2022

Insert Catalogue
Milling

BEYOND THE MACHINING

KARCAN cutting tools

www.karcan.com

IMAGINATION AND
FUNCTIONALITY IS
HARMONIZED WITH
MATERIALS AND
TOOL COMES TRUE...

KARCAN
cutting tools

BEYOND THE MACHINING

KARCAN cutting tools

STARTING A NEW JOURNEY OF SUCCESS REQUIRES FORESEEN

EXPERIENCE, EXPERT TEAM, STRATEGY AND VISION BY STRIVING FOR MANUFACTURING EXCELLENCE.

Dear Valued Customers and Business Partners

We, Karcan, as the biggest cutting tool manufacturer of Turkey with our modern machine and measuring park, R&D Center, number of qualified employees, sales figures and export share, owe you a great debt of gratitude for being a part of our journey all through these years and being a part of our achievement.
As the leading company steering the cutting tool industry of Turkey, we keep being your solution partner in machinability of hi-tech materials thanks to our highly skilled and trained R&D, process and technical sales team by following the recent developments in machining and material engineering and bringing the world's technology to your hands.

We are not just a Cutting Tools manufacturer! We make a difference in terms of our production improving activities, technical applications and consultancy services and we put all our efforts of our valued customers' gaining in 'cost per part' a competitive edge in global markets. From this point of view, we aim to provide products and services 'Beyond The Machining'.

We intend to present at our catalogue the carbide insert studies and improvements on the series within our standard program carried out together with our national and foreign universities, institutes, local and global partners.

We keep on bringing innovations to our customers in our country and 21 countries globally, and keep working with great passion in the belief that improvements are constant and a never ending process.

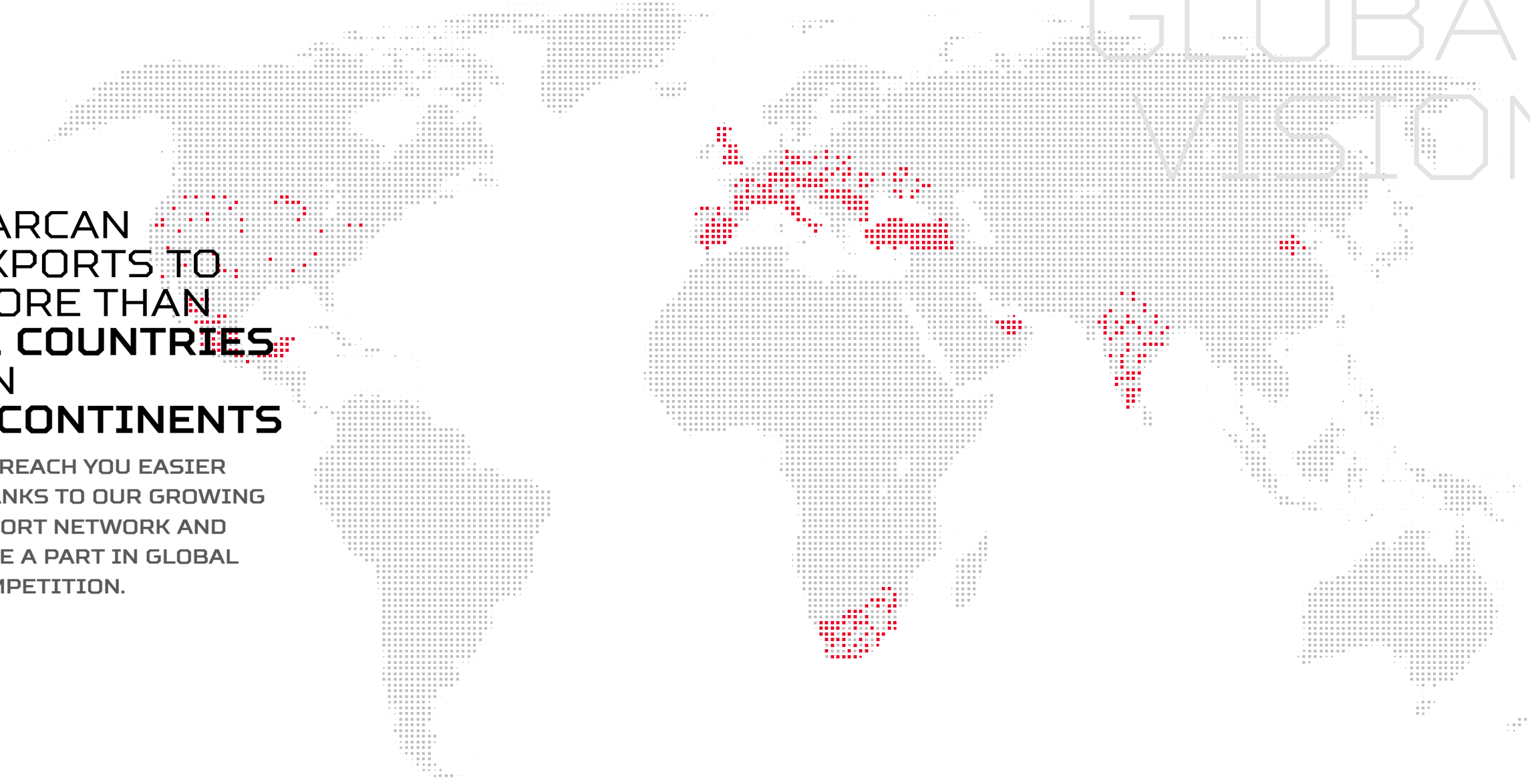
Welcome again to the world of Karcan Cutting Tools

On behalf of Karcan Cutting Tools,

Ümit GEZER
Founder / General Manager

www.karcan.com

GLOBAL VISION



KARCAN EXPORTS TO MORE THAN **21 COUNTRIES** ON **4 CONTINENTS**

WE REACH YOU EASIER THANKS TO OUR GROWING EXPORT NETWORK AND TAKE A PART IN GLOBAL COMPETITION.

		Milling System	Page
Face milling		HKPT06	40
		HPCT06	40
		HOKT06	44
		HOCT06	44
		SOKU12	48
		SOKU15	50
		HNKU08	54
		HOKU08	56

		Milling System	Page
Shouldering		APKT10	16
		APKT16	19
		TOKX07	24
		TOKX09	26
		SDKT09	30
		SDHT09	30
		SDKT12	32
		SDHT12	32
		LNKU12	36
		LOKU12	40

		Milling System	Page
Form milling		RP... / RD...10	62
		RP... / RD...12	64
		RP.X16	66
		RN.U / RO.U12	70
		RN.U / RO.U16	72

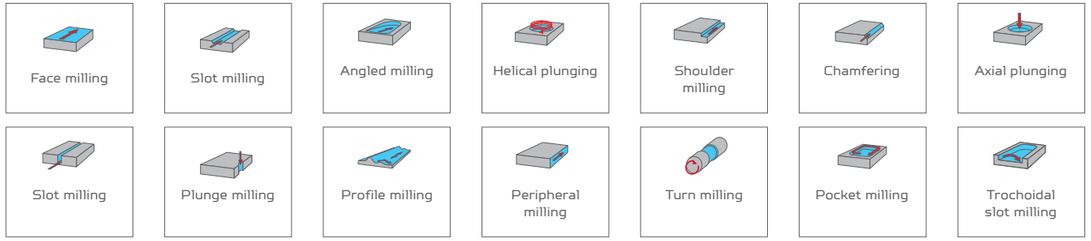
		Milling System	Page
High Feed Cutting		XPLT07	76
		XDLT10	78
		XDLX10	80
		XOLT13	82

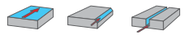
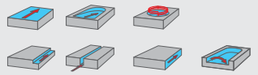
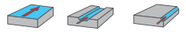
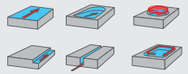
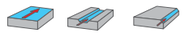
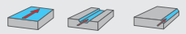
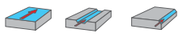
		Milling System	Page
Multiple Applica-tions		SDMX11	86
		SDMX15	88
		RPMX / RPHX12	92
		RPMX / RPHX16	94
		EOMT12	98

		Milling System	Page
Utility Milling		TPK. 16	102
		TPK. 22	102
		SEK. 12	106
		SEK. 15	106
		SPK. 12	106

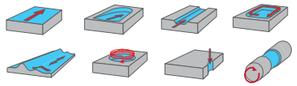
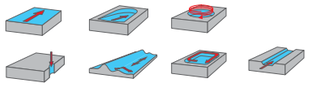
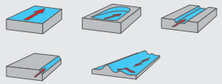
Shouldering / Face milling

Possible applications

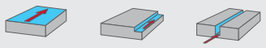
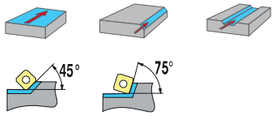


Application		Machining operations
Shouldering 2 x 90°		
Shouldering 3 x 90°		
Shouldering 4 x 90°		
Shouldering 4 x 90°		
Face milling 6 x 45°		
Face milling 8 x 45°		
Face milling 12 x 45°		

Form milling / High feed cutting / Multiple applications

Application		Machining operations
Form milling		
Form milling		
High feed cutting		
Multiple applications		

Utility Milling

Application		Machining operations
Shouldering 3 x 90°		
Face milling 4 x 45/75°		

Products

APKT...
APHT...
Overview

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

GCB: Steel
MFB: Stainless Steel
KCB: Cast iron
ACB: Aluminium
RCB: Specific radius

Grade

Standard grades

KRP130 ■

KRPD235 ■

KRM240 ■

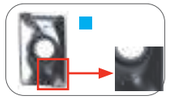
KRK115 ■

KRN015 ■

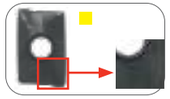
KRS135 ■

2 effective cutting edges

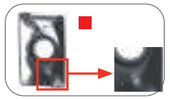
Which chipbreaker to use?



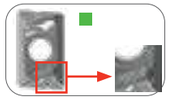
GCB
Strong cutting edge for general steel applications and hard conditions milling.



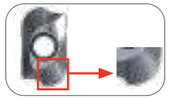
MFB
Sharp cutting edge for general stainless steel applications and for finishing in steels.



KCB
Strong cutting edge for cast iron applications.



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



RCB
Specific radius.

Available range APKT10

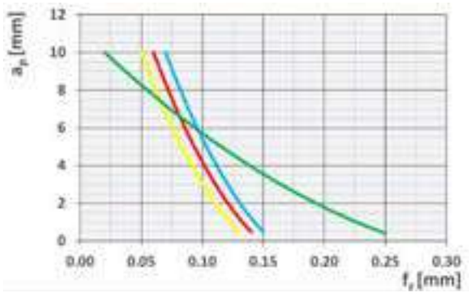
Insert	Designation	Chipbreaker	Available
	APKT 1003PDER-GCB KRP130	...-GCB	•
	APKT 1003PDER-GCB KRPD235	...-GCB	•
	APKT 1003PDER-MFB KRM240	...-MFB	•
	APKT 1003PDER-MFB KRS135	...-MFB	•
	APKT 1003PDER-KCB KRK115	...-KCB	•
	APHT 100302FR-ACB KRN015	...-ACB	•
	APHT 100304FR-ACB KRN015	...-ACB	•
	APHT 100308FR-ACB KRN015	...-ACB	•
	APKT 100308ER-RCB KRPD235	...-RCB	•
	APKT 100308ER-RCB KRM240	...-RCB	•
	APKT 100312ER-RCB KRPD235	...-RCB	•
	APKT 100312ER-RCB KRM240	...-RCB	•
	APKT 100316ER-RCB KRPD235	...-RCB	•
	APKT 100316ER-RCB KRM240	...-RCB	•
	APKT 100330ER-RCB KRPD235	...-RCB	•
	APKT 100330ER-RCB KRM240	...-RCB	•

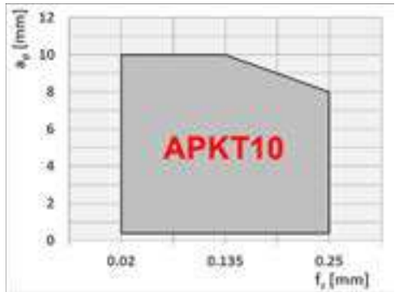
Body	Designation	ø Milling cutter [mm]	z	Available
	WS-UA10-12.Z.01-W-16-24-79	12	1	•
	WS-UA10-16.Z.02-W-25-80	16	2	•
	WS-UA10-20.Z.03-W-25-85	20	3	•
	WS-UA10-25.Z.04-W-32-95	25	4	•
	WS-UA10-32.Z.05-W-40-105	32	5	•
	TC-UA10-16.Z.02	16	2	•
	TC-UA10-20.Z.03	20	3	•
	TC-UA10-25.Z.04	25	4	•
	TC-UA10-32.Z.05	32	5	•
	AR-UA10-40.Z.04	40	4	•
	AR-UA10-40.Z.06	40	6	•
	AR-UA10-50.Z.05	50	5	•
	AR-UA10-50.Z.08	50	8	•
	AR-UA10-63.Z.06	63	6	•
	AR-UA10-63.Z.09	63	9	•
	AR-UA10-80.Z.07	80	7	•
	AR-UA10-80.Z.10	80	10	•
	AR-UA10-100.Z.12	100	12	•

Spare parts	Designation	Torque moment [Nm]	Material number	Available
	M2.5 x 5.6 – T08+ (only for TC-WS)	1.6	11114238	•
	M2.5 x 7.3 – T08+ (only for AR)	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	GCB	KRP130	220 – 60	0.07 – 0.15	10 – 0.5
		RCB	KRPD235		0.1 – 0.17	10 – 1.6
M	Stainless steel	MFB	KRM240	200 – 60	0.05 – 0.13	10 – 0.5
		RCB	KRS135		0.1 – 0.17	10 – 1.6
K	Cast iron	KCB	KRK115	320 – 100	0.1 – 0.17	10 – 0.5
		RCB				
N	Non-ferrous	ACB	KRN015	< 2000	0.02 – 0.14	10 – 0.2

Available range APKT16

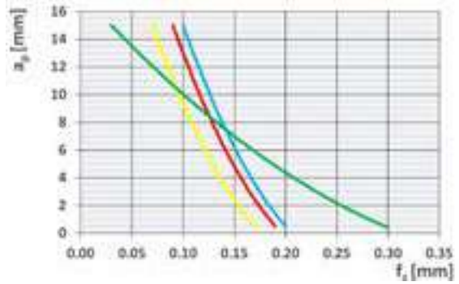
Insert	Designation	Chipbreaker	Available
	APKT 1604PDER-GCB KRP130	...-GCB	•
	APKT 1604PDER-GCB KRPD235	...-GCB	•
	APKT 1604PDER-MFB KRM240	...-MFB	•
	APKT 1604PDER-MFB KRS135	...-MFB	•
	APKT 1604PDER-KCB KRK115	...-KCB	•
	APHT 1604PDFR-ACB KRN015	...-ACB	•
	APKT 160416ER-RCB KRPD235	...-RCB	•
	APKT 160416ER-RCB KRM240	...-RCB	•
	APKT 160416ER-RCB KRK115	...-RCB	•
	APKT 160424ER-RCB KRPD235	...-RCB	•
	APKT 160424ER-RCB KRM240	...-RCB	•
	APKT 160432ER-RCB KRPD235	...-RCB	•
	APKT 160432ER-RCB KRM240	...-RCB	•
	APKT 160440ER-RCB KRM240	...-RCB	•
	APKT 160448ER-RCB KRPD235	...-RCB	•
	APKT 160448ER-RCB KRM240	...-RCB	•

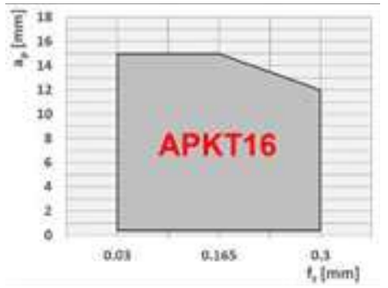
Body	Designation	ø Milling cutter [mm]	z	Available
	WS-UA16-25.Z.02-W-40-95	25	2	•
	WS-UA16-32.Z.03-W-40-105	32	3	•
	WS-UA16-40.Z.04-W-50-125	40	4	•
	TC-UA16-25.Z.02 25	25	2	•
	TC-UA16-32.Z.03 32	32	3	•
	TC-UA16-40.Z.04 40	40	4	•
	AR-UA16-40.Z.04	40	4	•
	AR-UA16-50.Z.05	50	5	•
	AR-UA16-63.Z.06	63	6	•
	AR-UA16-80.Z.07	80	7	•
	AR-UA16-80.Z.08	80	8	•
	AR-UA16-100.Z.09	100	9	•
	AR-UA16-125.Z.09	125	9	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 8.5 – T15 (only for Ø25 + Ø32)	5	•
	M4.0 x 11.0 – T15+	5	•
	Power screw M8.0 x 30.0 (only for AR-UA16-40.Z.04)	15	•

Cutting data APKT16

Starting parameters:





Grades and materials:

				Cutting data	
Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	GCB	KRP130	220 – 60	0.1 – 0.2	15 – 0.5
		RCB	KRPD235		0.12 – 0.23	15 – 0.5
M	Stainless steel	MFB	KRM240	200 – 60	0.07 – 0.17	15 – 0.5
		RCB	KRS135		0.12 – 0.23	15 – 0.5
K	Cast iron	KCB	KRK115	320 – 100	0.12 – 0.23	15 – 0.5
		RCB				
N	Non-ferrous	ACB	KRN015	< 2000	0.03 – 0.30	15 – 0.8

TOKX
Overview

Overview TOKX

Application

1) Face milling

2) Angled milling

3) Helical plunging

4) Shoulder milling

5) Slot milling

6) Pocket milling

Chipbreaker

GCB: Steel – Cast iron*
MFB: 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

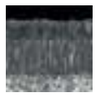
Result: Workpieces with clean surface. close tolerances and reduced formation of burrs, maximum service life of tool and insert.

Which chipbreaker to use?

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

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

Grades

KRP130 

KRPD235 

KRM240 

KRS135 

Available range TOKX07

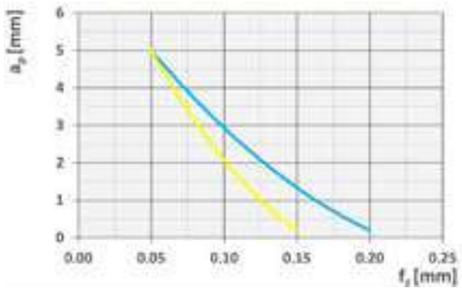
Insert	Designation	Chipbreaker	Available
	TOKX 070305PDER-GCB KRP130	...-GCB	•
	TOKX 070305PDER-GCB KRPD235	...-GCB	•
	TOKX 070305PDER-MFB KRM240	...-MFB	•
	TOKX 070305PDER-MFB KRS135	...-MFB	•
	TOKX 070308PDER-GCB KRP130	...-GCB	•
	TOKX 070308PDER-GCB KRPD235	...-GCB	•
	TOKX 070308PDER-MFB KRM240	...-MFB	•
	TOKX 070308PDER-MFB KRS135	...-MFB	•

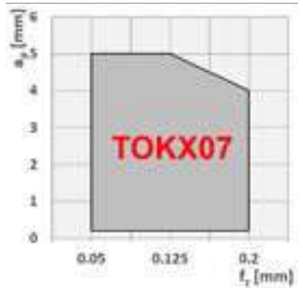
Body	Designation	ø Milling cutter [mm]	z	Available
	WS-T07-20.Z.03-W-25-77	20	3	•
	WS-T07-25.Z.04-W-34-90	25	4	•
	WS-T07-32.Z.05-W-40-102	32	5	•
	TC-T07-20.Z.03	20	3	•
	TC-T07-25.Z.04	25	4	•
	TC-T07-32.Z.05	32	5	•
	AR-T07-40.Z.05	40	5	•
	AR-T07-50.Z.06	50	6	○

Spare parts	Designation	Torque moment [Nm]	Available
	M2.5x6.0 – T08	1.2	•

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	GCB	KRP130 KRPD235	220 – 60	0.05 – 0.2	5 – 0.2
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.05 – 0.15	5 – 0.2

Available range TOKX09

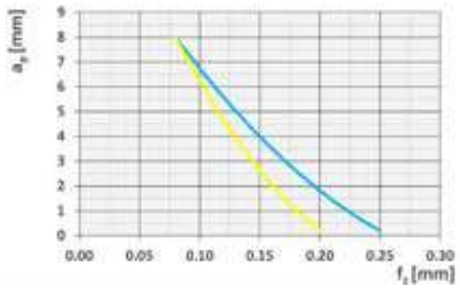
Insert	Designation	Chipbreaker	Available
	TOKX 09T308PDER-GCB KRP130	...-GCB	•
	TOKX 09T308PDER-GCB KRPD235	...-GCB	•
	TOKX 09T308PDER-MFB KRM240	...-MFB	•
	TOKX 09T308PDER-MFB KRS135	...-MFB	•
	TOKX 09T312PDER-GCB KRP130	...-GCB	•
	TOKX 09T312PDER-GCB KRPD235	...-GCB	•
	TOKX 09T312PDER-MFB KRM240	...-MFB	•
	TOKX 09T312PDER-MFB KRS135	...-MFB	•
	TOKX 09T316PDER-GCB KRP130	...-GCB	•
	TOKX 09T316PDER-GCB KRPD235	...-GCB	•
	TOKX 09T316PDER-MFB KRM240	...-MFB	•
	TOKX 09T316PDER-MFB KRS135	...-MFB	•

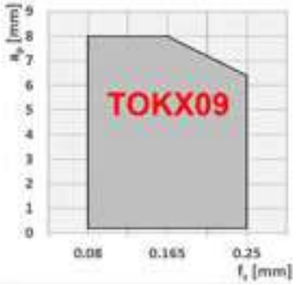
Body	Designation	ø Milling cutter	z	Available
	WS-T09-32.Z.03-W-40-102	32	3	•
	AR-T09-40.Z.04	40	4	•
	AR-T09-50.Z.05	50	5	•
	AR-T09-63.Z.06	63	6	•

Spare parts	Designation	Torque moment [Nm]	Available
	M3.0 x 7.3 – T08	1.2	•
	Power screw M8.0 x 30.0 (only for AR-T09-40.Z.04)	15	•

Cutting data TOKX09

Starting parameters:

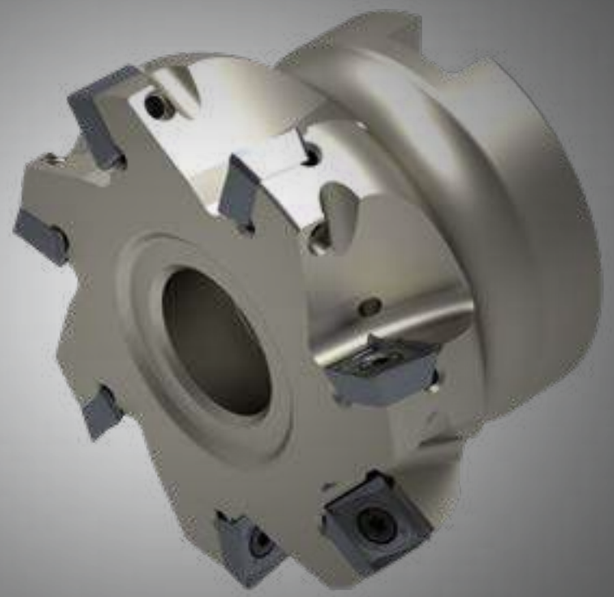




Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.08 – 0.25	8 – 0.2
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.08 – 0.2	8 – 0.2

SDKT
Overview



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

GCB: Steel
MFB: Stainless Steel – Exotic* – Titanium*
KCB: Cast iron
ACB: Aluminium

4 effective cutting edges

Grades

KRP130 ■

KRPD235 ■

KRM240 ■

KRS135 ■

KRK115 ■

KRN015 ■

KRS140 ■

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?

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

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

KCB
Strong cutting edge for cast iron applications.

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

* secondary application

Available range SDKT09

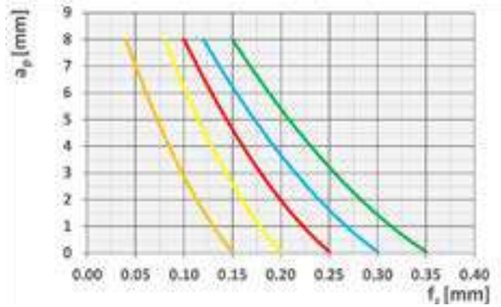
Insert	Designation	Chipbreaker	Available
	SDKT 09T308SR-GCB KRP130	...-GCB	•
	SDKT 09T308SR-GCB KRPD235	...-GCB	•
	SDKT 09T308SR-MFB KRM240	...-MFB	•
	SDKT 09T308SR-MFB KRS135	...-MFB	•
	SDKT 09T308SR-MFB KRS140	...-MFB	•
	SDKT 09T308SR-KCB KRK115	...-KCB	•
	SDHT 09T308FR-ACB KRN015	...-ACB	•

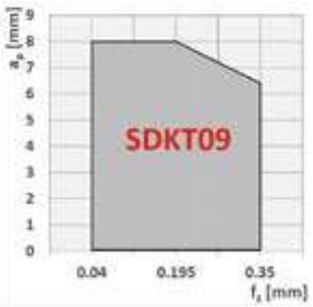
Body	Designation	ø Milling cutter [mm]	z	Available
	WS-S09-25.Z.03-W-32-88	25	3	•
	WS-S09-32.Z.04-W-40-100	32	4	•
	TC-S09-25.Z.03	25	3	○
	TC-S09-32.Z.04	32	4	○
	AR-S09-40.Z.05	40	5	•
	AR-S09-50.Z.06	50	6	•
	AR-S09-63.Z.07	63	7	•
	AR-S09-80.Z.09	80	9	•

Spare parts	Designation	Torque moment [Nm]	Available
	M3.0 x 7.3 – T08	1.2	•
	Power screw M8.0 x 30.0 (only for AR-S09-40.Z.05)	15	•

Cutting data SDKT09

Starting parameters:





Grades and materials:

z

Material group		Chipbreaker	Grade	v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.12 – 0.3	8 – 0.05
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.08 – 0.2	8 – 0.05
K	Cast iron	KCB	KRK115	320 – 100	0.1 – 0.25	8 – 0.05
N	Non-ferrous	ACB	KRN015	< 2000	0.15 – 0.35	8 – 0.05
S	Heat resistant alloys	MFB	KRS135	75 – 25	0.04 – 0.15	8 – 0.05
S	Titanium	MFB	KRS140			

Available range SDKT12

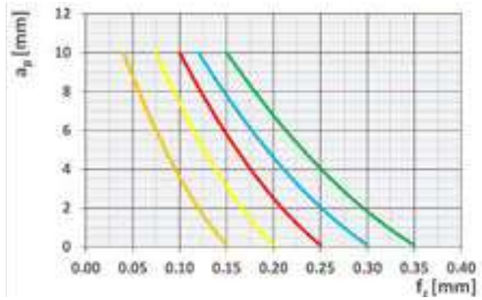
Insert	Designation	Chipbreaker	Available
	SDKT 120508SR-GCB KRP130	...-GCB	•
	SDKT 120508SR-GCB KRPD235	...-GCB	•
	SDKT 120508SR-MFB KRM240	...-MFB	•
	SDKT 120508SR-MFB KRS135	...-MFB	•
	SDKT 120508SR-MFB KRS140	...-MFB	•
	SDKT 120508SR-KCB KRK115	...-KCB	•
	SDHT 120508FR-ACB KRN015	...-ACB	•

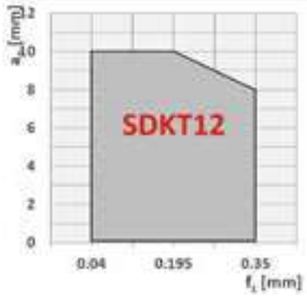
Body	Designation	ø Milling cutter [mm]	z	Available
	WS-S12-32.Z.03-W-40-100	32	3	•
	AR-S12-40.Z.04	40	4	•
	AR-S12-50.Z.05	50	5	•
	AR-S12-63.Z.06	63	6	•
	AR-S12-80.Z.07	80	7	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 8.5 – T15 (only for Ø32)	5	•
	M4.0 x 11 – T15+	5	•
	Power screw M8.0 x 30.0 (only for AR-S12-40.Z.04)	15	•

Cutting data SDKT12

Starting parameters:

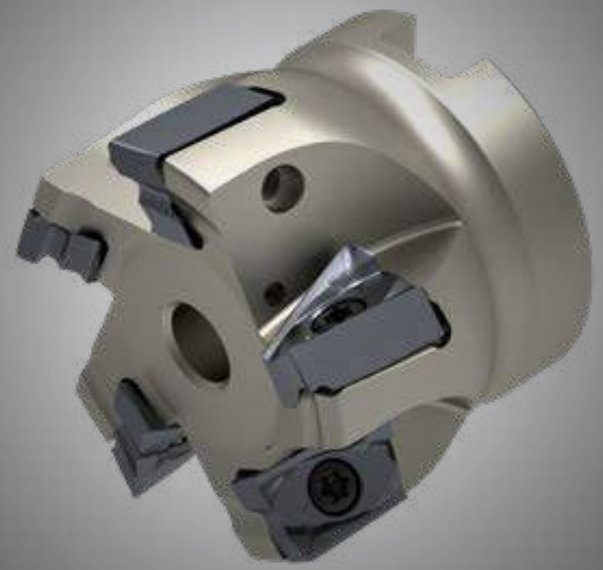




Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.12 – 0.3	10 – 0.1
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.08 – 0.2	10 – 0.1
K	Cast iron	KCB	KRK115	320 – 100	0.1 – 0.25	10 – 0.1
N	Non-ferrous	ACB	KRN015	< 2000	0.15 – 0.35	10 – 0.1
S	Heat resistant alloys	MFB	KRS135	75 – 25	0.04 – 0.15	10 – 0.1
S	Titanium	MFB	KRS140			

LNKU
LOKU
Overview



Overview LNKU / LOKU

Application

1) Face milling

2) Angled milling

3) Helical plunging

4) Shoulder milling

5) Slot milling

6) Pocket milling

Chipbreaker

GCB: Steel – Cast iron*
MFB: Stainless Steel – Exotic* – Titanium*
KCB: 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

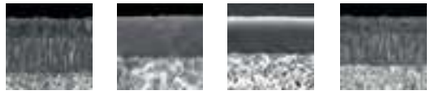
Which chipbreaker to use?

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

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

KCB
Strong cutting edge for cast iron applications.

KRP130 ■ KRP0235 ■ KRM240 ■ KRK115 ■



Available range LNKU12 / LOKU 12

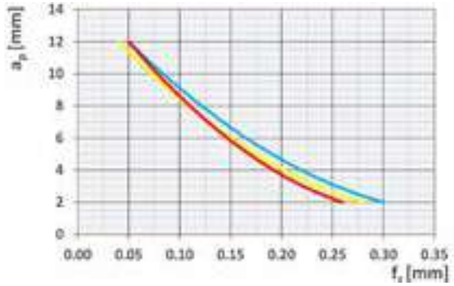
Insert	Designation	Chipbreaker	Available
	LNKU 120608ER-GCB KRP130	...-GCB	•
	LNKU 120608ER-GCB KRPD235	...-GCB	•
	LNKU 120608ER-MFB KRM240	...-MFB	•
	LNKU 120608ER-KCB KRK115	...-KCB	•
	LOKU 120608ER-MFB KRM240	...-MFB	•

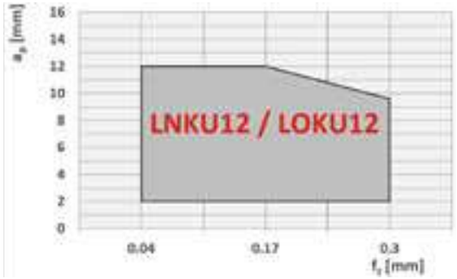
Body	Designation	ø Milling cutter [mm]	z	Available
	ARD-LO/LN12-40.Z.04	40	4	•
	ARD-LO/LN12-50.Z.05	50	5	•
	ARD-LO/LN12-63.Z.06	63	6	•
	ARD-LO/LN12-80.Z.07	80	7	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 11 – T15	5	•
	Power screw M10.0 x 31.0	20	•

Cutting data LNKU12 / LOKU 12

Starting parameters:





Grades and materials:

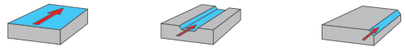
	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.05 – 0.30	12 – 2.0
M	Stainless steel	MFB	KRM240	200 – 60	0.04 – 0.28	12 – 2.0
K	Cast iron	KCB	KRK115	320 – 100	0.05 – 0.26	12 – 2.0

HPKT...
HPCT...
Overview

Overview HPKT... HPCT...

Application

1) Face milling 2) Slot milling 3) Chamfering



Chipbreaker

GCB: Steel – Cast iron*
MFB: Stainless Steel – Exotic* – Titanium*
ACB: Aluminium and non-ferrous metals

6 effective cutting edges

Grades

KRP130 ■ KRPD235 ■ KRM240 ■ KRS135 ■ KRN015 ■

* secondary application

Masterfinish

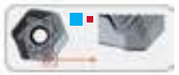
Extremely soft, spindle-friendly cut. The very positive cutting edge chipbreaker paired with the new chipbreaker designs revolutionizes milling on small to medium sized milling machines.

“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?



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

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

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

Available range HPKT... HPCT...

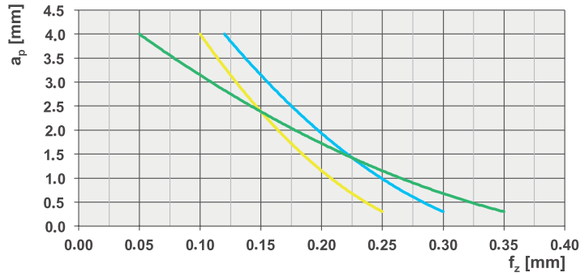
Insert	Designation	Chipbreaker	Available
	HPKT 0604AZER-GCB KRP130	...-GCB	•
	HPKT 0604AZER-GCB KRPD235	...-GCB	•
	HPKT 0604AZER-MFB KRS135	...-MFB	•
	HPCT 0604AZFR-ACB KRN015	...-ACB	•

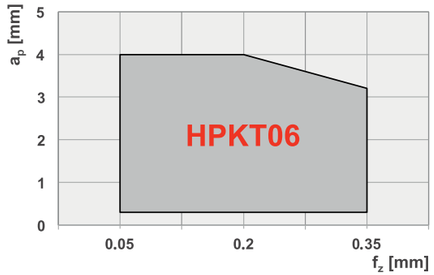
Body	Designation	ø Milling cutter [mm]	z	Available
	WS-H06-40.Z.04-W-32-50-110	40	4	•
	AR-H06-40.Z.04	40	4	•
	AR-H06-50.Z.05	50	5	•
	AR-H06-63.Z.06	63	6	•
	AR-H06-80.Z.07	80	7	•
	AR-H06-100.Z.09	100	9	•
	AR-H06-125.Z.10	125	10	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 11 – T15+	5	•
	Power screw M8.0 x 30.0 (only for AR-H06-40.Z.04)	15	•

Cutting data HPKT... HPCT...

Starting parameters:





Grades and materials:

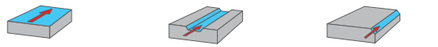
	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.12 – 0.3	4 – 0.3
M	Stainless steel	MFB	KRS135	200 – 60	0.1 – 0.25	4 – 0.3
N	Non-ferrous	ACB	KRN015	< 2000	0.05 – 0.35	4 – 0.3

HOKT...
HOCT...
Overview

Overview HOKT... HOCT...

Application

1) Face milling 2) Slot milling 3) Chamfering



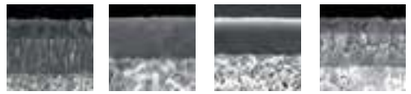
Chipbreaker

GCB: Steel – Cast iron*
MFB: Stainless Steel – Exotic* – Titanium*

6 effective cutting edges

Grades

KRP130 ■ KRPD235 ■ KRM240 ■ KRS135 ■



* secondary application

Masterfinish

- Extremely soft, spindle-friendly cut. The very positive cutting edge chipbreaker paired with the new chip-breaker 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?

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

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

Available range HOKT... HOCT...

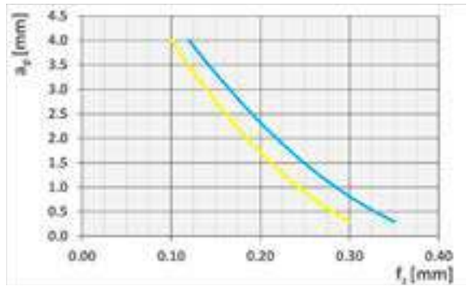
Insert	Designation	Chipbreaker	Available
	HOKT 0604AZER-GCB KRP130	...-GCB	•
	HOKT 0604AZER-GCB KRPD235	...-GCB	•
	HOCT 0604AZER-MFB KRM240	...-MFB	•
	HOCT 0604AZER-MFB KRS135	...-MFB	•

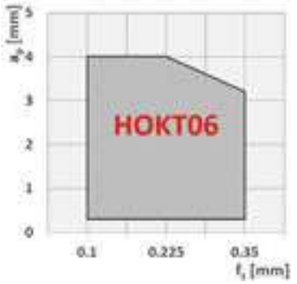
Body	Designation	ø Milling cutter [mm]	z	Available
	WS-H06-40.Z.04-W-32-50-110	40	4	•
	AR-H06-40.Z.04	40	4	•
	AR-H06-50.Z.05	50	5	•
	AR-H06-63.Z.06	63	6	•
	AR-H06-80.Z.07	80	7	•
	AR-H06-100.Z.09	100	9	•
	AR-H06-125.Z.10	125	10	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 11 – T15+	5	•
	Power screw M8.0 x 30.0 (only for AR-H06-40.Z.04)	15	•

Cutting data HOKT... HOCT...

Starting parameters:

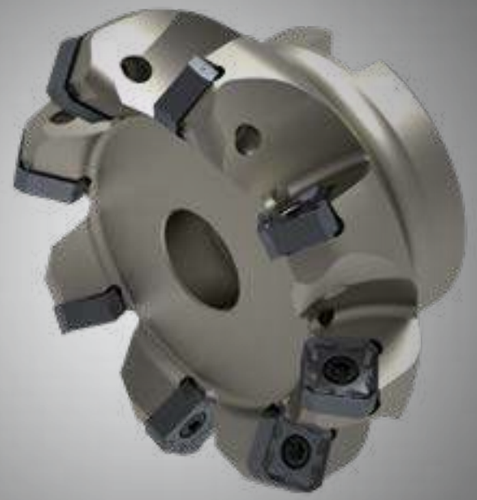




Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.12 – 0.35	4 – 0.3
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.1 – 0.3	4 – 0.3

SOKU
Overview



Overview SOKU

Application

1) Face milling 

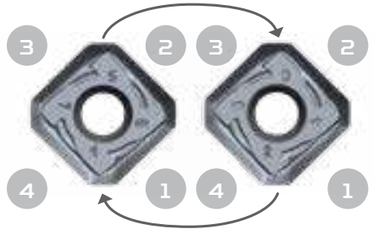
2) Slot milling 

3) Chamfering 

Chipbreaker

GCB: Steel / Medium & roughing operations
MFB: Steel – Stainless Steel / Finishing
KCB: Cast iron

Indexing 4 times and reversible



Grades

KRP130 

KRP135 

KRP0235 

KRM240 

KRS135 

KRK115 

KRK220 

Customer benefits

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

Square double-sided insert!

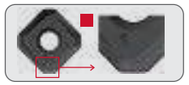
Available in 2 dimensions

IC 12 IC 15

Which chipbreaker to use?

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

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



KCB
Strong cutting edge for cast iron applications.

Available range SOKU12

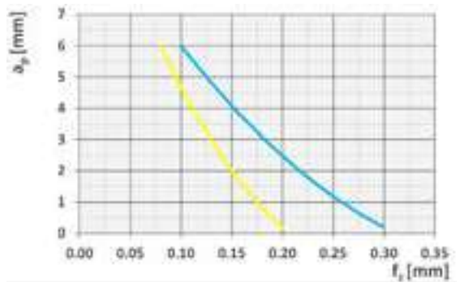
Insert	Designation	Chipbreaker	Available
	SOKU 1205AZER-GCB KRP130	...-GCB	•
	SOKU 1205AZER-GCB KRP135	...-GCB	•
	SOKU 1205AZER-GCB KRPD235	...-GCB	•
	SOKU 1205AZER-MFB KRM240	...-MFB	•
	SOKU 1205AZER-MFB KRS135	...-MFB	•

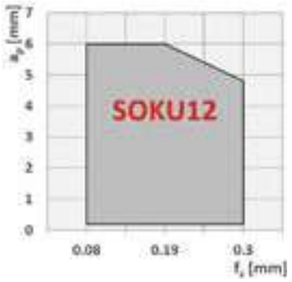
Body	Designation	ø Milling cutter [mm]	z	Available
	ARD-S12-40.Z.04	40	4	•
	ARD-S12-50.Z.05	50	5	•
	ARD-S12-63.Z.06	63	6	•
	ARD-S12-80.Z.08	80	8	•
	ARD-S12-100.Z.10	100	10	•
	ARD-S12-125.Z.12	125	12	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 11.0 – T15	5	•

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	GCB	KRP130 KRP135 KRPD235	220 – 60	0.1 – 0.3	6 – 0.2
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.08 – 0.2	6 – 0.2

Available range SOKU15

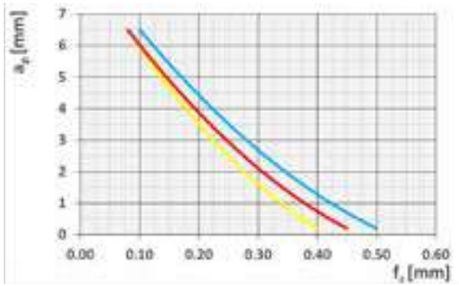
Insert	Designation	Chipbreaker	Available
	SOKU 1505AZER-GCB KRP130	...-GCB	•
	SOKU 1505AZER-GCB KRPD235	...-GCB	•
	SOKU 1505AZER-GCB KRP135	...-GCB	•
	SOKU 1505AZER-MFB KRM240	...-MFB	•
	SOKU 1505AZER-MFB KRS135	...-MFB	•
	SOKU 1505AZER-KCB KRK115	...-KCB	•
	SOKU 1505AZER-KCB KRK220	...-KCB	•

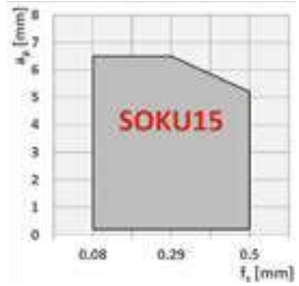
Body	Designation	ø Milling cutter [mm]	z	Available
	ARD-S15-40.Z.04	40	4	•
	ARD-S15-50.Z.04	50	4	•
	ARD-S15-63.Z.05	63	5	•
	ARD-S15-80.Z.06	80	6	•
	ARD-S15-100.Z.07	100	7	•
	ARD-S15-125.Z.08	125	8	•
	ARD-S15-160.Z.10	160	10	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.5 x 13.0 – T20+	5	•
	Power screw M8.0 x 30.0 (only for ARD-S15-40.Z.04)	15	•

Cutting data SOKU15

Starting parameters:





Grades and materials

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	f_z [mm]	a_p [mm]
P	Steel	GCB	KRP130 KRP135 KRPD235	220 – 60	0.1 – 0.5	6.5 – 0.2
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.08 – 0.4	6.5 – 0.2
K	Cast iron	KCB	KRK115 KRK220	320 – 100	0.08 – 0.45	6.5 – 0.2

HNKU
HOKU
Overview

Overview HNKU / HOKU

Application

1) Face milling

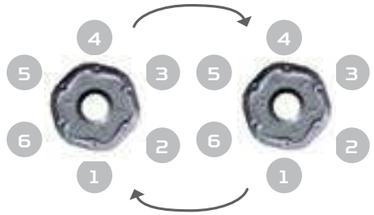

2) Slot milling


3) Chamfering


Chipbreaker

GCB: Steel – Cast iron*
MFB: Stainless Steel – Exotic* – Titanium*

Indexing 6 times and reversible



Grades

KRP130 ■ KRPD235 ■ KRM240 ■ KRS135 ■

* secondary application

Customer benefits

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

Which chipbreaker to use?

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

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

Available range HNKU

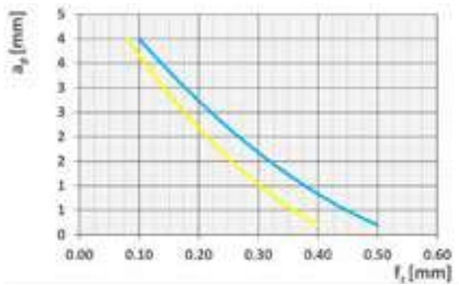
Insert	Designation	Chipbreaker	Available
	HNKU 0806AZER-GCB KRP130	...-GCB	•
	HNKU 0806AZER-GCB KRPD235	...-GCB	•
	HNKU 0806AZER-MFB KRS135	...-MFB	•

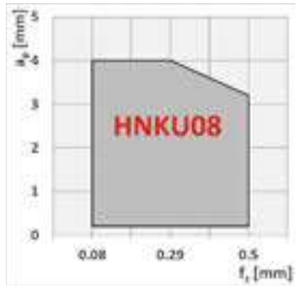
Body	Designation	ø Milling cutter [mm]	z	Available
	ARD-H08-40.Z.04	40	4	•
	ARD-H08-50.Z.04	50	4	•
	ARD-H08-63.Z.05	63	5	•
	ARD-H08-80.Z.06	80	6	•
	ARD-H08-100.Z.08	100	8	•
	ARD-H08-125.Z.09	125	9	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 11.0 – T15+	5	•

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	GCB	KRP130 KRPD235	220 – 60	0.1 – 0.5	4 – 0.2
M	Stainless steel	MFB	KRS135	200 – 60	0.08 – 0.4	4 – 0.2

Available range HOKU

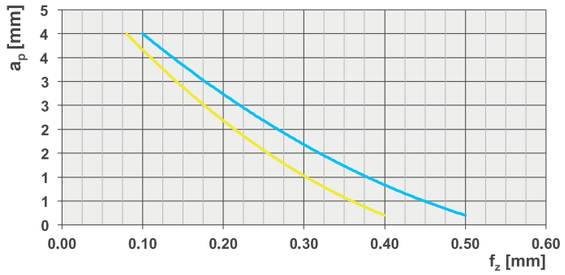
Insert	Designation	Chipbreaker	Available
	HOKU 0806AZER-GCB KRP130	...-GCB	•
	HOKU 0806AZER-GCB KRPD235	...-GCB	•
	HOKU 0806AZER-MFB KRM240	...-MFB	•
	HOKU 0806AZER-MFB KRS135	...-MFB	•

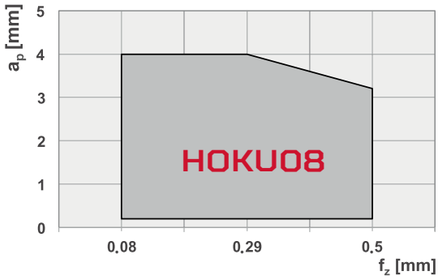
Body	Designation	ø Milling cutter [mm]	z	Available
	ARD-H08-40.Z.04	40	4	•
	ARD-H08-50.Z.04	50	4	•
	ARD-H08-63.Z.05	63	5	•
	ARD-H08-80.Z.06	80	6	•
	ARD-H08-100.Z.08	100	8	•
	ARD-H08-125.Z.09	125	9	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 11.0 – T15+	5	•

Cutting data HOKU

Starting parameters:



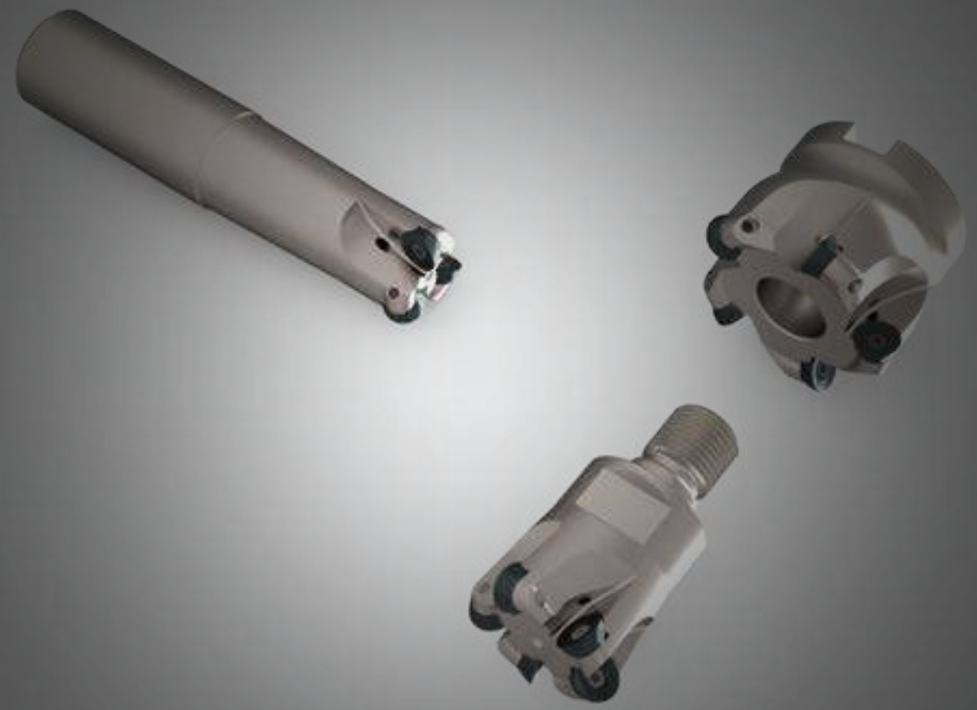


Grades and materials:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.1 – 0.5	4 – 0.2
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.08 – 0.4	4 – 0.2

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

Overview



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 

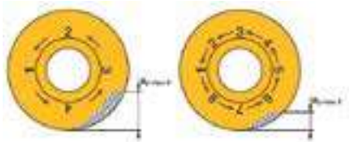
8) Turn milling 

Chipbreaker

GCB: Steel – Cast iron*
MFB: Stainless Steel
EMB: Exotic – Titanium*
ACB: 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

KRP130 ■ KRPD235 ■ KRM240 ■ KRN015 ■ KRS135 ■

KRS140 ■

* 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?

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

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

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

EMB
Stable cutting edge for dedicated exotic materials and titanium.

MOSN
Strong reinforced cutting edge for hard material.

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

Overview

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...

ROMX 1204 (1° to 16°)

NEW! Two different clearances and only ONE milling tool

OPTION: Adapted clearance angles are also available on request

Available range R10

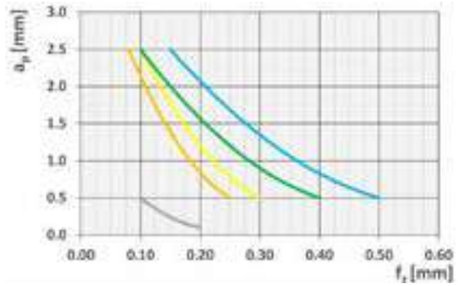
Insert	Designation	Chipbreaker	Available
	RPMX 10T3M0-GCB KRP130	...-GCB	•
	RPMX 10T3M0-GCB KRPD235	...-GCB	•
	RPMX 10T3M0-MFB KRM240	...-MFB	•
	RPMX 10T3M0-MFB KRS135	...-MFB	•
	RDHX 10T3M0-ACB KRN015	...-ACB	•
	RPHX 10T3M0-EMB KRS135	...-EMB	•
	RPHX 10T3M0-EMB KRS140	...-EMB	•

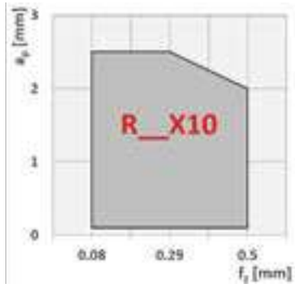
Body	Designation	ø Milling cutter [mm]	z	Available
	SH-R10-20.Z.02-A-50-102	20	2	•
	SH-R10-20.Z.02-A-50-165-165	20	2	•
	SH-R10-25.Z.03-A-60-116	25	3	•
	SH-R10-25.Z.03-A-60-165-165	25	3	•
	SH-R10-32.Z.04-A-70-130	32	4	•
	SH-R10-32.Z.04-A-70-165-165	32	4	•
	TC-R10-20.Z.02	20	2	○
	TC-R10-25.Z.03	25	3	○
	TC-R10-32.Z.04	32	4	•
	TC-R10-35.Z.04	35	4	•
	AR-R10-40.Z.04	40	4	•
	AR-R10-42.Z.05	42	5	•
	AR-R10-50.Z.05	50	5	•

Spare parts	Designation	Torque moment [Nm]	Available
	M3.0 x 7.5 – T10+	2	•
	Power screw M8.0 x 30.0 (for AR-R10-40.Z.04 and for AR-R10-42.Z.05)	15	•

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	GCB	KRP130 KRPD235	220 – 60	0.15 – 0.5	2.5 – 0.5
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.1 – 0.3	2.5 – 0.5
N	Non-ferrous	ACB	KRN015	‹ 2000	0.1 – 0.4	2.5 – 0.5
S	Heat-resistant alloys	EMB	KRS135	75 – 25	0.08 – 0.25	2.5 – 0.5
S	Titanium	EMB	KRS140			

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

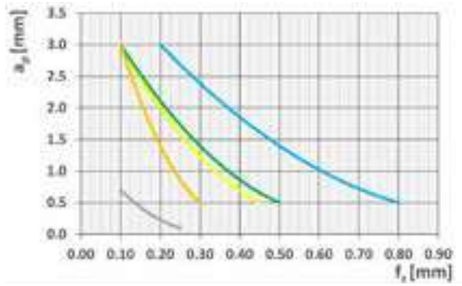
Insert	Designation	Chipbreaker	Available
	RPMX 1204M0-GCB KRP130	...-GCB	•
	RPMX 1204M0-GCB KRPD235	...-GCB	•
	RPMX 1204M0-MFB KRM240	...-MFB	•
	RPMX 1204M0-MFB KRS135	...-MFB	•
	RDHX 1204M0-ACB KRN015	...-ACB	•
	RPHX 1204M0-EMB KRS135	...-EMB	•
	RPHX 1204M0-EMB KRS140	...-EMB	•

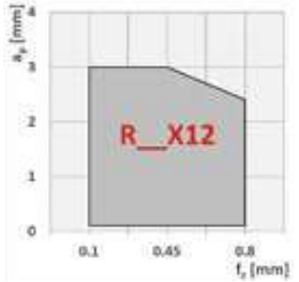
Body	Designation	ø Milling cutter [mm]	z	Available
	SH-R12-25.Z.02-A-30-86	25	2	•
	SH-R12-25.Z.02-A-60-116	25	2	•
	SH-R12-32.Z.03-A-40-100	32	3	•
	SH-R12-32.Z.03-A-70-130	32	3	•
	TC-R12-25.Z.02	25	2	•
	TC-R12-35.Z.03	35	3	•
	AR-R12-40.Z.04	40	4	•
	AR-R12-42.Z.04	42	4	•
	AR-R12-50.Z.05	50	5	•
	AR-R12-52.Z.05	52	5	•
	AR-R12-63.Z.06	63	6	•
	AR-R12-66.Z.06	66	6	•
	AR-R12-80.Z.08	80	8	•
	AR-R12-100.Z.10	100	10	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 8.5 – T15 (only for SH and TC)	5	•
	M4.0 x 11.0 – T15+ (only for AR)	5	•
	Power screw M8.0 x 30.0 (for AR-R12-40.Z.04 and for AR-R12-42.Z.04)	15	•

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	GCB	KRP130 KRPD235	220 – 60	0.2 – 0.8	3 – 0.5
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.1 – 0.45	3 – 0.5
N	Non-ferrous	ACB	KRN015	‹ 2000	0.1 – 0.5	3 – 0.5
S	Heat-resistant alloys	EMB	KRS135	75 – 25	0.1 – 0.3	3 – 0.5
S	Titanium	EMB	KRS140			

Recommended!

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

Available range R16

Insert	Designation	Chipbreaker	Available
	RPMX 1605M0-GCB KRP130	...-GCB	•
	RPMX 1605M0-GCB KRPD235	...-GCB	•
	RPMX 1605M0-MFB KRM240	...-MFB	•
	RPMX 1605M0-MFB KRS135	...-MFB	•
	RPHX 1605M0-EMB KRS135	...-EMB	•
	RPHX 1605M0-EMB KRS140	...-EMB	•

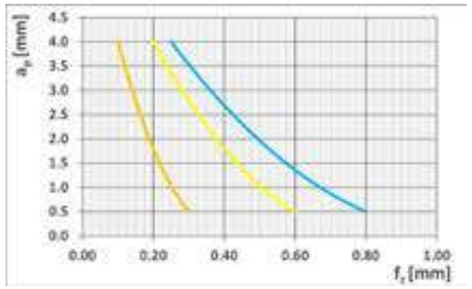
Body	Designation	ø Milling cutter [mm]	z	Available
	AR-R16-50.Z.03	50	3	•
	AR-R16-52.Z.04	52	4	•
	AR-R16-63.Z.05	63	5	•
	AR-R16-66.Z.05	66	5	•
	AR-R16-80.Z.06	80	6	•
	AR-R16-100.Z.07	100	7	•
	AR-R16-125.Z.08	125	8	•

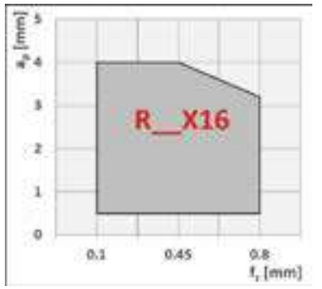
Spare parts	Designation	Torque moment [Nm]	Available
	M4.5 x 13.0 – T20+	5	•
	Power screw M10.0 x 31.0 (for AR-R16-50.Z.03 and for AR-R16-52.Z.04)	20	•

• available from stock, o available upon request

Cutting data R16

Starting parameters:





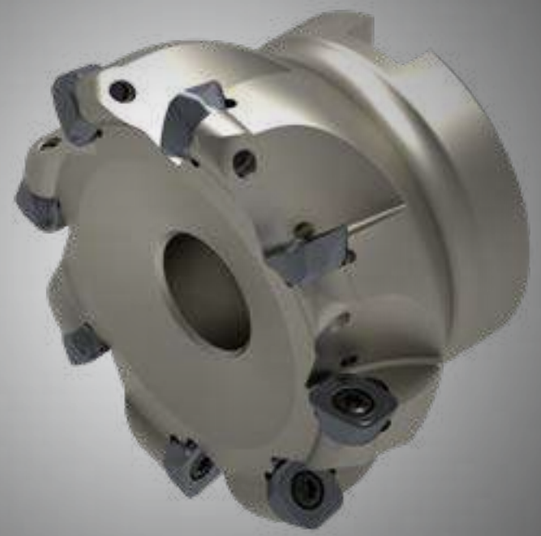
Grades and materials:

Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.25 – 0.8	4 – 0.5
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.2 – 0.6	4 – 0.5
S	Heat-resistant alloys	EMB	KRS135	75 – 25	0.1 – 0.3	4 – 0.5
S	Titanium	EMB	KRS140			

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

RNKU...
ROHU...
Overview



Overview RNKU... ROHU...

Application

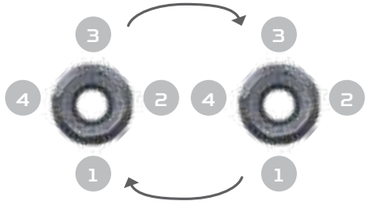
1) Face milling

2) Slot milling

Chipbreaker

GCB: Steel – Cast iron*
MFB: Stainless Steel

Indexing 4 times and reversible



Grades

KRP130 ■ KRPD235 ■ KRM240 ■ KRS135 ■

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?

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

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

Available range R12

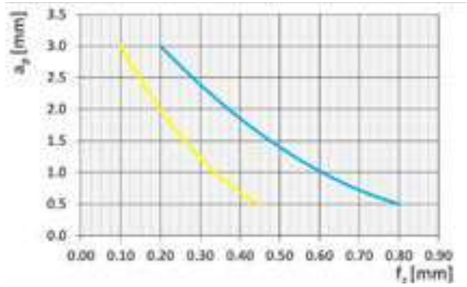
Insert	Designation	Chipbreaker	Available
	RNKU 1204M0ER-GCB KRP130	**...-GCB**	•
	RNKU 1204M0ER-GCB KRPD235	**...-GCB**	•
	ROHU 1204M0ER-MFB KRM240	**...-MFB**	•
	ROHU 1204M0ER-MFB KRS135	**...-MFB**	•

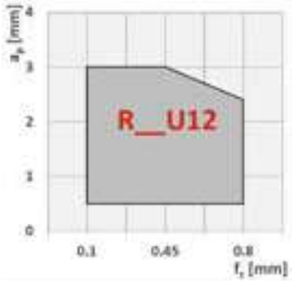
Body	Designation	ø Milling cutter [mm]	z	Available
	SHD-R12-32.Z.03-A-70-131	32	3	•
	SHD-R12-32.Z.03-A-70-165	32	3	•
	ARD-R12-40.Z.04	40	4	•
	ARD-R12-50.Z.05	50	5	•
	ARD-R12-63.Z.06	63	6	•
	ARD-R12-80.Z.08	80	8	•
	ARD-R12-100.Z.10	100	10	•

Spare parts	Designation	Torque moment [Nm]	Available
	Screw M4.0 x 11.0 – T15+	5	•
	Power screw M8.0 x 30.0 (only for ARD-R12-40.Z.04)	15	•

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	GCB	KRP130 KRPD235	220 – 60	0.2 – 0.8	3 – 0.5
M	Stainless steel	MFB	KRM240 KRS135	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

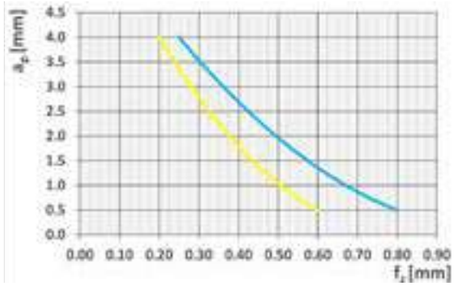
Insert	Designation	Chipbreaker	Available
	RNKU 1605MOER-GCB KRP130	...-GCB	•
	RNKU 1605MOER-GCB KRPD235	...-GCB	•
	ROHU 1605MOER-MFB KRM240	...-MFB	•
	ROHU 1605MOER-MFB KRS135	...-MFB	•

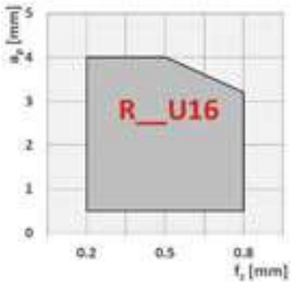
Body	Designation	ø Milling cutter [mm]	z	Available
	ARD-R16-50.Z.03	50	3	○
	ARD-R16-63.Z.05	63	5	•
	ARD-R16-80.Z.06	80	6	○
	ARD-R16-100.Z.07	100	7	○
	ARD-R16-125.Z.08	125	8	○

Spare parts	Designation	Torque moment [Nm]	Available
	M4.5 x 13.0 – T20	5	•
	Power screw M10.0 x 31.0 (only for ARD-R16-50.Z.03)	20	•

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	GCB	KRP130 KRPD235	220 – 60	0.25 – 0.8	4 – 0.5
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.2 – 0.6	4 – 0.5

Recommended!

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

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

Overview

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

GCB: Steel – Cast iron*
MFB: Stainless Steel – Titanium*

4 effective cutting edges

Grades

KRP130 ■ KRPD235 ■ KRM240 ■ KRS135 ■ KRS140 ■

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?

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

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

Available range HFC07

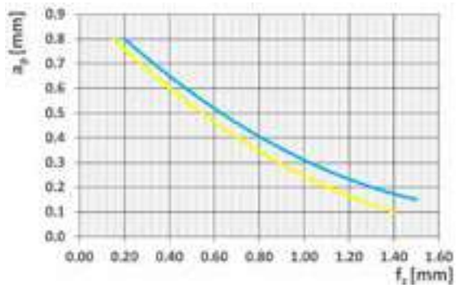
Insert	Designation	Chipbreaker	Available
	XPLT 070305SR-GCB KRP130	...-GCB	•
	XPLT 070305SR-GCB KRPD235	...-GCB	•
	XPLT 070305ER-MFB KRM240	...-MFB	•
	XPLT 070305ER-MFB KRS135	...-MFB	•
	XPLT 070305ER-MFB KRS140	...-MFB	•

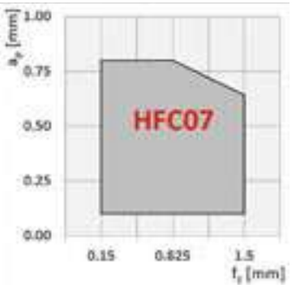
Body	Designation	ø Milling cutter [mm]	z	Available
	SH-HFC07-16.Z.02-A-50-200	16	2	•
	SH-HFC07-20.Z.03-A-50-200	20	3	•
	SH-HFC07-25.Z.04-A-50-200	25	4	•
	TC-HFC07-16.Z.02	16	2	•
	TC-HFC07-20.Z.03	20	3	•
	TC-HFC07-25.Z.04	25	4	•

Spare parts	Designation	Torque moment [Nm]	Available
	M2.5x5.0 – T08	1.2	•

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	GCB	KRP130 KRPD235	220 – 60	0.2 – 1.5	0.8 – 0.15
M	Stainless steel	MFB	KRM240 KRS135 KRS140	200 – 60	0.15 – 1.4	0.8 – 0.1

Available range HFC10 – XDLT

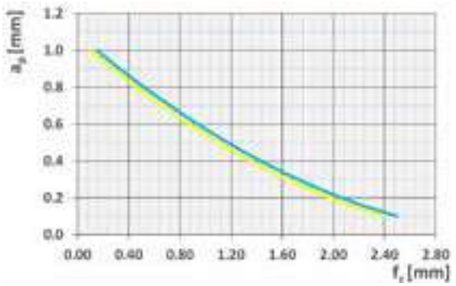
Insert	Designation	Chipbreaker	Available
	XDLT 10T308SR-GCB KRP130	...-GCB	•
	XDLT 10T308SR-GCB KRPD235	...-GCB	•
	XDLT 10T308ER-MFB KRM240	...-MFB	•
	XDLT 10T308ER-MFB KRS135	...-MFB	•
	XDLT 10T308ER-MFB KRS140	...-MFB	•

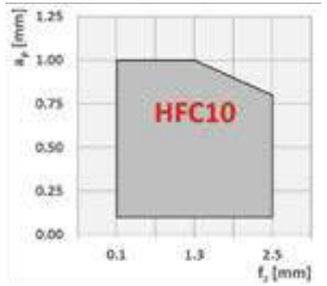
Body	Designation	ø Milling cutter [mm]	z	Available
	SH-HFC10-25.Z.03-A-50-125	25	3	○
	SH-HFC10-25.Z.03-A-50-225	25	3	•
	AR-HFC10-40.Z.04	40	4	•
	AR-HFC10-50.Z.05	50	5	•
	AR-HFC10-63.Z.06	63	6	•

Spare parts	Designation	Torque moment [Nm]	Available
	M3.5 x 7.2 – T15 (only for SH)	3.2	•
	M3.5 x 8.6 – T15 (only for AR)	3.2	•
	Power screw M8.0 x 30.0 (only for AR-HFC10-40.Z.04)	15	•

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	GCB	KRP130 KRPD235	220 – 60	0.15 – 2.5	1 – 0.1
M	Stainless steel	MFB	KRM240 KRS135 KRS140	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

-GCB

-MFB

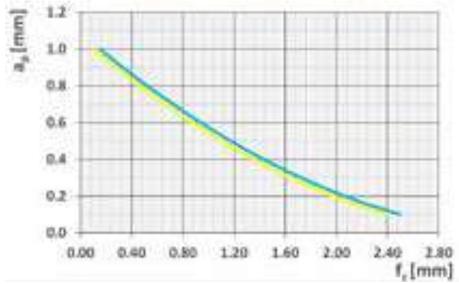
Insert	Designation	Chipbreaker	Available
	XDLX 10T308SR-GCB KRP130	...-GCB	•
	XDLX 10T308SR-GCB KRPD235	...-GCB	•
	XDLX 10T308SR-MFB KRM240	...-MFB	•
	XDLX 10T308SR-MFB KRS135	...-MFB	•

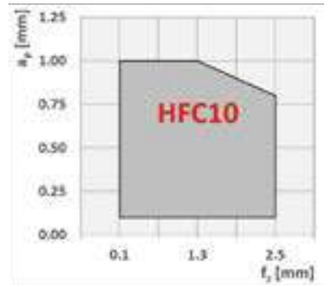
Body	Designation	ø Milling cutter [mm]	z	Available
	SH-HFC10-25.Z.03-A-50-125	25	3	○
	SH-HFC10-25.Z.03-A-50-225	25	3	•
	AR-HFC10-40.Z.04	40	4	•
	AR-HFC10-50.Z.05	50	5	•
	AR-HFC10-63.Z.06	63	6	•

Spare parts	Designation	Torque moment [Nm]	Available
	M3.5 x 7.2 – T15 (only for SH)	3.2	•
	M3.5 x 8.6 – T15 (only for AR)	3.2	•
	Power screw M8.0 x 30.0 (only for AR-HFC10-40.Z.04)	15	•

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	GCB	KRP130 KRPD235	220 – 60	0.15 – 2.5	1 – 0.1
M	Stainless steel	MFB	KRM240 KRS135 KRS140	200 – 60	0.1 – 2.4	1 – 0.1

Available range HFC13

Insert	Designation	Chipbreaker	Available
	XOLT 130410SR-GCB KRP130	...-GCB	•
	XOLT 130410SR-GCB KRPD235	...-GCB	•
	XOLT 130410ER-MFB KRM240	...-MFB	•
	XOLT 130410ER-MFB KRS135	...-MFB	•
	XOLT 130410ER-MFB KRS140	...-MFB	•

Body	Designation	ø Milling cutter [mm]	z	Available
	SH-HFC13-35.Z.03-A-63-144	35	3	○
	SH-HFC13-35.Z.03-A-63-250	35	3	•
	TC-HFC13-35.Z.03	35	3	○
	AR-HFC13-50.Z.04	50	4	•
	AR-HFC13-63.Z.05	63	5	•
	AR-HFC13-80.Z.07	80	7	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.5 x 10.5 – T20	5	•

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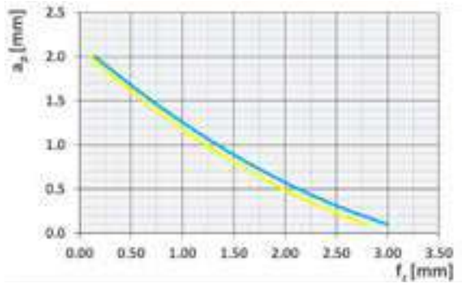
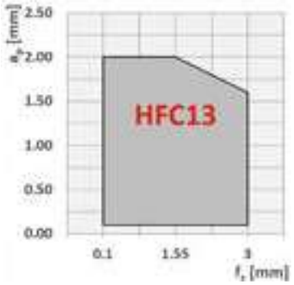
Cutting data HFC13

Starting parameters:





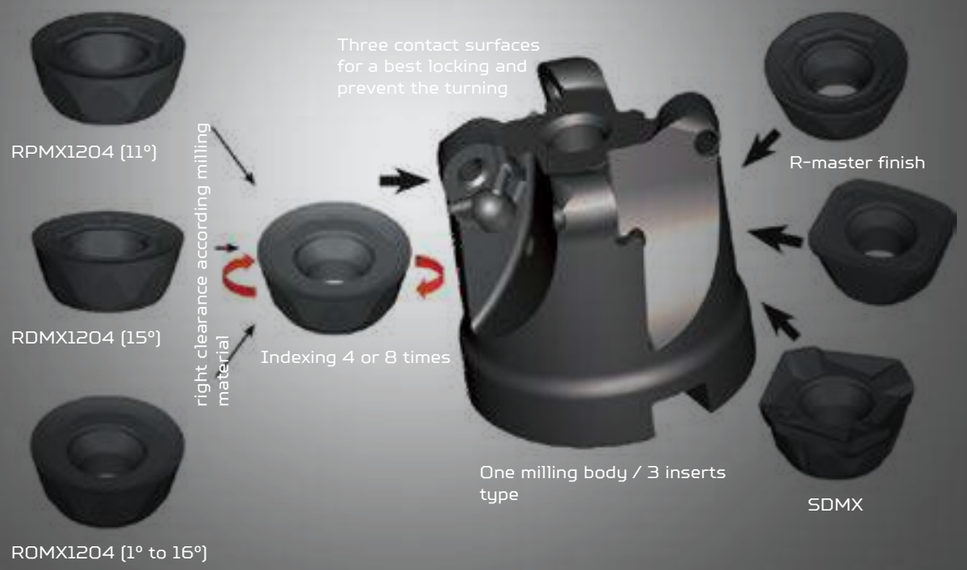
Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.15 – 2.5	1 – 0.1
M	Stainless steel	MFB	KRM240 KRS135 KRS140	200 – 60	0.1 – 2.4	1 – 0.1

SDMX
Overview

Standard application

Additional application



Overview SDMX

Application

1) Face milling 

2) Angled milling 

3) Slot milling 

4) Chamfering 

5) Profile milling 

Chipbreaker

GCB: Steel – Cast iron*
MFB: Stainless Steel

4 effective cutting edges

Grades

KRP130 ■ KRPD235 ■ KRM240 ■ KRS135 ■

* 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?

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

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

Available range SDMX11

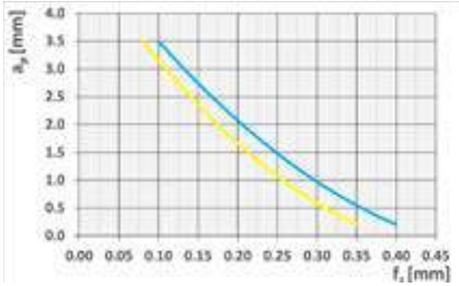
Insert	Designation	Chipbreaker	Available
	SDMX 1105AEER-GCB KRP130	...-GCB	•
	SDMX 1105AEER-GCB KRPD235	...-GCB	•
	SDMX 1105AEER-MFB KRM240	...-MFB	•
	SDMX 1105AEER-MFB KRS135	...-MFB	•

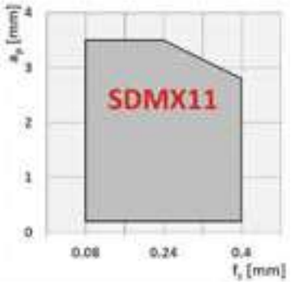
Body	Designation	ø Milling cutter [mm]	z	Available
	SH-R12-25.Z.02-A-30-86	25	2	•
	SH-R12-25.Z.02-A-60-116	25	2	•
	SH-R12-32.Z.03-A-40-100	32	3	•
	SH-R12-32.Z.03-A-70-130	32	3	•
	TC-R12-25.Z.02	25	2	•
	TC-R12-35.Z.03	35	3	•
	AR-R12-40.Z.04	40	4	•
	AR-R12-42.Z.04	42	4	•
	AR-R12-50.Z.05	50	5	•
	AR-R12-52.Z.05	52	5	•
	AR-R12-63.Z.06	63	6	•
	AR-R12-66.Z.06	66	6	•
	AR-R12-80.Z.08	80	8	•
	AR-R12-100.Z.10	100	10	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 8.5 – T15 (only for SH AND TC)	5	•
	M4.0 x 11.0 – T15+ (only for AR)	5	•
	Power screw M8.0 x 30.0 (for AR-R12-40.Z.04 and for AR-R12-42.Z.04)	15	•

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	GCB	KRP130 KRPD235	220 – 60	0.1 – 0.4	3.5 – 0.2
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.08 – 0.35	3.5 – 0.2

Available range SDMX15

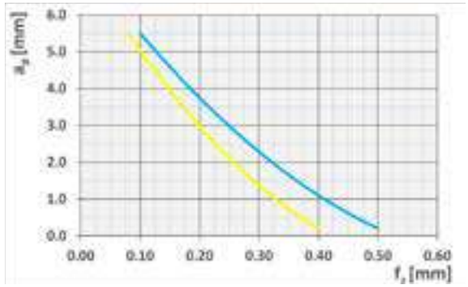
Insert	Designation	Chipbreaker	Available
	SDMX 1506AEER-GCB KRP130	...-GCB	•
	SDMX 1506AEER-GCB KRPD235	...-GCB	•
	SDMX 1506AEER-MFB KRM240	...-MFB	•
	SDMX 1506AEER-MFB KRS135	...-MFB	•

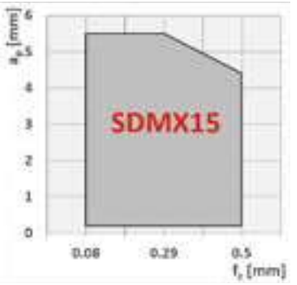
Body	Designation	ø Milling cutter [mm]	z	Available
	AR-R16-50.Z.03	50	3	•
	AR-R16-52.Z.04	52	4	•
	AR-R16-63.Z.05	63	5	•
	AR-R16-66.Z.05	66	5	•
	AR-R16-80.Z.06	80	6	•
	AR-R16-100.Z.07	100	7	•
	AR-R16-125.Z.08	125	8	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.5 x 13.0 – T20+	5	•
	Power screw M10.0 x 31.0 (for AR-R16-50.Z.03 and for AR-R16-52.Z.04)	20	•

Cutting data SDMX15

Starting parameters:

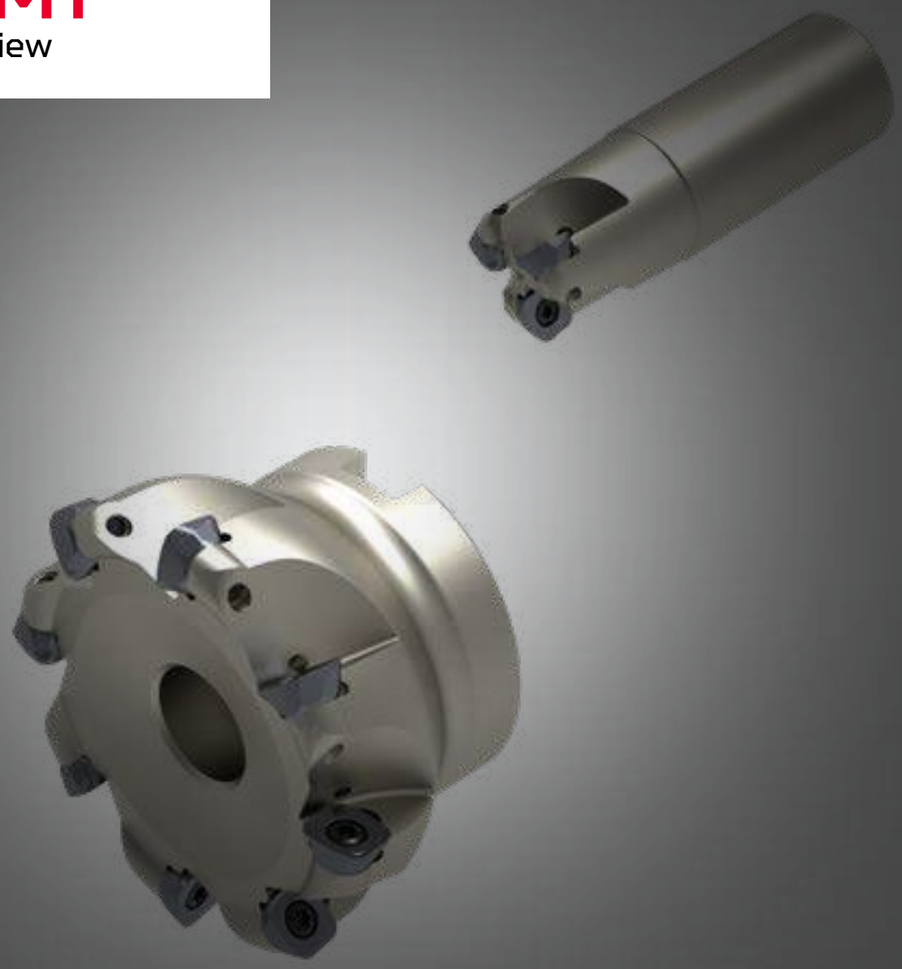




Grades and materials:

	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.1 – 0.5	5.5 – 0.2
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.08 – 0.4	5.5 – 0.2

EOMT
Overview



Overview EOMT

Application

1) Face milling

2) Angled milling

3) Slot milling

4) Chamfering

5) Profile milling

Chipbreaker

GCB: Steel – Cast iron*
MFB: Stainless Steel

Indexing 2 times

Grades

KRP130 ■ KRPD235 ■ KRM240 ■ KRS135 ■ KRS140 ■

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?

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

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

Available range EOMT12

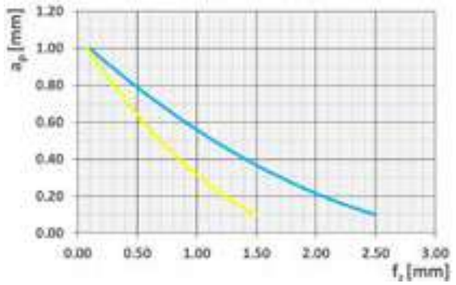
Insert	Designation	Chipbreaker	Available
	EOMT 120416-GCB KRP130	...-GCB	•
	EOMT 120416-GCB KRPD235	...-GCB	•
	EOMT 120416-MFB KRM240	...-MFB	•
	EOMT 120416-MFB KRS135	...-MFB	•

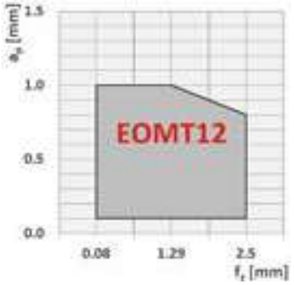
Body	Designation	ø Milling cutter [mm]	z	Available
	SH-R12-25.Z.02-A-30-86	25	2	•
	SH-R12-25.Z.02-A-60-116	25	2	•
	SH-R12-32.Z.03-A-40-100	32	3	•
	SH-R12-32.Z.03-A-70-130	32	3	•
	TC-R12-25.Z.02	25	2	•
	TC-R12-35.Z.03	35	3	•
	AR-R12-40.Z.04	40	4	•
	AR-R12-42.Z.04	42	4	•
	AR-R12-50.Z.05	50	5	•
	AR-R12-52.Z.05	52	5	•
	AR-R12-63.Z.06	63	6	•
	AR-R12-66.Z.06	66	6	•
	AR-R12-80.Z.08	80	8	•
	AR-R12-100.Z.10	100	10	•

Spare parts	Designation	Torque moment [Nm]	Available
	M4.0 x 8.5 – T15 (only for SH and TC)	5	•
	M4.0 x 11.0 – T15+ (only for AR)	5	•
	Power screw M8.0 x 30.0 (for AR-R12-40.Z.04 and for AR-R12-42.Z.04)	15	•

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	GCB	KRP130 KRPD235	220 – 60	0.1 – 2.5	1 – 0.1
M	Stainless steel	MFB	KRM240 KRS135	200 – 60	0.08 – 1.5	1 – 0.1

TPKN...
TPKR...
Overview

Overview TPKN... TPKR...

Application

1) Face milling

2) Slot milling

3) Peripheral milling

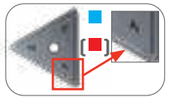
4) Shoulder milling

Chipbreaker

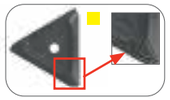
GCB: Steel – Cast iron*
MFB: Stainless Steel

2 effective cutting edges

Which chipbreaker to use?



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



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

Grade

Standard grades

KRP130 ■ KRPD235 ■ KRM240 ■

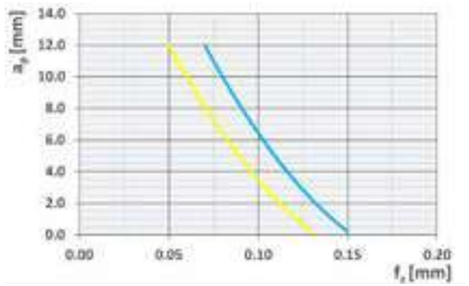
* secondary application

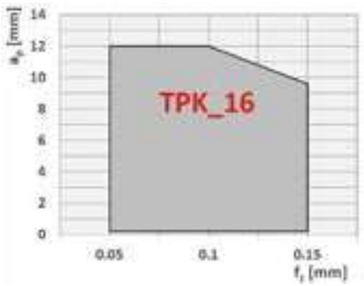
Available range TPKN / TPKR 16

Insert	Designation	Chipbreaker	Available
	TPKN 1603PDR-GCB KRP130	...-GCB	○
	TPKN 1603PDR-GCB KRPD235	...-GCB	○
	TPKR 1603PDR-MFB KRM240	...-MFB	○

Cutting data TPKN / TPKR 16

Starting parameters:





Grades and materials:

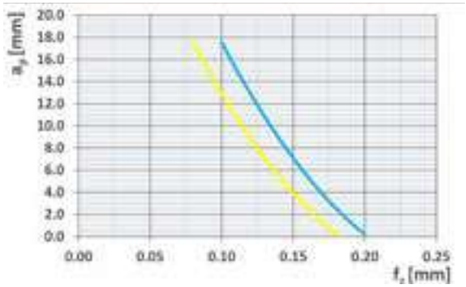
	Material group	Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB	KRP130 KRPD235	220 – 60	0.7 – 0.15	12 – 0.2
M	Stainless steel	MFB	KRM240	200 – 60	0.05 – 0.13	12 – 0.2

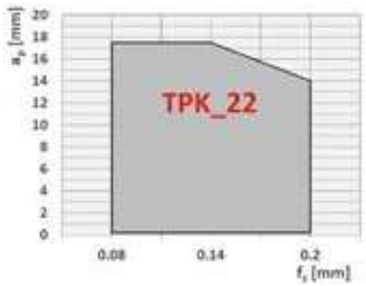
Available range TPKN / TPKR 22

Insert	Designation	Chipbreaker	Available
	TPKN 2204PDR-GCB KRP130	...-GCB	○
	TPKN 2204PDR-GCB KRPD235	...-GCB	○
	TPKR 2204PDR-MFB KRM240	...-MFB	○

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	GCB	KRP130 KRPD235	220 – 60	0.1 – 0.2	17.5 – 0.2
M	Stainless steel	MFB	KRM240	200 – 60	0.08 – 0.18	17.5 – 0.2

SEK...
SPK...
Overview

Overview SEK... SPK...

Application

1) Face milling

2) Slot milling

3) Chamfering (only SEK...) (only SEK...)

4) Slot 45°

5) Slot 75° (only SPK...)

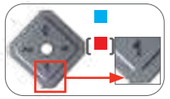
Chipbreaker

GCB: Steel – Cast iron*
MFB: Stainless Steel

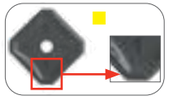
4 effective cutting edges

* secondary application

Which chipbreaker to use?



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



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

Grade

Standard grades

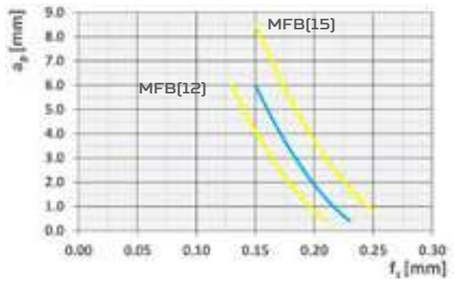
KRP130 ■ KRPD235 ■ KRM240 ■

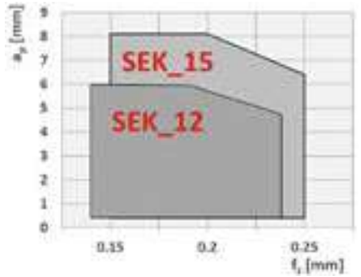
Available range SEK_12 / 15

Insert	Designation	Chipbreaker	Available
	SEKN 1203AFSN-GCB KRP130	...-GCB	○
	SEKN 1203AFSN-GCB KRPD235	...-GCB	○
	SEKR 1203AFSN-MFB KRM240	...-MFB	○
	SEKR 1504AFSN-MFB KRM240	...-MFB	○

Cutting data SEK_12 / 15

Starting parameters:





Grades and materials:

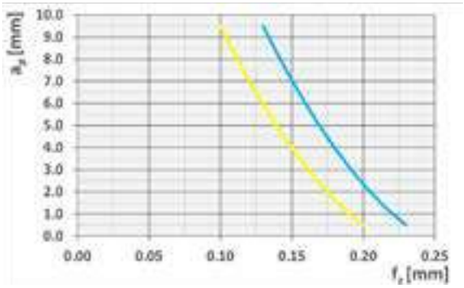
Material group		Chipbreaker	Grade	Cutting data v_c [m/min]	Cutting data f_z [mm]	Cutting data a_p [mm]
P	Steel	GCB (12)	KRP130	220 – 60	0.15 – 0.23	6 – 0.4
		GCB (15)	KRPD235		0.15 – 0.28	8.5 – 0.8
M	Stainless steel	MFB (12)	KRM240	200 – 60	0.13 – 0.21	6 – 0.4
		MFB (15)			0.15 – 0.23	8.5 – 0.8

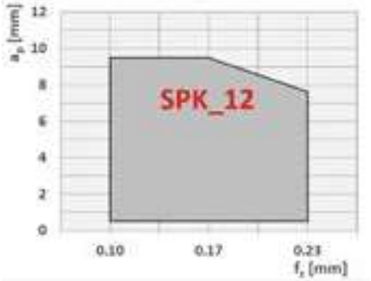
Available range SPK_12

Insert	Designation	Chipbreaker	Available
	SPKN 1203EDTR-GCB KRP130	...-GCB	○
	SPKN 1203EDTR-GCB KRPD235	...-GCB	○
	SPKR 1203EDER-MFB KRM240	...-MFB	○

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	GCB	KRP130	220 – 60	0.15 – 0.23	9.5 – 0.5
			KRPD235			
M	Stainless steel	MFB	KRM240	200 – 60	0.1 – 0.2	9.5 – 0.5

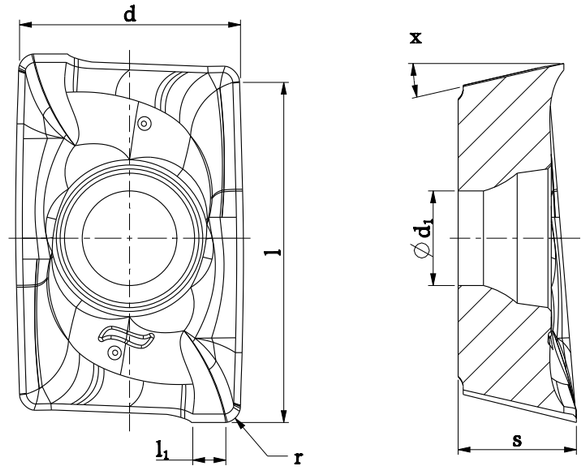
BEYOND
THE
MACHINING

Technical Data

KARCAN
cutting tools

SSM-A / Shouldering 2 x 90°

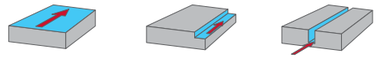
Insert (APKT / APHT 10)

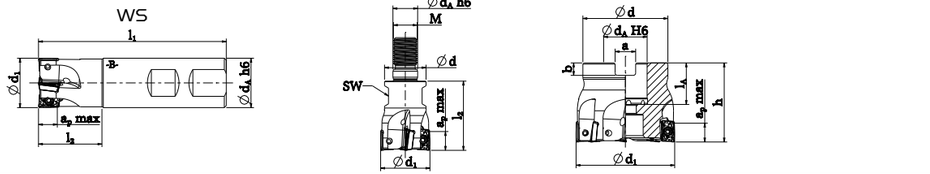


Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
APKT 1003PDER-GCB	6.75	10	3.5	1	0.5	2.8	11
APKT 1003PDER-MFB	6.75	10	3.5	1	0.5	2.8	11
APKT 1003PDER-KCB	6.75	10	3.5	1	0.5	2.8	11
APHT 100302FR-ACB	6.75	10	3	2.2	0.2	2.8	11
APHT 100304FR-ACB	6.75	10	3	2.2	0.4	2.8	11
APHT 100308FR-ACB	6.75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

SSM-A / Shouldering 2 x 90°

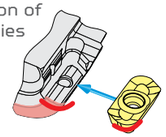
Milling body (APKT10)





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]
WS-UA10-12.Z.01-W-16-24-79	12	79	24	-	16	10	55000	1	-	-	-	-	-	-
WS-UA10-16.Z.02-W-25-80	16	80	25	-	16	10	42000	2	-	-	-	-	-	-
WS-UA10-20.Z.03-W-25-85	20	85	25	-	20	10	36900	3	-	-	-	-	-	-
WS-UA10-25.Z.04-W-32-95	25	95	32	-	25	10	33200	4	-	-	-	-	-	-
WS-UA10-32.Z.05-W-40-105	32	105	40	-	32	10	30200	5	-	-	-	-	-	-
TC-UA10-16.Z.02	16	-	25	-	8.5	10	42000	2	13	SW10	M8	-	-	-
TC-UA10-20.Z.03	20	-	30	-	10.5	10	36900	3	18	SW15	M10	-	-	-
TC-UA10-25.Z.04	25	-	35	-	12.5	10	33200	4	21	SW17	M12	-	-	-
TC-UA10-32.Z.05	32	-	40	-	17	10	30200	5	29	SW24	M16	-	-	-
AR-UA10-40.Z.04	40	-	-	40	16	10	27700	4	38	-	-	19	8.4	5.6
AR-UA10-40.Z.06	40	-	-	40	16	10	27700	6	38	-	-	19	8.4	5.6
AR-UA10-50.Z.05	50	-	-	40	22	10	25400	5	43	-	-	21	10.4	6.3
AR-UA10-50.Z.08	50	-	-	40	22	10	25400	8	43	-	-	21	10.4	6.3
AR-UA10-63.Z.06	63	-	-	40	22	10	23300	6	48	-	-	21	10.4	6.3
AR-UA10-63.Z.09	63	-	-	40	22	10	23300	9	48	-	-	21	10.4	6.3
AR-UA10-80.Z.07	80	-	-	50	27	10	21300	7	58	-	-	23	12.4	7
AR-UA10-80.Z.10	80	-	-	50	27	10	21300	10	58	-	-	23	12.4	7
AR-UA10-100.Z.12	100	-	-	50	32	10	19600	12	78	-	-	26	14.4	8

Modification of cutter bodies



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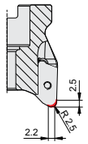

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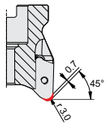
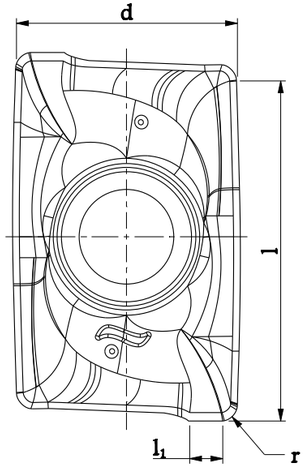
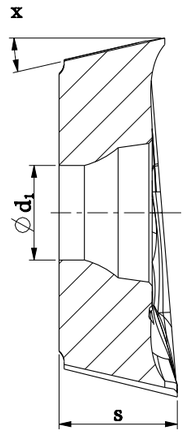


SSM-A / Shouldering 2 x 90°

Insert (APKT / APHT 16)

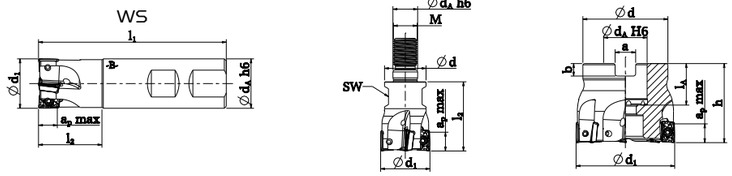




Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
APKT 1604PDER-GCB	9.5	15.3	5.25	1.4	0.85	4.4	11.5
APKT 1604PDER-MFB	9.5	15.3	5.25	1.4	0.85	4.4	11.5
APKT 1604PDER-KCB	9.5	15.3	5.25	1.4	0.85	4.4	11.5
APHT 1604PDFR-ACB	9.5	15.3	4.65	2	0.85	4.4	11.5
APKT 160416ER-RCB	9.5	15.3	5.25	0.65	1.6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

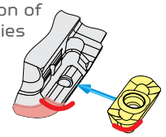
SSM-A / Shouldering 2 x 90°

Milling body (APKT16)

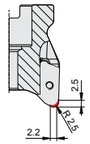


Descirption	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min-1]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
WS-UA16-25.Z.02-W-40-95	25	95	40	-	25	15.3	26560	2	-	-	-	-	-	-
WS-UA16-32.Z.03-W-40-105	32	105	40	-	32	15.3	24160	3	-	-	-	-	-	-
WS-UA16-40.Z.04-W-50-125	40	125	50	-	40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

Modification of cutter bodies



> r 1.6



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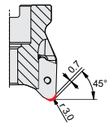
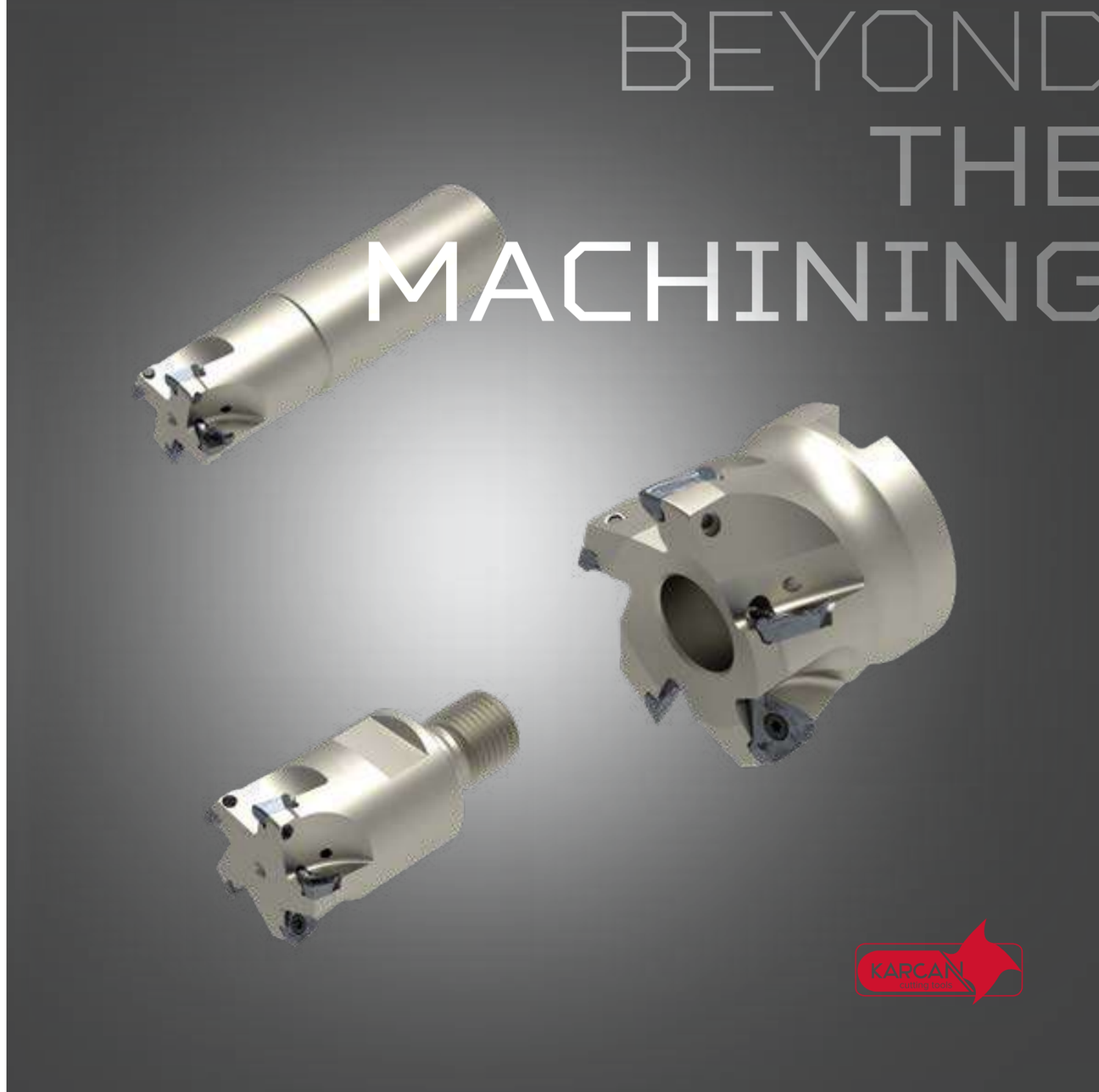
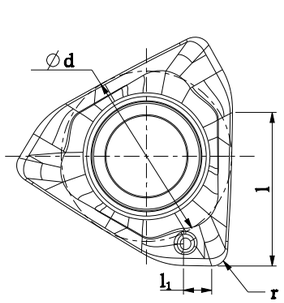
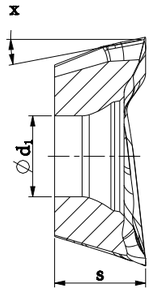




SSM-T / Shouldering 3 x 90°

Insert (TOKX)





-GCB

-MFB

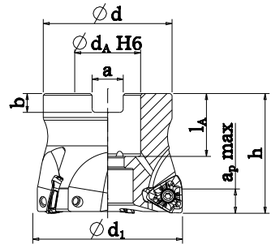
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]
TOKX 070305PDER-GCB	5.9	5.5	3.15	1	0.5	2.8
TOKX 070305PDER-MFB	5.9	5.5	3.15	1	0.5	2.8
TOKX 070308PDER-GCB	5.9	5.5	3.15	1	0.8	2.8
TOKX 070308PDER-MFB	5.9	5.5	3.15	1	0.8	2.8
TOKX 09T308PDER-GCB	9.525	9.2	3.8	1.5	1.2	3.4
TOKX 09T308PDER-MFB	9.525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

SSM-T / Shouldering 3 x 90°

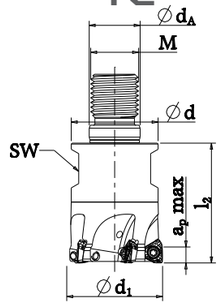
Milling body (TOKX07)

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

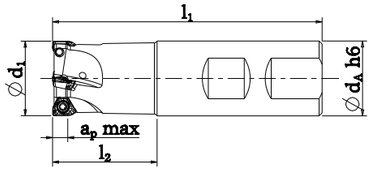
AR



TC



WS



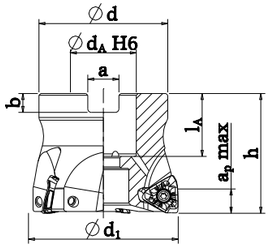
Description	Ød_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
WS-T07-20.Z.03-W-25-77	20	77	25	-	20	5	22000	3	-	-	-	-	-	-
WS-T07-25.Z.04-W-34-90	25	90	34	-	25	5	20000	4	-	-	-	-	-	-
WS-T07-32.Z.05-W-40-102	32	102	40	-	32	5	19700	5	-	-	-	-	-	-
TC-T07-20.Z.03	20	-	30	-	10.5	5	36900	3	18	SW15	M10	-	-	-
TC-T07-25.Z.04	25	-	35	-	12.5	5	33200	4	21	SW17	M12	-	-	-
TC-T07-32.Z.05	32	-	40	-	17	5	30200	5	29	SW24	M16	-	-	-
AR-T07-40.Z.05	40	-	-	40	16	5	17000	5	38	-	-	20	8.4	5.6
AR-T07-50.Z.06	50	-	-	40	22	5	14800	6	43	-	-	21	10.4	6.3

SSM-T / Shouldering 3 x 90°

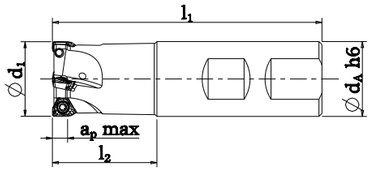
Milling body (TOKX09)

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

AR



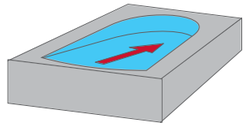
WS

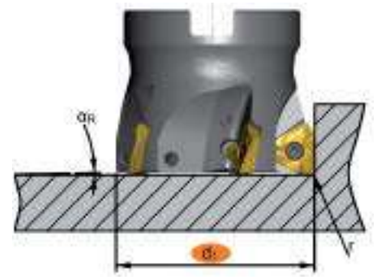


Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
WS-T09-32.Z.03-W-40-102	32	102	40	-	32	8	19700	3	-	-	-	-
AR-T09-40.Z.04	40	-	-	40	16	8	17000	4	38	20.5	8.4	5.6
AR-T09-50.Z.05	50	-	-	40	22	8	14800	5	43	21	10.4	6.3
AR-T09-63.Z.06	63	-	-	40	22	8	12850	6	48	21	10.4	6.3

SSM-T / Shouldering 3 x 90°

Application data (angled ramping TOKX07)

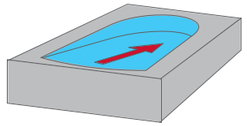


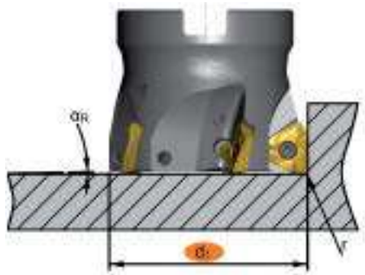


Description	d_1 [mm]	α_R [°]
WS-T07-20.Z.03-W-25-77	20	1.4
WS-T07-25.Z.04-W-34-90	25	1.2
WS-T07-32.Z.05-W-40-102	32	0.8
TC-T07-20.Z.03	20	1.4
TC-T07-25.Z.04	25	1.2
TC-T07-32.Z.05	32	0.8
AR-T07-40.Z.05	40	0.6
AR-T07-50.Z.06	50	0.5

SSM-T / Shouldering 3 x 90°

Application data (angled ramping TOKX09)

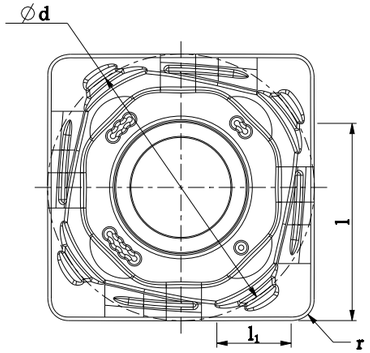


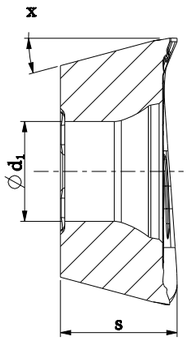


Description	d_1 [mm]	α_R [°]
WS-T09-32.Z.03-W-40-102	32	1.1
AR-T09-40.Z.04	40	0.8
AR-T09-50.Z.05	50	0.5
AR-T09-63.Z.06	63	0.5

SSM-S / Shouldering 4 x 90°

Insert (SDKT)





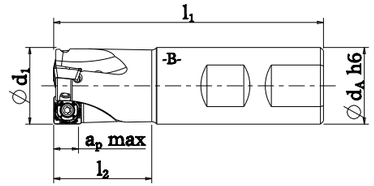
Description	d [mm]	l [mm]	s [mm]	l_2 [mm]	r [mm]	d_1 [mm]	x [°]
SDKT 09T308SR-GCB	9.9	7.4	3.97	2.5	0.8	3.4	15
SDKT 09T308SR-MFB	9.9	7.4	3.97	2.5	0.8	3.4	15
SDKT 09T308SR-KCB	9.9	7.4	3.97	2.5	0.8	3.4	15
SDHT 09T308FR-ACB	9.9	7.4	3.97	2.5	0.8	3.4	15
SDKT 120508SR-GCB	12.3	9.8	5	2.5	0.8	4.7	15
SDKT120508SR-MFB	12.3	9.8	5	2.5	0.8	4.7	15
SDKT 120508SR-KCB	12.3	9.8	5	2.5	0.8	4.7	15
SDHT 120508FR-ACB	12.3	9.8	5	2.5	0.8	4.7	15

SSM-S / Shouldering 4 x 90°

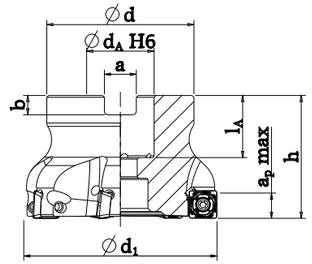
Milling body (SDKT09)

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

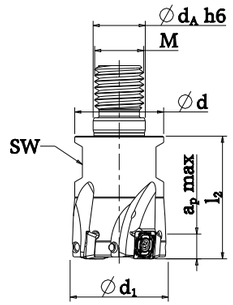
WS



AR



TC



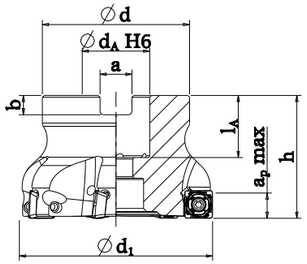
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
WS-S09-25.Z.03-W-32-88	25	88	32	-	25	8	23700	3	-	-	-	-	-	-
WS-S09-32.Z.04-W-40-100	32	100	40	-	32	8	19700	4	-	-	-	-	-	-
TC-S09-25.Z.03	25	-	35	-	12.5	8	33200	3	21	SW17	M12	-	-	-
TC-S09-32.Z.04	32	-	40	-	17	8	30200	4	29	SW24	M16	-	-	-
AR-S09-40.Z.05	40	-	-	40	16	8	17000	5	38	-	-	20	8.4	5.6
AR-S09-50.Z.06	50	-	-	40	22	8	14800	6	43	-	-	20	10.4	6.3
AR-S09-63.Z.07	63	-	-	40	22	8	12855	7	48	-	-	20	10.4	6.3
AR-S09-80.Z.09	80	-	-	50	27	8	11250	9	58	-	-	22	12.4	7

SSM-S / Shouldering 4 x 90°

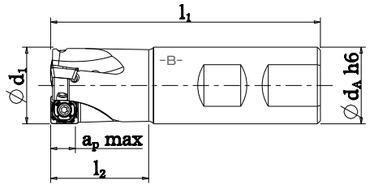
Milling body (SDKT12)

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

AR



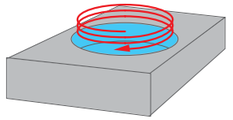
WS

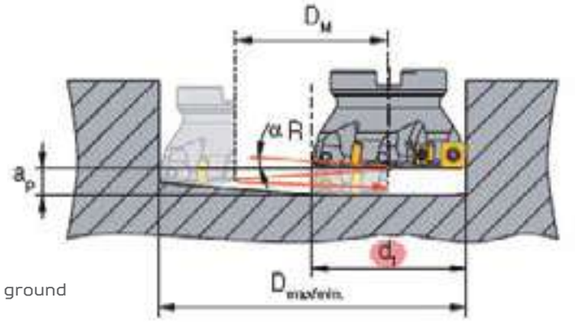


Description	Ød$_1$ [mm]	l$_1$ [mm]	l$_2$ [mm]	h [mm]	Ø d$_A$ H6/h6 [mm]	a$_p$ max [mm]	n$_{max}$ [min^{-1}]	z	Ø d [mm]	l$_A$ [mm]	a [mm]	b [mm]
WS-S12-32.Z.03-W-40-100	32	100	40	-	32	10	19700	3	-	-	-	-
AR-S12-40.Z.04	40	-	-	40	16	10	17000	4	38	20	8.4	5.6
AR-S12-50.Z.05	50	-	-	40	22	10	14800	5	43	20	10.4	6.3
AR-S12-63.Z.06	63	-	-	40	22	10	12850	6	48	21	10.4	6.3
AR-S12-80.Z.07	80	-	-	50	27	10	11250	7	58	22	12.4	7

SSM-S / Shouldering 4 x 90°

Application data (helical plunge milling SDKT09)



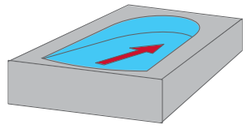


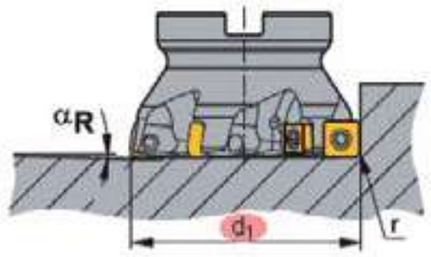
D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

Description	d$_1$ [mm]	D$_{max}$ [mm]	D$_{min}$ [mm]	α$_R$ [°]
WS-S09-25.Z.03-W-32-88	25	48	37	4.4
WS-S09-32.Z.04-W-40-100	32	62	47	2.2
TC-S09-25.Z.03	25	48	37	4.4
TC-S09-32.Z.04	32	62	47	2.2
AR-S09-40.Z.05	40	78	63	0.75
AR-S09-50.Z.06	50	98	83	0.5
AR-S09-63.Z.07	63	124	109	0.35
AR-S09-80.Z.09	80	158	143	0.25

SSM-S / Shouldering 4 x 90°

Application data (angled ramping SDKT09)

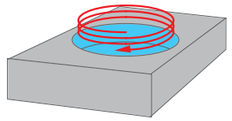


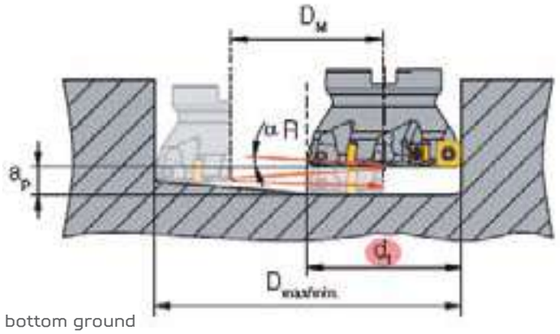


Description	d_1 [mm]	α_R [°]
WS-S09-25.Z.03-W-32-88	25	4.4
WS-S09-32.Z.04-W-40-100	32	2.2
TC-S09-25.Z.03	25	4.4
TC-S09-32.Z.04	32	2.2
AR-S09-40.Z.05	40	0.75
AR-S09-50.Z.06	50	0.5
AR-S09-63.Z.07	63	0.35
AR-S09-80.Z.09	80	0.25

SSM-S / Shouldering 4 x 90°

Application data (helical plunge milling SDKT12)



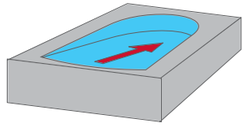


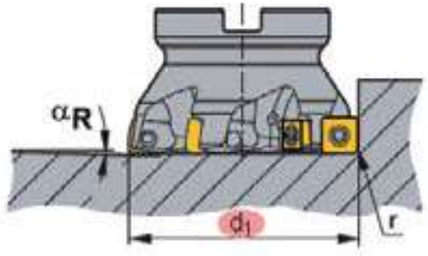
D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

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

SSM-S / Shouldering 4 x 90°

Application data (angled ramping SDKT12)

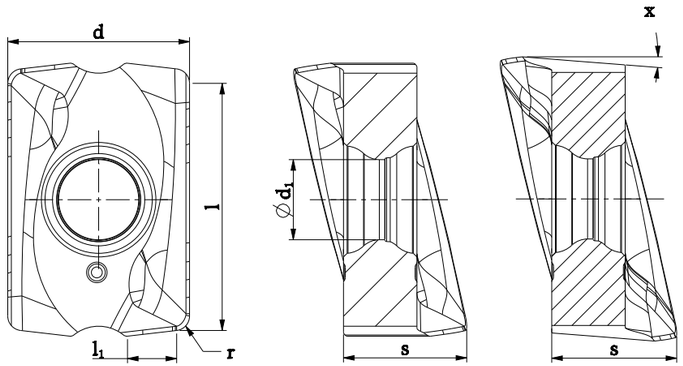




Description	d_1 [mm]	α_R [°]
WS-S12-32.Z.03-W-40-100	32	2.0
AR-S12-40.Z.04	40	2.0
AR-S12-50.Z.05	50	1.2
AR-S12-63.Z.06	63	0.7
AR-S12-80.Z.07	80	0.6

DSM-L / Shouldering 4 x 90°

Insert (LNKU12 / LOKU12)



LNKU12 LOKU12

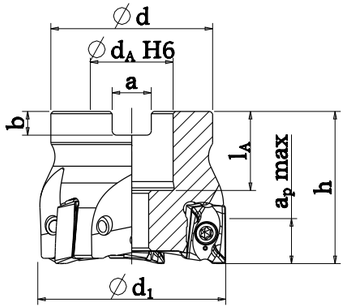
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
LNKU 120608ER-GCB	10	13.4	6.78	2.7	0.8	4.4	0
LNKU 120608ER-MFB	10	13.4	6.78	2.7	0.8	4.4	0
LNKU 120608ER-KCB	10	13.4	6.78	2.7	0.8	4.4	0
LOKU 120608ER-MFB	10	13.4	6.87	2.7	0.8	4.4	5
LOKU 120608ER-EMB	10	13.4	6.87	2.7	0.8	4.4	5

DSM-L / Shouldering 4 x 90°

Milling body (LNKU12 / LOKU12)

AR

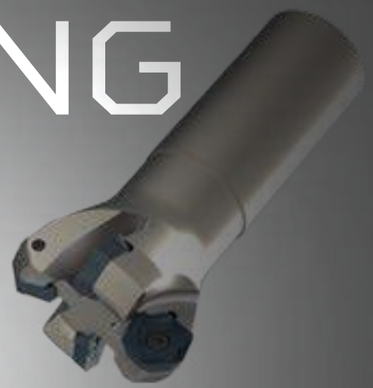
- Face milling
- Angled milling
- Helical plunging
- Shoulder milling
- Slot milling
- Pocket milling

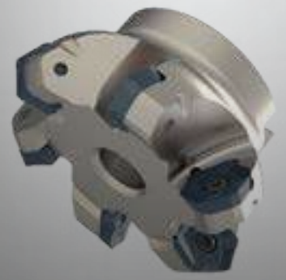


Description	$Ød_1$ [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
ARD-LO/LN12-40.Z.04	40	40 / 40.44*	16	12	17000	4	38	20	8.4	5.6
ARD-LO/LN12-50.Z.05	50	40 / 40.44*	22	12	14800	5	43	20	10.4	6.3
ARD-LO/LN12-63.Z.06	63	40 / 40.44*	22	12	12850	6	48	21	10.4	6.3
ARD-LO/LN12-80.Z.07	80	50 / 50.44*	27	12	11250	7	58	22	12.4	7

*with LOKU insert

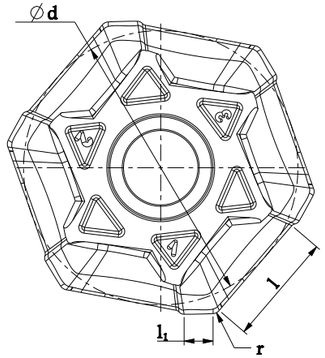
BEYOND
THE
MACHINING





SSM-H / Face milling 6 x 45°

Insert (HPKT, HOKT, HPCT and HOCT)



HPKT-GCB

HOKT-GCB

HPKT-MFB

HOCT-MFB

HPCT-ACB

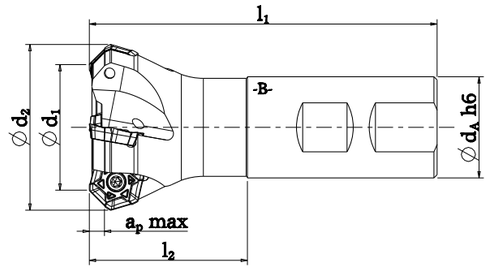
Description	d [mm]	l [mm]	s [mm]	I_1 [mm]	r [mm]	d_1 [mm]	x [°]
HPKT 0604AZER-GCB	16.3	6.5	4.5	1.7	0.5	4.4	11
HPKT 0604AZER-MFB	16.3	6.5	4.5	1.7	0.5	4.4	11
HPCT 0604AZFR-ACB	16.3	6.5	4.5	1.7	0.4	4.4	11
HOKT 0604AZER-GCB	16.3	6.5	4.5	1.7	0.5	4.4	10
HOCT 0604AZER-MFB	16.3	6.5	4.5	1.7	0.4	4.4	10

SSM-H / Face milling 6 x 45°

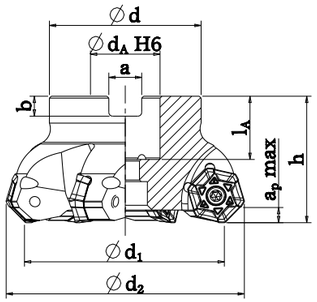
Milling body (HPKT. HOKT, HPCT and HOCT)

- Face milling
- Slot milling
- Chamfering

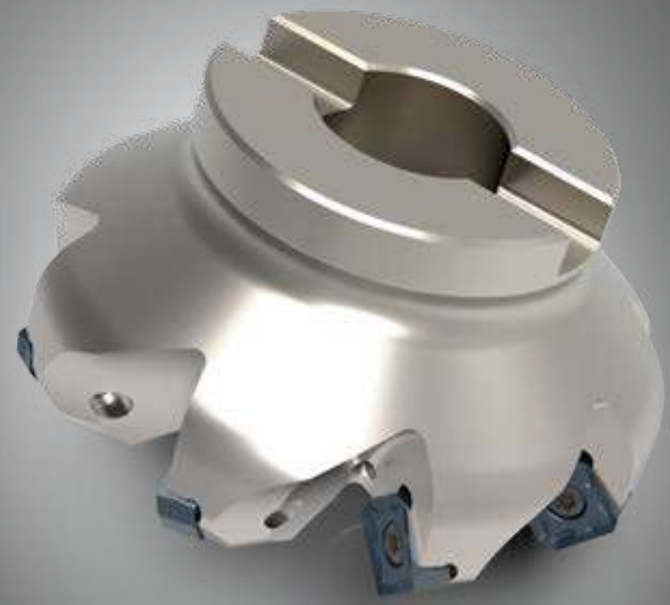
WS



AR

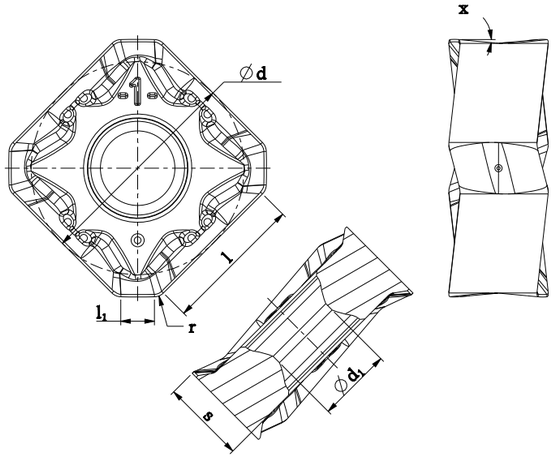


Description	Ø d_1 [mm]	Ø d_2 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ød [mm]	l_A [mm]	a [mm]	b [mm]
WS-H06-40.Z.04-W-32-50-110	40	52.2	110	50	-	32	4.5	17000	4	-	-	-	-
AR-H06-40.Z.04	40	52.2	-	-	40	16	4.5	19900	4	38	19	8.4	5.6
AR-H06-50.Z.05	50	62.2	-	-	40	22	4.5	15900	5	43	20	10.4	6.3
AR-H06-63.Z.06	63	75.2	-	-	40	22	4.5	12600	6	48	20	10.4	6.3
AR-H06-80.Z.07	80	92.2	-	-	50	27	4.5	9900	7	58	22	12.4	7
AR-H06-100.Z.09	100	112.2	-	-	50	32	4.5	7900	9	78	25	14.4	8
AR-H06-125.Z.10	125	137.2	-	-	63	40	4.5	6300	10	88	33	16.4	9



DSM-S / Face milling 8 x 45°

Insert (SOKU)



-GCB

-MFB

-KCB

Description	d [mm]	I [mm]	s [mm]	I_1 [mm]	r [mm]	d_1 [mm]	x [°]
SOKU 1205AZER-GCB	13	8.5	5.1	2	0.8	4.55	6
SOKU 1205AZER-MFB	13	8.5	5.1	2	0.8	4.55	6
SOKU 1205AZER-KCB	13	8.5	5.1	2	0.8	4.55	6
SOKU 1505AZER-GCB	15.875	10.5	6	2.7	1	5.74	6
SOKU 1505AZER-MFB	15.875	10.5	6	2.7	1	5.74	6
SOKU 1505AZER-KCB	15.875	10.5	6	2.7	1	5.74	6

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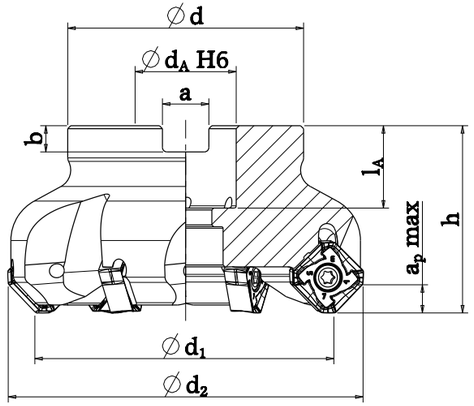
DSM-S / Face milling 8 x 45°

Milling body (SOKU12)

- Face milling
- Slot milling
- Chamfering

AR



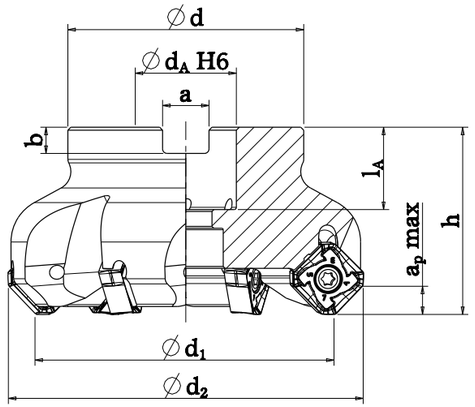
Description	Ø d_1 [mm]	Ø d_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
ARD-S12-40.Z.04	40	52.4	45	16	6	19900	4	38	19	8.4	5.6
ARD-S12-50.Z.05	50	62.4	45	22	6	15900	5	43	20	10.4	6.3
ARD-S12-63.Z.06	63	75.4	45	22	6	12600	6	48	20	10.4	6.3
ARD-S12-80.Z.08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

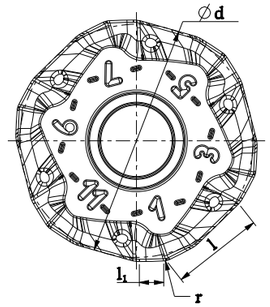
AR

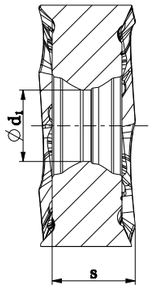


Description	Ø d_1 [mm]	Ø d_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
ARD-S15-40.Z.04	40	55	45	16	6.5	15900	4	38	19	8.4	5.6
ARD-S15-50.Z.04	50	65	45	22	6.5	12700	4	43	20	10.4	6.3
ARD-S15-63.Z.05	63	78	45	22	6.5	10100	5	48	20	10.4	6.3
ARD-S15-80.Z.06	80	95	50	27	6.5	7900	6	58	22	12.4	7
ARD-S15-100.Z.07	100	115	50	32	6.5	6300	7	78	25	14.4	8
ARD-S15-125.Z.08	125	140	63	40	6.5	5000	8	88	28	16.4	9
ARD-S15-160.Z.10	160	175	63	40	6.5	3800	10	93.4	29	16.4	9

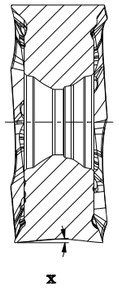
DSM-H / Face milling 12 x 45°

Insert (HNKU / HOKU)





HNKU08



HOKU08

-GCB

-MFB

Description	d [mm]	l [mm]	s [mm]	r [mm]	I_1 [mm]	d_1 [mm]	x [°]
HNKU 0806AZER-GCB	14.7	7.5	5.19	1	1.5	4.5	-
HNKU 0806AZER-MFB	14.7	7.5	5.19	1	1.5	4.5	-
HOKU 0806AZER-GCB	14.7	7.5	5.23	1	1.5	4.5	4.5
HOKU 0806AZER-MFB	14.7	7.5	5.23	1	1.5	4.5	4.5

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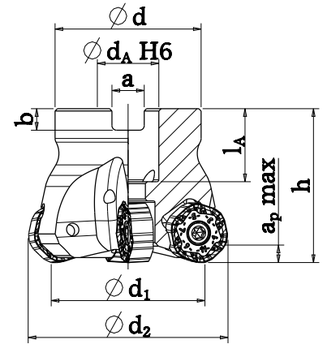
DSM-H / Face milling 12 x 45°

Milling body (HNKU / HOKU)

AR

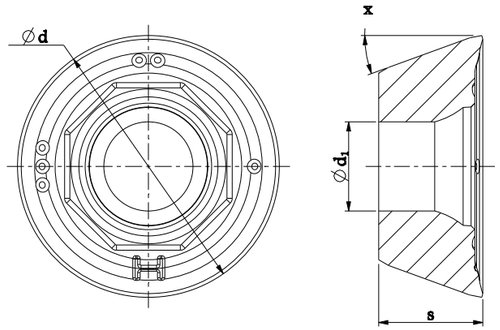
- Face milling
- Slot milling
- Chamfering



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]
ARD-H08-40.Z.04	40	52	40	16	4	15900	4	38	19	8.4	5.6
ARD-H08-50.Z.04	50	62	40	22	4	12700	4	43	20	10.4	6.3
ARD-H08-63.Z.05	63	75	40	22	4	10100	5	48	20	10.4	6.3
ARD-H08-80.Z.06	80	92	50	27	4	7900	6	58	22	12.4	7
ARD-H08-100.Z.08	100	112	50	32	4	6400	8	78	25	14.4	8
ARD-H08-125.Z.09	125	137	63	40	4	5100	9	88	28	16.4	9

SSM-R / Form milling

Insert (RPMX. RPHX, RDHW and RDHX)



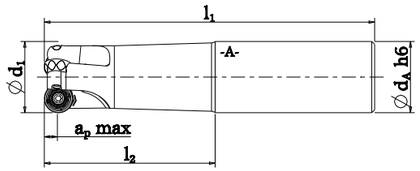
Description	d [mm]	s [mm]	d_1 [mm]	x [°]
RPMX 10T3M0-GCB	10	3.97	3.4	11
RPMX 10T3M0-MFB	10	3.97	3.4	11
RDHX 10T3M0-ACB	10	3.97	3.4	15
RPHX 10T3M0-EMB	10	3.97	3.4	11
RDHW 10T3M0SN	10	3.97	3.4	15
RPMX 1204M0-GCB	12	4.76	4.4	11
RPMX 1204M0-MFB	12	4.76	4.4	11
RDHX 1204M0-ACB	12	4.76	4.4	15
RPHX 1204M0-EMB	12	4.76	4.4	11
RDHW 1204M0SN	12	4.76	4.4	15
RPMX 1605M0-GCB	16	5.56	5.5	11
RPMX 1605M0-MFB	16	5.56	5.5	11
RDHX 1605M0-ACB	16	5.56	5.5	15
RPHX 1605M0-EMB	16	5.56	5.5	11
RDHW 1605M0SN	16	5.56	5.5	15

SSM-R / Form milling

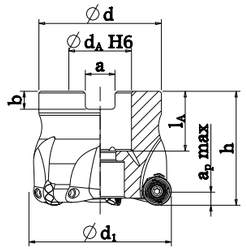
Milling body (RP/RD10)

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

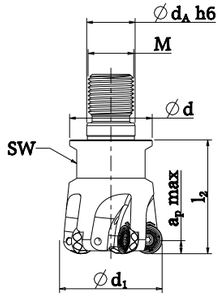
WS



AR



TC



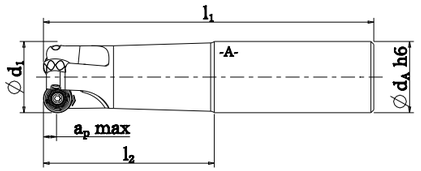
Description	Ød1 [mm]	l1 [mm]	l2 [mm]	h [mm]	Ø dA H6/h6 [mm]	ap max [mm]	n max [min-1]	z	Ø d [mm]	SW	M	lA [mm]	a [mm]	b [mm]
SH-R10-20.Z.02-A-50-102	20	102	50	-	20	5	31800	2	-	-	-	-	-	-
SH-R10-20.Z.02-A-50-165-165	20	165	50	-	20	5	22260	2	-	-	-	-	-	-
SH-R10-25.Z.03-A-60-116	25	116	60	-	25	5	20000	3	-	-	-	-	-	-
SH-R10-25.Z.03-A-60-165-165	25	165	60	-	25	5	20000	3	-	-	-	-	-	-
SH-R10-32.Z.04-A-70-130	32	130	70	-	32	5	19000	4	-	-	-	-	-	-
SH-R10-32.Z.04-A-70-165-165	32	165	70	-	32	5	18000	4	-	-	-	-	-	-
TC-R10-20.Z.02	20	-	30	-	10.5	5	36900	2	18	SW15	M10	-	-	-
TC-R10-25.Z.03	25	-	35	-	12.5	5	33200	3	21	SW17	M12	-	-	-
TC-R10-32.Z.04	32	-	40	-	17	5	30200	4	29	SW24	M16	-	-	-
TC-R10-35.Z.04	35	-	40	-	17	5	30200	4	29	SW24	M16	-	-	-
AR-R10-40.Z.04	40	-	-	40	16	5	15900	4	38	-	-	20	8.4	5.6
AR-R10-42.Z.05	42	-	-	40	16	5	15900	5	38	-	-	20	8.4	5.6
AR-R10-50.Z.05	50	-	-	40	22	5	12700	5	43	-	-	21	10.4	7.6

SSM-R / Form milling

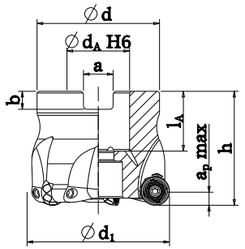
Milling body (RP/RD12)

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

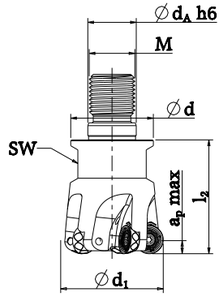
WS



AR



TC



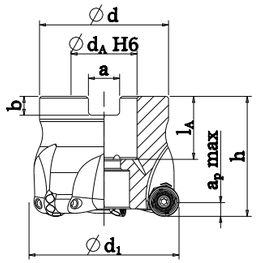
Description	Ø d1 [mm]	l1 [mm]	l2 [mm]	h [mm]	Ø dA H6/h6 [mm]	ap max [mm]	n max [min-1]	z	Ø d [mm]	lA [mm]	a [mm]	b [mm]
SH-R12-25.Z.02-A-30-86	25	86	30	-	25	6	25000	2	-	-	-	-
SH-R12-25.Z.02-A-60-116	25	116	60	-	25	6	18000	2	-	-	-	-
SH-R12-32.Z.03-A-40-100	32	100	40	-	32	6	19000	3	-	-	-	-
SH-R12-32.Z.03-A-70-130	32	130	70	-	32	6	17000	3	-	-	-	-
TC-R12-25.Z.02	25	-	35	-	12.5	6	25000	2	21	-	-	-
TC-R12-35.Z.03	35	-	40	-	17	6	15900	3	29	-	-	-
AR-R12-40.Z.04	40	-	-	40	16	6	15900	4	38	20	8.4	5.6
AR-R12-42.Z.04	42	-	-	40	16	6	15900	4	38	20	8.4	5.6
AR-R12-50.Z.05	50	-	-	40	22	6	12700	5	43	21	10.4	6.3
AR-R12-52.Z.05	52	-	-	40	22	6	12700	5	43	21	10.4	6.3
AR-R12-63.Z.06	63	-	-	40	22	6	10100	6	48	21	10.4	6.3
AR-R12-66.Z.06	66	-	-	40	27	6	10100	6	58	23	12.4	7
AR-R12-80.Z.08	80	-	-	50	27	6	7950	8	58	22	12.4	7
AR-R12-100.Z.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

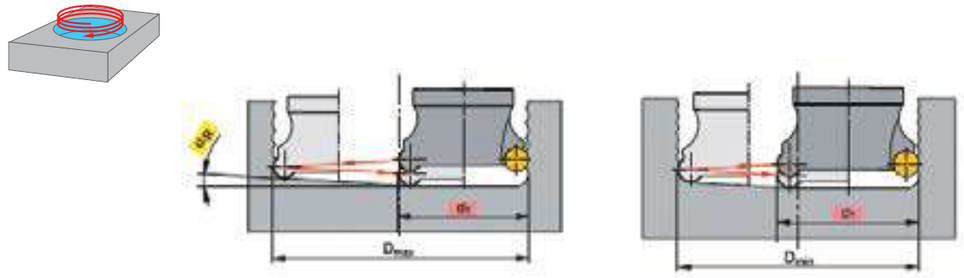
AR



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]
AR-R16-50.Z.03	50	40	22	8	12700	3	48	22	10.4	6.3
AR-R16-52.Z.04	52	40	22	8	12700	4	48	21	10.4	6.3
AR-R16-63.Z.05	63	40	22	8	10100	5	48	21	10.4	6.3
AR-R16-66.Z.05	66	40	22	8	10100	5	48	21	10.4	6.3
AR-R16-80.Z.06	80	50	27	8	7950	6	58	23	12.4	7
AR-R16-100.Z.07	100	50	32	8	6350	7	78	26	14.4	8
AR-R16-125.Z.08	125	63	40	8	5050	8	88	28	16.4	9

SSM-R / Form milling

Application data (helical plunge milling RP/RD10)

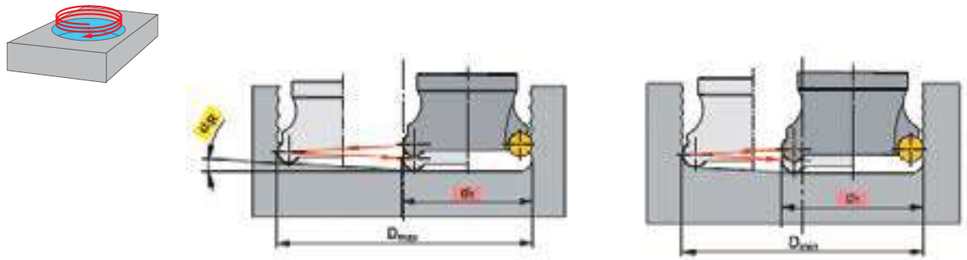


D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

Description	d_1 [mm]	D_{max} [mm]	D_{min} [mm]	R_{max} [°]
SH-R10-20.Z.02-A-50-102	20	30	26	1.3
SH-R10-20.Z.02-A-50-165-165	20	30	26	1.3
SH-R10-25.Z.03-A-60-116	25	40	37	1.8
SH-R10-25.Z.03-A-60-165-165	25	40	37	1.8
SH-R10-32.Z.04-A-70-130	32	54	50	1.5
SH-R10-32.Z.04-A-70-165-165	32	54	50	1.5
TC-R10-20.Z.02	20	30	26	1.3
TC-R10-25.Z.03	25	40	37	1.8
TC-R10-32.Z.04	32	54	50	1.5
TC-R10-35.Z.04	35	54	50	1.5
AR-R10-40.Z.04	40	70	64	1.1
AR-R10-42.Z.05	42	70	64	1.1
AR-R10-50.Z.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 [°]
SH-R12-25.Z.02-A-30-86	25	38	31	2.2
SH-R12-25.Z.02-A-60-116	32	38	31	2.2
SH-R12-32.Z.03-A-40-100	32	52	46	1.7
SH-R12-32.Z.03-A-70-130	32	52	46	1.7
TC-R12-25.Z.02	25	38	31	2.2
TC-R12-35.Z.03	35	52	46	1.7
AR-R12-40.Z.04	40	68	62	1.4
AR-R12-42.Z.04	42	68	62	1.4
AR-R12-50.Z.05	50	88	81	1.1
AR-R12-52.Z.05	52	88	81	1.1
AR-R12-63.Z.06	63	114	107	0.9
AR-R12-66.Z.06	66	114	107	0.9
AR-R12-80.Z.08	80	148	142	0.7
AR-R12-100.Z.10	100	188	181	0.5

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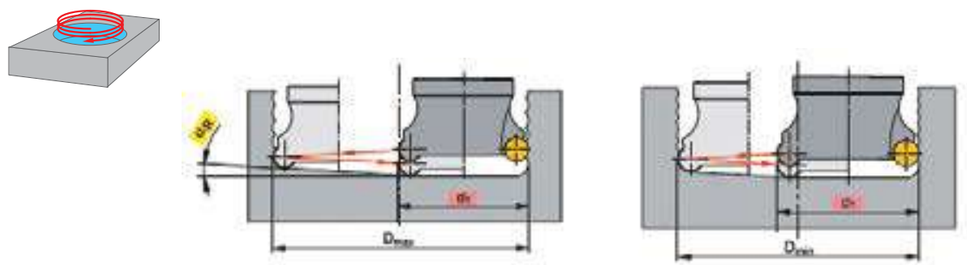
SSM-R / Form milling

Application data (helical plunge milling RP16)

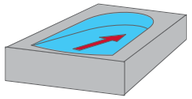


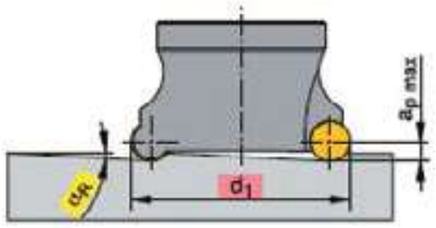
D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

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

SSM-R / Form milling

Application data (angled ramping)

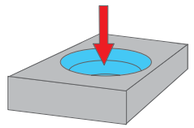


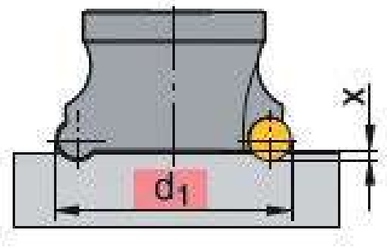


Description	d_1 [mm]	α_R [°]
SH-R10-20.Z.02-A-50-102	20	1.3
SH-R10-20.Z.02-A-50-165-165	20	1.3
SH-R10-25.Z.03-A-60-116	25	2.0
SH-R10-25.Z.03-A-60-165-165	25	2.0
SH-R10-32.Z.04-A-70-130	32	3.0
SH-R10-32.Z.04-A-70-165-165	32	3.0
TC-R10-20.Z.02	20	1.3
TC-R10-25.Z.03	25	2.0
TC-R10-32.Z.04	32	3.0
TC-R10-35.Z.04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

SSM-R / Form milling

Application data (axial plunging)



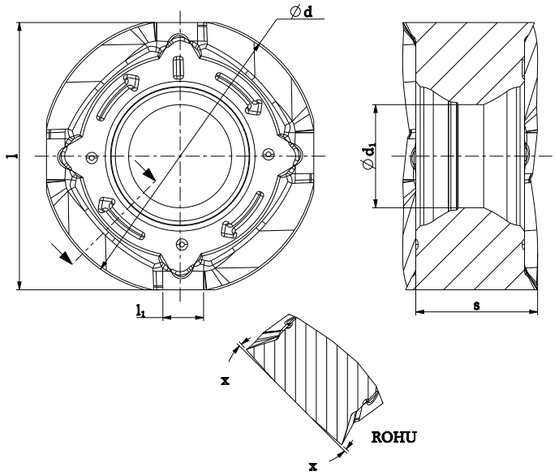


Ø [mm]	d_1 [mm]	X_{max} [mm]
10	20	0.2
	25	0.4
	32 – 35	0.8
	40 – 50	1.5
12	25	1.0
	32 – 35	1.1
	40 – 50	1.2
	50 – 100	1.5
16	50 – 52	1.1
	63 – 125	1.0

BEYOND
THE
MACHINING

DSM-R / Form milling

Insert (RNKU and ROHU)



-GCB

-MFB

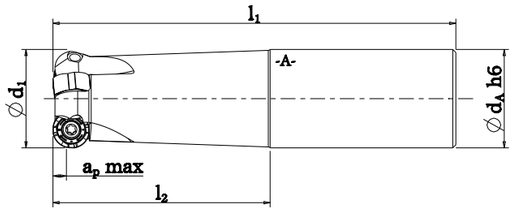
Description	d [mm]	I [mm]	s [mm]	I_1 [mm]	d_1 [mm]	x [°]
RNKU 1204MOER-GCB	12	-	5.9	2.3	4.5	0
ROHU 1204MOER-MFB	12	-	5.9	2.3	4.5	3
RNKU 1605MOER-GCB	16	-	6.7	2.7	5.8	0
ROHU 1605MOER-MFB	16	-	6.7	2.7	5.8	3

DSM-R / Form milling

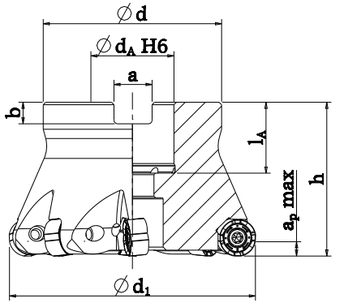
Milling body (RNKU12 and ROHU12)

- Face milling
- Slot milling

WS



AR



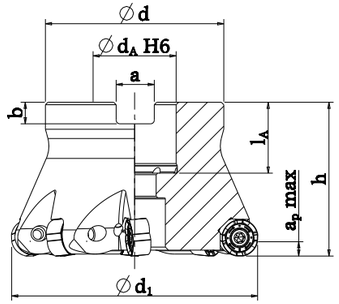
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/ h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
SHD-R12-32.Z.03-A-70-131	32	131	70	-	32	4.5	19000	3	-	-	-	-
SHD-R12-32.Z.03-A-70-165	32	165	70	-	32	4.5	17000	3	-	-	-	-
ARD-R12-40.Z.04	40	-	-	40	16	4.5	15900	4	38	20	8.4	5.6
ARD-R12-40.Z.04	50	-	-	40	22	4.5	12700	5	43	21	10.4	6.3
ARD-R12-63.Z.06	63	-	-	40	22	4.5	10100	6	48	21	10.4	6.3
ARD-R12-80.Z.08	80	-	-	50	27	4.5	7950	8	58	23	12.4	7
ARD-R12-100.Z.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

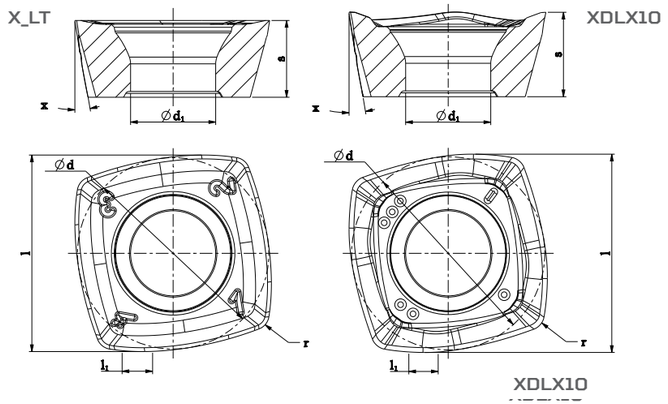
AR



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]
ARD-R16-50.Z.03	50	40	22	6	12700	3	43	22	10.4	6.3
ARD-R16-63.Z.05	63	40	22	6	10100	5	48	21	10.4	6.3
ARD-R16-80.Z.06	80	50	27	6	7950	6	58	23	12.4	7
ARD-R16-100.Z.07	100	50	32	6	6350	7	78	26	14.4	8
ARD-R16-125.Z.08	125	63	40	6	5050	8	88	28	16.4	9

SSM-HFC / High feed cutting

Insert (XPLT, XDLT, XDLX and XOLT)



-GCB -MFB -GCB -MFB

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

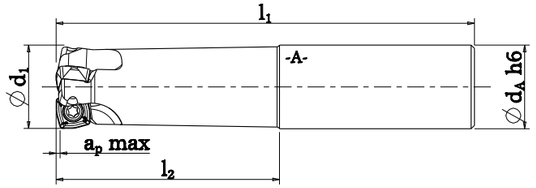
Description	d [mm]	s [mm]	d_1 [mm]	x [°]
XDLX 10T308SR-GCB	9.9	4.38	4.4	15
XDLX 10T308SR-MFB	9.9	4.38	4.4	15
XOLT 130410SR-GCB	13.1	4.76	5.5	9
XOLT 130410ER-MFB	13.1	4.76	5.5	9

SSM-HFC / High feed cutting

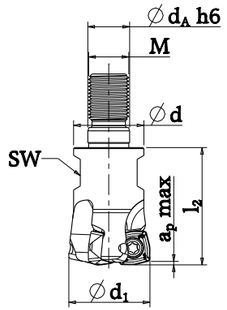
Milling body (XPLT07)

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

WS



TC



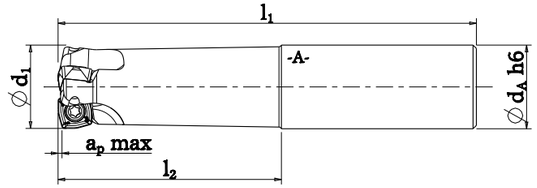
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M
SH-HFC07-16.Z.02-A-50-200	16	200	50	16	0.8	4600	2	–	–	–
SH-HFC07-20.Z.03-A-50-200	20	200	50	20	0.8	4200	3	–	–	–
SH-HFC07-25.Z.04-A-50-200	25	200	50	25	0.8	3900	4	–	–	–
TC-HFC07-16.Z.02	16	–	25	8.5	0.8	20800	2	13.8	SW10	M8
TC-HFC07-20.Z.03	20	–	30	10.5	0.8	19800	3	18	SW15	M10
TC-HFC07-25.Z.04	25	–	35	12.5	0.8	18700	4	21	SW17	M12

SSM-HFC / High feed cutting

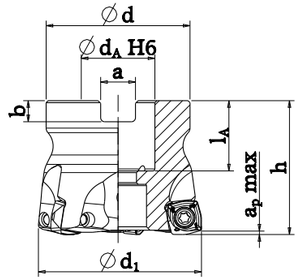
Milling body (XDLT10 and XDLX10)

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

WS



AR



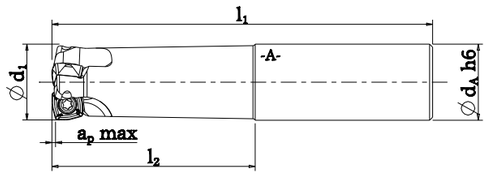
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	l_A [mm]	a [mm]	b [mm]
SH-HFC10-25.Z.03-A-50-125	25	125	50	-	25	1	15600	3	-	-	-	-
SH-HFC10-25.Z.03-A-50-225	25	225	50	-	25	1	9000	3	-	-	-	-
AR-HFC10-40.Z.04	40	-	-	40	16	1	26400	4	38	20	8.4	5.6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

SSM-HFC / High feed cutting

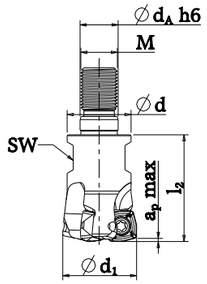
Milling body (XOLT13)

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

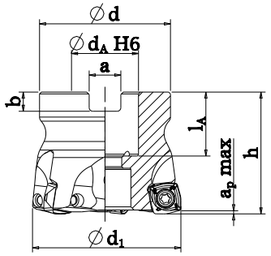
WS



TC



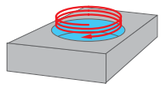
AR

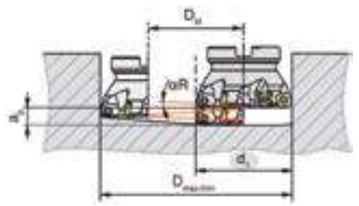


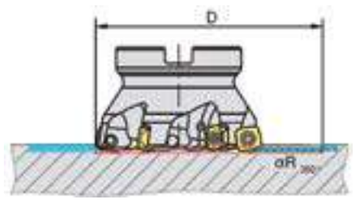
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/ h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
SH-HFC13-35.Z.03-A-63-144	35	144	63	-	32	2	9000	3	-	-	-	-	-	-
SH-HFC13-35.Z.03-A-63-250	35	250	63	-	32	2	6400	3	-	-	-	-	-	-
TC-HFC13-35.Z.03	35	-	40	-	17	2	21360	3	29	SW24	M16	-	-	-
AR-HFC13-50.Z.04	50	-	-	40	22	2	18800	4	43	-	-	21	10.4	6.3
AR-HFC13-63.Z.05	63	-	-	40	22	2	16400	5	48	-	-	21	10.4	6.3
AR-HFC13-80.Z.07	80	-	-	50	27	2	14000	7	58	-	-	23	12.4	7

SSM-HFC / High feed cutting

Application data (helical plunge milling XPLT07)





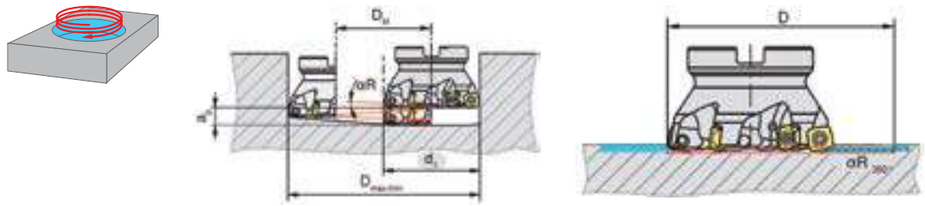


D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

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

SSM-HFC / High feed cutting

Application data (helical plunge milling XDLT10, XDLX10)

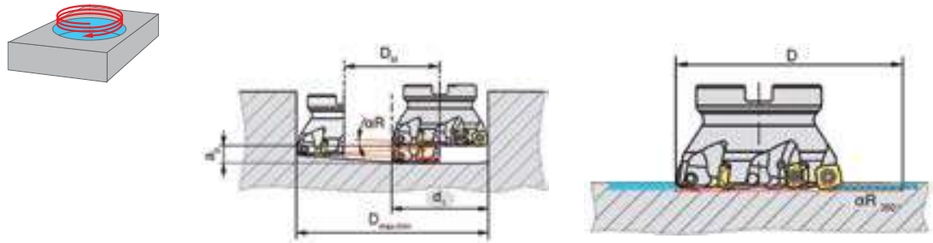


D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

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

SSM-HFC / High feed cutting

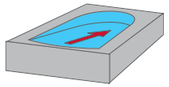
Application data (helical plunge milling XOLT13)

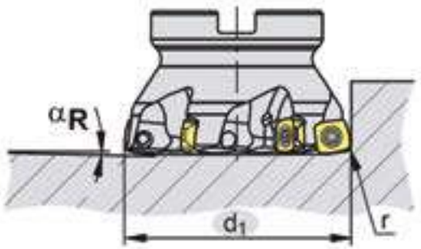


D_{max} [mm] = maximum diameter for flat bottom ground
D_{min} [mm] = minimum hole diameter
$D_M = D_{max} - d_1$ or $D_{min} - d_1$

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

SSM-HFC / High feed cutting

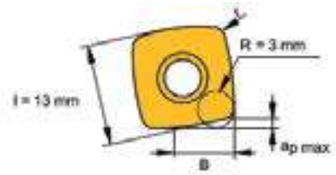




Description	d_1 [mm]	α_R [°]
SH-HFC07-16.Z.02-A-50-200	16	5.9
SH-HFC07-20.Z.03-A-50-200	20	3.2
SH-HFC07-25.Z.04-A-50-200	25	2.0
TC-HFC07-16.Z.02	16	5.9
TC-HFC07-20.Z.03	20	3.2
TC-HFC07-25.Z.04	25	2.0
SH-HFC10-25.Z.03-A-50-125	25	3.6
SH-HFC10-25.Z.03-A-50-225	25	3.6
AR-HFC10-40.Z.04	40	1.2
AR-HFC10-50.Z.05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

SSM-HFC / High feed cutting

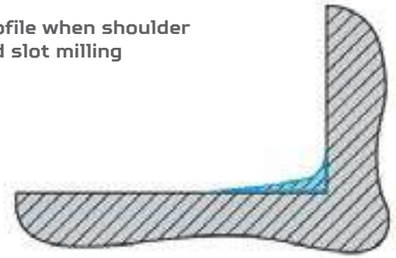
Depth of cut and remaining material



R = programmed radius

Recommended $f_z \geq 0.5$ / tooth

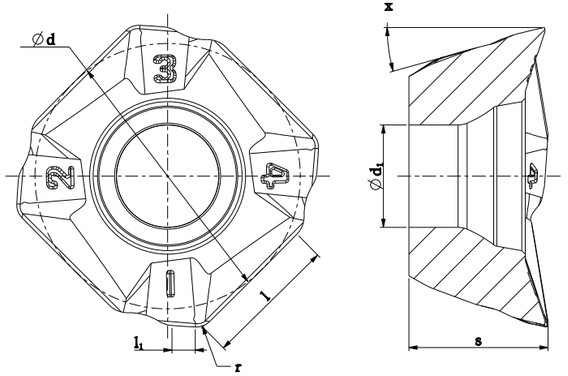
Profile when shoulder and slot milling



Insert	I [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

SSM-A.R / Multiple applications

Insert (SDMX)



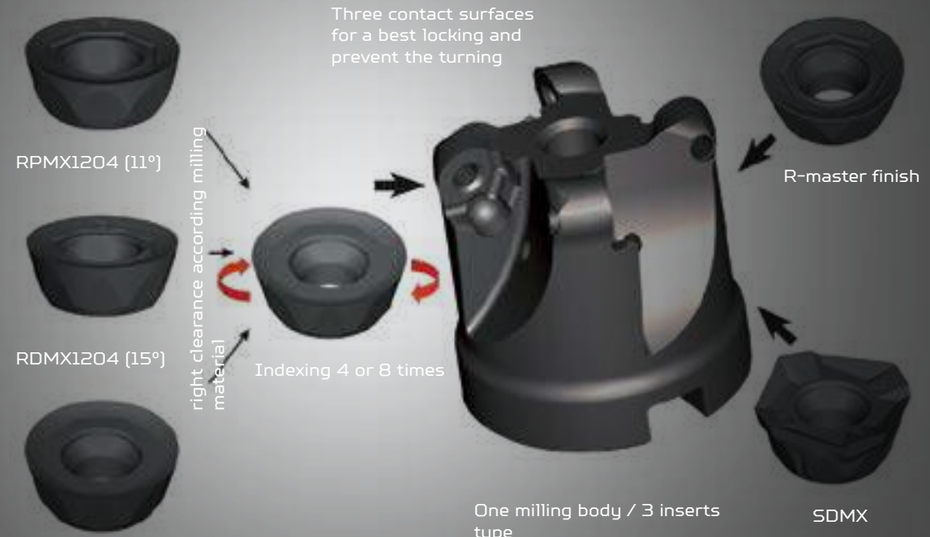
-GCB

-MFB

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

Standard application

Additional application

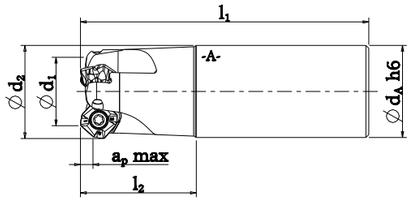


SSM-A.R / Multiple applications

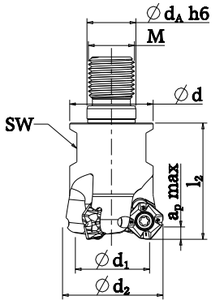
Milling body (SDMX11)

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

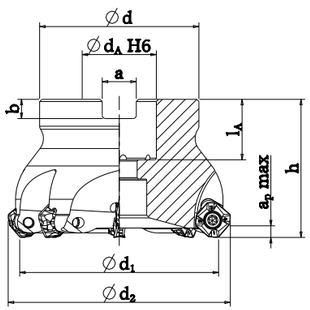
WS



TC



AR



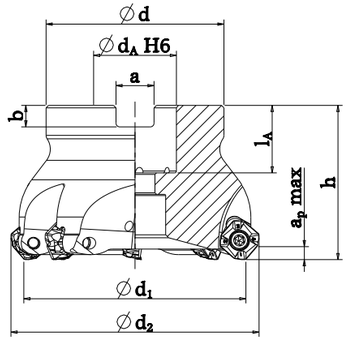
Description	Ø d_1 [mm]	Ø d_2 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
SH-R12-25.Z.02-A-30-86	17.5	25	86.3	30.3	-	25	6	25000	2	-	-	-	-	-	-
SH-R12-25.Z.02-A-60-116	17.5	25	116.3	60.3	-	25	6	18000	2	-	-	-	-	-	-
SH-R12-32.Z.03-A-40-100	24.5	32	100.3	40.3	-	32	6	19000	3	-	-	-	-	-	-
SH-R12-32.Z.03-A-70-130	24.5	32	130.3	70.3	-	32	6	17000	3	-	-	-	-	-	-
TC-R12-25.Z.02	17.5	25	-	35.3	-	12.5	6	25000	2	21	SW17	M12	-	-	-
TC-R12-35.Z.03	27.5	35	-	40.3	-	17	6	15900	3	29	SW24	M16	-	-	-
AR-R12-40.Z.04	32.5	40	-	-	40.3	16	6	15900	4	38	-	-	20	8.4	5.6
AR-R12-42.Z.04	34.5	42	-	-	40.3	16	6	15900	4	38	-	-	20	8.4	5.6
AR-R12-50.Z.05	42.5	50	-	-	40.3	22	6	12700	5	43	-	-	21	10.4	6.3
AR-R12-52.Z.05	44.5	52	-	-	40.3	22	6	12700	5	43	-	-	21	10.4	6.3
AR-R12-63.Z.06	55.5	63	-	-	40.3	22	6	10100	6	48	-	-	21	10.4	6.3
AR-R12-66.Z.06	58.5	66	-	-	40.3	27	6	10100	6	58	-	-	23	12.4	7
AR-R12-80.Z.08	72.5	80	-	-	50.3	27	6	7950	8	58	-	-	22	12.4	7
AR-R12-100.Z.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

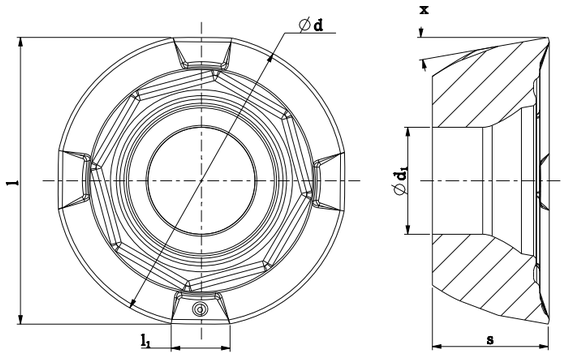
AR



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]
AR-R16-50.Z.03	39.8	50	40.5	22	8	12700	3	48	22	10.4	6.3
AR-R16-52.Z.04	41.8	52	40.5	22	8	12700	4	48	21	10.4	6.3
AR-R16-63.Z.05	52.8	63	40.5	22	8	10100	5	48	21	10.4	6.3
AR-R16-66.Z.05	55.8	66	40.5	22	8	10100	5	48	21	10.4	6.3
AR-R16-80.Z.06	69.8	80	50.5	27	8	7950	6	58	23	12.4	7
AR-R16-100.Z.07	89.8	100	50.5	32	8	6350	7	78	26	14.4	8
AR-R16-125.Z.08	114.8	125	63.5	40	8	5050	8	88	28	16.4	9

SSM-A.R / Multiple applications

Insert (RPMX)



-MFGCB

-MFMFB

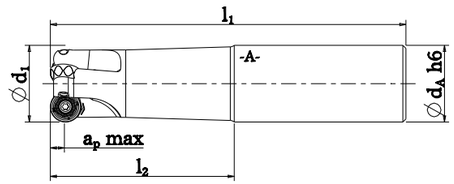
Description	d [mm]	l [mm]	s [mm]	l_1 [mm]	d_1 [mm]	X [°]
RPMX 1204MO-MFGCB	12	11.75	4.76	2.4	4.4	11
RPMX 1204MO-MFMFB	12	11.75	4.76	2.4	4.4	11
RPMX 1605MO-MFGCB	16	15.8	5.56	2.5	5.5	11
RPMX 1605MO-MFMFB	16	15.8	5.56	2.5	5.5	11

SSM-A.R / Multiple applications

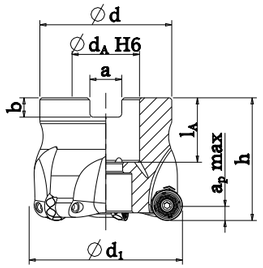
Milling body (RP12)

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

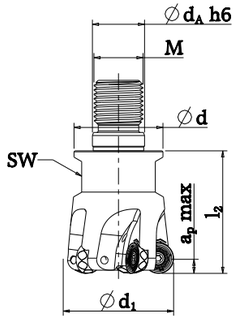
WS



AR



TC



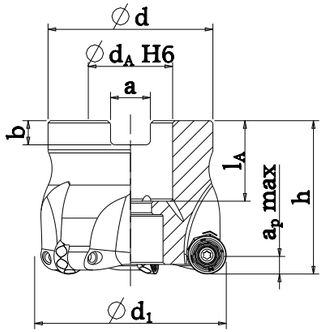
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
SH-R12-25.Z.02-A-30-86	24.75	85.87	29.87	-	25	6	25000	2	-	-	-	-	-	-
SH-R12-25.Z.02-A-60-116	24.75	115.87	59.87	-	25	6	18000	2	-	-	-	-	-	-
SH-R12-32.Z.03-A-40-100	31.75	99.87	39.87	-	32	6	19000	3	-	-	-	-	-	-
SH-R12-32.Z.03-A-70-130	31.75	129.87	69.87	-	32	6	17000	3	-	-	-	-	-	-
TC-R12-25.Z.02	24.75	-	34.87	-	12.5	6	25000	2	21	SW17	M12	-	-	-
TC-R12-35.Z.03	34.75	-	39.87	-	17	6	15900	3	29	SW24	M16	-	-	-
AR-R12-40.Z.04	39.75	-	-	39.87	16	6	15900	4	38	-	-	20	8.4	5.6
AR-R12-42.Z.04	41.75	-	-	39.87	16	6	15900	4	38	-	-	20	8.4	5.6
AR-R12-50.Z.05	49.75	-	-	39.87	22	6	12700	5	43	-	-	21	10.4	6.3
AR-R12-52.Z.05	51.75	-	-	39.87	22	6	12700	5	43	-	-	21	10.4	6.3
AR-R12-63.Z.06	62.75	-	-	39.87	22	6	10100	6	48	-	-	21	10.4	6.3
AR-R12-66.Z.06	65.75	-	-	39.87	27	6	10100	6	58	-	-	23	12.4	7
AR-R12-80.Z.08	79.75	-	-	49.87	27	6	7950	8	58	-	-	22	12.4	7
AR-R12-100.Z.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

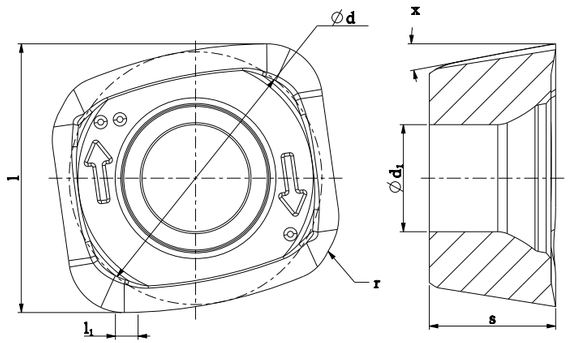
AR



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]
AR-R16-50.Z.03	49.8	39.9	22	8	12700	3	48	22	10.4	6.3
AR-R16-52.Z.04	51.8	39.9	22	8	12700	4	48	21	10.4	6.3
AR-R16-63.Z.05	62.8	39.9	22	8	10100	5	48	21	10.4	6.3
AR-R16-66.Z.05	65.8	39.9	22	8	10100	5	48	21	10.4	6.3
AR-R16-80.Z.06	79.8	49.9	27	8	7950	6	58	23	12.4	7
AR-R16-100.Z.07	99.8	49.9	32	8	6350	7	78	26	14.4	8
AR-R16-125.Z.08	124.8	62.9	40	8	5050	8	88	28	16.4	9

SSM-A.R / Multiple applications

Insert (EOMT)



-GCB -MFB

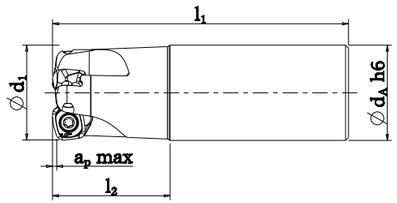
Description	d [mm]	s [mm]	l [mm]	d_1 [mm]	l_1 [mm]	r [mm]	x [°]
EOMT 120416-GCB	11.3	5.2	11	4.4	1	1.6	9
EOMT 120416-MFB	11.3	5.2	11	4.4	1	1.6	9

SSM-A.R / Multiple applications

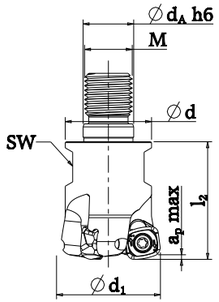
Milling body (SSM-A.R / EOMT12)

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

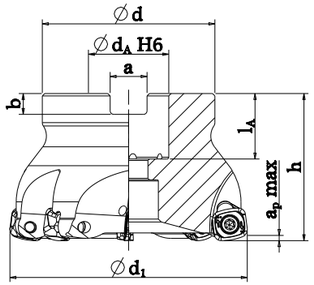
WS



TC



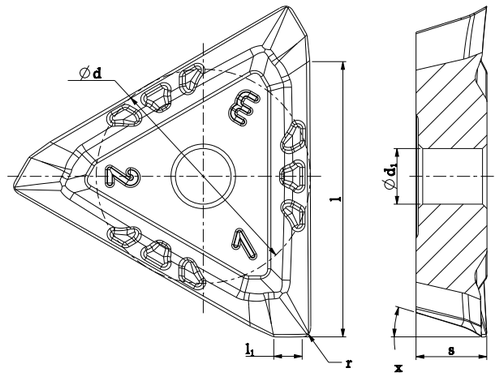
AR



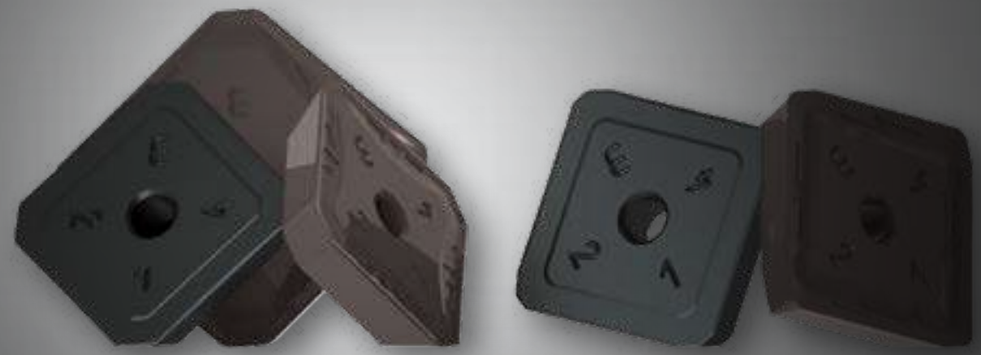
Description	Ø d_1 [mm]	l_1 [mm]	l_2 [mm]	h [mm]	Ø d_A H6/h6 [mm]	a_p max [mm]	n_{max} [min^{-1}]	z	Ø d [mm]	SW	M	l_A [mm]	a [mm]	b [mm]
SH-R12-25.Z.02-A-30-86	24.75	85.87	29.87	-	25	6	25000	2	-	-	-	-	-	-
SH-R12-25.Z.02-A-60-116	24.75	115.87	59.87	-	25	6	18000	2	-	-	-	-	-	-
SH-R12-32.Z.03-A-40-100	31.75	99.87	39.87	-	32	6	19000	3	-	-	-	-	-	-
SH-R12-32.Z.03-A-70-130	31.75	129.87	69.87	-	32	6	17000	3	-	-	-	-	-	-
TC-R12-25.Z.02	24.75	-	34.87	-	12.5	6	25000	2	21	SW17	M12	-	-	-
TC-R12-35.Z.03	34.75	-	39.87	-	17	6	15900	3	29	SW24	M16	-	-	-
AR-R12-40.Z.04	39.75	-	-	39.87	16	6	15900	4	38	-	-	20	8.4	5.6
AR-R12-42.Z.04	41.75	-	-	39.87	16	6	15900	4	38	-	-	20	8.4	5.6
AR-R12-50.Z.05	49.75	-	-	39.87	22	6	12700	5	43	-	-	21	10.4	6.3
AR-R12-52.Z.05	51.75	-	-	39.87	22	6	12700	5	43	-	-	21	10.4	6.3
AR-R12-63.Z.06	62.75	-	-	39.87	22	6	10100	6	48	-	-	21	10.4	6.3
AR-R12-66.Z.06	65.75	-	-	39.87	27	6	10100	6	58	-	-	23	12.4	7
AR-R12-80.Z.08	79.75	-	-	49.87	27	6	7950	8	58	-	-	22	12.4	7
AR-R12-100.Z.10	99.75	-	-	49.87	32	6	6350	10	78	-	-	26	14.4	8

SSM-T / Shouldering 3 x 90°

Insert (TPKN / TPKR)

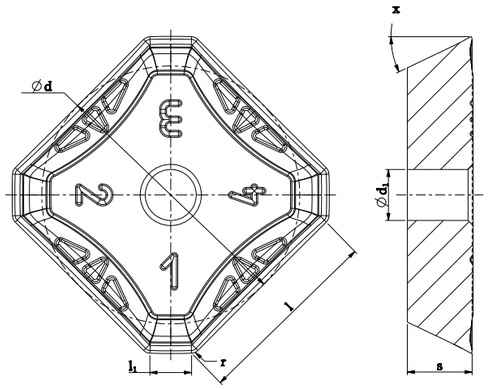


Descirption	l [mm]	s [mm]	d [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
TPKN 1603PDR-GCB	13	3.18	9.525	1.4	0.2	2.5	11
TPKR 1603PDR-MFB	13	3.18	9.525	1.2	0.4	2.5	11
TPKN 2204PDR-GCB	18.5	4.76	12.7	1.5	0.2	2.5	11
TPKR 2204PDR-MFB	18.5	4.76	12.7	1.6	0.3	2.5	11



SSM-S / Face milling 4 x 45°

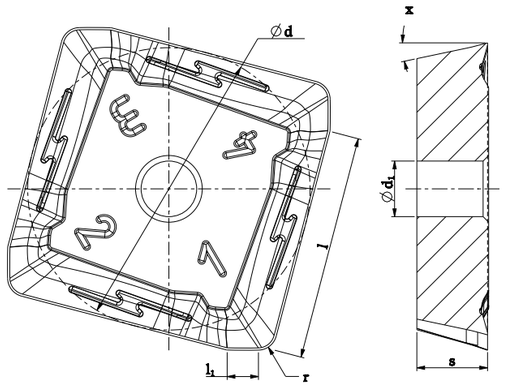
Insert (SEKN / SEKR)



Descirption	d [mm]	l [mm]	s [mm]	l_1 [mm]	r [mm]	d_1 [mm]	x [°]
SEKN 1203AFSN-GCB	12.7	9	3.18	2	0.45	2.5	20
SEKR 1203AFSN-MFB	12.7	9	3.18	2	0.45	2.5	20
SEKR 1504AFSN-MFB	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-GCB	12.7	10	3.18	1.2	0.5	2.5	11.25
SPKN 1203EDTR-GCB	12.7	10	3.18	1.2	0.5	2.5	11.25
SPKR 1203EDER-MFB	12.7	10	3.18	1.4	0.9	2.5	11.25

BEYOND
THE
MACHINING

Technical Information

KARCAN
cutting tools

www.karcan.com

TOOLING SOLUTIONS
BY KARCAN

KARCAN 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

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

Tolerances

	d ±	m ±	s ±	ø6.35/9.52	ø12.7	ø15.87/19.05
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

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

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

Chipbreaker

Chipbreaker designation

GCB = Steel machining
MFB = Stainless steel machining
KCB = Cast iron machining
ACB = Non-ferrous machining
EMB = Exotic machining
– = Hard material machining
RCB = Insert with specific radius

Cutting edge length

A	T	C/S	H	R

Cutting edge

F sharp

E honed

S chamfered and honed

T chamfered

Cutting direction

R

L

N

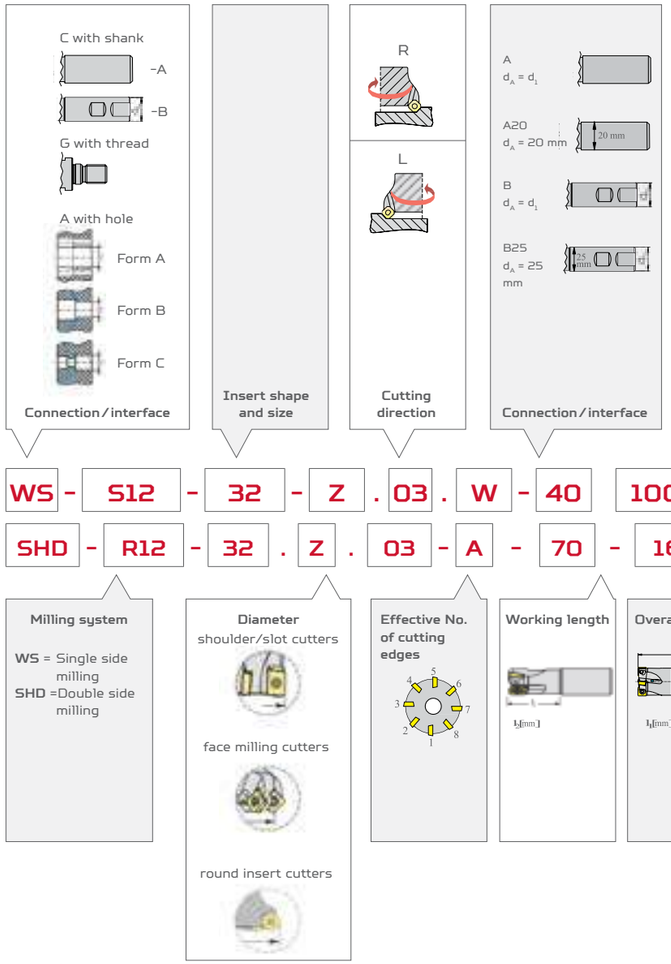
A	P	K	T	10		
R	P	G	T	10		

03	PD	E	R	-	GCB	
T3	M0	E	N	-	ACB	

MILLING CATALOGUE

KARCAN 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

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

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

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

EMB
Stable cutting edge for dedicated exotic materials and titanium.

KCB
Strong cutting edge for cast iron applications.

MOSN
Strong reinforced cutting edge for hard material.

Grades

Designation System

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

Main application (material)
Variant 2: ISO letter

Manufacturer:
KARCAN

KR	2	35
1	4	5

Main application
(machining method)

0	Uncoated Carbide
1	CVD Coated Carbide
2	PVD Coated Carbide

ISO 513
Application range

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

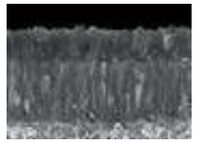
Grade Overview

Grade designation		Standard designation ISO	Standard designation 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
KRP130		HC-P30	C6	C		•					
		HC-K25	C2	C				•			
		HC-M25	–	C			•				
KRP135		HC-P35	C5	C		•					
		HC-M30	–	C			•				
KRPD235		HC-P35	C5	P		•					
		HC-M30	–	P			•				
KRM240		HC-M40	–	P			•				
		HC-P40	C5	P		•					
KRK115		HC-K15	C3	C				•			
KRK220		HC-K20	C2	P				•			
KRWN715		HW-N15	C3	W					•		
		HW-K15	C3	W				•			
KRS135		HC-S35	–	C						•	
		HC-M35	–	C			•				
KRS135		HC-S35	–	C						•	

● Main application
○ Extended application

KRP130 — 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.

KRP135 — HC-P35 | HC-M30

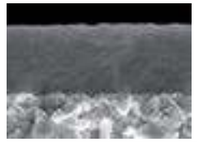
● ○

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.

KRPD235 — HC-P35 | HC-M30

● ○

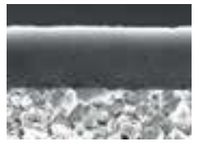


Specification:
Composition: Co 10.5 %; mixed carbide 2.0 %; WC balance | Grain size: 1-2 µm | Hardness: HV_{30} 1400 | Coating specification: PVD TiAlTaN

Recommended application:
Particularly suitable for the wet machining of steels.

KRM240 — HC-M40 | HC-P40

● ○

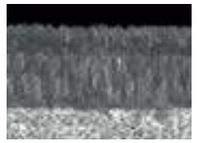


Specification:
Composition: Co 12.5 %; mixed carbides 2.0 %; WC balance | Grain size: 1 µm | Hardness: HV_{30} 1380 | Coating specification: PVD TiAlTaN

Recommended application:
The first choice for the machining of austenitic steels.

KRK115 — HC-K15

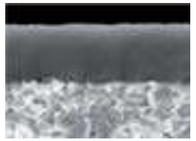
●



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.

KRK220 — 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

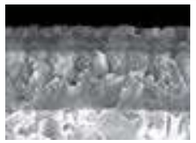
Recommended application:
Optimal for the machining of high-tensile cast icon materials when toughness is required.

KRN015 — 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.

KRS135 — 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.

KRS140 — 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.

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