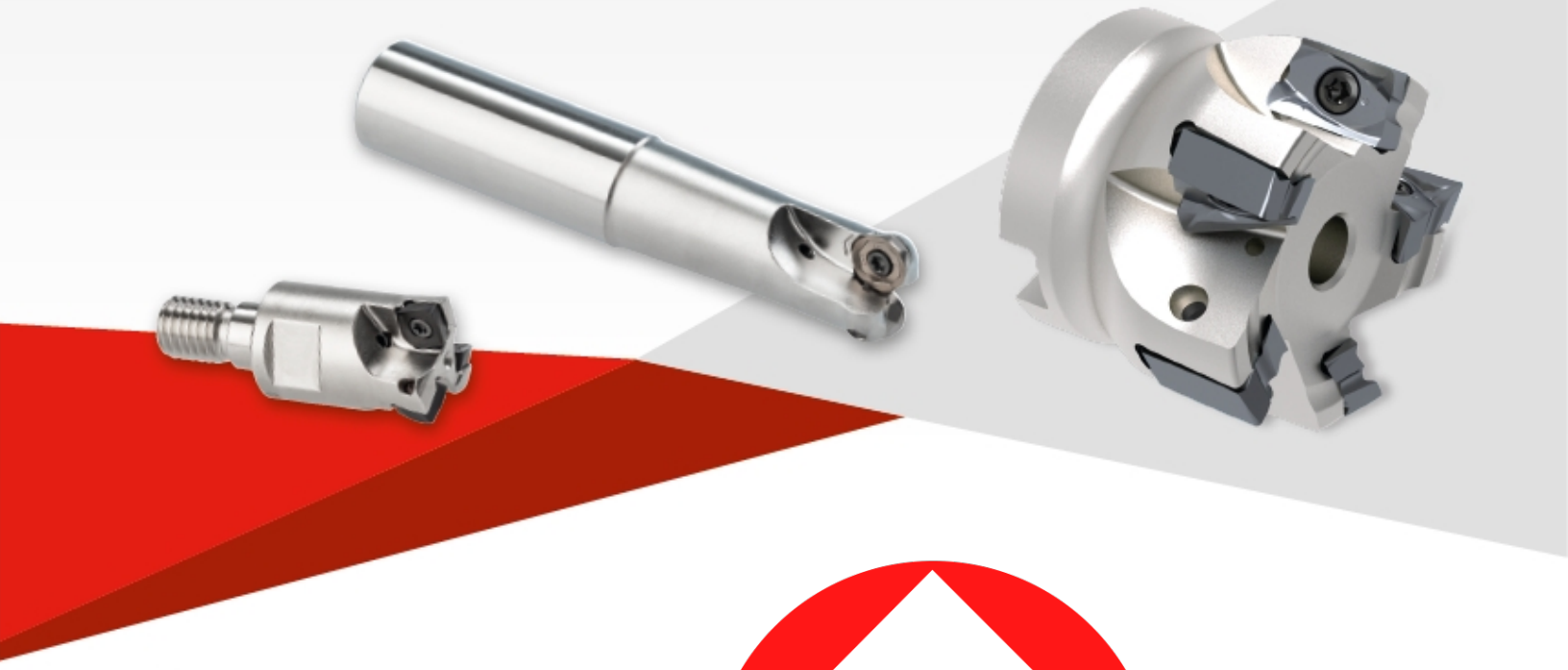
Cutting Tool Solutions

2021 EN

Tools and inserts for milling

Metric



CARBIDEN

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

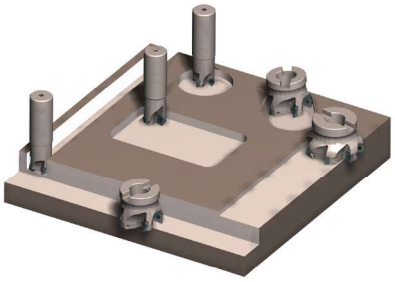
Milling

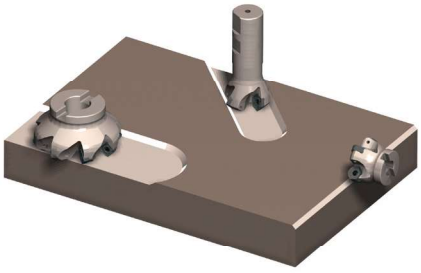
Drilling

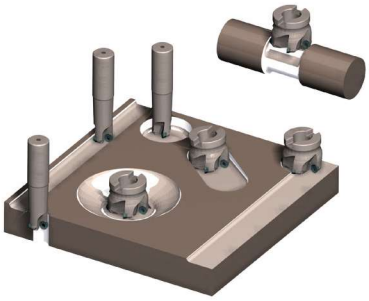
Multicut

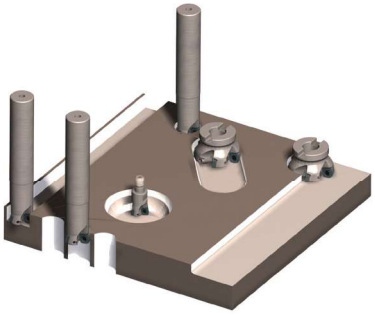
Turning

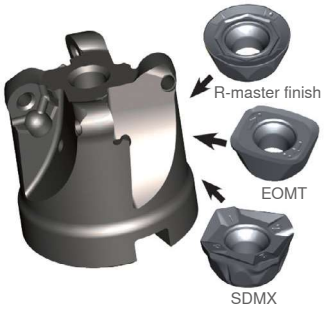
Grooving





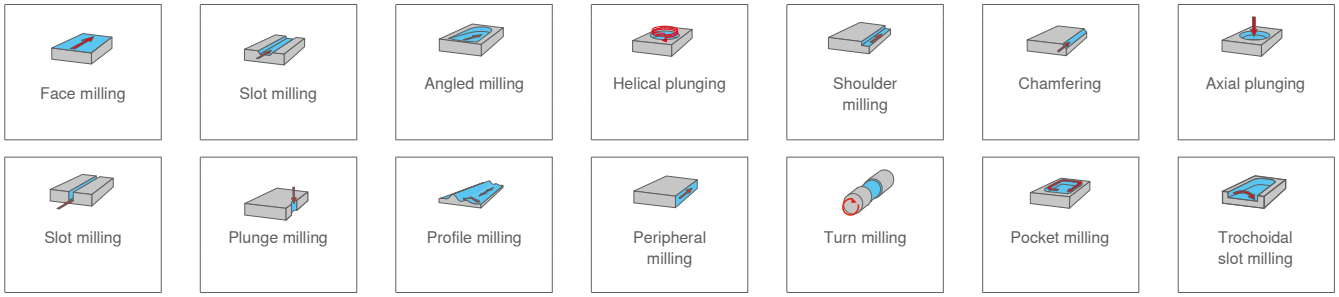


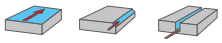
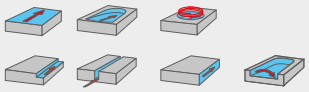
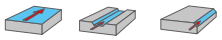
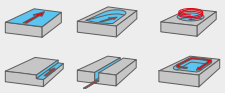
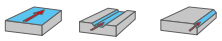
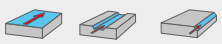
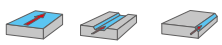




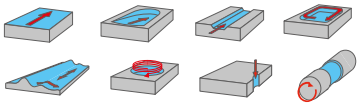
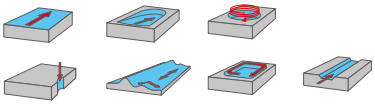
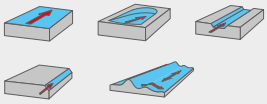
Shouldering / Face milling

Possible applications

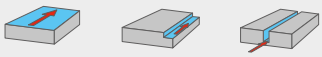
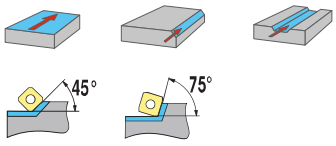


Application		Machining operations	Range	Page
Shouldering 2 x 90°			SSM-UA	P 10 – P 17
Shouldering 3 x 90°			SSM-T	P 18 – P 23
Shouldering 4 x 90°			SSM-S	P 24 – P 29
Shouldering 4 x 90°			DSM-L	P 30 – P 33
Face milling 6 x 45°			SSM-H	P 34 – P 41
Face milling 8 x 45°			DSM-S	P 42 – P 47
Face milling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

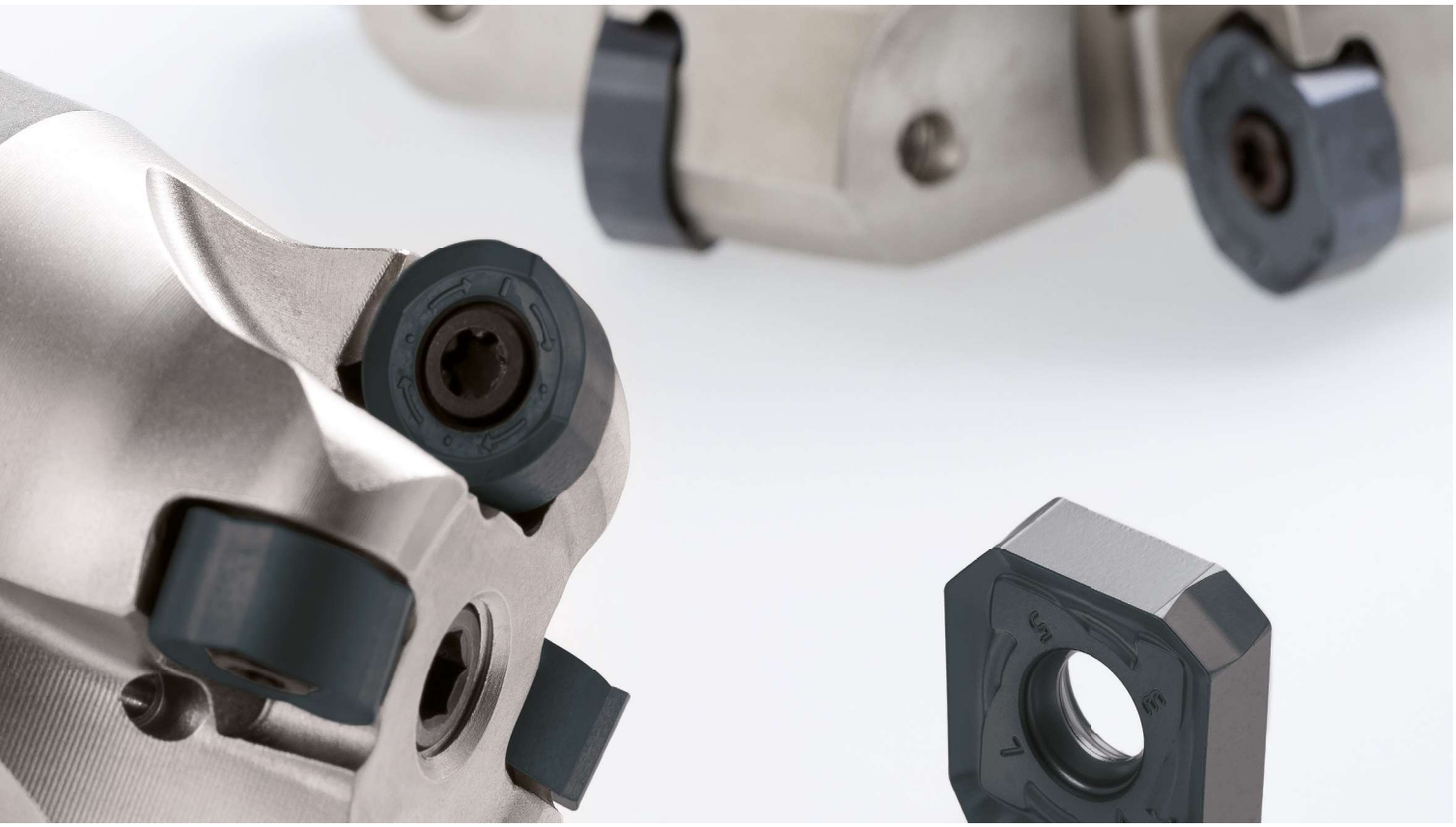
Form milling / High feed cutting / Multiple applications

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

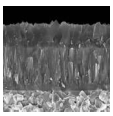
Chipbreaker

HCM: Steel
SCM: Stainless Steel
CCM: Cast iron
LMM: Aluminium
RCM: Specific radius

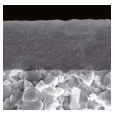
Grade

Standard grades

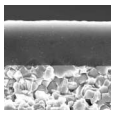
CTCP230 ■



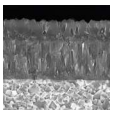
CTPP235 ■



CTPM240 ■

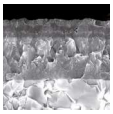


CTCK215 ■

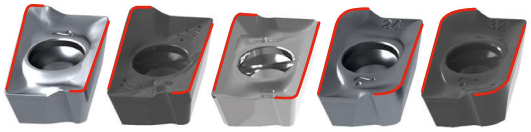


CTWN715 ■

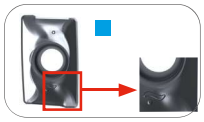
CTC5235 ■



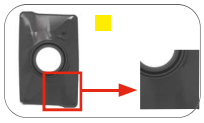
2 effective cutting edges



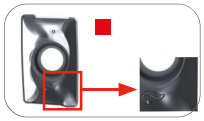
Which chipbreaker to use?



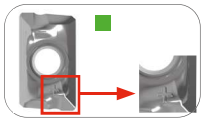
HCM
Strong cutting edge for general steel applications and hard conditions milling.



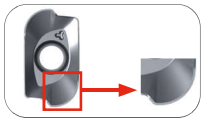
SCM
Sharp cutting edge for general stainless steel applications and for finishing in steels.



CCM
Strong cutting edge for cast iron applications.



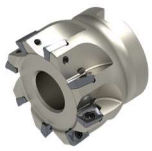
LMM
Extremely sharp cutting edge for aluminium and non-ferrous metals.



RCM
Specific radius.

Available range APKT10

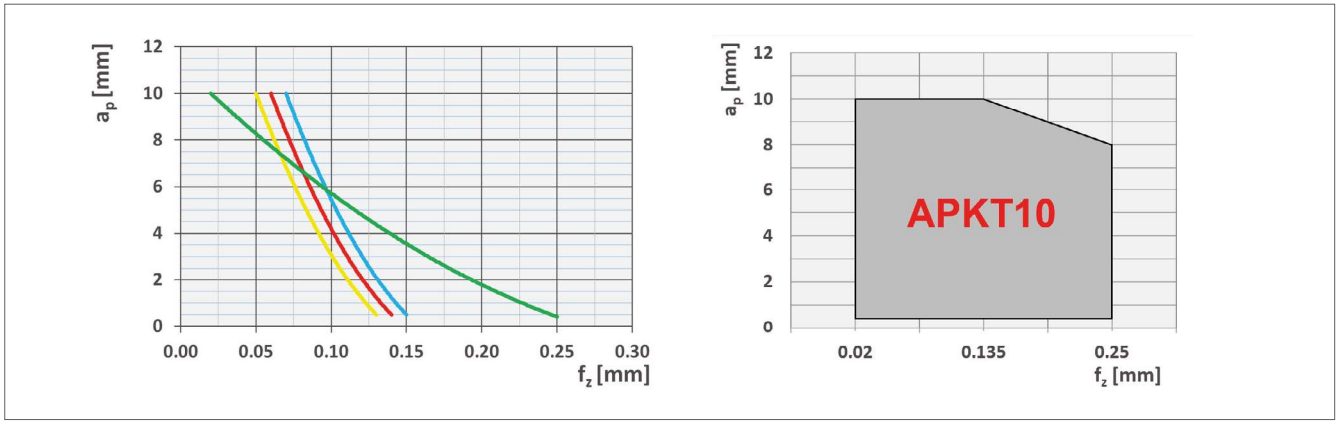
Insert	Designation	Chipbreaker	Material number	Available
	APKT 1003PDER-HCM CTCP230	…-HCM	12384796	●
	APKT 1003PDER-HCM CTPP235	…-HCM	14534961	●
	APKT 1003PDER-SCM CTPM240	…-SCM	14534962	●
	APKT 1003PDER-SCM CTC5235	…-SCM	11582506	●
	APKT 1003PDER-CCM CTCK215	…-CCM	14641285	●
	APHT 100302FR-LMM CTWN715	…-LMM	14617035	●
	APHT 100304FR-LMM CTWN715	…-LMM	14617031	●
	APHT 100308FR-LMM CTWN715	…-LMM	11348849	●
	APKT 100308ER-RCM CTPP235	…-RCM	12234997	●
	APKT 100308ER-RCM CTPM240	…-RCM	14641330	●
	APKT 100308ER-RCM CTCK215	…-RCM		○
	APKT 100312ER-RCM CTPP235	…-RCM	14652659	●
	APKT 100312ER-RCM CTPM240	…-RCM	14652660	●
	APKT 100312ER-RCM CTCK215	…-RCM		○
	APKT 100316ER-RCM CTPP235	…-RCM	14641303	●
	APKT 100316ER-RCM CTPM240	…-RCM	14641333	●
	APKT 100316ER-RCM CTCK215	…-RCM		○
	APKT 100330ER-RCM CTPP235	…-RCM	14641320	●
	APKT 100330ER-RCM CTPM240	…-RCM	14641335	●
	APKT 100330ER-RCM CTCK215	…-RCM		○

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:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230	220 – 60	0.07 – 0.15	10 – 0.5
		RCM	CTPP235		0.1 – 0.17	10 – 1.6
M	Stainless steel	SCM	CTPM240	200 – 60	0.05 – 0.13	10 – 0.5
		RCM	CTC5235		0.1 – 0.17	10 – 1.6
K	Cast iron	CCM	CTCK215	320 – 100	0.1 – 0.17	10 – 0.5
		RCM				
N	Non-ferrous	LMM	CTWN715	< 2000	0.02 – 0.14	10 – 0.2

Available range APKT16

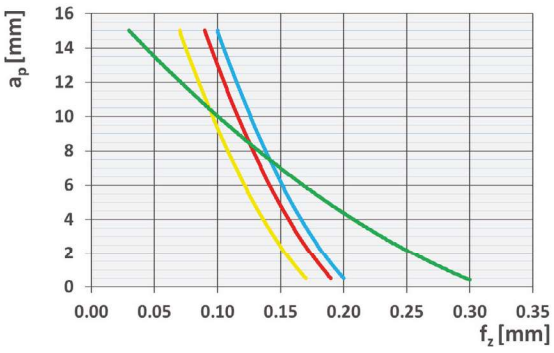
Insert	Designation	Chipbreaker	Material number	Available
	APKT 1604PDER-HCM CTCP230	...-HCM	14641339	●
	APKT 1604PDER-HCM CTPP235	...-HCM	14534966	●
	APKT 1604PDER-SCM CTPM240	...-SCM	14534968	●
	APKT 1604PDER-SCM CTC5235	...-SCM	11582503	●
	APKT 1604PDER-CCM CTCK215	...-CCM	14641345	●
	APHT 1604PDFR-LMM CTWN715	...-LMM	11348852	●
	APKT 160416ER-RCM CTPP235	...-RCM	12067441	●
	APKT 160416ER-RCM CTPM240	...-RCM	14641347	●
	APKT 160416ER-RCM CTCK215	...-RCM	14652661	●
	APKT 160424ER-RCM CTPP235	...-RCM	12067437	●
	APKT 160424ER-RCM CTPM240	...-RCM	14641349	●
	APKT 160424ER-RCM CTCK215	...-RCM		○
	APKT 160432ER-RCM CTPP235	...-RCM	12067435	●
	APKT 160432ER-RCM CTPM240	...-RCM	14641353	●
	APKT 160432ER-RCM CTCK215	...-RCM		○
	APKT 160440ER-RCM CTPP235	...-RCM		○
	APKT 160440ER-RCM CTPM240	...-RCM	14677925	●
	APKT 160440ER-RCM CTCK215	...-RCM		○
	APKT 160448ER-RCM CTPP235	...-RCM	12314049	●
	APKT 160448ER-RCM CTPM240	...-RCM	14641361	●
	APKT 160448ER-RCM CTCK215	...-RCM		○

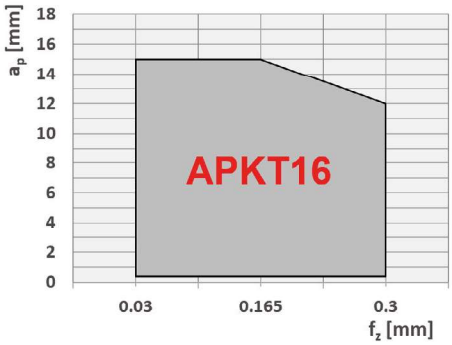
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-UA16-25.R.02-B-40-95	25	2	14655187	●
	C-SSM-UA16-32.R.03-B-40-105	32	3	12630641	●
	C-SSM-UA16-40.R.04-B-50-125	40	4	12630643	●
	G-SSM-UA16-25.R.02	25	2	14655190	●
	G-SSM-UA16-32.R.03	32	3	14655192	●
	G-SSM-UA16-40.R.04	40	4	14655184	●
	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:

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P	Steel	HCM	CTCP230	220 – 60	0.1 – 0.2	15 – 0.5
		RCM	CTPP235		0.12 – 0.23	15 – 0.5
M	Stainless steel	SCM	CTPM240	200 – 60	0.07 – 0.17	15 – 0.5
		RCM	CTC5235		0.12 – 0.23	15 – 0.5
K	Cast iron	CCM	CTCK215	320 – 100	0.12 – 0.23	15 – 0.5
		RCM				
N	Non-ferrous	LMM	CTWN715	< 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

HCM: Steel – Cast iron*
SCM: Stainless Steel – Exotic* – Titanium*

3 effective cutting edges

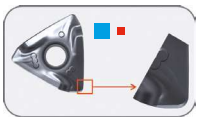
* secondary application

Customer benefits

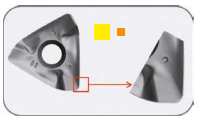
- High precision 90° milling
- Low power consumption. maximum chip removal rate
- Chipbreaker optimised by FEM
- Soft cutting providing quiet machining and maximum spindle protection

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

Which chipbreaker to use?

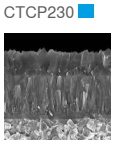


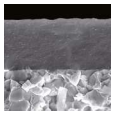
HCM
Strong cutting edge for general steel applications and hard conditions milling.

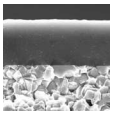


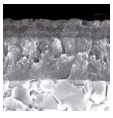
SCM
Sharp cutting edge for general stainless steel applications and for finishing in steels.

Grades

CTCP230 

CTPP235 

CTPM240 

CTC5235 

Available range TOKX07

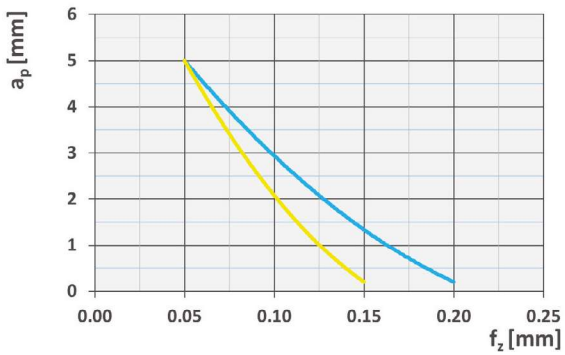
Insert	Designation	Chipbreaker	Material number	Available
	TOKX 070305PDER-HCM CTCP230	**...-HCM**	12193325	●
	TOKX 070305PDER-HCM CTPP235	**...-HCM**	12069063	●
	TOKX 070305PDER-SCM CTPM240	**...-SCM**	12120017	●
	TOKX 070305PDER-SCM CTC5235	**...-SCM**	12069061	●
	TOKX 070308PDER-HCM CTCP230	**...-HCM**	12307051	●
	TOKX 070308PDER-HCM CTPP235	**...-HCM**	12143629	●
	TOKX 070308PDER-SCM CTPM240	**...-SCM**	12143626	●
	TOKX 070308PDER-SCM CTC5235	**...-SCM**	12143628	●

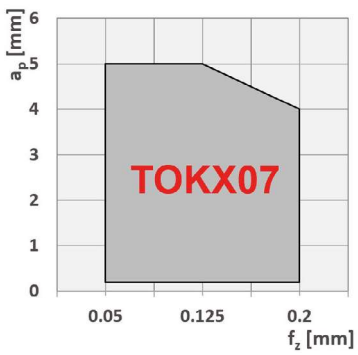
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-T07-20.R.03-B-25-77	20	3	12074285	●
	C-SSM-T07-25.R.04-B-34-90	25	4	11998760	●
	C-SSM-T07-32.R.05-B-40-102	32	5	12074282	●
	G-SSM-T07-20.R.03	20	3	12152218	●
	G-SSM-T07-25.R.04	25	4	12152220	●
	G-SSM-T07-32.R.05	32	5	12152223	●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

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.05 – 0.2	5 – 0.2
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.05 – 0.15	5 – 0.2

Available range TOKX09

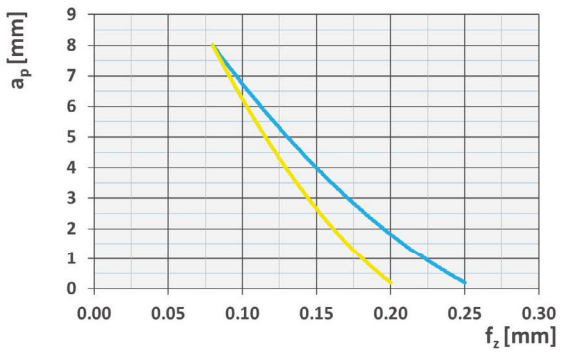
Insert	Designation	Chipbreaker	Material number	Available
	TOKX 09T308PDER-HCM CTCP230	**...-HCM**	12324207	●
	TOKX 09T308PDER-HCM CTPP235	**...-HCM**	12262506	●
	TOKX 09T308PDER-SCM CTPM240	**...-SCM**	12119996	●
	TOKX 09T308PDER-SCM CTC5235	**...-SCM**	12066590	●
	TOKX 09T312PDER-HCM CTCP230	**...-HCM**	12378662	●
	TOKX 09T312PDER-HCM CTPP235	**...-HCM**	12376480	●
	TOKX 09T312PDER-SCM CTPM240	**...-SCM**	12143645	●
	TOKX 09T312PDER-SCM CTC5235	**...-SCM**	12143648	●
	TOKX 09T316PDER-HCM CTCP230	**...-HCM**	12378664	●
	TOKX 09T316PDER-HCM CTPP235	**...-HCM**	12376489	●
	TOKX 09T316PDER-SCM CTPM240	**...-SCM**	12143637	●
	TOKX 09T316PDER-SCM CTC5235	**...-SCM**	12143639	●

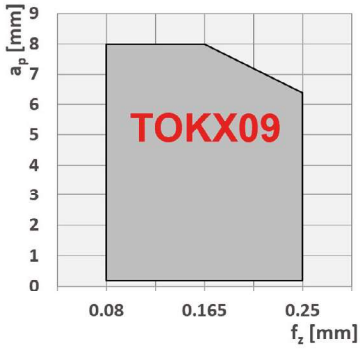
Body	Designation	ø Milling cutter	z	Material number	Available
	C-SSM-T09-32.R.03-B-40-102	32	3	11869624	●
	A-SSM-T09-40.R.04	40	4	11987902	●
	A-SSM-T09-50.R.05	50	5	11987903	●
	A-SSM-T09-63.R.06	63	6	11987904	●

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

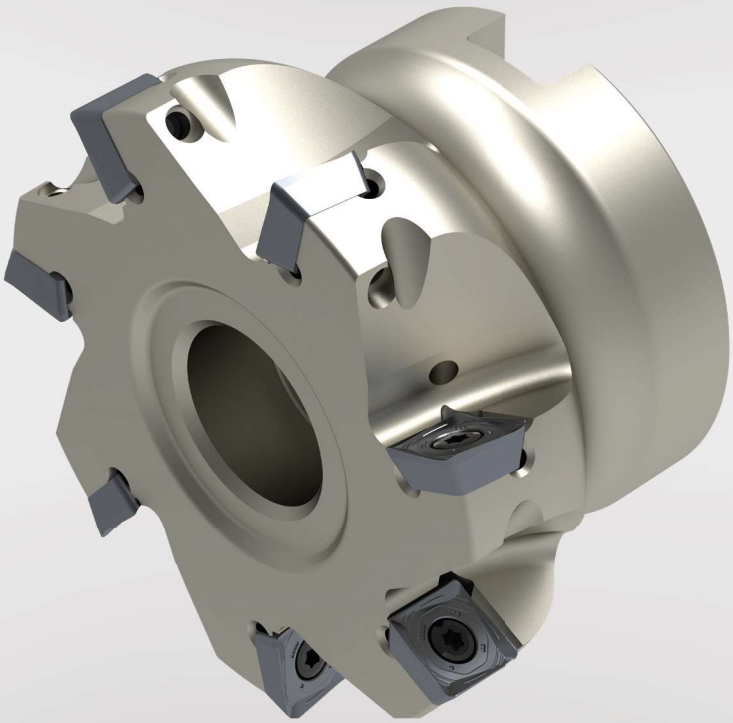
Starting parameters:





Grades and materials:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.08 – 0.25	8 – 0.2
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.08 – 0.2	8 – 0.2



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

HCM: Steel
SCM: Stainless Steel – Exotic* – Titanium*
CCM: Cast iron
LMM: Aluminium

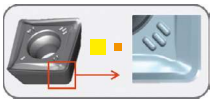
4 effective cutting edges

Customer benefits

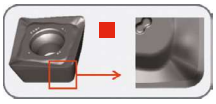
- High precision 90° milling
- Economic solution:
  High chip volume on low power machines
  Reduced cost per cutting edge compared to current insert solutions. (APKT and ADKT)
- Reduced machining costs:
  Compared to APKT10: +20 % to +30 % in price
  Advantage: up to 35 % cost reduction per cutting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

Which chipbreaker to use?

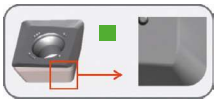
HCM
Strong cutting edge for general steel applications and hard conditions milling.



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



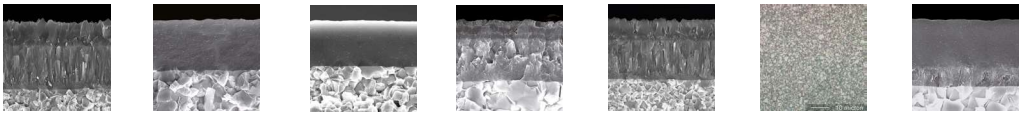
CCM
Strong cutting edge for cast iron applications.



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

Grades

CTCP230 ■ CTPP235 ■ CTPM240 ■ CTC5235 ■ CTCK215 ■ CTWN715 ■ CTC5240 ■



* secondary application

Available range SDKT09

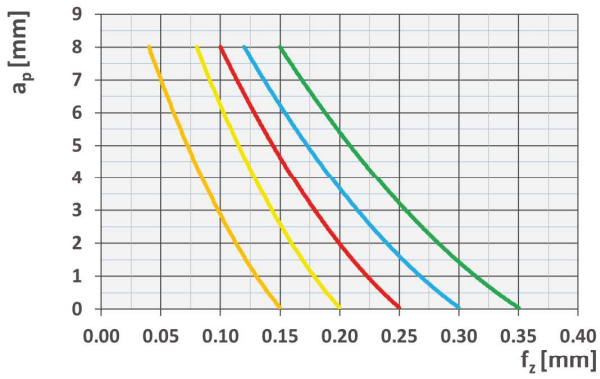
Insert	Designation	Chipbreaker	Material number	Available
	SDKT 09T308SR-HCM CTCP230	**...-HCM**	11979028	●
	SDKT 09T308SR-HCM CTPP235	**...-HCM**	11979030	●
	SDKT 09T308SR-SCM CTPM240	**...-SCM**	11979032	●
	SDKT 09T308SR-SCM CTC5235	**...-SCM**	11584645	●
	SDKT 09T308SR-SCM CTC5240	**...-SCM**	11710895	●
	SDKT 09T308SR-CCM CTCK215	**...-CCM**	12193340	●
	SDHT 09T308FR-LMM CTWN715	**...-LMM**	14652621	●

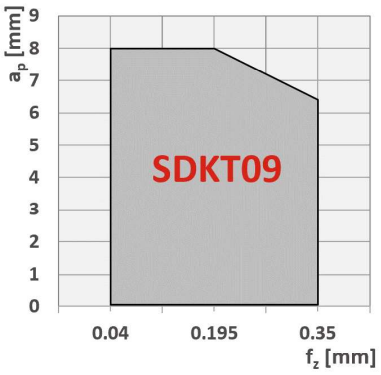
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-S09-25.R.03-B-32-88	25	3	11596014	●
	C-SSM-S09-32.R.04-B-40-100	32	4	11596009	●
	G-SSM-S09-25.R.03	25	3	12272435	○
	G-SSM-S09-32.R.04	32	4	12272436	○
	A-SSM-S09-40.R.05	40	5	11596010	●
	A-SSM-S09-50.R.06	50	6	11584233	●
	A-SSM-S09-63.R.07	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:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.12 – 0.3	8 – 0.05
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.08 – 0.2	8 – 0.05
K	Cast iron	CCM	CTCK215	320 – 100	0.1 – 0.25	8 – 0.05
N	Non-ferrous	LMM	CTWN715	< 2000	0.15 – 0.35	8 – 0.05
S	Heat resistant alloys	SCM	CTC5235	75 – 25	0.04 – 0.15	8 – 0.05
S	Titanium	SCM	CTC5240			

Available range SDKT12

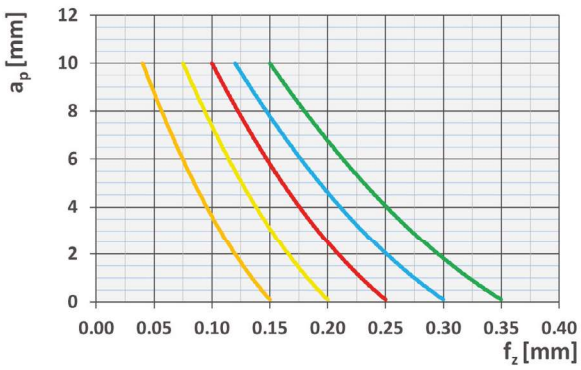
Insert	Designation	Chipbreaker	Material number	Available
	SDKT 120508SR-HCM CTCP230	**...-HCM**	12154549	●
	SDKT 120508SR-HCM CTPP235	**...-HCM**	12062538	●
	SDKT 120508SR-SCM CTPM240	**...-SCM**	12074525	●
	SDKT 120508SR-SCM CTC5235	**...-SCM**	12067263	●
	SDKT 120508SR-SCM CTC5240	**...-SCM**	12071921	●
	SDKT 120508SR-CCM CTCK215	**...-CCM**	12154553	●
	SDHT 120508FR-LMM CTWN715	**...-LMM**	14652623	●

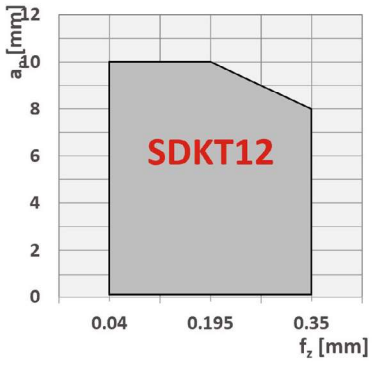
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-S12-32.R.03-B-40-100	32	3	12138258	●
	A-SSM-S12-40.R.04	40	4	11965069	●
	A-SSM-S12-50.R.05	50	5	11981629	●
	A-SSM-S12-63.R.06	63	6	12060728	●
	A-SSM-S12-80.R.07	80	7	12060727	●

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

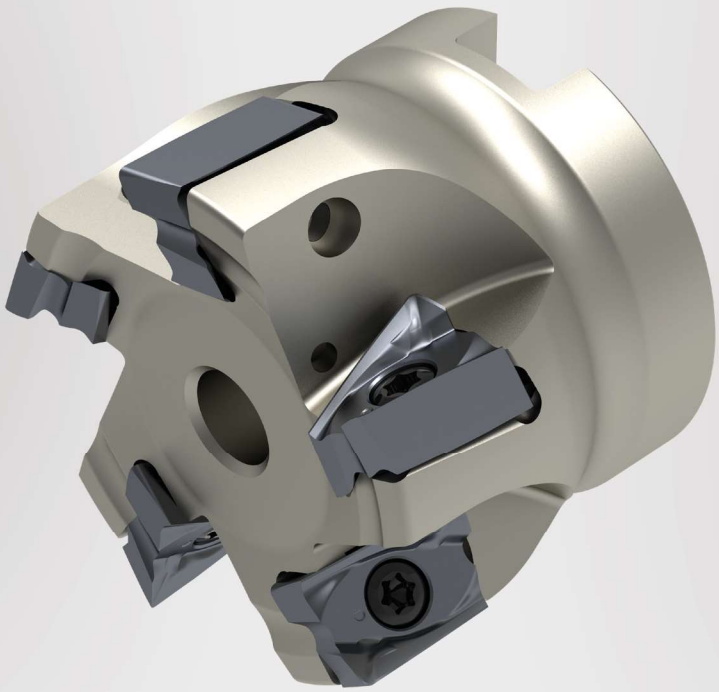
Starting parameters:





Grades and materials:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.12 – 0.3	10 – 0.1
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.08 – 0.2	10 – 0.1
K	Cast iron	CCM	CTCK215	320 – 100	0.1 – 0.25	10 – 0.1
N	Non-ferrous	LMM	CTWN715	< 2000	0.15 – 0.35	10 – 0.1
S	Heat resistant alloys	SCM	CTC5235	75 – 25	0.04 – 0.15	10 – 0.1
S	Titanium	SCM	CTC5240			



Overview LNKU / LOKU

Application

1) Face milling

2) Angled milling

3) Helical plunging

4) Shoulder milling

5) Slot milling

6) Pocket milling

Chipbreaker

HCM: Steel – Cast iron*
SCM: Stainless Steel – Exotic* – Titanium*
CCM: Cast iron

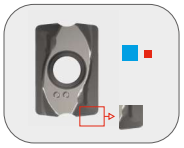
4 effective cutting edges

* secondary application

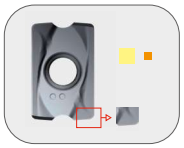
Customer benefits

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

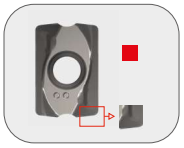
Which chipbreaker to use?



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

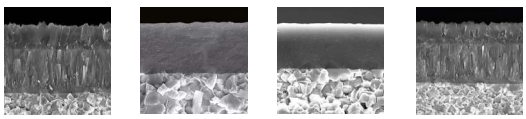


SCM
Sharp cutting edge for general stainless steel applications and for finishing in steels.



CCM
Strong cutting edge for cast iron applications.

CTCP230 CTPP235 CTPM240 CTCK215



Available range LNKU12 / LOKU 12

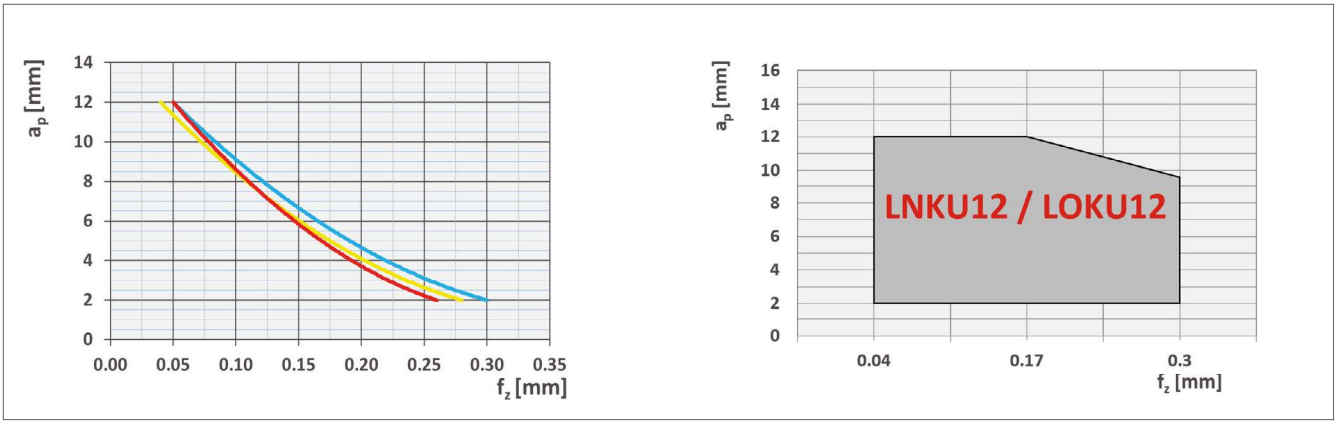
Insert	Designation	Chipbreaker	Material number	Available
	LNKU 120608ER-HCM CTCP230	…-HCM	12434604	●
	LNKU 120608ER-HCM CTPP235	…-HCM	12158008	●
	LNKU 120608ER-SCM CTPM240	…-SCM	12373789	●
	LNKU 120608ER-CCM CTCK215	…-CCM	14659156	●
	LOKU 120608ER-SCM CTPM240	…-SCM	12373779	●
	LOKU 120608ER-XCM CTC5235	…-XCM		○
	LOKU 120608ER-XCM CTC5240	…-XCM		○

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:



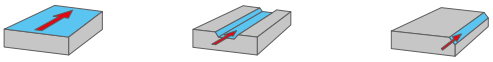
Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.05 – 0.30	12 – 2.0
M	Stainless steel	SCM	CTPM240	200 – 60	0.04 – 0.28	12 – 2.0
K	Cast iron	CCM	CTCK215	320 – 100	0.05 – 0.26	12 – 2.0

Overview HPKT... HPCT...

Application

1) Face milling 2) Slot milling 3) Chamfering



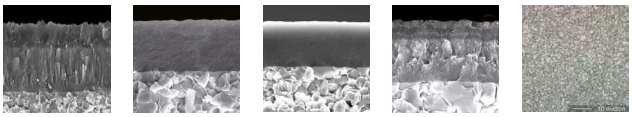
Chipbreaker

HCM: Steel – Cast iron*
SCM: Stainless Steel – Exotic* – Titanium*
LMM: Aluminium and non-ferrous metals

6 effective cutting edges

Grades

CTCP230 ■ CTPP235 ■ CTPM240 ■ CTC5235 ■ CTWN715 ■



* secondary application

Masterfinish

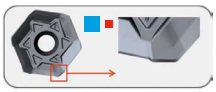
Extremely soft, spindle-friendly cut. The very positive cutting edge chipbreaker paired with the new chipbreaker designs revolutionizes milling on small to medium sized milling machines.

“Masterfinish technology”

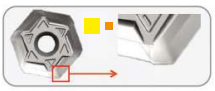
Indexing 6 times

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

Which chipbreaker to use?



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



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

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

Available range HPKT... HPCT...

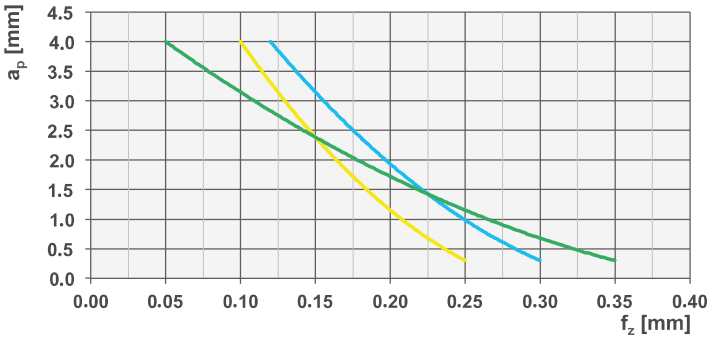
Insert	Designation	Chipbreaker	Material number	Available
	HPKT 0604AZER-HCM CTCP230	**...-HCM**	12193366	●
	HPKT 0604AZER-HCM CTPP235	**...-HCM**	12193369	●
	HPKT 0604AZER-SCM CTC5235	**...-SCM**	11526389	●
	HPCT 0604AZFR-LMM CTWN715	**...-LMM**	14652610	●

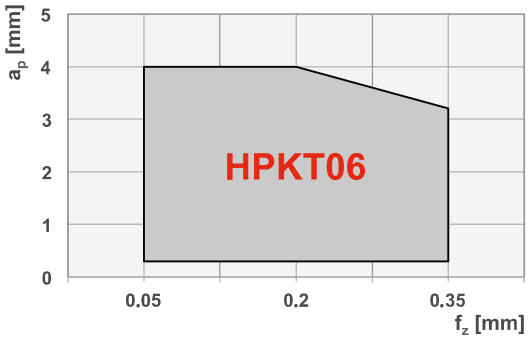
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-H06-40.R.04-B32-50-110	40	4	11520454	●
	A-SSM-H06-40.R.04	40	4	11520455	●
	A-SSM-H06-50.R.05	50	5	11520456	●
	A-SSM-H06-63.R.06	63	6	11520457	●
	A-SSM-H06-80.R.07	80	7	11520458	●
	A-SSM-H06-100.R.09	100	9	11520459	●
	A-SSM-H06-125.R.10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

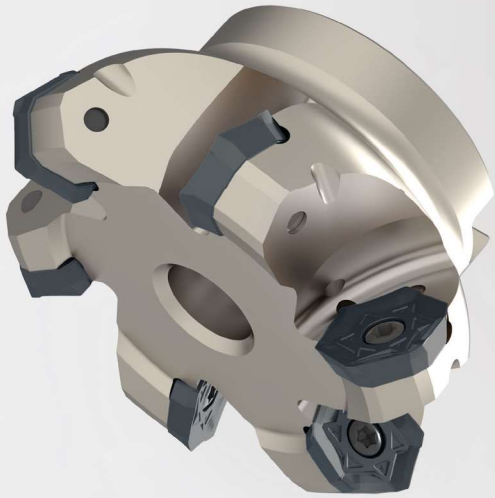
Starting parameters:





Grades and materials:

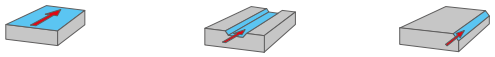
Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.12 – 0.3	4 – 0.3
M	Stainless steel	SCM	CTC5235	200 – 60	0.1 – 0.25	4 – 0.3
N	Non-ferrous	LMM	CTWN715	< 2000	0.05 – 0.35	4 – 0.3



Overview HOKT... HOCT...

Application

1) Face milling 2) Slot milling 3) Chamfering



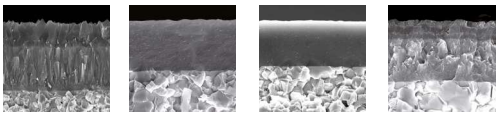
Chipbreaker

HCM: Steel – Cast iron*
SCM: Stainless Steel – Exotic* – Titanium*

6 effective cutting edges

Grades

CTCP230 ■ CTPP235 ■ CTPM240 ■ CTC5235 ■



Masterfinish

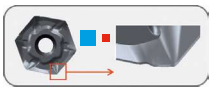
- Extremely soft, spindle-friendly cut. The very positive cutting edge chipbreaker paired with the new chipbreaker designs revolutionizes milling on small to medium sized milling machines.

“Masterfinish technology”

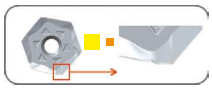
Indexing 6 times

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

Which chipbreaker to use?



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



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

* secondary application

Available range HOKT... HOCT...

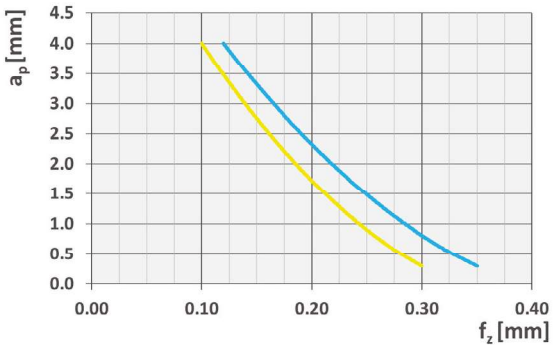
Insert	Designation	Chipbreaker	Material number	Available
	HOKT 0604AZER-HCM CTCP230	**...-HCM**	11950674	●
	HOKT 0604AZER-HCM CTPP235	**...-HCM**	11943817	●
	HOCT 0604AZER-SCM CTPM240	**...-SCM**	14652624	●
	HOCT 0604AZER-SCM CTC5235	**...-SCM**	12212264	●

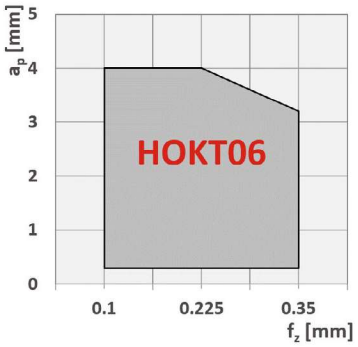
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-H06-40.R.04-B32-50-110	40	4	11520454	●
	A-SSM-H06-40.R.04	40	4	11520455	●
	A-SSM-H06-50.R.05	50	5	11520456	●
	A-SSM-H06-63.R.06	63	6	11520457	●
	A-SSM-H06-80.R.07	80	7	11520458	●
	A-SSM-H06-100.R.09	100	9	11520459	●
	A-SSM-H06-125.R.10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

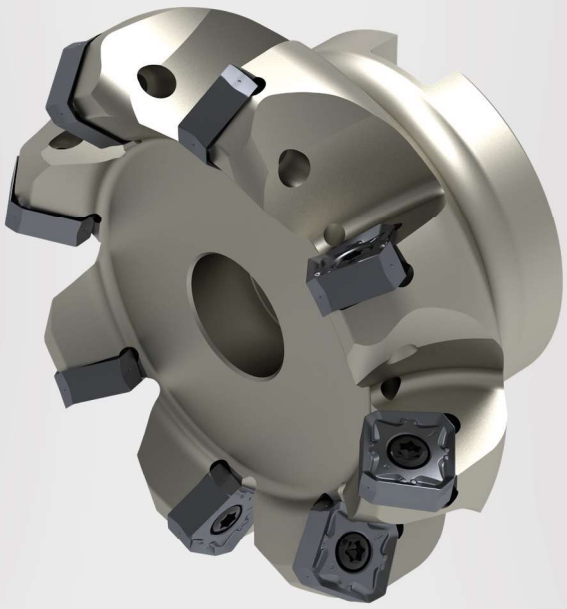
Starting parameters:





Grades and materials:

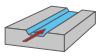
Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.12 – 0.35	4 – 0.3
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.1 – 0.3	4 – 0.3



Overview SOKU

Application

1) Face milling

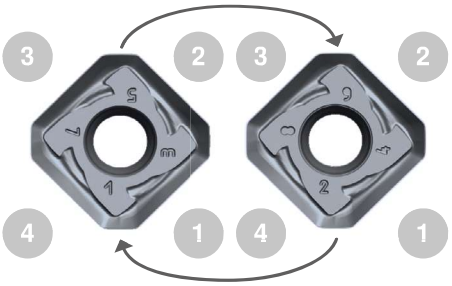

2) Slot milling


3) Chamfering

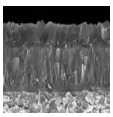

Chipbreaker

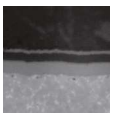
HCM: Steel / Medium & roughing operations
SCM: Steel – Stainless Steel / Finishing
CCM: Cast iron

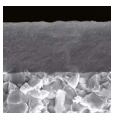
Indexing 4 times and reversible

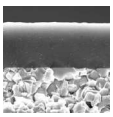


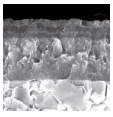
Grades

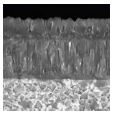
CTCP230 ■


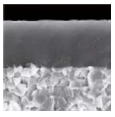
CTCP235 ■


CTPP235 ■


CTPM240 ■


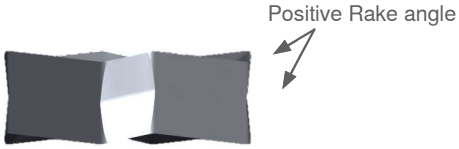
CTC5235 ■


CTCK215 ■


CTPK220 ■


Customer benefits

- Masterfinish" technology
- Double sided positive (positive rake angle)



Square double-sided insert!

Available in 2 dimensions

IC 12 IC 15

Which chipbreaker to use?

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

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

CCM
Strong cutting edge for cast iron applications.

Available range SOKU12

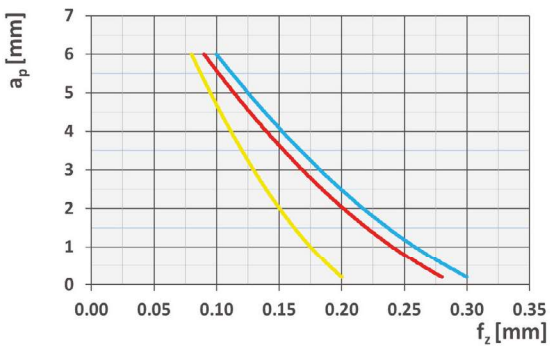
Insert	Designation	Chipbreaker	Material number	Available
	SOKU 1205AZER-HCM CTCP230	**...-HCM**	12193374	●
	SOKU 1205AZER-HCM CTCP235	**...-HCM**	12219854	●
	SOKU 1205AZER-HCM CTPP235	**...-HCM**	12193377	●
	SOKU 1205AZER-SCM CTPM240	**...-SCM**	11988963	●
	SOKU 1205AZER-SCM CTC5235	**...-SCM**	11906808	●
	SOKU 1205AZER-CCM CTCK215	**...-CCM**		○
	SOKU 1205AZER-CCM CTPK220	**...-CCM**		○

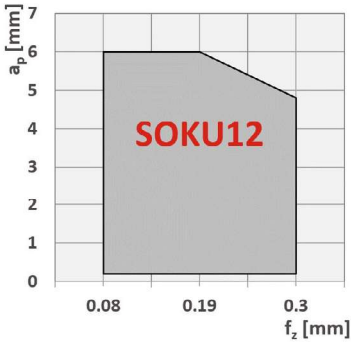
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-DSM-S12-40.R.04	40	4	11939775	●
	A-DSM-S12-50.R.05	50	5	11909357	●
	A-DSM-S12-63.R.06	63	6	11939774	●
	A-DSM-S12-80.R.08	80	8	11939772	●
	A-DSM-S12-100.R.10	100	10	11939771	●
	A-DSM-S12-125.R.12	125	12	11939769	●

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:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTCP235 CTPP235	220 – 60	0.1 – 0.3	6 – 0.2
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.08 – 0.2	6 – 0.2
K	Cast iron	CCM	CTCK215 CTPK220	320 – 100	0.08 - 0.45	6 – 0.2

Available range SOKU15

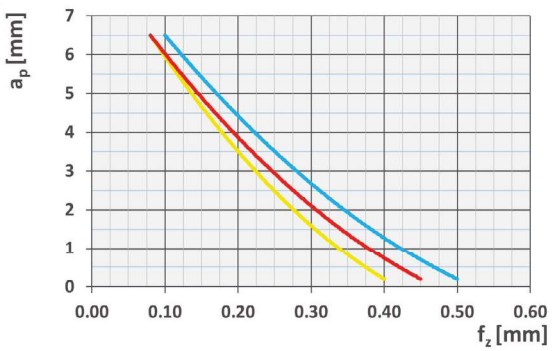
Insert	Designation	Chipbreaker	Material number	Available
	SOKU 1505AZER-HCM CTCP230	**...-HCM**	12237265	●
	SOKU 1505AZER-HCM CTPP235	**...-HCM**	12193379	●
	SOKU 1505AZER-HCM CTCP235	**...-HCM**	12219850	●
	SOKU 1505AZER-SCM CTPM240	**...-SCM**	11979060	●
	SOKU 1505AZER-SCM CTC5235	**...-SCM**	11526409	●
	SOKU 1505AZER-CCM CTCK215	**...-CCM**	12299379	●
	SOKU 1505AZER-CCM CTPK220	**...-CCM**	12145626	●

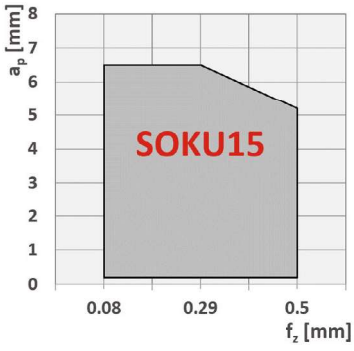
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-DSM-S15-40.R.04	40	4	11520461	●
	A-DSM-S15-50.R.04	50	4	11520462	●
	A-DSM-S15-63.R.05	63	5	11520463	●
	A-DSM-S15-80.R.06	80	6	11520464	●
	A-DSM-S15-100.R.07	100	7	11520465	●
	A-DSM-S15-125.R.08	125	8	11520466	●
	A-DSM-S15-160.R.10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

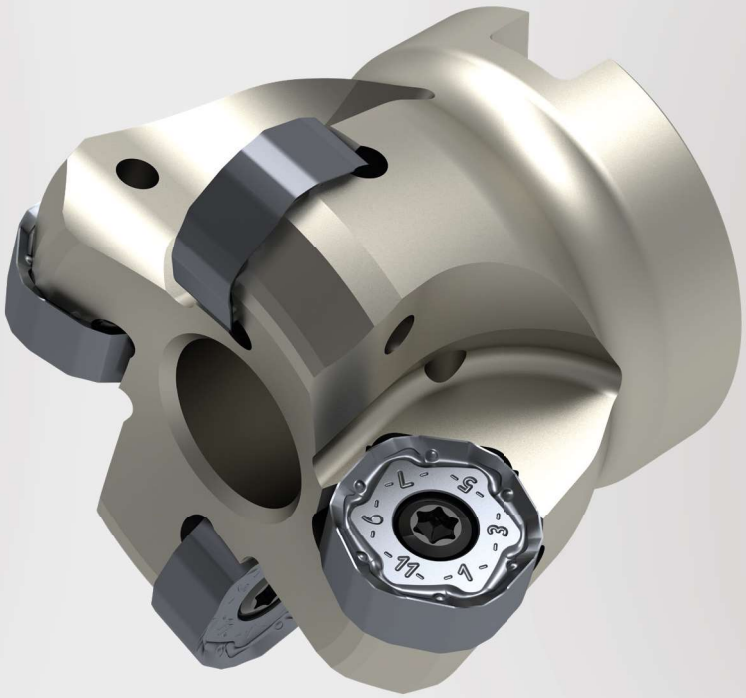
Starting parameters:





Grades and materials

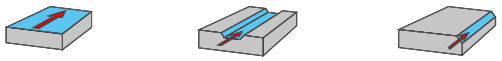
	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTCP235 CTPP235	220 – 60	0.1 – 0.5	6.5 – 0.2
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.08 – 0.4	6.5 – 0.2
K	Cast iron	CCM	CTCK215 CTPK220	320 – 100	0.08 – 0.45	6.5 – 0.2



Overview HNKU / HOKU

Application

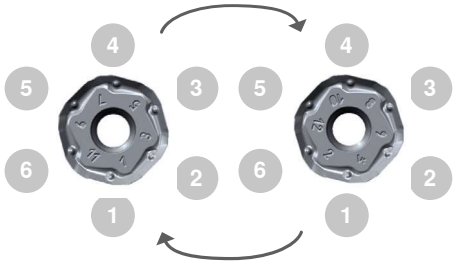
1) Face milling 2) Slot milling 3) Chamfering



Chipbreaker

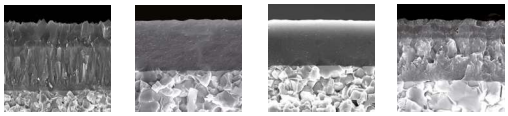
HCM: Steel – Cast iron*
SCM: Stainless Steel – Exotic* – Titanium*

Indexing 6 times and reversible



Grades

CTCP230 ■ CTPP235 ■ CTPM240 ■ CTC5235 ■

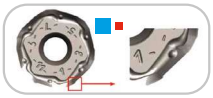


* secondary application

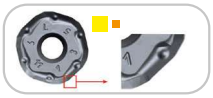
Customer benefits

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

Which chipbreaker to use?



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



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

Available range HNKU

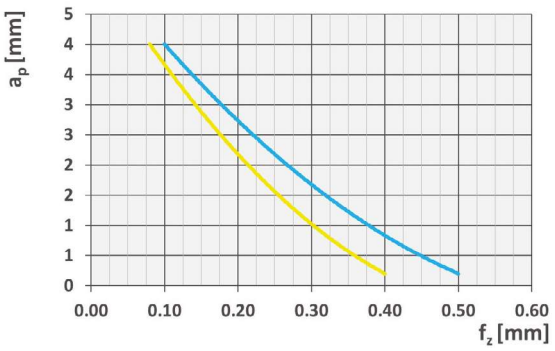
Insert	Designation	Chipbreaker	Material number	Available
	HNKU 0806AZER-HCM CTCP230	**...-HCM**	12193383	●
	HNKU 0806AZER-HCM CTPP235	**...-HCM**	12193384	●
	HNKU 0806AZER-SCM CTPM240	**...-SCM**		○
	HNKU 0806AZER-SCM CTC5235	**...-SCM**	11887368	●

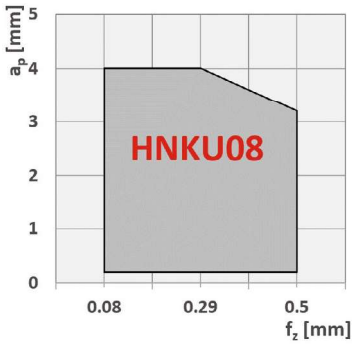
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-DSM-H08-40.R.04	40	4	11590448	●
	A-DSM-H08-50.R.04	50	4	11561804	●
	A-DSM-H08-63.R.05	63	5	11561802	●
	A-DSM-H08-80.R.06	80	6	11561800	●
	A-DSM-H08-100.R.08	100	8	12152205	●
	A-DSM-H08-125.R.09	125	9	12152207	●

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:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.1 – 0.5	4 – 0.2
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.08 – 0.4	4 – 0.2

Available range HOKU

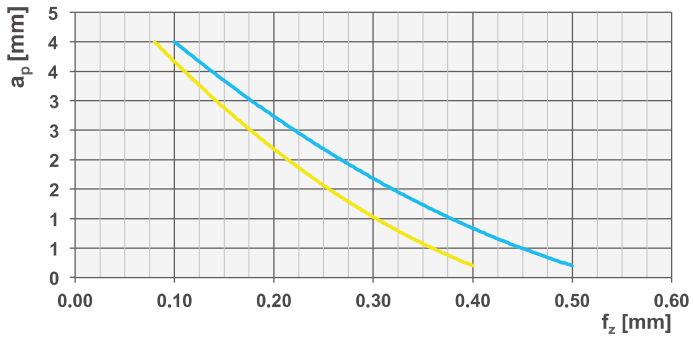
Insert	Designation	Chipbreaker	Material number	Available
	HOKU 0806AZER-HCM CTCP230	**...-HCM**	12623510	●
	HOKU 0806AZER-HCM CTPP235	**...-HCM**	12623511	●
	HOKU 0806AZER-SCM CTPM240	**...-SCM**	12630187	●
	HOKU 0806AZER-SCM CTC5235	**...-SCM**	12623507	●

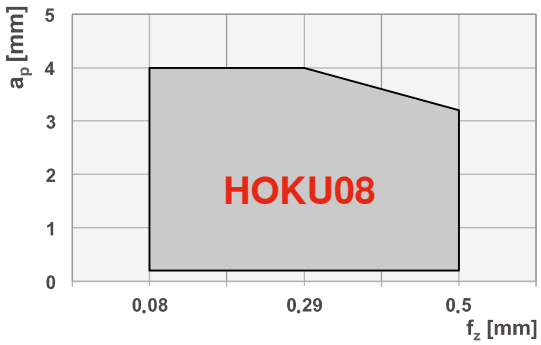
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-DSM-H08-40.R.04	40	4	11590448	●
	A-DSM-H08-50.R.04	50	4	11561804	●
	A-DSM-H08-63.R.05	63	5	11561802	●
	A-DSM-H08-80.R.06	80	6	11561800	●
	A-DSM-H08-100.R.08	100	8	12152205	●
	A-DSM-H08-125.R.09	125	9	12152207	●

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:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.1 – 0.5	4 – 0.2
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.08 – 0.4	4 – 0.2

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

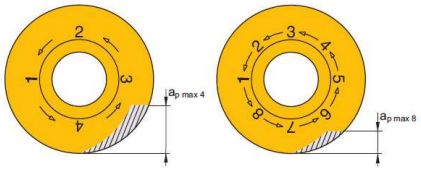

8) Turn milling


Chipbreaker

HCM: Steel – Cast iron*
SCM: Stainless Steel
XCM: Exotic – Titanium*
LMM: Aluminium and non-ferous metals
MOSN: Reinforced for hard materials

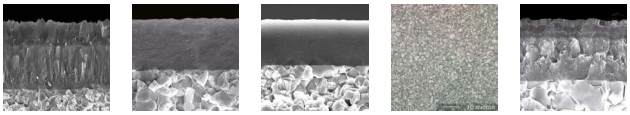
Indexing 4 or 8 times

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

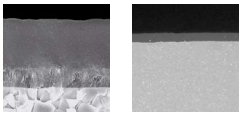


Grades

CTCP230 ■ CTPP235 ■ CTPM240 ■ CTWN715 ■ CTC5235 ■



CTC5240 ■ CTP6215 □



* secondary application

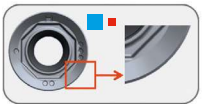
Customer benefits

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

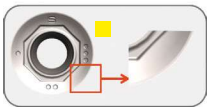
Available in 3 dimensions

IC 10 IC12 IC16

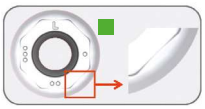
Which chipbreaker to use?



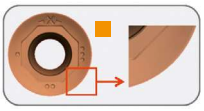
HCM
Strong cutting edge for general steel applications and hard conditions milling.



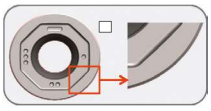
SCM
Sharp cutting edge for general stainless steel applications and for finishing in steels.



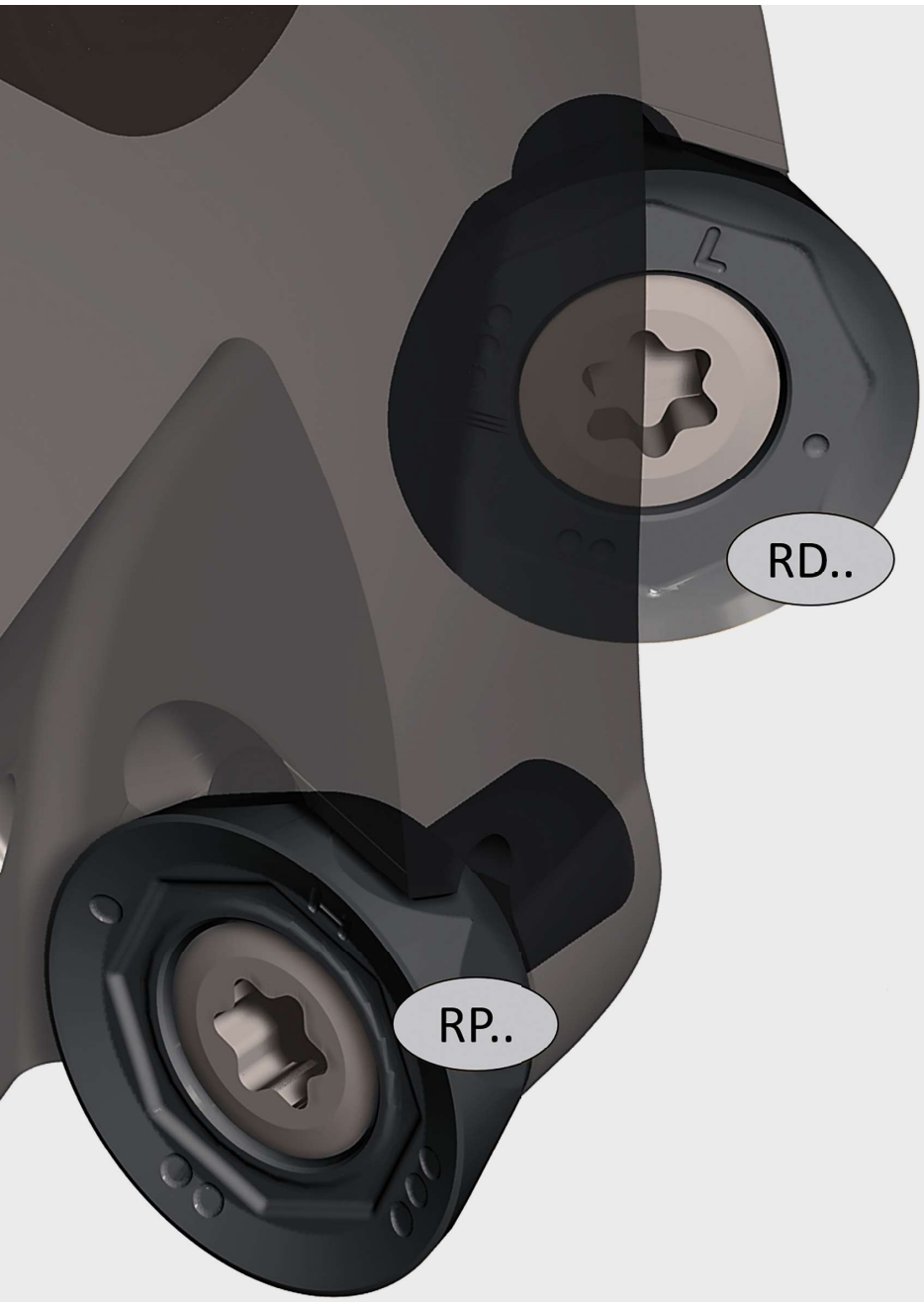
LMM
Extremely sharp cutting edge for aluminum and non-ferrous metals.



XCM
Stable cutting edge for dedicated exotic materials and titanium.



MOSN
Strong reinforced cutting edge for hard material.


L
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

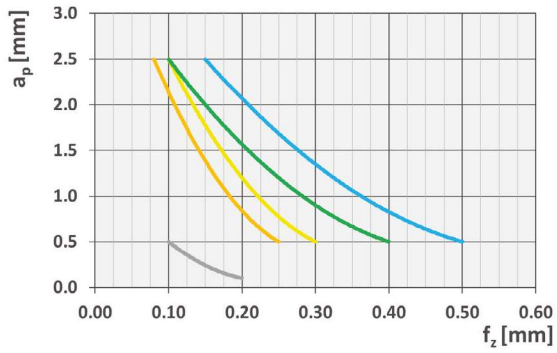
Insert	Designation	Chipbreaker	Material number	Available
	RPMX 10T3MO-HCM CTCP230	**...-HCM**	11978869	●
	RPMX 10T3MO-HCM CTPP235	**...-HCM**	11978872	●
	RPMX 10T3MO-SCM CTPM240	**...-SCM**	11978876	●
	RPMX 10T3MO-SCM CTC5235	**...-SCM**	12193387	●
	RDHX 10T3MO-LMM CTWN715	**...-LMM**	14652613	●
	RPHX 10T3MO-XCM CTC5235	**...-XCM**	11678477	●
	RPHX 10T3MO-XCM CTC5240	**...-XCM**	11678481	●
	RDHW 10T3MOSN CTP6215	**-**	11716131	●

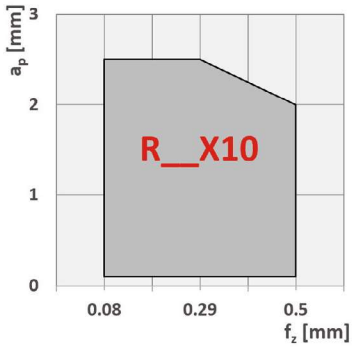
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-R10-20.R.02-A-50-102	20	2	11720312	●
	C-SSM-R10-20.R.02-A-50-165	20	2	11720313	●
	C-SSM-R10-25.R.03-A-60-116	25	3	11720314	●
	C-SSM-R10-25.R.03-A-60-165	25	3	11720315	●
	C-SSM-R10-32.R.04-A-70-130	32	4	11720318	●
	C-SSM-R10-32.R.04-A-70-165	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:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.15 – 0.5	2.5 – 0.5
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.1 – 0.3	2.5 – 0.5
N	Non-ferrous	LMM	CTWN715	< 2000	0.1 – 0.4	2.5 – 0.5
S	Heat-resistant alloys	XCM	CTC5235	75 – 25	0.08 – 0.25	2.5 – 0.5
S	Titanium	XCM	CTC5240			
H	Hard materials	–	CTP6215	180 – 100	0.1 – 0.2	0.5 – 0.1

Recommended!

ø [mm]	4 times a_p [mm]	4 times $a_{p\,max}$ [mm]	8 times $a_{p\,max}$ [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-HCM CTCP230	**...-HCM**	11979003	●
	RPMX 1204MO-HCM CTPP235	**...-HCM**	11979006	●
	RPMX 1204MO-SCM CTPM240	**...-SCM**	11979015	●
	RPMX 1204MO-SCM CTC5235	**...-SCM**	12193389	●
	RDHX 1204MO-LMM CTWN715	**...-LMM**	14652616	●
	RPHX 1204MO-XCM CTC5235	**...-XCM**	11666768	●
	RPHX 1204MO-XCM CTC5240	**...-XCM**	11666769	●
	RDHW 1204MOSN CTP6215	**-**	11716128	●

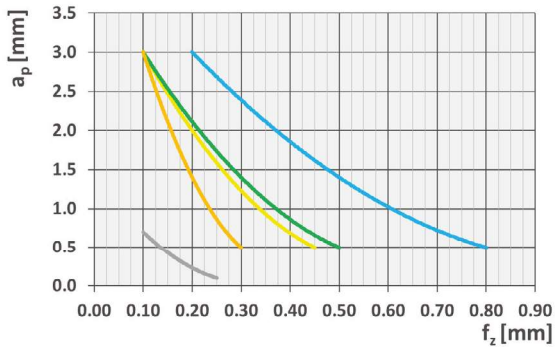
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-R12-25.R.02-A-30-86	25	2	11720305	●
	C-SSM-R12-25.R.02-A-60-116	25	2	11720307	●
	C-SSM-R12-32.R.03-A-40-100	32	3	11720308	●
	C-SSM-R12-32.R.03-A-70-130	32	3	11720310	●
	G-SSM-R12-25.R.02	25	2	12156946	●
	G-SSM-R12-35.R.03	35	3	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	●

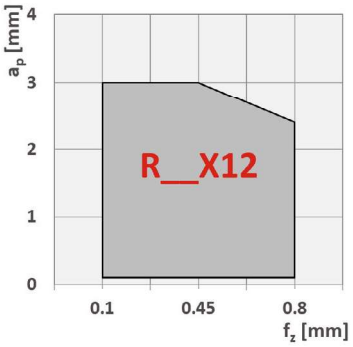
Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 8.5 – T15 (only for C- and G-)	5	11037484	●
	M4.0 x 11.0 – T15+ (only for A-)	5	1345432	●
	Power screw M8.0 x 30.0 (for A-SSM-R12-40.R.04 and for A-SSM-R12-42.R.04)	15	11036880	●

● available from stock, ○ available upon request

Cutting data R12

Starting parameters:





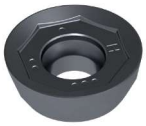
Grades and materials:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.2 – 0.8	3 – 0.5
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.1 – 0.45	3 – 0.5
N	Non-ferrous	LMM	CTWN715	< 2000	0.1 – 0.5	3 – 0.5
S	Heat-resistant alloys	XCM	CTC5235	75 – 25	0.1 – 0.3	3 – 0.5
S	Titanium	XCM	CTC5240			
H	Hard materials	–	CTP6215	180 – 100	0.1 – 0.25	0.7 – 0.1

Recommended!

ø [mm]	4 times a_p [mm]	4 times $a_{p\,max}$ [mm]	8 times $a_{p\,max}$ [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-HCM CTCP230	**...-HCM**	11979017	●
	RPMX 1605MO-HCM CTPP235	**...-HCM**	11979021	●
	RPMX 1605MO-SCM CTPM240	**...-SCM**	11979026	●
	RPMX 1605MO-SCM CTC5235	**...-SCM**	12193449	●
	RDHX 1605MO-LMM CTWN715	**...-LMM**		○
	RPHX 1605MO-XCM CTC5235	**...-XCM**	11670391	●
	RPHX 1605MO-XCM CTC5240	**...-XCM**	11670392	●
	RDHW 1605MOSN CTP6215	**-**		○

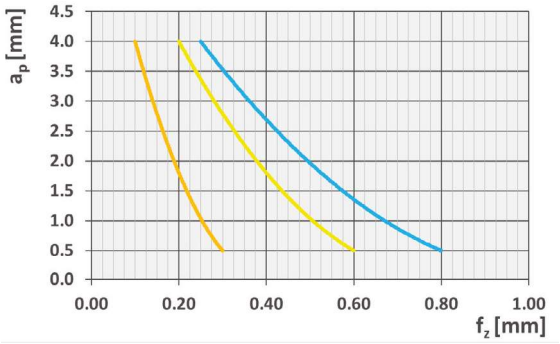
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-SSM-R16-50.R.03	50	3	11739864	●
	A-SSM-R16-52.R.04	52	4	14653992	●
	A-SSM-R16-63.R.05	63	5	11739862	●
	A-SSM-R16-66.R.05	66	5	14653995	●
	A-SSM-R16-80.R.06	80	6	11739860	●
	A-SSM-R16-100.R.07	100	7	11739857	●
	A-SSM-R16-125.R.08	125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

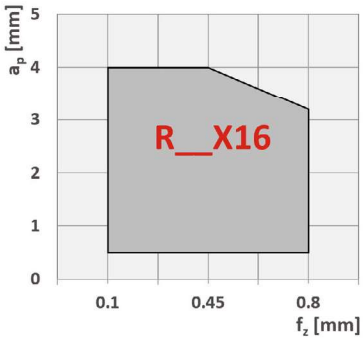
Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.5 x 13.0 – T20+	5	1345431	●
	Power screw M10.0 x 31.0 (for A-SSM-R16-50.R.03 and for A-SSM-R16-52.R.04)	20	11040298	●

● available from stock, ○ available upon request

Cutting data R16

Starting parameters:



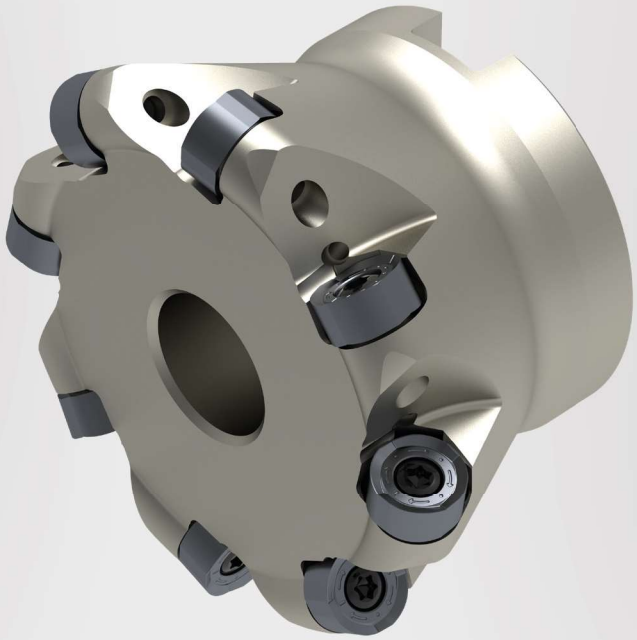


Grades and materials:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.25 – 0.8	4 – 0.5
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.2 – 0.6	4 – 0.5
S	Heat-resistant alloys	XCM	CTC5235	75 – 25	0.1 – 0.3	4 – 0.5
S	Titanium	XCM	CTC5240			

Recommended!

ø [mm]	4 times a_p [mm]	4 times $a_{p\,max}$ [mm]	8 times $a_{p\,max}$ [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

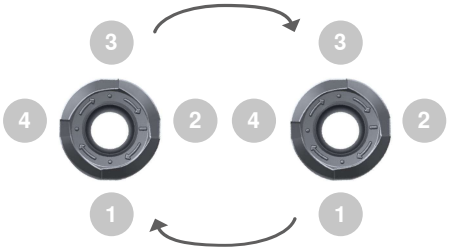
1) Face milling

2) Slot milling

Chipbreaker

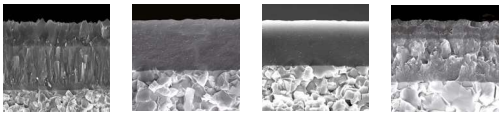
HCM: Steel – Cast iron*
SCM: Stainless Steel

Indexing 4 times and reversible



Grades

CTCP230 ■ CTPP235 ■ CTPM240 ■ CTC5235 ■



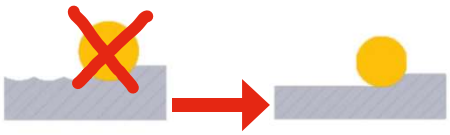
Customer benefits

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

Available in 2 dimensions

CI 12 CI 16

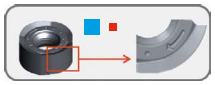
Best finishing



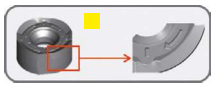
Cutting parameters: v_c 280m/ min. f 0.4 mm. a_p 0.5 mm

- ▲ 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 μm
  - → Ra with the double-sided round insert: 1 μm

Which chipbreaker to use?



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



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

Available range R12

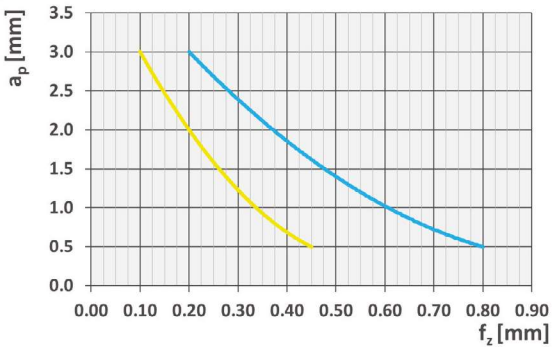
Insert	Designation	Chipbreaker	Material number	Available
	RNKU 1204MOER-HCM CTCP230	**...-HCM**	11979067	●
	RNKU 1204MOER-HCM CTPP235	**...-HCM**	11979068	●
	ROHU 1204MOER-SCM CTPM240	**...-SCM**	12376587	●
	ROHU 1204MOER-SCM CTC5235	**...-SCM**	12193450	●

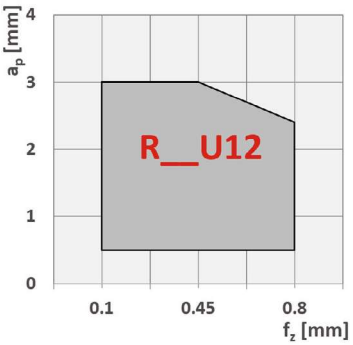
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-DSM-R12-32.R.03-A-70-131	32	3	11775976	●
	C-DSM-R12-32.R.03-A-70-165	32	3	11984880	●
	A-DSM-R12-40.R.04	40	4	11718939	●
	A-DSM-R12-50.R.05	50	5	11775978	●
	A-DSM-R12-63.R.06	63	6	11775977	●
	A-DSM-R12-80.R.08	80	8	11984879	●
	A-DSM-R12-100.R.10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

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.2 – 0.8	3 – 0.5
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.1 – 0.45	3 – 0.5

Recommended!

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

Available range R16

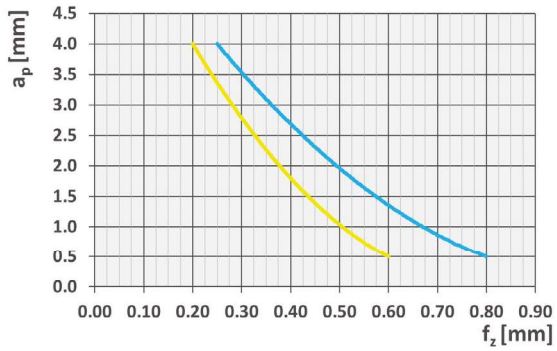
Insert	Designation	Chipbreaker	Material number	Available
	RNKU 1605MOER-HCM CTCP230	**...-HCM**	12193454	●
	RNKU 1605MOER-HCM CTPP235	**...-HCM**	12193465	●
	ROHU 1605MOER-SCM CTPM240	**...-SCM**	14652625	●
	ROHU 1605MOER-SCM CTC5235	**...-SCM**	12193480	●

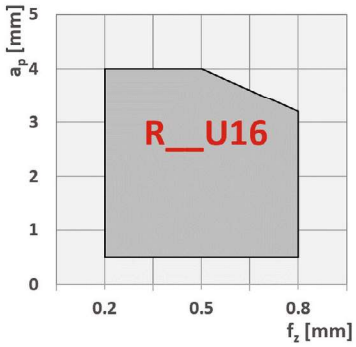
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-DSM-R16-50.R.03	50	3		○
	A-DSM-R16-63.R.05	63	5	11928824	●
	A-DSM-R16-80.R.06	80	6		○
	A-DSM-R16-100.R.07	100	7		○
	A-DSM-R16-125.R.08	125	8		○

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:



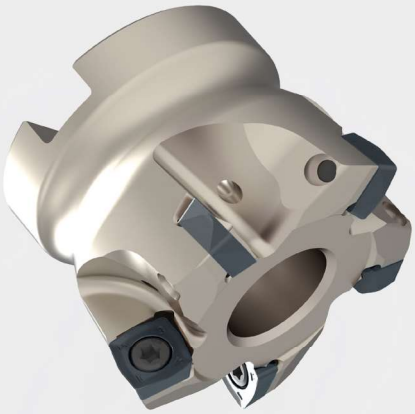


Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.25 – 0.8	4 – 0.5
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.2 – 0.6	4 – 0.5

Recommended!

ø [mm]	4 times a_p [mm]	4 times $a_{p\,max}$ [mm]	8 times $a_{p\,max}$ [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 

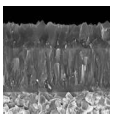
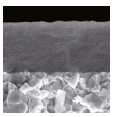
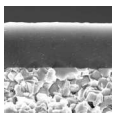
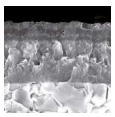
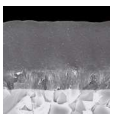
7) Slot milling 

Chipbreaker

HCM: Steel – Cast iron*
SCM: Stainless Steel – Titanium*

4 effective cutting edges

Grades

CTCP230 
CTPP235 
CTPM240 
CTC5235 
CTC5240 

Customer benefits

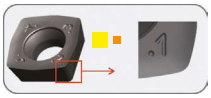
- With feed rates up to 3 mm / tooth and closely pitched tools. very high chip removal rates are achieved.
- Maximal tool life thanks to HyperCoat coating.
- Maximised economy thanks to 4 cutting edges.
- Reduced machining noise and vibration. light cutting geometries.
- Flexibility thanks to coolant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

Available in 3 dimensions

IC 07 IC 10 IC 13

Which chipbreaker to use?

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



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

Available range HFC07

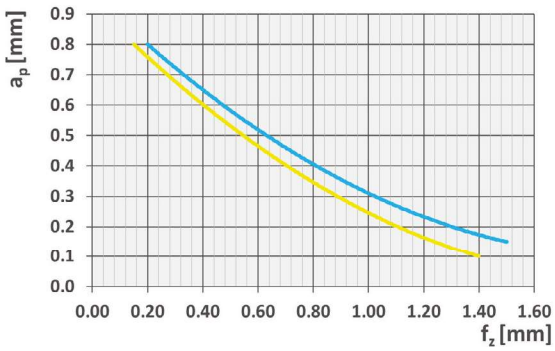
Insert	Designation	Chipbreaker	Material number	Available
	XPLT 070305SR-HCM CTCP230	**...-HCM**	12193481	●
	XPLT 070305SR-HCM CTPP235	**...-HCM**	12193482	●
	XPLT 070305ER-SCM CTPM240	**...-SCM**	14652649	●
	XPLT 070305ER-SCM CTC5235	**...-SCM**	11869773	●
	XPLT 070305ER-SCM CTC5240	**...-SCM**	11869775	●

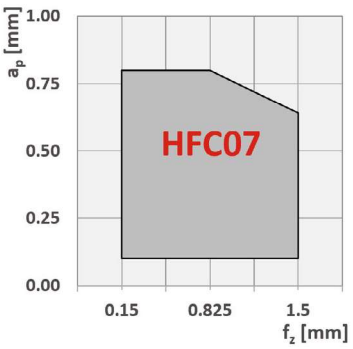
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-HFC07-16.R.02-A-50-200	16	2	11919179	●
	C-SSM-HFC07-20.R.03-A-50-200	20	3	11919180	●
	C-SSM-HFC07-25.R.04-A-50-200	25	4	11919182	●
	G-SSM-HFC07-16.R.02	16	2	11919183	●
	G-SSM-HFC07-20.R.03	20	3	11919184	●
	G-SSM-HFC07-25.R.04	25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

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.2 – 1.5	0.8 – 0.15
M	Stainless steel	SCM	CTPM240 CTC5235 CTC5240	200 – 60	0.15 – 1.4	0.8 – 0.1

Available range HFC10 – XDLT

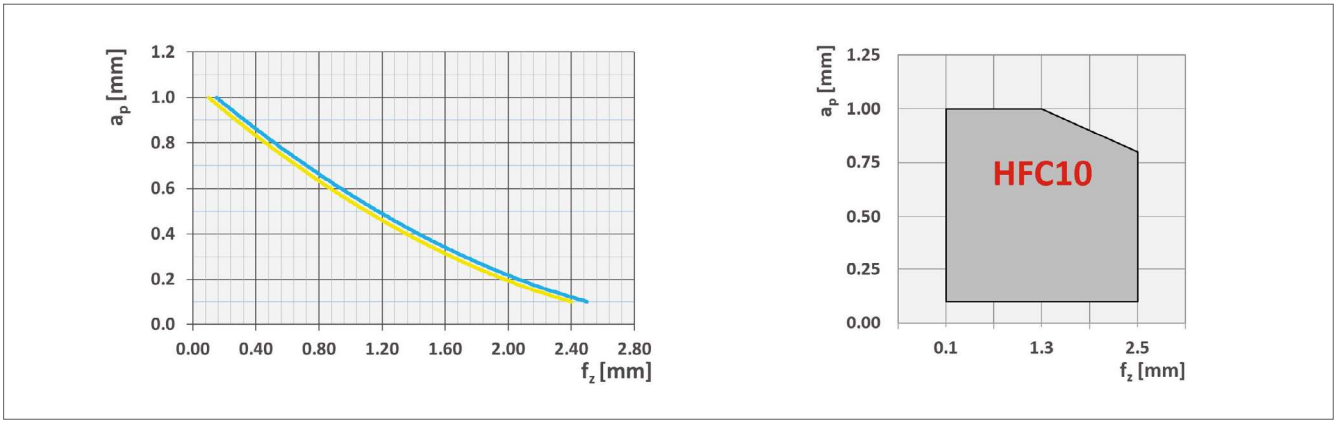
Insert	Designation	Chipbreaker	Material number	Available
	XDLT 10T308SR-HCM CTCP230	**...-HCM**	12193485	●
	XDLT 10T308SR-HCM CTPP235	**...-HCM**	12193487	●
	XDLT 10T308ER-SCM CTPM240	**...-SCM**	14652626	●
	XDLT 10T308ER-SCM CTC5235	**...-SCM**	11940752	●
	XDLT 10T308ER-SCM CTC5240	**...-SCM**	11940753	●

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:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.15 – 2.5	1 – 0.1
M	Stainless steel	SCM	CTPM240 CTC5235 CTC5240	200 – 60	0.1 – 2.4	1 – 0.1

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

-HCM

-SCM

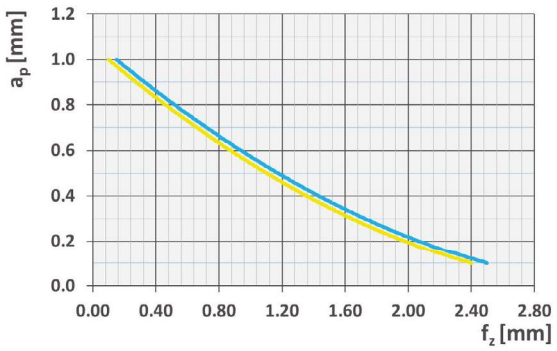
Insert	Designation	Chipbreaker	Material number	Available
	XDLX 10T308SR-HCM CTCP230	**...-HCM**	12308829	●
	XDLX 10T308SR-HCM CTPP235	**...-HCM**	12248334	●
	XDLX 10T308SR-SCM CTPM240	**...-SCM**	14652628	●
	XDLX 10T308SR-SCM CTC5235	**...-SCM**	12188504	●

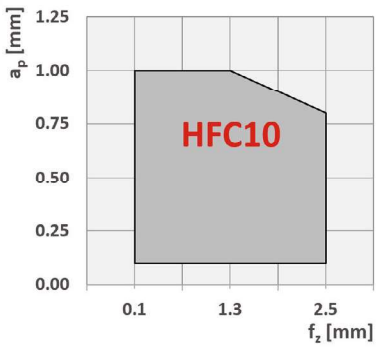
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-HFC10-25.R.03-A-50-125	25	3		○
	C-SSM-HFC10-25.R.03-A-50-225	25	3	11536252	●
	A-SSM-HFC10-40.R.04	40	4	11536253	●
	A-SSM-HFC10-50.R.05	50	5	11536255	●
	A-SSM-HFC10-63.R.06	63	6	11536256	●

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:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.15 – 2.5	1 – 0.1
M	Stainless steel	SCM	CTPM240 CTC5235 CTC5240	200 – 60	0.1 – 2.4	1 – 0.1

Available range HFC13

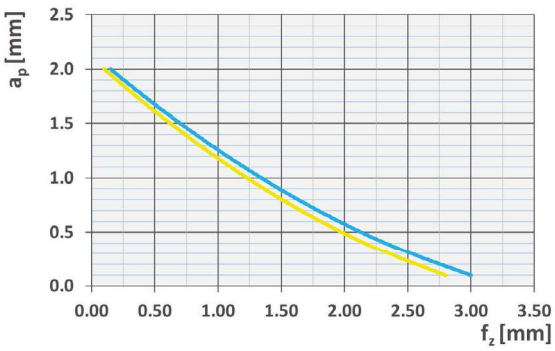
Insert	Designation	Chipbreaker	Material number	Available
	XOLT 130410SR-HCM CTCP230	**...-HCM**	12193499	●
	XOLT 130410SR-HCM CTPP235	**...-HCM**	12193508	●
	XOLT 130410ER-SCM CTPM240	**...-SCM**	14652630	●
	XOLT 130410ER-SCM CTC5235	**...-SCM**	11940763	●
	XOLT 130410ER-SCM CTC5240	**...-SCM**	11940765	●

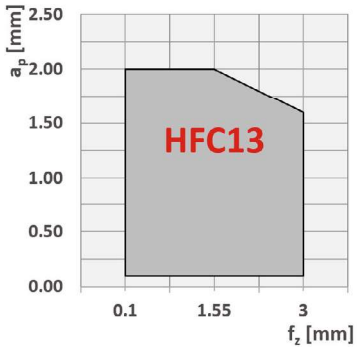
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-HFC13-35.R.03-A32-63-144	35	3		○
	C-SSM-HFC13-35.R.03-A32-63-250	35	3	11536246	●
	G-SSM-HFC13-35.R.03	35	3		○
	A-SSM-HFC13-50.R.04	50	4	11536249	●
	A-SSM-HFC13-63.R.05	63	5	11536248	●
	A-SSM-HFC13-80.R.07	80	7	11536247	●

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

Cutting data HFC13

Starting parameters:



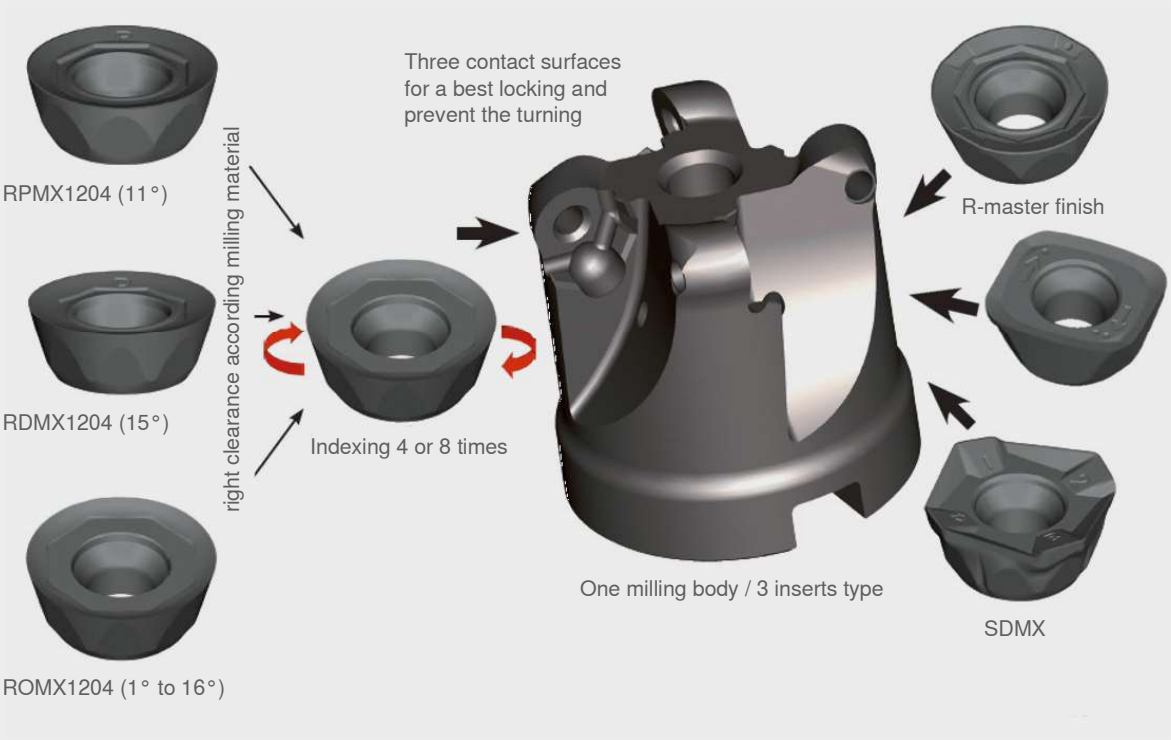


Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.15 – 2.5	1 – 0.1
M	Stainless steel	SCM	CTPM240 CTC5235 CTC5240	200 – 60	0.1 – 2.4	1 – 0.1

Standard application

Additional application



Overview SDMX

Application

1) Face milling

2) Angled milling

3) Slot milling

4) Chamfering

5) Profile milling

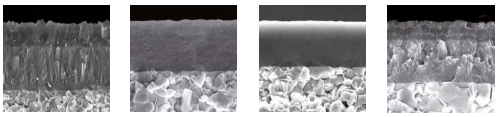
Chipbreaker

HCM: Steel – Cast iron*
SCM: Stainless Steel

4 effective cutting edges

Grades

CTCP230 ■ CTPP235 ■ CTPM240 ■ CTC5235 ■

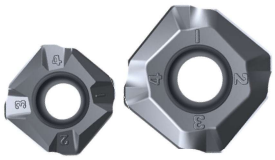


* secondary application

Customer benefits

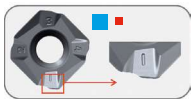
- Indexing of the insert without complete removal of the clamping screw is possible!
- Direct insert indexing saves valuable machine time.

Available in 2 dimensions

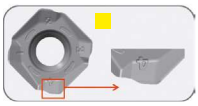


IC 12 IC 16

Which chipbreaker to use?



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



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

Available range SDMX11

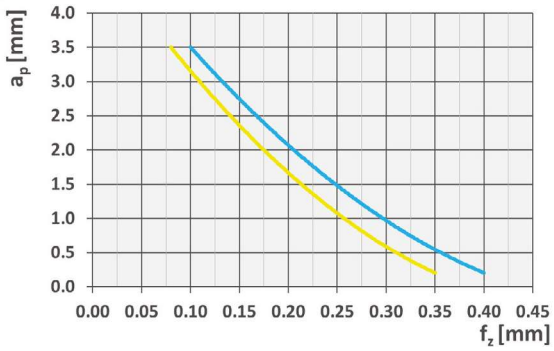
Insert	Designation	Chipbreaker	Material number	Available
	SDMX 1105AEER-HCM CTCP230	**...-HCM**	12193911	●
	SDMX 1105AEER-HCM CTPP235	**...-HCM**	12193912	●
	SDMX 1105AEER-SCM CTPM240	**...-SCM**	14652653	●
	SDMX 1105AEER-SCM CTC5235	**...-SCM**	12193916	●

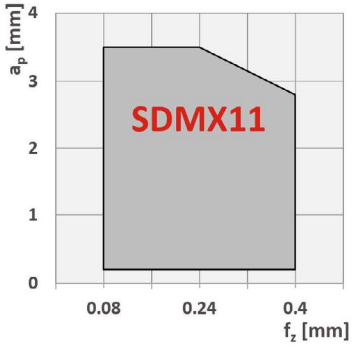
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-R12-25.R.02-A-30-86	25	2	11720305	●
	C-SSM-R12-25.R.02-A-60-116	25	2	11720307	●
	C-SSM-R12-32.R.03-A-40-100	32	3	11720308	●
	C-SSM-R12-32.R.03-A-70-130	32	3	11720310	●
	G-SSM-R12-25.R.02	25	2	12156946	●
	G-SSM-R12-35.R.03	35	3	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:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.1 – 0.4	3.5 – 0.2
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.08 – 0.35	3.5 – 0.2

Available range SDMX15

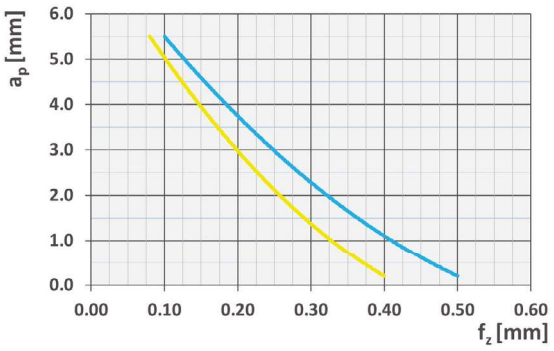
Insert	Designation	Chipbreaker	Material number	Available
	SDMX 1506AEER-HCM CTCP230	**...-HCM**	12193917	●
	SDMX 1506AEER-HCM CTPP235	**...-HCM**	12212274	●
	SDMX 1506AEER-SCM CTPM240	**...-SCM**	14652655	●
	SDMX 1506AEER-SCM CTC5235	**...-SCM**	12212268	●

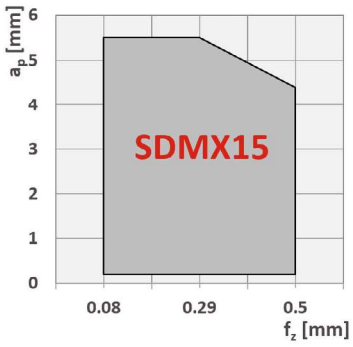
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-SSM-R16-50.R.03	50	3	11739864	●
	A-SSM-R16-52.R.04	52	4	14653992	●
	A-SSM-R16-63.R.05	63	5	11739862	●
	A-SSM-R16-66.R.05	66	5	14653995	●
	A-SSM-R16-80.R.06	80	6	11739860	●
	A-SSM-R16-100.R.07	100	7	11739857	●
	A-SSM-R16-125.R.08	125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

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.1 – 0.5	5.5 – 0.2
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.08 – 0.4	5.5 – 0.2

Overview RPMX-MF

Application

1) Face milling 

2) Angled milling 

3) Slot milling 

4) Chamfering 

5) Profile milling 

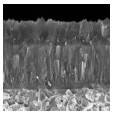
Chipbreaker

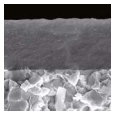
HCM: Steel – Cast iron*
SCM: Stainless Steel

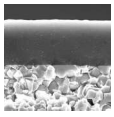
Indexing 4 / Master finish

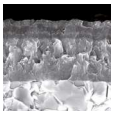
4 cutting edges Master Finish for a best finishing.

Grades

CTCP230 ■ 

CTPP235 ■ 

CTPM240 ■ 

CTC5235 ■ 

* secondary application

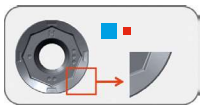
Customer benefits

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

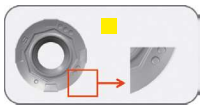
Available in 2 dimensions

IC 12 IC 16

Which chipbreaker to use?



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



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

Available range R...X12-MF

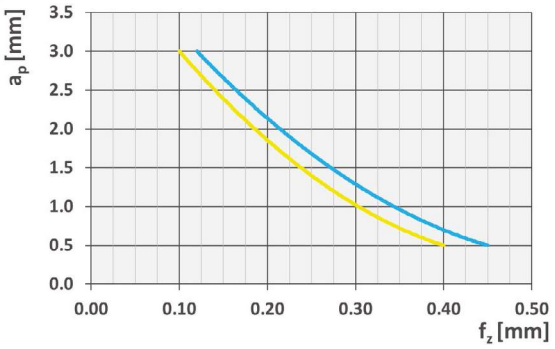
Insert	Designation	Chipbreaker	Material number	Available
	RPMX 1204MO-MFHCM CTCP230	**...-MFHCM**	11988961	●
	RPMX 1204MO-MFHCM CTPP235	**...-MFHCM**	11988960	●
	RPMX 1204MO-MFSCM CTPM240	**...-MFSCM**	11988957	●
	RPMX 1204MO-MFSCM CTC5235	**...-MFSCM**	12212285	●

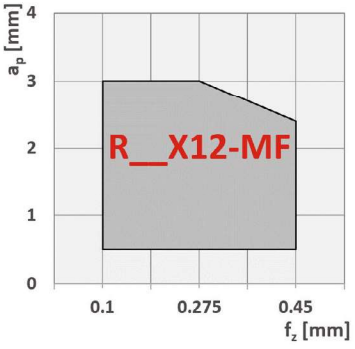
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-R12-25.R.02-A-30-86	25	2	11720305	●
	C-SSM-R12-25.R.02-A-60-116	25	2	11720307	●
	C-SSM-R12-32.R.03-A-40-100	32	3	11720308	●
	C-SSM-R12-32.R.03-A-70-130	32	3	11720310	●
	G-SSM-R12-25.R.02	25	2	12156946	●
	G-SSM-R12-35.R.03	35	3	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:





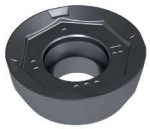
Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.12 – 0.45	3 – 0.5
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.1 – 0.4	3 – 0.5

Recommended!

ø [mm]	4 times a_p [mm]	4 times $a_{p\,max}$ [mm]
12	3.0	5.5
16	4.0	7.5

Available range R...X16-MF

Insert	Designation	Chipbreaker	Material number	Available
	RPMX 1605MO-MFHCM CTCP230	**...-MFHCM**	11988954	●
	RPMX 1605MO-MFHCM CTPP235	**...-MFHCM**	11988952	●
	RPMX 1605MO-MFSCM CTPM240	**...-MFSCM**	11988950	●
	RPMX 1605MO-MFSCM CTC5235	**...-MFSCM**	12212286	●

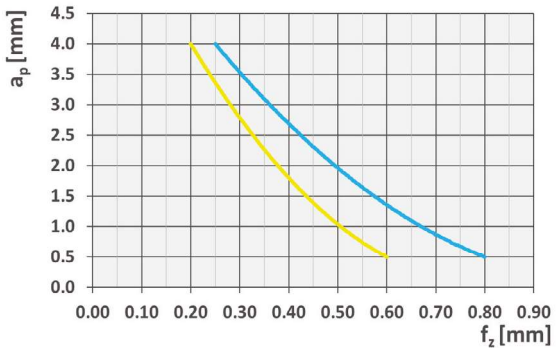
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	A-SSM-R16-50.R.03	50	3	11739864	●
	A-SSM-R16-52.R.04	52	4	14653992	●
	A-SSM-R16-63.R.05	63	5	11739862	●
	A-SSM-R16-66.R.05	66	5	14653995	●
	A-SSM-R16-80.R.06	80	6	11739860	●
	A-SSM-R16-100.R.07	100	7	11739857	●
	A-SSM-R16-125.R.08	125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

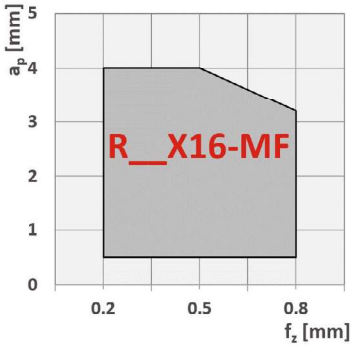
Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.5 x 13.0 – T20+	5	1345431	●
	Power screw M10.0 x 31.0 (for A-SSM-R16-50.R.03 and for A-SSM-R16-52.R.04)	20	11040298	●

● available from stock, ○ available upon request

Cutting data R...X16-MF

Starting parameters:



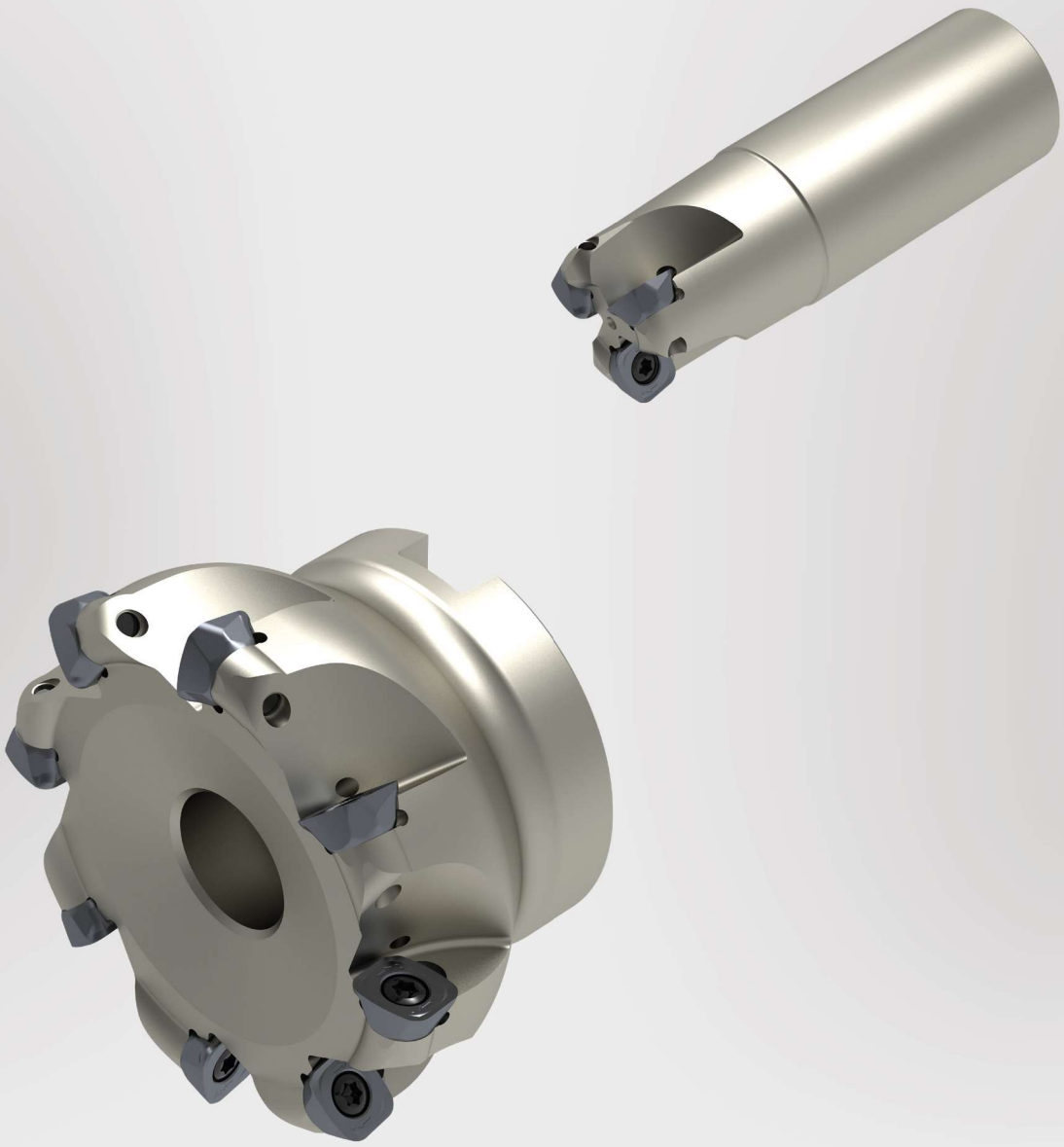


Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.25 – 0.8	4 – 0.5
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.2 – 0.6	4 – 0.5

Recommended!

ø [mm]	4 times a_p [mm]	4 times $a_{p\,max}$ [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

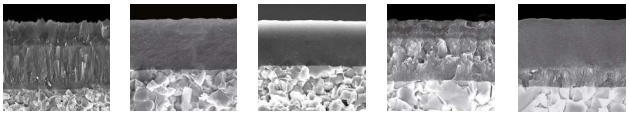
Chipbreaker

HCM: Steel – Cast iron*
SCM: Stainless Steel

Indexing 2 times

Grades

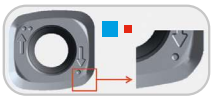
CTCP230 ■ CTPP235 ■ CTPM240 ■ CTC5235 ■ CTC5240 ■



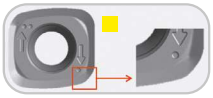
Customer benefits

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

Which chipbreaker to use?



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



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

Available range EOMT12

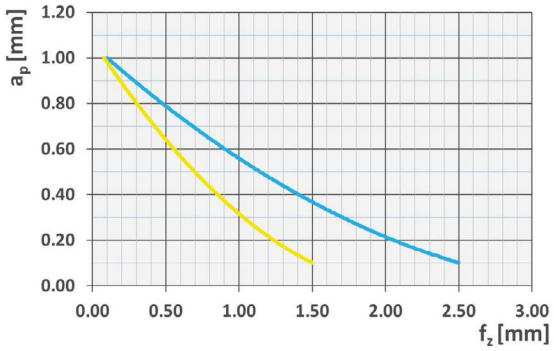
Insert	Designation	Chipbreaker	Material number	Available
	EOMT 120416-HCM CTCP230	**...-HCM**	12212261	●
	EOMT 120416-HCM CTPP235	**...-HCM**	12212263	●
	EOMT 120416-SCM CTPM240	**...-SCM**	14652658	●
	EOMT 120416-SCM CTC5235	**...-SCM**	12212295	●
	EOMT 120416-SCM CTC5240	**...-SCM**		○

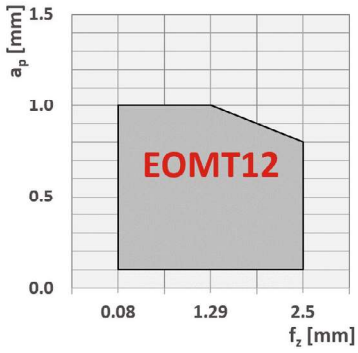
Body	Designation	ø Milling cutter [mm]	z	Material number	Available
	C-SSM-R12-25.R.02-A-30-86	25	2	11720305	●
	C-SSM-R12-25.R.02-A-60-116	25	2	11720307	●
	C-SSM-R12-32.R.03-A-40-100	32	3	11720308	●
	C-SSM-R12-32.R.03-A-70-130	32	3	11720310	●
	G-SSM-R12-25.R.02	25	2	12156946	●
	G-SSM-R12-35.R.03	35	3	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:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.1 – 2.5	1 – 0.1
M	Stainless steel	SCM	CTPM240 CTC5235	200 – 60	0.08 – 1.5	1 – 0.1


2
3
1
4
3
2
2
3
1

Overview TPKN... TPKR...

Application

1) Face milling

2) Slot milling

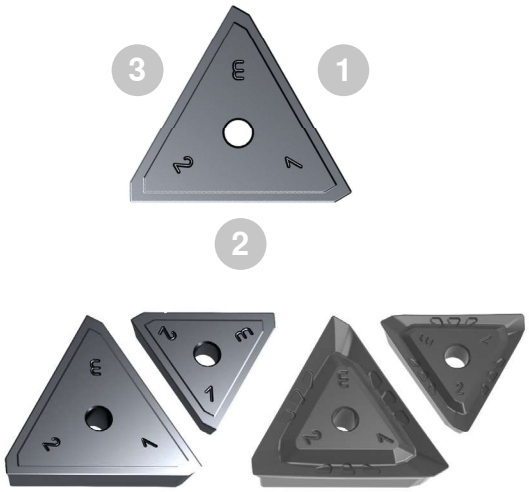
3) Peripheral milling

4) Shoulder milling

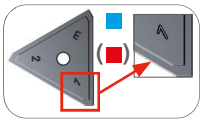
Chipbreaker

HCM: Steel – Cast iron*
SCM: Stainless Steel

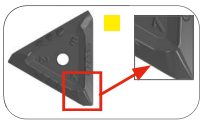
2 effective cutting edges



Which chipbreaker to use?



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

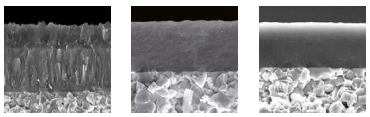


SCM
Sharp cutting edge for general stainless steel applications and for finishing in steels.

Grade

Standard grades

CTCP230 ■ CTPP235 ■ CTPM240 ■



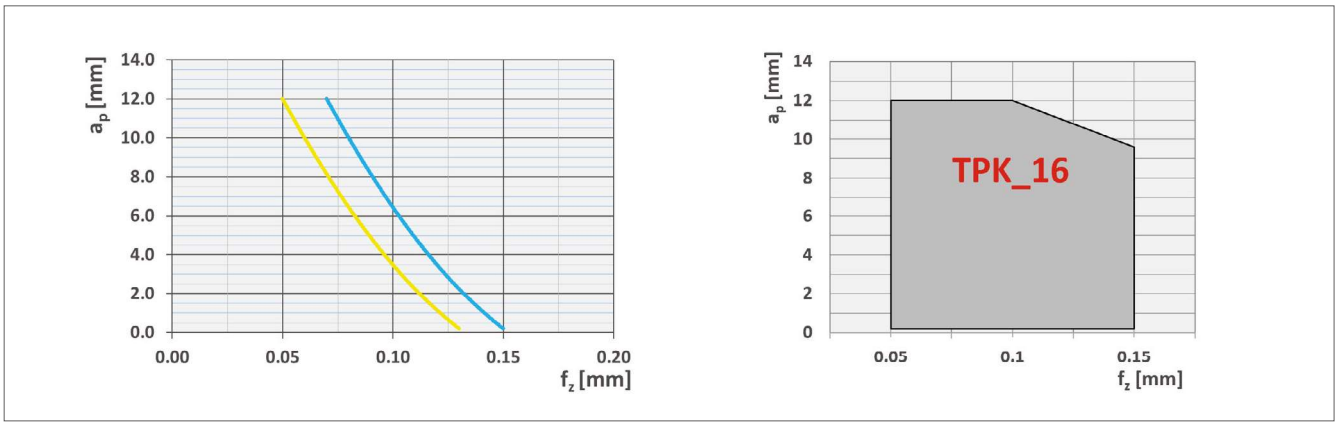
* secondary application

Available range TPKN / TPKR 16

Insert	Designation	Chipbreaker	Material number	Available
	TPKN 1603PDR-HCM CTCP230	...-HCM		○
	TPKN 1603PDR-HCM CTPP235	...-HCM		○
	TPKR 1603PDR-SCM CTPM240	...-SCM		○

Cutting data TPKN / TPKR 16

Starting parameters:



Grades and materials:

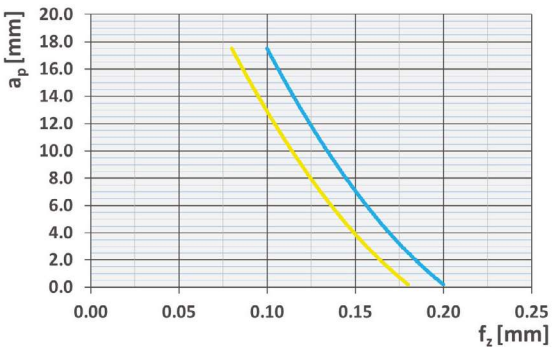
Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.7 – 0.15	12 – 0.2
M	Stainless steel	SCM	CTPM240	200 – 60	0.05 – 0.13	12 – 0.2

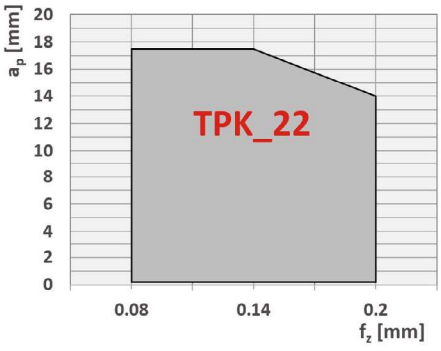
Available range TPKN / TPKR 22

Insert	Designation	Chipbreaker	Material number	Available
	TPKN 2204PDR-HCM CTCP230	…-HCM		○
	TPKN 2204PDR-HCM CTPP235	…-HCM		○
	TPKR 2204PDR-SCM CTPM240	…-SCM		○

Cutting data TPKN / TPKR 22

Starting parameters:





Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.1 – 0.2	17.5 – 0.2
M	Stainless steel	SCM	CTPM240	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...)

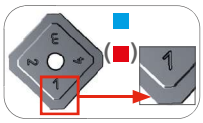
Chipbreaker

HCM: Steel – Cast iron*
SCM: Stainless Steel

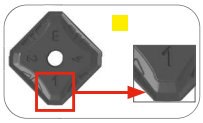
4 effective cutting edges

* secondary application

Which chipbreaker to use?



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

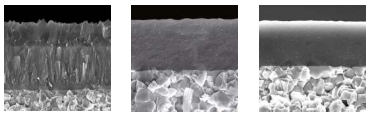


SCM
Sharp cutting edge for general stainless steel applications and for finishing in steels.

Grade

Standard grades

CTCP230 ■ CTPP235 ■ CTPM240 ■

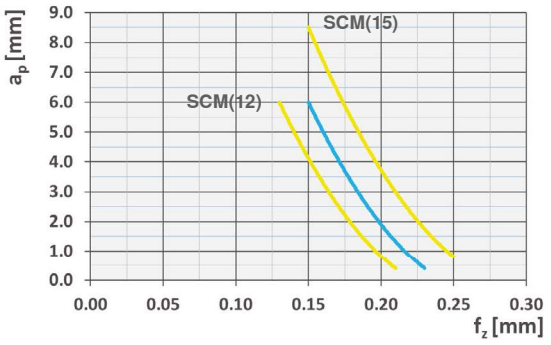


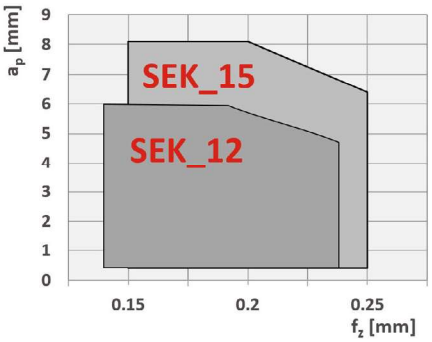
Available range SEK_12 / 15

Insert	Designation	Chipbreaker	Material number	Available
	SEKN 1203AFSN-HCM CTCP230	…-HCM		○
	SEKN 1203AFSN-HCM CTPP235	…-HCM		○
	SEKR 1203AFSN-SCM CTPM240	…-SCM		○
	SEKR 1504AFSN-SCM CTPM240	…-SCM		○

Cutting data SEK_12 / 15

Starting parameters:





Grades and materials:

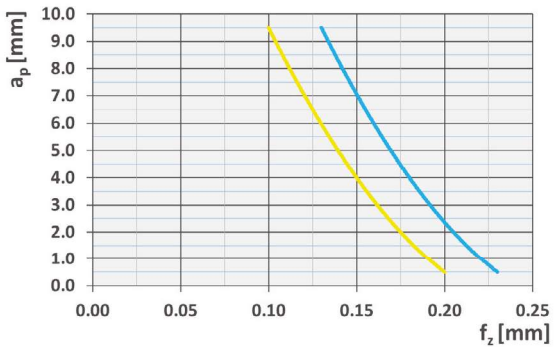
Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM (12)	CTCP230	220 – 60	0.15 – 0.23	6 – 0.4
		HCM (15)	CTPP235		0.15 – 0.28	8.5 – 0.8
M	Stainless steel	SCM (12)	CTPM240	200 – 60	0.13 – 0.21	6 – 0.4
		SCM (15)			0.15 – 0.23	8.5 – 0.8

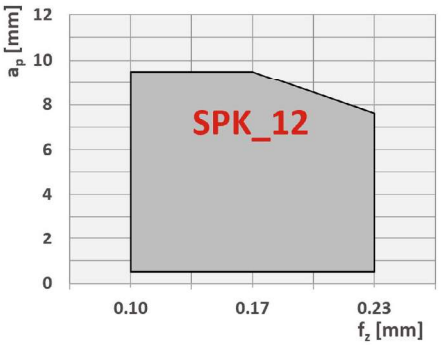
Available range SPK_12

Insert	Designation	Chipbreaker	Material number	Available
	SPKN 1203EDTR-HCM CTCP230	…-HCM		○
	SPKN 1203EDTR-HCM CTPP235	…-HCM		○
	SPKR 1203EDER-SCM CTPM240	…-SCM		○

Cutting data SPK_12

Starting parameters:





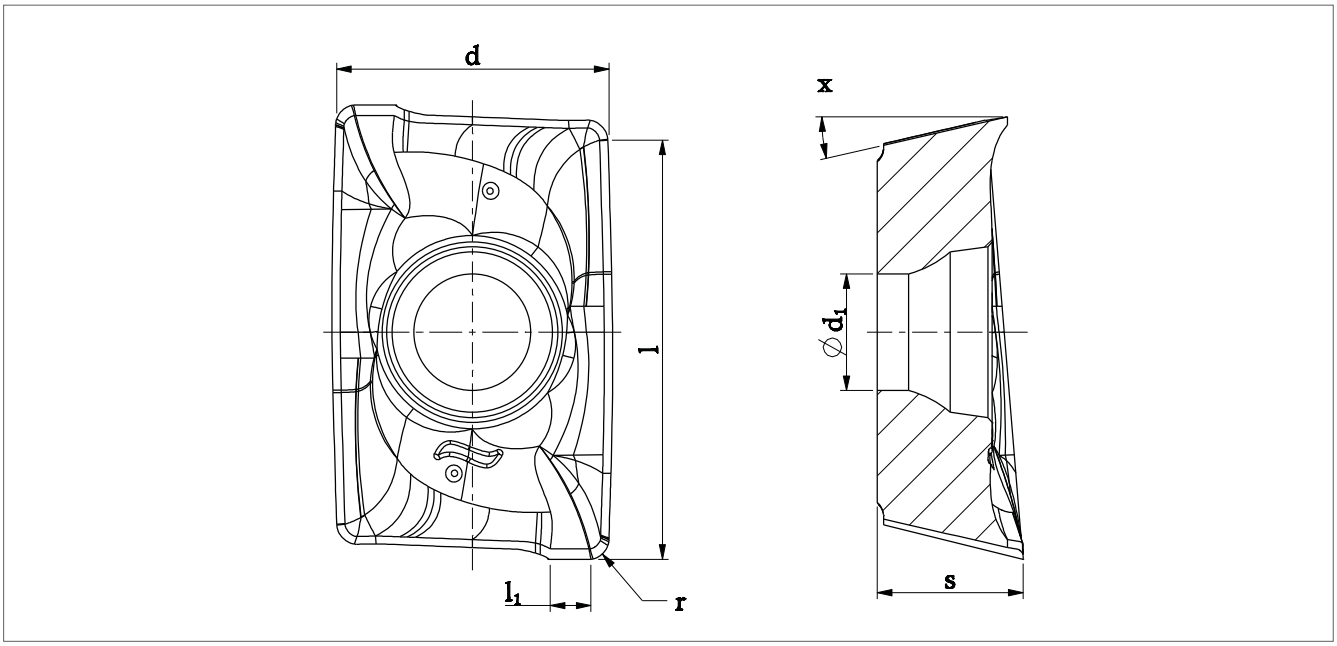
Grades and materials:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	HCM	CTCP230 CTPP235	220 – 60	0.15 – 0.23	9.5 – 0.5
M	Stainless steel	SCM	CTPM240	200 – 60	0.1 – 0.2	9.5 – 0.5

Technical Data

SSM-A / Shouldering 2 x 90°

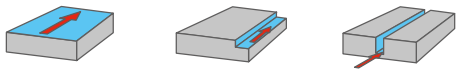
Insert (APKT / APHT 10)

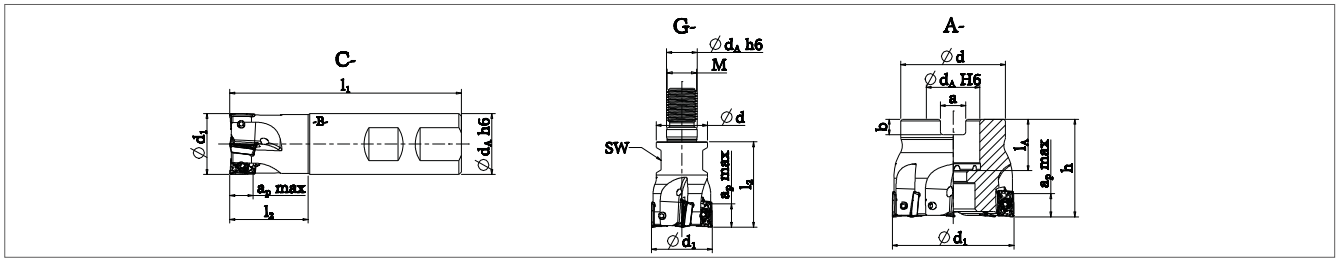


Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
APKT 1003PDER-HCM	6.75	10	3.5	1	0.5	2.8	11
APKT 1003PDER-SCM	6.75	10	3.5	1	0.5	2.8	11
APKT 1003PDER-CCM	6.75	10	3.5	1	0.5	2.8	11
APHT 100302FR-LMM	6.75	10	3	2.2	0.2	2.8	11
APHT 100304FR-LMM	6.75	10	3	2.2	0.4	2.8	11
APHT 100308FR-LMM	6.75	10	3	2.2	0.8	2.8	11
APKT 100308ER-RCM	6.7	10	3.5	0.64	0.85	2.8	11
APKT 100312ER-RCM	6.7	10	3.5	0.5	1.2	2.8	11
APKT 100316ER-RCM	6.7	11.5	3.4	0	1.6	2.8	11
APKT 100330ER-RCM	6.7	11.5	3.4	0.2	3	2.8	11

SSM-A / Shouldering 2 x 90°

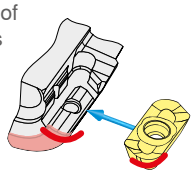
Milling body (APKT10)





Descirption	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-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



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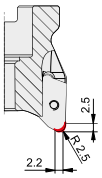

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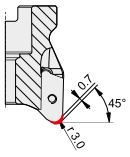
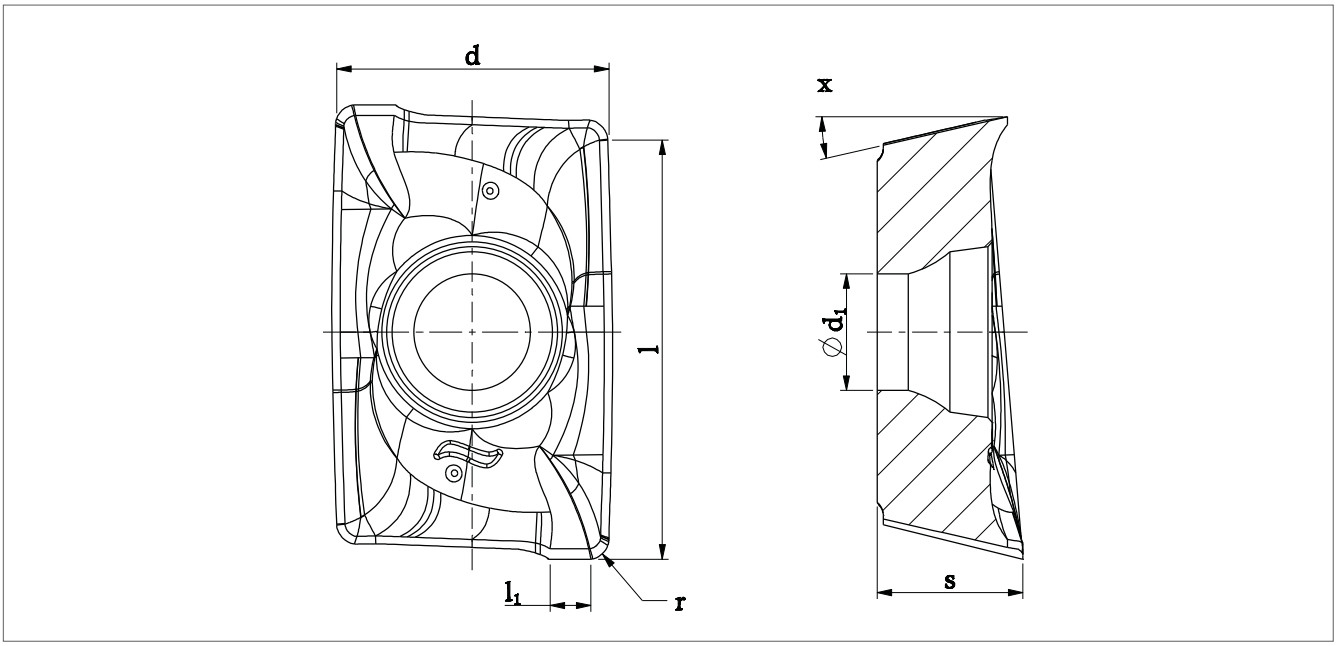


SSM-A / Shouldering 2 x 90°

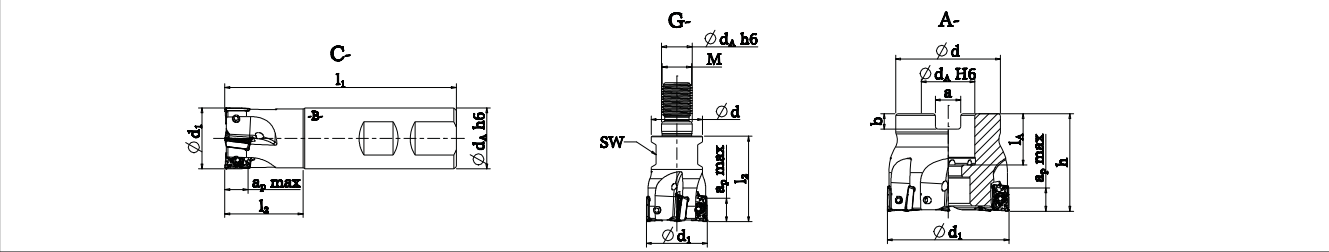
Insert (APKT / APHT 16)



Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
APKT 1604PDER-HCM	9.5	15.3	5.25	1.4	0.85	4.4	11.5
APKT 1604PDER-SCM	9.5	15.3	5.25	1.4	0.85	4.4	11.5
APKT 1604PDER-CCM	9.5	15.3	5.25	1.4	0.85	4.4	11.5
APHT 1604PDFR-LMM	9.5	15.3	4.65	2	0.85	4.4	11.5
APKT 160416ER-RCM	9.5	15.3	5.25	0.65	1.6	4.4	11.5
APKT 160424ER-RCM	9.5	15.3	5.25	0.6	2.4	4.4	11.5
APKT 160432ER-RCM	9.5	15.3	5.25	0.3	3.2	4.4	11.5
APKT 160440ER-RCM	9.5	15.3	5.25	0.3	4.0	4.4	11.5
APKT 160448ER-RCM	9.5	15.3	5.8	0.3	4.8	4.4	11.5

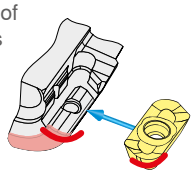
SSM-A / Shouldering 2 x 90°

Milling body (APKT16)

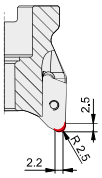


Descirption	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min-1]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
C-SSM-UA16-25.R.02-B-40-95	25	95	40	-	25	15.3	26560	2	-	-	-	-	-	-
C-SSM-UA16-32.R.03-B-40-105	32	105	40	-	32	15.3	24160	3	-	-	-	-	-	-
C-SSM-UA16-40.R.04-B-50-125	40	125	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



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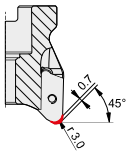
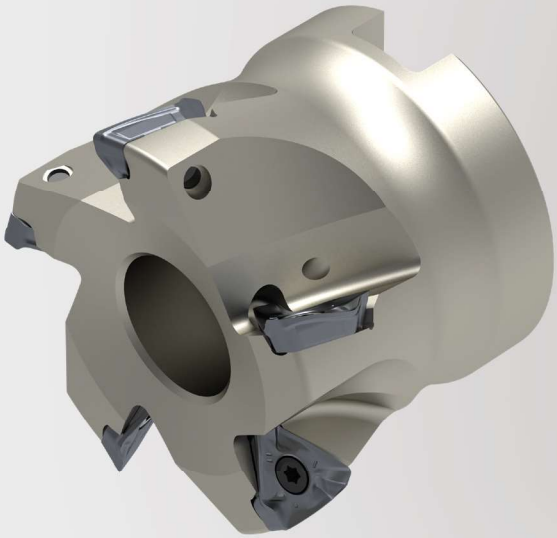
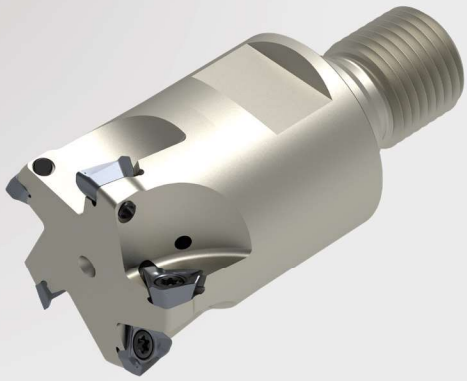
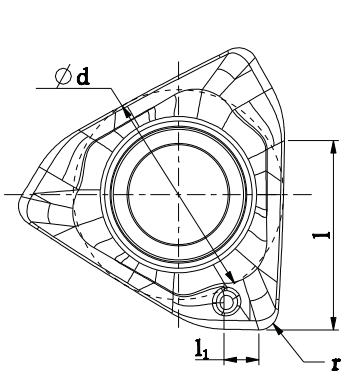


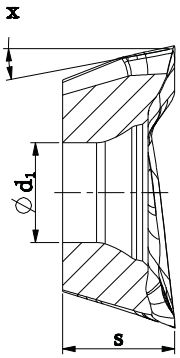




SSM-T / Shouldering 3 x 90°

Insert (TOKX)





-HCM

-SCM

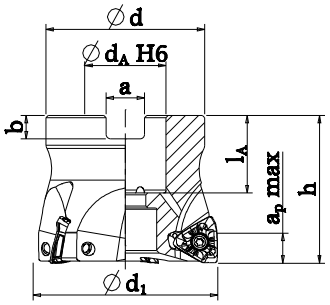
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]
TOKX 070305PDER-HCM	5.9	5.5	3.15	1	0.5	2.8
TOKX 070305PDER-SCM	5.9	5.5	3.15	1	0.5	2.8
TOKX 070308PDER-HCM	5.9	5.5	3.15	1	0.8	2.8
TOKX 070308PDER-SCM	5.9	5.5	3.15	1	0.8	2.8
TOKX 09T308PDER-HCM	9.525	9.2	3.8	1.5	1.2	3.4
TOKX 09T308PDER-SCM	9.525	9.2	3.8	1.5	0.8	3.4
TOKX 09T312PDER-HCM	9.525	9.2	3.8	1.5	1.2	3.4
TOKX 09T312PDER-SCM	9.525	9.2	3.8	1.5	1.2	3.4
TOKX 09T316PDER-HCM	9.525	9.2	3.8	1.5	1.6	3.4
TOKX 09T316PDER-SCM	9.525	9.2	3.8	1.5	1.6	3.4

SSM-T / Shouldering 3 x 90°

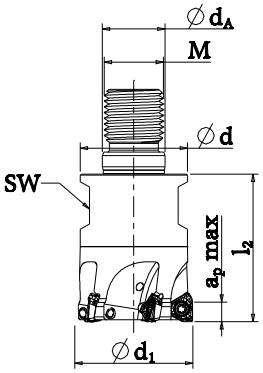
Milling body (TOKX07)

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

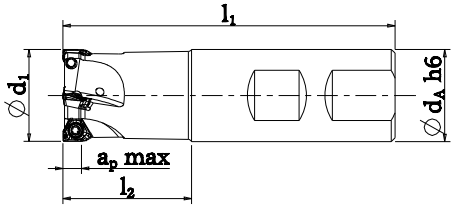
A-



G-



C-



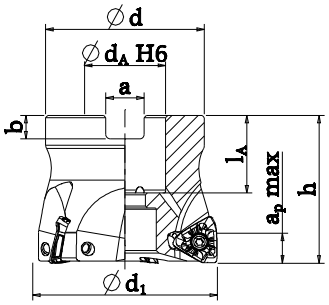
Description	Ød1 [mm]	l1 [mm]	l2 [mm]	h [mm]	Ø dA H6/h6 [mm]	ap max [mm]	n max [min-1]	z	Ø d [mm]	SW	M	lA [mm]	a [mm]	b [mm]
C-SSM-T07-20.R.03-B-25-77	20	77	25	-	20	5	22000	3	-	-	-	-	-	-
C-SSM-T07-25.R.04-B-34-90	25	90	34	-	25	5	20000	4	-	-	-	-	-	-
C-SSM-T07-32.R.05-B-40-102	32	102	40	-	32	5	19700	5	-	-	-	-	-	-
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°

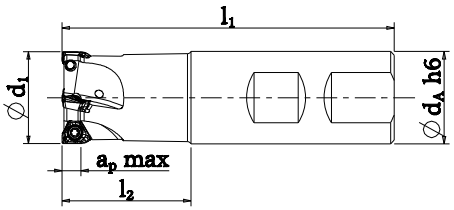
Milling body (TOKX09)

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

A-



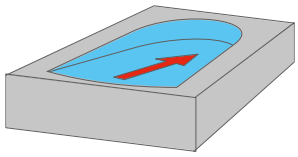
C-

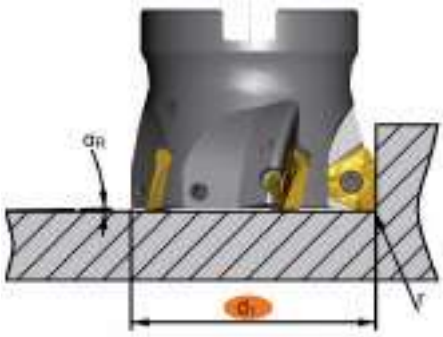


Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
C-SSM-T09-32.R.03-B-40-102	32	102	40	-	32	8	19700	3	-	-	-	-
A-SSM-T09-40.R.04	40	-	-	40	16	8	17000	4	38	20.5	8.4	5.6
A-SSM-T09-50.R.05	50	-	-	40	22	8	14800	5	43	21	10.4	6.3
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)

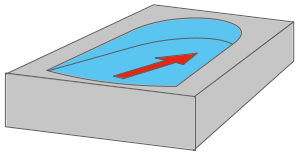


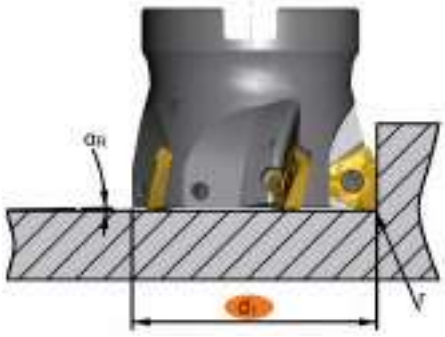


Description	d_1 [mm]	α_R [°]
C-SSM-T07-20.R.03-B-25-77	20	1.4
C-SSM-T07-25.R.04-B-34-90	25	1.2
C-SSM-T07-32.R.05-B-40-102	32	0.8
G-SSM-T07-20.R.03	20	1.4
G-SSM-T07-25.R.04	25	1.2
G-SSM-T07-32.R.05	32	0.8
A-SSM-T07-40.R.05	40	0.6
A-SSM-T07-50.R.06	50	0.5

SSM-T / Shouldering 3 x 90°

Application data (angled ramping TOKX09)

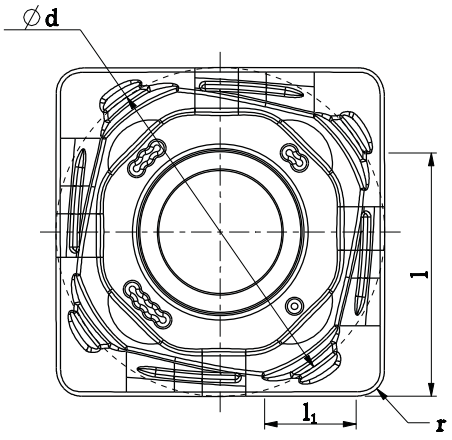




Description	d_1 [mm]	α_R [°]
C-SSM-T09-32.R.03-B-40-102	32	1.1
A-SSM-T09-40.R.04	40	0.8
A-SSM-T09-50.R.05	50	0.5
A-SSM-T09-63.R.06	63	0.5

SSM-S / Shouldering 4 x 90°

Insert (SDKT)




-HCM


-SCM


-CCM


-LMM

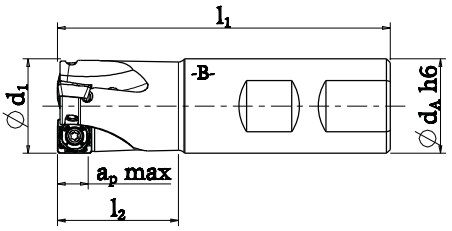
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
SDKT 09T308SR-HCM	9.9	7.4	3.97	2.5	0.8	3.4	15
SDKT 09T308SR-SCM	9.9	7.4	3.97	2.5	0.8	3.4	15
SDKT 09T308SR-CCM	9.9	7.4	3.97	2.5	0.8	3.4	15
SDHT 09T308FR-LMM	9.9	7.4	3.97	2.5	0.8	3.4	15
SDKT 120508SR-HCM	12.3	9.8	5	2.5	0.8	4.7	15
SDKT120508SR-SCM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

SSM-S / Shouldering 4 x 90°

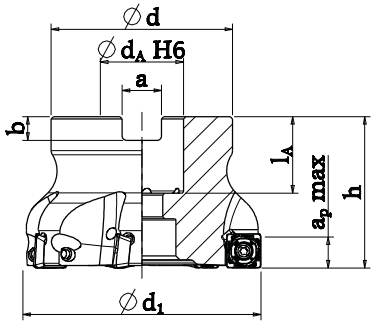
Milling body (SDKT09)

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

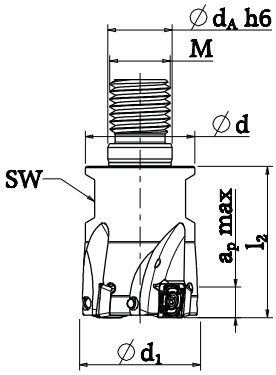
C-



A-



G-



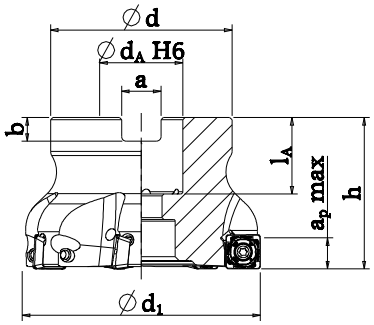
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
C-SSM-S09-25.R.03-B-32-88	25	88	32	-	25	8	23700	3	-	-	-	-	-	-
C-SSM-S09-32.R.04-B-40-100	32	100	40	-	32	8	19700	4	-	-	-	-	-	-
G-SSM-S09-25.R.03	25	-	35	-	12.5	8	33200	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°

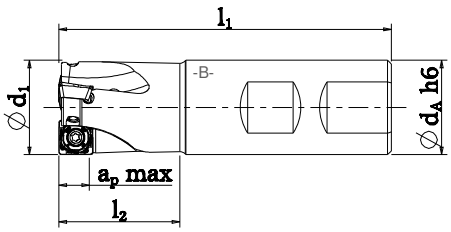
Milling body (SDKT12)

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

A-



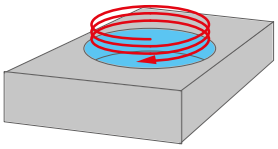
C-

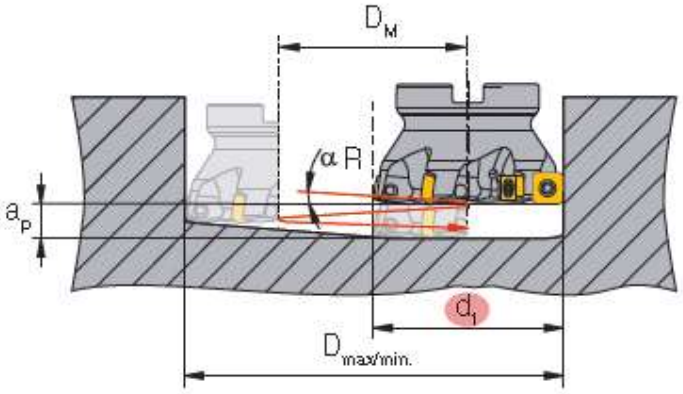


Description	Ød1 [mm]	l1 [mm]	l2 [mm]	h [mm]	Ø dA H6/h6 [mm]	ap max [mm]	nmax [min-1]	z	Ø d [mm]	lA [mm]	a [mm]	b [mm]
C-SSM-S12-32.R.03-B-40-100	32	100	40	-	32	10	19700	3	-	-	-	-
A-SSM-S12-40.R.04	40	-	-	40	16	10	17000	4	38	20	8.4	5.6
A-SSM-S12-50.R.05	50	-	-	40	22	10	14800	5	43	20	10.4	6.3
A-SSM-S12-63.R.06	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)



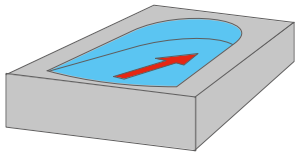


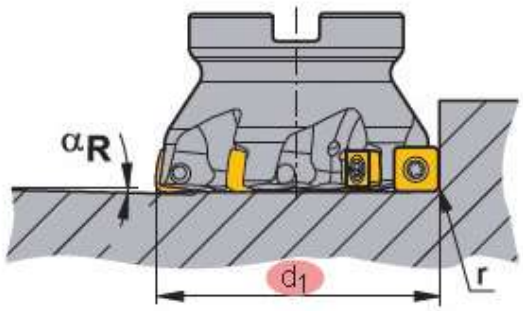
D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
C-SSM-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)

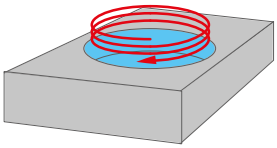


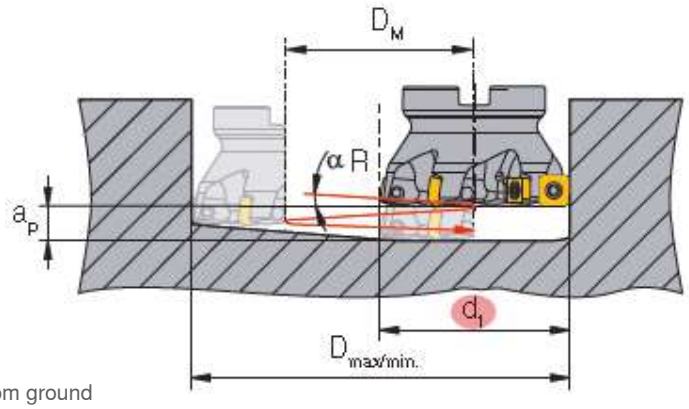


Description	d_1 [mm]	α_R [°]
C-SSM-S09-25.R.03-B-32-88	25	4.4
C-SSM-S09-32.R.04-B-40-100	32	2.2
G-SSM-S09-25.R.03	25	4.4
G-SSM-S09-32.R.04	32	2.2
A-SSM-S09-40.R.05	40	0.75
A-SSM-S09-50.R.06	50	0.5
A-SSM-S09-63.R.07	63	0.35
A-SSM-S09-80.R.09	80	0.25

SSM-S / Shouldering 4 x 90°

Application data (helical plunge milling SDKT12)



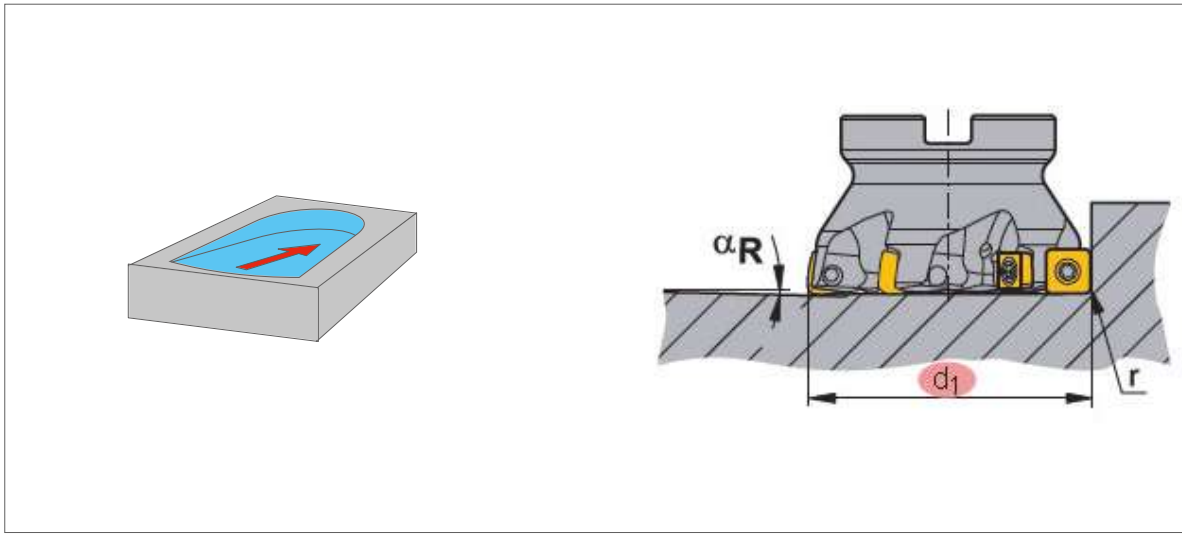


D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

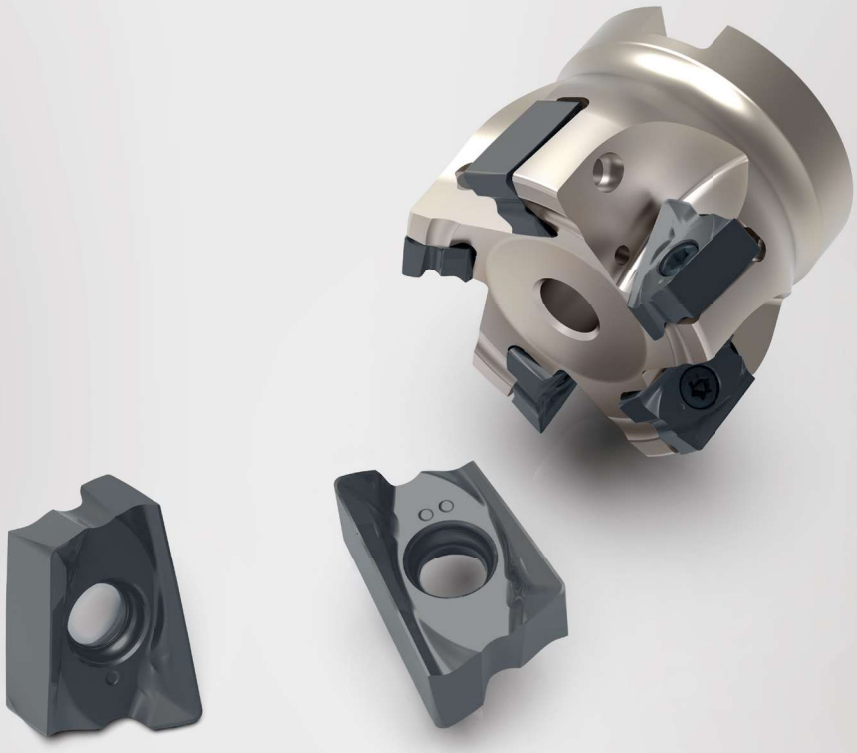
Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
C-SSM-S12-32.R.03-B-40-100	32	62	41	2.0
A-SSM-S12-40.R.04	40	78	57	2.0
A-SSM-S12-50.R.05	50	98	77	1.2
A-SSM-S12-63.R.06	63	124	103	0.7
A-SSM-S12-80.R.07	80	158	137	0.6

SSM-S / Shouldering 4 x 90°

Application data (angled ramping SDKT12)

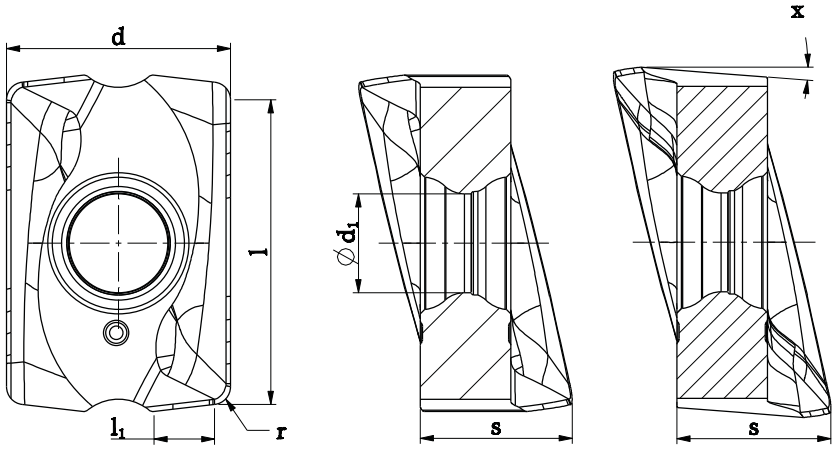


Description	d_1 [mm]	α_R [°]
C-SSM-S12-32.R.03-B-40-100	32	2.0
A-SSM-S12-40.R.04	40	2.0
A-SSM-S12-50.R.05	50	1.2
A-SSM-S12-63.R.06	63	0.7
A-SSM-S12-80.R.07	80	0.6



DSM-L / Shouldering 4 x 90°

Insert (LNKU12 / LOKU12)



LNKU12 LOKU12

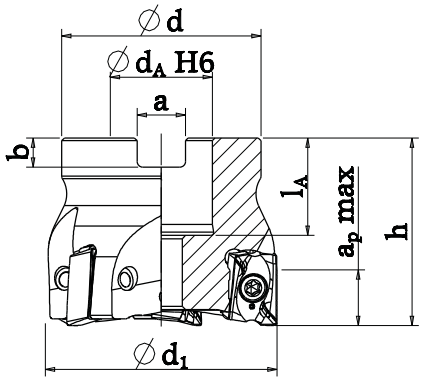
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
LNKU 120608ER-HCM	10	13.4	6.78	2.7	0.8	4.4	0
LNKU 120608ER-SCM	10	13.4	6.78	2.7	0.8	4.4	0
LNKU 120608ER-CCM	10	13.4	6.78	2.7	0.8	4.4	0
LOKU 120608ER-SCM	10	13.4	6.87	2.7	0.8	4.4	5
LOKU 120608ER-XCM	10	13.4	6.87	2.7	0.8	4.4	5

DSM-L / Shouldering 4 x 90°

Milling body (LNKU12 / LOKU12)

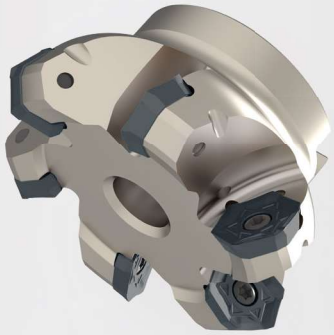
A-

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



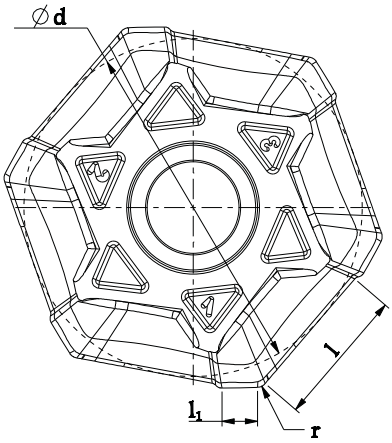
Description	Ød1 [mm]	h [mm]	Ø dA H6/h6 [mm]	ap max [mm]	nmax [min-1]	z	Ø d [mm]	lA [mm]	a [mm]	b [mm]
A-DSM-LO/LN12-40.R.04	40	40 / 40.44*	16	12	17000	4	38	20	8.4	5.6
A-DSM-LO/LN12-50.R.05	50	40 / 40.44*	22	12	14800	5	43	20	10.4	6.3
A-DSM-LO/LN12-63.R.06	63	40 / 40.44*	22	12	12850	6	48	21	10.4	6.3
A-DSM-LO/LN12-80.R.07	80	50 / 50.44*	27	12	11250	7	58	22	12.4	7

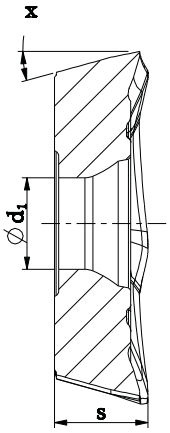
*with LOKU insert

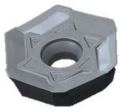


SSM-H / Face milling 6 x 45°

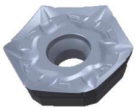
Insert (HPKT, HOKT, HPCT and HOCT)





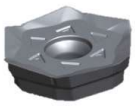


HPKT-HCM



HOKT-HCM

HPKT-SCM



HOCT-SCM

HPCT-LMM

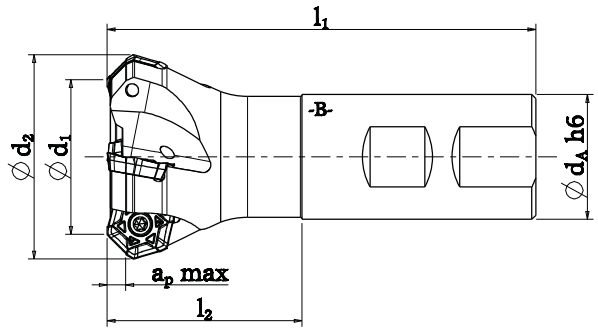
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
HPKT 0604AZER-HCM	16.3	6.5	4.5	1.7	0.5	4.4	11
HPKT 0604AZER-SCM	16.3	6.5	4.5	1.7	0.5	4.4	11
HPCT 0604AZFR-LMM	16.3	6.5	4.5	1.7	0.4	4.4	11
HOKT 0604AZER-HCM	16.3	6.5	4.5	1.7	0.5	4.4	10
HOCT 0604AZER-SCM	16.3	6.5	4.5	1.7	0.4	4.4	10

SSM-H / Face milling 6 x 45°

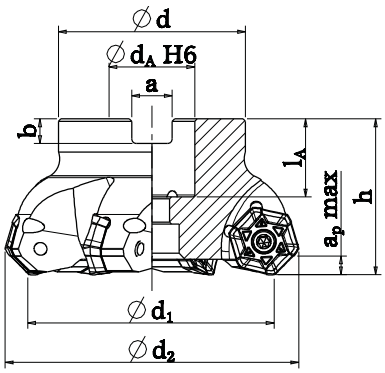
Milling body (HPKT. HOKT, HPCT and HOCT)

- Face milling
- Slot milling
- Chamfering

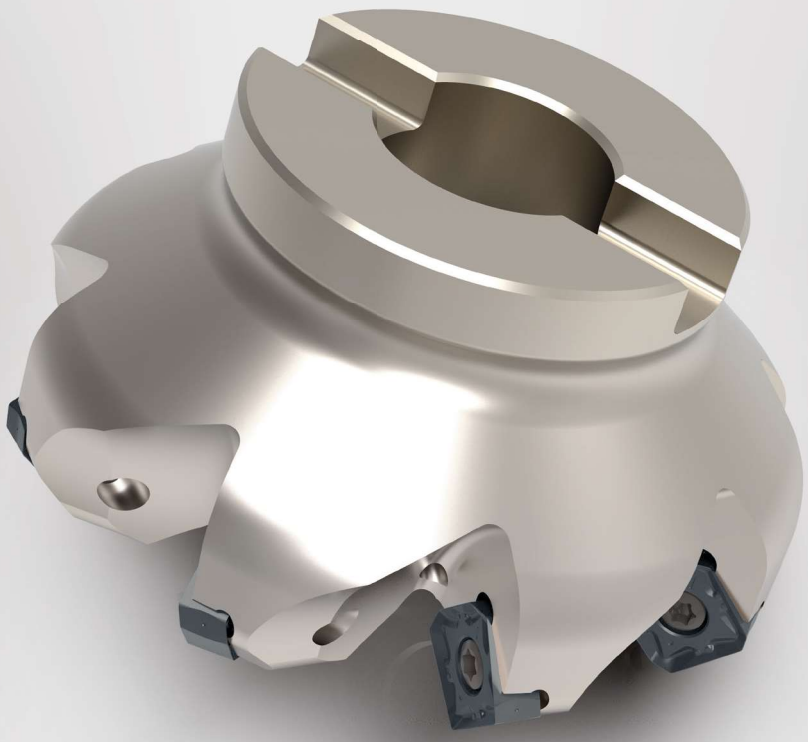
C-



A-

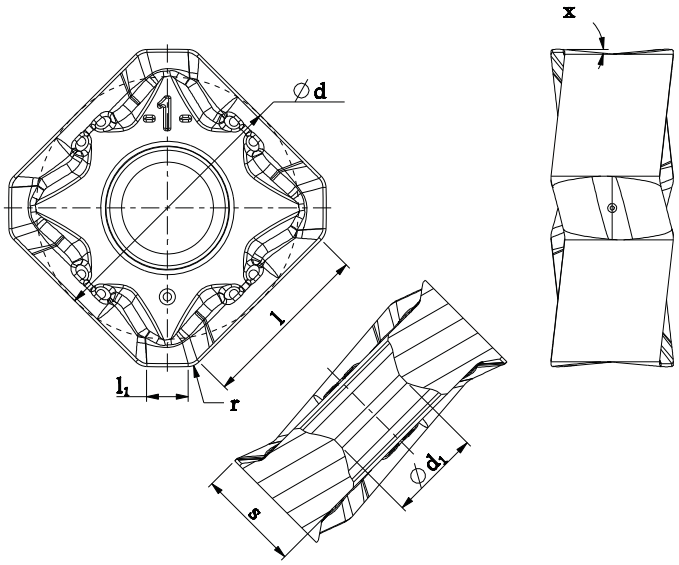


Description	Ø d_1 [mm]	Ø d_2 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ød [mm]	l_A [mm]	a [mm]	b [mm]
C-SSM-H06-40.R.04-B32-50-110	40	52.2	110	50	-	32	4.5	17000	4	-	-	-	-
A-SSM-H06-40.R.04	40	52.2	-	-	40	16	4.5	19900	4	38	19	8.4	5.6
A-SSM-H06-50.R.05	50	62.2	-	-	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)



-HCM

-SCM

-CCM

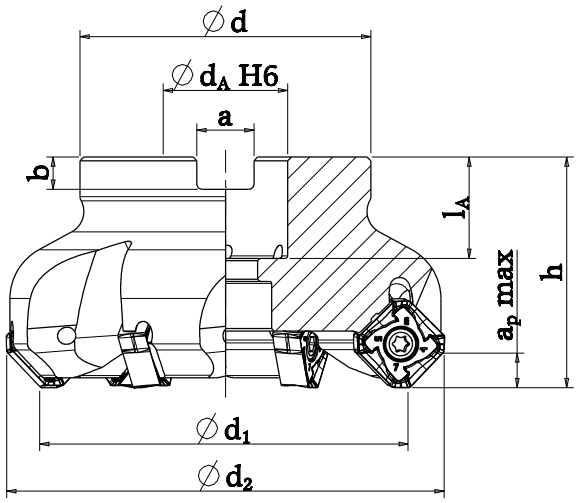
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
SOKU 1205AZER-HCM	13	8.5	5.1	2	0.8	4.55	6
SOKU 1205AZER-SCM	13	8.5	5.1	2	0.8	4.55	6
SOKU 1205AZER-CCM	13	8.5	5.1	2	0.8	4.55	6
SOKU 1505AZER-HCM	15.875	10.5	6	2.7	1	5.74	6
SOKU 1505AZER-SCM	15.875	10.5	6	2.7	1	5.74	6
SOKU 1505AZER-CCM	15.875	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-



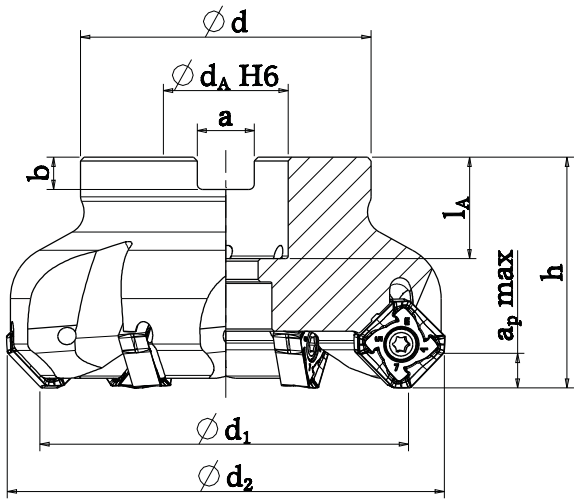
Description	Ø d_1 [mm]	Ø d_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
A-DSM-S12-40.R.04	40	52.4	45	16	6	19900	4	38	19	8.4	5.6
A-DSM-S12-50.R.05	50	62.4	45	22	6	15900	5	43	20	10.4	6.3
A-DSM-S12-63.R.06	63	75.4	45	22	6	12600	6	48	20	10.4	6.3
A-DSM-S12-80.R.08	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°

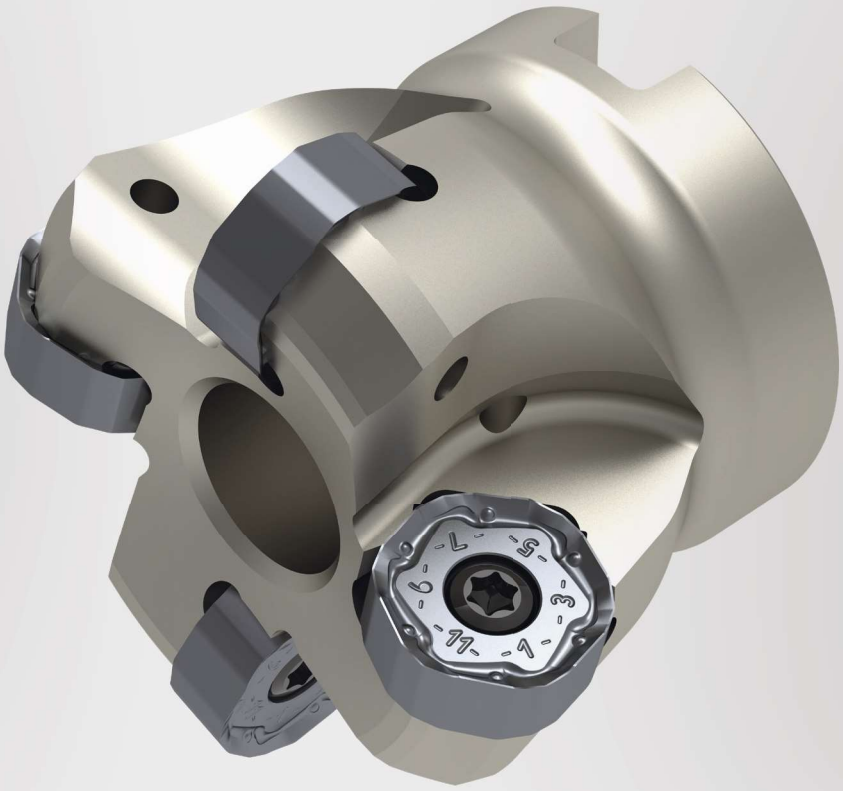
Milling body (SOKU15)

- Face milling
- Slot milling
- Chamfering

A-

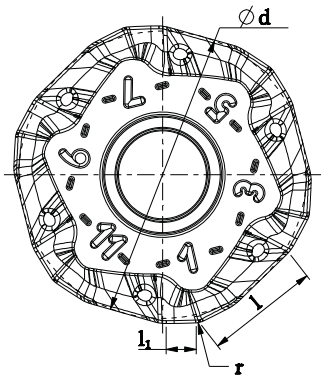


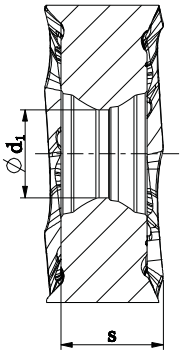
Description	Ø d_1 [mm]	Ø d_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
A-DSM-S15-40.R.04	40	55	45	16	6.5	15900	4	38	19	8.4	5.6
A-DSM-S15-50.R.04	50	65	45	22	6.5	12700	4	43	20	10.4	6.3
A-DSM-S15-63.R.05	63	78	45	22	6.5	10100	5	48	20	10.4	6.3
A-DSM-S15-80.R.06	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



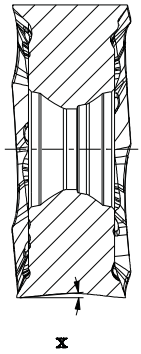
DSM-H / Face milling 12 x 45°

Insert (HNKU / HOKU)





HNKU08



HOKU08

-HCM

-SCM

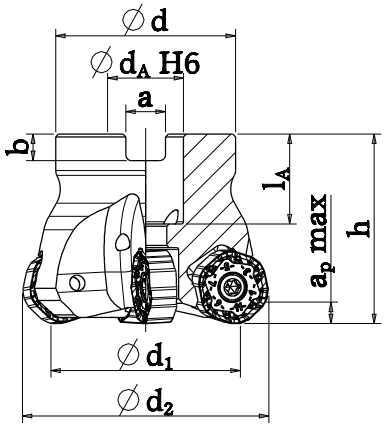
Description	d [mm]	l [mm]	s [mm]	r [mm]	l_1 [mm]	d_1 [mm]	x [°]
HNKU 0806AZER-HCM	14.7	7.5	5.19	1	1.5	4.5	-
HNKU 0806AZER-SCM	14.7	7.5	5.19	1	1.5	4.5	-
HOKU 0806AZER-HCM	14.7	7.5	5.23	1	1.5	4.5	4.5
HOKU 0806AZER-SCM	14.7	7.5	5.23	1	1.5	4.5	4.5

DSM-H / Face milling 12 x 45°

Milling body (HNKU / HOKU)

A-

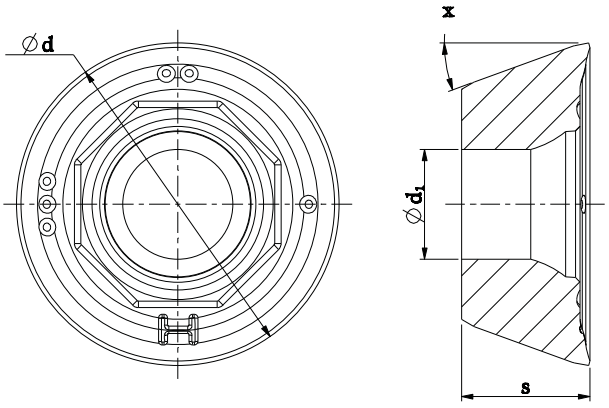
- Face milling
- Slot milling
- Chamfering



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-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)



-HCM

-SCM

-XCM

-MOSN

-LMM

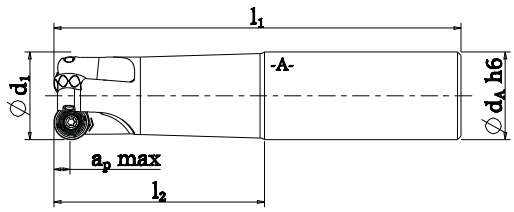
Description	d [mm]	s [mm]	d_1 [mm]	x [°]
RPMX 10T3MO-HCM	10	3.97	3.4	11
RPMX 10T3MO-SCM	10	3.97	3.4	11
RDHX 10T3MO-LMM	10	3.97	3.4	15
RPHX 10T3MO-XCM	10	3.97	3.4	11
RDHW 10T3MOSN	10	3.97	3.4	15
RPMX 1204MO-HCM	12	4.76	4.4	11
RPMX 1204MO-SCM	12	4.76	4.4	11
RDHX 1204MO-LMM	12	4.76	4.4	15
RPHX 1204MO-XCM	12	4.76	4.4	11
RDHW 1204MOSN	12	4.76	4.4	15
RPMX 1605MO-HCM	16	5.56	5.5	11
RPMX 1605MO-SCM	16	5.56	5.5	11
RDHX 1605MO-LMM	16	5.56	5.5	15
RPHX 1605MO-XCM	16	5.56	5.5	11
RDHW 1605MOSN	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

C-



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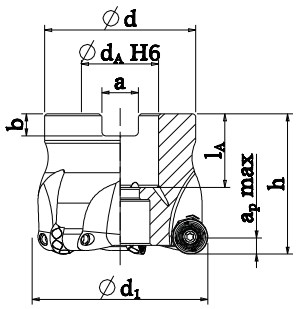
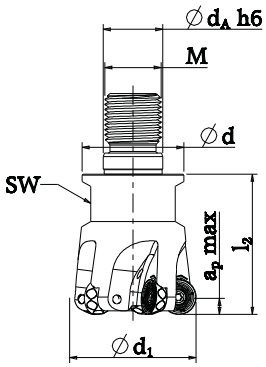


G-



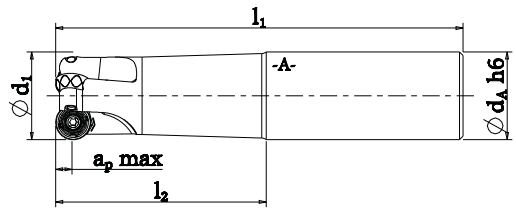
Description	Ød1 [mm]	l1 [mm]	l2 [mm]	h [mm]	Ø dA H6/h6 [mm]	ap max [mm]	n max [min-1]	z	Ø d [mm]	SW	M	lA [mm]	a [mm]	b [mm]
C-SSM-R10-20.R.02-A-50-102	20	102	50	-	20	5	31800	2	-	-	-	-	-	-
C-SSM-R10-20.R.02-A-50-165	20	165	50	-	20	5	22260	2	-	-	-	-	-	-
C-SSM-R10-25.R.03-A-60-116	25	116	60	-	25	5	20000	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

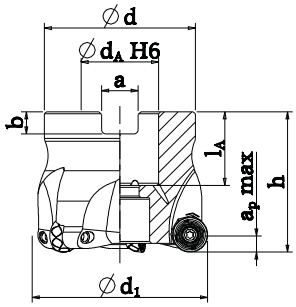
Milling body (RP/RD12)

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

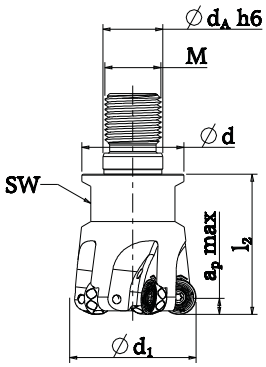
C-



A-



G-



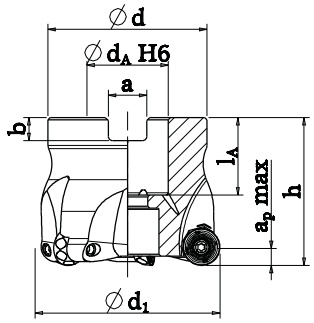
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
C-SSM-R12-25.R.02-A-30-86	25	86	30	-	25	6	25000	2	-	-	-	-
C-SSM-R12-25.R.02-A-60-116	25	116	60	-	25	6	18000	2	-	-	-	-
C-SSM-R12-32.R.03-A-40-100	32	100	40	-	32	6	19000	3	-	-	-	-
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

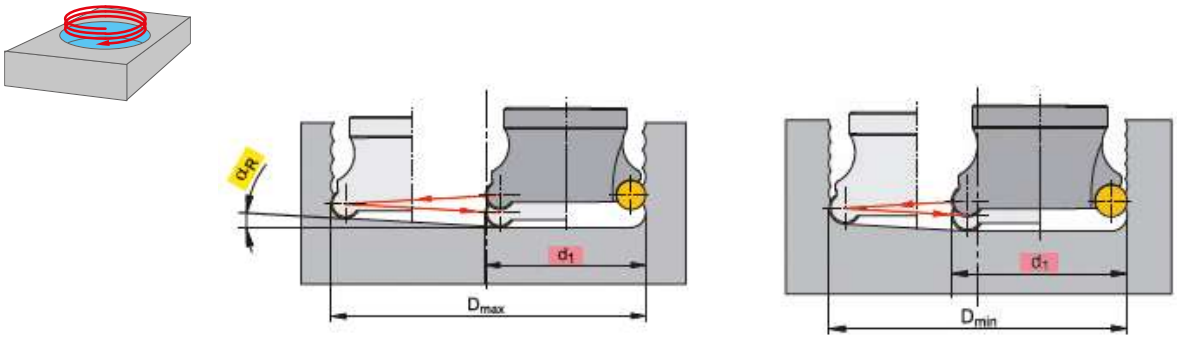
A-



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)

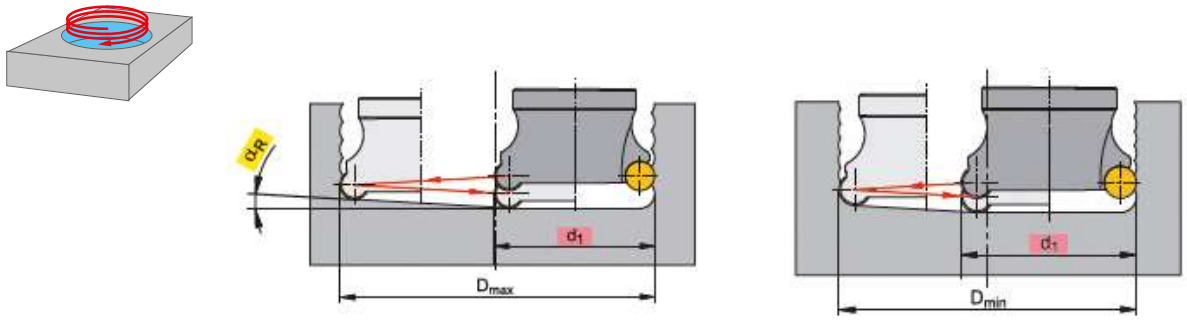


D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

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)

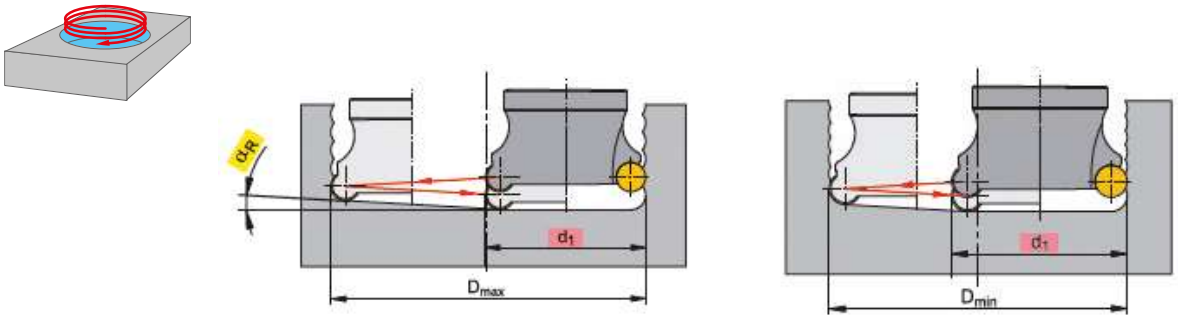


D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
C-SSM-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)

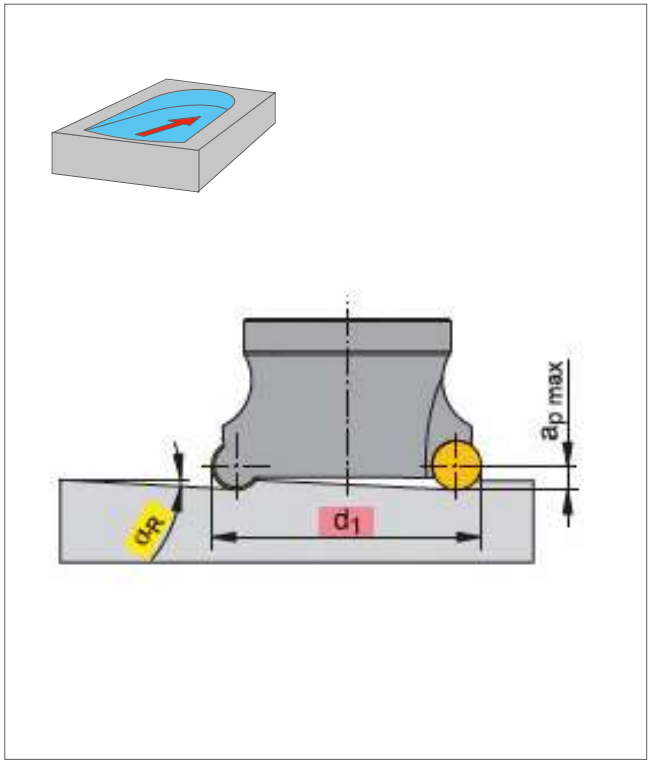


D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
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

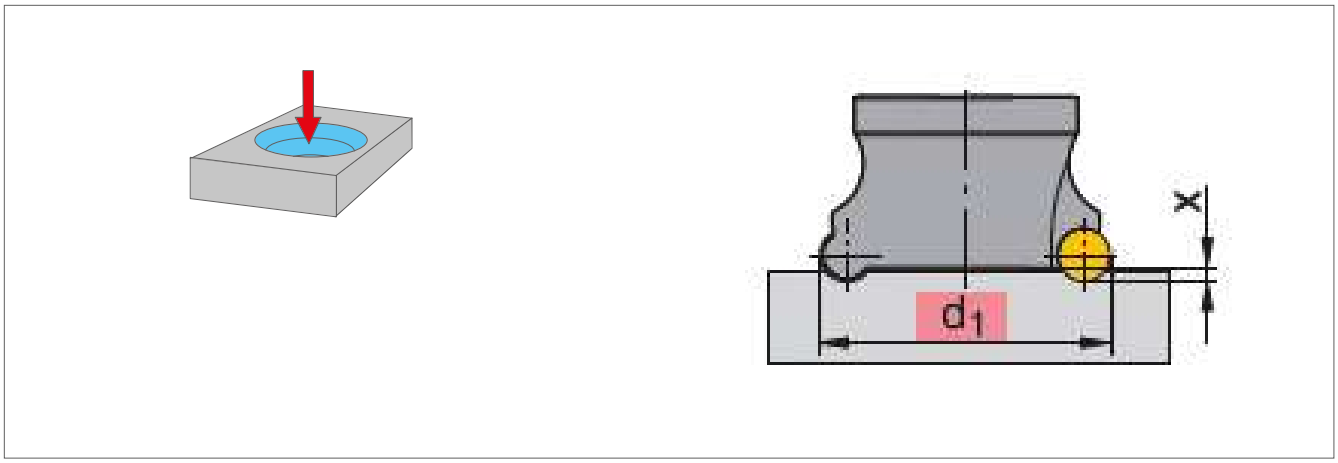
Application data (angled ramping)



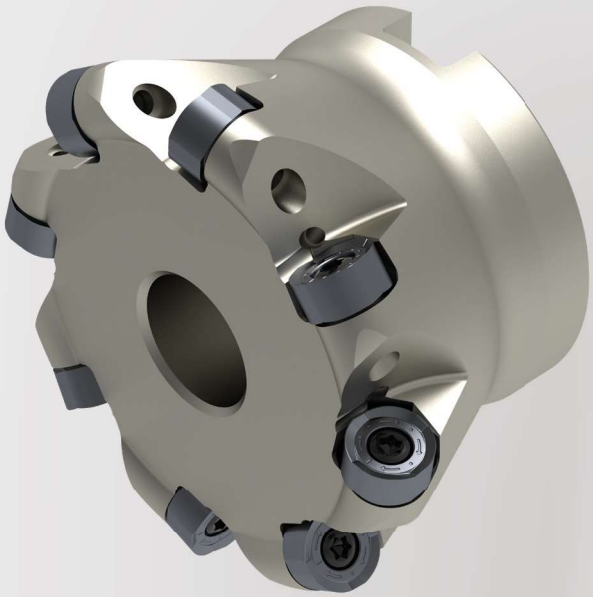
Description	d_1 [mm]	α_R [°]
C-SSM-R10-20.R.02-A-50-102	20	1.3
C-SSM-R10-20.R.02-A-50-165	20	1.3
C-SSM-R10-25.R.03-A-60-116	25	2.0
C-SSM-R10-25.R.03-A-60-165	25	2.0
C-SSM-R10-32.R.04-A-70-130	32	3.0
C-SSM-R10-32.R.04-A-70-165	32	3.0
G-SSM-R10-20.R.02	20	1.3
G-SSM-R10-25.R.03	25	2.0
G-SSM-R10-32.R.04	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

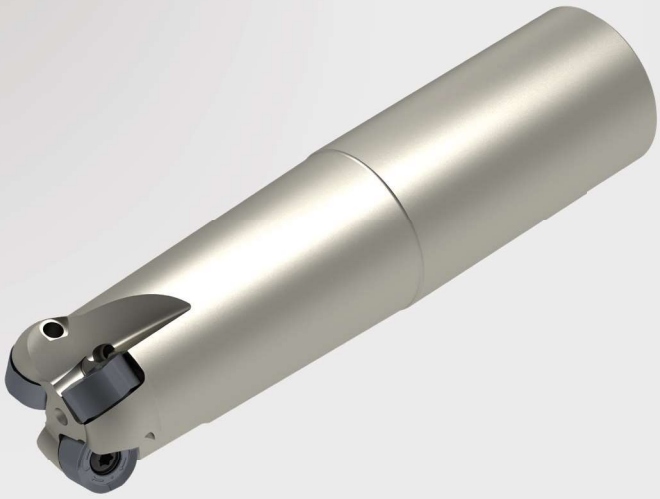
SSM-R / Form milling

Application data (axial plunging)



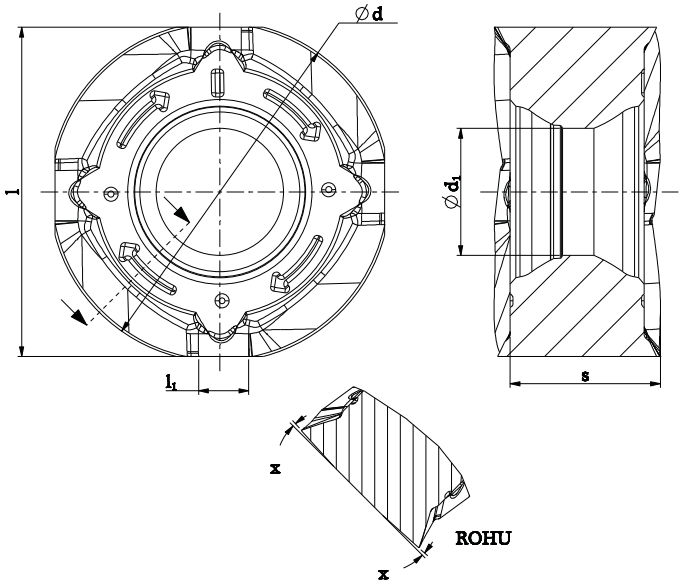
Ø [mm]	d_1 [mm]	X_{max} [mm]
10	20	0.2
	25	0.4
	32 – 35	0.8
	40 – 50	1.5
12	25	1.0
	32 – 35	1.1
	40 – 50	1.2
	50 – 100	1.5
16	50 – 52	1.1
	63 – 125	1.0





DSM-R / Form milling

Insert (RNKU and ROHU)



-HCM

-SCM

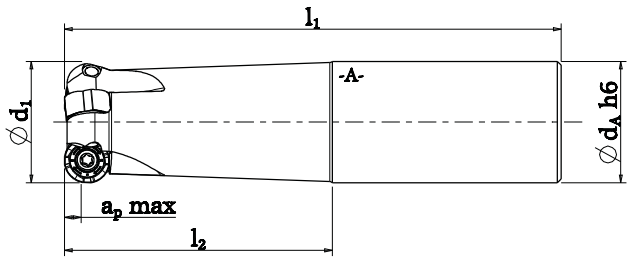
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	d_1 [mm]	x [°]
RNKU 1204MOER-HCM	12	-	5.9	2.3	4.5	0
ROHU 1204MOER-SCM	12	-	5.9	2.3	4.5	3
RNKU 1605MOER-HCM	16	-	6.7	2.7	5.8	0
ROHU 1605MOER-SCM	16	-	6.7	2.7	5.8	3

DSM-R / Form milling

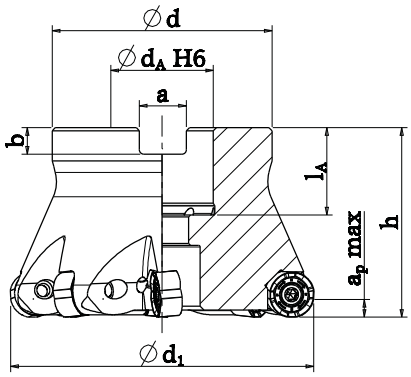
Milling body (RNKU12 and ROHU12)

- Face milling
- Slot milling

C-



A-



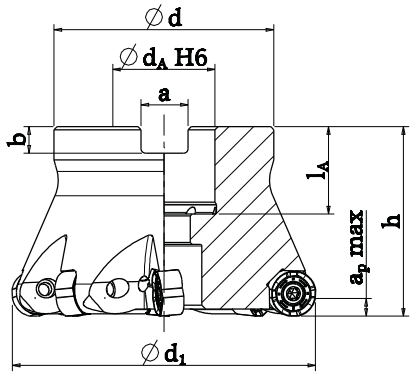
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
C-DSM-R12-32.R.03-A-70-131	32	131	70	-	32	4.5	19000	3	-	-	-	-
C-DSM-R12-32.R.03-A-70-165	32	165	70	-	32	4.5	17000	3	-	-	-	-
A-DSM-R12-40.R.04	40	-	-	40	16	4.5	15900	4	38	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

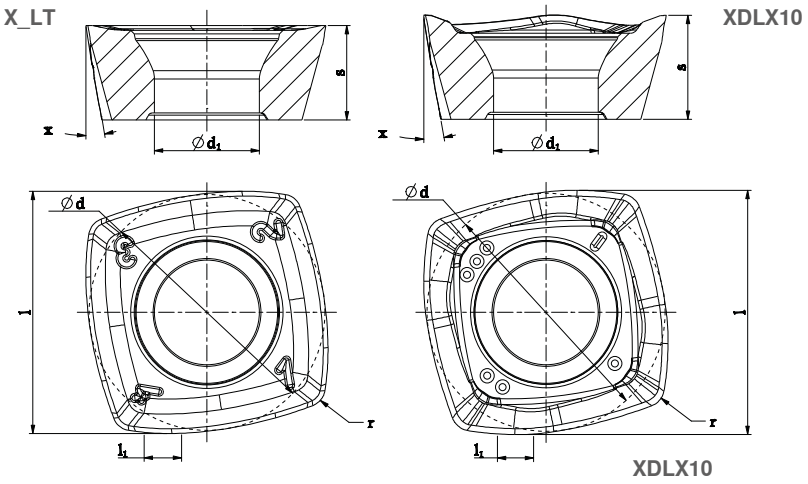
A-



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)



-HCM -SCM -HCM -SCM

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

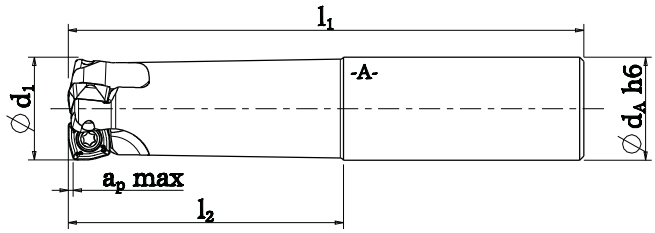
Description	d [mm]	s [mm]	d_1 [mm]	x [°]
XDLX 10T308SR-HCM	9.9	4.38	4.4	15
XDLX 10T308SR-SCM	9.9	4.38	4.4	15
XOLT 130410SR-HCM	13.1	4.76	5.5	9
XOLT 130410ER-SCM	13.1	4.76	5.5	9

SSM-HFC / High feed cutting

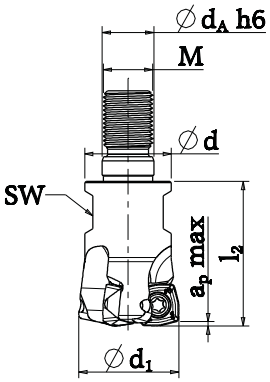
Milling body (XPLT07)

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

C-



G-



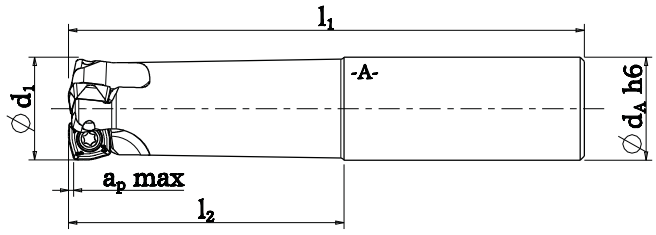
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M
C-SSM-HFC07-16.R.02-A-50-200	16	200	50	16	0.8	4600	2	–	–	–
C-SSM-HFC07-20.R.03-A-50-200	20	200	50	20	0.8	4200	3	–	–	–
C-SSM-HFC07-25.R.04-A-50-200	25	200	50	25	0.8	3900	4	–	–	–
G-SSM-HFC07-16.R.02	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

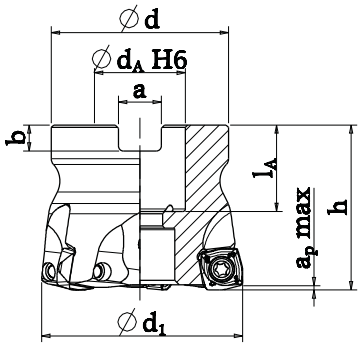
Milling body (XDLT10 and XDLX10)

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

C-



A-



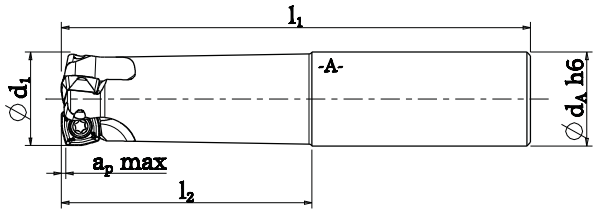
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
C-SSM-HFC10-25.R.03-A-50-125	25	125	50	-	25	1	15600	3	-	-	-	-
C-SSM-HFC10-25.R.03-A-50-225	25	225	50	-	25	1	9000	3	-	-	-	-
A-SSM-HFC10-40.R.04	40	-	-	40	16	1	26400	4	38	20	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

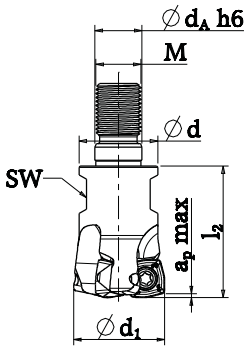
Milling body (XOLT13)

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

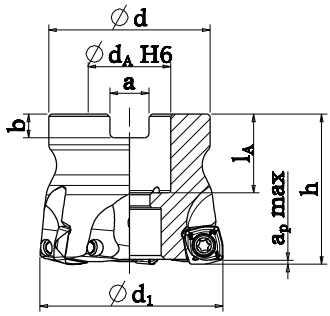
C-



G-



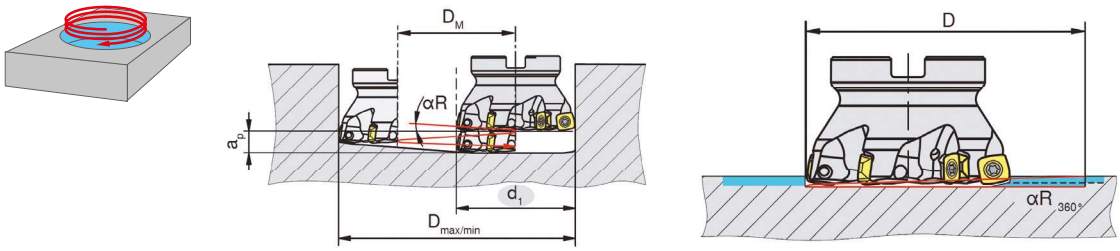
A-



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)

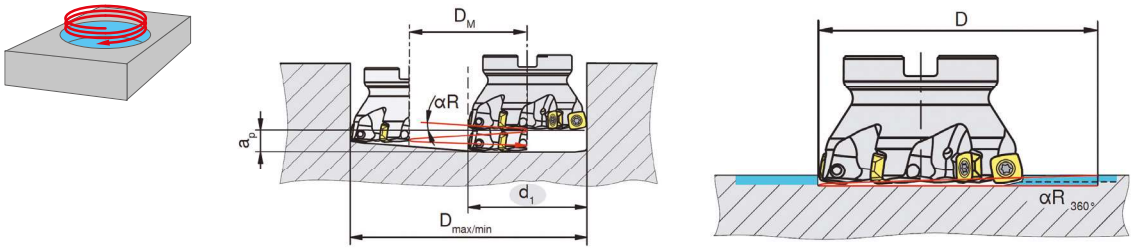


D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

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)

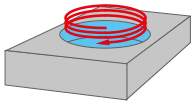


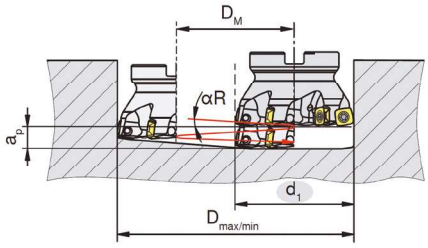
D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

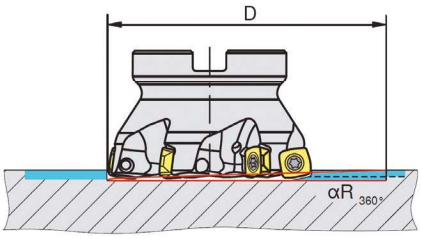
Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	α_R [°]
C-SSM-HFC10-25.R.03-A-50-125	25	48	35	3.1
C-SSM-HFC10-25.R.03-A-50-225	25	48	35	3.1
A-SSM-HFC10-40.R.04	40	78	65	1.0
A-SSM-HFC10-50.R.05	50	98	85	0.8
A-SSM-HFC10-63.R.06	63	124	111	0.7

SSM-HFC / High feed cutting

Application data (helical plunge milling XOLT13)





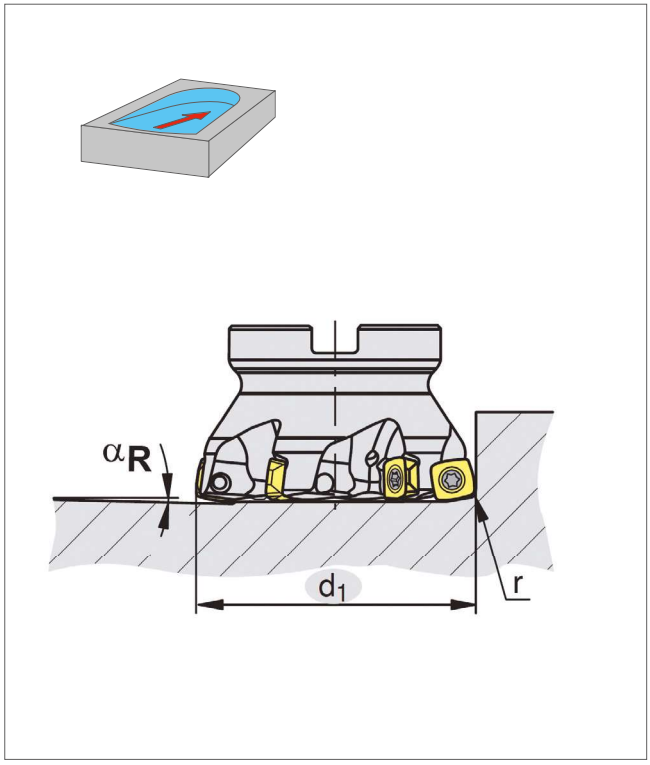


D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

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

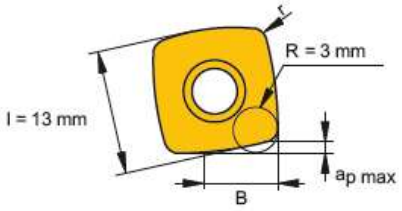
Application data (angled ramping)



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

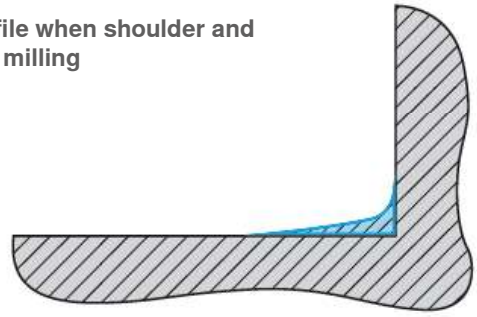
Depth of cut and remaining material



R = programmed radius

Recommended $f_z \geq 0.5$ / tooth

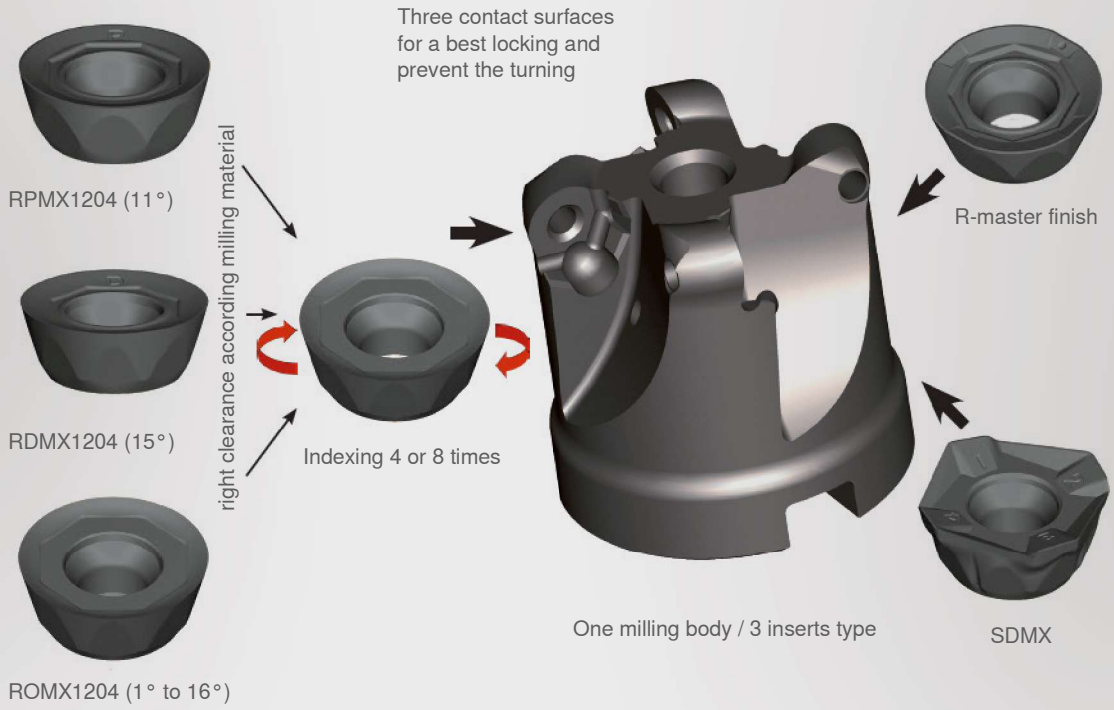
Profile when shoulder and slot milling



Insert	l [mm]	R [mm]	B [mm]	r [mm]	a_p 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

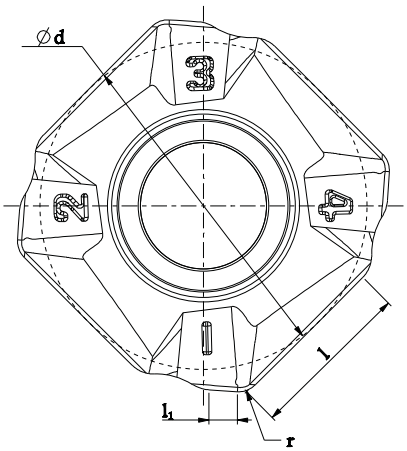
Standard application

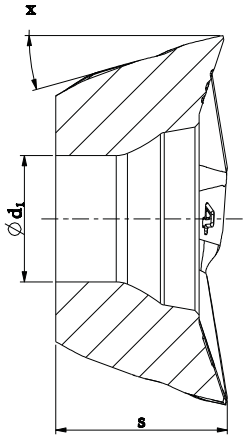
Additional application



SSM-A.R / Multiple applications

Insert (SDMX)





-HCM

-SCM

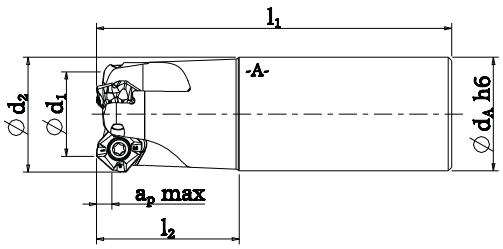
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	d_1 [mm]	r [mm]	x [°]
SDMX 1105AEER-HCM	11.4	5.8	5.9	1	4.4	0.8	15
SDMX 1105AEER-SCM	11.4	5.8	5.9	1	4.4	0.8	15
SDMX 1506AEER-HCM	15	8	6.5	1.5	5.5	0.8	15
SDMX 1506AEER-SCM	15	8	6.5	1.5	5.5	0.8	15

SSM-A.R / Multiple applications

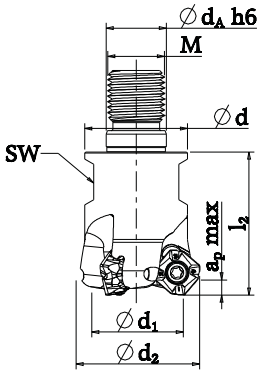
Milling body (SDMX11)

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

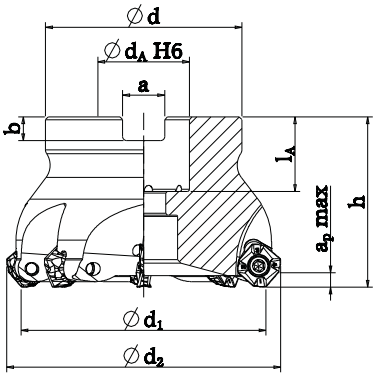
C-



G-



A-



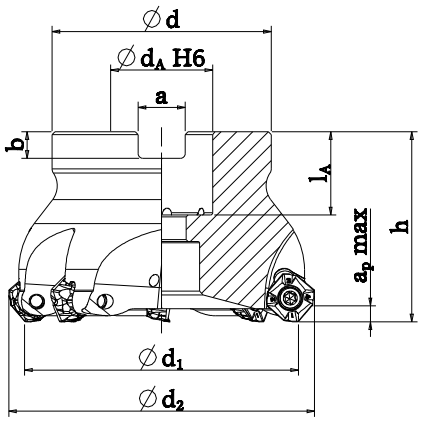
Description	Ø d_1 [mm]	Ø d_2 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
C-SSM-R12-25.R.02-A-30-86	17.5	25	86.3	30.3	-	25	6	25000	2	-	-	-	-	-	-
C-SSM-R12-25.R.02-A-60-116	17.5	25	116.3	60.3	-	25	6	18000	2	-	-	-	-	-	-
C-SSM-R12-32.R.03-A-40-100	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

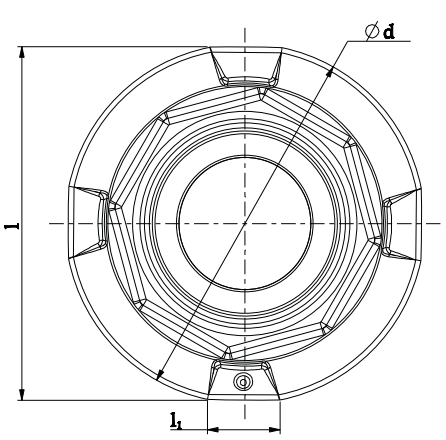
A-



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)



-MFHCM

-MFSCM

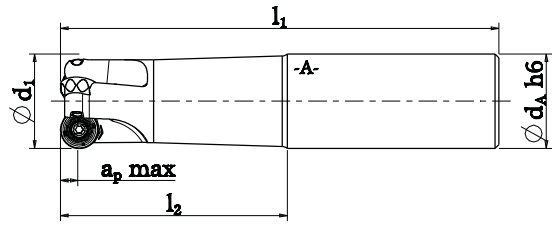
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	d_1 [mm]	X [°]
RPMX 1204MO-MFHCM	12	11.75	4.76	2.4	4.4	11
RPMX 1204MO-MFSCM	12	11.75	4.76	2.4	4.4	11
RPMX 1605MO-MFHCM	16	15.8	5.56	2.5	5.5	11
RPMX 1605MO-MFSCM	16	15.8	5.56	2.5	5.5	11

SSM-A.R / Multiple applications

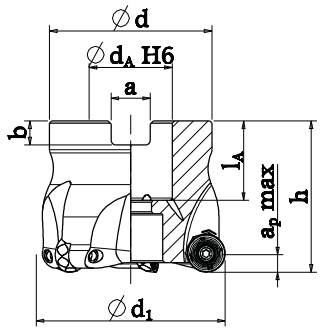
Milling body (RP12)

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

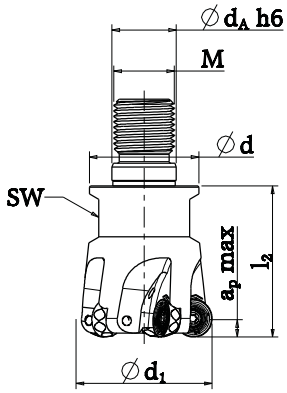
C-



A-



G-



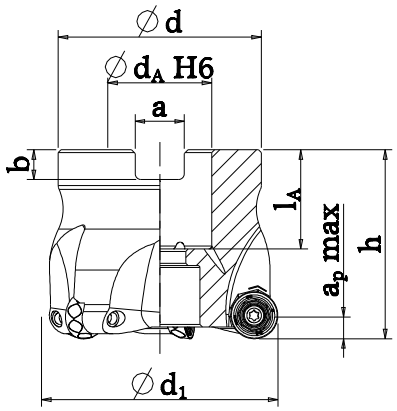
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
C-SSM-R12-25.R.02-A-30-86	24.75	85.87	29.87	-	25	6	25000	2	-	-	-	-	-	-
C-SSM-R12-25.R.02-A-60-116	24.75	115.87	59.87	-	25	6	18000	2	-	-	-	-	-	-
C-SSM-R12-32.R.03-A-40-100	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

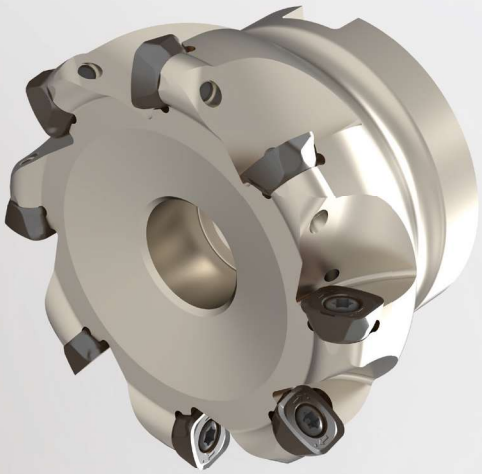
Milling body (RP16)

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

A-

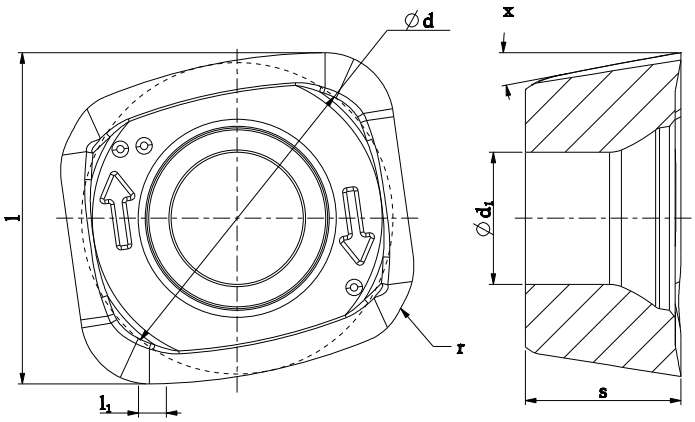


Description	Ø d_1 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
A-SSM-R16-50.R.03	49.8	39.9	22	8	12700	3	48	22	10.4	6.3
A-SSM-R16-52.R.04	51.8	39.9	22	8	12700	4	48	21	10.4	6.3
A-SSM-R16-63.R.05	62.8	39.9	22	8	10100	5	48	21	10.4	6.3
A-SSM-R16-66.R.05	65.8	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)



-HCM -SCM

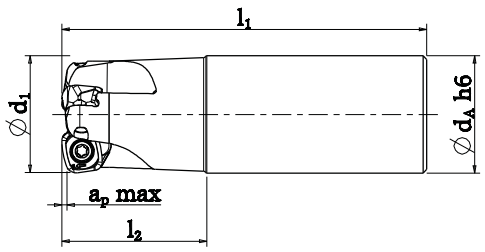
Description	d [mm]	s [mm]	l [mm]	d_1 [mm]	l_1 [mm]	r [mm]	x [°]
EOMT 120416-HCM	11.3	5.2	11	4.4	1	1.6	9
EOMT 120416-SCM	11.3	5.2	11	4.4	1	1.6	9

SSM-A.R / Multiple applications

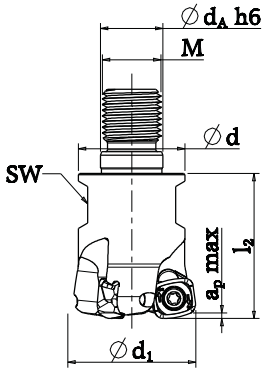
Milling body (SSM-A.R / EOMT12)

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

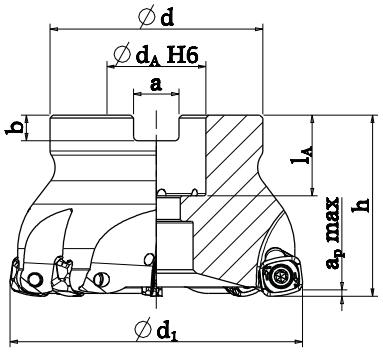
C-



G-



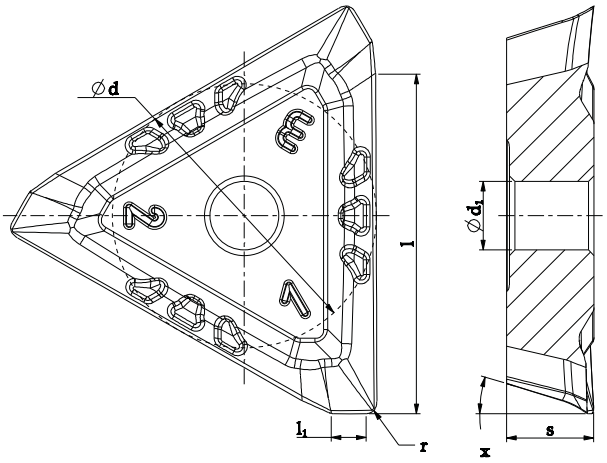
A-



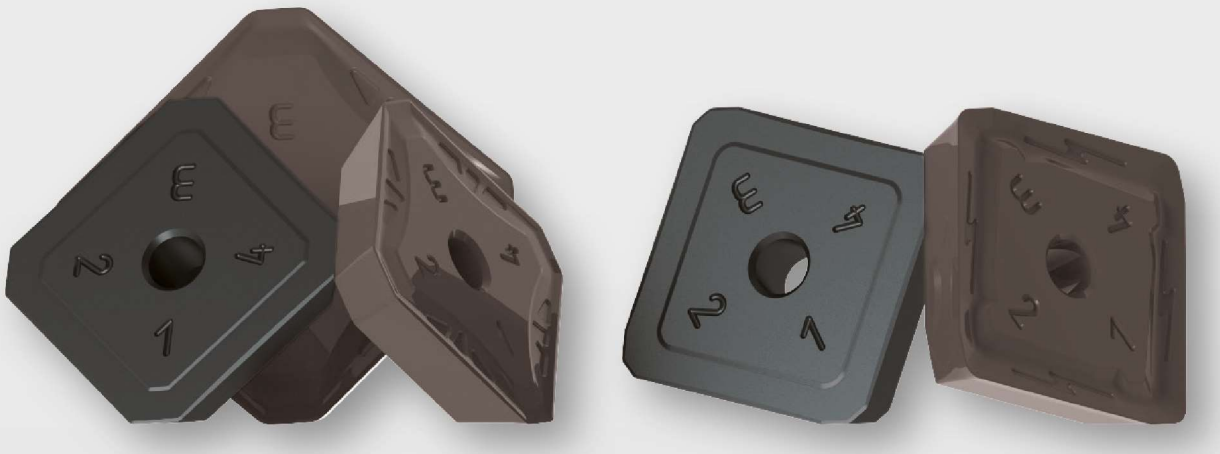
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
C-SSM-R12-25.R.02-A-30-86	24.75	85.87	29.87	-	25	6	25000	2	-	-	-	-	-	-
C-SSM-R12-25.R.02-A-60-116	24.75	115.87	59.87	-	25	6	18000	2	-	-	-	-	-	-
C-SSM-R12-32.R.03-A-40-100	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)

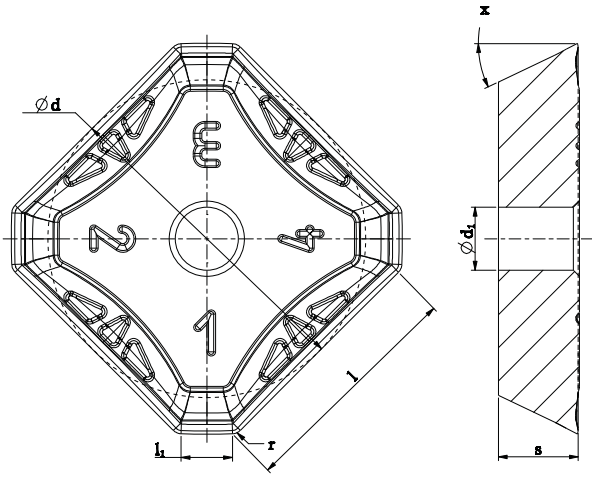


Descirption	l [mm]	s [mm]	d [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
TPKN 1603PDR-HCM	13	3.18	9.525	1.4	0.2	2.5	11
TPKR 1603PDR-SCM	13	3.18	9.525	1.2	0.4	2.5	11
TPKN 2204PDR-HCM	18.5	4.76	12.7	1.5	0.2	2.5	11
TPKR 2204PDR-SCM	18.5	4.76	12.7	1.6	0.3	2.5	11



SSM-S / Face milling 4 x 45°

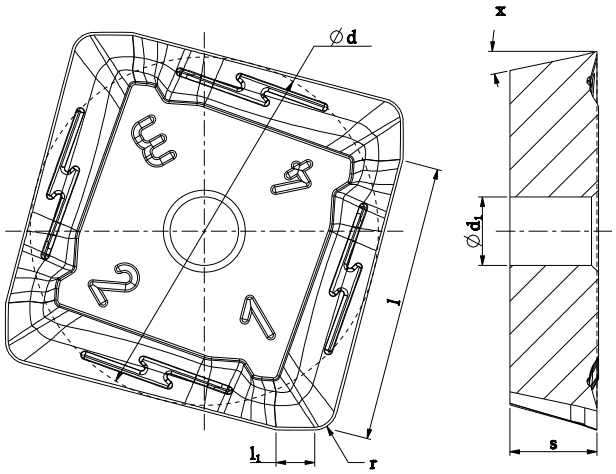
Insert (SEKN / SEKR)



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

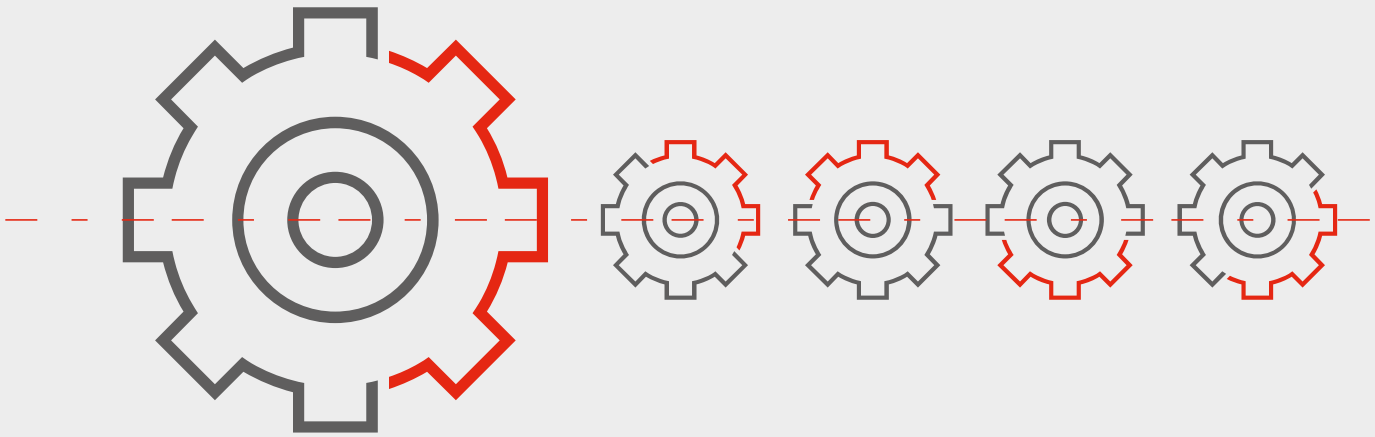
SSM-S / Face milling 4 x 75°

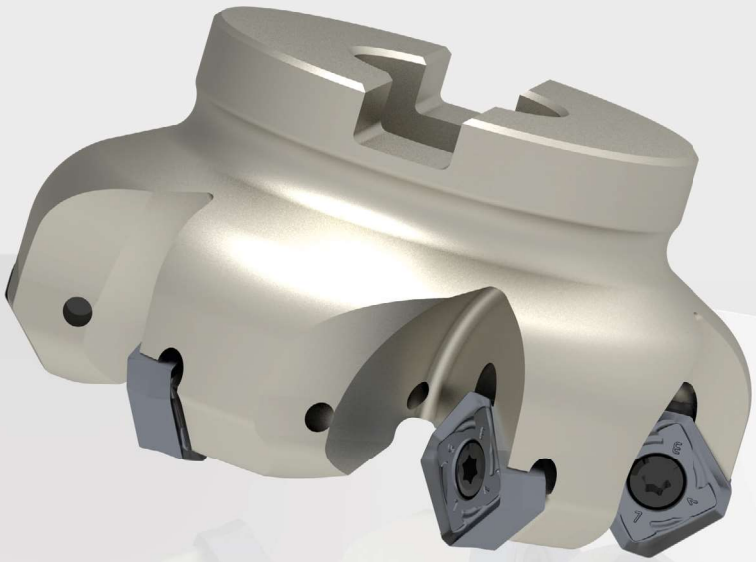
Insert (SPKN / SPKR)



Descirption	d [mm]	l [mm]	s [mm]	l1 [mm]	r [mm]	d_1 [mm]	x [°]
SPKN 1203EDTR-HCM	12.7	10	3.18	1.2	0.5	2.5	11.25
SPKN 1203EDTR-HCM	12.7	10	3.18	1.2	0.5	2.5	11.25
SPKR 1203EDER-SCM	12.7	10	3.18	1.4	0.9	2.5	11.25

Technical information





CERATIZIT designation system
Insert designation

Insert shape

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	Special shapes	

Clearance angle

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

Tolerances

	d ±	m ±	s ±	d=6,35/9,52	d=12,7	d=15,8/19,05
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	●	●	●
	0.05	0.005	0.025	●		
J	0.08	0.005	0.025		●	
	0.10	0.005	0.025			●
	0.05	0.013	0.025	●		
K	0.08	0.013	0.02		●	
	0.10	0.013	0.02			●
	0.05	0.08	0.13	●		
M	0.08	0.13	0.13		●	
	0.10	0.15	0.13			●
	0.05	0.08	0.025	●		
N	0.08	0.13	0.025		●	
	0.10	0.15	0.025			●
	0.08	0.13	0.13	●		
U	0.13	0.20	0.13		●	
	0.18	0.27	0.13			●

Form of top surface

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

A	P	K	T	10
R	P	G	T	10

Cutting edge length

A	T	C/S	H	R

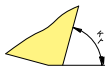
Insert thickness

	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

Facet corner radius

Radius

	r [mm]
M0*	
2	0.2
4	0.4
8	0.8
12	1.2



1st sign

	s [mm]
	r
A	45°
D	60°
E	75°
F	85°
P	90°
Z	Others

2nd sign

	α'n
A	3°
B	5°
C	7°
D	15°
E	20°
F	25°
G	30°
N	0°
P	11°
Z O	Others

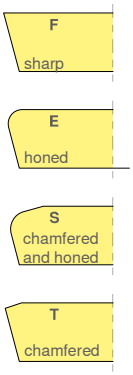
Chipbreaker

Chipbreaker designation

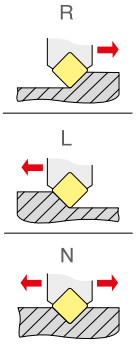
HCM = Steel machining
SCM = Stainless steel machining
CCM = Cast iron machining
LMM = Non-ferrous machining
XCM = Exotic machining
– = Hard material machining
RCM = Insert with specific radius

03	PD	E	R	-	HCM
T3	MO	E	N	-	LMM

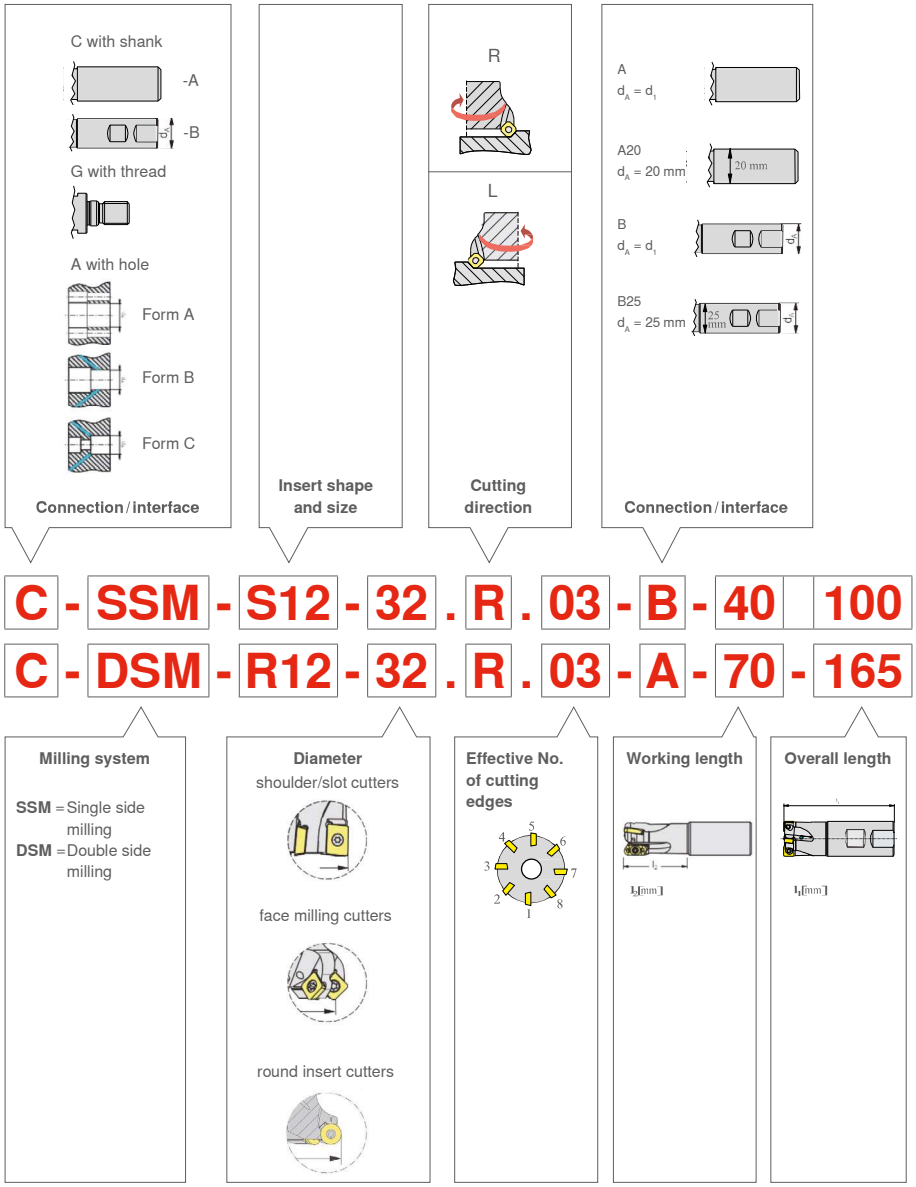
Cutting edge



Cutting direction



CERATIZIT designation system
Body designation



Application

P	Steel	M	Stainless steel	K	Cast iron
N	Non-ferrous metals and non-metals	S	Heat-resistant alloys, titanium	H	Hard materials

Machining application types

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

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

LMM
Sharp cutting edge for aluminium and non-ferrous metals.

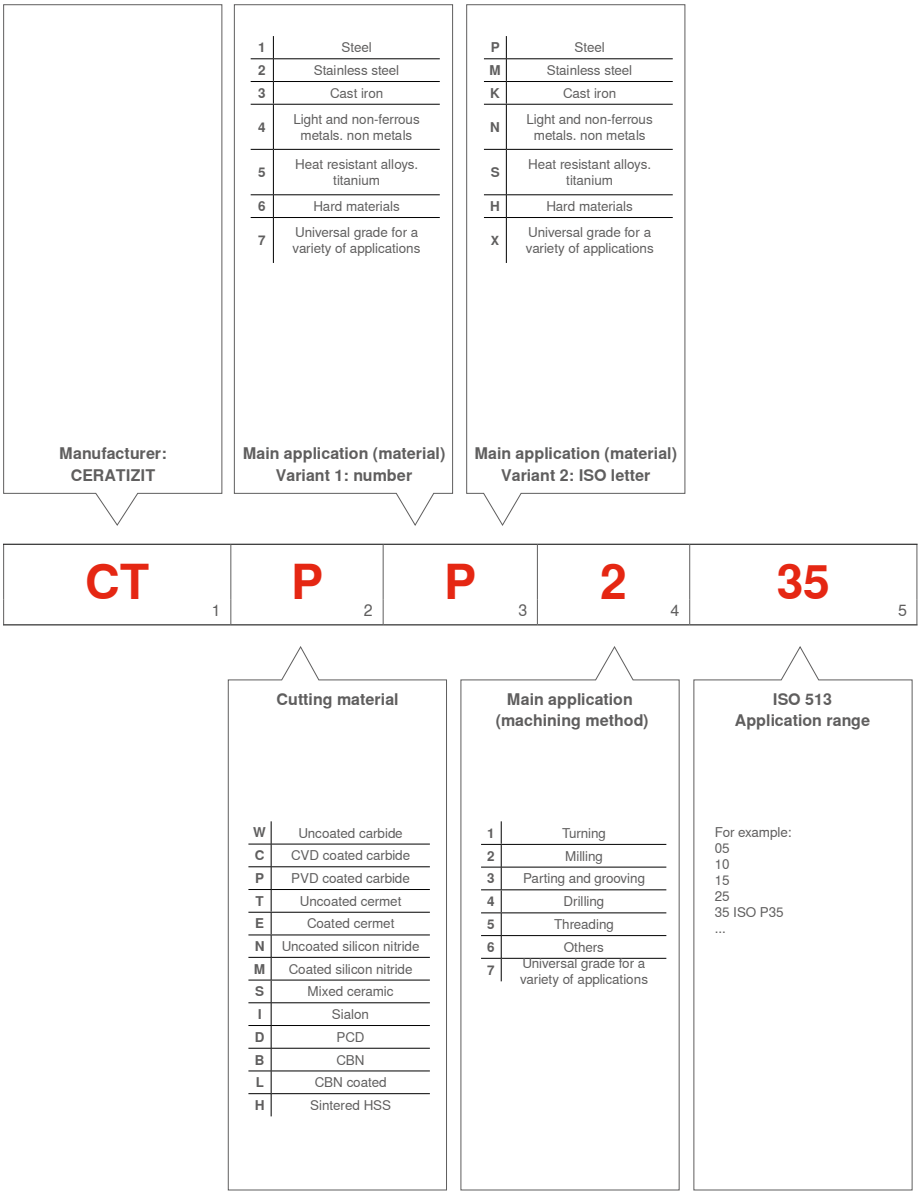
XCM
Stable cutting edge for dedicated exotic materials and titanium.

CCM
Strong cutting edge for cast iron applications.

MOSN
Strong reinforced cutting edge for hard material.

Grade overview

CERATIZIT designation system

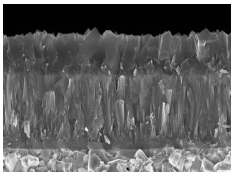


Grade overview

Grade designation	Standard designation ISO	ANSI	*Type of cutting material	Application range 01 05 10 15 20 25 30 35 40 45 50	P Steel	M Stainless	K Cast iron	N Non-ferrous metals	S Heat-resistant	H Hard materials
CTCP230	HC-P30	C6	C		●					
	HC-K25	C2	C				●			
	HC-M25	–	C			●				
CTCP235	HC-P35	C5	C		●					
	HC-M30	–	C			●				
CTPP235	HC-P35	C5	P		●					
	HC-M30	–	P			●				
CTPM240	HC-M40	–	P			●				
	HC-P40	C5	P		●					
CTCK215	HC-K15	C3	C				●			
CTPK220	HC-K20	C2	P				●			
CTMN715	HW-N15	C3	W					●		
	HW-K15	C3	W				●			
CTC5235	HC-S35	–	C						●	
	HC-M35	–	C			●				
CTC5240	HC-S35	–	C						●	
CTP6215	HC-H15	–	P							●
	HC-K15	–	P				●			

● Main application
○ Extended application

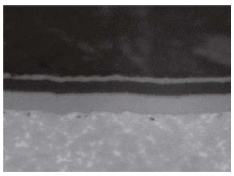
CTCP230 **HC-P30 | HC-K25 | HC-M25** ● ○ ○



Specification:
Composition: Co 10.5 %; mixed carbides 2.0 %; WC balance | Grain size: 1-2 µm | Hardness: HV_{30} 1400 | Coating specification: CVD TiCN-Al_2O_3

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

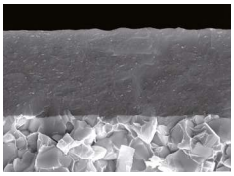
CTCP235 **HC-P35 | HC-M30** ● ○



Specification:
Composition: Co 12.5%; mixed carbides 2.0%; WC balance | Grain size: fine
Hardness: HV_{30} 1380 | Coating specification: CVD TiCN-Al_2O_3 + TiN; 7 µm

Recommended application:
Milling Grade designed for Alloyed Steel cutting.

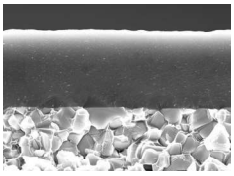
CTPP235 **HC-P35 | HC-M30** ● ○



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.

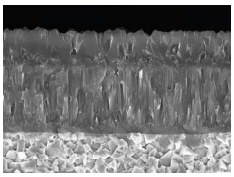
CTPM240 **HC-M40 | HC-P40** ● ○



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.

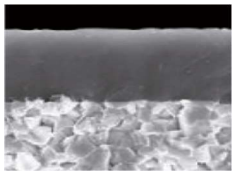
CTCK215 **HC-K15** ●



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 spreeds.

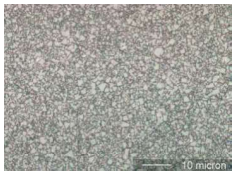
CTPK220 **HC-K20** ●



Specification:
Composition: Co 6.0 %; mixed carbides 2.0%, WC balance | Grain size: 1 µm | Hardness: HV_{30} 1630 |
Coating specification: PVD TiAlTaN

Recommended application:
Optimal for the machining of high-tensile cast icon materials when toughness is required.

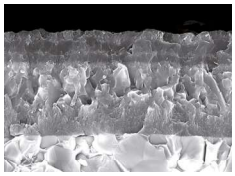
CTWN715 **HW-N15 | HW-K15** ● ○



Specification:
Composition: Co 6.0 %; WC balance | Grain size: 1 µm | Hardness: HV_{30} 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.

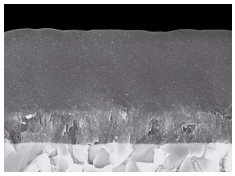
CTC5235 **HC-S35 | HC-M35** ● ●



Specification:
Composition: 10.0 % binder; WC balance | Grain size: 2 µm | Hardness: HV_{30} 1330 |
Coating specification: CVD TiCN-Al_2O_3 multi-layer

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

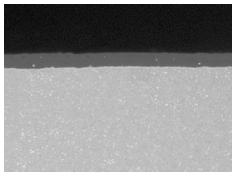
CTC5240 **HC-S35** ●



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.

CTP6215 **HC-H15 | HC-K15** ● ○



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