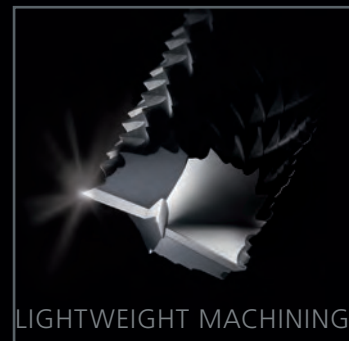
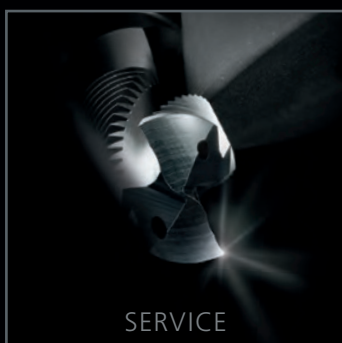


TOOLS PLUS IDEAS



2015 | 2016

With innovative solutions and tool designs for bore machining, the KOMET GROUP holds a leading market role worldwide. Our developments for boring, reaming, tapping and milling contribute enormously to our customers' success.

THE CUTTING EDGE – Solutions for peak performance



In this "TOOLS PLUS IDEAS" catalogue, we provide you with detailed information about our innovations and about the additions of new products to already existing ranges. More extensive information on our various product lines can be found in our specialist catalogues.



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KOMET® Indexable insert mills

Combining an innovative design and the special geometry of their indexable inserts, KOMET® milling cutters make a distinctive difference when machining an extremely wide variety of different materials. Using more than 70 indexable inserts with different topographies, substrates and coatings, which can be combined with a variety of 60 basic body versions, KOMET® provides a versatile, complete range of tools with which all milling tasks from face, shoulder and chamfer milling to milling straight, 45-degree and T-slots, circular and plunge milling, inclined plunge milling as well as free-form milling can be mastered with optimum efficiency.

KOMET® *hi.aeQ*



The innovative KOMET® *hi.aeQ* arbor face milling cutter is excellently suited for reliable face milling of cast iron materials. It features a high number of teeth and low cutting forces.

The Q80 tangential indexable inserts used are designed for counterboring and milling operations. Thanks to a standing-lying arrangement, each insert has eight usable cutting edges. The extremely stable tangential indexable inserts, when combined with selected cutting tool materials and coatings, provide a great economic advantage when machining cast iron materials.

KOMET® Q40-KFM



Highly positive and soft-cutting KOMET® Q40-KFM face-milling cutter with a cutting depth up to 4 mm. Suitable for precision and medium machining. The high-performance cutting tool materials BK6130 and BK2735 increase productivity in steel and cast iron machining.

KOMET® Q63-KFM

The 45° face-milling cutter KOMET® Q63-KFM is ideally designed for middle and roughing operations with a cutting depth of up to 6.5 mm and a tooth feed of up to 0.5 mm. Extremely sturdy design and eight usable cutting edges for working with process reliability.



KOMET® Quatron *hi.feed*

The success enjoyed by our tried and tested KUB Quatron® solid drill range continues in our milling cutter range. With the successful Quatron indexable insert developed from solid drilling technology, we are extending our experience to the KOMET® Quatron *hi.feed* milling cutter. Plunge milling (also known more simply as plunging) is a type of machining particularly suitable for cutting deep grooves and large cavities. Plunge milling can be the ideal solution for large projection lengths and unstable conditions. The KOMET® Quatron *hi.feed* is a high-performance roughing tool for the fast removal of large quantities of cut metal.



KOMET® Q56-KHF

The face-milling cutter KOMET® Q56-KHF is particularly efficient. It was designed for high-feed applications and achieves a very high metal removal rate. Its angled cutting edge also achieves optimum surface quality.



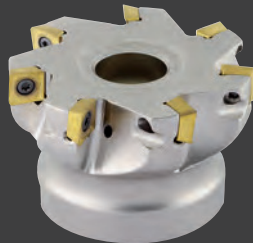
KOMET® *hi.apQ*

A new generation of mills for efficiently processing an extremely wide variety of tasks. The tools are equipped with highly positive APKT indexable inserts and are suitable for shoulder milling, trimming, grooving, inclined plunging and circular interpolation milling. Almost any machining situation can be successfully handled thanks to the wide range of extremely different types of main carrier, e.g. in the form of arbor milling cutters, end milling cutters or screw-in cutters. In addition, a wide selection of cutting materials and coatings is available that can increase your productivity.



KOMET® Q43-KSM

The shoulder milling cutter KOMET® Q43-KSM produces shoulders that are step-free and are exactly at 90 degrees as a result of its soft-cutting geometry.



KOMET® Q55-KCM

The copy-milling cutter KOMET® Q55-KCM is suitable for an extremely wide variety of milling tasks and allows high feed rates combined with maximum stability. Due to the use of further indexable insert shapes such as Q43-SDMX, Q47-EOMT or Q55 circular inserts with wiper geometry on the same basic body, this milling system is an all-rounder as far as machining options are concerned. The KOMET® Q55-KCM can therefore be used for chamfer milling, and used equally well as a high feed-rate milling cutter. Tipped with circular wiper inserts, it ensures particularly good surface quality.



KOMET® Q75-KCM

The copy-milling cutter KOMET® Q75-KCM is suitable for face and slot milling. For applications in highly heat-resistant alloys as well as titanium and titanium alloys, the specially matched topography -25 is available in combination with the coatings BK6435 and BK7740 and, thanks to the eight usable cutting edges, ensures efficient machining of difficult materials.



KOMET® Quatron *Chamfer*

The chamfer milling cutters are optimally matched to your requirements and are suitable for chamfering workpiece edges and large holes, for both forward and reverse machining. The Quatron indexable insert used here has already distinguished itself in a number of applications.



Indexable insert mills

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Face milling cutter

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Chamfer milling cutter

KOMET® Quatron <i>Chamfer</i>	
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Circular milling cutter

T-slot milling cutter

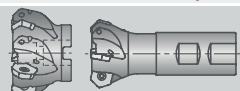
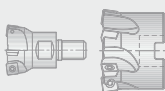
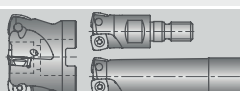
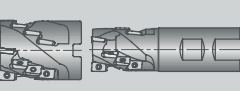
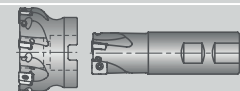
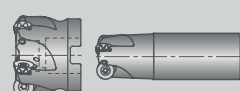
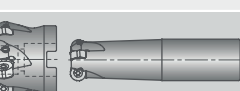
KomPass
MILLING



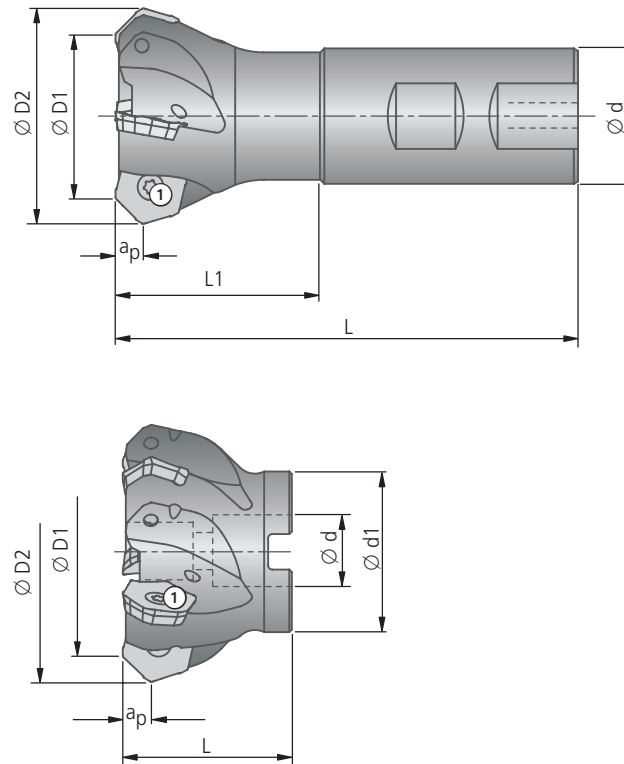
KOMET® Tool selection

Help table for milling

Machining												
Surface milling	Axial plunging	Circular milling	Plunge milling	Slot milling	Shoulder milling	Slot milling 45°	Chamfer milling	Free form milling	Turn milling	Circular turn milling	T-slot milling	
												
●					⊕ With 45° setting angle from 2016							
●						●	●					
●						●	●					
●						●	●					
●	●	●	●		⊕ Diameter expansion to 100 mm from 2016							
●	●	●	●	●								
	●	●		●	●							
	●	●		●	●							
●	●	●		●	●							
●	●	●	●	●				●	●			
●	●	●	●	●				●	●			
●						●	●					
●	●	●	●	●								
				●				●				
●				●					●			
						●	●					
										●		
											●	

	Material	Ø mm	Indexable insert				Tool		Page	
	Mild steel/tool steel Stainless and acid-resistant steel Grey cast iron, spherical cast iron Non-ferrous metals Heat-resistant steels Hardened tool steel P M K N S H		Cutting depth ap max	Setting angle α		ISO code	Cutting edges per indexable insert			
	<div><div></div><div></div><div></div><div></div><div></div></div>	40-50 63-160	3,0 4,0	88°		Q80 20.. Q80 32..	LNGU	8	 Face milling cutter KOMET® <i>hi.aeQ</i>	
	<div><div></div><div></div><div></div><div></div></div>	40-80	6,0	45°		Q09 44..	SEHW	4	 Face milling cutter Q09	
	<div><div></div><div></div><div></div><div></div><div></div></div>	40-125	4,5	45°		Q40 53..	HOKT HPCT HPKT	6	 Face milling cutter Q40-KFM	8
	<div><div></div><div></div><div></div><div></div><div></div></div>	40-125 40-125	6,0 6,5	45°		Q63 46.. Q63 53..	SOKU	8	 Face milling cutter Q63-KFM	10
	<div><div></div><div></div><div></div></div>	20 25 32-35 42-52	0,67 0,72 0,88 1,1	8°		W83 13.. W83 18.. W83 23.. W83 32..	SOEX	4	 Face milling cutter KOMET® <i>Quatron hi.feed</i>	
	<div><div></div><div></div><div></div><div></div></div>	16-25 25-40 35-80	0,8 1,0 2,0	90°		Q56 20.. Q56 32.. Q56 46..	XPLT XDLT XOLT	4	 Face milling cutter Q56-KHF	12
	<div><div></div><div></div><div></div><div></div><div></div></div>	12-100 20-100 32-40	9 11 15	90°		Q36 18.. Q36 24.. Q36 38..	APKT	2	 Shoulder milling cutter KOMET® <i>hi.apQ</i>	
	<div><div></div><div></div><div></div><div></div><div></div></div>	25-40 32 32-50 40-63 80	26 32 35 42 55	90°		Q36 18.. Q36 24.. Q36 38..	APKT	2	 Shoulder milling cutter Q36-KSM KOMET® <i>hi.apQ</i>	16
	<div><div></div><div></div><div></div><div></div><div></div></div>	25-80	8	90°		Q43 28..	SDKT SDHT	4	 Shoulder milling cutter Q43-KSM	20
	<div><div></div><div></div><div></div><div></div><div></div><div></div></div>	20-50 25-100	5 6	~		Q55 34.. Q55 42..	RDHW RDHX RPHX RPMX	8	 Copy milling cutter Q55-KCM	22 – 26
	<div><div></div><div></div><div></div><div></div><div></div></div>	25-100	6	~		Q55 42..	RPHX RPMX	4		28
	<div><div></div><div></div><div></div><div></div><div></div></div>	25-100	4	45°		Q43 48..	SDMX	4		27
	<div><div></div><div></div></div>	32-100	1,5			Q47 34..	EOMT	2		29
	<div><div></div><div></div><div></div><div></div></div>	25-32	11	90°		Q36 24..	APKT	2	 Copy milling cutter	
	<div><div></div><div></div><div></div><div></div><div></div></div>	32-100	4,5	~		Q75 42..	RNKU ROHU	8	 Copy milling cutter Q75-KCM	30
	<div><div></div><div></div><div></div><div></div></div>	12-44	~	45°		W83 13.. W83 18.. W83 23.. W83 32..	SOEX	4	 Chamfer milling cutter KOMET® <i>Quatron Chamfer</i>	
	<div><div></div><div></div><div></div><div></div></div>	10-80	~	~		Q12 18.. Q12 32.. Q12 44..	TPAX TCAX TNAX	3	 Circular milling cutter	
	<div><div></div><div></div><div></div><div></div></div>	17,5-47		90°		Q09 13.. Q15 18.. Q15 32..	SPGW CPMT CPMW	2	 T-slot milling cutter	

Face milling cutter Q40-KFM



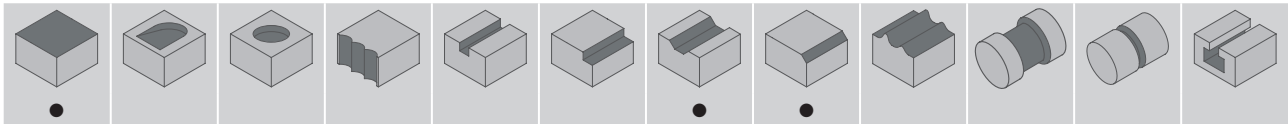
BENEFITS for you:

- Highly positive cutting edge geometry for soft cutting action
- Optimised topographies for different applications on small and medium-sized milling machines
- Six useful cutting edges per indexable insert
- Every cutting edge with wiper geometry

a_p max. 4,5 mm

KOMET®

Face milling cutter Q40-KFM



Z = effective number of teeth for calculating v_f

End milling cutter										Clamping screw	Indexable insert
$\varnothing D1$	$\varnothing D2$	Order No.	$\varnothing d_{h6}$	L	L1	a_p max	Spindle speed max. rpm	Z		① Order No. Article	 Order No. ISO Code
40	52,2	F55 03150	32	110	50	4,5	17.000	4		N00 57890 S40110-15IP-55° 4,25 Nm	Q40 53.. HOKT HPCT HPKT

Arbor milling cutter										Differential screw	Clamping screw	Indexable insert
$\varnothing D1$	$\varnothing D2$	Order No.	$\varnothing d^{H7}$	$\varnothing d1$	L	a_p max	Spindle speed max. rpm	Z		Order No.	① Order No. Article	 Order No. ISO Code
40	52,2	F55 04150	16	38	40	4,5	19.900	4		L02 30990 15Nm	N00 57890 S40110-15IP-55° 4,25 Nm	Q40 53.. HOKT HPCT HPKT
50	62,2	F55 04170	22	38	40	4,5	15.900	5	0,32	—		
63	75,2	F55 04190	22	48	40	4,5	12.600	6	0,56	—		
80	92,2	F55 04210	27	58	50	4,5	9.900	7		—		
100	112,2	F55 04230	32	78	50	4,5	7.900	9		—		
125	137,2	F55 04250	40	88	63	4,5	6.300	10		—		

Supply includes: Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

Supply includes arbor milling cutter $\varnothing 40$ mm:

Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and differential screw.

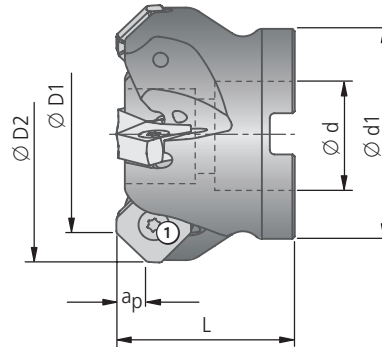
Please order insert separately. Screwdriver see page 47.

Recommended cutting data											
Material		Topo- graphy	Coating	Order No. ISO code		Cutting speed v_c m/min	Feed f_z (mm/tooth) at a_e/D				Cutting depth a_p mm
							$\leq 0,1$	$> 0,1 - 0,2$	$> 0,2 - 0,3$	$> 0,3$	
P	For medium roughing operations	-01	BK8425	Q40 53010.048425 HPKT0604AZER-01 BK8425		60-350	0,21-0,35	0,15-0,25	0,12-0,18	0,10-0,15	0,1-4,0
	High-performance grade for higher cutting speed	-01	BK6130	Q40 53010.046130 HOKT0604AZER-01 BK6130							
	High-performance grade for tougher steel materials	-01	BK2735	Q40 53010.042735 HOKT0604AZER-01 BK2735							
	For precision-machining and finishing	-21	BK8425	Q40 53210.048425 HPKT0604AZER-21 BK8425							
M	For medium roughing operations	-01	BK2740	Q40 53010.042740 HPKT0604AZER-01 BK2740		60-200	0,21-0,30	0,15-0,21	0,12-0,15	010-0,13	0,1-4,0
	For precision-machining and finishing	-21	BK2740	Q40 53210.042740 HPKT0604AZER-21 BK2740							
K	Specialist for cast iron	-05	BK6110	Q40 53050.046110 HPKT0604AZER-05 BK6110		100-350	0,21-0,35	0,15-0,25	0,12-0,18	0,10-0,15	0,1-4,0
	High-performance grade for higher cutting speed	-01	BK6130	Q40 53010.046130 HOKT0604AZER-01 BK6130							
N	Highly polished chip breaker	-12	K10	Q40 53120.0423 HPCT0604AZFR-12 K10		< 2000	0,21-0,35	0,15-0,25	0,12-0,18	0,10-0,15	0,1-4,0
S	For highly heat-resistant steels	-21	BK6435	Q40 53210.046435 HPKT0604AZER-21 BK6435		25-75	0,16-0,30	0,12-0,21	0,10-0,15	0,08-0,13	0,1-4,0

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

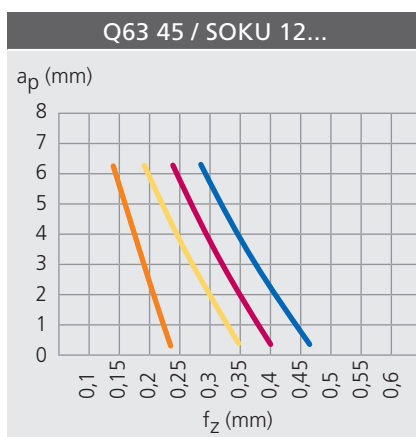
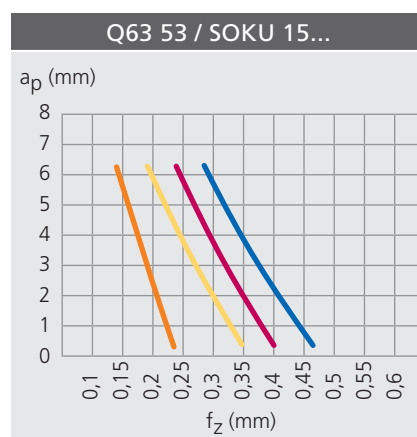
Important: See page 247 for more application details and safety notes !

Face milling cutter Q63-KFM



BENEFITS for you:

- Stable double-sided indexable insert for a_p up to 6.5 mm
- High-quality surface finish thanks to wiper geometry
- Eight cutting edges per indexable insert

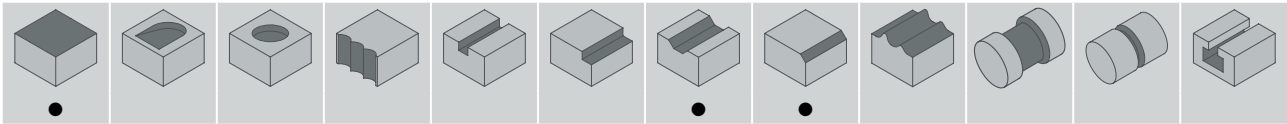


Initial values for a_e/D ≥ 0,4 in relation to a_p

ap max. 6 – 6,5 mm

KOMET®

Face milling cutter Q63-KFM



Z = effective number of teeth for calculating v_f

Arbor milling cutter											Indexable insert	
Ø D1	Ø D2	Order No.	Ø d ^{H7}	Ø d1	L	a _p max.	Spindle speed max. rpm	 Z	 kg	Differential screw  Order No.	Clamping screw  ① Order No. Article	 Order No. ISO Code
40	52,4	F55 01150	16	38	45	6	19.900	4		L02 30990 15Nm	N00 57920 S40110-T15-55° 4,25 Nm	Q63 46.. SOKU 12..
50	62,4	F55 01170	22	43	45	6	15.900	5		–		
63	75,4	F55 01190	22	48	45	6	12.600	6		–		
80	92,4	F55 01210	27	58	50	6	9.900	8		–		
100	112,4	F55 01230	32	78	50	6	7.900	10		–		
125	137,4	F55 01250	40	88	63	6	6.300	12		–		
40	55	F55 02150	16	48	45	6,5	15.900	4		L02 30990 15Nm	N00 57900 S45130-20IP-55° 5 Nm	Q63 53.. SOKU 15..
50	65	F55 02170	22	53	45	6,5	12.700	4	0,42	–		
63	78	F55 02190	22	58	45	6,5	10.100	5	0,62	–		
80	95	F55 02210	27	63	50	6,5	7.900	6		–		
100	115	F55 02230	32	78	50	6,5	6.300	7	1,82	–		
125	140	F55 02250	40	88	63	6,5	5.000	8		–		

Supply includes: Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

Supply includes arbor milling cutter Ø 40 mm:

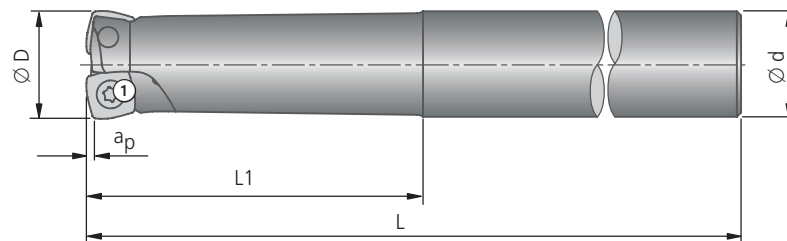
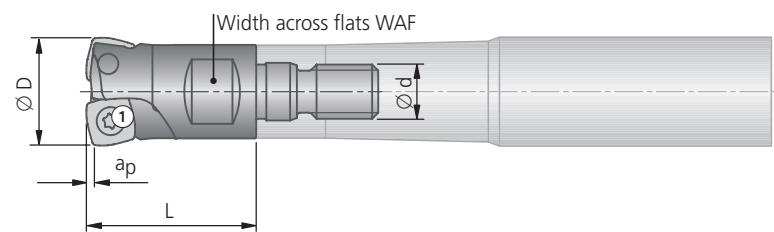
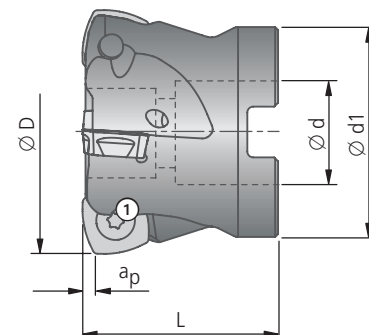
Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and differential screw. Please order insert separately. Screwdriver see page 47.

Recommended cutting data											
Material		Topo- graphy	Coating	Order No. ISO code		Cutting speed v_c m/min	Feed f_z (mm/tooth) at a_e/D				Cutting depth a_p mm
							$\leq 0,1$	$> 0,1 - 0,2$	$> 0,2 - 0,3$	$> 0,3$	
Q63 46 / SOKU 12...											
P	For medium roughing operations	-21	BK8425	Q63 46210.068425 SOKU1205AZ-21 BK8425		60-350	0,21-0,35	0,15-0,25	0,12-0,18	0,10-0,15	0,1-6,0
M	For medium roughing operations	-21	BK2740	Q63 46210.062740 SOKU1205AZ-21 BK2740		60-200	0,21-0,30	0,15-0,21	0,12-0,15	0,10-0,13	0,1-6,0
K	Specialist for cast iron	-05	BK6110	Q63 46050.066110 SOKU1205AZ-05 BK6110		60-300	0,21-0,35	0,15-0,25	0,12-0,18	0,10-0,15	0,1-6,0
S	For highly heat-resistant steels	-21	BK6435	Q63 46210.066435 SOKU1205AZ-21 BK6435		25-75	0,16-0,30	0,12-0,21	0,10-0,15	0,08-0,13	0,1-6,0
Q63 53 / SOKU 15...											
P	For medium roughing operations	-21	BK8425	Q63 53210.068425 SOKU1505AZ-21 BK8425		60-350	0,21-0,35	0,15-0,25	0,12-0,18	0,10-0,15	0,1-6,5
M	For medium roughing operations	-21	BK2740	Q63 53210.062740 SOKU1505AZ-21 BK2740		60-200	0,21-0,30	0,15-0,21	0,12-0,15	0,10-0,13	0,1-6,5
K	Specialist for cast iron	-05	BK6110	Q63 53050.066110 SOKU1505AZ-05 BK6110		60-300	0,21-0,35	0,15-0,25	0,12-0,18	0,10-0,15	0,1-6,5
S	For highly heat-resistant steels	-21	BK6435	Q63 53210.066435 SOKU1505AZ-21 BK6435		25-75	0,16-0,30	0,12-0,21	0,10-0,15	0,08-0,13	0,1-6,5

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See page 247 for more application details and safety notes !

Face milling cutter Q56-KHF



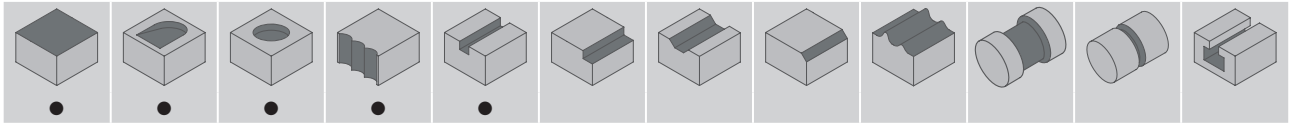
BENEFITS for you:

- High feed-rate milling
- High metal removal rate achievable because tooth feed rate of up to 3 mm possible
- Soft-cutting geometry reduces vibration
- Angled cutting edge for outstanding surface quality
- Creation of a 90° shoulder

a_p max. 0,8 – 2,0 mm

KOMET®

Face milling cutter Q56-KHF



Z = effective number of teeth for calculating v_f

End milling cutter										Indexable insert
Ø D	Order No.	Ø d _{h6}	L	L1	a_p max	Spindle speed max. rpm	Z		Clamping screw ① Order No. Article	 Order No. ISO Code
16	F55 05070	16	200	50	0,8	4.600	2		N00 57820 S2550-T8-55° 1,2 Nm	Q56 20.. XPLT 07..
20	F55 05090	20	200	50	0,8	4.200	3			
25	F55 05110	25	200	50	0,8	4.600	4			
25	F55 07110	25	225	50	1,0	9.000	3	0,76	N00 57860 S3572-T15-55° 3,2 Nm	Q56 32.. XDLT 10..
32	F55 09140	32	250	63	2,0	6.400	3		N00 57880 S45105-T20-55° 5 Nm	Q56 46.. XOLT 13..

Screw-in cutter											
Ø D	Order No.	Ø d	L	a _p max	Spindle speed max. rpm	Width across flats WAF	Tightening torque Nm			Clamping screw   ① Order No. Article	Indexable insert  Order No. ISO Code Size
16	F55 06070	M8	25	0,8	20.800	10	25	2		N00 57820 S2550-T8-55° 1,2 Nm	Q56 20.. XPLT 07..
20	F55 06090	M10	30	0,8	19.800	15	40	3			
25	F55 06110	M12	35	0,8	18.700	17	60	4			

Arbor milling cutter											Indexable insert
Ø D	Order No.	Ø d ^{H7}	Ø d1	L	a _p max	Spindle speed max. rpm			 Order No.	 ① Order No. Article	 Order No. ISO Code
40	F55 08150	16	38	40	1,0	26.400	4		L02 30990 15Nm – –	N00 57870 S3586-T15-55° 3,2 Nm	Q56 32.. XDLT 10..
50	F55 08170	22	43	40	1,0	23.500	5				
63	F55 08190	22	48	40	1,0	20.500	6				
50	F55 10170	22	43	40	2,0	18.800	4		–	N00 57880 S45105-T20-55° 5 Nm	Q56 46.. XOLT 13..
63	F55 10190	22	48	40	2,0	16.400	5		–		
80	F55 10210	27	58	50	2,0	14.000	7		–		

Supply includes: Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

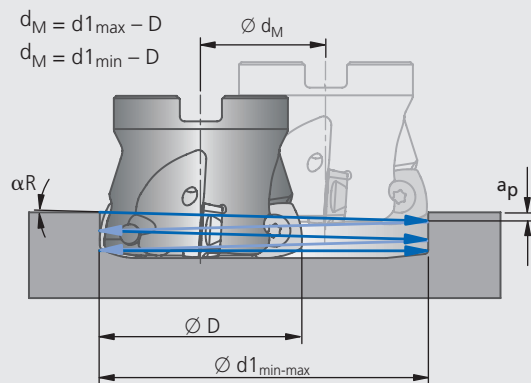
Supply includes arbor milling cutter Ø 40 mm:

Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and differential screw. Please order insert separately. Screwdriver see page 47.

Application example face milling cutter Q56-KHF



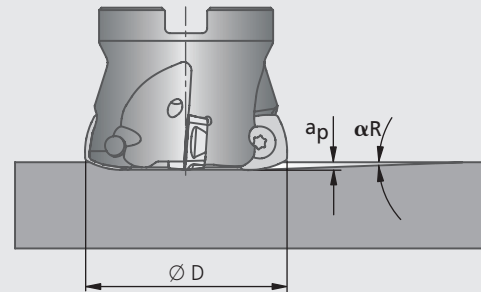
Circular plunging



Milling cutter dia. Ø D	ISO code indexable insert	Machining dia. Ø d1 min-max	Ramping angle αR max	Cutting depth ap max
End milling cutter				
16	XPLT 07	22 - 31	4,5°	0,8
20	XPLT 07	30 - 39	2,3°	0,8
25	XPLT 07	40 - 49	1,3°	0,8
25	XDLT 10	35 - 48	3,1°	1,0
35	XOLT 13	50 - 68	3,7°	2,0
Screw-in cutter				
16	XPLT 07	22 - 31	4,5°	0,8
20	XPLT 07	30 - 39	2,3°	0,8
25	XPLT 07	40 - 49	1,3°	0,8
Arbor milling cutter				
40	XDLT 10	65 - 78	1,0°	1,0
50	XDLT 10	85 - 98	0,8°	1,0
63	XDLT 10	111 - 124	0,7°	1,0
50	XOLT 13	80 - 98	1,3°	2,0
63	XOLT 13	106 - 124	0,9°	2,0
80	XOLT 13	140 - 158	1,1°	2,0



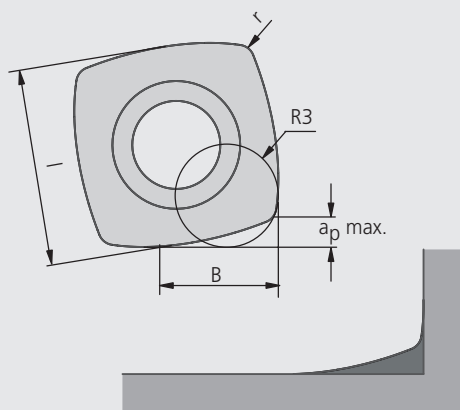
Inclined plunging



Milling cutter dia. Ø D	ISO code indexable insert	Ramping angle αR max	Cutting depth ap max
End milling cutter			
16	XPLT 07	5,9°	0,8
20	XPLT 07	3,2°	0,8
25	XPLT 07	2,0°	0,8
25	XDLT 10	3,6°	1,0
35	XOLT 13	4,4°	2,0
Screw-in cutter			
16	XPLT 07	5,9°	0,8
20	XPLT 07	3,2°	0,8
25	XPLT 07	2,0°	0,8
Arbor milling cutter			
40	XDLT 10	1,2°	1,0
50	XDLT 10	0,9°	1,0
63	XDLT 10	0,8°	1,0
50	XOLT 13	1,5°	2,0
63	XOLT 13	1,1°	2,0
80	XOLT 13	1,3°	2,0



Profile for shoulder and groove milling
Program radius and residual material

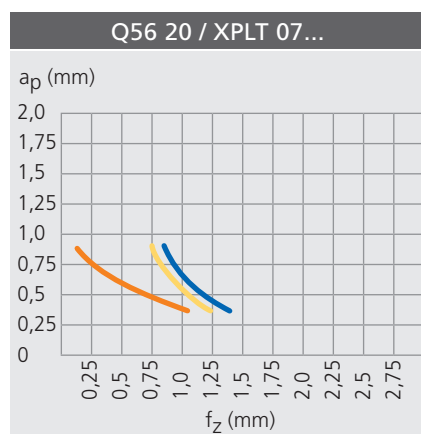
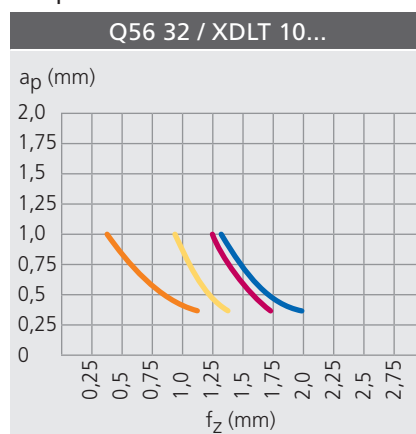
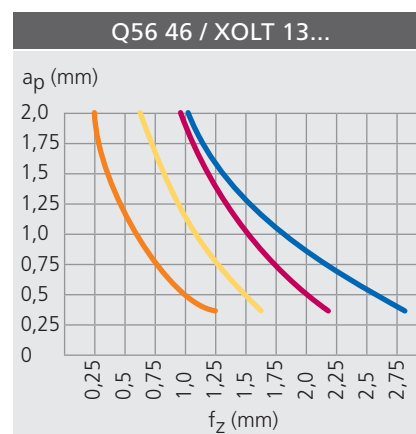


ISO code indexable insert	I	Program radius R	B	r	Cutting depth ap max
XPLT 07	7	1,2	4,3	0,5	0,8
XDLT 10	10	2	5,9	0,8	1,0
XOLT 13	13	3	8,5	1	2,0

Recommended
 $f_z \geq 0,5$ mm/tooth

Recommended cutting data face milling cutter Q56-KHF

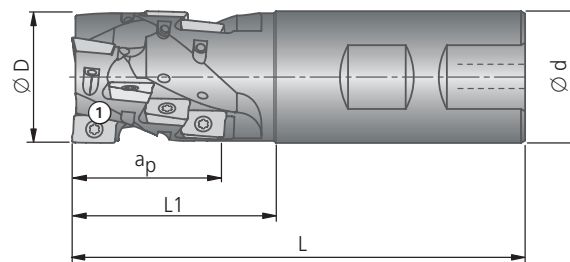
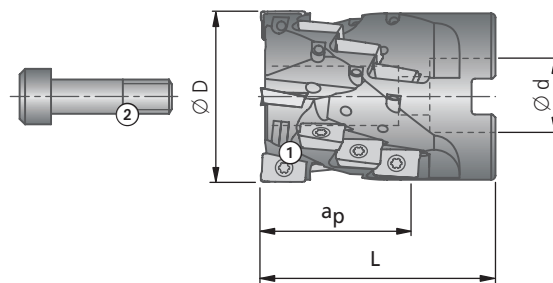
Recommended cutting data											
Material		Topo- graphy	Coating	Order No. ISO code		Cutting speed v_c m/min	Feed f_z (mm/tooth) at a_e/D				Cutting depth a_p mm
							$\leq 0,1$	$> 0,1 - 0,2$	$> 0,2 - 0,3$	$> 0,3$	
Q56 20 / XPLT 07...											
P	For medium roughing operations	-01	BK8425	Q56 20010.058425 XPLT070305-01 BK8425		100-280	0,82-1,50	0,59-1,07	0,49-0,77	0,40-0,64	0,1-0,8
M	For medium roughing operations	-01	BK2740	Q56 20010.052740 XPLT070305-01 BK2740		140-260	0,82-1,50	0,59-1,07	0,49-0,77	0,40-0,64	0,1-0,8
S	For highly heat-resistant steels	-21	BK6435	Q56 20210.056435 XPLT070305-21 BK6435		25-75	0,62-0,80	0,44-0,57	0,37-0,41	0,30-0,34	0,1-0,8
	For titanium / titanium alloys	-21	BK7740	Q56 20210.057740 XPLT070305-21 BK7740							
Q56 32 / XDLT 10...											
P	For medium roughing operations	-01	BK8425	Q56 32010.088425 XDLT10T308-01 BK8425		100-280	0,82-2,50	0,59-1,78	0,49-1,29	0,40-1,07	0,1-1,0
	For precision-machining and finishing	-21	BK8425	Q56 32210.088425 XDLT10T308-21 BK8425							
M	For medium roughing operations	-01	BK2740	Q56 32010.082740 XDLT10T308-01 BK2740		140-260	0,82-2,50	0,59-1,78	0,49-1,29	0,40-1,07	0,1-1,0
	For precision-machining and finishing	-21	BK2740	Q56 32210.082740 XDLT10T308-21 BK2740							
K	Specialist for cast iron	-05	BK6110	Q56 32050.086110 XDLT10T308-05 BK6110		110-230	0,82-2,50	0,59-1,78	0,49-1,29	0,40-1,07	0,1-1,0
S	For highly heat-resistant steels	-21	BK6435	Q56 32210.086435 XDLT10T308-21 BK6435		25-75	0,62-0,80	0,44-0,57	0,37-0,41	0,30-0,34	0,1-1,0
	For titanium / titanium alloys	-21	BK7740	Q56 32210.087740 XDLT10T308-21 BK7740							
Q56 46 / XOLT 13...											
P	For medium roughing operations	-01	BK8425	Q56 46010.108425 XOLT130410-01 BK8425		100-280	0,82-3,00	0,59-2,14	0,49-1,54	0,40-1,28	0,1-2,0
	For precision-machining and finishing	-21	BK8425	Q56 46210.108425 XOLT130410-21 BK8425							
M	For medium roughing operations	-01	BK2740	Q56 46010.102740 XOLT130410-01 BK2740		140-260	0,82-3,00	0,59-2,14	0,49-1,54	0,40-1,28	0,1-2,0
	For precision-machining and finishing	-21	BK2740	Q56 46210.102740 XOLT130410-21 BK2740							
K	Specialist for cast iron	-05	BK6110	Q56 46050.106110 XOLT130410-05 BK6110		110-230	0,82-3,00	0,59-2,14	0,49-1,54	0,40-1,28	0,1-2,0
S	For highly heat-resistant steels	-21	BK6435	Q56 46210.106435 XOLT130410-21 BK6435		25-75	0,62-1,00	0,44-0,71	0,37-0,51	0,30-0,43	0,1-1,0
	For titanium / titanium alloys	-21	BK7740	Q56 46210.107740 XOLT130410-21 BK7740							

Initial values for $a_e/D \geq 0,4$ in relation to a_p 

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See page 247 for more application details and safety notes !

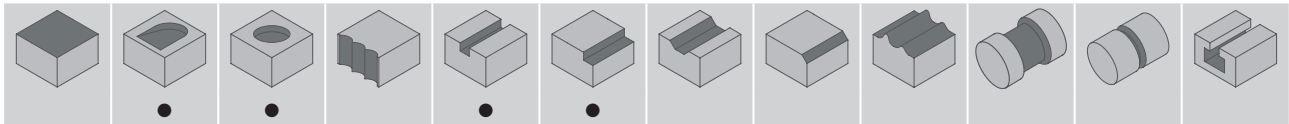
Shoulder milling cutter Q36-KSM



a_p max. 26 – 55 mm

KOMET® *hi.apQ*

Shoulder milling cutter Q36-KSM



Y = number of inserts

Z = effective number of teeth for calculating v_f

End milling cutter										Clamping screw	Indexable insert
Ø D	Order No.	Ød _{h6}	L	L1	a _p max.	Spindle speed max. rpm	Y	Z	kg	Order No. Article	Order No. ISO Code ▽▽ Size
25	F51 40321	25	100	44	26	22.000	6	2	0,30	N00 57321 S2556-8IP 1,28 Nm	Q36 18000.01.... APKT 1003PD-R
32	F51 40370	32	110	49	26	20.000	6	2	0,57		
32	F51 40361	32	110	49	35	20.000	12	3	0,54		
32	F51 40400	32	119	50	32	19.000	6	2	0,53	N00 57341 S3066-9IP 2,25 Nm	Q36 24000.02.... APKT 1203PD-R
40	F51 40410	40	130	59	42	17.000	12	3	1,01		

For further details on selecting the cutting material, see page 19. Enter cutting material code ▲

Arbor milling cutter											
Ø D	Order No.	Ød ^{H7}	L	a _p max.	Spindle speed max. rpm	Y	Z				
									 ②	 ①	
									Order No. Article	Order No. Article	Order No. ISO Code ▽▽ Size
40	F51 42200	16	45	26	17.000	9	3	0,28	55011 08040 M8x40	N00 57321 S2556-8IP 1,28 Nm	Q36 18000.01.... APKT 1003PD-R
40	F51 42210*	16	55	35	17.000	16	4	0,31			
50	F51 42220	22	55	32	15.000	9	3	0,51	55011 10050 M10x50	N00 57341 S3066-9IP 2,25 Nm	Q36 24000.02.... APKT 1203PD-R
50	F51 42230*	22	60	42	15.000	16	4	0,52			
63	F51 42061	27	70	42	11.000	9	3	1,07	55011 12050 M12x50	N00 57411 S40101-15IP 4,3 Nm	Q36 38000.07.... APKT 1605PD-R
80	F51 42081	32	80	55	10.000	16	4	2,03			

For further details on selecting the cutting material, see page 19. Enter cutting material code ▲

* only suitable for contour milling

Supply includes:

Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

Supply includes arbor milling cutter:

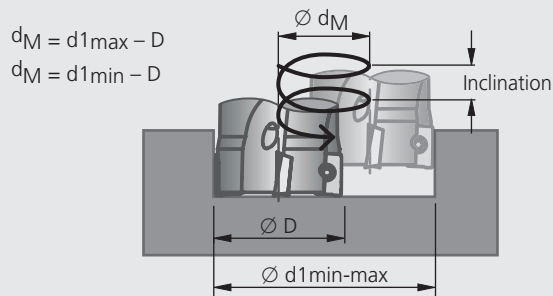
Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and cylindrical screw ②.

Please order insert separately. Screwdriver see page 248.

Application example shoulder milling cutter Q36-KSM



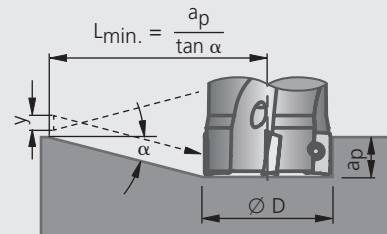
Circular plunging into solid material



Ø D	ap max.	Ø d1 min		Ø d1 max	
		Ø d1 min	Inclination (mm/rev)	Ø d1 max	Inclination (mm/rev)
Q39 18..					
12	9	21,8	1,9	23	2,2
14	9	25,8	2,0	27	2,2
16	9	29,4	1,9	31	2,1
20	9	37,4	1,7	39	1,9
25	9 / 26	47,4	1,6	49	1,7
32	9 / 26 / 35	61,4	3,1	63	3,2
40	9 / 26 / 35	77,4	2,9	79	3,0
42	9	81,4	2,8	83	2,9
50	9	97,4	2,6	99	2,7
63	9	123,4	2,6	125	2,7
80	9	157,4	2,5	159	2,6
100	9	197,4	2,1	199	2,2
Q36 24..					
20	11	35,4	3,8	38,4	4,5
25	11	45,2	3,3	48,4	3,9
32	11 / 32	59	3,0	62,4	3,3
40	11 / 42	75	2,9	78,4	3,2
42	11	79	2,8	82,4	3,1
50	11 / 32 / 42	95	2,7	98,4	2,9
63	11	121	2,5	124,4	2,7
80	11	155	2,5	158,4	2,6
100	11	195	2,6	198,4	2,7
Q36 38..					
32	15	89	4,3	62	4,8
40	15	75	3,8	78	4,2
63	15 / 42	121	3,5	124	3,7
80	15 / 55	155	3,3	158	3,4



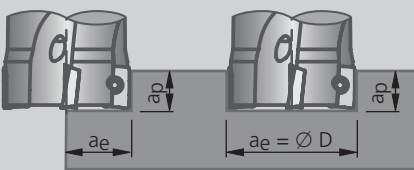
Inclined plunging



Ø D	ap max.	Lift from work- piece if direction is reversed	Ramping angle	L min.
		y	α max.	
Q39 18..				
12	9	0,4	3,6	143
14	9	0,4	3,1	166
16	9	0,4	2,6	198
20	9	0,4	1,8	286
25	9 / 26	0,4	1,3	397
32	9 / 26 / 35	0,8	1,9	271
40	9 / 26 / 35	0,8	1,4	368
42	9	0,8	1,3	397
50	9	0,8	1	516
63	9	0,8	0,8	645
80	9	0,8	0,6	859
100	9	0,8	0,4	1289
Q36 24..				
20	35,4	0,8	4,5	140
25	45,2	0,8	3	210
32	59	0,8	2	315
40	75	0,8	1,5	420
42	79	0,8	1,4	450
50	95	0,8	1,1	573
63	121	0,8	0,8	788
80	155	0,8	0,6	1050
100	195	0,8	0,5	1260
Q36 38..				
32	15	1	2,9	296
40	15	1	2	430
63	15 / 42	1	1,1	781
80	15 / 55	1	0,8	1074

For reasons of safety, the recommended maximum speed must not be exceeded. For shoulder milling, the feed rate/tooth and cutting speed should be increased in comparison to milling with full cutting edge engagement.

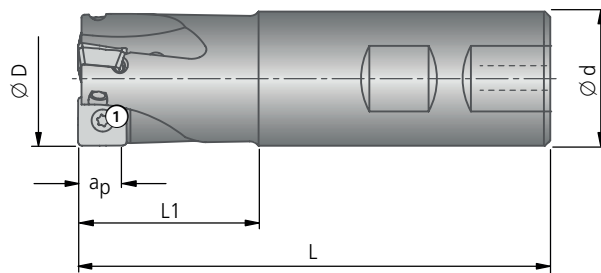
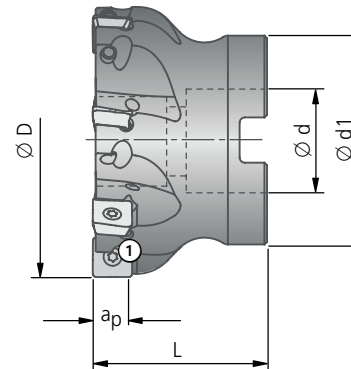
Recommended cutting data shoulder milling cutter Q36-KSM

Feed f_z (mm/tooth) at a_e/D				
	$\leq 0,1$	$> 0,1 - 0,2$	$> 0,2 - 0,3$	$> 0,3$
	P 0,16 - 0,29	0,12 - 0,21	0,10 - 0,17	0,07 - 0,15
	S 0,16 - 0,23	0,12 - 0,16	0,10 - 0,14	0,07 - 0,12
	M 0,16 - 0,23	0,12 - 0,16	0,10 - 0,14	0,07 - 0,12
	K 0,39 - 0,61	0,28 - 0,44	0,23 - 0,37	0,18 - 0,33
	N 0,55 - 0,61	0,39 - 0,44	0,33 - 0,37	0,25 - 0,33
	H			

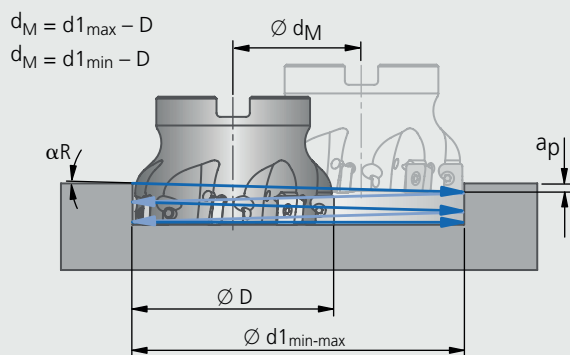
Cutting speed v_c can be increased by reducing the width of cutting edge engagement a_e

Cutting speed v_c (m/min)									
Cutting material designation				P25M	K10	BK6110	BK64	BK68	BK78
Cutting material code				03	21	6110	64	68	78
Material				Material example, material code DIN	Strength R_m (N/mm ²)	Hardness HB	Material group		
non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S275JR)	≤ 500	P 1.0		60-120			100-180	170-280
non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	500-900	P 2.0		50-100			80-150	80-200
lead alloys	1.0718 (11SMnPb30)	< 500	P 2.1		60-120			100-180	170-280
low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	> 900	P 3.0		40-90			60-140	70-160
high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165CrMoV12)	> 900	P 4.0		40-80			60-120	60-120
HSS			P 4.1		—			—	—
special alloys: Inconel, Hastelloy, Nimonic, stc.	2.4668 (NiuCr19Fe19Nb5Mo3) 2.4631 (Nimonic 80A)	250	S 5.0		30-60				20-60
titanium, titanium alloys	3.7115 (TiAl5Sn2.5)	400	S 5.1		30-120				30-60
stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNiMo17-12-2)	≤ 600	M 6.0					100-180	160-320
stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMoTi17-12-2)	< 900	M 6.1					80-160	140-280
stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	> 900	M 7.0					60-110	100-190
gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)	180	K 8.0		100-150	180-350		100-240	80-180
alloy gray cast iron	0.6660 (GGL-NiCr20 2)	250	K 8.1		60-100	130-230		80-160	80-150
spheroidal graphite cast iron, ferritic	0.7040 (EN-GJS-400-15)	≤ 600	K 9.0		80-120	150-280		130-190	100-170
spheroidal graphite cast iron, ferritic/perlitic	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)	230	K 9.1		80-120	150-280		130-190	100-170
spheroidal graphite cast iron, perlitic, malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)	> 600	K 10.0		60-100	120-210		80-160	80-150
alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA-XNiCr20-2)	200	K 10.1		50-70	100-170		80-120	70-100
vermicular cast iron	EN-GJV Ti $< 0,2$ EN-GJV Ti $> 0,2$	300	K 10.2		40-60	90-140		70-110	50-90
copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G-CuPb15Sn)	90	N 12.0		250-500				
copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)	100	N 12.1		200-375				
wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)	60	N 13.0		300-650				
cast alum. alloy: Si-content $< 10\%$ magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)	75	N 13.1		220-450				
cast alum.alloy: Si-content $> 10\%$	3.2381.01 (G-AlSi10Mg)	100	N 14.0		200-375				
hardened steels < 45 HRC		1400	H 15.0						
hardened steels > 45 HRC		1800	H 16.0						

Shoulder milling cutter Q43-KSM



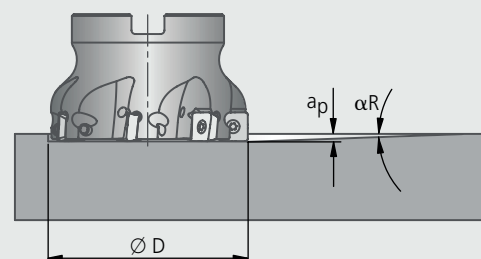
Circular plunging



Milling cutter		Machining dia.	Ramping angle	Cutting depth
Ø D	Order No.	Ø d1 min-max	αR max	ap max
End milling cutter				
25	F55 18110	37 - 48	4,4°	8
32	F55 18130	47 - 62	2,2°	8
Arbor milling cutter				
40	F55 19150	63 - 78	0,75°	8
50	F55 19170	83 - 98	0,5°	8
63	F55 19190	109 - 124	0,35°	8
80	F55 19210	143 - 158	0,25°	8



Inclined plunging

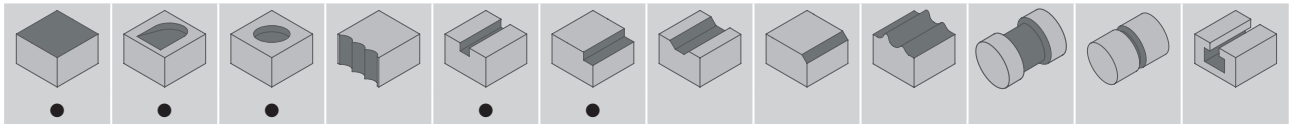


Milling cutter		Ramping angle	Cutting depth
Ø D	Order No.	αR max	ap max
End milling cutter			
25	F55 18110	4,4°	8
32	F55 18130	2,2°	8
Arbor milling cutter			
40	F55 19150	0,75°	8
50	F55 19170	0,5°	8
63	F55 19190	0,35°	8
80	F55 19210	0,25°	8

a_p max. 8 mm

KOMET®

Shoulder milling cutter Q43-KSM



Z = effective number of teeth for calculating v_f

End milling cutter										
$\varnothing D$	Order No.	$\varnothing d_{h6}$	L	L1	a_p max.	Spindle speed max. rpm	Z		Clamping screw	Indexable insert
25	F55 18110	25	88	32	8	23.700	3		①	
32	F55 18130	32	100	40	8	19.700	4		Order No. Article N00 57830 S3073-T8-55° 2 Nm	Order No. ISO Code Size Q43 28.. SDHT SDKT 09..

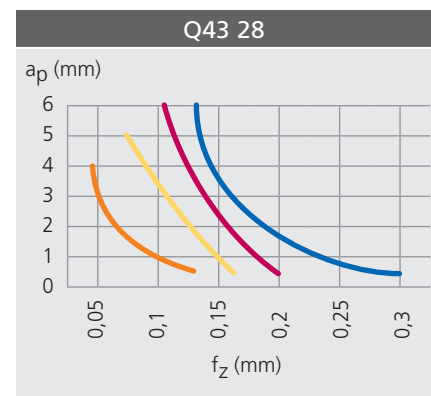
Arbor milling cutter											
Ø D	Order No.	Ø d ^{H7}	Ø d1	L	a _p max.	Spindle speed max. rpm			 Order No.	 ① Order No. Article	 Order No. ISO Code Size
40	F55 19150	16	38	40	8	17.000	5	0,24	L02 30990 15Nm	N00 57830 S3073-T8-55° 2 Nm	Q43 28.. SDHT SDKT 09..
50	F55 19170	22	43	40	8	14.800	6	0,30	–		
63	F55 19190	22	48	40	8	12.850	7	0,50	–		
80	F55 19210	27	58	50	8	11.250	9		–		

Supply includes: Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

Supply includes arbor milling cutter $\varnothing 40$ mm:

Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and differential screw.

Please order insert separately. Screwdriver see page 47.



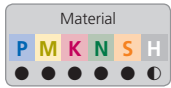
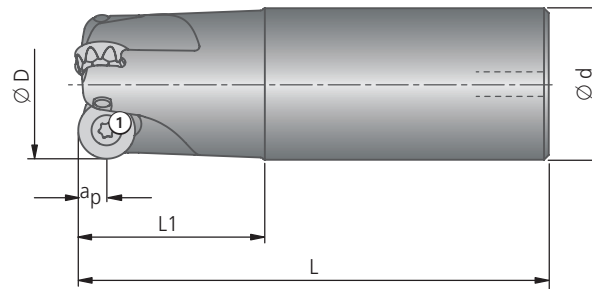
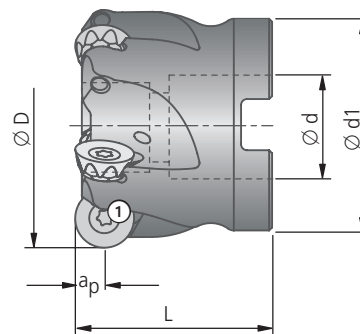
Initial values for $a_e/D \geq 0,4$ in relation to a_p

Recommended cutting data											
Material		Topo- graphy	Coating	Order No. ISO code		Cutting speed v_c m/min	Feed f_z (mm/tooth) at a_e/D				Cutting depth a_p mm
							$\leq 0,1$	$> 0,1 - 0,2$	$> 0,2 - 0,3$	$> 0,3$	
P	For medium roughing operations	-01	BK8425	Q43 28010.088425 SDKT09T308SR-01 BK8425		80-380	0,14-0,25	0,10-0,18	0,09-0,13	0,07-0,11	0,1-4,0
M	For precision-machining and finishing	-21	BK2740	Q43 28210.082740 SDKT09T308SR-21 BK2740		80-280	0,14-0,25	0,10-0,18	0,09-0,13	0,07-0,11	0,1-4,0
K	Specialist for cast iron	-05	BK6110	Q43 28050.086110 SDKT09T308SR-05 BK6110		120-280	0,14-0,25	0,10-0,18	0,09-0,13	0,07-0,11	0,1-4,0
N	Highly polished chip breaker	-12	K10	Q43 28120.0823 SDHT09T308FR-12 K10		< 2000	0,14-0,25	0,10-0,21	0,09-0,15	0,07-0,13	0,1-4,0
S	For highly heat-resistant steels	-21	BK6435	Q43 28210.086435 SDKT09T308SR-21 BK6435		15-115	0,10-0,15	0,07-0,11	0,06-0,08	0,05-0,06	0,1-4,0
	For titanium / titanium alloys	-21	BK7740	Q43 28210.087740 SDKT09T308SR-21 BK7740							

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See page 247 for more application details and safety notes !

Copy milling cutter Q55-KCM



BENEFITS for you:

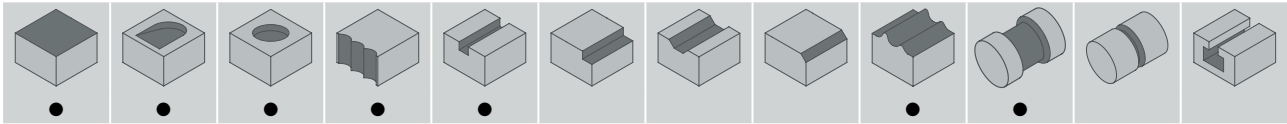
- High feed rates with maximum stability
- 8 indexing positions for maximum cost-efficiency

Recommended feed		
4-fold		8-fold
a_p	$a_{p \text{ max.}}$	$a_{p \text{ max.}}$
2,5	4,5	1,4

a_p max. 5 mm

KOMET®

Copy milling cutter Q55-KCM



Z = effective number of teeth for calculating v_f

End milling cutter										
Ø D	Order No.	Ød _{h6}	L	L1	a _p max.	Spindle speed max. rpm			Clamping screw	Indexable insert
									  ①	
									Order No. Article	Order No. ISO Code
20	F55 11090	20	102	50	5	31.800	2		N00 57840 M3×7,5-10IP 2 Nm	Q55 34.. RP.. / RD.. 10
	F55 12090		165			22.260				
25	F55 11110	25	116	60	5	20.000	3			
	F55 12110		165			20.000				
32	F55 11130	32	130	70	5	19.000	4			
	F55 12130		165			18.000				

Arbor milling cutter										Differential screw	Clamping screw	Indexable insert
$\varnothing D$	Order No.	$\varnothing d^{H7}$	$\varnothing d1$	L	a_p max.	Spindle speed max. rpm				Order No.	Order No. Article	Order No. ISO Code
40	F55 13150	16	38	40	5	15.900	4			L02 30990 15Nm	N00 57840 M3×7,5-10IP 2 Nm	Q55 34.. RP.. / RD.. 10
50	F55 13170	22	43	40	5	12.700	5		—			

Supply includes: Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

Supply includes arbor milling cutter $\varnothing 40$ mm:

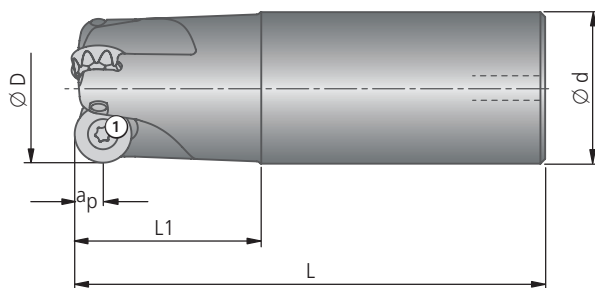
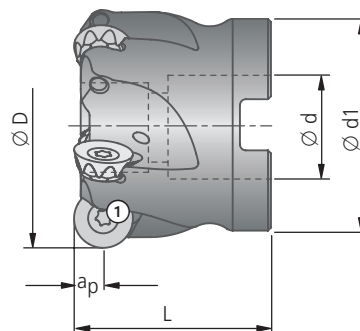
Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and differential screw.
Please order insert separately. Screwdriver see page 47.

Recommended cutting data											
Material		Topo- graphy	Coating	Order No. ISO code		Cutting speed v_c m/min	Feed f_z (mm/tooth) at a_e/D				Cutting depth a_p mm
							$\leq 0,1$	$> 0,1 - 0,2$	$> 0,2 - 0,3$	$> 0,3$	
P	For medium roughing operations	-01	BK8425	Q55 34010.118425 RPMX10T3MO-01 BK8425		180-350	0,41-0,80	0,30-0,57	0,25-0,41	0,20-0,34	0,5-3,0
M	For precision-machining and finishing	-21	BK2740	Q55 34210.112740 RPMX10T3MO-21 BK2740		80-250	0,21-0,45	0,15-0,32	0,12-0,23	0,10-0,19	0,5-3,0
K	Specialist for cast iron	-05	BK6110	Q55 34050.116110 RPMX10T3MO-05 BK6110		100-350	0,21-0,45	0,15-0,32	0,12-0,23	0,10-0,19	0,5-3,0
N	Highly polished chip breaker	-12	K10	Q55 34120.1523 RDHX10T3MO-12 K10		< 2000	0,21-0,45	0,15-0,32	0,12-0,23	0,10-0,19	0,5-3,0
S	For highly heat-resistant steels	-25	BK6435	Q55 34250.116435 RPHX10T3MO-25 BK6435		25-75	0,21-0,30	0,15-0,21	0,12-0,15	0,10-0,13	0,5-3,0
	For titanium / titanium alloys	-25	BK7740	Q55 34250.117740 RPHX10T3MO-25 BK7710							
H	For hard machining	-02	BK2710	Q55 34020.152710 RDHW10T3MO-02 BK2710		100-180	0,21-0,30	0,15-0,21	0,12-0,15	0,10-0,13	0,1-0,5

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See page 247 for more application details and safety notes !

Copy milling cutter Q55-KCM



Ihr PLUS:

- High feed rates with maximum stability
- 8 indexing positions for maximum cost-efficiency
- Selection of further indexable inserts on same basic body for high feed-rate milling, face and chamfer milling and with wiper geometry for high-quality surface finish

Recommended feed		
4-fold	8-fold	
ap	ap max.	ap max.
3,0	5,5	1,7

Q47.. | EOMT
High feed-rate milling
Page 29

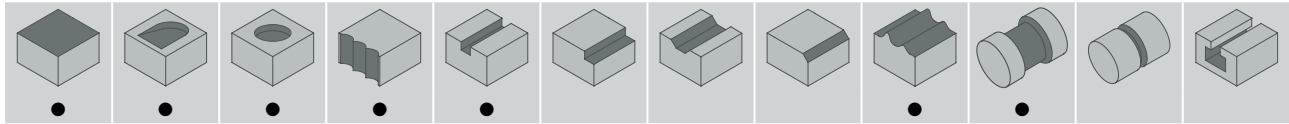
Q43.. | SDMX
For face and chamfer milling
Page 27

Q55 42.. | RP.12
Wiper geometry for
high-quality surface finish
Page 28

ap max. 6 mm

KOMET®

Copy milling cutter Q55-KCM



Z = effective number of teeth for calculating v_f

End milling cutter										
Ø D	Order No.	Ød _{h6}	L	L1	a _p max.	Spindle speed max. rpm			Clamping screw	Indexable insert
									  ①	
									Order No. Article	Order No. ISO Code
25	F55 14110	25	86	30	6	25.000	2		N00 57910 S4085-T15-55° 4,25 Nm	Q55 42.. RP.. / RD.. 12
	F55 15110		116	60		18.000				
32	F55 14130	32	100	40	6	19.000	3			
	F55 15130		130	70		17.000				

Arbor milling cutter											
Ø D	Order No.	Ø d ^{H7}	Ø d1	L	a _p max.	Spindle speed max. rpm			Differential screw 	Clamping screw   ①	Indexable insert 
									Order No.	Order No. Article	Order No. ISO Code
40	F55 16150	16	38	40	6	15.900	4		L02 30990 15Nm	N00 57890 S40110-15IP-55° 4,25 Nm	Q55 42.. RP.. / RD.. 12
50	F55 16170	22	43	40	6	12.700	5		—		
63	F55 16190	22	48	40	6	10.100	6		—		
80	F55 16210	27	58	50	6	7.950	8		—		
100	F55 16230	32	78	50	6	6.350	10		—		

Supply includes: Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

Supply includes arbor milling cutter Ø 40 mm:

Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and differential screw.

Please order insert separately. Screwdriver see page 47.

Recommended cutting data										
Material	Topo-graphy	Coating	Order No. ISO code		Cutting speed v_c m/min	Feed f_z (mm/tooth) at a_e/D				Cutting depth a_p mm
						≤ 0,1	> 0,1 - 0,2	> 0,2 - 0,3	> 0,3	
P	For medium roughing operations	-01	BK8425		180-350	0,41-0,80	0,30-0,57	0,25-0,41	0,20-0,34	0,5-4,0
M	For precision-machining and finishing	-21	BK2740		80-250	0,21-0,45	0,15-0,32	0,12-0,23	0,10-0,19	0,5-4,0
K	Specialist for cast iron	-05	BK6110		100-350	0,21-0,45	0,15-0,32	0,12-0,23	0,10-0,19	0,5-4,0
N	Highly polished chip breaker	-12	K10		< 2000	0,21-0,45	0,15-0,32	0,12-0,23	0,10-0,19	0,5-4,0
S	For highly heat-resistant steels	-25	BK6435		25-75	0,21-0,30	0,15-0,21	0,12-0,15	0,10-0,13	0,5-4,0
	For titanium / titanium alloys	-25	BK7740							
H	For hard machining	-02	BK2710		100-180	0,21-0,30	0,15-0,21	0,12-0,15	0,10-0,13	0,1-0,7

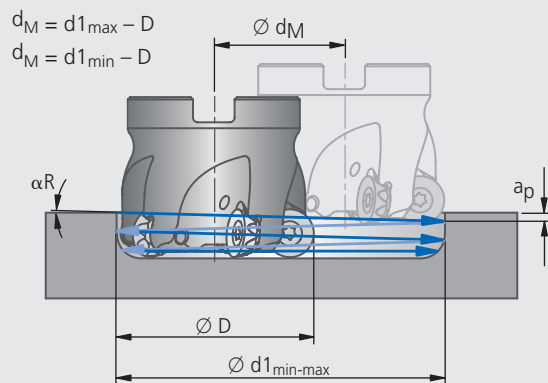
Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See page 247 for more application details and safety notes !

Application example copy milling cutter Q55-KCM



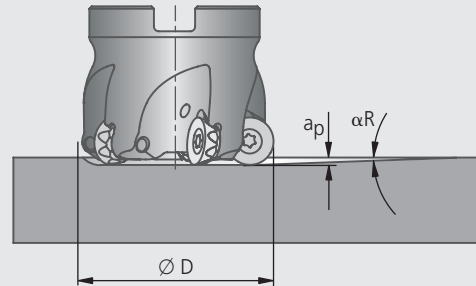
Circular plunging



Milling cutter dia. Ø D	ISO code indexable insert	Machining dia. Ø d1 min-max	Ramping angle αR max	Cutting depth ap max
End milling cutter				
20	RP.. / RD.. 10	26 - 30	1,3	5
25	RP.. / RD.. 10	37 - 40	1,8	5
32	RP.. / RD.. 10	50 - 54	1,5	5
25	RP.. / RD.. 12	31 - 38	2,2	6
32	RP.. / RD.. 12	46 - 52	1,7	6
Arbor milling cutter				
40	RP.. / RD.. 10	64 - 70	1,1	5
50	RP.. / RD.. 10	68 - 74	1,1	5
40	RP.. / RD.. 12	62 - 68	1,4	6
50	RP.. / RD.. 12	81 - 88	1,1	6
63	RP.. / RD.. 12	107 - 114	0,9	6
80	RP.. / RD.. 12	142 - 148	0,7	6
100	RP.. / RD.. 12	181 - 188	0,5	6



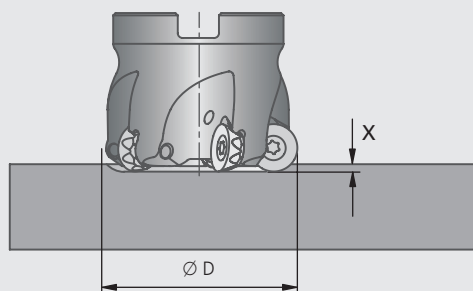
Inclined plunging



Milling cutter dia. Ø D	ISO code indexable insert	Ramping angle αR max	Cutting depth ap max
End milling cutter			
20	RP.. / RD.. 10	1,3	5
25	RP.. / RD.. 10	2,0	5
32	RP.. / RD.. 10	3,0	5
25	RP.. / RD.. 12	6,4	6
32	RP.. / RD.. 12	4,0	6
Arbor milling cutter			
40	RP.. / RD.. 10	3,3	5
50	RP.. / RD.. 10	2,4	5
40	RP.. / RD.. 12	2,8	6
50	RP.. / RD.. 12	2,6	6
63	RP.. / RD.. 12	1,9	6
80	RP.. / RD.. 12	1,3	6
100	RP.. / RD.. 12	1,0	6



Axial plunging

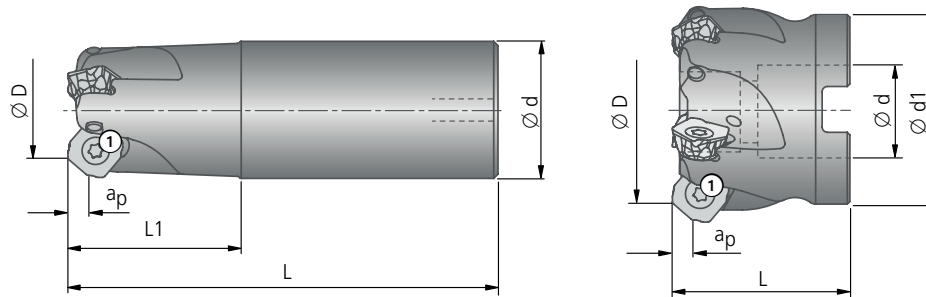


Milling cutter dia. Ø D	ISO code indexable insert	X max
End milling cutter		
20	RP.. / RD.. 10	0,2
25	RP.. / RD.. 10	0,4
32	RP.. / RD.. 10	0,8
25	RP.. / RD.. 12	1,0
32	RP.. / RD.. 12	1,1
Arbor milling cutter		
40	RP.. / RD.. 10	1,5
50	RP.. / RD.. 10	1,5
40	RP.. / RD.. 12	1,2
50	RP.. / RD.. 12	1,5
63	RP.. / RD.. 12	1,5
80	RP.. / RD.. 12	1,5
100	RP.. / RD.. 12	1,5

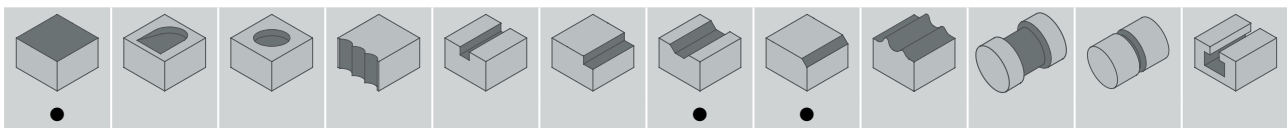
a_p max. 4 mm

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Copy milling cutter Q55-KCM



Z = effective number of teeth for calculating v_f



End milling cutter										Indexable insert
Ø D	Order No.	Ø d _{h6}	L	L1	a _p max.	Spindle speed max. rpm	Z	kg	Clamping screw	Order No. ISO Code
24,5	F55 14130	32	100,3	40,3	4	19.000	3		Order No. Article N00 57910 S4085-T15-55° 4,25 Nm	Q43 38.. SDMX 11
	F55 15130		130,3	70,3		17.000				

Arbor milling cutter											
Ø D	Order No.	Ø d ^{H7}	Ø d1	L	a _p max.	Spindle speed max. rpm			Differential screw 	Clamping screw   ①	Indexable insert 
							Z	kg	Order No.	Order No. Article	Order No. ISO Code
32,5	F55 16150	16	38	40,3	4	15.900	4		L02 30990 15Nm	N00 57890 S40110-15IP-55° 4,25 Nm	Q43 38.. SDMX 11
42,5	F55 16170	22	43	40,3	4	12.700	5		–		
55,5	F55 16190	22	48	40,3	4	10.100	6		–		
72,5	F55 16210	27	58	50,3	4	7.950	8		–		
92,5	F55 16230	32	78	50,3	4	6.350	10		–		

Supply includes: Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

Supply includes arbor milling cutter Ø 40 mm:

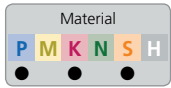
Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and differential screw. Please order insert separately. Screwdriver see page 47.

Recommended cutting data											
Material		Topo- graphy	Coating	Order No. ISO code		Cutting speed v_c m/min	Feed f_z (mm/tooth) at a_e/D				Cutting depth a_p mm
P	For medium roughing operations	-01	BK8425	Q43 38010.158425 SDMX1105AE-01 BK8425		180-350	0,21-0,35	0,15-0,25	0,12-0,18	0,10-0,15	4
M	For precision-machining and finishing	-21	BK2740	Q43 38210.152740 SDMX1105AE-21 BK2740		80-250	0,21-0,30	0,15-0,21	0,12-0,15	0,10-0,13	4
K	Specialist for cast iron	-05	BK6110	Q43 38050.156110 SDMX1105AE-05 BK6110		100-350	0,21-0,35	0,15-0,25	0,12-0,18	0,10-0,15	4
S	For highly heat-resistant steels	-25	BK6435	Q43 38250.156435 SDMX1105AE-25 BK6435		25-75	0,16-0,30	0,12-0,21	0,10-0,15	0,08-0,13	4
	For titanium / titanium alloys	-25	BK7740	Q43 38250.157740 SDMX1105AE-25 BK7740		25-75	0,21-0,30	0,15-0,21	0,12-0,15	0,10-0,13	4

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

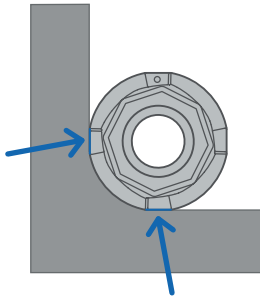
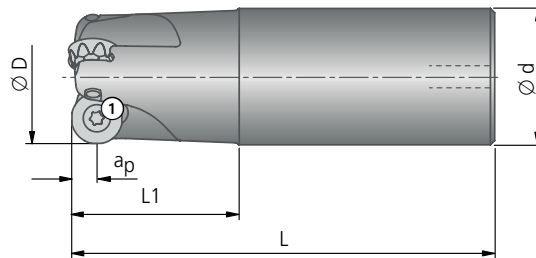
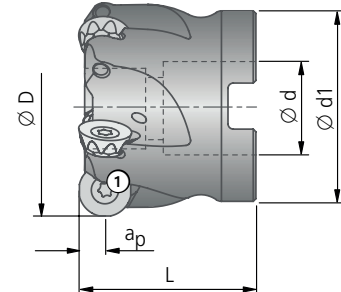
Important: See page 247 for more application details and safety notes !

Copy milling cutter Q55-KCM

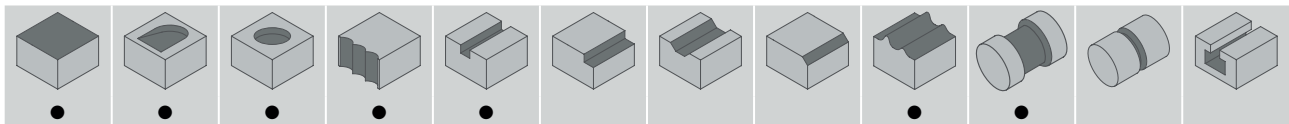


High-quality surface finish thanks to wiper geometry.

In order to guarantee the function of the wiper geometry, the milling cutter must be fully equipped.



Z = effective number of teeth for calculating v_f



End milling cutter										Clamping screw	Indexable insert
Ø D	Order No.	Ø d _{h6}	L	L1	a_p max.	Spindle speed max. rpm	Z	kg		Order No. Article	Order No. ISO Code
24,75	F55 14110	25	85,87	29,87	6	25.000	2			N00 57910 S4085-T15-55° 4,25 Nm	Q55 42260.11.... Q55 42460.11.... RP. 12
	F55 15110		115,87	59,87	6	18.000	2				
31,75	F55 14130	32	99,87	39,87	6	19.000	3			N00 57910 S4085-T15-55° 4,25 Nm	Q55 42260.11.... Q55 42460.11.... RP. 12
	F55 15130		129,87	69,87	6	17.000	3				

Arbor milling cutter											
Ø D	Order No.	Ø d ^{H7}	Ø d1	L	a _p max.	Spindle speed max. rpm			Differential screw	Clamping screw	Indexable insert
									 Order No.	 ① Order No. Article	 Order No. ISO Code
39,75	F55 16150	16	38	39,87	6	15.900	4		L02 30990 15Nm	N00 57890 S40110-15IP-55° 4,25 Nm	Q55 42260.11.... Q55 42460.11.... RP. 12
49,75	F55 16170	22	43	39,87	6	12.700	5		—		
62,75	F55 16190	22	48	39,87	6	10.100	6		—		
79,75	F55 16210	27	58	49,87	6	7.950	8		—		
99,75	F55 16230	32	78	49,87	6	6.350	10		—		

Supply includes: Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

Supply includes arbor milling cutter Ø 40 mm:

Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and differential screw.

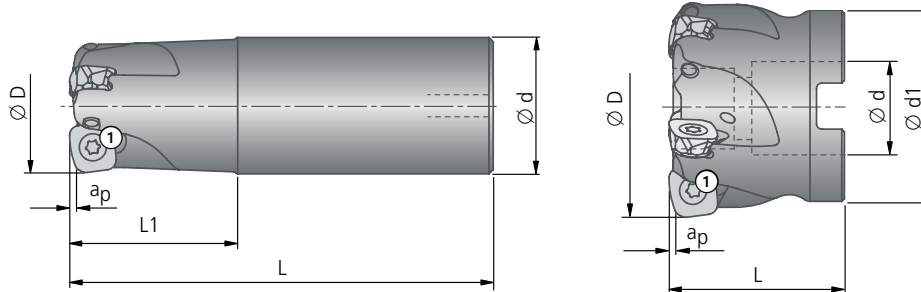
Please order insert separately. Screwdriver see page 47.

Recommended cutting data											
Material		Topo-graphy	Coating	Order No. ISO code		Cutting speed v_c m/min	Feed f_z (mm/tooth) at a_e/D				Cutting depth a_p mm
							≤ 0,1	> 0,1 - 0,2	> 0,2 - 0,3	> 0,3	
P	For medium roughing operations	-26	BK8425	Q55 42260.118425 RPMX1204MO-26 BK8425		180-350	0,41-0,80	0,30-0,57	0,25-0,41	0,20-0,34	6
K	Specialist for cast iron	-26	BK6110	Q55 42260.116110 RPMX1204MO-26 BK6110		100-350	0,21-0,45	0,15-0,32	0,12-0,23	0,10-0,19	6
S	For highly heat-resistant steels	-46	BK6435	Q55 42460.116435 RPHX1204MO-46 BK6435		25-75	0,21-0,30	0,15-0,21	0,12-0,15	0,10-0,13	6
	For titanium / titanium alloys	-46	BK7740	Q55 42460.117740 RPHX1204MO-46 BK7740							

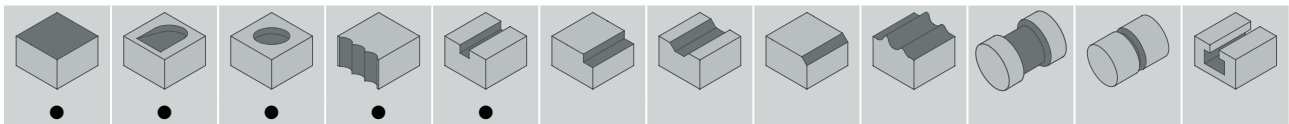
a_p max. 1,5 mm

KOMET®

Copy milling cutter Q55-KCM



Z = effective number of teeth for calculating v_f



End milling cutter										Indexable insert
Ø D	Order No.	Ø d _{h6}	L	L1	a _p max.	Spindle speed max. rpm	Z	kg	Clamping screw Order No. Article	Order No. ISO Code
31,7	F55 14130	32	99,5	39,5	1,5	19.000	3		N00 57910 S4085-T15-55° 4,25 Nm	Q47 34.. EOMT
	F55 15130		129,5	69,5		17.000				

Arbor milling cutter											
Ø D	Order No.	Ø d ^{H7}	Ø d1	L	a _p max.	Spindle speed max. rpm			Differential screw	Clamping screw	Indexable insert
										  ①	
									Order No.	Order No. Article	Order No. ISO Code
									L02 30990 15Nm	N00 57890 S40110-15IP-55° 4,25 Nm	Q47 34.. EOMT
									–		
									–		
–											
–											

Supply includes: Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

Supply includes arbor milling cutter Ø 40 mm:

Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and differential screw.

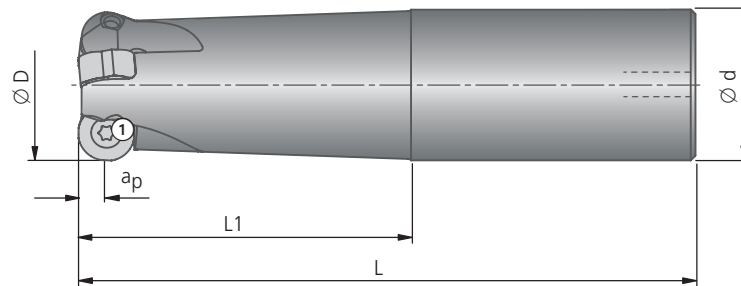
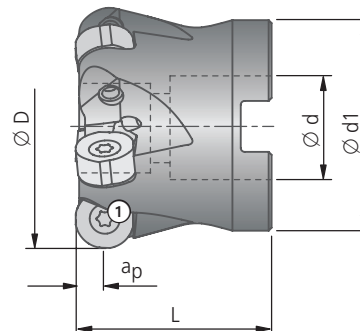
Please order insert separately. Screwdriver see page 47.

Recommended cutting data											
Material		Topo-graphy	Coating	Order No. ISO code		Cutting speed v_c m/min	Feed f_z (mm/tooth) at a_e/D				Cutting depth a_p mm
							≤ 0,1	> 0,1 - 0,2	> 0,2 - 0,3	> 0,3	
P	For medium roughing operations	-21	BK8425	Q47 34210.168425 EOMT120416-21 BK8425		180-350	0,82-2,50	0,59-1,78	0,49-1,29	0,40-1,07	1,5
M	For precision-machining and finishing	-21	BK2740	Q47 34210.162740 EOMT120416-21 BK2740		80-250	0,82-2,50	0,59-1,78	0,49-1,29	0,40-1,07	1,5

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See page 247 for more application details and safety notes !

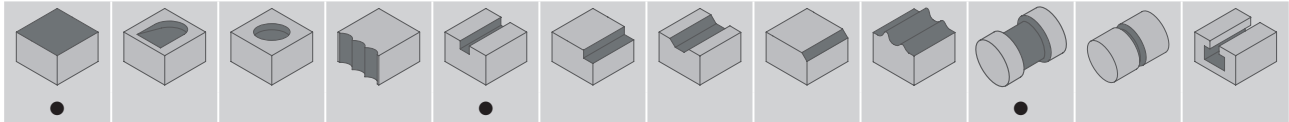
Copy milling cutter Q75-KCM



a_p max. 4,5 mm

KOMET®

Recommended cutting data copy milling cutter Q75-KCM



Z = effective number of teeth for calculating v_f

End milling cutter										Indexable insert
Ø D	Order No.	Ø d _{h6}	L	L1	a _p max.	Spindle speed max. rpm	Z		Clamping screw ① Order No. Article	Order No. ISO Code
32	F55 20130 F55 21130	32	131 165	70	4,5	19.000 17.000	3		N00 57890 S40110-T15-55° 4,25 Nm	Q75 42.. RNKU ROHU

Arbor milling cutter											
Ø D	Order No.	Ø d ^{H7}	Ø d1	L	a _p max.	Spindle speed max. rpm			Differential screw	Clamping screw	Indexable insert
										 ①	
									Order No.	Order No. Article	Order No. ISO Code
									L02 30990 15Nm	N00 57890 S40110-T15-55° 4,25 Nm	Q75 42.. RNKU ROHU
									–		
									–		
–											
–											

Supply includes: Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105).

Supply includes arbor milling cutter Ø 40 mm:

Milling cutter with clamping screws ① (pre-fitted with high-temperature paste, order no.: 47001 00105) and differential screw. Please order insert separately. Screwdriver see page 47.

Recommended cutting data											
Material		Topo- graphy	Coating	Order No. ISO code		Cutting speed v_c m/min	Feed f_z (mm/tooth) at a_e/D				Cutting depth a_p mm
							≤ 0,1	> 0,1 - 0,2	> 0,2 - 0,3	> 0,3	
P	For medium roughing operations	-01	BK8425	Q75 42010.008425 RNKU1204MO-01 BK8425		180-350	0,41-0,80	0,30-0,57	0,25-0,41	0,20-0,34	4,5
M	For precision-machining and finishing	-21	BK2740	Q75 42210.032740 ROHU1204MO-21 BK2740		80-250	0,21-0,45	0,15-0,32	0,12-0,23	0,10-0,19	4,5
K	Specialist for cast iron	-05	BK6110	Q75 42050.006110 RNKU1204MO-05 BK6110		100-350	0,21-0,45	0,15-0,32	0,12-0,23	0,10-0,19	4,5
S	For highly heat-resistant steels	-25	BK6435	Q75 42250.036435 ROHU1204MO-25 BK6435		25-75	0,21-0,30	0,15-0,21	0,12-0,15	0,10-0,13	4,5
	For titanium / titanium alloys	-25	BK7740	Q75 42250.037740 ROHU1204MO-25 BK7740							

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See page 247 for more application details and safety notes !

Recommended cutting data for Q40 | Q43 | Q55 | Q56 | Q63 | Q75

Guideline values for milling					Cutting speed v_c (m/min)							
Material group	Strength Rm (N/mm²)	Hardness HB	Material	Material example, material code/DIN	BK8425		BK6110		K10		BK2740	
					dry	wet	dry	wet	dry	wet	dry	wet
P	1.0	≤500	non-alloy steels	1.0037 (S235JR) 1.0715 (11SMn30) 1.0044 (S2575JR)	100-220	70-180					150-260	90-180
	2.0	500-900	non-alloy / low alloy steels	1.0050 (E295) 1.0535 (C55) 1.7131 (16MnCr5)	80-220	70-170					80-200	70-160
	2.1	<500	lead alloys	1.0718 (11SMnPb30)	100-220	70-170					150-260	90-180
	3.0	>900	non alloy / low alloy steels: heat resistant structural, heat treated, nitride and tools steels	1.7225 (42CrMo4) 1.1221 (C60E)	80-200	70-160					90-180	70-140
	4.0	>900	high alloy steels	1.2341 (6CrMo15-5) 1.2601 (X165Cr- MoV12)	80-170	70-150					120-200	60-140
	4.1		HSS		80-140	60-120					70-180	60-130
S	5.0	250	special alloys: Inconel, Hastelloy, Nimonic, etc.	2.4668 (NiuCr19Fe19N- b5Mo3) 2.4631 (Nimonic 80A)								20-60
	5.1	400	titanium, titanium alloys	3.7115 (TiAl5Sn2.5)								20-70
M	6.0	≤600	stainless steels	1.4306 (X2CrNi19-11) 1.4401 (X5CrNi- Mo17-12-2)	160-220	70-140					160-250	60-140
	6.1	<900	stainless steels	1.4511 (X3CrNb17) 1.4571 (X10CrNiMo- Ti17-12-2)	70-140	70-140					150-220	60-140
	7.0	>900	stainless / fireproof steels	1.4713 (X10CrAlSi7) 1.4862 (X8NiCrSi38-18)	70-140	70-140					100-250	60-140
	8.0	180	gray cast iron	0.6025 (EN-GJL-250) 0.6035 (EN-GJL-350)			140-350	140-350		80-160		
K	8.1	250	alloy gray cast iron	0.6660 (GGL-NiCr20 2)			120-320	120-320		80-160		
	9.0	≤600	spheroidal graphite cast iron, ferritic	0.7040 (EN- GJS-400-15)			100-250	100-250		80-160		
	9.1	230	spheroidal graphite cast iron, ferritic / perlite	0.7050 (EN-GJS-500-7) 0.7055 (GGG-55) 0.8055 (GTW-55)			120-320	120-320		80-160		
	10.0	>600	spheroidal graphite cast iron, perlite malleable iron	0.7060 (EN-GJS-600-3) 0.8165 (GTS-65)			120-320	120-320		80-160		
	10.1	200	alloyed spheroidal graphite cast iron	0.7661 (EN-GJSA- XNiCr20-2)			120-320	120-320		80-160		
	10.2	300	vermicular cast iron	EN-GJV Ti < 0,2 EN-GJV Ti > 0,2			100-250	100-250		80-160		
	12.0	90	copper alloy, brass, lead-alloy bronze, lead bronze: good cut	2.0375 (CuZn36Pb3) 2.1182.01 (G- CuPb15Sn)					300-1000			
N	12.1	100	copper alloy, brass, bronze: average cut	2.0550 (CuZn40Al2) 2.0060 (E-Cu57)					300-1000			
	13.0	60	wrought aluminium alloys	3.3315 (AlMg1) 3.0517 (AlMnCu)					200-3000			
	13.1	75	cast alum. alloy: Si-content <10% magnesium alloy	3.3561 (G-AlMg5) 3.2373.61 (G-AlSi9Mg wa)					300-500			
	14.0	100	cast alum.alloy: Si-content >10%	3.2381.01 (G-Al- Si10Mg)					300-400			
	15.0	1400	hardened steels < 45 HRC									
H	16.0	1800	hardened steels > 45 HRC									

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Recommended cutting data for Q40 | Q43 | Q55 | Q56 | Q63 | Q75

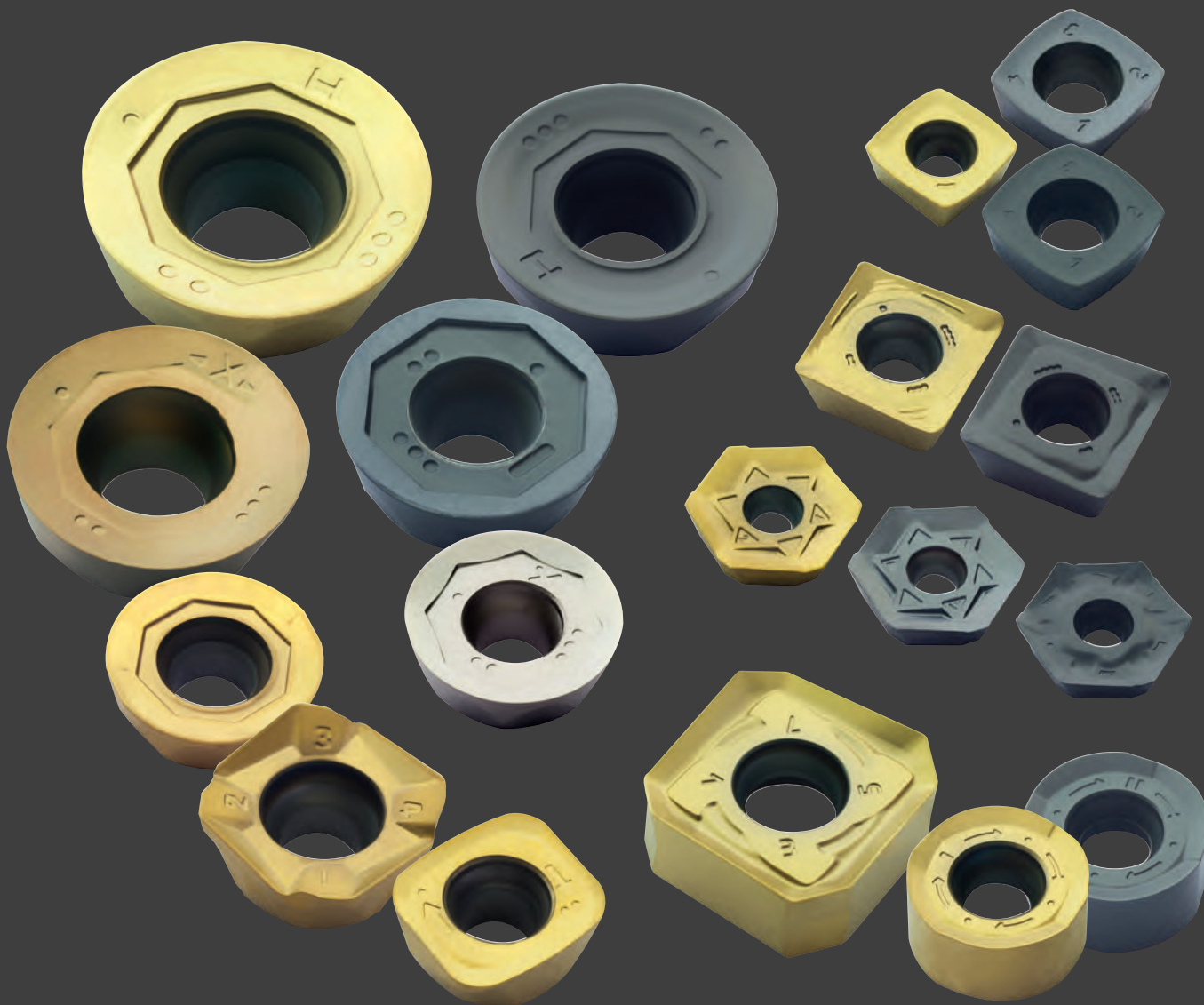
Cutting speed v_c (m/min)											
BK6435		BK7740		BK2710		BK6130		BK2735			
dry	wet	dry	wet	dry	wet	dry	wet	dry	wet		
						120-280	80-150	160-240	100-140	1.0	P
						80-250	70-140	120-220	90-120	2.0	
						120-280	80-150	160-240	100-140	2.1	
						80-220	70-140	120-220	90-120	3.0	
	60-140					80-130	60-90	80-110	60-80	4.0	
	60-140					80-140	60-120	80-140	60-120	4.1	
			10-60							5.0	S
			40-80							5.1	
220-350	60-180							120	110	6.0	M
220-350	60-140							110	100	6.1	
150-240	60-140							100	90	7.0	
				180-350	180-350	180-350	140-190			8.0	K
				100-250	100-250	180-350	140-190			8.1	
				100-250	100-250	130-210	80-120			9.0	
				100-250	100-250	130-210	80-120			9.1	
				120-250	120-250	160-200	90-120			10.0	
				120-250	120-250	180-250	100-180			10.1	
				100-250	100-250	100-160	80-120			10.2	N
										12.0	
										12.1	
										13.0	
										13.1	
										14.0	
				40-60						15.0	H
				30-50						16.0	

Cutting values shown are maximum values relating to the basic recommendations for cutting materials given.

Important: See page 247 for more application details and safety notes !

More than 70 new indexable inserts are available for the new milling cutters – from extremely soft-cutting topographies for low spindle-stress machining on small to medium-sized machines through to extremely sturdy cutting edges for hard machining.

Four new kinds of high-performance cutting tool material which ensure an even longer tool life when machining steel and cast iron materials, high-strength or high-temperature resistant steels and titanium and titanium alloys are particularly notable. These are accompanied by high-performance coatings which extend the range of standard coatings which already have very good properties.



Topographies

- 01 Stable cutting edge (chamfered and rounded) for universal steel machining, even with interrupted cuts
- 02 Reinforced cutting edge for hard machining
- 05 Stable cutting edge (chamfered and rounded) for universal cast iron machining
- 12 Extremely sharp topography (polished), large rake angle for NF machining
- 21 Easy-cutting topography (cutting edge slightly rounded) for stainless and highly heat-resistant alloys
- 25 Stable cutting edge for highly heat-resistant steels and titanium/titanium alloys
- 26 Wiper geometry for outstanding surface finish for steel, cast steel
- 46 Wiper geometry for outstanding surface finish for exotic materials

Summary and list of codes																
Cutting material designation	Code	Norm code	Application range										Properties	Cutting element		
			Wear resistance													
			Toughness factor													
			01	05	10	15	20	25	30	35	40	45	50			
P25M	03	HW-P25	P												uncoated: • with excellent wear resistance and good toughness factor • suitable for medium to high cutting speeds for roughing and finishing, also for interrupted cut • for non-alloy steel, malleable cast iron, stainless steel and cast steel	W01 Q09 W27 Q36 W29 W30 W34 W59 W60 W79
		M														
		K														
		N														
		S														
		H														
K10	21	HW-K10	P												uncoated: • chamfered and neutral cutter geometry suitable for all grades of cast iron • positively sintered (PD) and ground geometry is used for aluminium e.g.: 12° and 20° top rake, ground sharply and not rounded	W00 W37 W01 W59 W04 W60 W24 W79 W27 W83 W29 W85 W30 Q36 W32 W34
		M														
		K														
		N														
		S														
		H														
K10 / fine grain	23	HW-M10 HW-K15	P												uncoated: • fine grain carbide with high wear and thermal resistance • mainly for machining aluminium; PVD coated, also suitable for machining general steels and rust-resistant materials	W57..12 W58..12 C83.. C85.. C86.. Q40.. Q43.. Q55.. Q80..
		M														
		K														
		N														
		S														
		H														
BK2710	2710	HC-K10	P												PVD-TiAlN coated: • extremely wear resistant carbide • for bore end machining stainless steels, structural and tool steels and cast materials • excellent dimensional stability due to combination of hard substrate and TiAlN coating with high aluminium content	W00.. W30.. W60.. W79.. H80.. Q55..
		M														
		K														
		N														
		S														
		H														
BK2735	2735	HC-P35 HC-M30	P												PVD-TiAlTaN coated: • extremely tough grade with outstanding coating adhesion and wear resistance • post-treated	Q40..
		M														
		K														
		N														
		S														
		H														
BK2740	2740	HC-P35	P												PVD-TiAlN coated: • coating with high aluminium content on extremely tough substrate • completes the grades for solid drilling steel materials in the medium cutting speed ranges	Q40.. Q43.. Q47.. Q55.. Q56.. Q63.. Q75..
		M														
		K														
		N														
		S														
		H														
BK6110	6110	HC-P10 HC-K10	P												CVD-TiCN-TiN-Al ₂ O ₃ coated: • for final machining bores in cast iron and steel materials • excellent dimensional stability due to combination of wear resistant substrate and ceramic, surface treated coating	W30 Q36 W59 Q40 H80 Q43 Q55 Q56 Q63 Q75
		M														
		K														
		N														
		S														
		H														
BK6130	6130	HC-P30	P												CVD-TiCN-TiN-Al ₂ O ₃ coated: • high quality, surface treated coating • mainly for machining cast iron materials • thanks to stabilised cutting edge excellent suitability for steel and stainless steel	W83..21 Q40..
		M														
		K														
		N														
		S														
		H														
			01	05	10	15	20	25	30	35	40	45	50	■ main area of application ■ suitable in some cases		

Summary and list of codes																
Cutting material designation	Code	Norm code	Application range												Properties	Cutting element
			Wear resistance						Toughness factor							
			01	05	10	15	20	25	30	35	40	45	50			
BK64	64	HC-P35	P												CVD-TiC-TiN coated: • multiple coating on P 40 carbide base • suitable for interrupted cut	Q09.. Q36..
		HC-M15	M													
		K														
		N														
		S														
		H														
BK6435	6435	HC-M35	P												CVD-TiN-Ti (C,N);Al2O3; Ti (N,B) coated: • very tough and wear-resistant grade for use in special materials	Q40.. Q43.. Q55.. Q56.. Q63.. Q75..
		M														
		K														
		N														
		HC-S35	S													
		H														
BK68	68	HC-P20	P												CVD-TiCN coated: • coated milling tools for high cutting speeds, particularly in the areas of steel and iron casting • high wear resistance, even with insufficient cooling lubricant supply	Q36.. Q80..
		M														
		K														
		N														
		S														
		H														
BK7740	7740	HC-M40	P												CVD-TiN+TiB2 coated: • very tough and wear-resistant grade for use in titanium alloys and special materials	Q43 Q55.. Q56.. Q75..
		M														
		K														
		N														
		HC-S40	S													
		H														
BK78	78	HC-P25	P												PVD-TiAlN coated: • coated carbide on P25M base with high wear resistance • medium to high cutting speed for roughing and finishing and with interrupted cut • for non alloy steel, cast steel and die steels	Q36..
		M														
		K														
		N														
		S														
		H														
BK80	80	HC-P35	P												PVD-TiCN coated: • for milling with a wide range of applications in steel and cast iron materials • excellent balance between wear resistance and strength makes this suitable for universal use	Q36..
		M														
		K														
		N														
		S														
		H														
BK8425	8425	HC-P25	P												PVD-TiAlN/TiN coated: • universally usable grade with increased wear resistance thanks to innovative multi-layer design of PVD coating	W01 Q15 W29 Q36 W30 Q40 W59 Q43 W80 Q47 W83 Q55 H70 Q56 Q09 Q63 Q12 Q75
		M														
		K														
		N														
		S														
		H														
				01	05	10	15	20	25	30	35	40	45	50	 main area of application	 suitable in some cases

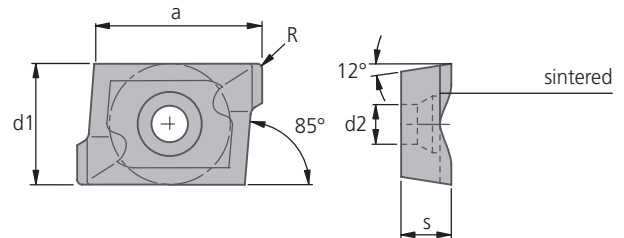


Application range:

Shoulder milling cutter
Shell end face milling cutter
End milling cutter

Highly positive cutter geometry with specially designed face cutter allows high feed rates and a good surface quality.
Soft cutting also possible even with unstable machining conditions. The special cutter geometry allows the insert to be used universally in the appropriate grades both for machining steel, cast iron and aluminium.

Cutter geometry:



Substrate		Carbide												
Coating type		—	—	CVD	CVD	CVD	PVD	PVD	PVD					
Cutting material designation		P25M	K10	BK6110	BK64	BK68	BK78	BK80	BK8425					
ISO Code	Order No.									d1	d2	s	a	R
RM = Reinforced cutting edge	Enter code ▼	03	21	6110	64	68	78	80	8425					
APKT 1003PD-RM	Q36 18000.01..	▲	▲	▲	▲		▲	▲	▲	6,7	2,8	3,5	9	0,35
APKT 1003PD-R						▲								
APKT 1203PD-RM	Q36 24000.02..	▲	▲	▲	▲		▲		▲	8,0	3,5	3,8	11	0,6
APKT 1203PD-R						▲		▲						
APKT 1605PD-RM	Q36 38000.07..	▲	▲	▲	▲		▲		▲	11,1	4,5	5,26	15	0,8
APKT 1605PD-R								▲						
Mild steel/tool steel	P	●			●	●	●	●	●	Order example: ISO Code APKT 1003PD-RM Cutting material P25M Order No. Q36 18000.0103				
Stainless and acid-resistant steel	M				●		●	●	●					
Grey cast iron, spheroidal cast iron	K		●	●		●			●					
Non-ferrous metals	N		●											
Heat-resistant steels	S		●											
Hardened tool steel	H													

Indexable insert



Application range:

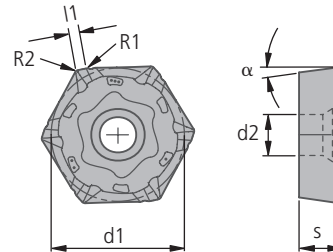
Face milling cutter Q40-KFM

Six useful cutting edges, each cutting edge with wiper cutting edge.

Highly positive cutting edge geometry for a soft cutting action.

Optimised topographies for different applications on small and medium-sized milling machines.

Cutter geometry:



Substrate		Solid carbide													
Coating type		—	PVD	PVD	PVD	CVD	CVD	CVD							
Cutting material designation		K10	BK2735	BK2740	BK8425	BK6130	BK6435	BK6110							
ISO Code	Order No.								d1	d2	s	l1	R1	R2	α
Topography ▼	Enter code ▼	23	2735	2740	8425	6130	6435	6110							
HOKT0604AZER-01	Q40 53010.04..		▲			▲			16,3	4,4	4,5	1,7	0,4	0,5	11°
HPCT0604AZFR-12	Q40 53120.04..	▲													
HPKT0604AZER-01	Q40 53010.04..			▲	▲										
HPKT0604AZER-21	Q40 53210.04..			▲	▲		▲								
HPKT0604AZER-05	Q40 53050.04..							▲							
Mild steel/tool steel	P								Order example: ISO code HOKT 0604AZ-01 Cutting material K10 Order No. Q40 53010.0423						
Stainless and acid-resistant steel	M														
Grey cast iron, spheroidal cast iron	K														
Non-ferrous metals	N														
Heat-resistant steels	S														
Hardened tool steel	H														

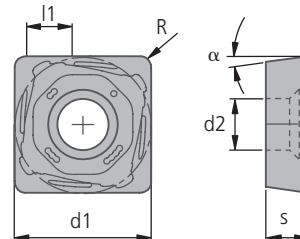


Application range:

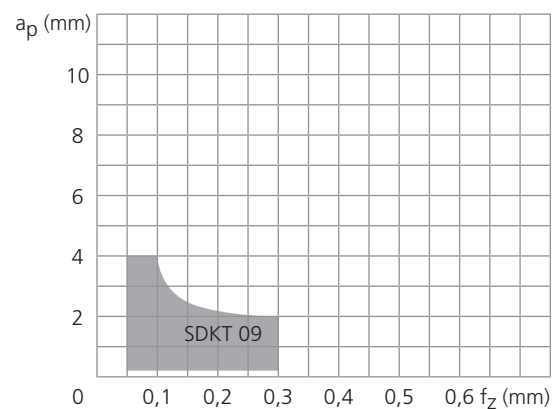
Shoulder milling cutter Q43-KSM

Four cutting edges per indexable insert.
For creating an exactly 90-degree shoulder.

Cutter geometry:



Substrate		Solid carbide											
Coating type		—	PVD	PVD	CVD	CVD	PVD						
Cutting material designation		K10	BK8425	BK2740	BK6110	BK6435	BK7740						
ISO Code	Order No.							d1	d2	s	l1	R	α
Topography ▼	Enter code ▼	23	8425	2740	6110	6435	7740						
SDHT 09T308FR-12	Q43 28120.08..	▲											
SDKT 09T308SR-01	Q43 28010.08..		▲										
SDKT 09T308SR-21	Q43 28210.08..			▲		▲	▲	9	3,4	3,97	2,5	0,8	15°
SDKT 09T308SR-05	Q43 28050.08..				▲								
Mild steel/tool steel	P		●	●				Order example: ISO code SDHT 09T308FR-12 Cutting material K10 Order No. Q43 28120.0823					
Stainless and acid-resistant steel	M		●	●									
Grey cast iron, spheroidal cast iron	K				●								
Non-ferrous metals	N	●											
Heat-resistant steels	S					●	●						
Hardened tool steel	H												



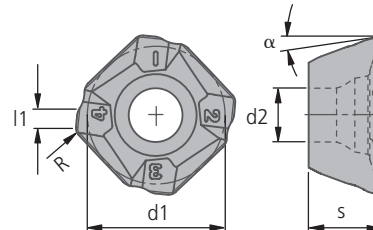


Application range:

Copy milling cutter Q55-KCM

Four useful cutting edges per indexable insert for face and chamfer milling.

Cutter geometry:



Substrate		Solid carbide															
Coating type		PVD	PVD	CVD	CVD	PVD											
Cutting material designation		BK8425	BK2740	BK6110	BK6435	BK7740											
ISO Code	Order No.						d1	d2	s	l1	R	α					
Topography ▼	Enter code ▼	8425	2740	6110	6435	7740											
SDMX 1105AE-01	Q43 38010.15..	▲					11,4	4,4	5,9	1	0,8	20°					
SDMX 1105AE-21	Q43 38210.15..		▲														
SDMX 1105AE-05	Q43 38050.15..			▲													
SDMX 1105AE-25	Q43 38250.15..				▲	▲											
Mild steel/tool steel	P						Order example: ISO code SDMX 1105AE-01 Cutting material BK8425 Order No. Q43 38010.158425										
Stainless and acid-resistant steel	M																
Grey cast iron, spheroidal cast iron	K																
Non-ferrous metals	N																
Heat-resistant steels	S																
Hardened tool steel	H																

EOMT

KOMET® Q47

Indexable insert

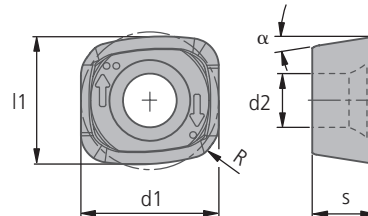


Application range:

Copy milling cutter Q55-KCM

Two cutting edges per indexable insert for high feed-rate machining operations.

Cutter geometry:



Substrate		Solid carbide							
Coating type		PVD	PVD						
Cutting material designation		BK8425	BK2740						
ISO Code	Order No.			d1	d2	s	l1	R	α
Topography ▼	Enter code ▼	8425	2740						
EOMT 120416-21	Q47 34210.16..	▲	▲	12	4,4	5	10,5	16	9°
Mild steel/tool steel	P	●	●	Order example: ISO code EOMT 120416-21 Cutting material BK8425 Order No. Q47 34210.168425					
Stainless and acid-resistant steel	M	●	●						
Grey cast iron, spheroidal cast iron	K	●	●						
Non-ferrous metals	N	●	●						
Heat-resistant steels	S	●	●						
Hardened tool steel	H	●	●						

Indexable insert



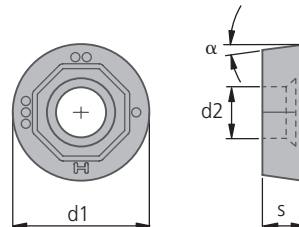
Application range:

Copy milling cutter Q55-KCM

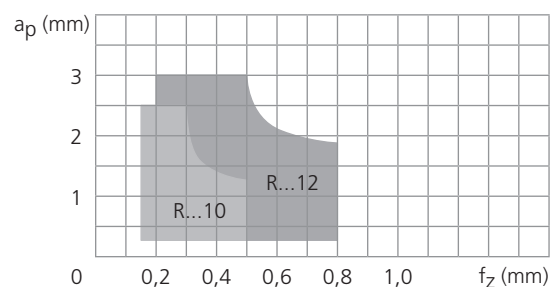
Eight useful cutting edges per indexable insert.
Use of different indexable insert clearance angles.

The indexable insert is supported with three surfaces, which allows high feed rates with maximum stability to be achieved. 8 indexing positions for optimum cost-efficiency.

Cutter geometry:



Substrate		Solid carbide													
Coating type		—	PVD	PVD	PVD	CVD	CVD	PVD							
Cutting material designation		K10	BK8425	BK2740	BK2710	BK6110	BK6435	BK7740							
ISO Code	Order No.								d1	d2	s	α			
Topography ▼	Enter code ▼	23	8425	2740	2710	6110	6435	7740							
RPMX 10T3MO-01	Q55 34010.11..		▲						10	3,4	3,97	11°			
RPMX 10T3MO-21	Q55 34210.11..			▲											
RPMX 10T3MO-05	Q55 34050.11..					▲									
RPHX 10T3MO-25	Q55 34250.11..						▲	▲							
RDHW 10T3MO-02	Q55 34020.15..				▲				10	3,4	3,97	15°			
RDHX 10T3MO-12	Q55 34120.15..	▲													
RPMX 1204MO-01	Q55 42010.11..		▲						12	4,4	4,76	11°			
RPMX 1204MO-21	Q55 42210.11..			▲											
RPMX 1204MO-05	Q55 42050.11..					▲									
RPHX 1204MO-25	Q55 42250.11..						▲	▲							
RDHW 1204MO-02	Q55 42020.15..				▲				12	4,4	4,76	15°			
RDHX 1204MO-12	Q55 42120.15..	▲													
Mild steel/tool steel	P		●	●					Order example: ISO code RPMX 10T3MO-01 Cutting material BK8425 Order No. Q55 34010.118425						
Stainless and acid-resistant steel	M		●	●											
Grey cast iron, spheroidal cast iron	K					●									
Non-ferrous metals	N	●													
Heat-resistant steels	S						●	●							
Hardened tool steel	H				●										



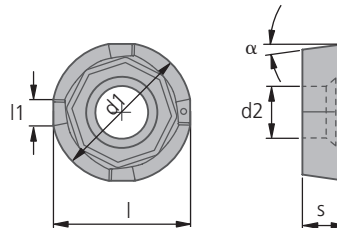


Application range:

Copy milling cutter Q55-KCM

Wiper geometry for outstanding surface finish.

Cutter geometry:



Substrate		Solid carbide									
Coating type		PVD	CVD	CVD	PVD						
Cutting material designation		BK8425	BK6110	BK6435	BK7740						
ISO Code	Order No.					d1	d2	l	l1	s	α
Topography ▼	Enter code ▼	8425	6110	6435	7740						
RPMX 1204MO-26	Q55 42260.11..	▲	▲			12	4,4	11,75	2,4	4,76	11°
RPHX 1204MO-46	Q55 42460.11..			▲	▲						
Mild steel/tool steel	P					Order example: ISO code RPMX 1204MO-26 Cutting material BK8425 Order No. Q55 42260.118425					
Stainless and acid-resistant steel	M										
Grey cast iron, spheroidal cast iron	K										
Non-ferrous metals	N										
Heat-resistant steels	S										
Hardened tool steel	H										

Indexable insert

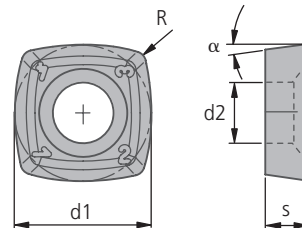


Application range:

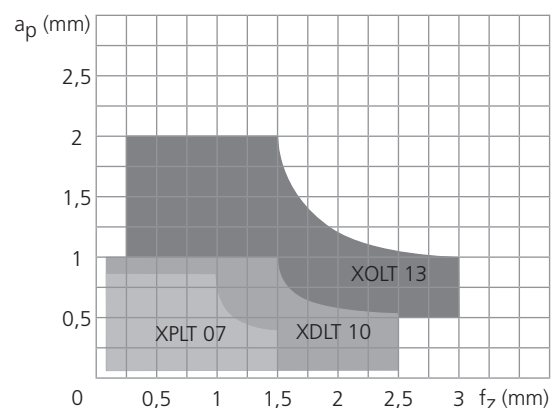
Face milling cutter Q56-KHF

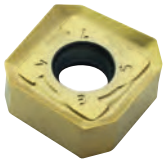
Four useful cutting edges per indexable insert.
High metal removal rate achievable because tooth feed rate of up to 3 mm possible.
Soft-cutting geometry reduces vibration during machining.
Premium-grade coatings for highly heat-resistant alloys and titanium materials.
Angled cutting edge for excellent surface quality, yet 90-degree shoulder still possible.

Cutter geometry:



Substrate		Solid carbide									
Coating type		PVD	PVD	PVD	CVD	CVD					
Cutting material designation		BK8425	BK2740	BK7740	BK6435	BK6110					
ISO Code	Order No.						d1	d2	s	R	α
Topography ▼	Enter code ▼	8425	2740	7740	6435	6110					
XPLT 070305-01	Q56 20010.05..	▲	▲		▲		7	2,8	2,75	0,5	11°
XPLT 070305-21	Q56 20210.05..			▲	▲						
XDLT 10T308-01	Q56 32010.08..	▲	▲				10	4,4	3,97	0,8	9°
XDLT 10T308-21	Q56 32210.08..	▲	▲	▲	▲						
XDLT 10T308-05	Q56 32050.08..					▲					
XOLT 130410-01	Q56 46010.10..	▲	▲				13	5,5	4,76	1	9°
XOLT 130410-21	Q56 46210.10..	▲	▲	▲	▲						
XOLT 130410-05	Q56 46050.10..					▲					
Mild steel/tool steel	P	●	●				Order example: ISO code XPLT 070305-01 Cutting material BK8425 Order No. Q56 20010.058425				
Stainless and acid-resistant steel	M	●	●		●						
Grey cast iron, spheroidal cast iron	K					●					
Non-ferrous metals	N										
Heat-resistant steels	S			●	●						
Hardened tool steel	H										



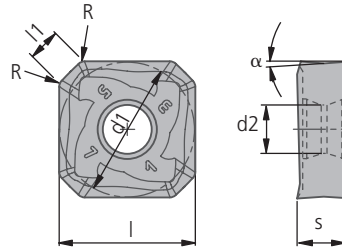


Application range:

Face milling cutter Q63-KFM

Eight useful cutting edges with positive clearance angle per indexable insert.
Stable double-sided indexable insert for a_p up to 6.5 mm.
High-quality surface finishes are produced thanks to the wiper cutting edge.

Cutter geometry:



Substrate		Solid carbide										
Coating type		PVD	PVD	CVD	CVD							
Cutting material designation		BK8425	BK2740	BK6435	BK6110							
ISO Code	Order No.					d1	d2	s	l	l1	R	α
Topography ▼	Enter code ▼	8425	2740	6435	6110							
SOKU 1205AZ-21	Q63 46210.06..	▲	▲	▲		13	4,55	5	13	2	0,8	6°
SOKU 1205AZ-05	Q63 46050.06..				▲							
SOKU 1505AZ-21	Q63 53210.06..	▲	▲	▲		15,875	5,7	6,03	15,875	3,65	1	6°
SOKU 1505AZ-05	Q63 53050.06..				▲							
Mild steel/tool steel	P	●	●	●	●	Order example: ISO code SOKU 1205AZ-21 Cutting material BK8425 Order No. Q63 46210.068425						
Stainless and acid-resistant steel	M	●	●	●	●							
Grey cast iron, spheroidal cast iron	K											
Non-ferrous metals	N											
Heat-resistant steels	S			●								
Hardened tool steel	H											

Indexable insert

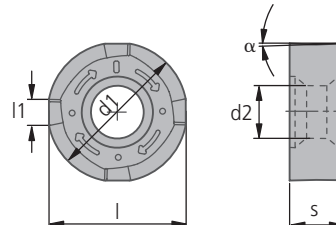


Application range:

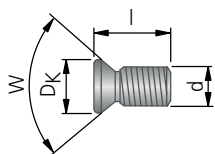
Copy milling cutter Q75-KCM

Eight useful cutting edges per indexable insert.
Stable double-sided indexable insert for ap up to 4.5 mm.
High-quality surface finishes are produced thanks to the wiper cutting edge.

Cutter geometry:



Substrate		Solid carbide										
Coating type		PVD	PVD	CVD	CVD	PVD						
Cutting material designation		BK8425	BK2740	BK6110	BK6435	BK7740						
ISO Code	Order No.						d1	d2	s	l	l1	α
Topography ▼	Enter code ▼	8425	2740	6110	6435	7740						
RNKU 1204MO-01	Q75 42010.00..	▲										0°
ROHU 1204MO-21	Q75 42210.03..		▲									3°
RNKU 1204MO-05	Q75 42050.00..			▲			12	4,5	5,9	11,8	2,3	0°
ROHU 1204MO-25	Q75 42250.03..				▲	▲						3°
Mild steel/tool steel	P	●	●				Order example: ISO code RNKU 1204MO-01 Cutting material BK8425 Order No. Q75 42010.008425					
Stainless and acid-resistant steel	M	●	●		●							
Grey cast iron, spheroidal cast iron	K			●								
Non-ferrous metals	N											
Heat-resistant steels	S				●	●						
Hardened tool steel	H											



Clamping screw | Screwdriver | Key

Clamping screw		Packing unit	Thread	Length	Screw head taper angle		Screw turning slot		Tightening torque
Order No.	Article	piece	d	l	DK	W	TORX®	TORX PLUS®	Nm
N00 57820	S2550-T8-55°	10	2,5	5,0	3,45	55°	T8		1,2
N00 57830	S3073-T8-55°	10	3	7,3	4,1	55°	T8		2
N00 57840	S3075-10IP-55°	10	3	7,5	4,2	55°		10IP	2
N00 57860	S3572-T15-55°	10	3,5	7,2	5,2	55°	T15		3,2
N00 57870	S3586-T15-55°	10	3,5	8,6	5,2	55°	T15		3,2
N00 57880	S45105-T20-55°	10	4,5	10,5	5,3	55°	T20		5
N00 57890	S40110-15IP-55°	10	4	11,0	6,6	55°		15IP	4,25
N00 57900	S45130-20IP-55°	10	4,5	13,0	5,3	55°		20IP	5
N00 57910	S4085-T15-55°	10	4	8,5	6,6	55°	T15		4,25
N00 57920	S40110-T15-55°	10	4	11,0	6,6	55°	T15		4,25

To ensure the correct starting torque on screws, the torque key from the TORX® and TORX PLUS® system has. Complies with the following requirements: EN ISO 6789, BS EN 26789, ASME B107.14M (with certificate).

Torque wrench TorqueVario®
adjustable with scale

TORX®			Replaceable blades	
Torque wrench			Replaceable blades	
				
Size	Torque	Order No.	Size	Order No.
T8 – T20	1 – 5 Nm (0,2 Nm)	L05 00600	T8	L05 00601
			T15	L05 00603
			T20	L05 00604

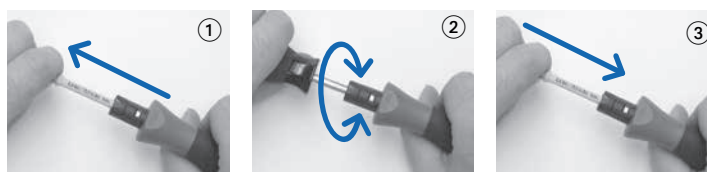
Supply includes: Torque wrench with adjusting key without replaceable blade.

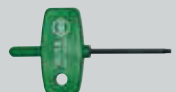
TorqueVario®				
				
Size	Torque	Order No.	Adjusting key	Replaceable blades
9IP – 20IP	2,25 - 6,25 Nm	L05 00791	L05 00990	L05 00740
				L05 00750
				L05 00760
				L05 00770

Supply includes: Torque wrench with adjusting key and replaceable blades.

Changing the torque

- Remove blade
- Insert adjusting key in variable torque key handle and turn to set the required torque. The appropriate IP or T size can be read from the graduated scale.
- Push blade in again



TORX®	
	
Size	Order No.
T8	L05 00605

TORX®	
	
Size	Order No.
T15	L05 00607
T20	L05 00608

TORX PLUS®	
	
Size	Order No.
15IP	L05 00860
20IP	L05 00870

Allen key	
	
~ISO 2936L	
Width across flats WAF	Order No.
4	18591 10041