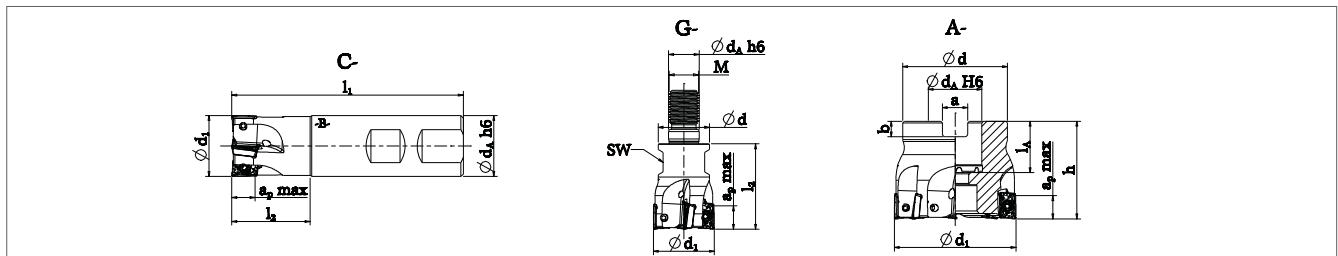
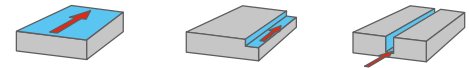


Description	d [mm]	l [mm]	s [mm]	l ₁ [mm]	r [mm]	d ₁ [mm]	x [°]
APKT 1003PDER-PC	6.75	10	3.5	1	0.5	2.8	11
APKT 1003PDER-MC	6.75	10	3.5	1	0.5	2.8	11
APKT 1003PDER-KC	6.75	10	3.5	1	0.5	2.8	11
APHT 100302FR-NC	6.75	10	3	2.2	0.2	2.8	11
APHT 100304FR-NC	6.75	10	3	2.2	0.4	2.8	11
APHT 100308FR-NC	6.75	10	3	2.2	0.8	2.8	11
APKT 100308ER-RC	6.7	10	3.5	0.64	0.85	2.8	11
APKT 100312ER-RC	6.7	10	3.5	0.5	1.2	2.8	11
APKT 100316ER-RC	6.7	11.5	3.4	0	1.6	2.8	11
APKT 100330ER-RC	6.7	11.5	3.4	0.2	3	2.8	11



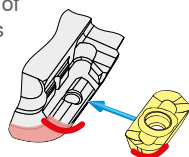
SSM-A / Shouldering 2 x 90°

Milling body (APKT10)

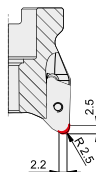


Descirption	ϕd_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	ϕd_A H6/h6 [mm]	a_p max [mm]	n_{max} [min-1]	z	ϕd [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
C-SSM-UA10-12.R.01-B16-24-79	12	79	24	-	16	10	55000	1	-	-	-	-	-	-
C-SSM-UA10-16.R.02-B-25-80	16	80	25	-	16	10	42000	2	-	-	-	-	-	-
C-SSM-UA10-20.R.03-B-25-85	20	85	25	-	20	10	36900	3	-	-	-	-	-	-
C-SSM-UA10-25.R.04-B-32-95	25	95	32	-	25	10	33200	4	-	-	-	-	-	-
C-SSM-UA10-32.R.05-B-40-105	32	105	40	-	32	10	30200	5	-	-	-	-	-	-
G-SSM-UA10-16.R.02	16	-	25	-	8.5	10	42000	2	13	SW10	M8	-	-	-
G-SSM-UA10-20.R.03	20	-	30	-	10.5	10	36900	3	18	SW15	M10	-	-	-
G-SSM-UA10-25.R.04	25	-	35	-	12.5	10	33200	4	21	SW17	M12	-	-	-
G-SSM-UA10-32.R.05	32	-	40	-	17	10	30200	5	29	SW24	M16	-	-	-
A-SSM-UA10-40.R.04	40	-	-	40	16	10	27700	4	38	-	-	19	8.4	5.6
A-SSM-UA10-40.R.06	40	-	-	40	16	10	27700	6	38	-	-	19	8.4	5.6
A-SSM-UA10-50.R.05	50	-	-	40	22	10	25400	5	43	-	-	21	10.4	6.3
A-SSM-UA10-50.R.08	50	-	-	40	22	10	25400	8	43	-	-	21	10.4	6.3
A-SSM-UA10-63.R.06	63	-	-	40	22	10	23300	6	48	-	-	21	10.4	6.3
A-SSM-UA10-63.R.09	63	-	-	40	22	10	23300	9	48	-	-	21	10.4	6.3
A-SSM-UA10-80.R.07	80	-	-	50	27	10	21300	7	58	-	-	23	12.4	7
A-SSM-UA10-80.R.10	80	-	-	50	27	10	21300	10	58	-	-	23	12.4	7
A-SSM-UA10-100.R.12	100	-	-	50	32	10	19600	12	78	-	-	26	14.4	8

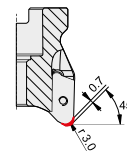
Modification of
cutter bodies



> r 1.6



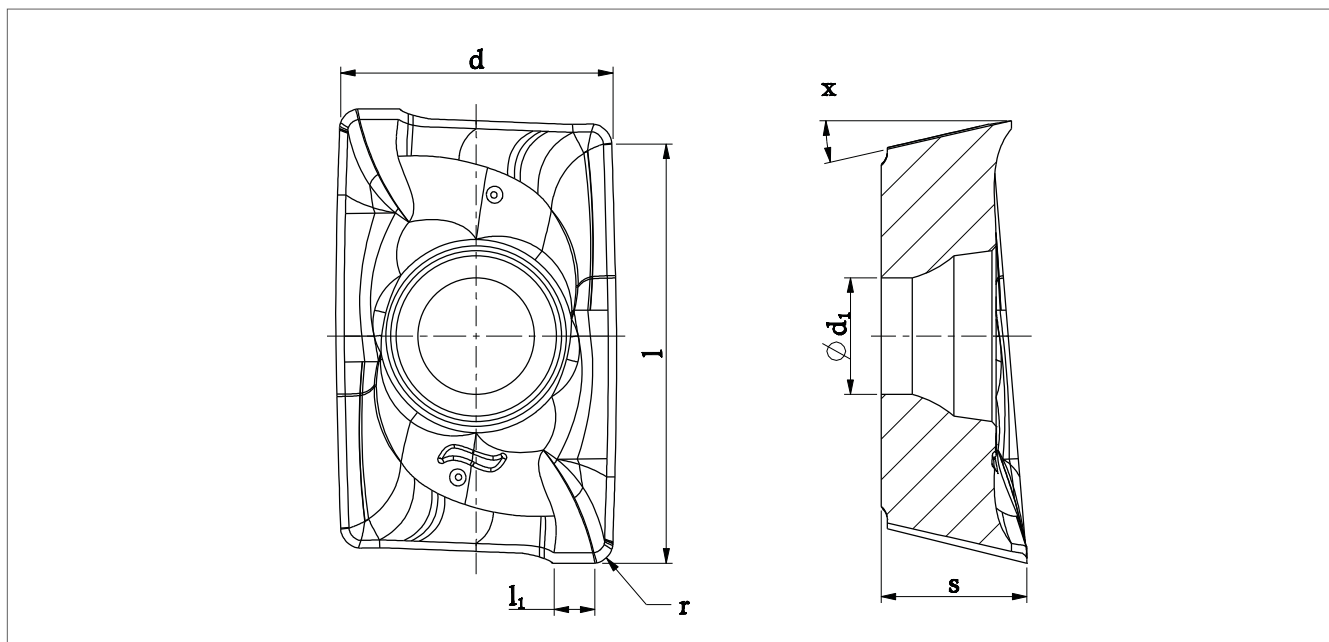
> r 3.0





SSM-A / Shouldering 2 x 90°

Insert (APKT / APHT 16)

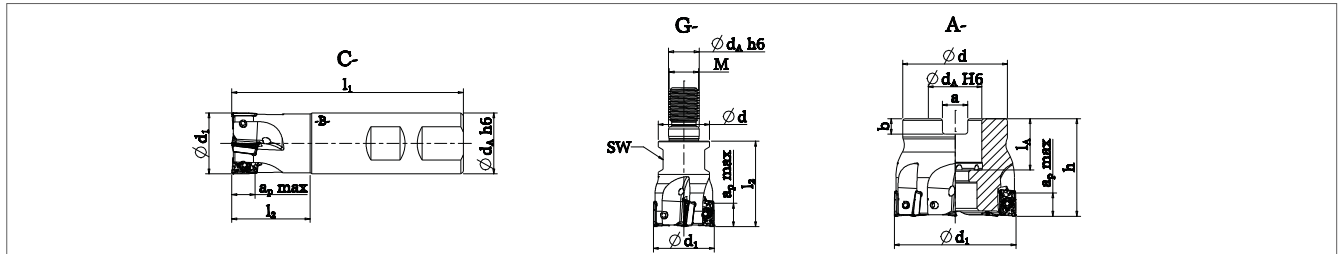


Description	d [mm]	l [mm]	s [mm]	l ₁ [mm]	r [mm]	d ₁ [mm]	x [°]
APKT 1604PDER-PC	9.5	15.3	5.25	1.4	0.85	4.4	11.5
APKT 1604PDER-MC	9.5	15.3	5.25	1.4	0.85	4.4	11.5
APKT 1604PDER-KC	9.5	15.3	5.25	1.4	0.85	4.4	11.5
APHT 1604PDFR-NC	9.5	15.3	4.65	2	0.85	4.4	11.5
APKT 160416ER-RC	9.5	15.3	5.25	0.65	1.6	4.4	11.5
APKT 160424ER-RC	9.5	15.3	5.25	0.6	2.4	4.4	11.5
APKT 160432ER-RC	9.5	15.3	5.25	0.3	3.2	4.4	11.5
APKT 160440ER-RC	9.5	15.3	5.25	0.3	4.0	4.4	11.5
APKT 160448ER-RC	9.5	15.3	5.8	0.3	4.8	4.4	11.5



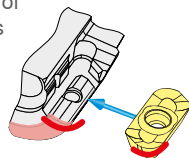
SSM-A / Shouldering 2 x 90°

Milling body (APKT16)

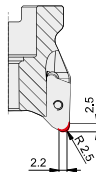


Description	$\varnothing d_1$ [mm]	l_1 [mm]	l_2 [mm]	h [mm]	$\varnothing d_A$ H6/h6 [mm]	$a_p \max$ [mm]	$n_{\max}$ [min ⁻¹]	z	$\varnothing d$ [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
C-SSM-UA16-25.R.02-B-40-95	25	95	40	-	25	15.3	26560	2	-	-	-	-	-	-
C-SSM-UA16-32.R.03-B-40-105	32	105	40	-	32	15.3	24160	3	-	-	-	-	-	-
C-SSM-UA16-40.R.04-B-50-125	40	125	50	-	40	15.3	22160	4	-	-	-	-	-	-
G-SSM-UA16-25.R.02	25	-	35	-	12.5	15.3	26560	2	21	SW17	M12	-	-	-
G-SSM-UA16-32.R.03	32	-	40	-	17	15.3	20500	3	29	SW24	M15	-	-	-
G-SSM-UA16-40.R.04	40	-	40	-	17	15.3	16400	4	29	SW24	M16	-	-	-
A-SSM-UA16-40.R.04	40	-	-	40	16	15.3	22160	4	38	-	-	20	8.4	5.6
A-SSM-UA16-50.R.05	50	-	-	40	22	15.3	20320	5	43	-	-	21	10.4	6.3
A-SSM-UA16-63.R.06	63	-	-	40	22	15.3	18640	6	48	-	-	21	10.4	6.3
A-SSM-UA16-80.R.07	80	-	-	50	27	15.3	17040	7	0	-	-	23	12.4	7
A-SSM-UA16-80.R.08	80	-	-	50	27	15.3	17040	8	58	-	-	23	12.4	7
A-SSM-UA16-100.R.09	100	-	-	50	32	15.3	15680	9	78	-	-	26	14.4	8
A-SSM-UA16-125.R.09	125	-	-	63	40	15.3	12600	9	0	-	-	28	16.4	9

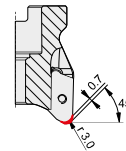
Modification of
cutter bodies

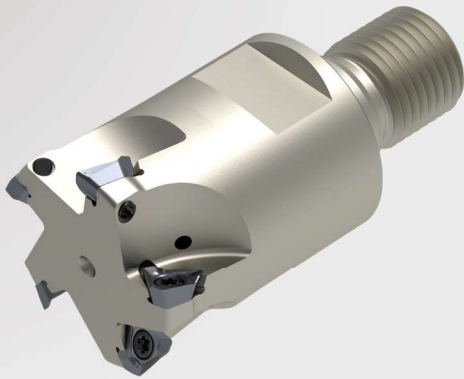
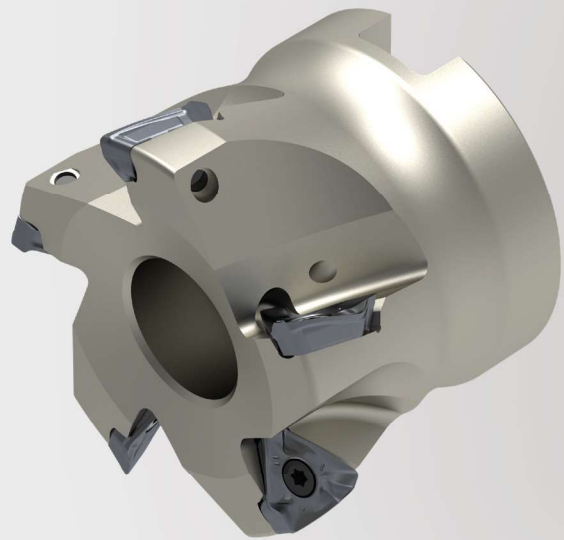
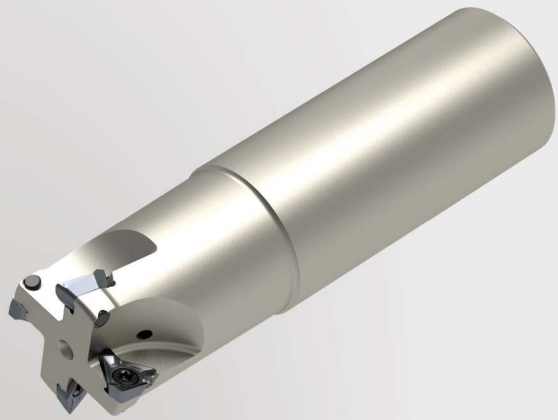


> r 1.6



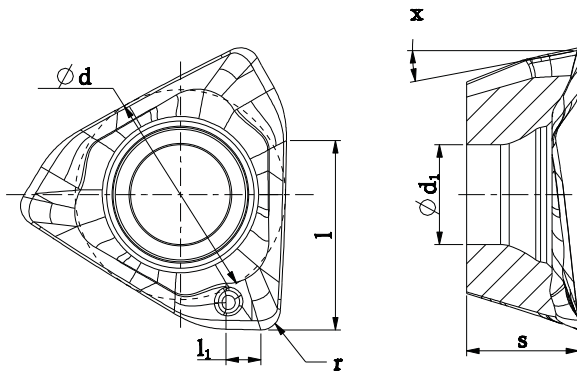
> r 3.0





SSM-T / Shouldering 3 x 90°

Insert (TOKX)



-PC



-MC

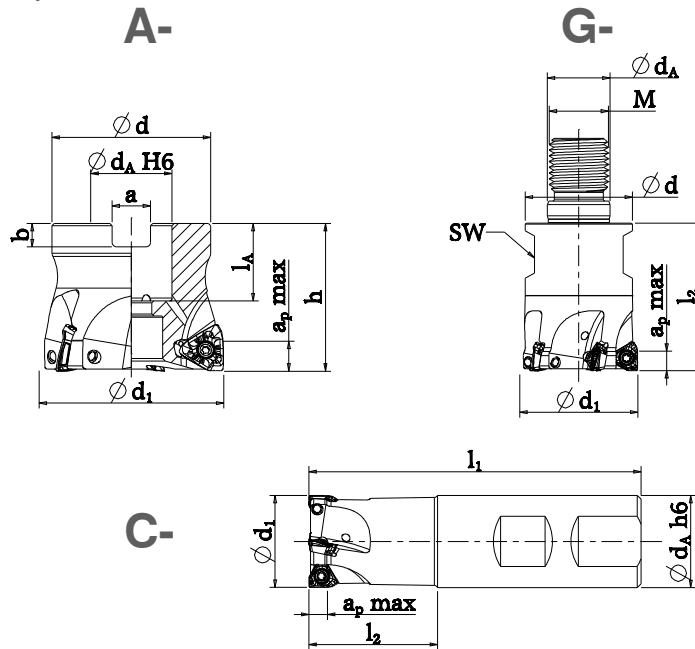
Description	d [mm]	l [mm]	s [mm]	l ₁ [mm]	r [mm]	d ₁ [mm]
TOKX 070305PDER-PC	5.9	5.5	3.15	1	0.5	2.8
TOKX 070305PDER-MC	5.9	5.5	3.15	1	0.5	2.8
TOKX 070308PDER-MC	5.9	5.5	3.15	1	0.8	2.8
TOKX 070308PDER-MC	5.9	5.5	3.15	1	0.8	2.8
TOKX 09T308PDER-PC	9.525	9.2	3.8	1.5	1.2	3.4
TOKX 09T308PDER-MC	9.525	9.2	3.8	1.5	0.8	3.4
TOKX 09T312PDER-SC	9.525	9.2	3.8	1.5	1.2	3.4
TOKX 09T312PDER-MC	9.525	9.2	3.8	1.5	1.2	3.4
TOKX 09T316PDER-SC	9.525	9.2	3.8	1.5	1.6	3.4
TOKX 09T316PDER-MC	9.525	9.2	3.8	1.5	1.6	3.4



SSM-T / Shouldering 3 x 90°

Milling body (TOKX07)

- ▲ Face milling
- ▲ Angled milling
- ▲ Helical plunging
- ▲ Shoulder milling
- ▲ Slot milling
- ▲ Pocket milling



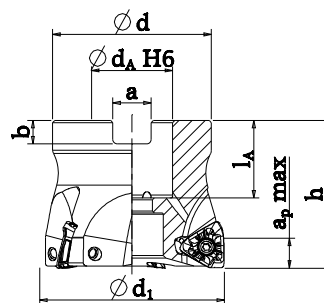
Description	ϕd_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	ϕd_A H6/h6 [mm]	$a_p \max$ [mm]	$n_{\max}$ [min ⁻¹]	z	ϕd [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
C-SSM-T07-20.R.03-B-25-77	20	77	25	-	20	5	22000	3	-	-	-	-	-	-
C-SSM-T07-25.R.04-B-34-90	25	90	34	-	25	5	20000	4	-	-	-	-	-	-
C-SSM-T07-32.R.05-B-40-102	32	102	40	-	32	5	19700	5	-	-	-	-	-	-
G-SSM-T07-20.R.03	20	-	30	-	10.5	5	36900	3	18	SW15	M10	-	-	-
G-SSM-T07-25.R.04	25	-	35	-	12.5	5	33200	4	21	SW17	M12	-	-	-
G-SSM-T07-32.R.05	32	-	40	-	17	5	30200	5	29	SW24	M16	-	-	-
A-SSM-T07-40.R.05	40	-	-	40	16	5	17000	5	38	-	-	20	8.4	5.6
A-SSM-T07-50.R.06	50	-	-	40	22	5	14800	6	43	-	-	21	10.4	6.3

SSM-T / Shouldering 3 x 90°

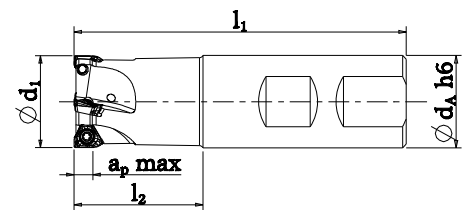
Milling body (TOKX09)

A-

- ▲ Face milling
- ▲ Angled milling
- ▲ Helical plunging
- ▲ Shoulder milling
- ▲ Slot milling
- ▲ Pocket milling



C-

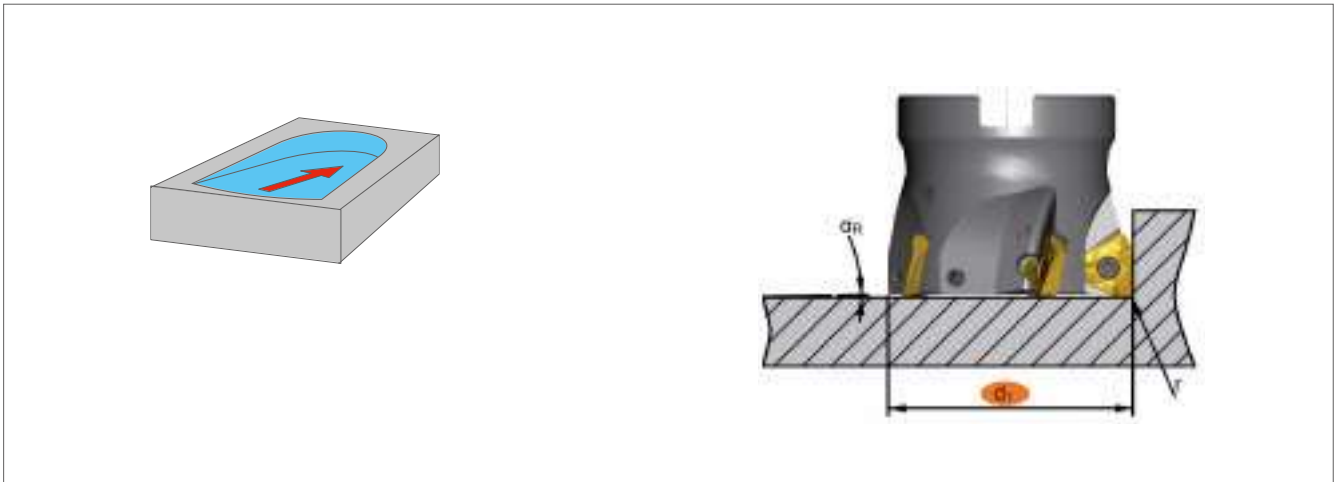


Description	Ø d ₁ [mm]	l ₁ [mm]	l ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	l _A [mm]	a [mm]	b [mm]
C-SSM-T09-32.R.03-B-40-102	32	102	40	-	32	8	19700	3	-	-	-	-
A-SSM-T09-40.R.04	40	-	-	40	16	8	17000	4	38	20.5	8.4	5.6
A-SSM-T09-50.R.05	50	-	-	40	22	8	14800	5	43	21	10.4	6.3
A-SSM-T09-63.R.06	63	-	-	40	22	8	12850	6	48	21	10.4	6.3



SSM-T / Shouldering 3 x 90°

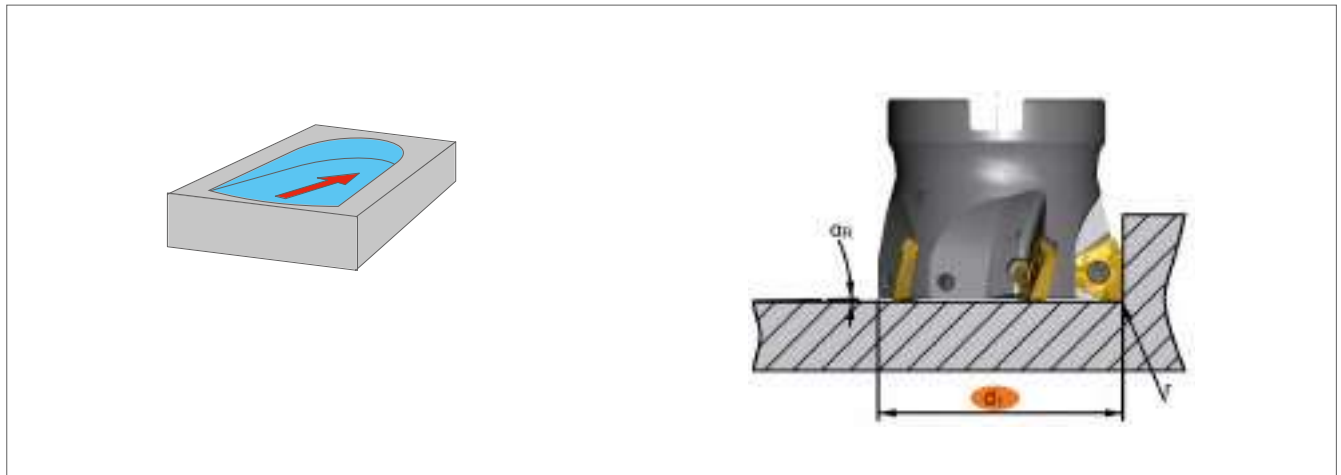
Application data (angled ramping TOKX07)



Description	d_1 [mm]	α_R [°]
C-SSM-T07-20.R.03-B-25-77	20	1.4
C-SSM-T07-25.R.04-B-34-90	25	1.2
C-SSM-T07-32.R.05-B-40-102	32	0.8
G-SSM-T07-20.R.03	20	1.4
G-SSM-T07-25.R.04	25	1.2
G-SSM-T07-32.R.05	32	0.8
A-SSM-T07-40.R.05	40	0.6
A-SSM-T07-50.R.06	50	0.5

SSM-T / Shouldering 3 x 90°

Application data (angled ramping TOKX09)

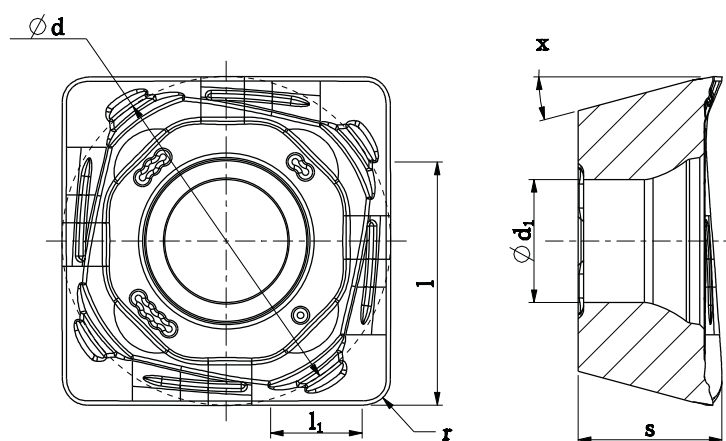


Description	d_l [mm]	α_r [°]
C-SSM-T09-32.R.03-B-40-102	32	1.1
A-SSM-T09-40.R.04	40	0.8
A-SSM-T09-50.R.05	50	0.5
A-SSM-T09-63.R.06	63	0.5



SSM-S / Shouldering 4 x 90°

Insert (SDKT)



-PC



-MC



-KC



-NC

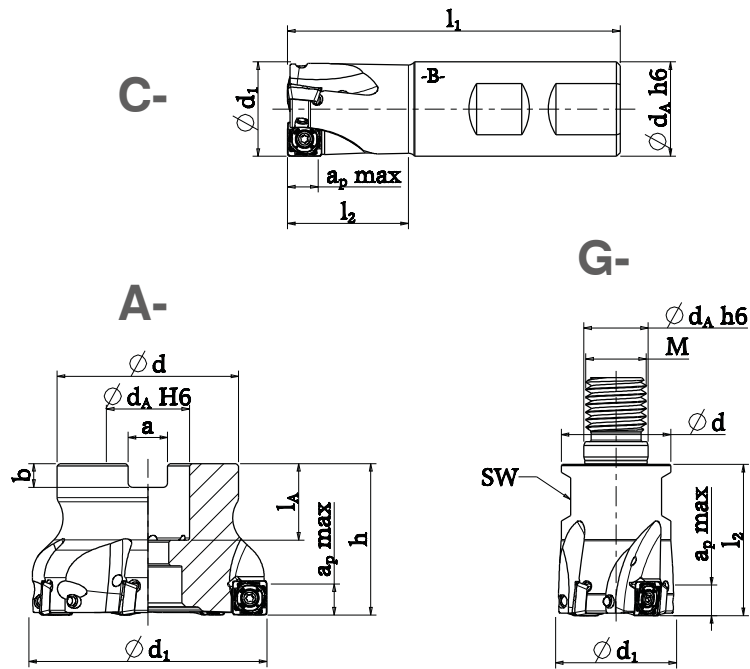
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
SDKT 09T308SR-PC	9.9	7.4	3.97	2.5	0.8	3.4	15
SDKT 09T308SR-MC	9.9	7.4	3.97	2.5	0.8	3.4	15
SDKT 09T308SR-KC	9.9	7.4	3.97	2.5	0.8	3.4	15
SDHT 09T308FR-NC	9.9	7.4	3.97	2.5	0.8	3.4	15
SDKT 120508SR-PC	12.3	9.8	5	2.5	0.8	4.7	15
SDKT120508SR-MC	12.3	9.8	5	2.5	0.8	4.7	15
SDKT 120508SR-KC	12.3	9.8	5	2.5	0.8	4.7	15
SDHT 120508FR-NC	12.3	9.8	5	2.5	0.8	4.7	15



SSM-S / Shouldering 4 x 90°

Milling body (SDKT09)

- ▲ Face milling
- ▲ Angled milling
- ▲ Helical plunging
- ▲ Shoulder milling
- ▲ Slot milling
- ▲ Peripheral milling
- ▲ Trochoidal slot milling

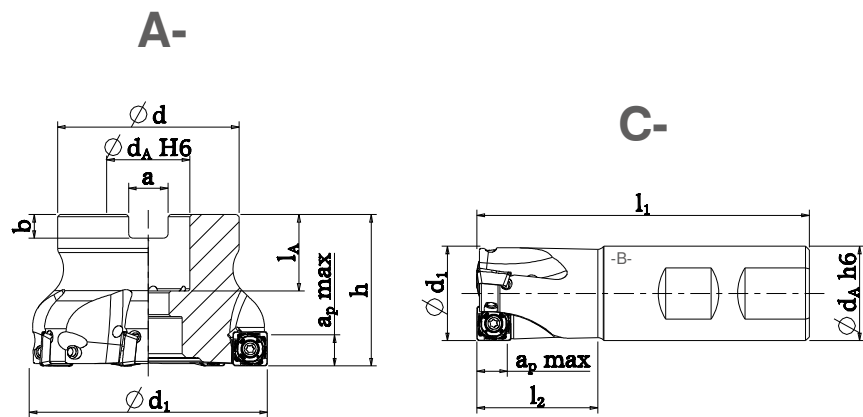


Description	Ø d ₁ [mm]	l ₁ [mm]	l ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	SW	M	l _A [mm]	a [mm]	b [mm]
C-SSM-S09-25.R.03-B-32-88	25	88	32	-	25	8	23700	3	-	-	-	-	-	-
C-SSM-S09-32.R.04-B-40-100	32	100	40	-	32	8	19700	4	-	-	-	-	-	-
G-SSM-S09-25.R.03	25	-	35	-	12.5	8	33200	3	21	SW17	M12	-	-	-
G-SSM-S09-32.R.04	32	-	40	-	17	8	30200	4	29	SW24	M16	-	-	-
A-SSM-S09-40.R.05	40	-	-	40	16	8	17000	5	38	-	-	20	8.4	5.6
A-SSM-S09-50.R.06	50	-	-	40	22	8	14800	6	43	-	-	20	10.4	6.3
A-SSM-S09-63.R.07	63	-	-	40	22	8	12855	7	48	-	-	20	10.4	6.3
A-SSM-S09-80.R.09	80	-	-	50	27	8	11250	9	58	-	-	22	12.4	7

SSM-S / Shouldering 4 x 90°

Milling body (SDKT12)

- ▲ Face milling
- ▲ Angled milling
- ▲ Helical plunging
- ▲ Shoulder milling
- ▲ Slot milling
- ▲ Peripheral milling
- ▲ Trochoidal slot milling

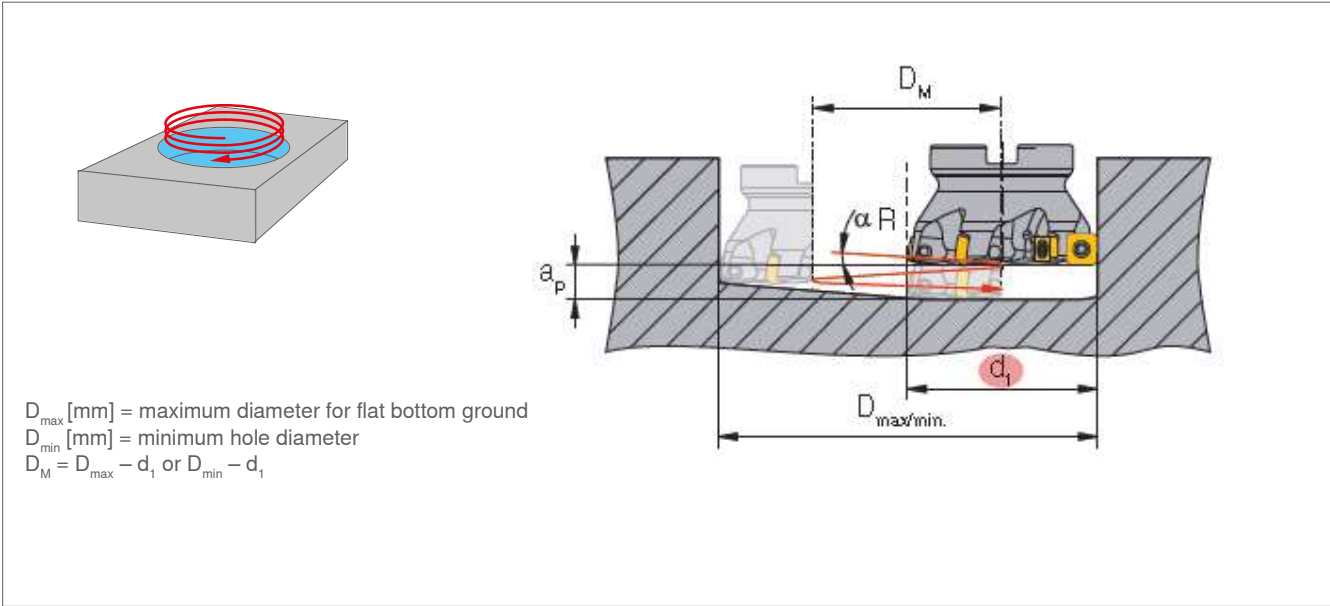


Description	Ød ₁ [mm]	l ₁ [mm]	l ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	l _A [mm]	a [mm]	b [mm]
C-SSM-S12-32.R.03-B-40-100	32	100	40	-	32	10	19700	3	-	-	-	-
A-SSM-S12-40.R.04	40	-	-	40	16	10	17000	4	38	20	8.4	5.6
A-SSM-S12-50.R.05	50	-	-	40	22	10	14800	5	43	20	10.4	6.3
A-SSM-S12-63.R.06	63	-	-	40	22	10	12850	6	48	21	10.4	6.3
A-SSM-S12-80.R.07	80	-	-	50	27	10	11250	7	58	22	12.4	7



SSM-S / Shouldering 4 x 90°

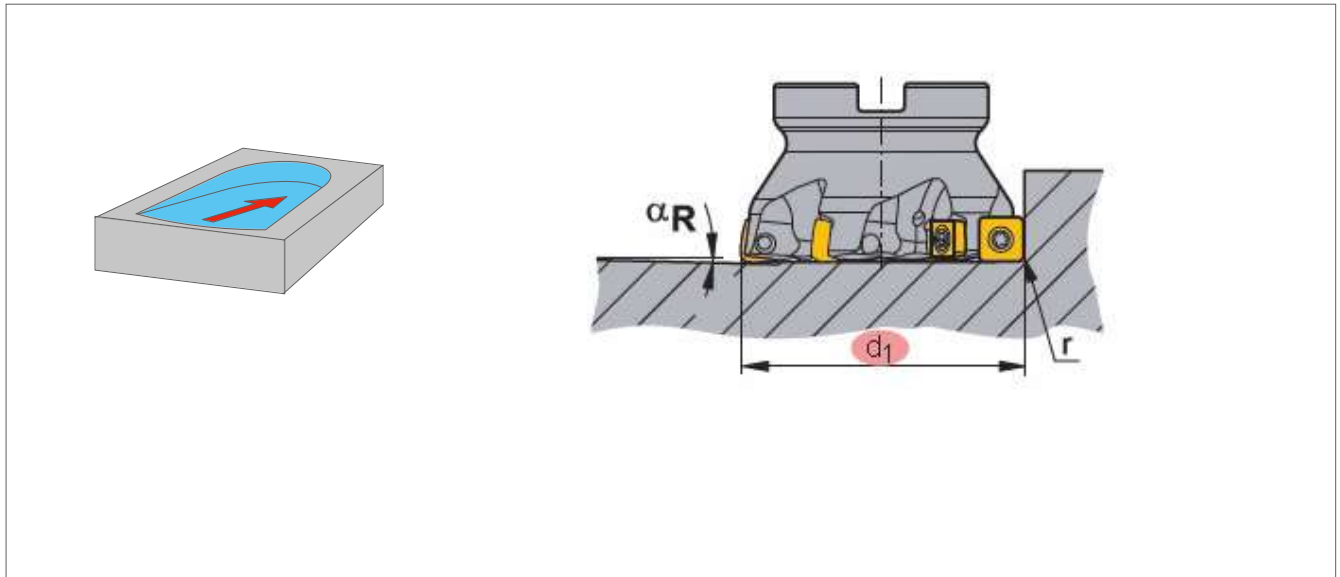
Application data (helical plunge milling SDKT09)



Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
C-SSM-S09-25.R.03-B-32-88	25	48	37	4.4
C-SSM-S09-32.R.04-B-40-100	32	62	47	2.2
G-SSM-S09-25.R.03	25	48	37	4.4
G-SSM-S09-32.R.04	32	62	47	2.2
A-SSM-S09-40.R.05	40	78	63	0.75
A-SSM-S09-50.R.06	50	98	83	0.5
A-SSM-S09-63.R.07	63	124	109	0.35
A-SSM-S09-80.R.09	80	158	143	0.25

SSM-S / Shouldering 4 x 90°

Application data (angled ramping SDKT09)

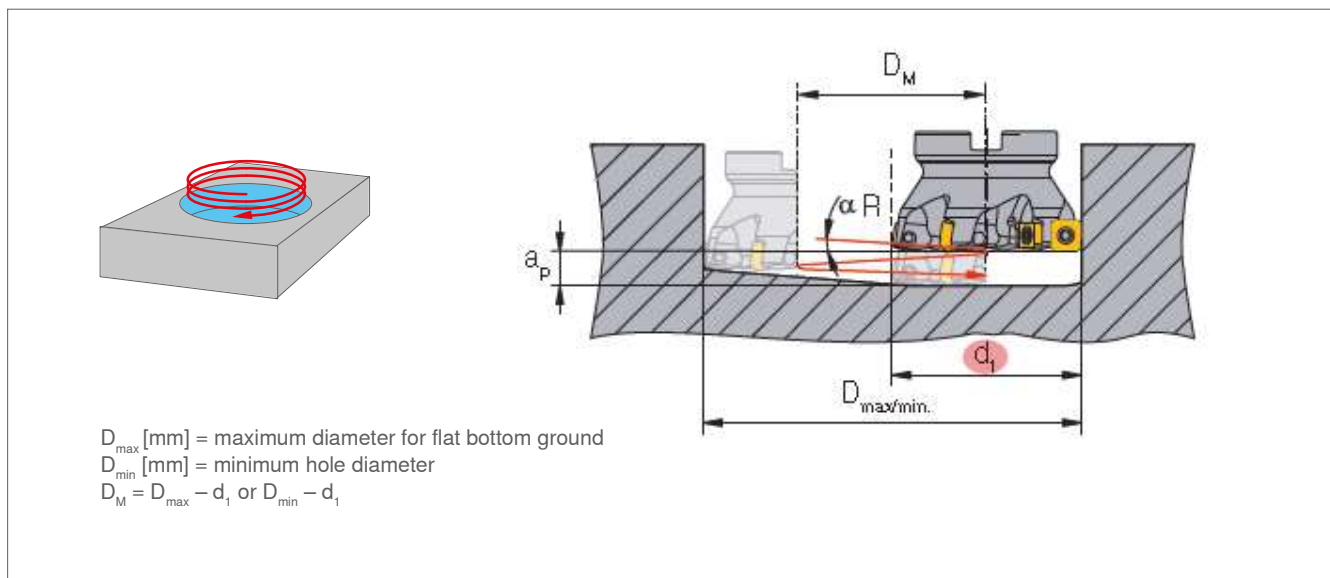


Description	d_1 [mm]	α_R [°]
C-SSM-S09-25.R.03-B-32-88	25	4.4
C-SSM-S09-32.R.04-B-40-100	32	2.2
G-SSM-S09-25.R.03	25	4.4
G-SSM-S09-32.R.04	32	2.2
A-SSM-S09-40.R.05	40	0.75
A-SSM-S09-50.R.06	50	0.5
A-SSM-S09-63.R.07	63	0.35
A-SSM-S09-80.R.09	80	0.25



SSM-S / Shouldering 4 x 90°

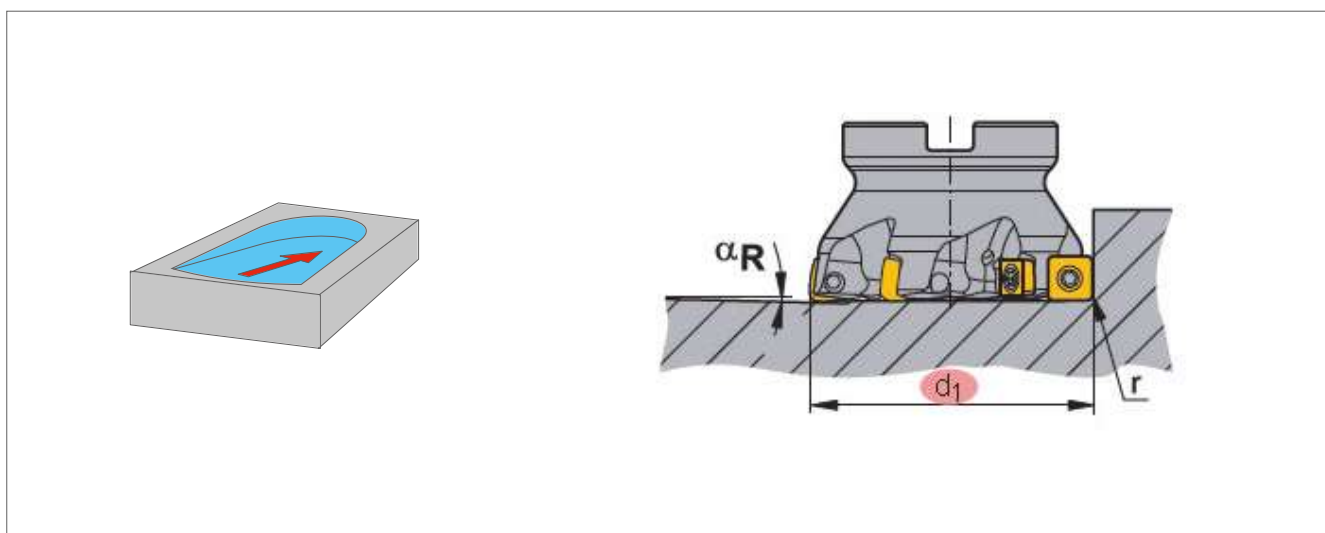
Application data (helical plunge milling SDKT12)



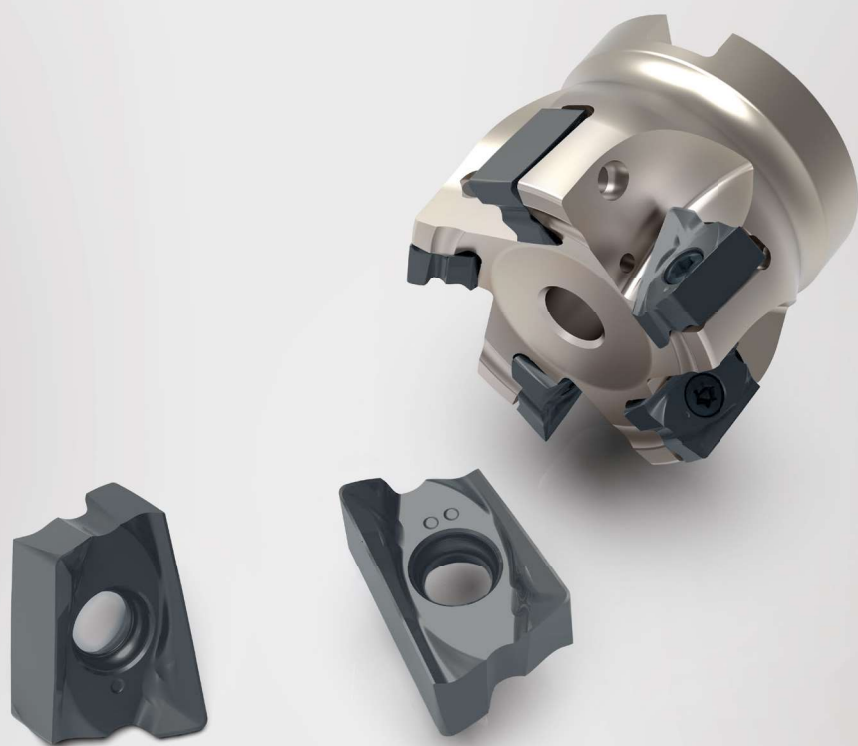
Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
C-SSM-S12-32.R.03-B-40-100	32	62	41	2.0
A-SSM-S12-40.R.04	40	78	57	2.0
A-SSM-S12-50.R.05	50	98	77	1.2
A-SSM-S12-63.R.06	63	124	103	0.7
A-SSM-S12-80.R.07	80	158	137	0.6

SSM-S / Shouldering 4 x 90°

Application data (angled ramping SDKT12)

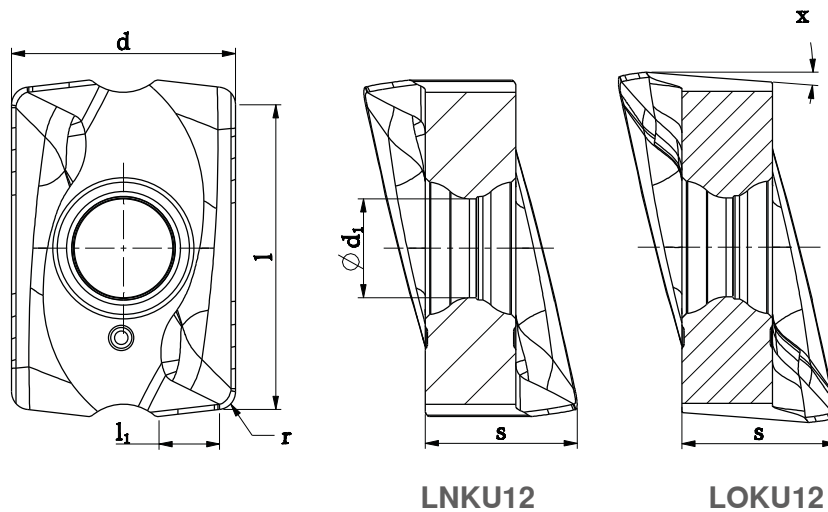


Description	d_1 [mm]	α_R [°]
C-SSM-S12-32.R.03-B-40-100	32	2.0
A-SSM-S12-40.R.04	40	2.0
A-SSM-S12-50.R.05	50	1.2
A-SSM-S12-63.R.06	63	0.7
A-SSM-S12-80.R.07	80	0.6



DSM-L / Shouldering 4 x 90°

Insert (LNKU12 / LOKU12)



Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
LNKU 120608ER-PC	10	13.4	6.78	2.7	0.8	4.4	0
LNKU 120608ER-MC	10	13.4	6.78	2.7	0.8	4.4	0
LNKU 120608ER-KC	10	13.4	6.78	2.7	0.8	4.4	0
LOKU 120608ER-PC	10	13.4	6.87	2.7	0.8	4.4	5
LOKU 120608ER-MC	10	13.4	6.87	2.7	0.8	4.4	5

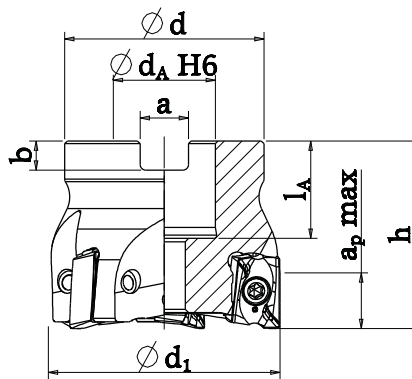


DSM-L / Shouldering 4 x 90°

Milling body (LNKU12 / LOKU12)

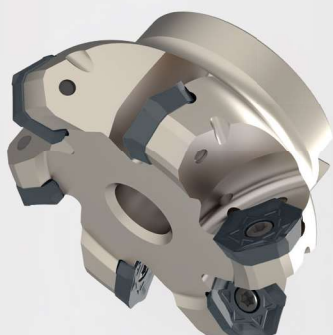
A-

- ▲ Face milling
- ▲ Angled milling
- ▲ Helical plunging
- ▲ Shoulder milling
- ▲ Slot milling
- ▲ Pocket milling



Description	Ø d ₁ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	l _A [mm]	a [mm]	b [mm]
A-DSM-LO/LN12-40.R.04	40	40 / 40.44*	16	12	17000	4	38	20	8.4	5.6
A-DSM-LO/LN12-50.R.05	50	40 / 40.44*	22	12	14800	5	43	20	10.4	6.3
A-DSM-LO/LN12-63.R.06	63	40 / 40.44*	22	12	12850	6	48	21	10.4	6.3
A-DSM-LO/LN12-80.R.07	80	50 / 50.44*	27	12	11250	7	58	22	12.4	7

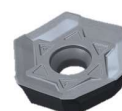
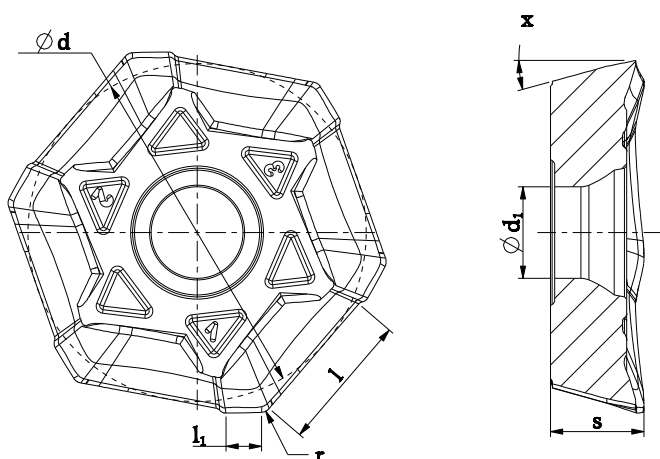
*with LOKU insert



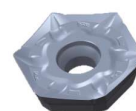


SSM-H / Face milling 6 x 45°

Insert (HPKT, HOKT, HPCT and HOCT)



HPKT-PC



HOKT-PC



HPKT-MC



HOCT-MC



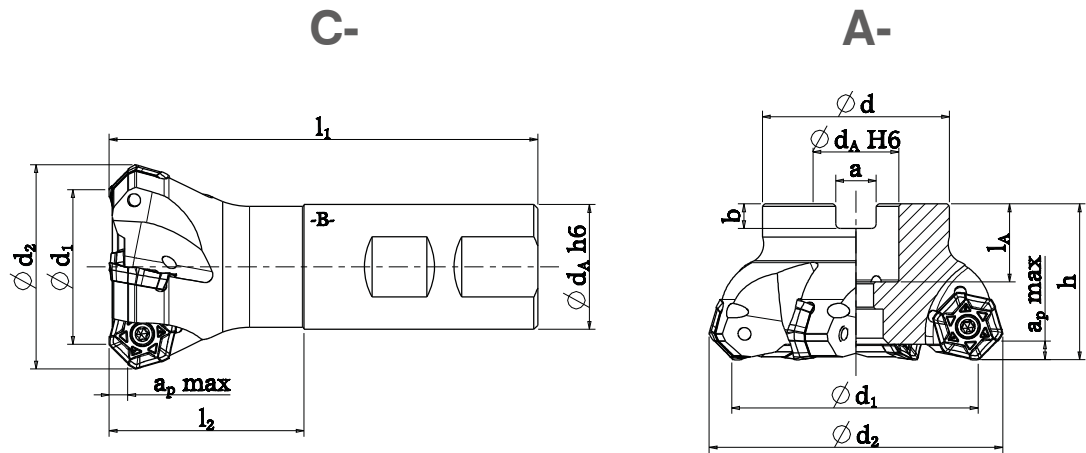
HPCT-NC

Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
HPKT 0604AZER-PC	16.3	6.5	4.5	1.7	0.5	4.4	11
HPKT 0604AZER-MC	16.3	6.5	4.5	1.7	0.5	4.4	11
HPCT 0604AZFR-NC	16.3	6.5	4.5	1.7	0.4	4.4	11
HOKT 0604AZER-PC	16.3	6.5	4.5	1.7	0.5	4.4	10
HOCT 0604AZER-MC	16.3	6.5	4.5	1.7	0.4	4.4	10

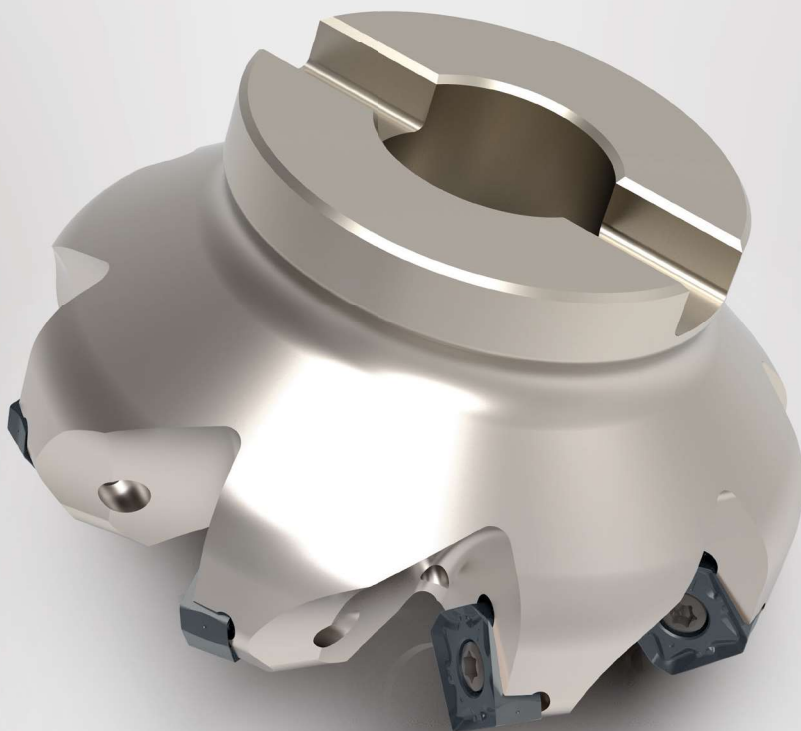
SSM-H / Face milling 6 x 45°

Milling body (HPKT, HOKT, HPCT and HOCT)

- ▲ Face milling
- ▲ Slot milling
- ▲ Chamfering

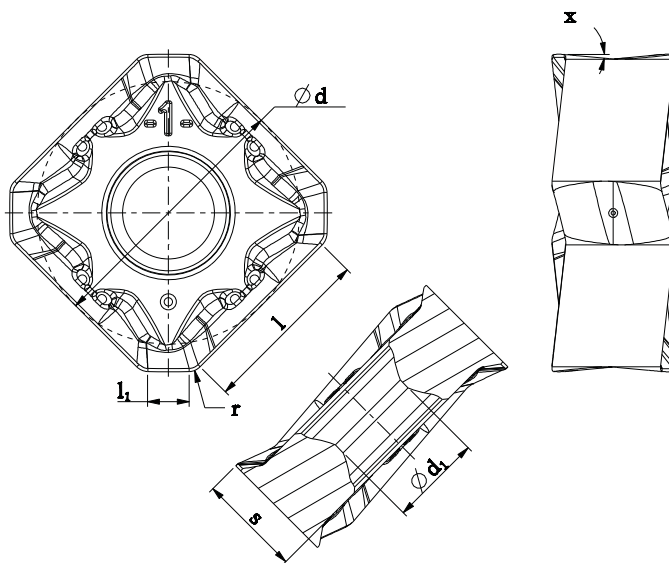


Description	Ø d ₁ [mm]	Ø d ₂ [mm]	l ₁ [mm]	l ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ød [mm]	l _A [mm]	a [mm]	b [mm]
C-SSM-H06-40.R.04-B32-50-110	40	52.2	110	50	-	32	4.5	17000	4	-	-	-	-
A-SSM-H06-40.R.04	40	52.2	-	-	40	16	4.5	19900	4	38	19	8.4	5.6
A-SSM-H06-50.R.05	50	62.2	-	-	40	22	4.5	15900	5	43	20	10.4	6.3
A-SSM-H06-63.R.06	63	75.2	-	-	40	22	4.5	12600	6	48	20	10.4	6.3
A-SSM-H06-80.R.07	80	92.2	-	-	50	27	4.5	9900	7	58	22	12.4	7
A-SSM-H06-100.R.09	100	112.2	-	-	50	32	4.5	7900	9	78	25	14.4	8
A-SSM-H06-125.R.10	125	137.2	-	-	63	40	4.5	6300	10	88	33	16.4	9



DSM-S / Face milling 8 x 45°

Insert (SOKU)



-PC



-MC



-KC

Description	d [mm]	l [mm]	s [mm]	l ₁ [mm]	r [mm]	d ₁ [mm]	x [°]
SOKU 1205AZER-PC	13	8.5	5.1	2	0.8	4.55	6
SOKU 1205AZER-MC	13	8.5	5.1	2	0.8	4.55	6
SOKU 1205AZER-KC	13	8.5	5.1	2	0.8	4.55	6
SOKU 1505AZER-PC	15.875	10.5	6	2.7	1	5.74	6
SOKU 1505AZER-MC	15.875	10.5	6	2.7	1	5.74	6
SOKU 1505AZER-KC	15.875	10.5	6	2.7	1	5.74	6

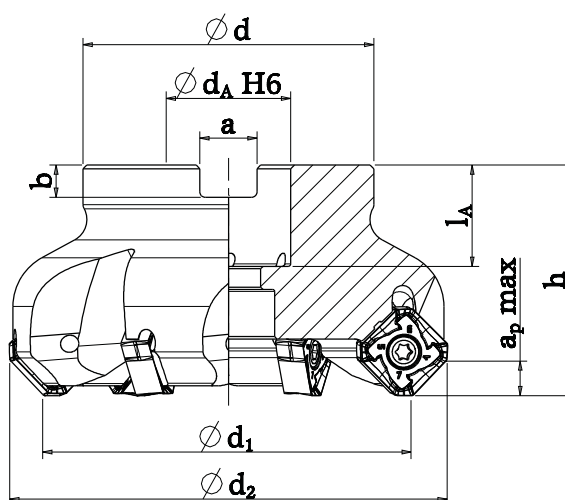


DSM-S / Face milling 8 x 45°

Milling body (SOKU12)

- ▲ Face milling
- ▲ Slot milling
- ▲ Chamfering

A-

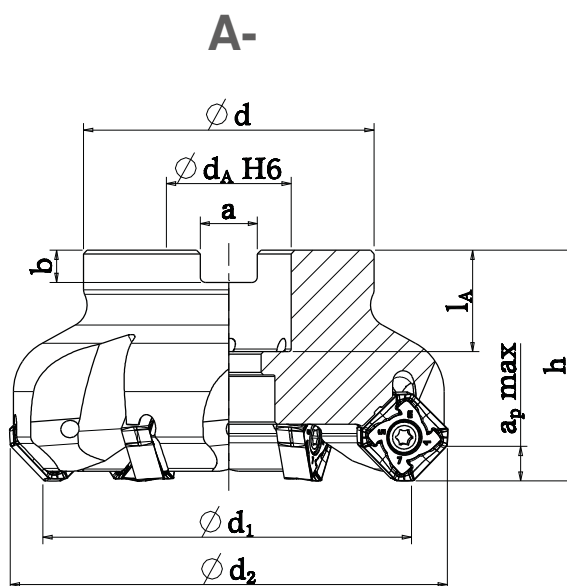


Description	$\varnothing d_1$ [mm]	$\varnothing d_2$ [mm]	h [mm]	$\varnothing d_A$ H6/h6 [mm]	$a_p \max$ [mm]	$n_{\max}$ [min ⁻¹]	z	$\varnothing d$ [mm]	l_A [mm]	a [mm]	b [mm]
A-DSM-S12-40.R.04	40	52.4	45	16	6	19900	4	38	19	8.4	5.6
A-DSM-S12-50.R.05	50	62.4	45	22	6	15900	5	43	20	10.4	6.3
A-DSM-S12-63.R.06	63	75.4	45	22	6	12600	6	48	20	10.4	6.3
A-DSM-S12-80.R.08	80	92.4	50	27	6	9900	8	58	23	12.4	7
A-DSM-S12-100.R.10	100	112.4	50	32	6	7900	10	78	25	14.4	8
A-DSM-S12-125.R.12	125	137.4	63	40	6	6300	12	88	28	16.4	9

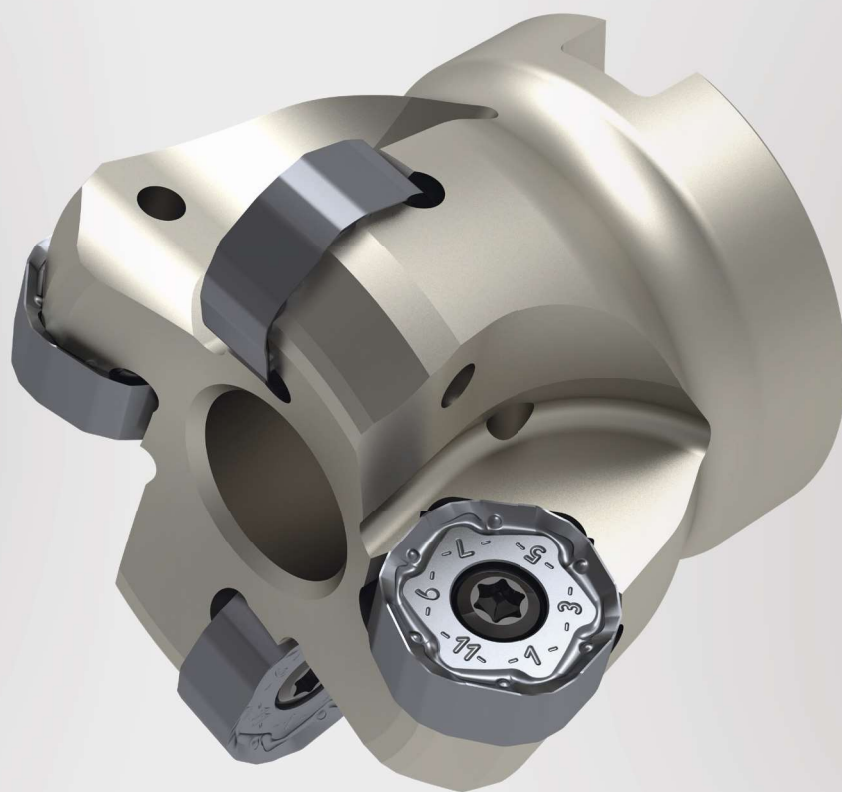
DSM-S / Face milling 8 x 45°

Milling body (SOKU15)

- ▲ Face milling
- ▲ Slot milling
- ▲ Chamfering

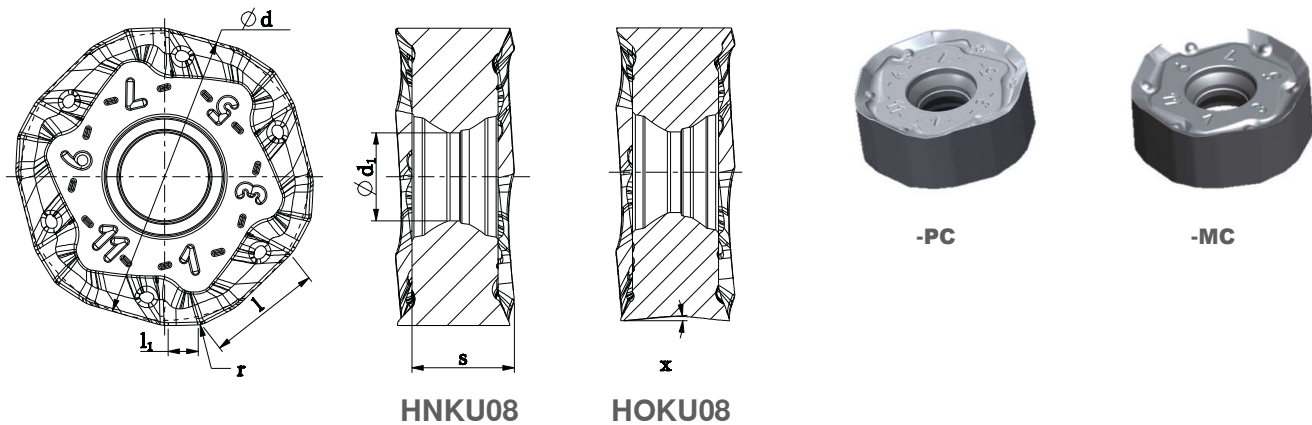


Description	Ø d ₁ [mm]	Ø d ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	l _A [mm]	a [mm]	b [mm]
A-DSM-S15-40.R.04	40	55	45	16	6.5	15900	4	38	19	8.4	5.6
A-DSM-S15-50.R.04	50	65	45	22	6.5	12700	4	43	20	10.4	6.3
A-DSM-S15-63.R.05	63	78	45	22	6.5	10100	5	48	20	10.4	6.3
A-DSM-S15-80.R.06	80	95	50	27	6.5	7900	6	58	22	12.4	7
A-DSM-S15-100.R.07	100	115	50	32	6.5	6300	7	78	25	14.4	8
A-DSM-S15-125.R.08	125	140	63	40	6.5	5000	8	88	28	16.4	9
A-DSM-S15-160.R.10	160	175	63	40	6.5	3800	10	93.4	29	16.4	9



DSM-H / Face milling 12 x 45°

Insert (HNKU / HOKU)



Description	d [mm]	l [mm]	s [mm]	r [mm]	l ₁ [mm]	d ₁ [mm]	x [°]
HNKU 0806AZER-PC	14.7	7.5	5.19	1	1.5	4.5	-
HNKU 0806AZER-MC	14.7	7.5	5.19	1	1.5	4.5	-
HOKU 0806AZER-PC	14.7	7.5	5.23	1	1.5	4.5	4.5
HOKU 0806AZER-MC	14.7	7.5	5.23	1	1.5	4.5	4.5

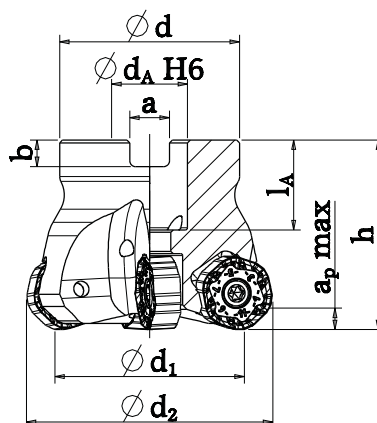


DSM-H / Face milling 12 x 45°

Milling body (HNKU / HOKU)

- ▲ Face milling
- ▲ Slot milling
- ▲ Chamfering

A-



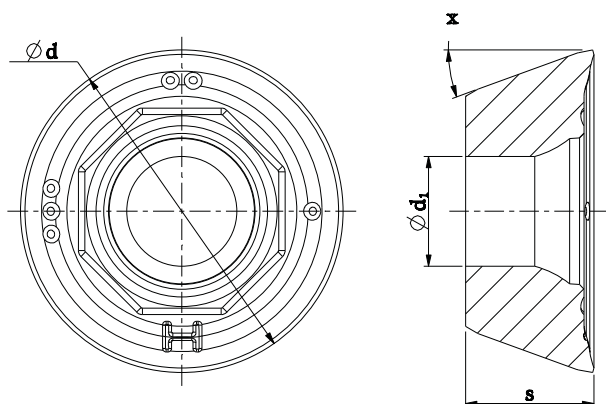
Description	Ø d ₁ [mm]	Ø d ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	l _A [mm]	a [mm]	b [mm]
A-DSM-H08-40.R.04	40	52	40	16	4	15900	4	38	19	8.4	5.6
A-DSM-H08-50.R.04	50	62	40	22	4	12700	4	43	20	10.4	6.3
A-DSM-H08-63.R.05	63	75	40	22	4	10100	5	48	20	10.4	6.3
A-DSM-H08-80.R.06	80	92	50	27	4	7900	6	58	22	12.4	7
A-DSM-H08-100.R.08	100	112	50	32	4	6400	8	78	25	14.4	8
A-DSM-H08-125.R.09	125	137	63	40	4	5100	9	88	28	16.4	9





SSM-R / Form milling

Insert (RPMX, RPHX, RDHW and RDHX)



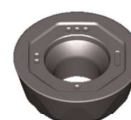
-PC



-MC



-SC



HC



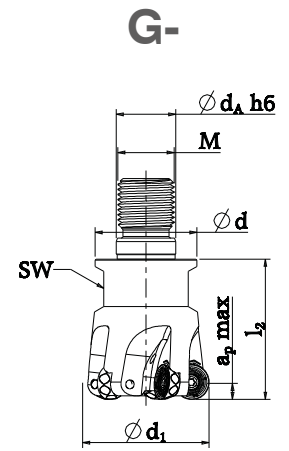
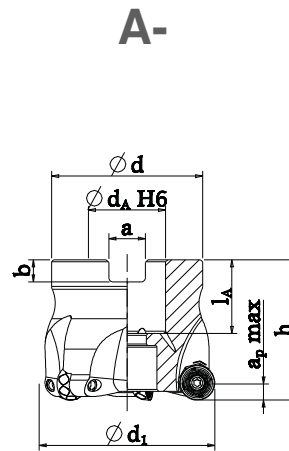
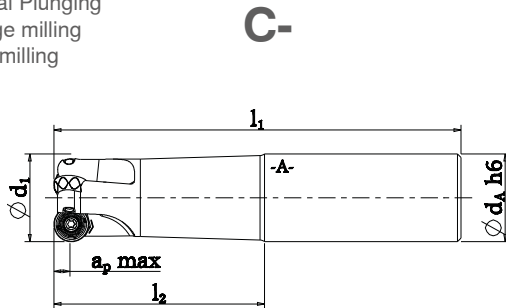
-NC

Description	d [mm]	s [mm]	d ₁ [mm]	x [°]
RPMX 10T3MO-PC	10	3.97	3.4	11
RPMX 10T3MO-MC	10	3.97	3.4	11
RDHX 10T3MO-NC	10	3.97	3.4	15
RPHX 10T3MO-SC	10	3.97	3.4	11
RDHW 10T3MO-HC	10	3.97	3.4	15
RPMX 1204MO-PC	12	4.76	4.4	11
RPMX 1204MO-MC	12	4.76	4.4	11
RDHX 1204MO-NC	12	4.76	4.4	15
RPHX 1204MO-SC	12	4.76	4.4	11
RDHW 1204MO-HC	12	4.76	4.4	15
RPMX 1605MO-PC	16	5.56	5.5	11
RPMX 1605MO-MC	16	5.56	5.5	11
RDHX 1605MO-NC	16	5.56	5.5	15
RPHX 1605MO-SC	16	5.56	5.5	11
RDHW 1605MO-HC	16	5.56	5.5	15

SSM-R / Form milling

Milling body (RP/RD10)

- ▲ Face milling
- ▲ Angled milling
- ▲ Slot milling
- ▲ Pocket milling
- ▲ Profile milling
- ▲ Helical Plunging
- ▲ Plunge milling
- ▲ Turn milling



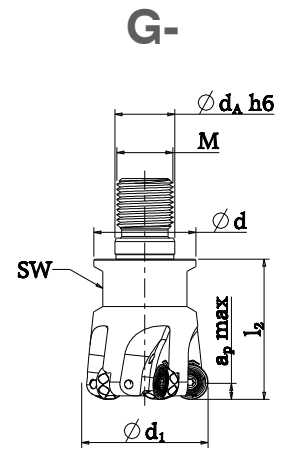
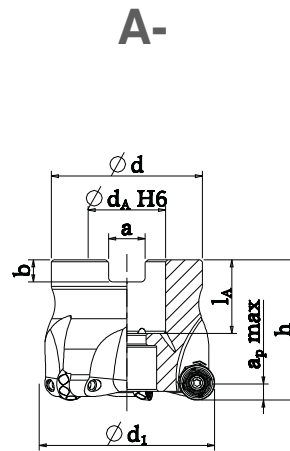
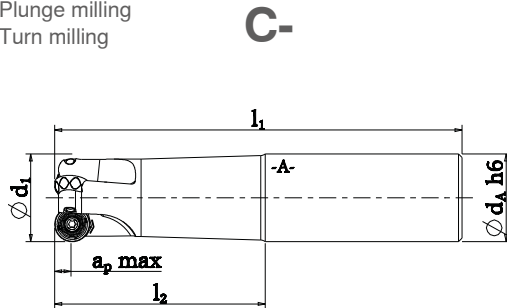
Description	Ød ₁ [mm]	l ₁ [mm]	l ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	SW	M	l _A [mm]	a [mm]	b [mm]
C-SSM-R10-20.R.02-A-50-102	20	102	50	-	20	5	31800	2	-	-	-	-	-	-
C-SSM-R10-20.R.02-A-50-165	20	165	50	-	20	5	22260	2	-	-	-	-	-	-
C-SSM-R10-25.R.03-A-60-116	25	116	60	-	25	5	20000	3	-	-	-	-	-	-
C-SSM-R10-25.R.03-A-60-165	25	165	60	-	25	5	20000	3	-	-	-	-	-	-
C-SSM-R10-32.R.04-A-70-130	32	130	70	-	32	5	19000	4	-	-	-	-	-	-
C-SSM-R10-32.R.04-A-70-165	32	165	70	-	32	5	18000	4	-	-	-	-	-	-
G-SSM-R10-20.R.02	20	-	30	-	10.5	5	36900	2	18	SW15	M10	-	-	-
G-SSM-R10-25.R.03	25	-	35	-	12.5	5	33200	3	21	SW17	M12	-	-	-
G-SSM-R10-32.R.04	32	-	40	-	17	5	30200	4	29	SW24	M16	-	-	-
G-SSM-R10-35.R.04	35	-	40	-	17	5	30200	4	29	SW24	M16	-	-	-
A-SSM-R10-40.R.04	40	-	-	40	16	5	15900	4	38	-	-	20	8.4	5.6
A-SSM-R10-42.R.05	42	-	-	40	16	5	15900	5	38	-	-	20	8.4	5.6
A-SSM-R10-50.R.05	50	-	-	40	22	5	12700	5	43	-	-	21	10.4	7.6



SSM-R / Form milling

Milling body (RP/RD12)

- ▲ Face milling
- ▲ Angled milling
- ▲ Slot milling
- ▲ Pocket milling
- ▲ Profile milling
- ▲ Helical Plunging
- ▲ Plunge milling
- ▲ Turn milling



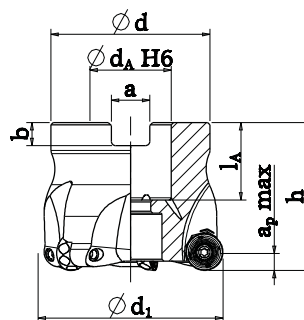
Description	Ø d ₁ [mm]	l ₁ [mm]	l ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _{p max} [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	l _A [mm]	a [mm]	b [mm]
C-SSM-R12-25.R.02-A-30-86	25	86	30	-	25	6	25000	2	-	-	-	-
C-SSM-R12-25.R.02-A-60-116	25	116	60	-	25	6	18000	2	-	-	-	-
C-SSM-R12-32.R.03-A-40-100	32	100	40	-	32	6	19000	3	-	-	-	-
C-SSM-R12-32.R.03-A-70-130	32	130	70	-	32	6	17000	3	-	-	-	-
G-SSM-R12-25.R.02	25	-	35	-	12.5	6	25000	2	21	-	-	-
G-SSM-R12-35.R.03	35	-	40	-	17	6	15900	3	29	-	-	-
A-SSM-R12-40.R.04	40	-	-	40	16	6	15900	4	38	20	8.4	5.6
A-SSM-R12-42.R.04	42	-	-	40	16	6	15900	4	38	20	8.4	5.6
A-SSM-R12-50.R.05	50	-	-	40	22	6	12700	5	43	21	10.4	6.3
A-SSM-R12-52.R.05	52	-	-	40	22	6	12700	5	43	21	10.4	6.3
A-SSM-R12-63.R.06	63	-	-	40	22	6	10100	6	48	21	10.4	6.3
A-SSM-R12-66.R.06	66	-	-	40	27	6	10100	6	58	23	12.4	7
A-SSM-R12-80.R.08	80	-	-	50	27	6	7950	8	58	22	12.4	7
A-SSM-R12-100.R.10	100	-	-	50	32	6	6350	10	78	26	14.4	8

SSM-R / Form milling

Milling body (RP16)

- ▲ Face milling
- ▲ Angled milling
- ▲ Slot milling
- ▲ Pocket milling
- ▲ Profile milling
- ▲ Helical Plunging
- ▲ Plunge milling
- ▲ Turn milling

A-

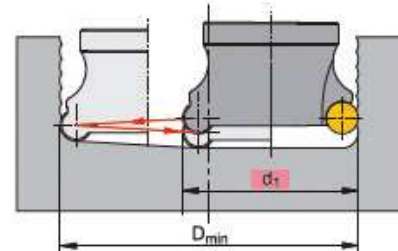
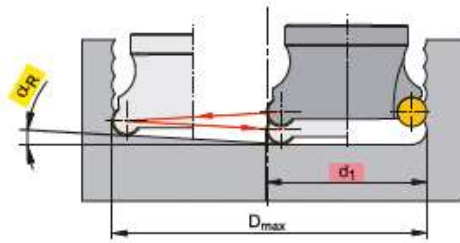
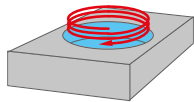


Description	Ø d ₁ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	l _A [mm]	a [mm]	b [mm]
A-SSM-R16-50.R.03	50	40	22	8	12700	3	48	22	10.4	6.3
A-SSM-R16-52.R.04	52	40	22	8	12700	4	48	21	10.4	6.3
A-SSM-R16-63.R.05	63	40	22	8	10100	5	48	21	10.4	6.3
A-SSM-R16-66.R.05	66	40	22	8	10100	5	48	21	10.4	6.3
A-SSM-R16-80.R.06	80	50	27	8	7950	6	58	23	12.4	7
A-SSM-R16-100.R.07	100	50	32	8	6350	7	78	26	14.4	8
A-SSM-R16-125.R.08	125	63	40	8	5050	8	88	28	16.4	9



SSM-R / Form milling

Application data (helical plunge milling RP/RD10)



$D_{\max}$ [mm] = maximum diameter for flat bottom ground

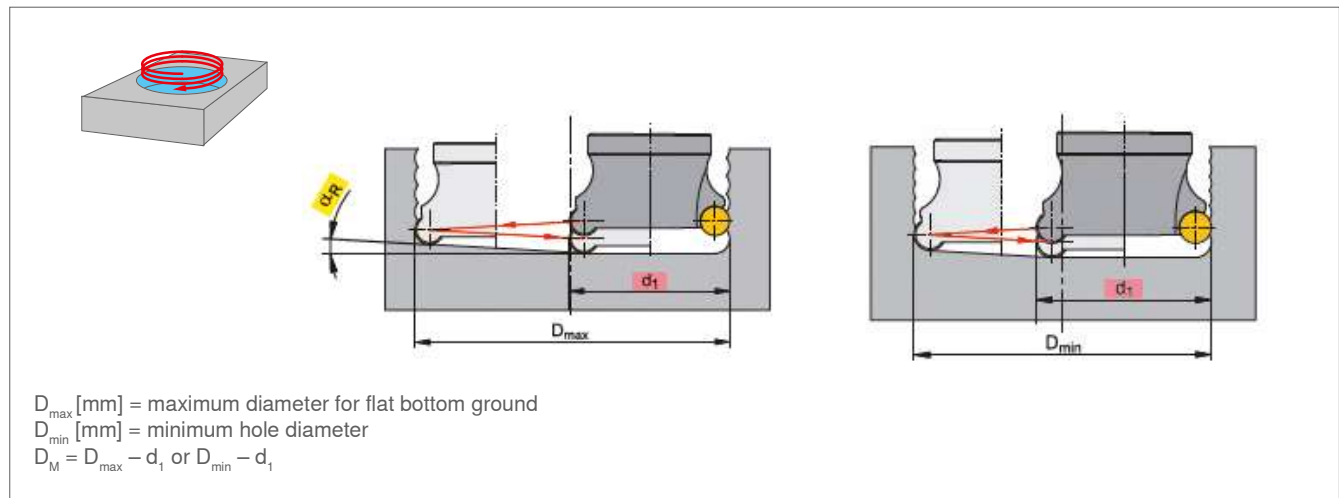
$D_{\min}$ [mm] = minimum hole diameter

$D_M = D_{\max} - d_1$ or $D_{\min} - d_1$

Description	d_1 [mm]	$D_{\max}$ [mm]	$D_{\min}$ [mm]	$R_{\max}$ [°]
C-SSM-R10-20.R.02-A-50-102	20	30	26	1.3
C-SSM-R10-20.R.02-A-50-165	20	30	26	1.3
C-SSM-R10-25.R.03-A-60-116	25	40	37	1.8
C-SSM-R10-25.R.03-A-60-165	25	40	37	1.8
C-SSM-R10-32.R.04-A-70-130	32	54	50	1.5
C-SSM-R10-32.R.04-A-70-165	32	54	50	1.5
G-SSM-R10-20.R.02	20	30	26	1.3
G-SSM-R10-25.R.03	25	40	37	1.8
G-SSM-R10-32.R.04	32	54	50	1.5
G-SSM-R10-35.R.04	35	54	50	1.5
A-SSM-R10-40.R.04	40	70	64	1.1
A-SSM-R10-42.R.05	42	70	64	1.1
A-SSM-R10-50.R.05	50	74	68	1.1

SSM-R / Form milling

Application data (helical plunge milling RP/RD12)

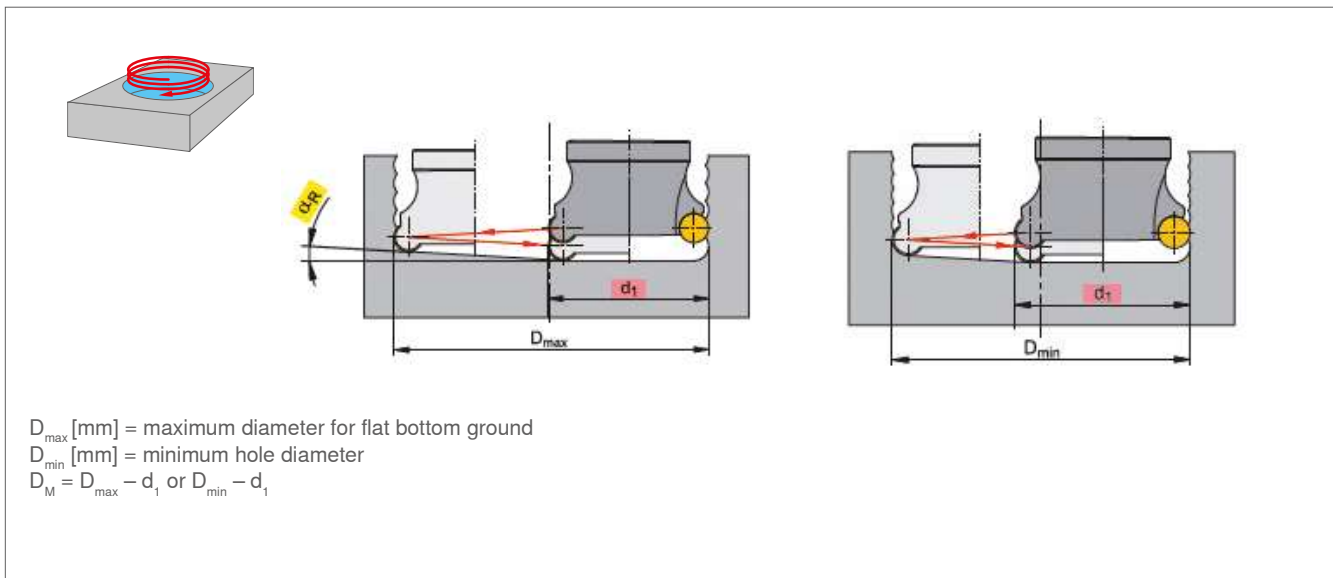


Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
C-SSM-R12-25.R.02-A-30-86	25	38	31	2.2
C-SSM-R12-25.R.02-A-60-116	32	38	31	2.2
C-SSM-R12-32.R.03-A-40-100	32	52	46	1.7
C-SSM-R12-32.R.03-A-70-130	32	52	46	1.7
G-SSM-R12-25.R.02	25	38	31	2.2
G-SSM-R12-35.R.03	35	52	46	1.7
A-SSM-R12-40.R.04	40	68	62	1.4
A-SSM-R12-42.R.04	42	68	62	1.4
A-SSM-R12-50.R.05	50	88	81	1.1
A-SSM-R12-52.R.05	52	88	81	1.1
A-SSM-R12-63.R.06	63	114	107	0.9
A-SSM-R12-66.R.06	66	114	107	0.9
A-SSM-R12-80.R.08	80	148	142	0.7
A-SSM-R12-100.R.10	100	188	181	0.5



SSM-R / Form milling

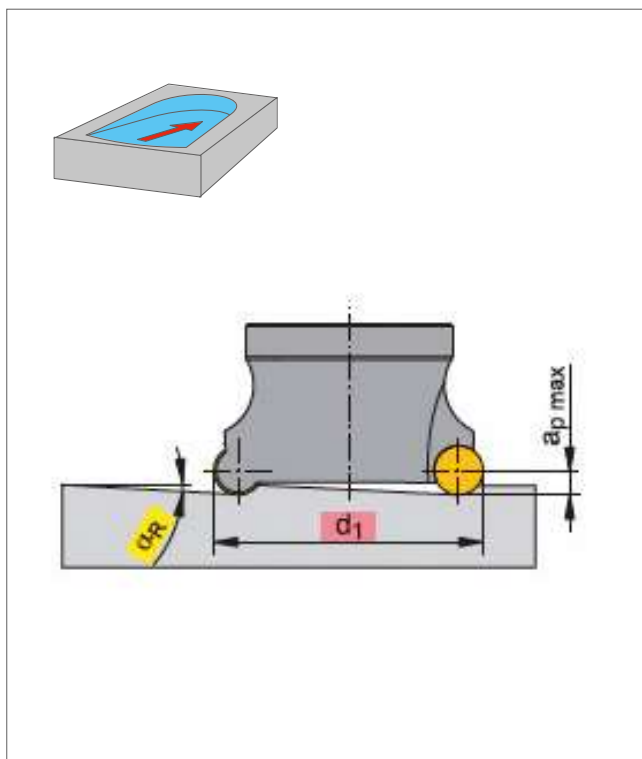
Application data (helical plunge milling RP16)



Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
A-SSM-R16-50.R.03	50	84	75	1.5
A-SSM-R16-52.R.04	52	84	75	1.5
A-SSM-R16-63.R.05	63	110	101	1.1
A-SSM-R16-66.R.05	66	110	101	1.1
A-SSM-R16-80.R.06	80	144	135	0.9
A-SSM-R16-100.R.07	100	184	175	0.7
A-SSM-R16-125.R.08	125	234	225	0.5

SSM-R / Form milling

Application data (angled ramping)

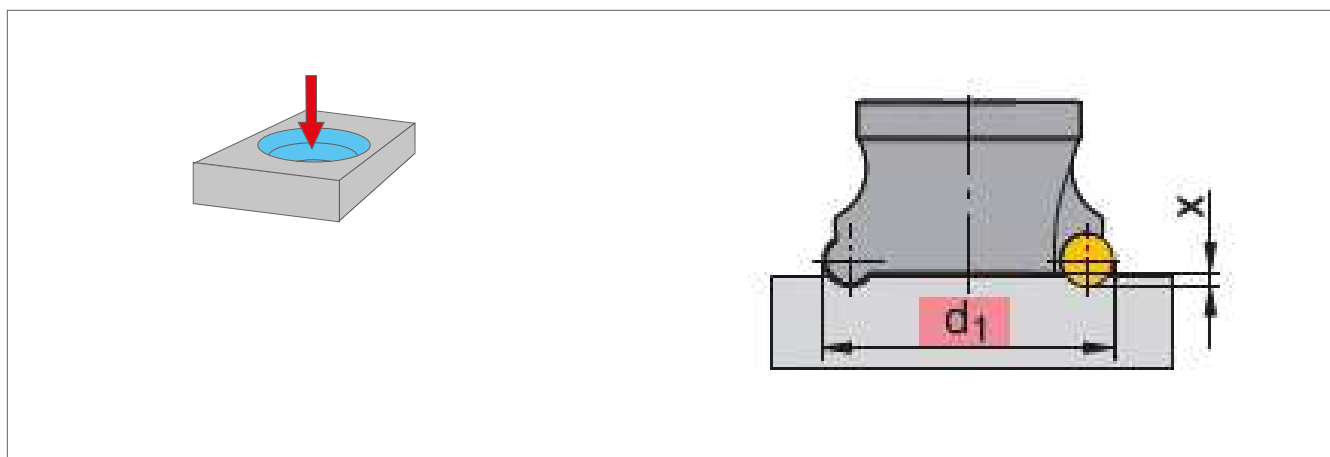


Description	d_1 [mm]	α_R [°]
C-SSM-R10-20.R.02-A-50-102	20	1.3
C-SSM-R10-20.R.02-A-50-165	20	1.3
C-SSM-R10-25.R.03-A-60-116	25	2.0
C-SSM-R10-25.R.03-A-60-165	25	2.0
C-SSM-R10-32.R.04-A-70-130	32	3.0
C-SSM-R10-32.R.04-A-70-165	32	3.0
G-SSM-R10-20.R.02	20	1.3
G-SSM-R10-25.R.03	25	2.0
G-SSM-R10-32.R.04	32	3.0
G-SSM-R10-35.R.04	35	3.0
A-SSM-R10-40.R.04	40	3.3
A-SSM-R10-42.R.04	42	3.3
A-SSM-R10-50.R.05	50	2.4
C-SSM-R12-25.R.02-A-30-86	25	6.4
C-SSM-R12-25.R.02-A-60-116	25	6.4
C-SSM-R12-32.R.03-A-40-100	32	4.0
C-SSM-R12-32.R.03-A-70-130	32	4.0
A-SSM-R12-40.R.04	40	2.8
A-SSM-R12-42.R.04	42	2.8
A-SSM-R12-50.R.05	50	2.6
A-SSM-R12-52.R.05	52	2.6
A-SSM-R12-63.R.06	63	1.9
A-SSM-R12-66.R.06	66	1.9
A-SSM-R12-80.R.08	80	1.3
A-SSM-R12-100.R.10	100	1.0
A-SSM-R16-50.R.03	50	4.0
A-SSM-R16-52.R.03	52	4.0
A-SSM-R16-63.R.05	63	2.8
A-SSM-R16-66.R.05	66	2.8
A-SSM-R16-80.R.06	80	2.0
A-SSM-R16-100.R.07	100	1.5
A-SSM-R16-125.R.08	125	1.0

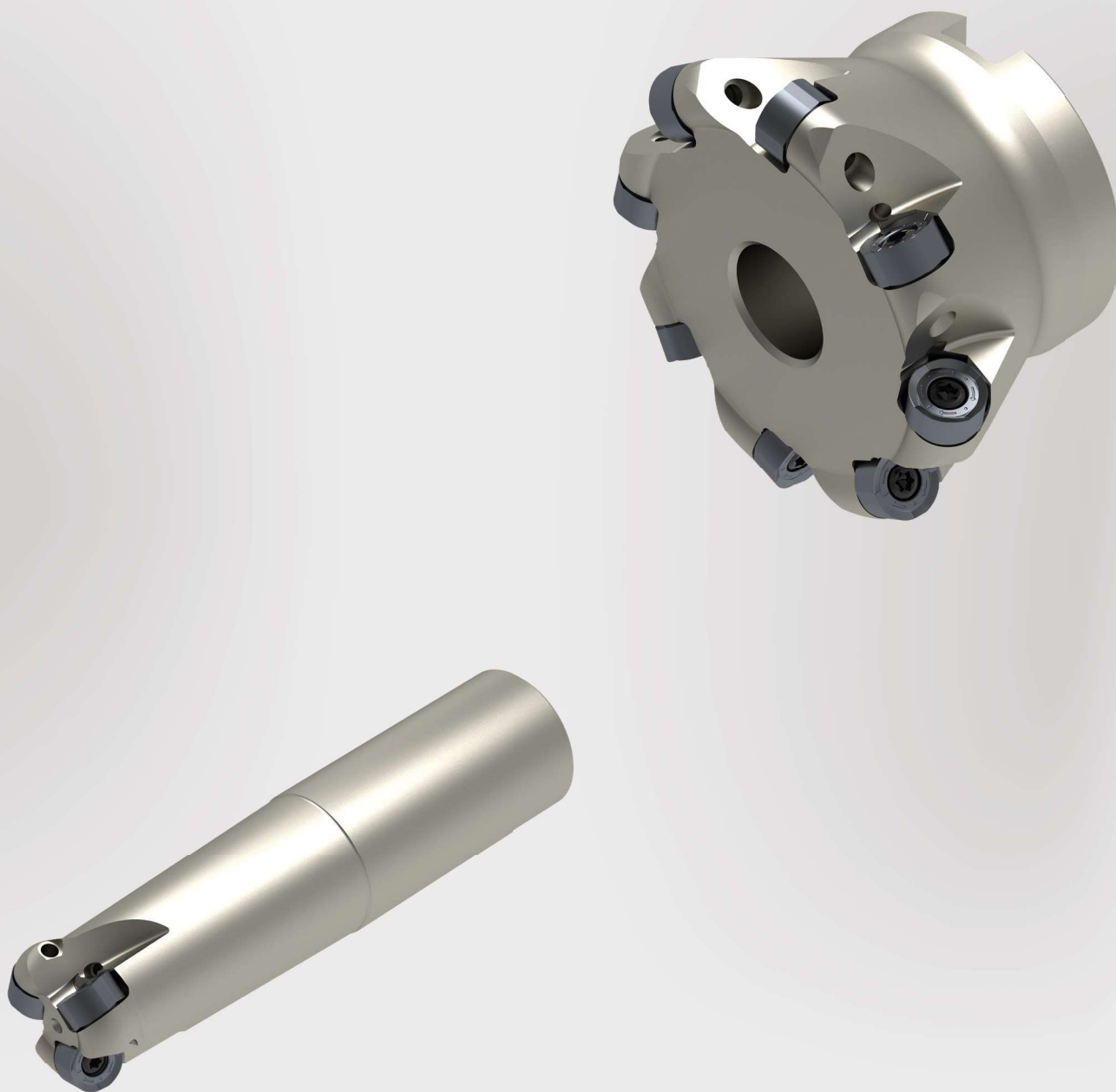


SSM-R / Form milling

Application data (axial plunging)



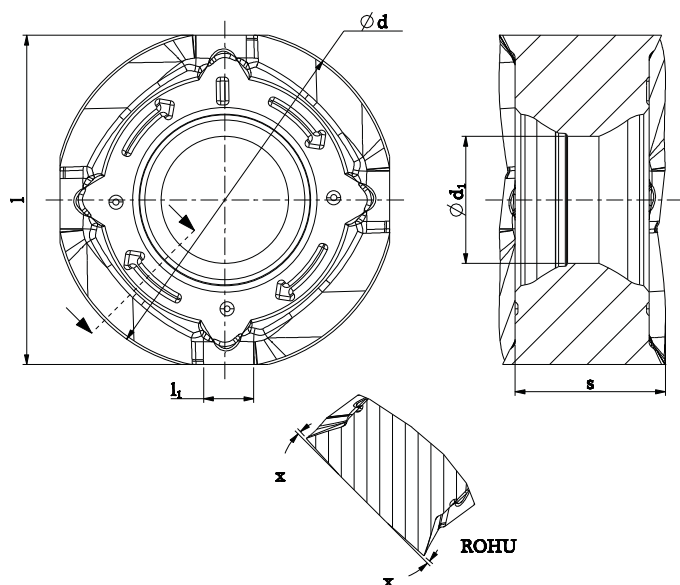
Ø [mm]	d ₁ [mm]	X _{max} [mm]
10	20	0.2
	25	0.4
	32 – 35	0.8
	40 – 50	1.5
12	25	1.0
	32 – 35	1.1
	40 – 50	1.2
	50 – 100	1.5
16	50 – 52	1.1
	63 – 125	1.0





DSM-R / Form milling

Insert (RNKU and ROHU)



-PC



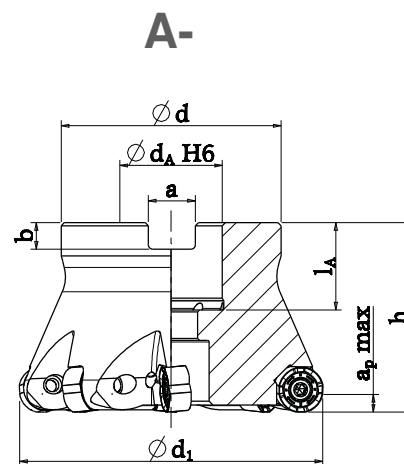
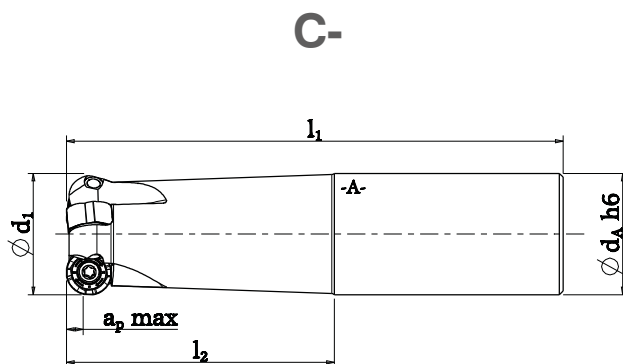
-MC

Description	d [mm]	l [mm]	s [mm]	l ₁ [mm]	d ₁ [mm]	x [°]
RNKU 1204MOER-PC	12	-	5.9	2.3	4.5	0
ROHU 1204MOER-MC	12	-	5.9	2.3	4.5	3
RNKU 1605MOER-PC	16	-	6.7	2.7	5.8	0
ROHU 1605MOER-MC	16	-	6.7	2.7	5.8	3

DSM-R / Form milling

Milling body (RNKU12 and ROHU12)

- ▲ Face milling
- ▲ Slot milling



Description	$\varnothing d_1$ [mm]	l_1 [mm]	l_2 [mm]	h [mm]	$\varnothing d_A$ H6/h6 [mm]	$a_p \text{ max}$ [mm]	n_{max} [min ⁻¹]	z	$\varnothing d$ [mm]	l_A [mm]	a [mm]	b [mm]
C-DSM-R12-32.R.03-A-70-131	32	131	70	-	32	4.5	19000	3	-	-	-	-
C-DSM-R12-32.R.03-A-70-165	32	165	70	-	32	4.5	17000	3	-	-	-	-
A-DSM-R12-40.R.04	40	-	-	40	16	4.5	15900	4	38	20	8.4	5.6
A-DSM-R12-50.R.05	50	-	-	40	22	4.5	12700	5	43	21	10.4	6.3
A-DSM-R12-63.R.06	63	-	-	40	22	4.5	10100	6	48	21	10.4	6.3
A-DSM-R12-80.R.08	80	-	-	50	27	4.5	7950	8	58	23	12.4	7
A-DSM-R12-100.R.10	100	-	-	50	32	4.5	6350	10	78	26	14.4	8

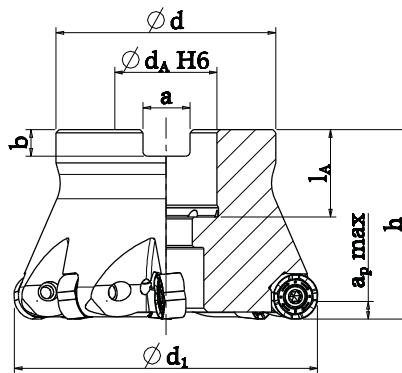


DSM-R / Form milling

Milling body (RNKU16 and ROHU16)

- ▲ Face milling
- ▲ Slot milling

A-



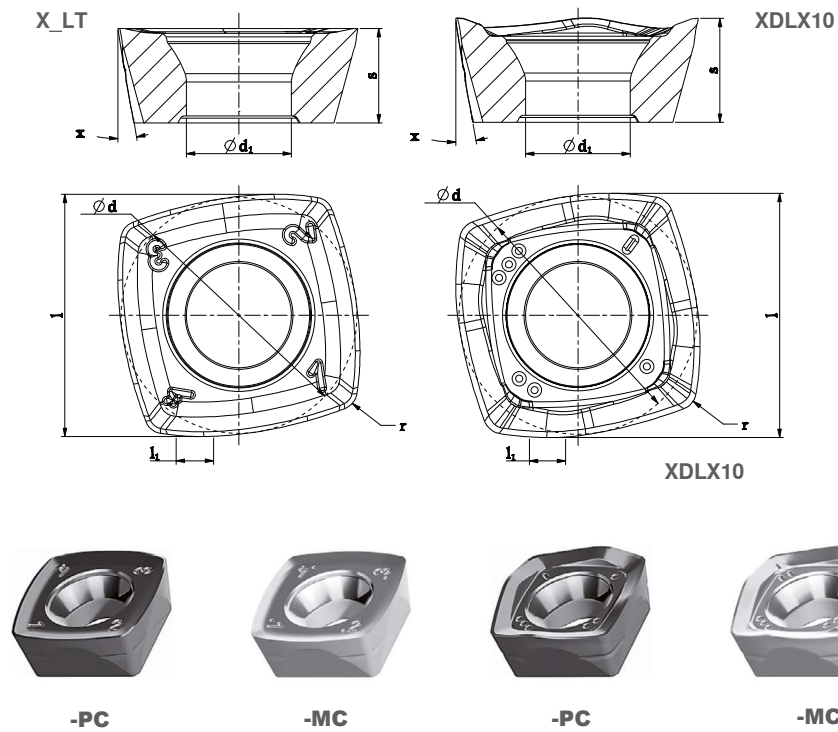
Description	Ø d ₁ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	l _A [mm]	a [mm]	b [mm]
A-DSM-R16-50.R.03	50	40	22	6	12700	3	43	22	10.4	6.3
A-DSM-R16-63.R.05	63	40	22	6	10100	5	48	21	10.4	6.3
A-DSM-R16-80.R.06	80	50	27	6	7950	6	58	23	12.4	7
A-DSM-R16-100.R.07	100	50	32	6	6350	7	78	26	14.4	8
A-DSM-R16-125.R.08	125	63	40	6	5050	8	88	28	16.4	9





SSM-HFC / High feed cutting

Insert (XPLT, XDLT, XDLX and XOLT)



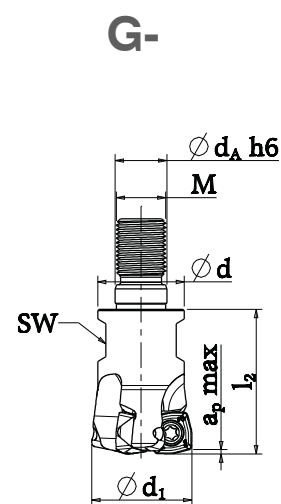
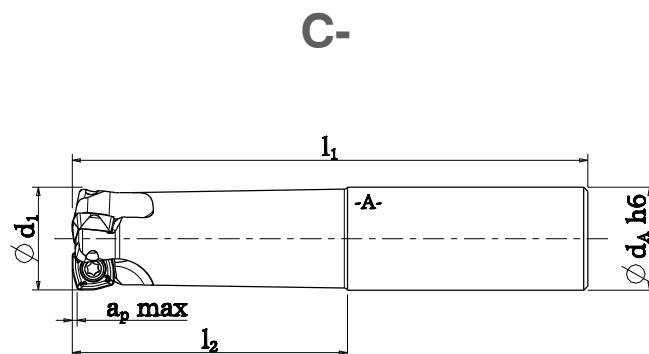
Description	d [mm]	s [mm]	d_1 [mm]	x [°]
XPLT 070305SR-PC	6.9	2.75	2.8	11
XPLT 070305ER-MC	6.9	2.75	2.8	11
XDLT 10T308SR-PC	9.9	3.97	4.4	15
XDLT 10T308ER-MC	9.9	3.97	4.4	15

Description	d [mm]	s [mm]	d_1 [mm]	x [°]
XDLX 10T308SR-PC	9.9	4.38	4.4	15
XDLX 10T308SR-MC	9.9	4.38	4.4	15
XOLT 130410SR-PC	13.1	4.76	5.5	9
XOLT 130410ER-MC	13.1	4.76	5.5	9

SSM-HFC / High feed cutting

Milling body (XPLT07)

- ▲ Face milling
- ▲ Angled milling
- ▲ Helical plunging
- ▲ Plunge milling
- ▲ Profile milling
- ▲ Pocket milling
- ▲ Slot milling



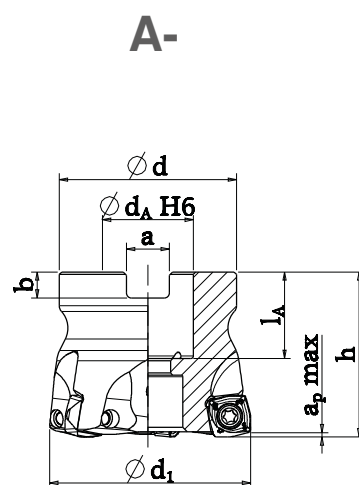
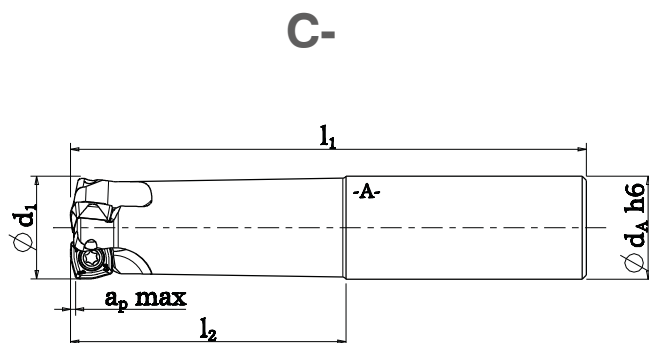
Description	$\varnothing d_1$ [mm]	l_1 [mm]	l_2 [mm]	$\varnothing d_A$ H6/h6 [mm]	$a_p \max$ [mm]	$n_{\max}$ [min ⁻¹]	z	$\varnothing d$ [mm]	SW	M
C-SSM-HFC07-16.R.02-A-50-200	16	200	50	16	0.8	4600	2	—	—	—
C-SSM-HFC07-20.R.03-A-50-200	20	200	50	20	0.8	4200	3	—	—	—
C-SSM-HFC07-25.R.04-A-50-200	25	200	50	25	0.8	3900	4	—	—	—
G-SSM-HFC07-16.R.02	16	—	25	8.5	0.8	20800	2	13.8	SW10	M8
G-SSM-HFC07-20.R.03	20	—	30	10.5	0.8	19800	3	18	SW15	M10
G-SSM-HFC07-25.R.04	25	—	35	12.5	0.8	18700	4	21	SW17	M12



SSM-HFC / High feed cutting

Milling body (XDLT10 and XDLX10)

- ▲ Face milling
- ▲ Angled milling
- ▲ Helical plunging
- ▲ Plunge milling
- ▲ Profile milling
- ▲ Pocket milling
- ▲ Slot milling

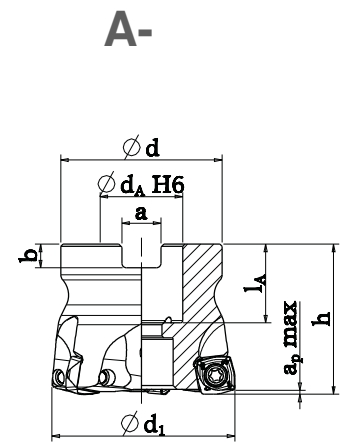
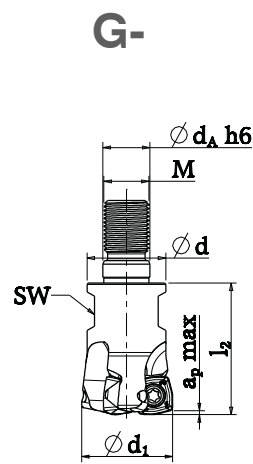
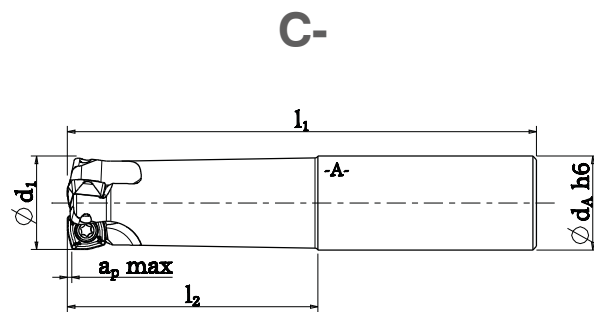


Description	$\varnothing d_1$ [mm]	l_1 [mm]	l_2 [mm]	h [mm]	$\varnothing d_A$ H6/h6 [mm]	$a_p \max$ [mm]	$n_{\max}$ [min ⁻¹]	z	$\varnothing d$ [mm]	l_A [mm]	a [mm]	b [mm]
C-SSM-HFC10-25.R.03-A-50-125	25	125	50	-	25	1	15600	3	-	-	-	-
C-SSM-HFC10-25.R.03-A-50-225	25	225	50	-	25	1	9000	3	-	-	-	-
A-SSM-HFC10-40.R.04	40	-	-	40	16	1	26400	4	38	20	8.4	5.6
A-SSM-HFC10-50.R.05	50	-	-	40	22	1	23500	5	43	21	10.4	6.3
A-SSM-HFC10-63.R.06	63	-	-	40	22	1	20500	6	48	21	10.4	6.3

SSM-HFC / High feed cutting

Milling body (XOLT13)

- ▲ Face milling
- ▲ Angled milling
- ▲ Helical plunging
- ▲ Plunge milling
- ▲ Profile milling
- ▲ Pocket milling
- ▲ Slot milling

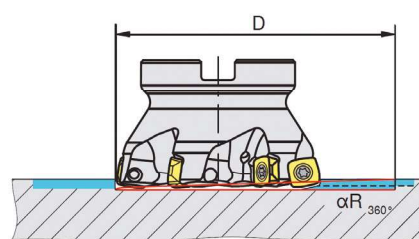
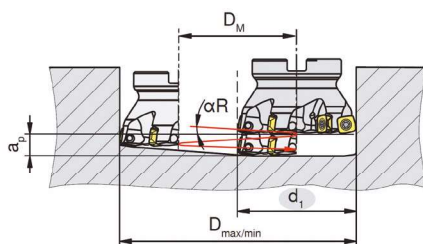
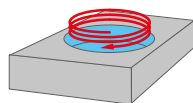


Description	Ø d ₁ [mm]	l ₁ [mm]	l ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	SW	M	l _A [mm]	a [mm]	b [mm]
C-SSM-HFC13-35.R.03-A32-63-144	35	144	63	-	32	2	9000	3	-	-	-	-	-	-
C-SSM-HFC13-35.R.03-A32-63-250	35	250	63	-	32	2	6400	3	-	-	-	-	-	-
G-SSM-HFC13-35.R.03	35	-	40	-	17	2	21360	3	29	SW24	M16	-	-	-
A-SSM-HFC13-50.R.04	50	-	-	40	22	2	18800	4	43	-	-	21	10.4	6.3
A-SSM-HFC13-63.R.05	63	-	-	40	22	2	16400	5	48	-	-	21	10.4	6.3
A-SSM-HFC13-80.R.07	80	-	-	50	27	2	14000	7	58	-	-	23	12.4	7



SSM-HFC / High feed cutting

Application data (helical plunge milling XPLT07)



D_{max} [mm] = maximum diameter for flat bottom ground

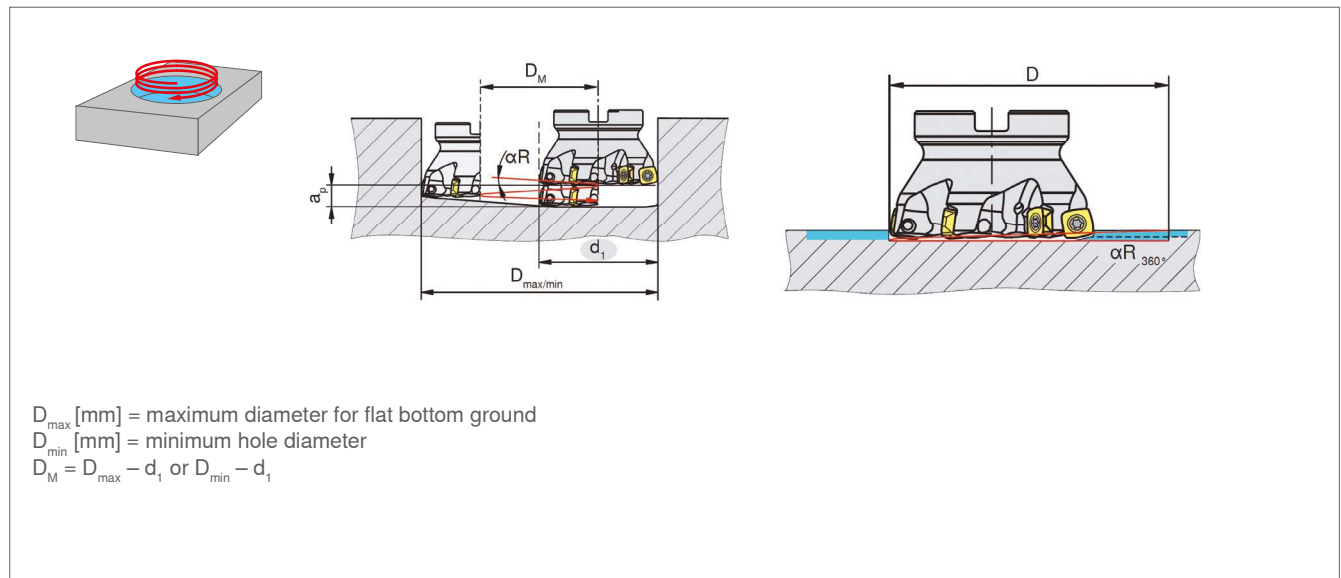
D_{min} [mm] = minimum hole diameter

$D_M = D_{max} - d_1$ or $D_{min} - d_1$

Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
C-SSM-HFC07-16.R.02-A-50-200	16	31	22	4.5
C-SSM-HFC07-20.R.03-A-50-200	20	39	30	2.3
C-SSM-HFC07-25.R.04-A-50-200	25	49	40	1.3
G-SSM-HFC07-16.R.02	16	31	22	4.5
G-SSM-HFC07-20.R.03	20	39	30	2.3
G-SSM-HFC07-25.R.04	25	49	40	1.3

SSM-HFC / High feed cutting

Application data (helical plunge milling XDLT10, XDLX10)

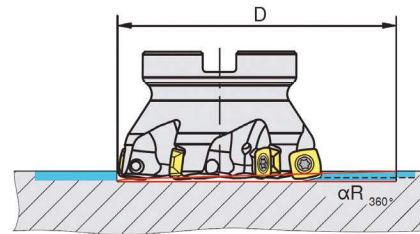
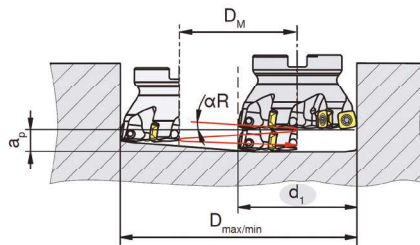
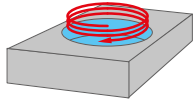


Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
C-SSM-HFC10-25.R.03-A-50-125	25	48	35	3.1
C-SSM-HFC10-25.R.03-A-50-225	25	48	35	3.1
A-SSM-HFC10-40.R.04	40	78	65	1.0
A-SSM-HFC10-50.R.05	50	98	85	0.8
A-SSM-HFC10-63.R.06	63	124	111	0.7



SSM-HFC / High feed cutting

Application data (helical plunge milling XOLT13)



D_{max} [mm] = maximum diameter for flat bottom ground

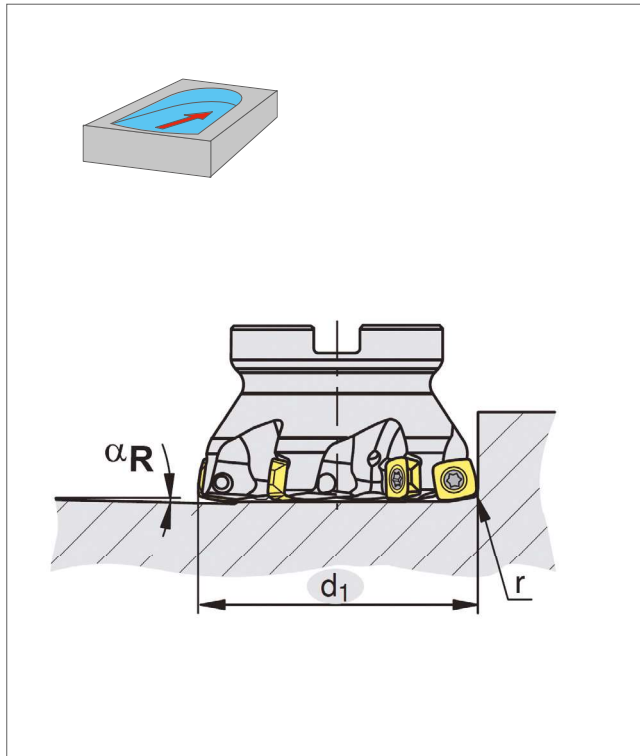
D_{min} [mm] = minimum hole diameter

$D_M = D_{max} - d_1$ or $D_{min} - d_1$

Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
C-SSM-HFC13-35.R.03-A32-63-144	35	68	50	3.7
C-SSM-HFC13-35.R.03-A32-63-250	35	68	50	3.7
G-SSM-HFC13-35.R.03	35	68	59	3.7
A-SSM-HFC13-50.R.04	50	98	80	1.3
A-SSM-HFC13-63.R.05	63	124	106	0.9
A-SSM-HFC13-80.R.07	80	158	140	1.1

SSM-HFC / High feed cutting

Application data (angled ramping)

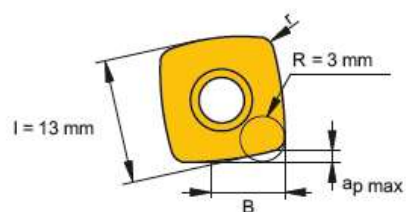


Description	d_1 [mm]	α_R [°]
C-SSM-HFC07-16.R.02-A-50-200	16	5.9
C-SSM-HFC07-20.R.03-A-50-200	20	3.2
C-SSM-HFC07-25.R.04-A-50-200	25	2.0
G-SSM-HFC07-16.R.02	16	5.9
G-SSM-HFC07-20.R.03	20	3.2
G-SSM-HFC07-25.R.04	25	2.0
C-SSM-HFC10-25.R.03-A-50-125	25	3.6
C-SSM-HFC10-25.R.03-A-50-225	25	3.6
A-SSM-HFC10-40.R.04	40	1.2
A-SSM-HFC10-50.R.05	50	0.9
A-SSM-HFC10-63.R.06	63	0.8
C-SSM-HFC13-35.R.03-A-63-144	35	4.4
C-SSM-HFC13-35.R.03-A-63-250	35	4.4
G-SSM-HFC13-35.R.03	35	4.4
A-SSM-HFC13-50.R.04	50	1.5
A-SSM-HFC13-63.R.05	63	1.1
A-SSM-HFC13-80.R.07	80	1.3



SSM-HFC / High feed cutting

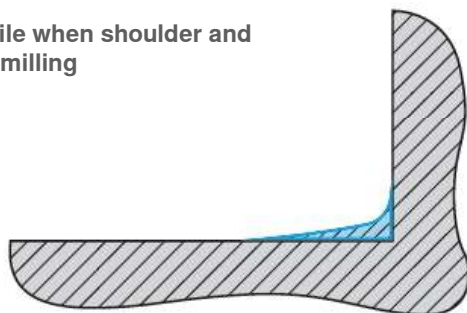
Depth of cut and remaining material



R = programmed radius

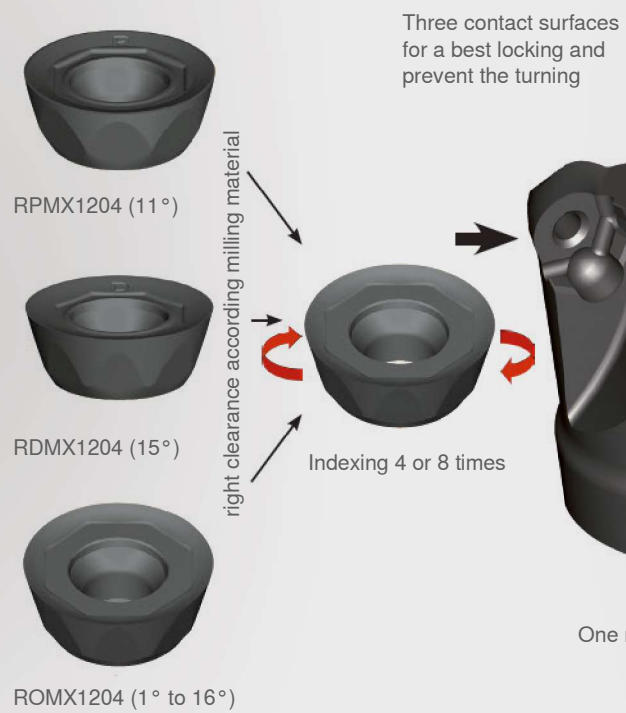
Recommended $f_z \geq 0,5$ / tooth

Profile when shoulder and slot milling

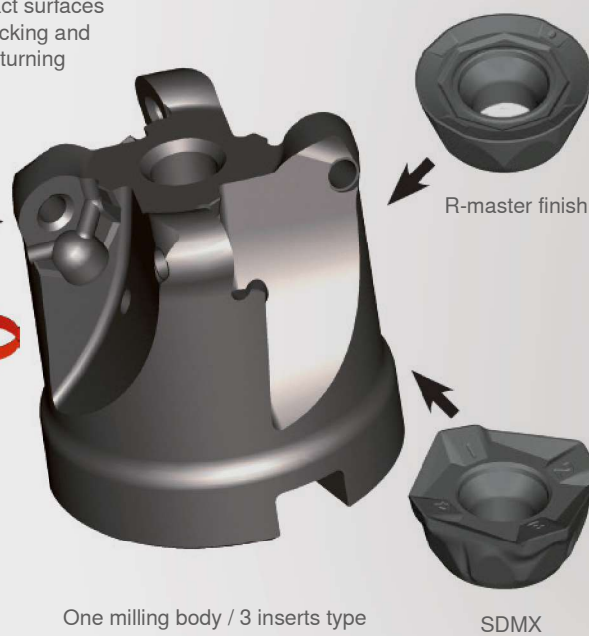


Insert	l [mm]	R [mm]	B [mm]	r [mm]	$a_p \text{ max}$ [mm]
XPLT07	7.15	1.2	4.3	0.5	0.8
XDLT10	10.2	2.0	5.9	0.8	1.0
XDLX10	10.2	2.0	5.9	0.8	1.0
XOLT13	13.5	3.0	8.5	1.0	2.0

Standard application



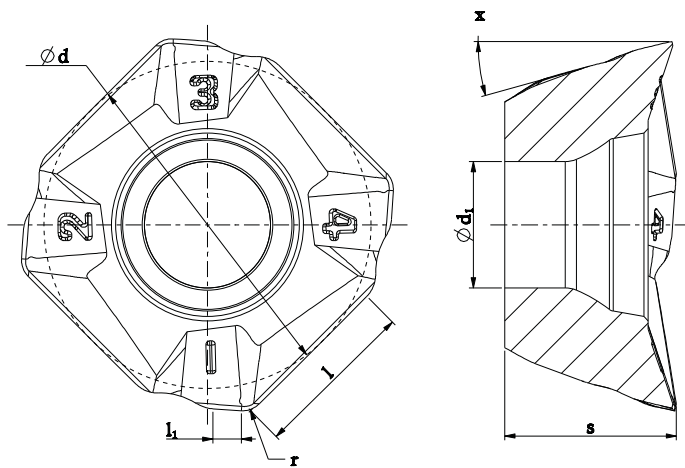
Additional application





SSM-A.R / Multiple applications

Insert (SDMX)



-PC



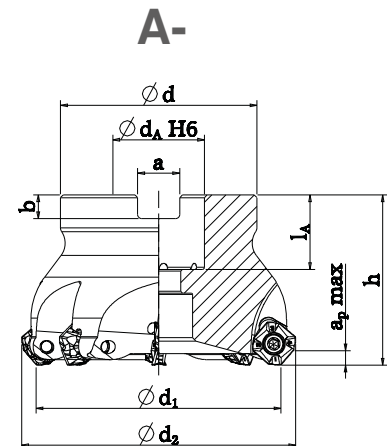
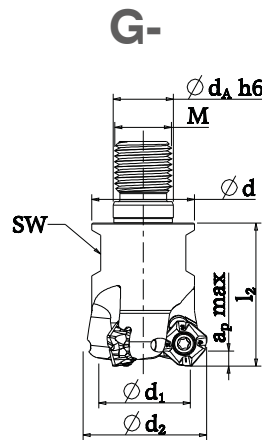
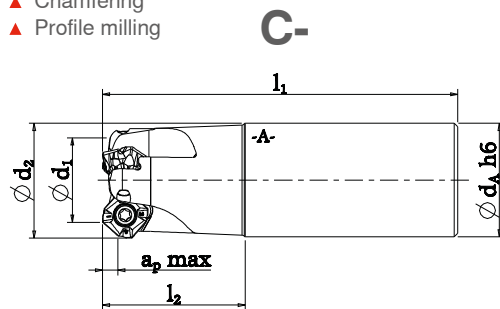
-MC

Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	d_1 [mm]	r [mm]	x [°]
SDMX 1105AEER-PC	11.4	5.8	5.9	1	4.4	0.8	15
SDMX 1105AEER-MC	11.4	5.8	5.9	1	4.4	0.8	15
SDMX 1506AEER-PC	15	8	6.5	1.5	5.5	0.8	15
SDMX 1506AEER-MC	15	8	6.5	1.5	5.5	0.8	15

SSM-A.R / Multiple applications

Milling body (SDMX11)

- ▲ Face milling
- ▲ Angled milling
- ▲ Slot milling
- ▲ Chamfering
- ▲ Profile milling



Description	Ø d ₁ [mm]	Ø d ₂ [mm]	l ₁ [mm]	l ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	SW	M	l _A [mm]	a [mm]	b [mm]
C-SSM-R12-25.R.02-A-30-86	17.5	25	86.3	30.3	-	25	6	25000	2	-	-	-	-	-	-
C-SSM-R12-25.R.02-A-60-116	17.5	25	116.3	60.3	-	25	6	18000	2	-	-	-	-	-	-
C-SSM-R12-32.R.03-A-40-100	24.5	32	100.3	40.3	-	32	6	19000	3	-	-	-	-	-	-
C-SSM-R12-32.R.03-A-70-130	24.5	32	130.3	70.3	-	32	6	17000	3	-	-	-	-	-	-
G-SSM-R12-25.R.02	17.5	25	-	35.3	-	12.5	6	25000	2	21	SW17	M12	-	-	-
G-SSM-R12-35.R.03	27.5	35	-	40.3	-	17	6	15900	3	29	SW24	M16	-	-	-
A-SSM-R12-40.R.04	32.5	40	-	-	40.3	16	6	15900	4	38	-	-	20	8.4	5.6
A-SSM-R12-42.R.04	34.5	42	-	-	40.3	16	6	15900	4	38	-	-	20	8.4	5.6
A-SSM-R12-50.R.05	42.5	50	-	-	40.3	22	6	12700	5	43	-	-	21	10.4	6.3
A-SSM-R12-52.R.05	44.5	52	-	-	40.3	22	6	12700	5	43	-	-	21	10.4	6.3
A-SSM-R12-63.R.06	55.5	63	-	-	40.3	22	6	10100	6	48	-	-	21	10.4	6.3
A-SSM-R12-66.R.06	58.5	66	-	-	40.3	27	6	10100	6	58	-	-	23	12.4	7
A-SSM-R12-80.R.08	72.5	80	-	-	50.3	27	6	7950	8	58	-	-	22	12.4	7
A-SSM-R12-100.R.10	92.5	100	-	-	50.3	32	6	6350	10	78	-	-	26	14.4	8

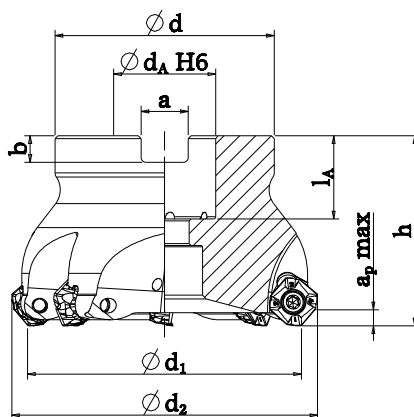


SSM-A.R / Multiple applications

Milling body (SDMX15)

- ▲ Face milling
- ▲ Angled milling
- ▲ Slot milling
- ▲ Chamfering
- ▲ Profile milling

A-



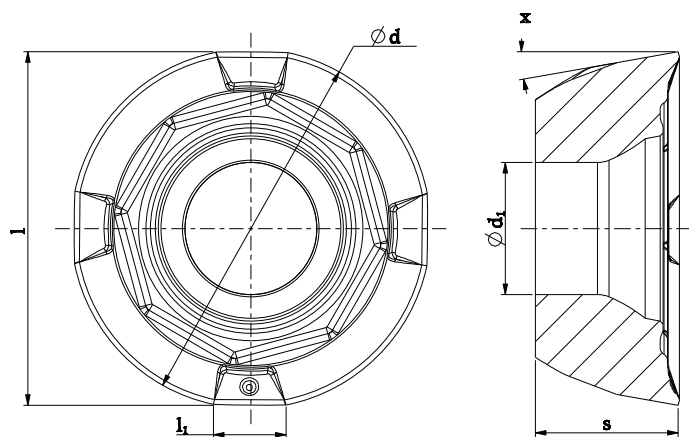
Description	Ø d ₁ [mm]	Ø d ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	l _A [mm]	a [mm]	b [mm]
A-SSM-R16-50.R.03	39.8	50	40.5	22	8	12700	3	48	22	10.4	6.3
A-SSM-R16-52.R.04	41.8	52	40.5	22	8	12700	4	48	21	10.4	6.3
A-SSM-R16-63.R.05	52.8	63	40.5	22	8	10100	5	48	21	10.4	6.3
A-SSM-R16-66.R.05	55.8	66	40.5	22	8	10100	5	48	21	10.4	6.3
A-SSM-R16-80.R.06	69.8	80	50.5	27	8	7950	6	58	23	12.4	7
A-SSM-R16-100.R.07	89.8	100	50.5	32	8	6350	7	78	26	14.4	8
A-SSM-R16-125.R.08	114.8	125	63.5	40	8	5050	8	88	28	16.4	9





SSM-A.R / Multiple applications

Insert (RPMX)



-PCF



-MCF

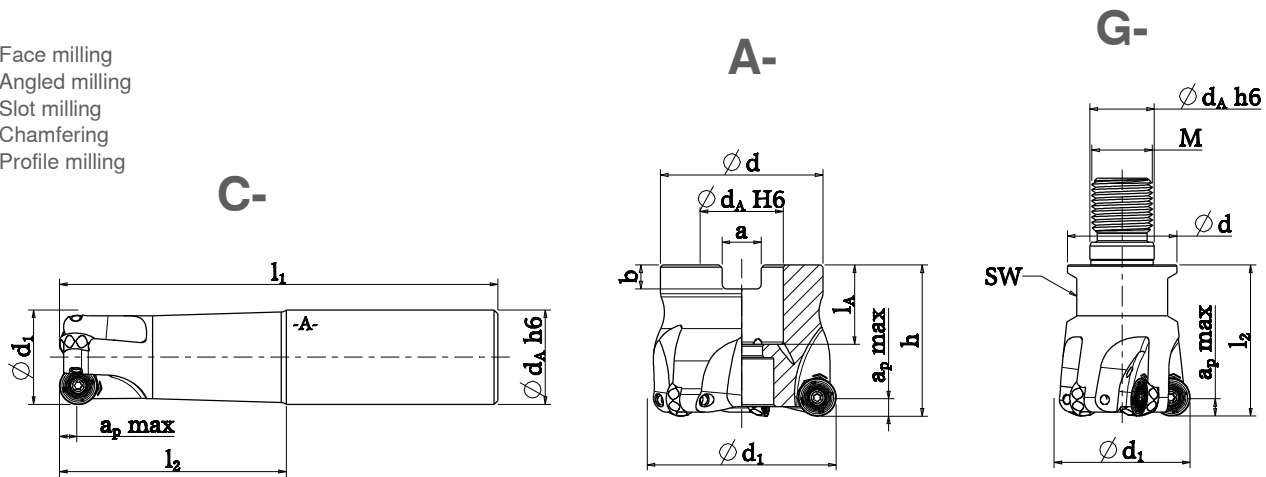
Description	d [mm]	l [mm]	s [mm]	l ₁ [mm]	d ₁ [mm]	X [°]
RPMX 1204MO-PCF	12	11.75	4.76	2.4	4.4	11
RPMX 1204MO-MCF	12	11.75	4.76	2.4	4.4	11
RPMX 1605MO-PCF	16	15.8	5.56	2.5	5.5	11
RPMX 1605MO-MCF	16	15.8	5.56	2.5	5.5	11



SSM-A.R / Multiple applications

Milling body (RP12)

- ▲ Face milling
- ▲ Angled milling
- ▲ Slot milling
- ▲ Chamfering
- ▲ Profile milling



Description	Ø d ₁ [mm]	l ₁ [mm]	l ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	SW	M	l _A [mm]	a [mm]	b [mm]
C-SSM-R12-25.R.02-A-30-86	24.75	85.87	29.87	-	25	6	25000	2	-	-	-	-	-	-
C-SSM-R12-25.R.02-A-60-116	24.75	115.87	59.87	-	25	6	18000	2	-	-	-	-	-	-
C-SSM-R12-32.R.03-A-40-100	31.75	99.87	39.87	-	32	6	19000	3	-	-	-	-	-	-
C-SSM-R12-32.R.03-A-70-130	31.75	129.87	69.87	-	32	6	17000	3	-	-	-	-	-	-
G-SSM-R12-25.R.02	24.75	-	34.87	-	12.5	6	25000	2	21	SW17	M12	-	-	-
G-SSM-R12-35.R.03	34.75	-	39.87	-	17	6	15900	3	29	SW24	M16	-	-	-
A-SSM-R12-40.R.04	39.75	-	-	39.87	16	6	15900	4	38	-	-	20	8.4	5.6
A-SSM-R12-42.R.04	41.75	-	-	39.87	16	6	15900	4	38	-	-	20	8.4	5.6
A-SSM-R12-50.R.05	49.75	-	-	39.87	22	6	12700	5	43	-	-	21	10.4	6.3
A-SSM-R12-52.R.05	51.75	-	-	39.87	22	6	12700	5	43	-	-	21	10.4	6.3
A-SSM-R12-63.R.06	62.75	-	-	39.87	22	6	10100	6	48	-	-	21	10.4	6.3
A-SSM-R12-66.R.06	65.75	-	-	39.87	27	6	10100	6	58	-	-	23	12.4	7
A-SSM-R12-80.R.08	79.75	-	-	49.87	27	6	7950	8	58	-	-	22	12.4	7
A-SSM-R12-100.R.10	99.75	-	-	49.87	32	6	6350	10	78	-	-	26	14.4	8

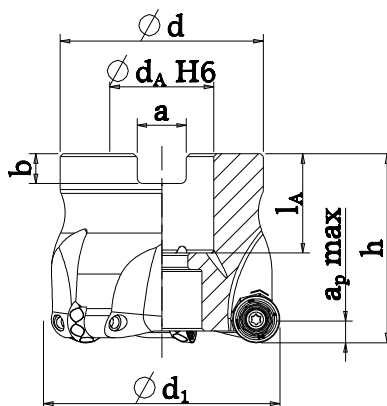


SSM-A.R / Multiple applications

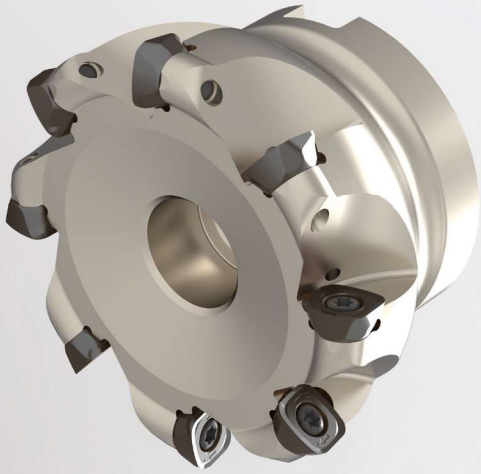
Milling body (RP16)

- ▲ Face milling
- ▲ Angled milling
- ▲ Slot milling
- ▲ Chamfering
- ▲ Profile milling

A-



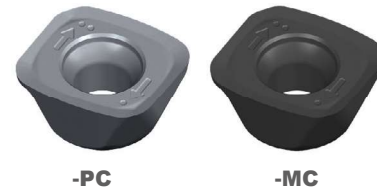
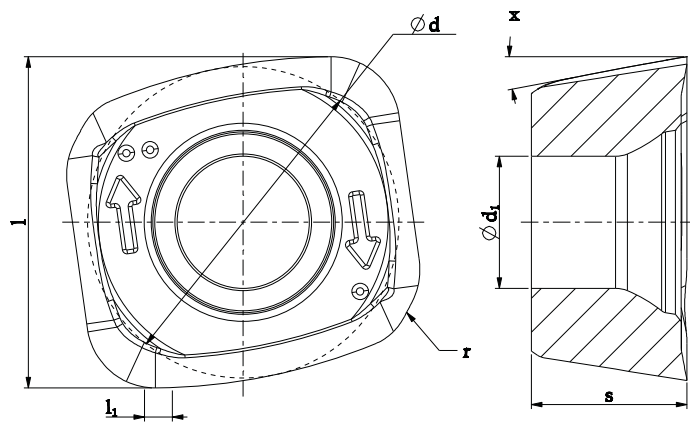
Description	Ø d ₁ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	l _A [mm]	a [mm]	b [mm]
A-SSM-R16-50.R.03	49.8	39.9	22	8	12700	3	48	22	10.4	6.3
A-SSM-R16-52.R.04	51.8	39.9	22	8	12700	4	48	21	10.4	6.3
A-SSM-R16-63.R.05	62.8	39.9	22	8	10100	5	48	21	10.4	6.3
A-SSM-R16-66.R.05	65.8	39.9	22	8	10100	5	48	21	10.4	6.3
A-SSM-R16-80.R.06	79.8	49.9	27	8	7950	6	58	23	12.4	7
A-SSM-R16-100.R.07	99.8	49.9	32	8	6350	7	78	26	14.4	8
A-SSM-R16-125.R.08	124.8	62.9	40	8	5050	8	88	28	16.4	9





SSM-A.R / Multiple applications

Insert (EOMT)

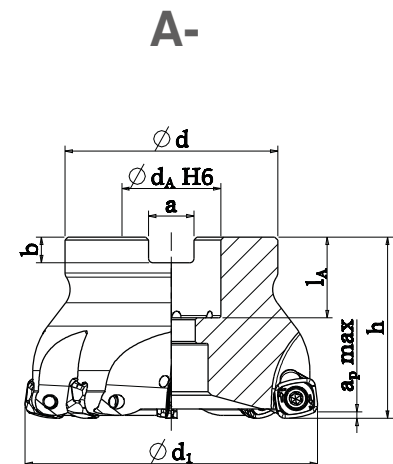
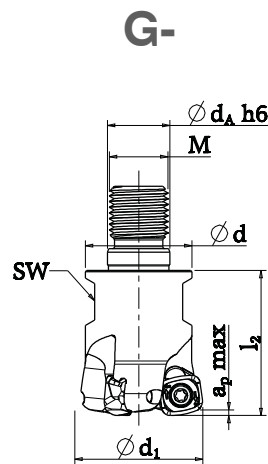
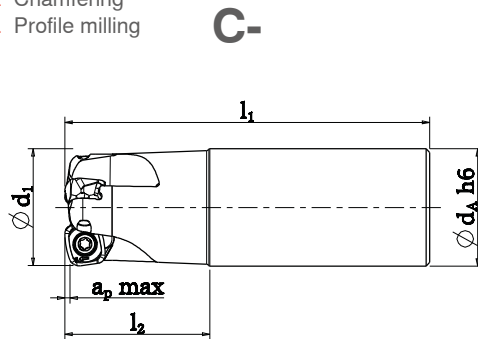


Description	d [mm]	s [mm]	l [mm]	d ₁ [mm]	l ₁ [mm]	r [mm]	x [°]
EOMT 120416-PC	11.3	5.2	11	4.4	1	1.6	9
EOMT 120416-MC	11.3	5.2	11	4.4	1	1.6	9

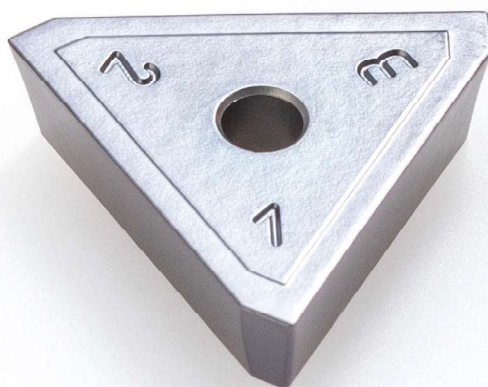
SSM-A.R / Multiple applications

Milling body (SSM-A.R / EOMT12)

- ▲ Face milling
- ▲ Angled milling
- ▲ Slot milling
- ▲ Chamfering
- ▲ Profile milling

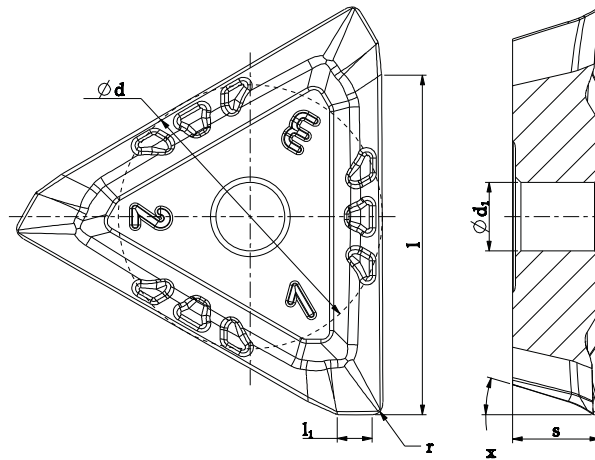


Description	Ø d ₁ [mm]	l ₁ [mm]	l ₂ [mm]	h [mm]	Ø d _A H6/h6 [mm]	a _p max [mm]	n _{max} [min ⁻¹]	z	Ø d [mm]	SW	M	l _A [mm]	a [mm]	b [mm]
C-SSM-R12-25.R.02-A-30-86	24.75	85.87	29.87	-	25	6	25000	2	-	-	-	-	-	-
C-SSM-R12-25.R.02-A-60-116	24.75	115.87	59.87	-	25	6	18000	2	-	-	-	-	-	-
C-SSM-R12-32.R.03-A-40-100	31.75	99.87	39.87	-	32	6	19000	3	-	-	-	-	-	-
C-SSM-R12-32.R.03-A-70-130	31.75	129.87	69.87	-	32	6	17000	3	-	-	-	-	-	-
G-SSM-R12-25.R.02	24.75	-	34.87	-	12.5	6	25000	2	21	SW17	M12	-	-	-
G-SSM-R12-35.R.03	34.75	-	39.87	-	17	6	15900	3	29	SW24	M16	-	-	-
A-SSM-R12-40.R.04	39.75	-	-	39.87	16	6	15900	4	38	-	-	20	8.4	5.6
A-SSM-R12-42.R.04	41.75	-	-	39.87	16	6	15900	4	38	-	-	20	8.4	5.6
A-SSM-R12-50.R.05	49.75	-	-	39.87	22	6	12700	5	43	-	-	21	10.4	6.3
A-SSM-R12-52.R.05	51.75	-	-	39.87	22	6	12700	5	43	-	-	21	10.4	6.3
A-SSM-R12-63.R.06	62.75	-	-	39.87	22	6	10100	6	48	-	-	21	10.4	6.3
A-SSM-R12-66.R.06	65.75	-	-	39.87	27	6	10100	6	58	-	-	23	12.4	7
A-SSM-R12-80.R.08	79.75	-	-	49.87	27	6	7950	8	58	-	-	22	12.4	7
A-SSM-R12-100.R.10	99.75	-	-	49.87	32	6	6350	10	78	-	-	26	14.4	8



SSM-T / Shouldering 3 x 90°

Insert (TPKN / TPKR)

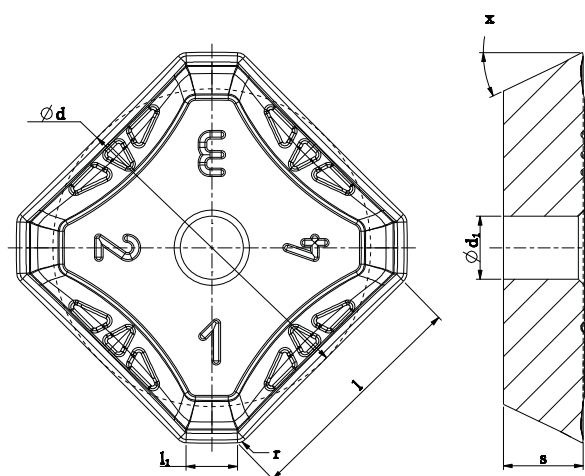


Descirption	l [mm]	s [mm]	d [mm]	l ₁ [mm]	r [mm]	d ₁ [mm]	x [°]
TPKN 1603PDR-PC	13	3.18	9.525	1.4	0.2	2.5	11
TPKR 1603PDR-MC	13	3.18	9.525	1.2	0.4	2.5	11
TPKN 2204PDR-PC	18.5	4.76	12.7	1.5	0.2	2.5	11
TPKR 2204PDR-MC	18.5	4.76	12.7	1.6	0.3	2.5	11



SSM-S / Face milling 4 x 45°

Insert (SEKN / SEKR)

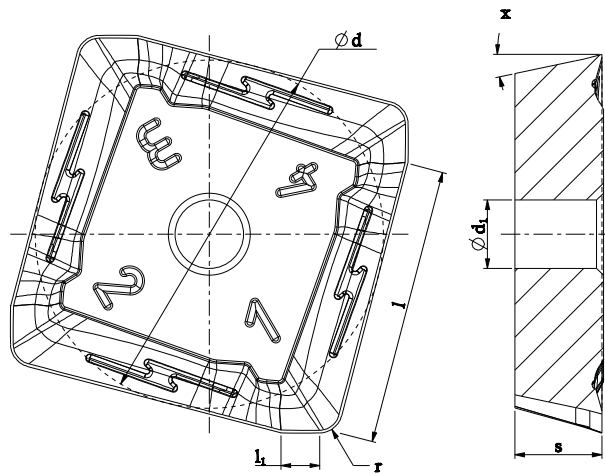


Descirption	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
SEKN 1203AFSN-PC	12.7	9	3.18	2	0.45	2.5	20
SEKR 1203AFSN-MC	12.7	9	3.18	2	0.45	2.5	20
SEKR 1504AFSN-MC	15.875	12	4.76	1.7	1	2.5	20



SSM-S / Face milling 4 x 75°

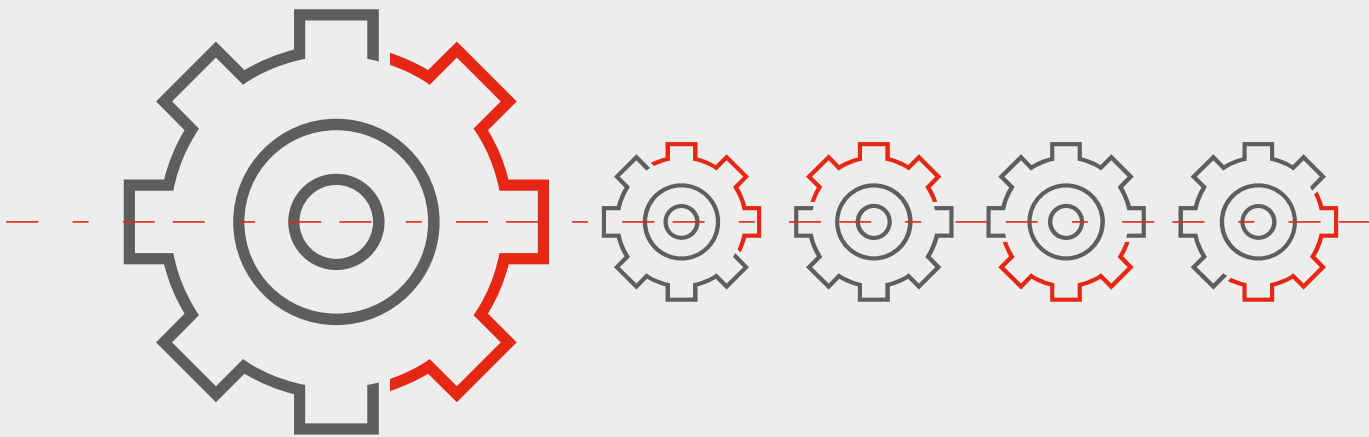
Insert (SPKN / SPKR)

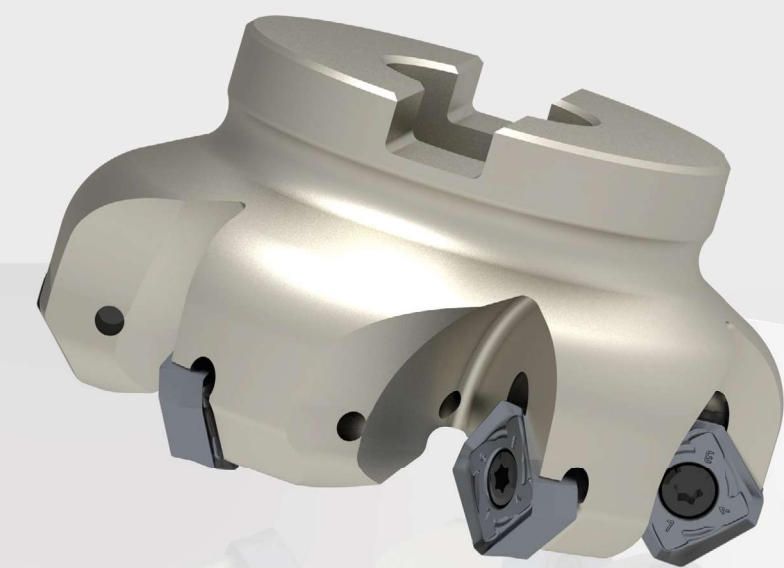


Descirption	d [mm]	l [mm]	s [mm]	l1 [mm]	r [mm]	d ₁ [mm]	x [°]
SPKN 1203EDTR-PC	12.7	10	3.18	1.2	0.5	2.5	11.25
SPKN 1203EDTR-PC	12.7	10	3.18	1.2	0.5	2.5	11.25
SPKR 1203EDER-MC	12.7	10	3.18	1.4	0.9	2.5	11.25



Technical information







CARBIDEN designation system Insert designation

A	85°	
B	82°	
K	55°	
H	120°	
L	90°	
O	135°	
P	108°	
C	80°	
D	55°	
E	75°	
M	86°	
V	35°	
R		
S	90°	
T	60°	
W	80°	
X		
Z		

Insert shape

	α
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
O	Special version

Clearance angle

	$d \pm$	$m \pm$	$s \pm$	$d = 6, 3, 5, 9, 12, 16, 20, 25, 32, 40, 50, 63, 80, 100$	$d = 12, 16, 20, 25, 32, 40, 50, 63, 80, 100$	$d = 15, 18, 19, 20, 22, 25, 28, 32, 36, 40, 45, 50, 56, 63, 71, 80, 90, 100$
A	0.025	0.005	0.025	●	●	●
C	0.025	0.013	0.025	●	●	●
E	0.025	0.025	0.025	●	●	●
F	0.013	0.005	0.025	●	●	●
G	0.025	0.025	0.13	●	●	●
H	0.013	0.013	0.025	●	●	●
J	0.05	0.005	0.025	●	●	●
K	0.08	0.005	0.025	●	●	●
L	0.10	0.005	0.025	●	●	●
M	0.05	0.013	0.025	●	●	●
N	0.08	0.013	0.02	●	●	●
O	0.10	0.013	0.02	●	●	●
P	0.05	0.08	0.13	●	●	●
Q	0.08	0.13	0.13	●	●	●
R	0.10	0.15	0.13	●	●	●
S	0.05	0.08	0.025	●	●	●
T	0.08	0.13	0.025	●	●	●
U	0.10	0.15	0.025	●	●	●
V	0.08	0.13	0.13	●	●	●
W	0.13	0.20	0.13	●	●	●
X	0.18	0.27	0.13	●	●	●

Tolerances

A	
F	
G	
M	
N	
Q	
R	
T	
U	
W	
X	Special shapes

Form of top surface

A	P	K	T	10
R	P	G	T	10

Cutting edge length				
A	T	C/S	H	R



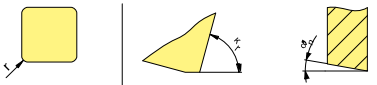
	s [mm]
01	1.59
T1	1.98
02	2.38
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52

Insert thickness



Radius	r [mm]	1st sign	2nd sign
M0*		r	A 3°
2	0.2	A 45°	B 5°
4	0.4	D 60°	C 7°
8	0.8	E 75°	D 15°
12	1.2	F 85°	E 20°
		P 90°	F 25°
		Z Others	G 30°
			N 0°
			P 11°
			Z Others
			O

Facet corner radius



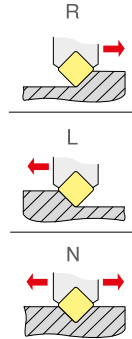
Chipbreaker designation
PC = Steel machining
MC = Stainless steel machining
KC = Cast iron machining
NC = Non-ferrous machining
SC = Exotic machining
- = Hard material machining
RC = Insert with specific radius

Chipbreaker

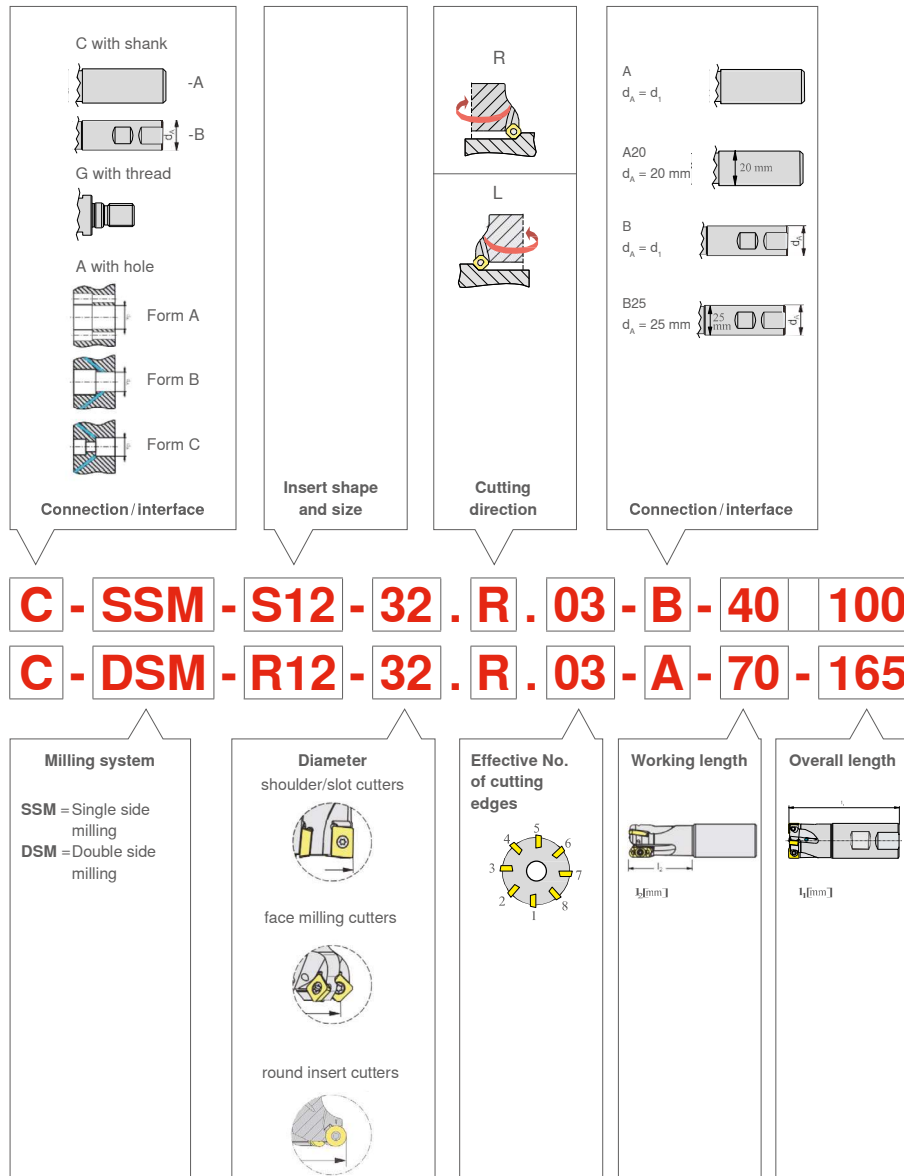
03	PD	E	R	-	PC
T3	MO	E	N	-	NC

Cutting edge
F sharp
E honed
S chamfered and honed
T chamfered

Cutting direction
R
L
N



CARBIDEN designation system Body designation





Application



Steel



Stainless steel



Cast iron



Non-ferrous metals and
non-metals



Heat-resistant alloys,
titanium



Hard materials

Machining application types



PC

Strong cutting edge for
general steel applications and
hard conditions milling.



SC

Stable cutting edge
for dedicated exotic
materials and titanium.



MC

Sharp cutting edge for general
stainless steel applications
and for finishing in steels.



KC

Strong cutting edge for cast
iron applications.



NC

Sharp cutting edge for
aluminium and non-ferrous
metals.



HC

Strong reinforced cutting
edge for hard material.

Grade overview





CARBIDEN designation system

P	Steel
M	Stainless steel
K	Cast iron
N	Light and non-ferrous metals, non metals
S	Heat resistant alloys, titanium
H	Hard materials
X	Universal grade for a variety of applications

Main application (material)
Variant 2: ISO letter

P	M	K	30	P
1	2	3	4	5

ISO 513 Application range

For example:
05
10
15
25
35 ISO P35
...

Cutting material

W	Uncoated carbide
C	CVD coated carbide
P	PVD coated carbide
T	Uncoated cermet
E	Coated cermet
N	Uncoated silicon nitride
M	Coated silicon nitride
S	Polishing
I	Sialon
D	PCD
B	CBN
L	CBN coated
H	Sintered HSS



Grade overview

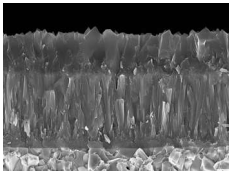
Grade designation	Standard designation				*Type of cutting material	Application range																	P	M	K	N	S	H																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
	ISO	ANSI																		Steel	Stainless	Cast iron	Non-ferrous metals	Heat-resistant	Hard materials																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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PMK30C		HC-P30	C6	C																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</

● Main application
○ Extended application



PMK30C

HC-P30 | HC-K25 | HC-M25

**Specification:**

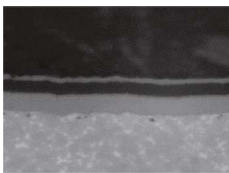
Composition: Co 10.5 %; mixed carbides 2.0 %; WC balance | Grain size: 1-2 μm | Hardness: HV_{30} 1400 |
Coating specification: CVD $\text{TiCN-Al}_2\text{O}_3$

Recommended application:

First choice for dry machining of steels at high cutting speeds.

PM35C

HC-P35 | HC-M30

**Specification:**

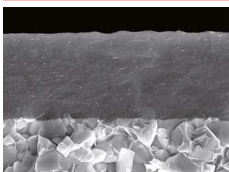
Composition: Co 12.5%; mixed carbides 2.0%; WC balance | Grain size: fine
Hardness: HV_{30} 1380 | Coating specification: CVD $\text{TiCN-Al}_2\text{O}_3$ + TiN; 7 μm

Recommended application:

Milling Grade designed for Alloyed Steel cutting.

PM35P

HC-P35 | HC-M30

**Specification:**

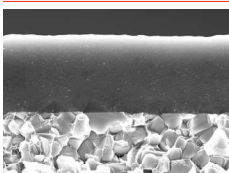
Composition: Co 10.5 %; mixed carbide 2.0 %; WC balance | Grain size: 1-2 μm | Hardness: HV_{30} 1400 |
Coating specification: PVD TiAlTaN

Recommended application:

Particularly suitable for the wet machining of steels.

MP40P

HC-M40 | HC-P40

**Specification:**

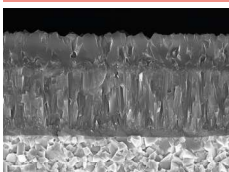
Composition: Co 12.5 %; mixed carbides 2.0 %; WC balance | Grain size: 1 μm | Hardness: HV_{30} 1380 |
Coating specification: PVD TiAlTaN

Recommended application:

The first choice for the machining of austenitic steels.

K15C

HC-K15

**Specification:**

Composition: Co 6.0 %; mixed carbides 2.0 %; WC balance | Grain size: 1 μm | Hardness: HV_{30} 1600 |
Coating specification: CVD TiN, MT-TiCN; Al_2O_3

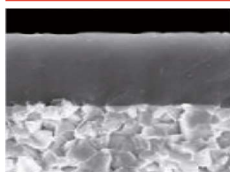
Recommended application:

The first choice for the machining of cast iron at high cutting speeds.



K20P

HC-K20



Specification:

Composition: Co 6.0 %; mixed carbides 2.0%, WC balance | Grain size: 1 μm | Hardness: HV₃₀ 1630 | Coating specification: PVD TiAlTaN

Recommended application:

Optimal for the machining of high-tensile cast iron materials when toughness is required.

NK15S

HW-N15 | HW-K15



Specification:

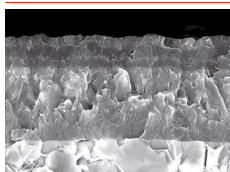
Composition: Co 6.0 %; WC balance | Grain size: 1 μm | Hardness: HV₃₀ 1630

Recommended application:

The uncoated carbide grade for the machining of aluminium. It's an high wear and high heat resistant carbide with a low tendency to adhesion.

SM35C

HC-S35 | HC-M35



Specification:

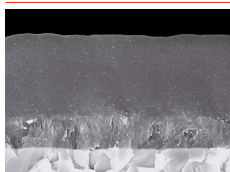
Composition: 10.0 % binder; WC balance | Grain size: 2 μm | Hardness: HV₃₀ 1330 | Coating specification: CVD TiCN-Al₂O₃ multi-layer

Recommended application:

Particularly suitable for the machining of heat-resistant steels and iron-based alloys.

S35C

HC-S35



Specification:

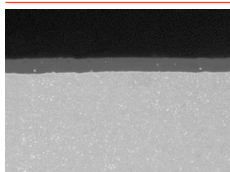
Composition: Co 10.0 %; WC balance | Grain size: 2 μm | Hardness: HV 1330 | Coating specification: CVD TiN +TiB₂; 4 μm

Recommended application:

Recommended for the machining of titanium materials.

HK15P

HC-H15 | HC-K15



Specification:

Composition: Co 12.0 %; WC balance | Grain size: 4 μm | Hardness: HV 1730 | Coating specification: PVD (TiAl)N; 4 μm

Recommended application:

Particularly suitable for the machining of hardened steels.

Production



The carbide formula for success

Composite materials with valuable properties

Cemented carbides are composite materials consisting of a hard component and a comparatively soft binder metal, such as cobalt. The performance characteristics of carbide are determined by hardness, transverse rupture strength and fracture toughness. With regard to their application, important parameters for the optimisation of the characteristics here are the cobalt content and the grain size of the metal binder phase. The tungsten carbide grains have an average size of 0.5 up to several micrometres (μm). The cobalt fills the gaps between the carbide grains. On the one hand, when extremely high toughness is required, the cobalt content can amount up to 30%. On the other, the cobalt content is reduced and the grain size decreased to the submicron range (for example 0.3 μm), in order to guarantee maximum wear resistance.

