

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



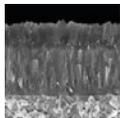
Chipbreaker

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

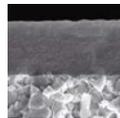
Grade

Standard grades

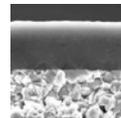
■ GCP230



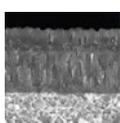
■ GPP235



■ GPM240



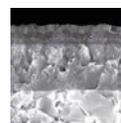
■ GCK215



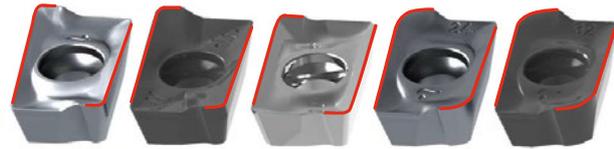
■ GWN715



■ GC5235



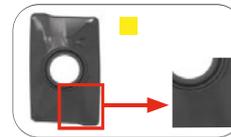
2 effective cutting edges



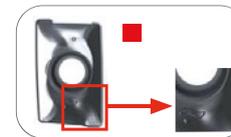
Which chipbreaker to use?



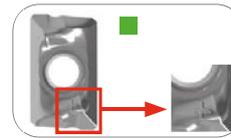
HCM
Strong cutting edge for general steel applications and hard conditions milling.



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

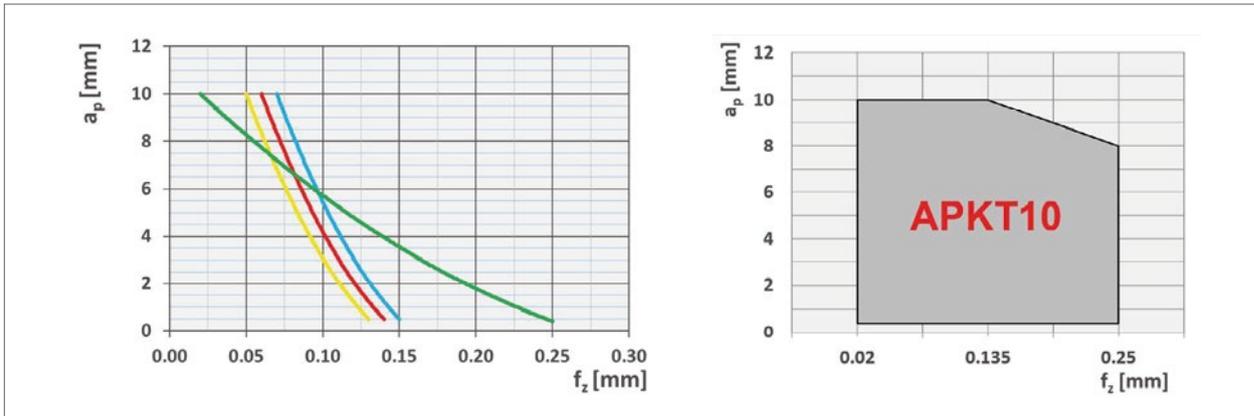
Insert	Designation	Chipbreaker	Material number	Available
	APKT 1003PDER-HCM GCP230	...-HCM	MM12384796	●
	APKT 1003PDER-HCM GPP235	...-HCM	MM14534961	●
	APKT 1003PDER-SCM GPM240	...-SCM	MM 14534962	●
	APKT 1003PDER-SCM GC5235	...-SCM	MM 11582506	●
	APKT 1003PDER-CCM GCK215	...-CCM	MM14641285	●
	APHT 100302FR-LMM GWN715	...-LMM	MM14617035	●
	APHT 100304FR-LMM GWN715	...-LMM	MM14617031	●
	APHT 100308FR-LMM GWN715	...-LMM	MM11348849	●
	APKT 100308ER-RCM GPP235	...-RCM	MM12234997	●
	APKT 100308ER-RCM GPM240	...-RCM	MM14641330	●
	APKT 100308ER-RCM GCK215	...-RCM		○
	APKT 100312ER-RCM GPP235	...-RCM	MM14652659	●
	APKT 100312ER-RCM GPM240	...-RCM	MM14652660	●
	APKT 100312ER-RCM GCK215	...-RCM		○
	APKT 100316ER-RCM GPP235	...-RCM	MM14641303	●
	APKT 100316ER-RCM GPM240	...-RCM	MM14641333	●
	APKT 100316ER-RCM GCK215	...-RCM		○
	APKT 100330ER-RCM GPP235	...-RCM	MM14641320	●
	APKT 100330ER-RCM GPM240	...-RCM	MM14641335	●
	APKT 100330ER-RCM GCK215	...-RCM		○



Body	Designation	∅ Milling cutter [mm]	z	Material number	Available
	C-SSM-UA10-12.R.01-B16-24-79	12	1	MM14655180	●
	C-SSM-UA10-16.R.02-B-25-80	16	2	MM12411773	●
	C-SSM-UA10-20.R.03-B-25-85	20	3	MM12411768	●
	C-SSM-UA10-25.R.04-B-32-95	25	4	MM12411777	●
	C-SSM-UA10-32.R.05-B-40-105	32	5	MM2411783	●
	G-SSM-UA10-16.R.02	16	2	MM14655181	●
	G-SSM-UA10-20.R.03	20	3	MM12411792	●
	G-SSM-UA10-25.R.04	25	4	MM12411797	●
	G-SSM-UA10-32.R.05	32	5	MM12411799	●
	A-SSM-UA10-40.R.04	40	4	MM14655178	●
	A-SSM-UA10-40.R.06	40	6	MM12630624	●
	A-SSM-UA10-50.R.05	50	5	MM14654216	●
	A-SSM-UA10-50.R.08	50	8	MM12630633	●
	A-SSM-UA10-63.R.06	63	6	MM14654218	●
	A-SSM-UA10-63.R.09	63	9	MM12630637	●
	A-SSM-UA10-80.R.07	80	7	MM14655179	●
	A-SSM-UA10-80.R.10	80	10	MM12630638	●
A-SSM-UA10-100.R.12	100	12	MM12630640	●	
Spare parts	Designation	Torque moment [Nm]	Material number	Available	
	M2.5 x 5.6 – T08+ (only for C- + G-)	1.6	MM11114238	●	
	M2.5 x 7.3 – T08+ (only for A-)	1.6	MM11114242	●	

Cutting data APKT10

Starting parameters:



Grades and materials:

	Material group	Chipbreaker	Grade	v_c [m/min]	Cutting data	
					f_z [mm]	a_p [mm]
P	Steel	HCM	GCP230	220 – 60	0.07 – 0.15	10 – 0.5
		RCM	GPP235			10 – 1.6
M	Stainless steel	SCM	GPM240	200 – 60	0.05 – 0.13	10 – 0.5
		RCM	GC5235			10 – 1.6
K	Cast iron	CCM	GCK215	320 – 100	0.06 – 0.14	10 – 0.5
		RCM				10 – 1.6
N	Non-ferrous	LMM	GWN715	< 2000	0.02 – 0.14	10 – 0.2

Available range APKT16

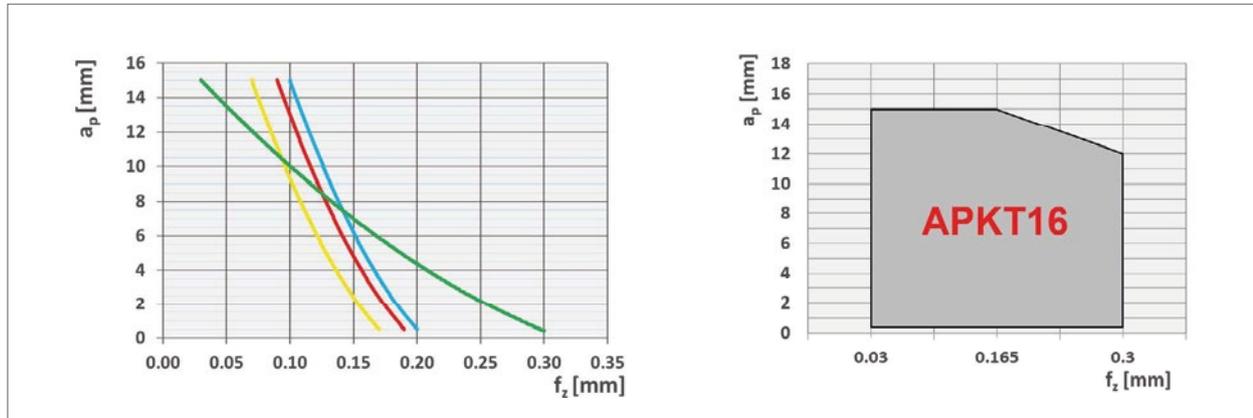
Insert	Designation	Chipbreaker	Material number	Available
	APKT 1604PDER-HCM GCP230	...-HCM	MM14641339	●
	APKT 1604PDER-HCM GPP235	...-HCM	MM14534966	●
	APKT 1604PDER-SCM GPM240	...-SCM	MM14534968	●
	APKT 1604PDER-SCM GC5235	...-SCM	MM11582503	●
	APKT 1604PDER-CCM GCK215	...-CCM	MM14641345	●
	APHT 1604PDFR-LMM GWN715	...-LMM	MM11348852	●
	APKT 160416ER-RCM GPP235	...-RCM	MM12067441	●
	APKT 160416ER-RCM GPM240	...-RCM	MM14641347	●
	APKT 160416ER-RCM GCK215	...-RCM	MM14652661	●
	APKT 160424ER-RCM GPP235	...-RCM	MM12067437	●
	APKT 160424ER-RCM GPM240	...-RCM	MM14641349	●
	APKT 160424ER-RCM GCK215	...-RCM		○
	APKT 160432ER-RCM GPP235	...-RCM	MM12067435	●
	APKT 160432ER-RCM GPM240	...-RCM	MM14641353	●
	APKT 160432ER-RCM GCK215	...-RCM		○
	APKT 160440ER-RCM GPP235	...-RCM		○
	APKT 160440ER-RCM GPM240	...-RCM	MM14677925	●
	APKT 160440ER-RCM GCK215	...-RCM		○
	APKT 160448ER-RCM GPP235	...-RCM	MM12314049	●
	APKT 160448ER-RCM GPM240	...-RCM	MM14641361	●
	APKT 160448ER-RCM GCK215	...-RCM		○



Body	Designation	∅ Milling cutter [mm]	z	Material number	Available
	C-SSM-UA10-12.R.01-B16-24-79	12	1	MM14655180	●
	C-SSM-UA10-16.R.02-B-25-80	16	2	MM12411773	●
	C-SSM-UA10-20.R.03-B-25-85	20	3	MM12411768	●
	C-SSM-UA10-25.R.04-B-32-95	25	4	MM12411777	●
	C-SSM-UA10-32.R.05-B-40-105	32	5	MM12411783	●
	G-SSM-UA10-16.R.02	16	2	MM14655181	●
	G-SSM-UA10-20.R.03	20	3	MM12411792	●
	G-SSM-UA10-25.R.04	25	4	MM12411797	●
	G-SSM-UA10-32.R.05	32	5	MM12411799	●
	A-SSM-UA10-40.R.04	40	4	MM14655178	●
	A-SSM-UA10-40.R.06	40	6	MM12630624	●
	A-SSM-UA10-50.R.05	50	5	MM14654216	●
	A-SSM-UA10-50.R.08	50	8	MM12630633	●
	A-SSM-UA10-63.R.06	63	6	MM14654218	●
	A-SSM-UA10-63.R.09	63	9	MM12630637	●
	A-SSM-UA10-80.R.07	80	7	MM14655179	●
	A-SSM-UA10-80.R.10	80	10	MM12630638	●
A-SSM-UA10-100.R.12	100	12	MM12630640	●	
Spare parts	Designation	Torque moment [Nm]	Material number	Available	
	M2.5 x 5.6 – T08+ (only for C- + G-)	1.6	MM11114238	●	
	M2.5 x 7.3 – T08+ (only for A-)	1.6	MM11114242	●	
	Power screw M8.0 x 30.0 (only for A-SSM-UA16-40.R.04)	15	MM11036880	●	

Cutting data APKT16

Starting Parameters:



Grades and Materials:

	Material Group	Chipbreaker	Grade	v_c [m/min]	Cutting Data	
					f_z [mm]	a_p [mm]
P	Steel	HCM	GCP230	220 – 60	0.1 – 0.2	15 – 0.5
		RCM	GPP235			15 – 1.6
M	Stainless steel	SCM	GPM240	200 – 60	0.07 – 0.17	15 – 0.5
		RCM	GC5235			15 – 1.6
K	Cast iron	CCM	GCK215	320 – 100	0.09 – 0.19	15 – 0.5
		RCM				15 – 1.6
N	Non-ferrous	LMM	GWN715	< 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



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

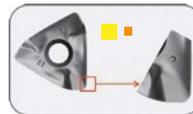


Result: Workpieces with clean surface, close tolerances and reduced formation of burrs, maximum service life of tool and insert.

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.

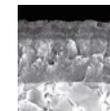
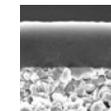
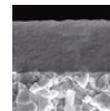
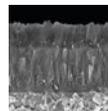
Grades

GCP230 ■

GPP235 ■

GPM240 ■

GC5235 ■



* secondary application

Available range TOKX07

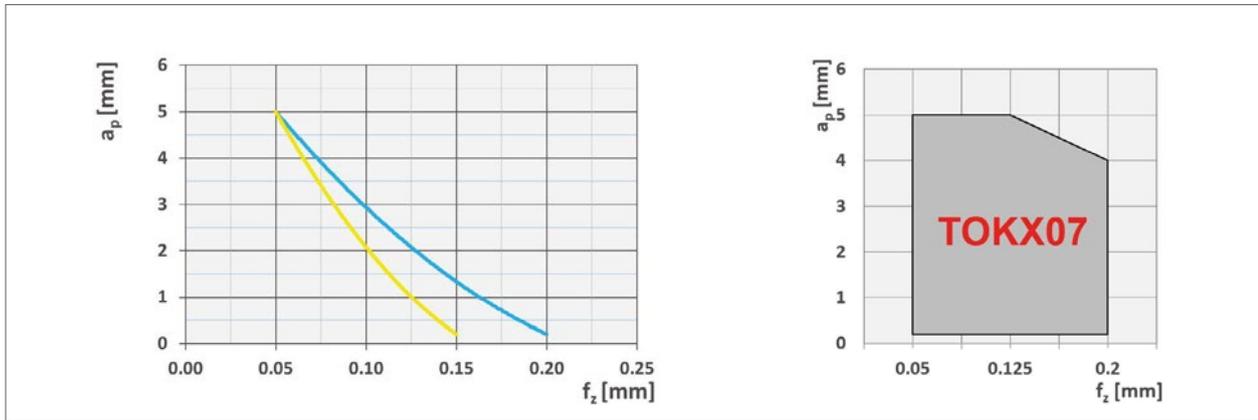
Insert	Designation	Chipbreaker	Material number	Available
	TOKX 070305PDER-HCM CTCP230	...-HCM	MM12193325	●
	TOKX 070305PDER-HCM CTPP235	...-HCM	MM12069063	●
	TOKX 070305PDER-SCM CTPM240	...-SCM	MM12120017	●
	TOKX 070305PDER-SCM CTC5235	...-SCM	MM12069061	●
	TOKX 070308PDER-HCM CTCP230	...-HCM	MM12307051	●
	TOKX 070308PDER-HCM CTPP235	...-HCM	MM12143629	●
	TOKX 070308PDER-SCM CTPM240	...-SCM	MM12143626	●
	TOKX 070308PDER-SCM CTC5235	...-SCM	MM12143628	●

Body	Designation	∅ Milling cutter [mm]	z	Material number	Available
	G-SSM-T07-20.R.03-B-25-77	20	3	MM12074285	●
	G-SSM-T07-25.R.04-B-34-90	25	4	MM11998760	●
	G-SSM-T07-32.R.05-B-40-102	32	5	MM12074282	●
	G-SSM-T07-20.R.03	20	3	MM12152218	●
	G-SSM-T07-25.R.04	25	4	MM12152220	●
	G-SSM-T07-32.R.05	32	5	MM12152223	●
	A-SSM-T07-40.R.05	40	5	MM12152214	●
	A-SSM-T07-50.R.06	50	6	MM12152215	○

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M2.5x6.0 – T08	1.2	MM24645	●

Cutting data TOKX07

Starting Parameters:



Grades and Materials:

	Material group	Chipbreaker	Grade	Cutting data		
				v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	HCM	GTCP230 GTPP235	220 – 60	0.05 – 0.2	5 – 0.2
M	Stainless steel	SCM	GTPM240 GTC5235	200 – 60	0.05 – 0.15	5 – 0.2

Available range TOKX09

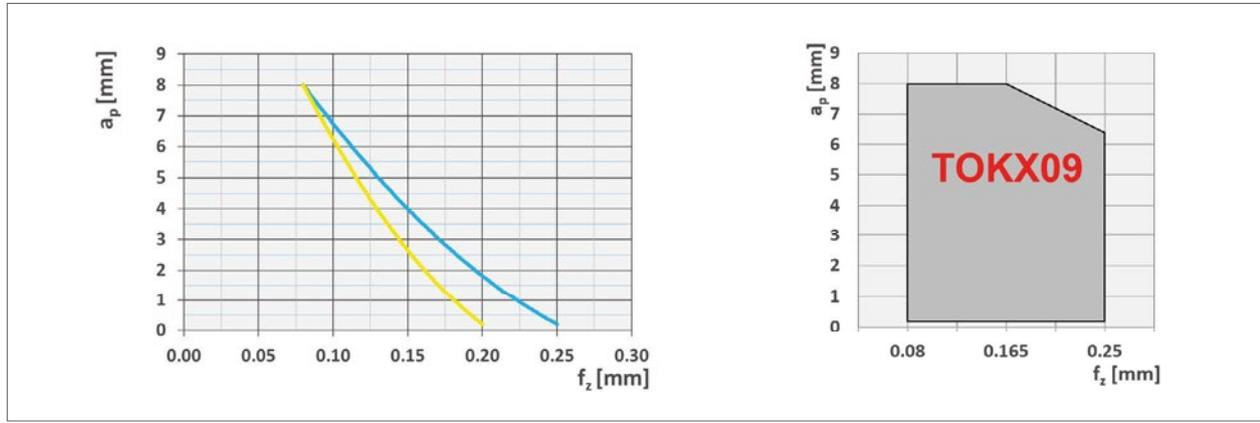
Insert	Designation	Chipbreaker	Material number	Available
	TOKX 09T308PDER-HCM GTCP230	...-HCM	MM12324207	●
	TOKX 09T308PDER-HCM GTPP235	...-HCM	MM12262506	●
	TOKX 09T308PDER-SCM GTPM240	...-SCM	MM12119996	●
	TOKX 09T308PDER-SCM GTC5235	...-SCM	MM12066590	●
	TOKX 09T312PDER-HCM GTCP230	...-HCM	MM12378662	●
	TOKX 09T312PDER-HCM GTPP235	...-HCM	MM12376480	●
	TOKX 09T312PDER-SCM GTPM240	...-SCM	MM12143645	●
	TOKX 09T312PDER-SCM GTC5235	...-SCM	MM12143648	●
	TOKX 09T316PDER-HCM GTCP230	...-HCM	MM12378664	●
	TOKX 09T316PDER-HCM GTPP235	...-HCM	MM12376489	●
	TOKX 09T316PDER-SCM GTPM240	...-SCM	MM12143637	●
	TOKX 09T316PDER-SCM GTC5235	...-SCM	MM12143639	●

Body	Designation	ø Milling cutter	z	Material number	Available
	C-SSM-T09-32.R.03-B-40-102	32	3	MM11869624	●
	A-SSM-T09-40.R.04	40	4	MM11987902	●
	A-SSM-T09-50.R.05	50	5	MM11987903	●
	A-SSM-T09-63.R.06	63	6	MM11987904	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M3.0 x 7.3 – T08	1.2	MM77613	●
	Power screw M8.0 x 30.0 (only for A-SSM-T09-40.R.04)	15	MM11036880	●

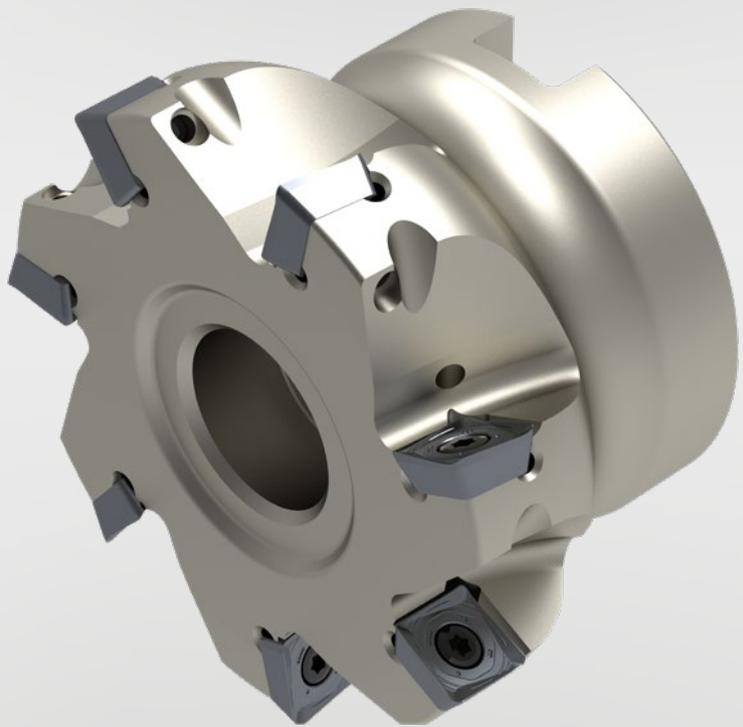
Cutting data TOKX09

Starting Parameters:



Grades and Materials:

	Material group	Chipbreaker	Grade	Cutting data		
				v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	HCM	GTCP230	220 – 60	0.08 – 0.25	8 – 0.2
			GTPP235			
M	Stainless steel	SCM	GTPM240	200 – 60	0.08 – 0.2	8 – 0.2
			GTC5235			



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

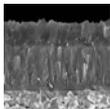
LMM:Aluminium

4 effective cutting edges:

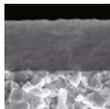


Grades:

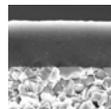
GTCP230 ■



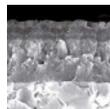
GTPP235 ■



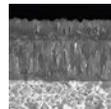
GTPM240 ■



GTC5235 ■



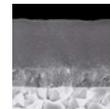
GTCK215 ■



GTWN715 ■



GTC5240 ■



* secondary application

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?



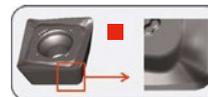
HCM

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.

Available range SDKT09

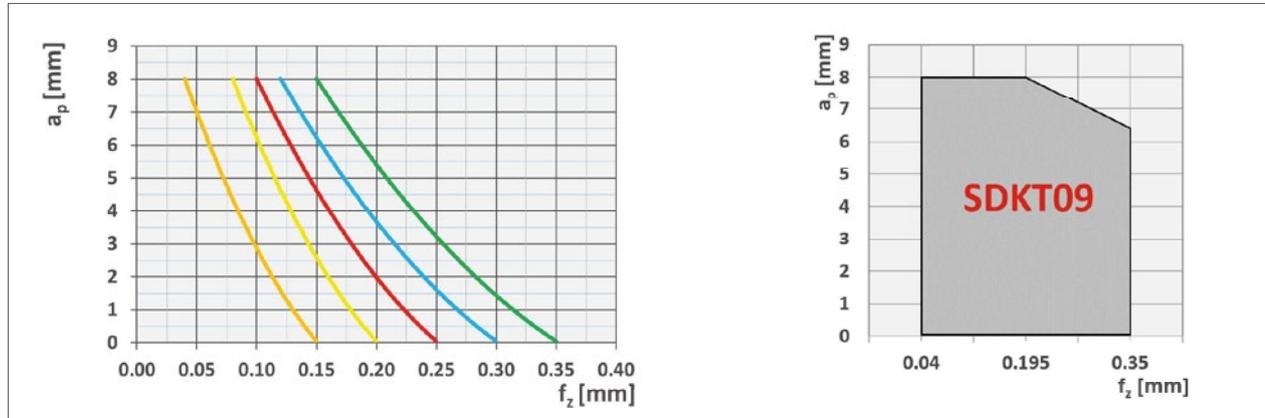
Insert	Designation	Chipbreaker	Material number	Available
	SDKT 09T308SR-HCM GTCP230	...-HCM	MM11979028	●
	SDKT 09T308SR-HCM GTPP235	...-HCM	MM11979030	●
	SDKT 09T308SR-SCM GTPM240	...-SCM	MM11979032	●
	SDKT 09T308SR-SCM GTC5235	...-SCM	MM11584645	●
	SDKT 09T308SR-SCM GTC5240	...-SCM	MM11710895	●
	SDKT 09T308SR-CCM GTCK215	...-CCM	MM12193340	●
	SDHT 09T308FR-LMM GTWN715	...-LMM	MM14652621	●

Body	Designation	ø Milling cutter	z	Material number	Available
	C-SSM-S09-25.R.03-B-32-88	25	3	MM11596014	●
	C-SSM-S09-32.R.04-B-40-100	32	4	MM11596009	●
	G-SSM-S09-25.R.03	25	3	MM12272435	○
	G-SSM-S09-32.R.04	32	4	MM12272436	○
	A-SSM-S09-40.R.05	40	5	MM11596010	●
	A-SSM-S09-50.R.06	50	6	MM11584233	●
	A-SSM-S09-63.R.07	63	7	MM11596011	●
	A-SSM-S09-80.R.09	80	9	MM11596013	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M3.0 x 7.3 – T08	1.2	MM77613	●
	Power screw M8.0 x 30.0 (only for A-SSM-S09-40.R.04)	15	MM1036880	●

Cutting data SDKT09

Starting Parameters:



Grades and Materials:

	Material group	Chipbreaker	Grade	v_c [m/min]	Cutting data	
					f_z [mm]	a_p [mm]
P	Steel	HCM	GTCP230	220 – 60	0.12 – 0.3	8 – 0.05
			GTPP235			
M	Stainless steel	SCM	GTPM240	200 – 60	0.08 – 0.2	8 – 0.05
			GTC5235			
K	Cast iron	CCM	GTCK215	320 – 100	0.1 – 0.25	8 – 0.05
N	Non-ferrous	LMM	GTWN715	< 2000	0.15 – 0.35	8 – 0.05
S	Heat resistant alloys	SCM	GTC5235	75 – 25	0.04 – 0.15	8 – 0.05
S	Titanium	SCM	GTC5240			

Available range SDKT12

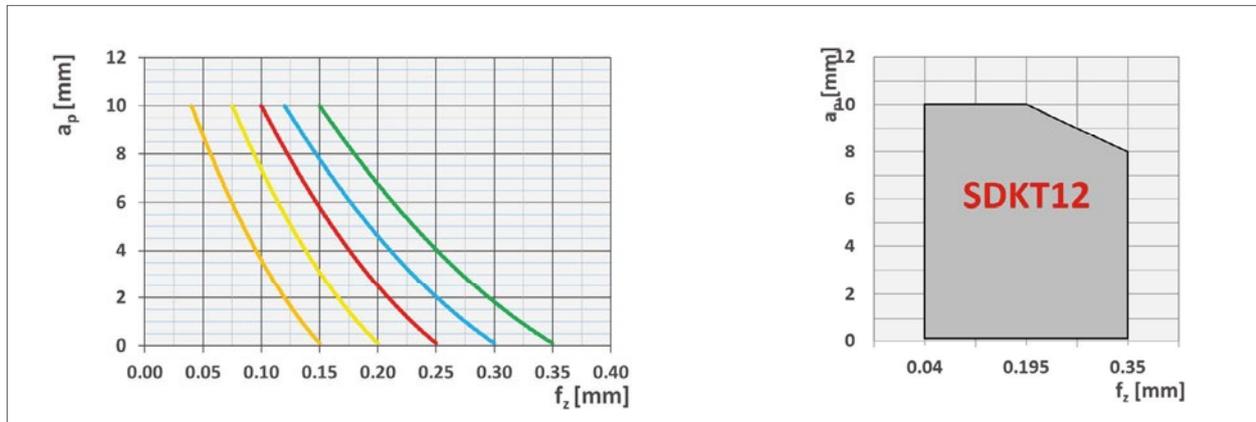
Insert	Designation	Chipbreaker	Material number	Available
	SDKT 120508SR-HCM GTCP230	...-HCM	MM12154549	●
	SDKT 120508SR-HCM GTPP235	...-HCM	MM12062538	●
	SDKT 120508SR-SCM GTPM240	...-SCM	MM12074525	●
	SDKT 120508SR-SCM GTC5235	...-SCM	MM12067263	●
	SDKT 120508SR-SCM GTC5240	...-SCM	MM12071921	●
	SDKT 120508SR-CCM GTCK215	...-CCM	MM12154553	●
	SDHT 120508FR-LMM GTWN715	...-LMM	MM14652623	●

Body	Designation	∅ Milling cutter	z	Material number	Available
	C-SSM-S12-32.R.03-B-40-100	32	3	MM12138258	●
	A-SSM-S12-40.R.04	40	4	MM11965069	●
	A-SSM-S12-50.R.05	50	5	MM11981629	●
	A-SSM-S12-63.R.06	63	6	MM12060728	●
	A-SSM-S12-80.R.07	80	7	MM12060727	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 8.5 – T15 (only for Ø32)	5	MM11037484	●
	M4.0 x 11 – T15+	5	MM1345432	●
	Power screw M8.0 x 30.0 (only for A-SSM-S12-40.R.04)	15	MM11036880	●

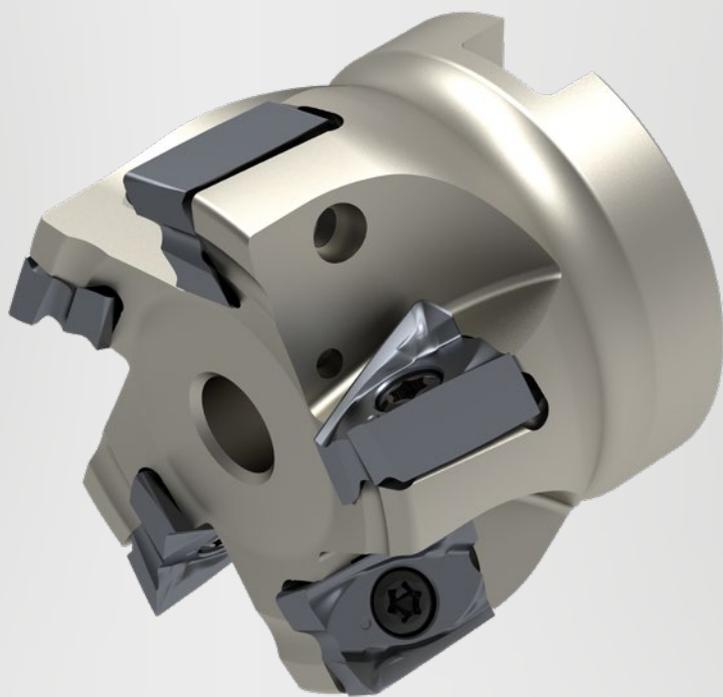
Cutting data SDKT12

Starting Parameters:



Grades and Materials:

	Material group	Chipbreaker	Grade	v_c [m/min]	Cutting data	
					f_z [mm]	a_p [mm]
P	Steel	HCM	GTCP230	220 – 60	0.12 – 0.3	10 – 0.1
			GTPP235			
M	Stainless steel	SCM	GTPM240	200 – 60	0.08 – 0.2	10 – 0.1
			GTC5235			
K	Cast iron	CCM	GTCK215	320 – 100	0.1 – 0.25	10 – 0.1
N	Non-ferrous	LMM	GTWN715	< 2000	0.15 – 0.35	10 – 0.1
S	Heat resistant alloys	SCM	GTC5235	75 – 25	0.04 – 0.15	10 – 0.1
S	Titanium	SCM	GTC5240			



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

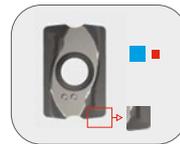
4 effective cutting edges:



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?



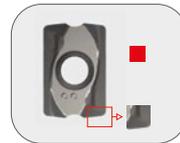
HCM

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



SCM

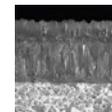
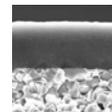
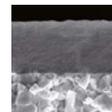
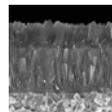
Sharp cutting edge for general stainless steel applications and for finishing in steels.



CCM

Strong cutting edge for cast iron applications.

GTCP230 ■ GTPP235 ■ GTPM240 ■ GTCK215 ■



* secondary application

Available range LNKU12 / LOKU 12

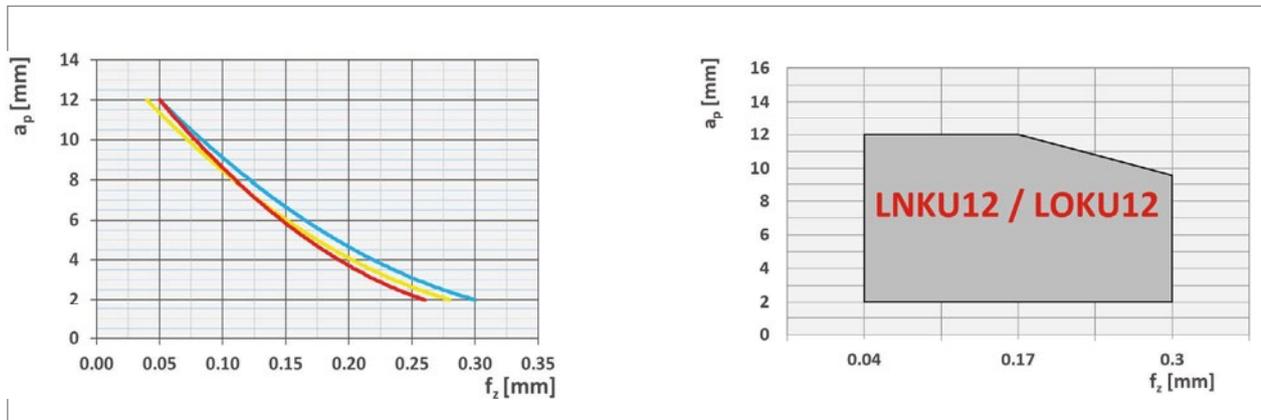
Insert	Designation	Chipbreaker	Material number	Available
	LNKU 120608ER-HCM GTCP230	...-HCM	MM12434604	●
	LNKU 120608ER-HCM GTPP235	...-HCM	MM12158008	●
	LNKU 120608ER-SCM GTPM240	...-SCM	MM12373789	●
	LNKU 120608ER-CCM GTCK215	...-CCM	MM14659156	●
	LOKU 120608ER-SCM GTPM240	...-SCM	MM12373779	●
	LOKU 120608ER-XCM GTC5235	...-XCM		○
	LOKU 120608ER-XCM GTC5240	...-XCM		○

Body	Designation	∅ Milling cutter	z	Material number	Available
	A-DSM-LO/LN12-40.R.04	40	4	MM14549248	●
	A-DSM-LO/LN12-50.R.05	50	5	MM12367555	●
	A-DSM-LO/LN12-63.R.06	63	6	MM12645968	●
	A-DSM-LO/LN12-80.R.07	80	7	MM12645971	●
	A-DSM-LO/LN12-100.R.08	100	8	MM14684049	●
	A-DSM-LO/LN12-125.R.09	125	9	MM14684046	●
	A-DSM-LO/LN12-160.R.11	160	11	MM14685069	●

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M4.0 x 11 – T15	5	MM11042274	●
	Power screw M8.0 x 30.0 (only for ∅ 40)	15	MM11036880	●
	Power screw M10.0 x 31.0 (only for ∅ 50)	20	MM11040298	●

Cutting data LNKU12 / LOKU 12

Starting Parameters:



Grades and Materials:

	Material group	Chipbreaker	Grade	v_c [m/min]	Cutting data	
					f_z [mm]	a_p [mm]
P	Steel	HCM	GTCP230 GTPP235	220 – 60	0.05 – 0.30	12 – 2.0
M	Stainless steel	SCM	GTPM240	200 – 60	0.04 – 0.28	12 – 2.0
K	Cast iron	CCM	GTCK215	320 – 100	0.05 – 0.26	12 – 2.0