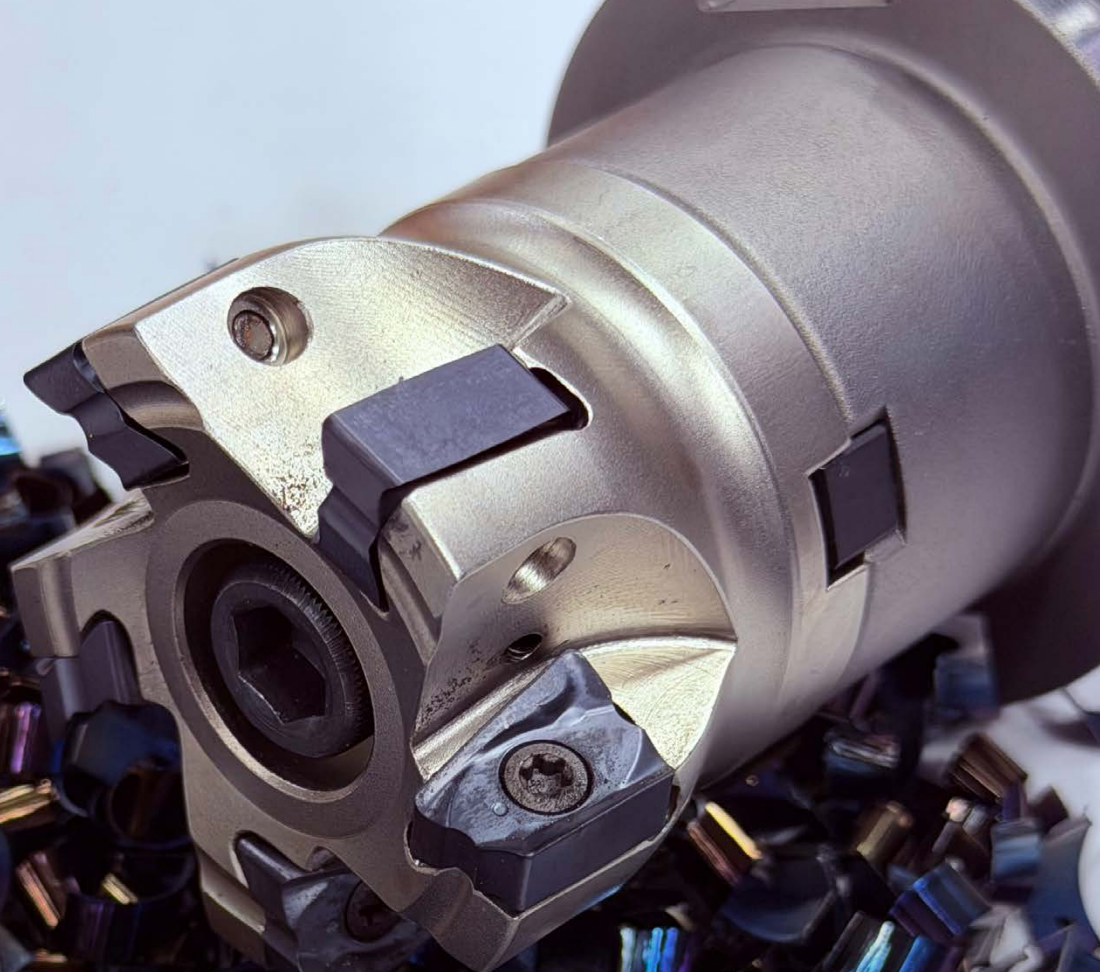


74



DYNAMICS



Tools and Inserts for Milling

INCH

2025

The power of precision.

At W Dynamics, we believe precision isn't a feature — it's the foundation. Every cut, every pass, and every detail begins with a commitment to exactness. From high-efficiency milling to complex surface finishing, our cutting tools are designed to deliver results that move production forward with confidence and consistency.

We were founded on a simple idea: performance follows precision. That belief drives every innovation, every test, and every refinement in our design process. Our engineers work at the intersection of material science, machining technology, and real-world production feedback — ensuring that every tool head that leaves our floor performs to the same high standard as the one before it.

W Dynamics tools are built for the realities of modern CNC machining — faster feed rates, harder alloys, and tighter tolerances. Our cutting heads are optimized to maintain stability under load, reduce vibration, and extend tool life without sacrificing finish quality. Because in high-performance manufacturing, precision isn't optional — it's expected.

Our approach is rooted in dynamic thinking. We don't just react to change; we design for it. By continually evolving our geometries, coatings, and materials, we give machinists the flexibility to push limits and the reliability to repeat success, run after run. Each product we make is tested to perform under pressure — and to perform again.

Behind every tool is a team that understands the demands of the floor. We partner closely with our customers to solve challenges that can't be met by off-the-shelf solutions. From prototype to production, W Dynamics is built on collaboration, because innovation happens fastest when performance meets purpose.

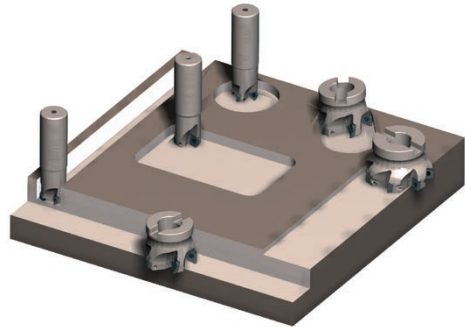
Our catalog reflects more than a collection of products — it's a toolkit for precision. Inside, you'll find cutting heads engineered for strength, stability, and speed. Each design represents thousands of hours of testing, refinement, and feedback from the field. Together, they form a system built to maximize machine potential and operator control.

In an industry defined by microns and milliseconds, W Dynamics stands for the pursuit of better — not just in what we make, but in how we think.

**PERFORMANCE IN MOTION. PRECISION BY DESIGN.
THAT'S THE W DYNAMICS DIFFERENCE.**

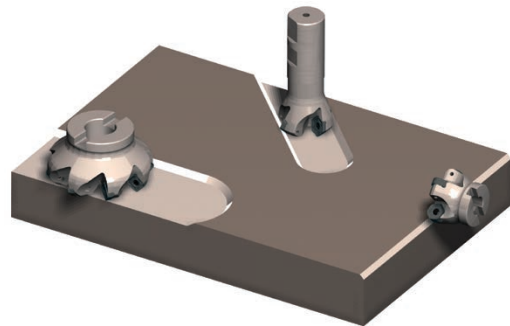


Shouldering



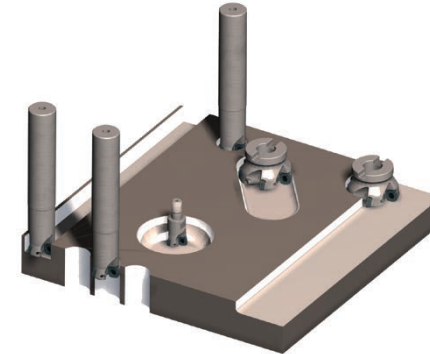
Milling System		Page
	UPLY 07	P 12 – P 14
	UPLY 09	
	TELU 09	P 18 – P 19
	TEIU 09	
	MOLV 12	P 22 – P 23
	MPLV 12	
	MOIV 12	P 26 – P 27
	MPJW 12	

Face Milling



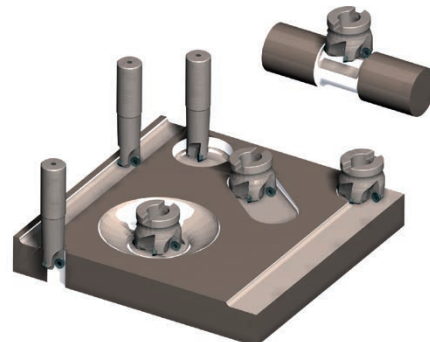
Milling System		Page
	IQLU 06	P 30 – P 31
	IQDU 06	
	IPLU 06	P 32 – P 33
	IPDU 06	
	TPLV 12	P 36 – P 39
	TPLV 15	
	IOLV 08	P 42 – P 45
	IPLV 08	

High Feed Cutting



Milling System		Page
	FQIU07	P 72 – P 75
	YQMU 07	P 76 – P 85
	YEMU 10	
	YEMY 10	
	YPMU 13	
	YPMU 13 (LO ₂)	P 86 – P 87

Form Milling



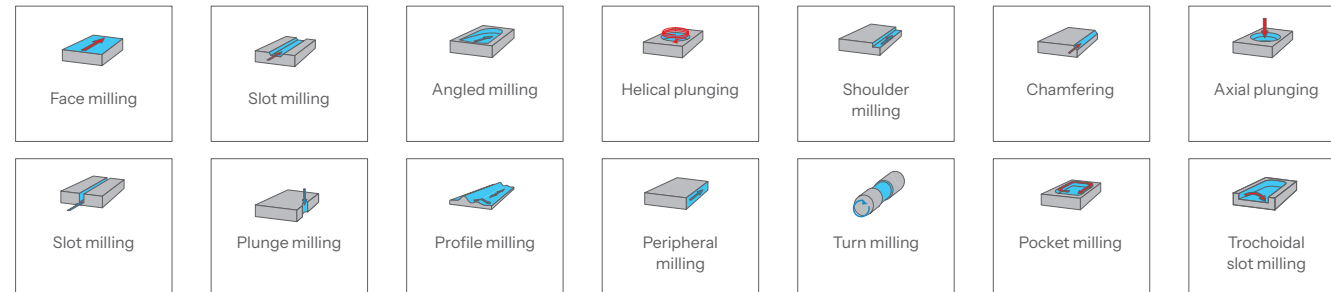
Milling System		Page
	SQNY 10/12/16	P 48 – P 53
	SEIY 10/12/16	
	SQIY 10/12/16	
	SEIX 10/12/16	
	SQNY 12 (LO ₂)	P 54 – P 55
	SQIY 16 (LO ₂)	P 56 – P 57

Technical

		Page
Technical Data		P 74 – P 133
Technical Information – General		P 134 – P 143

Shouldering / Face milling

Possible applications



Application		Machining operations	Range	Page
Shouldering 3 x 90°			LDR-T	P 10 – P 15
Shouldering 4 x 90°			BRT-S	P 16 – P 19
Shouldering 4 x 90°			TOC-L	P 20 – P 23
Shouldering 4 x 90°			OXM-T-L	P 24 – P 27
Face milling 6 x 45°			DLT-H	P 28 – P 33
Face milling 8 x 45°			GNT-S	P 34 – P 39
Face milling 12 x 45°			LBW-H	P 40 – P 45

Form milling / High feed cutting / Multiple applications

Application		Machining operations	Range	Page
Form milling			MRK-R	P 46 – P 53
Form milling Cool			MRK-R	P 54 – P 57
High feed cutting			EHO-E	P 58 – P 61
High feed cutting			MKO-HFC	P 62 – P 71
High feed Cool			MKO-HFC	P 72 – P 73

Products



LADRA XM7



Application

1) Face milling



2) Angled milling



3) Helical plunging



4) Shoulder milling



5) Slot milling



6) Pocket milling



Chipbreaker

IDN: Steel – Cast iron*

TDN: Stainless Steel – Exotic* – Titanium*

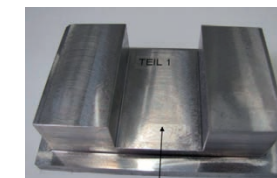
* secondary application

3 effective cutting edges



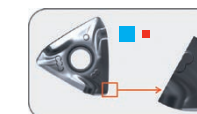
Customer benefits

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



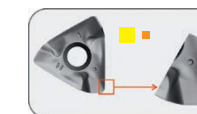
Result: Workpieces with clean surface, close tolerances and reduced formation of burrs, maximum service life of tool and insert.

Which chipbreaker to use?



IDN

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

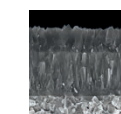


TDN

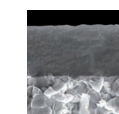
Sharp cutting edge for general stainless steel applications and for finishing in steels.

Grades

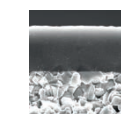
WDPC230



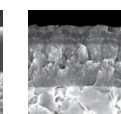
WDPP235



WDPM240



WDC5235



Available range LADRA XM7

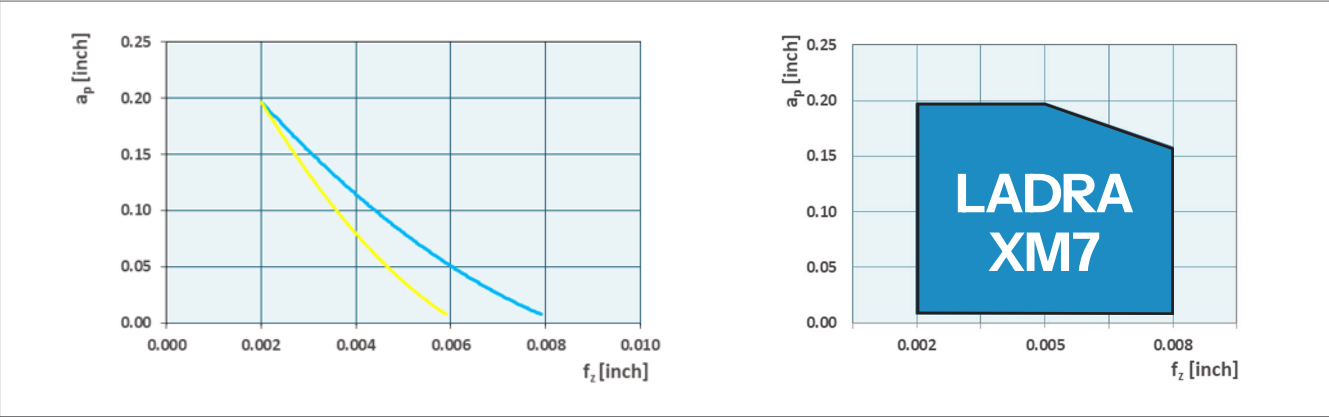
Insert	Designation	Chipbreaker	Material #	Available
	UPLY 070305PDER-IDN WDCP230	...-IDN	23204436	●
	UPLY 070305PDER-IDN WDPP235	...-IDN	23170174	●
	UPLY 070305PDER-TDN WDPM240	...-TDN	23231128	●
	UPLY 070305PDER-TDN WDC5235	...-TDN	23170172	●
	UPLY 070308PDER-IDN WDCP230	...-IDN	23418162	●
	UPLY 070308PDER-IDN WDPP235	...-IDN	23254730	●
	UPLY 070308PDER-TDN WDPM240	...-TDN	23254737	●
	UPLY 070308PDER-TDN WDC5235	...-TDN	23254739	●

Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-LDR-T07-075.R.03-B075-100-300-I	0.750	3		○
	C-LDR-T07-100.R.04-B100-150-350-I	1.000	4		○
	C-LDR-T07-125.R.05-B125-200-400-I	1.250	5		○
	G-LDR-T07-075.R.03-125-I	0.750	3		○
	G-LDR-T07-100.R.04-150-I	1.000	4		○
	G-LDR-T07-125.R.05-150-I	1.250	5		○
	A-LDR-T07-150.R.05-A050-150-I	1.500	5		○
	A-LDR-T07-200.R.06-A075-150-I	2.000	6		○

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M2.5x6.0 – T08	11	35756	●

Cutting data LADRA XM7

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v_c [sfm]	f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.002 – 0.008	0.197 – 0.008
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.002 – 0.006	0.197 – 0.008
			WDC5235			

Available range LADRA XM9

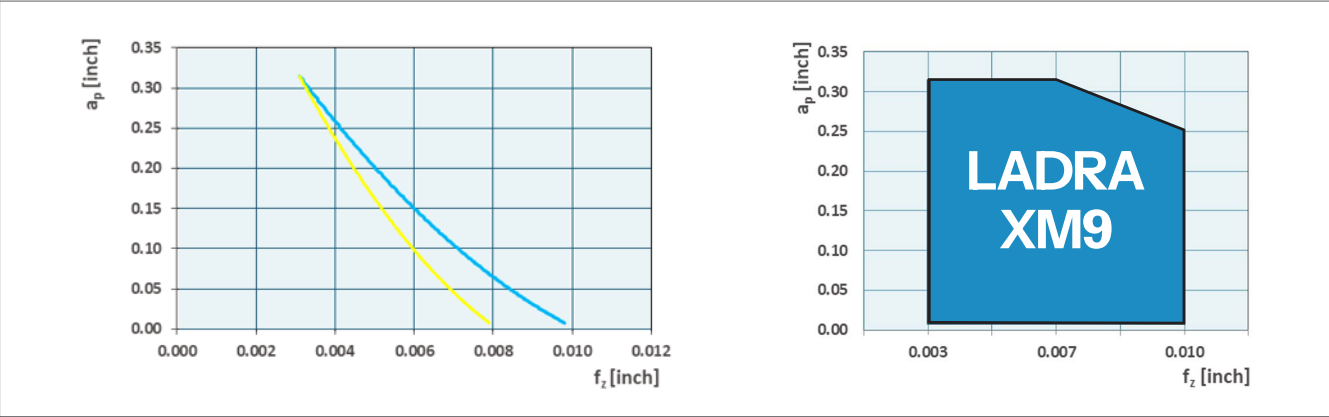
Insert	Designation	Chipbreaker	Material #	Available
	UPLY 09T308PDER-IDN WDCP230	...-IDN	23435318	●
	UPLY 09T308PDER-IDN WDPP235	...-IDN	23373617	●
	UPLY 09T308PDER-TDN WDPM240	...-TDN	23220007	●
	UPLY 09T308PDER-TDN WDC5235	...-TDN	23177601	●
	UPLY 09T312PDER-IDN WDCP230	...-IDN	23489773	●
	UPLY 09T312PDER-IDN WDPP235	...-IDN	23487591	●
	UPLY 09T312PDER-TDN WDPM240	...-IDN	23254756	●
	UPLY 09T312PDER-TDN WDC5235	...-TDN	23254759	●
	UPLY 09T316PDER-IDN WDCP230	...-IDN	23489775	●
	UPLY 09T316PDER-IDN WDPP235	...-IDN	23487590	●
	UPLY 09T316PDER-TDN WDPM240	...-TDN	23254748	●
	UPLY 09T316PDER-TDN WDC5235	...-TDN	23254740	●

Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-LDR-T09-125.R.03-B125-200-400-I	1.250	3		○
	A-LDR-T09-150.R.04-A050-150-I	1.500	4		○
	A-LDR-T09-200.R.05-A075-150-I	2.000	5		○
	A-LDR-T09-250.R.06-A075-150-I	2.500	6		○

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M3.0 x 7.3 – T08	11	88724	●
	Power screw M8.0 x 30.0 (only for A-LDR-T09-150.R.04)	15	22147991	●

Cutting data LADRA XM9

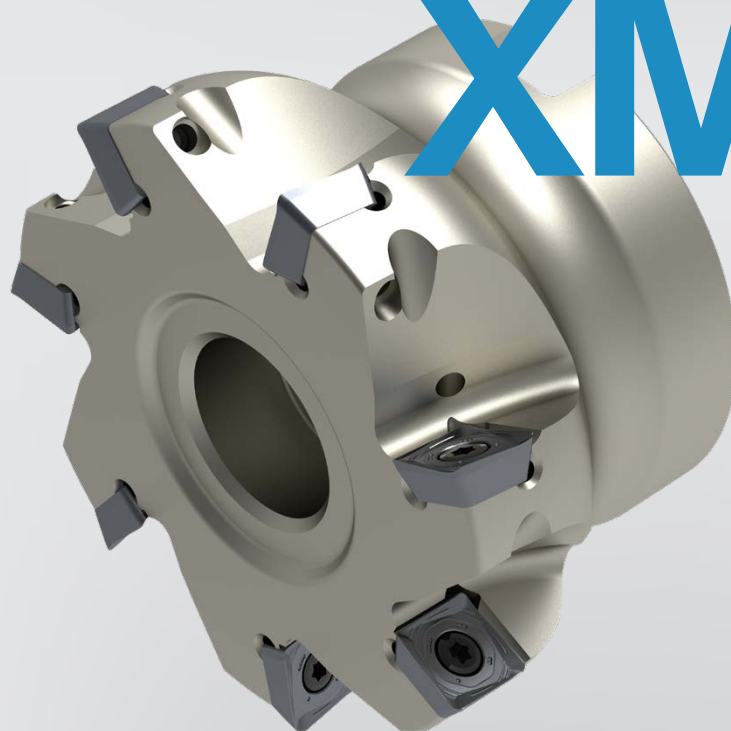
Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v_c [sfm]	f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.003 – 0.010	0.315 – 0.008
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.003 – 0.008	0.315 – 0.008
			WDC5235			

BRUTE XM9



Application

- 1) Face milling 
- 2) Angled milling 
- 3) Helical plunging 
- 4) Shoulder milling 
- 5) Slot milling 
- 6) Peripheral milling 
- 7) Trochoidal slot milling 

Chipbreaker

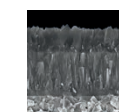
IDN: Steel
TDN: Stainless Steel – Exotic* – Titanium*
DDN: Cast iron
MNN: Aluminium

4 effective cutting edges

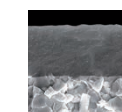


Grades

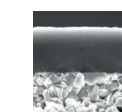
WDPC230 



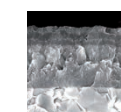
WDPP235 



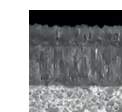
WDPM240 



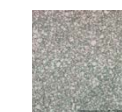
WDC5235 



WDCK215 



WDWN715 



WDC5240 



Customer benefits

- High precision 90° milling

Which chipbreaker to use?



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



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



DDN
 Strong cutting edge for cast iron applications.



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

Available rangeBRUTE XM9

Insert	Designation	Chipbreaker	Material #	Available
	TELU 09T308SR-IDN WDCP230	...-IDN	22080139	●
	TELU 09T308SR-IDN WDPP235	...-IDN	22080141	●
	TELU 09T308SR-TDN WDPM240	...-TDN	22080143	●
	TELU 09T308SR-TDN WDC5235	...-TDN	22695756	●
	TELU 09T308SR-TDN WDC5240	...-TDN	22821906	●
	TELU 09T308SR-DDN WDCK215	...-DDN	23204451	●
	TEIU 09T308FR-MNN WDWN715	...-MNN	25763732	●

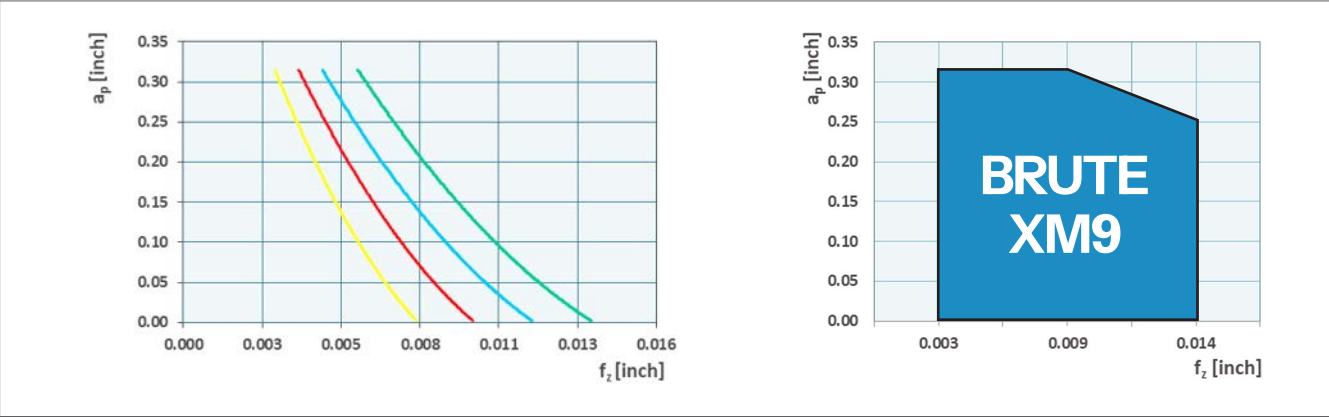
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-BRT-S09-100.R.03-B100-150-380-I	1.000	3	23180019	●
	C-BRT-S09-125.R.04-B125-200-450-I	1.250	4	23180021	●
	G-BRT-S09-100.R.03-150-I	1.000	3		○
	G-BRT-S09-125.R.04-150-I	1.250	4		○
	A-BRT-S09-150.R.05-A050-150-I	1.500	5	23180996	●
	A-BRT-S09-200.R.06-A075-150-I	2.000	6	23180990	●
	A-BRT-S09-250.R.07-A075-150-I	2.500	7	23180901	●
	A-BRT-S09-300.R.09-A100-200-I	3.000	9	23180902	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M3.0 x 7.3 – T08	11	88724	●
	Power screw M8.0 x 30.0 (only for A-BRT-S09-150.R.05)	15	2147991	●

● available from stock, ○ available upon request

Cutting dataBRUTE XM9

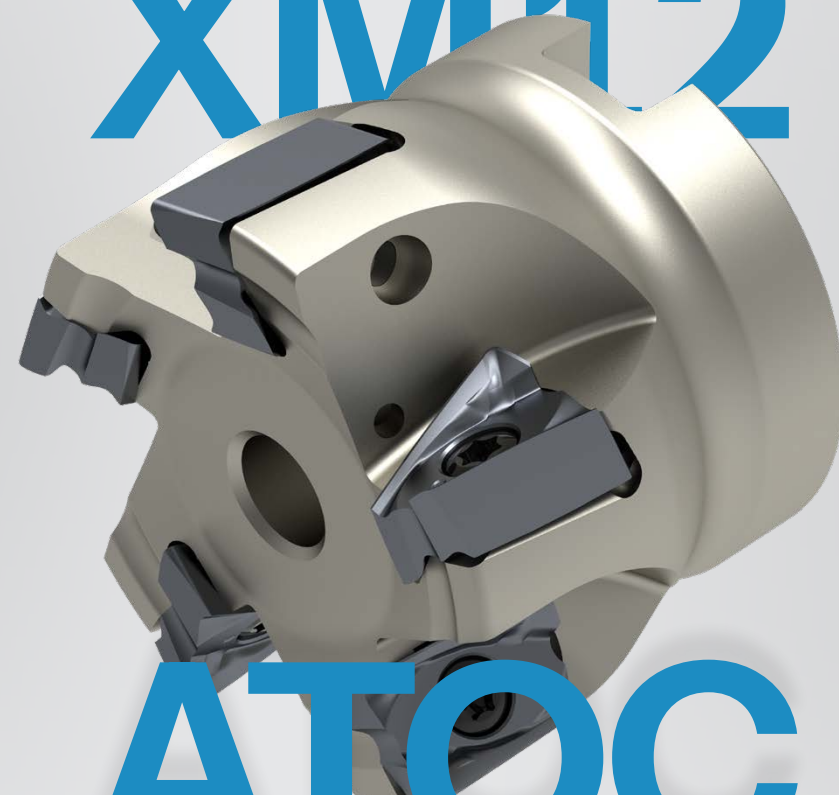
Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v_c [sfm]	Cutting data	
					f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230 WDPP235	720 – 200	0.005 – 0.012	0.315 – 0.002
M	Stainless steel	TDN	WDPM240 WDC5235	660 – 200	0.003 – 0.008	0.315 – 0.002
K	Cast iron	DDN	WDCK215	1050 – 330	0.004 – 0.010	0.315 – 0.002
N	Non-ferrous	MNN	WDWN715	< 6560	0.006 – 0.014	0.315 – 0.002
S	Heat resistant alloys	TDN	WDC5235	250 – 80	0.0016 – 0.006	0.315 – 0.002
S	Titanium	TDN	WDC5240			

ATOC XM12



ATOC XM12



Application

1) Face milling



2) Angled milling



3) Helical plunging



4) Shoulder milling



5) Slot milling



6) Pocket milling



Chipbreaker

IDN: Steel – Cast iron*

TDN: Stainless Steel – Exotic* – Titanium*

DDN: Cast iron

* secondary application

4 effective cutting edges



Customer benefits

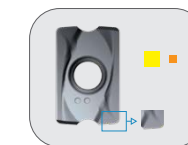
- High precision 90° milling
- Low power consumption, maximum chip removal rate
- Chipbreaker optimised by FEM
- Soft cutting providing quiet machining and maximum spindle protection

Which chipbreaker to use?



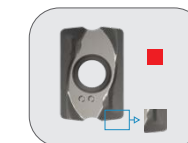
IDN

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



TDN

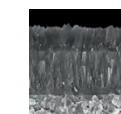
Sharp cutting edge for general stainless steel applications and for finishing in steels.



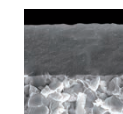
DDN

Strong cutting edge for cast iron applications.

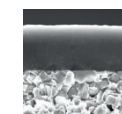
WDPC230



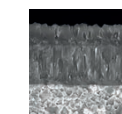
WDPP235



WDPM240



WDCK215



Available range ATOC XM12

Insert	Designation	Chipbreaker	Material number	Available
	MOLV 120608ER-IDN WDCP230	...-IDN	23545715	●
	MOLV 120608ER-IDN WDPP235	...-IDN	23269119	●
	MOLV 120608ER-TDN WDPM240	...-TDN	23484890	●
	MOLV 120608ER-DDN WDCK215	...-DDN	25760267	●
	MPLV 120608ER-TDN WDPM240	...-TDN	23484880	●

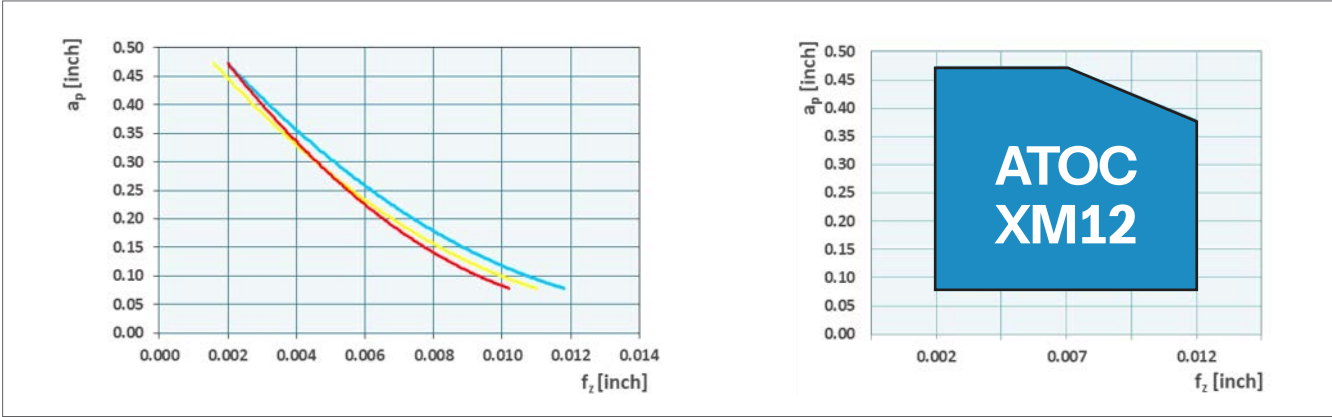
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	A-TOC-MP/MO12--150.R.04-A050-150-I	1.500	4		●
	A-TOC-LO/LN12-200.R.05-A075-150-I	2.000	5		●
	A-TOC-LO/LN12-250.R.06-A075-150-I	2.500	6		○
	A-TOC-LO/LN12-300.R.07-A100-200-I	3.000	7		○
	A-TOC-LO/LN12-400.R.08-B150-200-I	4.000	8		○
	A-TOC-LO/LN12-500.R.09-B150-250-I	5.000	9		○
	A-TOC-LO/LN12-600.R.11-B200-250-I	6.000	11		○

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.0 x 11 – T15	44	22153385	●
	Power screw M8.0 x 30.0 (only for Ø 150)	132	22147991	●
	Power screw M10.0 x 31.0 (only for Ø 200)	176	22151309	●

● available from stock, ○ available upon request

Cutting data ATOC XM12

Starting parameters:



Grades and materials:

Cutting data					
Material group	Chipbreaker	Grade	v _c [sfm]	f _z [ipt]	a _p [inch]
P	Steel	IDN	720 – 200	0.002 – 0.012	0.472 – 0.079
		WDPP235			
M	Stainless steel	TDN	660 – 200	0.002 – 0.011	0.472 – 0.079
K	Cast iron	DDN	1050 – 330	0.002 – 0.010	0.472 – 0.079

OXMILL XM 12



Application

1) Shoulder milling



2) Slot milling (90°)



3) Face milling
ling



4) Peripheral mil-
ling



5) Trochoidal slot milling



Chipbreaker

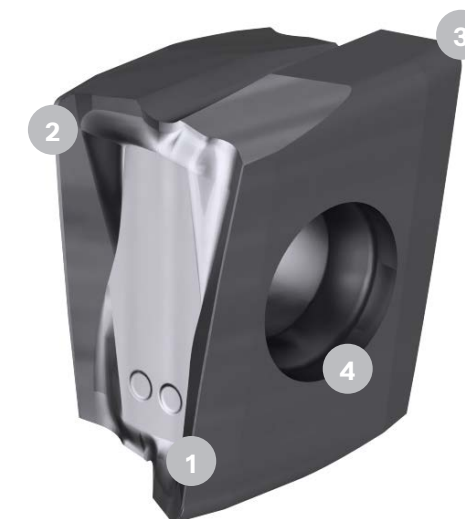
IDN: Steel

TDN: Stainless Steel

CCM: Cast iron

XCM: Exotic – Titanium

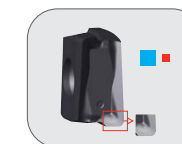
4 effective cutting edges



Customer benefits

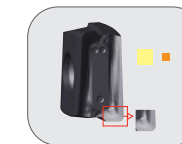
- High level of cost efficiency
- Low cutting material costs due to four cutting edges per indexable insert
- High precision 90° milling
- High process reliability
- Stable, tangential indexable inserts (thanks a special axial support)

Which chipbreaker to use?



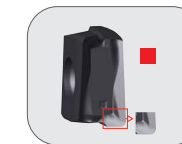
IDN

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



TDN

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



CCM

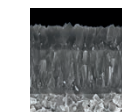
Strong cutting edge for cast iron applications.



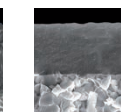
XCM

Stable cutting edge for dedicated exotic materials and titanium.

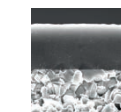
WDCP230



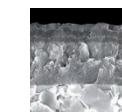
WDPP235



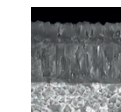
WDPM240



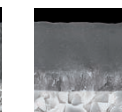
WDC5235



WDCK215



WDC5240



Available range OXMILL XM12

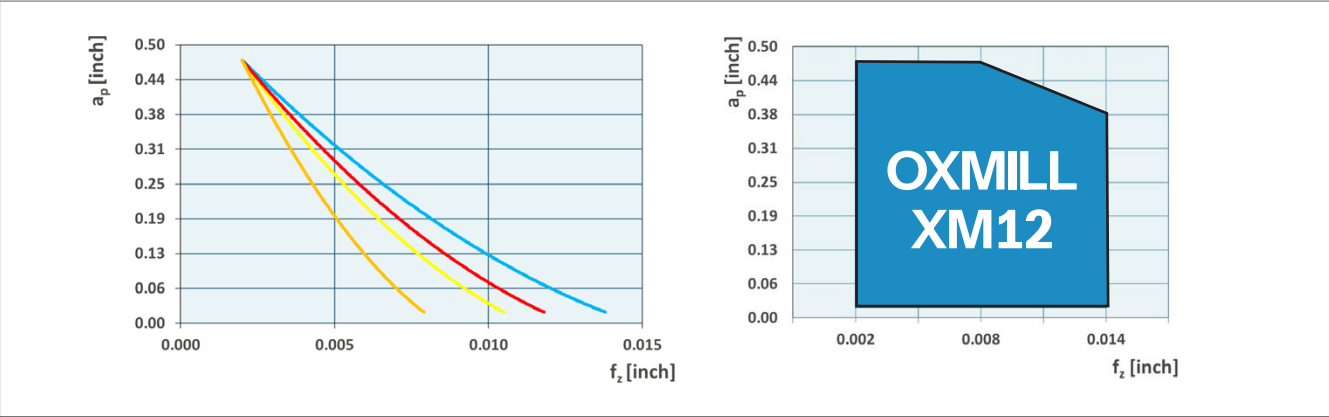
Insert	Designation	Chipbreaker	Material number	Available
	MOIV 120608-IDN WDCP230	...-IDN	25553339	●
	MOIV 120608-IDN WDPP235	...-IDN	23542846	●
	MOIV 120608-TDN WDPM240	...-TDN	25905990	●
	MOIV 120608-TDN WDC5235	...-TDN	25905903	●
	MPJW 120608-CCM WDCK215	...-CCM	25647162	●
	MPJW 120608-XCM WDC5240	...-XCM	25905905	●

Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	A-OXM-T-LN12-150.R.04-A050-150-I	1.500	4	26187210	○
	A-OXM-T-LN12-200.R.05-A075-150-I	2.000	5	26187226	○
	A-OXM-T-LN12-250.R.06-A075-150-I	2.500	6	26187228	○
	A-OXM-T-LN12-300.R.07-A100-200-I	3.000	7	26187231	○
	A-OXM-T-LN12-400.R.08-B150-200-I	4.000	8	26187234	○
	A-OXM-T-LN12-500.R.09-B150-250-I	5.000	9	26187239	○
	A-OXM-T-LN12-600.R.11-B200-250-I	6.000	11	26187244	○

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.0 x 11 – T15+	44	2456543	●

Cutting data OXMILL XM12

Starting parameters:



Grades and materials:

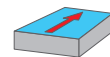
Material group		Chipbreaker	Grade	v_c [sfm]	f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.002 – 0.014	0.472 – 0.02
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.002 – 0.011	0.472 – 0.02
K	Cast iron	CCM	WDCK215	1050 – 330	0.002 – 0.012	0.472 – 0.02
S	Heat resistant alloys	XCM	WDC5235	250 – 80	0.002 – 0.008	0.472 – 0.02
	Titanium		WDC5240			

DELTA XM6

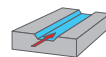


Application

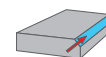
1) Face milling



2) Slot milling



3) Chamfering



Chipbreaker

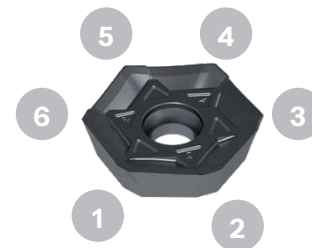
IDN: Steel – Cast iron*

TDN: Stainless Steel – Exotic* – Titanium*

MNN: Aluminium and non-ferrous metals

* secondary application

6 effective cutting edges



Grades

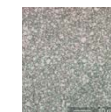
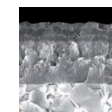
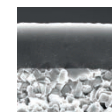
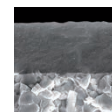
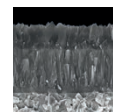
WDCP230 ■

WDPP235 ■

WDPM240 ■

WDC5235 ■

WDWN715 ■



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



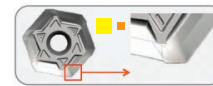
- Indexing of the insert without complete removal of the clamping screw is possible!
- Direct insert indexing saves valuable machine time.

Which chipbreaker to use?



IDN

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



TDN

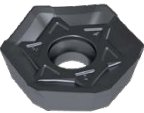
Sharp cutting edge for general stainless steel applications and for finishing in steels.



MNN

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

Available rangeDELTA XM6

Insert	Designation	Chipbreaker	Material #	Available
	IQLU 0604AZER-IDN WDCP230	...-IDN	23204477	●
	IQLU 0604AZER-IDN WDPP235	...-IDN	23204470	●
	IQLU 0604AZER-TDN WDC5235	...-TDN	22637490	●
	IQDU 0604AZFR-MNN WDWN715	...-MNN	25763721	●

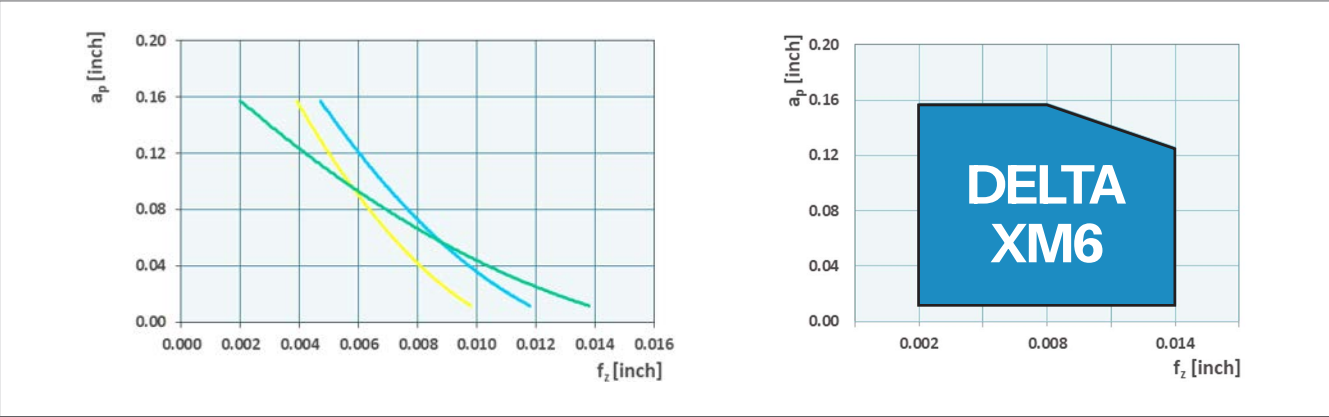
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
 	C-DLT-H06-150.R.04-B150-200-400-I	1.500	4	23180013	●
	A-DLT-H06-150.R.04-A050-150-I	1.500	4	23180803	●
	A-DLT-H06-200.R.05-A075-150-I	2.000	5	23180807	●
	A-DLT-H06-250.R.06-A075-150-I	2.500	6	23180808	●
	A-DLT-H06-300.R.07-A100-200-I	3.000	7	23180972	●
	A-DLT-H06-400.R.09-B150-200-I	4.000	9	23180975	●
	A-DLT-H06-500.R.10-B150-250-I	5.000	10	23180976	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
 	M4.0 x 11 – T15+	44	2456543	●
	Power screw M8.0 x 30.0 (A-DLT-H06-150.R.04)	132	22147991	●

● available from stock, ○ available upon request

Cutting dataDELTA XM6

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v_c [sfm]	f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.005 – 0.012	0.158 – 0.012
			WDPP235			
M	Stainless steel	TDN	WDC5235	660 – 200	0.004 – 0.010	0.158 – 0.012
N	Non-ferrous	MNN	WDWN715	< 6560	0.002 – 0.014	0.158 – 0.012

Available range **DELTA XM6**

Insert	Designation	Chipbreaker	Material #	Available
	IPLU 0604AZER-IDN WDCP230	...-IDN	22061785	●
	IPLU 0604AZER-IDN WDPP235	...-IDN	22054928	●
	IPDU 0604AZER-TDN WDPM240	...-TDN	25763735	●
	IPDU 0604AZER-TDN WDC5235	...-TDN	23323375	●

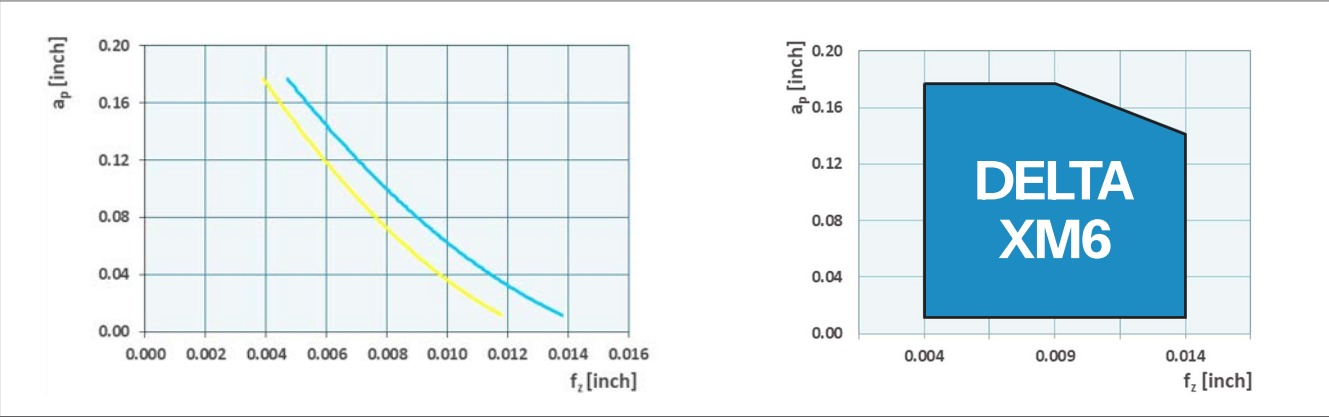
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
 	C-DLT-H06-150.R.04-B150-200-400-I	1.500	4	23180013	●
	A-DLT-H06-150.R.04-A050-150-I	1.500	4	23180803	●
	A-DLT-H06-200.R.05-A075-150-I	2.000	5	23180807	●
	A-DLT-H06-250.R.06-A075-150-I	2.500	6	23180808	●
	A-DLT-H06-300.R.07-A100-200-I	3.000	7	23180972	●
	A-DLT-H06-400.R.09-B150-200-I	4.000	9	23180975	●
	A-DLT-H06-500.R.10-B150-250-I	5.000	10	23180976	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
 	M4.0 x 11 – T15+	44	2456543	●
	Power screw M8.0 x 30.0 (A-DLT-H06-150.R.04)	132	22147991	●

● available from stock, ○ available upon request

Cutting data **DELTA XM6**

Starting parameters:



Grades and materials:

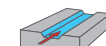
Material group		Chipbreaker	Grade	v_c [sfm]	Cutting data	
					f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.005 – 0.014	0.177 – 0.012
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.004 – 0.012	0.177 – 0.012
			WDC5235			

GRUNT XM12



Application

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



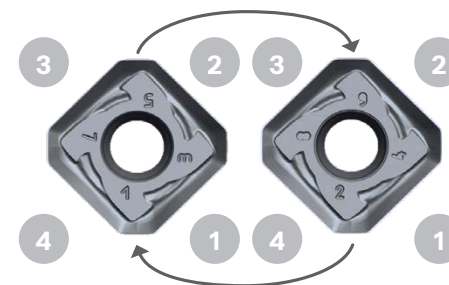
Chipbreaker

IDN: Steel / Medium & roughing operations

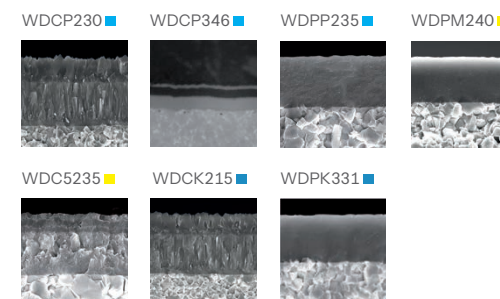
TDN: Steel – Stainless Steel / Finishing

DDN: Cast iron

Indexing 4 times and reversible

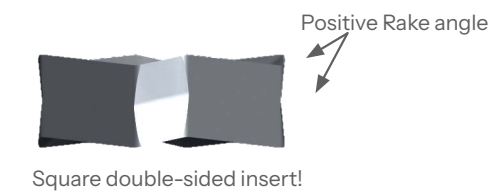


Grades



Customer benefits

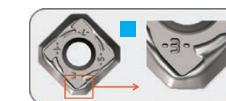
- Masterfinish® technology
- Double sided positive (positive rake angle)



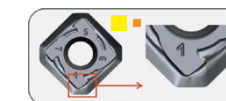
Available in 2 dimensions



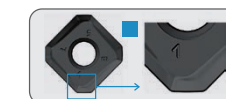
Which chipbreaker to use?



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

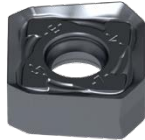


TDN
Sharp cutting edge for general stainless steel applications and for finishing in steels.



DDN
Strong cutting edge for cast iron applications.

Available rangeGRUNT XM12

Insert	Designation	Chipbreaker	Material #	Available
	TPLV 1205AZER-IDN WDCP230	...-IDN	23204485	●
	TPLV 1205AZER-IDN WDCP346	...-IDN	23320965	●
	TPLV 1205AZER-IDN WDPP235	...-IDN	23204488	●
	TPLV 1205AZER-TDN WDPM240	...-TDN	22099074	●
	TPLV 1205AZER-TDN WDC5235	...-TDN	22017919	●
	TPLV 1505AZER-TDN WDC5240	...-TDN	22079919	●

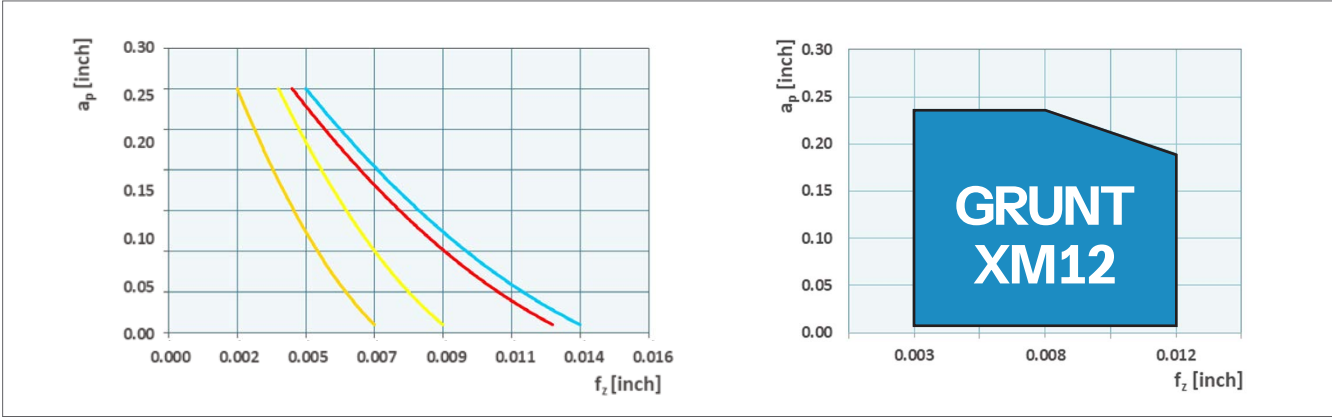
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	A-GNT-S12-150.R.04-A050-175-I	1.500	4	23215843	●
	A-GNT-S12-200.R.05-A075-175-I	2.000	5	23215844	●
	A-GNT-S12-250.R.06-A075-175-I	2.500	6	23215845	●
	A-GNT-S12-300.R.08-A100-200-I	3.000	8	23215846	●
	A-GNT-S12-400.R.10-B150-250-I	4.000	10	23215855	●
	A-GNT-S12-500.R.12-B150-250-I	5.000	12	23215856	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.0 x 11.0 – T15	44	22153385	●

● available from stock, ○ available upon request

Cutting dataGRUNT XM12

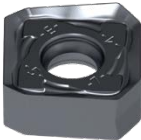
Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v_c [sfm]	Cutting data	
					f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.004 – 0.012	0.236 – 0.008
			WDCP346			
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.003 – 0.008	0.236 – 0.008
			WDC5235			
K	Cast iron	DDN	WDCK215	1050 – 330	0.004 – 0.011	0.236 – 0.008
			WDPK331			
S	Heat resistant alloys	TDN	WDC5240	2459 – 82	0.002 – 0.006	0.236 – 0.008
	Titanium					

Available rangeGRUNT XM15

Insert	Designation	Chipbreaker	Material #	Available
	TPLV 1505AZER-IDN WDCP230	...-IDN	23348376	●
	TPLV 1505AZER-IDN WDPP235	...-IDN	23204480	●
	TPLV 1505AZER-IDN WDCP346	...-IDN	23320961	●
	TPLV 1505AZER-TDN WDPM240	...-TDN	22080171	●
	TPLV 1505AZER-TDN WDC5235	...-TDN	22637510	●
	TPLV 1505AZER-DDN WDCK215	...-DDN	23300480	●
	TPLV 1505AZER-DDN WDPK331	...-DDN	23256737	●

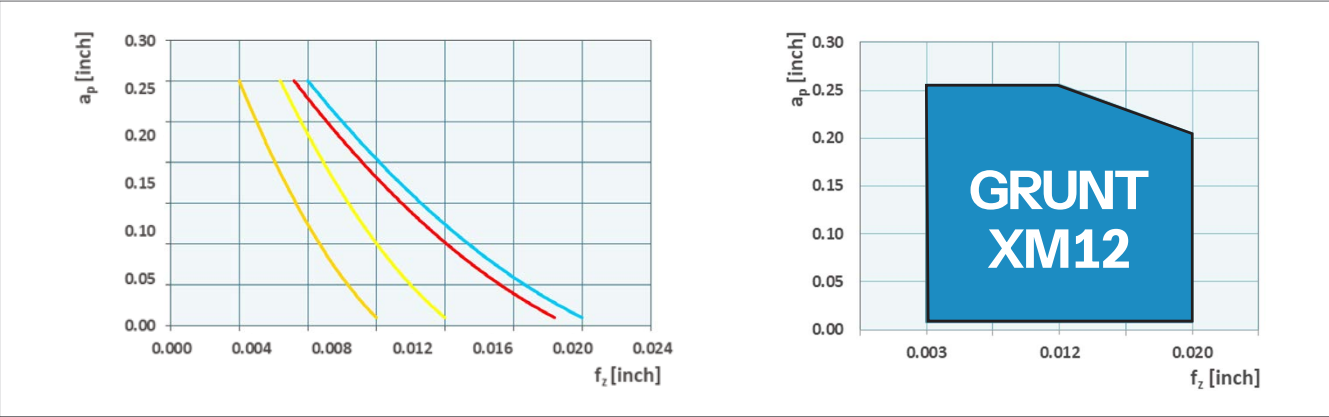
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	A-GNT-S15-150.R.04-A050-175-I	1.500	4	23180903	●
	A-GNT-S15-200.R.04-A075-175-I	2.000	4	23180904	●
	A-GNT-S15-250.R.05-A075-175-I	2.500	5	23180905	●
	A-GNT-S15-300.R.06-A100-200-I	3.000	6	23180907	●
	A-GNT-S15-400.R.07-B150-250-I	4.000	7	23180900	●
	A-GNT-S15-500.R.08-B150-250-I	5.000	8	23180012	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.5 x 13.0 – T20+	44	2456542	●
	Power screw M8.0 x 30.0 (A-DSM-S15-150.R.04)	132	22147991	●

● available from stock, ○ available upon request

Cutting dataGRUNT XM15

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v _c [sfm]	Cutting data	
					f _z [ipt]	a _p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.004 – 0.020	0.256 – 0.008
			WDCP346			
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.003 – 0.016	0.256 – 0.008
			WDC5235			
K	Cast iron	DDN	WDCK215	1050 – 330	0.003 – 0.018	0.256 – 0.008
			WDPK331			
S	Heat resistant alloys	TDN	WDC5240	2459 – 82	0.002 – 0.006	0.256 – 0.008
	Titanium					

LONGBOW XM8

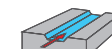


Application

1) Face milling



2) Slot milling



3) Chamfering

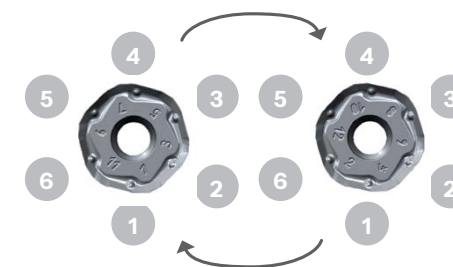


Chipbreaker

IDN: Steel – Cast iron*

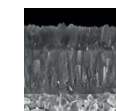
TDN: Stainless Steel – Exotic* – Titanium*

Indexing 6 times and reversible

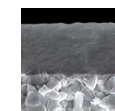


Grades

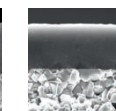
WDCP230 ■



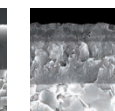
WDPP235 ■



WDPM240 ■



WDC5235 ■

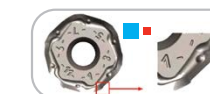


* secondary application

Customer benefits

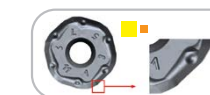
- Masterfinish geometry
- Maximised economy thanks to 12 cutting edges.

Which chipbreaker to use?



IDN

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



TDN

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

Available range **Longbow XM8**

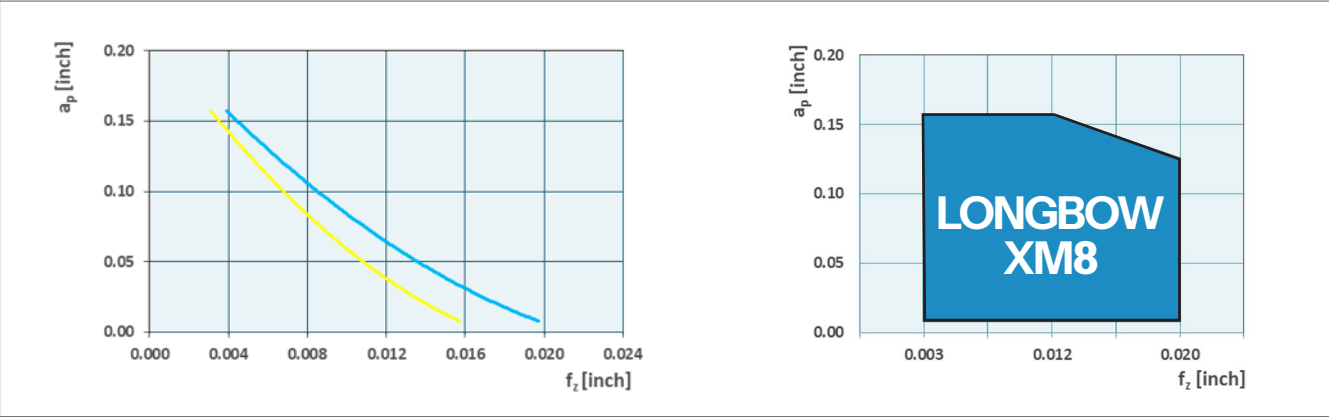
Insert	Designation	Chipbreaker	Material #	Available
	IOLV 0806AZER-IDN WDCP230	...-IDN	23204494	●
	IOLV 0806AZER-IDN WDPP235	...-IDN	23204495	●
	IOLV 0806AZER-TDN WDPM240	...-TDN		○
	IOLV 0806AZER-TDN WDC5235	...-TDN	22998479	●

Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	A-LBW-H08-150.R.04-A050-150-I	1.500	4		○
	A-LBW-H08-200.R.04-A075-150-I	2.000	4		○
	A-LBW-H08-250.R.05-A075-150-I	2.500	5		○
	A-LBW-H08-300.R.06-A100-200-I	3.000	6		○
	A-LBW-H08-400.R.08-B150-200-I	4.000	8		○
	A-LBW-H08-500.R.09-B150-250-I	5.000	9		○

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.0 x 11.0 – T15+	44	2456543	●

Cutting data **Longbow XM8**

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v_c [sfm]	f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.004 – 0.020	0.158 – 0.008
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.003 – 0.016	0.158 – 0.008
			WDC5235			

Available range **Longbow XM8**

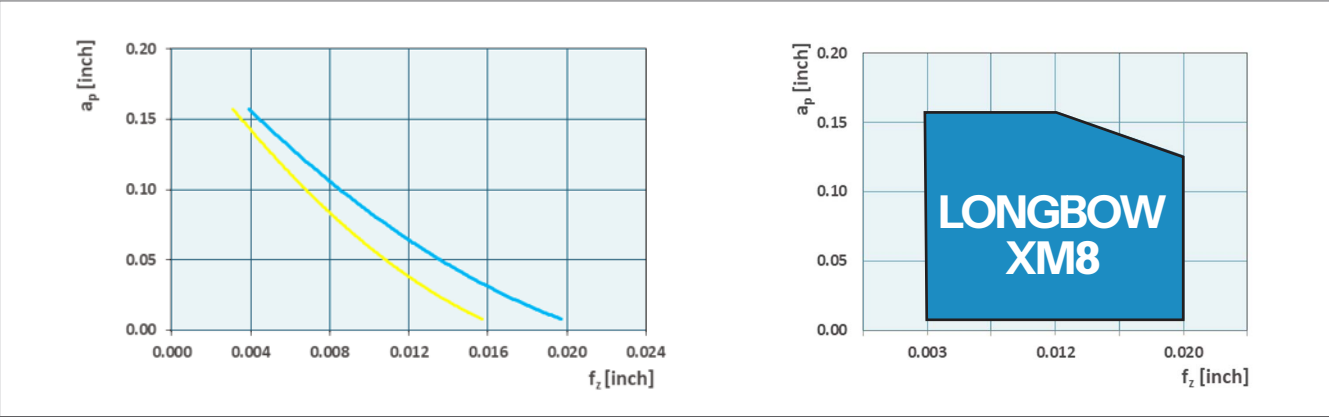
Insert	Designation	Chipbreaker	Material #	Available
	IPLV 0806AZER-IDN WDCP230	...-IDN	23734621	●
	IPLV 0806AZER-IDN WDPP235	...-IDN	23734622	●
	IPLV 0806AZER-TDN WDPM240	...-TDN	23741298	●
	IPLV 0806AZER-TDN WDC5235	...-TDN	23734618	●

Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	A-LBW-H08-150.R.04-A050-150-I	1.500	4		○
	A-LBW-H08-200.R.04-A075-150-I	2.000	4		○
	A-LBW-H08-250.R.05-A075-150-I	2.500	5		○
	A-LBW-H08-300.R.06-A100-200-I	3.000	6		○
	A-LBW-H08-400.R.08-B150-200-I	4.000	8		○
	A-LBW-H08-500.R.09-B150-250-I	5.000	9		○

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.0 x 11.0 – T15+	44	2456543	●

Cutting data **Longbow XM8**

Starting parameters:



Grades and materials:

				Cutting data		
Material group		Chipbreaker	Grade	v_c [sfm]	f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.004 – 0.020	0.158 – 0.008
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.003 – 0.016	0.158 – 0.008
			WDC5235			



Flexibility – One tool for several round inserts

Optimised clearance angles for high performance milling operations.

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

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



SQ..



SE...

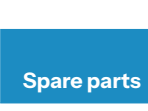
Optimised coolant control increasing your productivity thanks to longer tool life.

The LO₂ System is developed for titanium, superalloys like Inconel 718, stainless steel and other applications.



Available rangeMERIK XM10

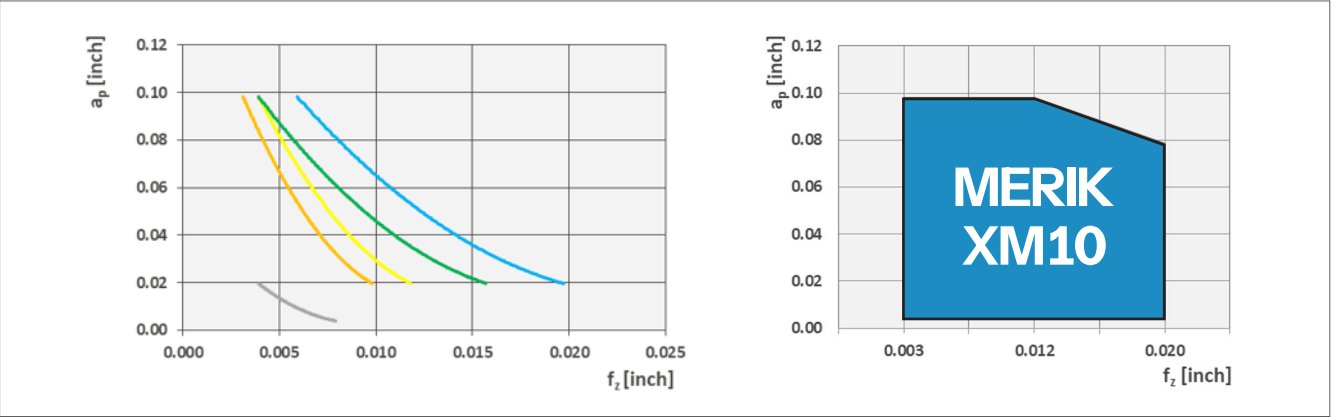
Insert	Designation	Chipbreaker	Material #	Available
	SQNY 10T3MO-IDN WDCP230	...-IDN	22089970	●
	SQNY 10T3MO-IDN WDPP235	...-IDN	22089983	●
	SQNY 10T3MO-TDN WDPM240	...-TDN	22089987	●
	SQNY 10T3MO-TDN WDC5235	...-TDN	23204498	●
	SEIY 10T3MO-MNN WDWN715	...-MNN	25763724	●
	SQIY 10T3MO-YDN WDC5235	...-YDN	22789588	●
	SQIY 10T3MO-YDN WDC5240	...-YDN	22789592	●
	SEIX 10T3MOSN- WDP6326	-	22827242	●

Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-MRK-R10-075.R.02-B075-200-400-I	0.750	2		○
	C-MRK-R10-075.R.02-B075-200-650-I	0.750	2		○
	C-MRK-R10-100.R.03-B100-250-450-I	1.000	3	23215896	●
	C-MRK-R10-100.R.03-B100-250-650-I	1.000	3	23215897	●
	C-MRK-R10-125.R.04-B125-275-500-I	1.250	4	23215899	●
	C-MRK-R10-125.R.04-B125-275-650-I	1.250	4	23215890	●
	G-MRK-R10-075.R.02-125-I	0.750	2		○
	G-MRK-R10-100.R.03-150-I	1.000	3		○
	G-MRK-R10-125.R.04-150-I	1.250	4		○
	A-MRK-R10-150.R.04-A050-150-I	1.500	4	23215894	●
	A-MRK-R10-200.R.05-A075-150-I	2.000	5	23215895	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M3.0 x 7.5 - T10+	18	22790905	●
	Power screw M8.0 x 30.0 (for A-MRK-R10-150.R.04 and for A-MRK-R10-200.R.05)	132	22147991	●

Cutting dataMERIK XM10

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v _c [sfm]	f _z [ipt]	a _p [inch]
P	Steel	IDN	WDCP230 WDPP235	720 – 200	0.006 – 0.020	0.098 – 0.020
M	Stainless steel	TDN	WDPM240 WDC5235	660 – 200	0.004 – 0.012	0.098 – 0.020
N	Non-ferrous	MNN	WDWN715	< 6560	0.004 – 0.016	0.098 – 0.020
S	Heat-resistant alloys	YDN	WDC5235	250 – 80	0.003 – 0.010	0.098 – 0.020
S	Titanium	YDN	WDC5240			
H	Hard materials	-	WDP6326	590 – 330	0.004 – 0.008	0.020 – 0.004

Reccomended:		4 times		8 times
	ø [mm]	a _p [inch]	a _{p max} [inch]	a _{p max} [inch]
	10	0.098	0.177	0.055
	12	0.118	0.217	0.067
	16	0.157	0.295	0.091

Available rangeMERIK XM12

Insert	Designation	Chipbreaker	Material #	Available
	SQNY 1204MO-IDN WDCP230	...-IDN	22080114	●
	SQNY 1204MO-IDN WDPP235	...-IDN	22080117	●
	SQNY 1204MO-TDN WDPM240	...-TDN	22080126	●
	SQNY 1204MO-TDN WDC5235	...-TDN	23204490	●
	SEIY 1204MO-MNN WDWN715	...-MNN	25763727	●
	SQIY 1204MO-YDN WDC5235	...-YDN	22777879	●
	SQIY 1204MO-YDN WDC5240	...-YDN	22777870	●
	SEIX 1204MOSN- WDP6326	-	22827239	●

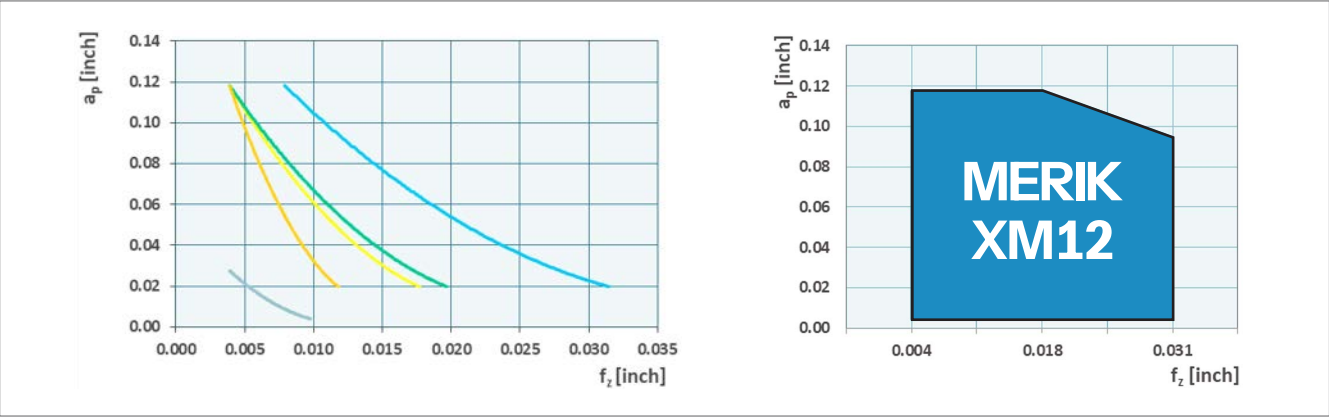
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-MRK-R12-100.R.02-B100-125-350-I	1.000	2	23215860	●
	C-MRK-R12-100.R.02-B100-250-450-I	1.000	2	23215871	●
	C-MRK-R12-125.R.03-B125-150-400-I	1.250	3	23215875	●
	C-MRK-R12-125.R.03-B125-300-500-I	1.250	3	23215877	●
	G-MRK-R12-100.R.02-150-I	1.000	2		○
	G-MRK-R12-125.R.03-150-I	1.250	3		○
	A-MRK-R12-150.R.04-A050-150-I	1.500	4	23215815	●
	A-MRK-R12-200.R.05-A075-150-I	2.000	5	23215827	●
	A-MRK-R12-250.R.06-A075-150-I	2.500	6	23215832	●
	A-MRK-R12-300.R.08-A100-200-I	3.000	8	23215837	●
	A-MRK-R12-400.R.10-B150-200-I	4.000	10	23215842	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.0 x 8.5 - T15 (only for C- and G-)	44	22148595	●
	M4.0 x 11.0 - T15+ (only for A-)	44	2456543	●
	Power screw M8.0 x 30.0 (for A-MRK-R12-150.R.04)	132	22147991	●

● available from stock, ○ available upon request

Cutting dataMERIK XM12

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v _c [sfm]	Cutting data	
					f _z [ipt]	a _p [inch]
P	Steel	IDN	WDCP230 WDPP235	720 – 200	0.008 – 0.032	0.118 – 0.020
M	Stainless steel	TDN	WDPM240 WDC5235	660 – 200	0.004 – 0.018	0.118 – 0.020
N	Non-ferrous	MNN	WDWN715	< 6560	0.004 – 0.020	0.118 – 0.020
S	Heat-resistant alloys	YDN	WDC5235	250 – 80	0.004 – 0.012	0.118 – 0.020
S	Titanium	YDN	WDC5240			
H	Hard materials	-	WDP6326	590 – 330	0.004 – 0.010	0.028 – 0.004

Reccomended:			4 times	8 times
ø [mm]	a _p [inch]	a _{p max} [inch]	a _{p max} [inch]	
10	0.098	0.177	0.055	
12	0.118	0.217	0.067	
16	0.157	0.295	0.091	

Available rangeMERIK XM16

Insert	Designation	Chipbreaker	Material #	Available
	SQNY 1605MO-IDN WDCP230	...-IDN	22080128	●
	SQNY 1605MO-IDN WDPP235	...-IDN	22080132	●
	SQNY 1605MO-TDN WDPM240	...-TDN	22080137	●
	SQNY 1605MO-TDN WDC5235	...-TDN	23204550	●
	SEIY 1605MO-LMM WDWN715	...-LMM		●
	SQIY 1605MO-XCM WDC5235	...-XCM	22781402	●
	SQIY 1605MO-XCM WDC5240	...-XCM	22781403	●
	SEIX 1605MOSN WDP6215	-		○

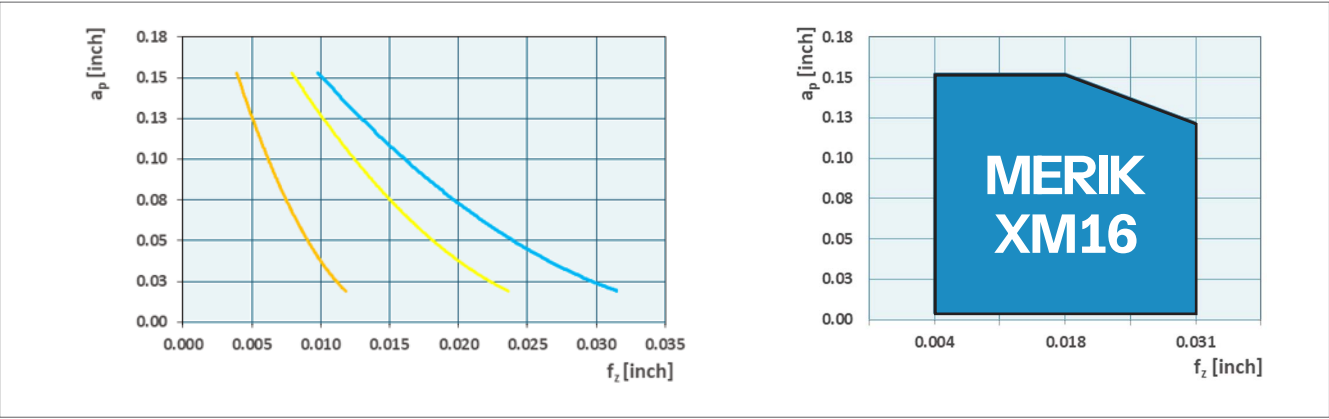
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	A-MRK-R16-200.R.03-A075-150-I	2.000	3		●
	A-MRK-R16-250.R.05-A075-150-I	2.500	5		●
	A-MRK-R16-300.R.06-A100-200-I	3.000	6		●
	A-MRK-R16-400.R.07-B150-200-I	4.000	7		●
	A-MRK-R16-500.R.08-B150-250-I	5.000	8		●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.5 x 13.0 – T20+	44	2456542	●
	Power screw M10.0 x 31.0 (for A-LDR-R16-200.R.03)	176	22151309	●

● available from stock, ○ available upon request

Cutting dataMERIK XM16

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v_c [sfm]	f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.010 – 0.032	0.158 – 0.020
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.008 – 0.024	0.158 – 0.020
			WDC5235			
S	Heat-resistant alloys	XCM	WDC5235	250 – 80	0.004 – 0.012	0.158 – 0.020
S	Titanium	XCM	WDC5240			

Recommened:		4 times		8 times
	ø [mm]	a_p [inch]	$a_{p \max}$ [inch]	$a_{p \max}$ [inch]
	10	0.098	0.177	0.055
	12	0.118	0.217	0.067
	16	0.157	0.295	0.091

Available rangeMERIK XM12 (LO₂)

Insert	Designation	Chipbreaker	Material #	Available
	SQNY 1204MO-COOL-XCM WDC5240	...-XCM	25985787	●
	SQNY 1204MO-COOL-XCM WDC5235	...-XCM	25071182	●
	SQNY 1204MO-COOL-XCM WDPM240	...-XCM	25071184	●

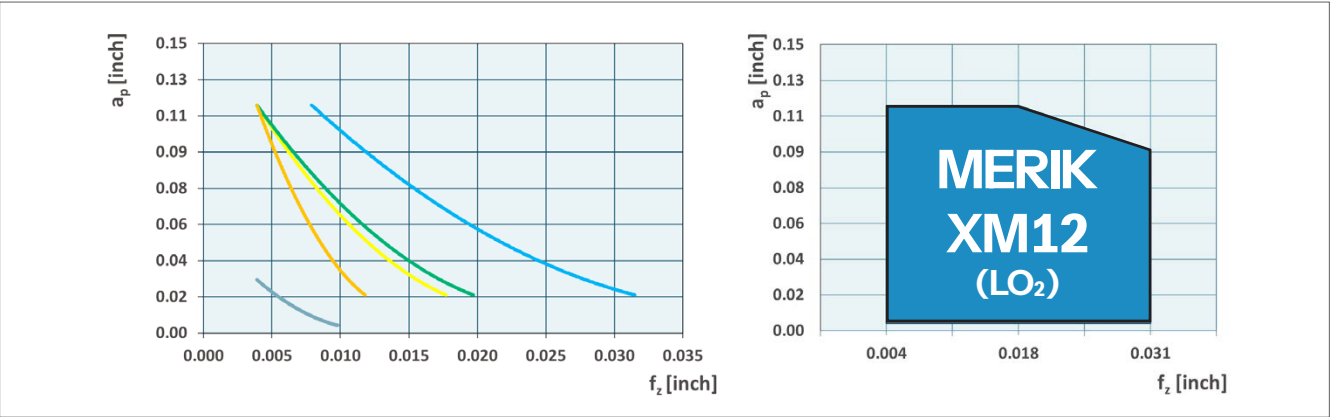
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-MRK-R12-150.R.03-B100-150-350-LF-I	1.500	3	26187256	●
	C-MRK-R12-175.R.04-B100-150-350-LF-I	1.750	4	26187257	●
	A-MRK-R12-175.R.04-A075-150-LF-I	1.750	4	26187105	●
	A-MRK-R12-200.R.05-A075-150-LF-I	2.000	5	26187218	●
	A-MRK-R12-250.R.06-A075-150-LF-I	2.500	6	26187220	●
	A-MRK-R12-300.R.08-A100-200-LF-I	3.000	8	26187237	●
	A-MRK-R12-400.R.10-B150-200-LF-I	4.000	10	26187242	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.0 x 13.0 - T15 Head7 (110810)	44	25071967	●
	Power screw M8.0 x 30.0 (for A-MRK-R12-40.R.04)	133	22147991	●

Note: Be carefull both system are not interchangeable! ● available from stock, ○ available upon request

Cutting dataMERIK XM12 (LO₂)

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v _c [sfm]	f _z [ipt]	a _p [inch]
P	Steel	IDN	WDCP230 WDPP235	720 – 200	0.008 – 0.032	0.118 – 0.020
M	Stainless steel	TDN	WDPM240 WDC5235	660 – 200	0.004 – 0.018	0.118 – 0.020
N	Non-ferrous	LMM	WDWN715	6560 – 0	0.004 – 0.020	0.118 – 0.020
S	Heat-resistant alloys	XCM	WDC5235	250 – 80	0.004 – 0.012	0.118 – 0.020
S	Titanium	XCM	WDC5240	250 – 80	0.004 – 0.012	0.118 – 0.020
H	Hard materials	–	WDP6215	590 – 330	0.004 – 0.010	0.028 – 0.004

Reccomended:			4 times		8 times	
ø [mm]	a _p [inch]	a _{p max} [inch]	a _{p max} [inch]			
10	0.098	0.177	0.055			
16	0.157	0.295	0.091			

Available range MERIK 16 (LO₂)

Insert	Designation	Chipbreaker	Material #	Available
	SQIY 1605MO-COOL-XCM WDC5240	...-XCM	25929676	●
	SQIY 1605MO-COOL-XCM WDC5235	...-XCM	25929675	●
	SQIY 1605MO-COOL-XCM WDPM240	...-XCM	25929674	●

Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	A-MRK-R16-200.R.03-A075-150-LF-I	2.000	3	26187245	●
	A-MRK-R16-250.R.05-A075-150-LF-I	2.500	5	26187246	●
	A-MRK-R16-300.R.06-A100-200-LF-I	3.000	6	26187248	●
	A-MRK-R16-400.R.07-B150-200-LF-I	4.000	7	26187251	●
	A-MRK-R16-500.R.08-B150-250-LF-I	5.000	8	26187254	●

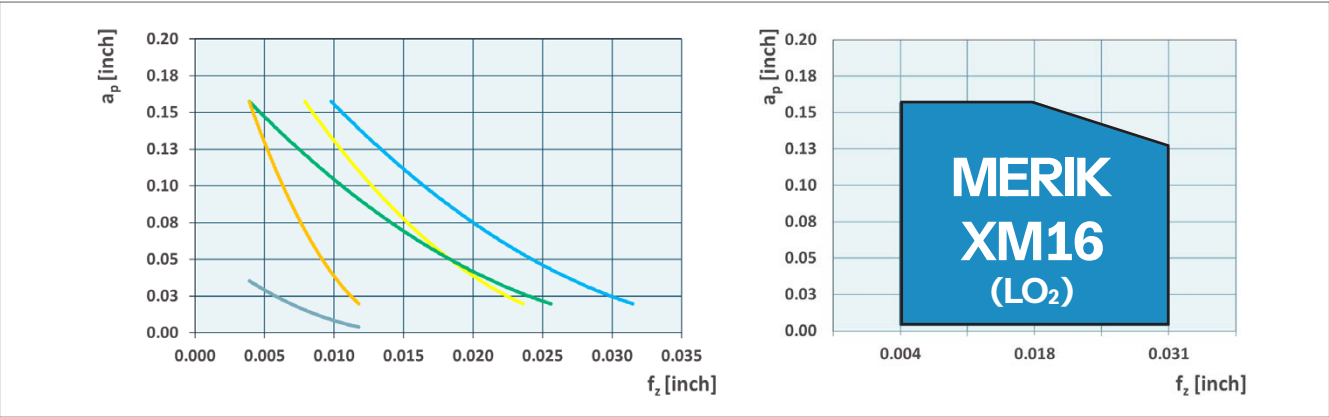
Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.5 x 15 T20 Head8.6 (110809)	44	25071965	●
	Power screw M10.0 x 31.0 (for A-MRK-R16-50.R.03)	177	22151309	●

Note: Be carefull both system are not interchangeable!

● available from stock, ○ available upon request

Cutting data MERIK 16 (LO₂)

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v _c [sfm]	Cutting data f _z [ipt]	a _p [inch]
P	Steel	IDN	WDCP230 WDPP235	720 – 200	0.010 – 0.032	0.158 – 0.020
M	Stainless steel	TDN	WDPM240 WDC5235	660 – 200	0.008 – 0.024	0.158 – 0.020
N	Non-ferrous	LMM	WDWN715	6560 – 0	0.004 – 0.026	0.158 – 0.020
S	Heat-resistant alloys	XCM	WDC5235	250 – 80	0.004 – 0.012	0.158 – 0.020
S	Titanium	XCM	WDC5240			
H	Hard materials	–	WDP6215	590 – 330	0.004 – 0.012	0.035 – 0.004

Reccomended:

ø [mm]	4 times		8 times	
	a _p [inch]	a _{p max} [inch]	a _{p max} [inch]	a _{p max} [inch]
10	0.098	0.177		0.055
16	0.157	0.295		0.091

ECHO XM7



Application

1) Face milling



2) Shoulder milling



3) Slot milling



4) Angled milling



5) Profile milling



6) Pocket milling



7) Helical plunging



8) Trochoidal slot milling



2 effective cutting edges



Customer benefits

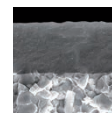
- Low power consumption, maximum chip removal rate
- Soft cutting and reduced vibration for maximum spindle protection
- Maximum rigidity thanks to the large material cross-section in the tool holder
- Wide range of tool holders (from Diameter 16)

Light cutting geometries

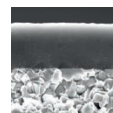
Positive cutting angle:
Soft cutting and reduced cutting noise! The cutting forces are mainly in the axial direction.
Even with long overhang lengths there is almost no vibration, and little stress on the machine spindle.

Grades

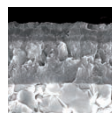
WDPP235



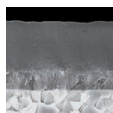
WDPM240



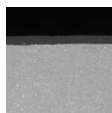
WDC5235



WDC5240



WDP6215



Available rangeECHO XM7

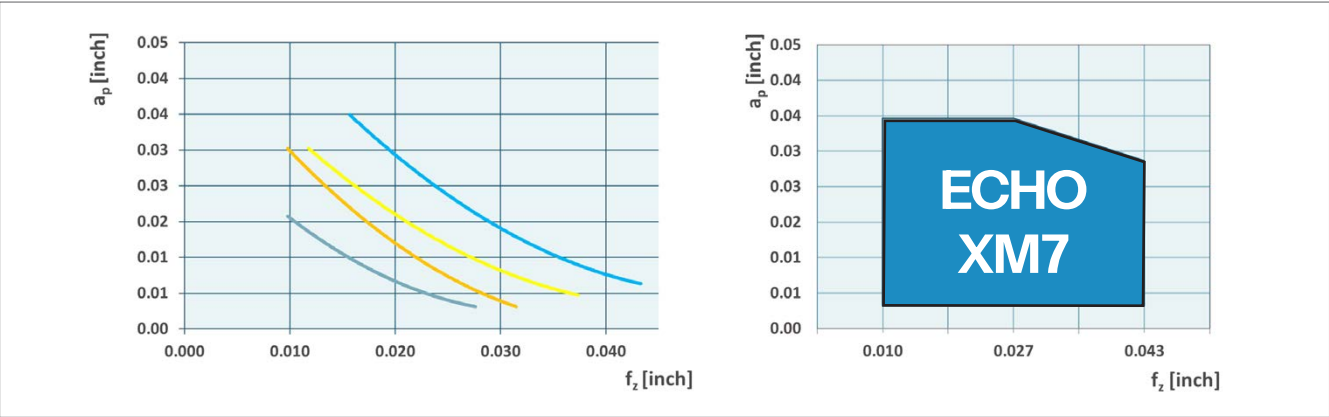
Insert	Designation	Chipbreaker	Material #	Available
	FQIU 070315-12HP WDPP235	...-12HP	23250823	●
	FQIU 070315-12HP WDPM240	...-12HP	23250827	●
	FQIU 070315-12HP WDC5235	...-12HP	23250834	●
	FQIU 070315-12HP WDC5240	...-12HP	23250831	●
	FQIX 070315-12HP WDP6215	...-12HP	23250841	●

Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-EHO-HFC-E07-0625.R.02-A0625-200-800-I	0.625	2	23299157	●
	C-EHO-HFC-E07-0750.R.03-A075-200-800-I	0.750	3	23299159	●
	C-EHO-HFC-E07-100.R.04-A100-200-800-I	1.000	4	23299150	●
	C-EHO-HFC-E07-125.R.05-A125-250-900-I	1.250	5	23299161	●
	G-EHO-HFC-E07-0625.R.02-100-I	0.625	2	23299147	●
	G-EHO-HFC-E07-0750.R.03-125-I	0.750	3	23299153	●
	G-EHO-HFC-E07-100.R.04-150-I	1.000	4	23299154	●
	G-EHO-HFC-E07-125.R.05-150-I	1.250	5	23281172	●
	G-EHO-HFC-E07-150.R.06-150-I	1.500	6	23281173	●
	A-EHO-HFC-E07-150.R.06-A050-150-I	1.500	6	23281176	●
	A-EHO-HFC-E07-200.R.07-A075-150-I	2.000	7	23281177	●
	A-EHO-HFC-E07-250.R.08-A075-150-I	2.5000	8	23281178	●
	A-EHO-HFC-E07-300.R.10-A100-200-I	3.000	10	23281170	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M3.0 x 5.75 – T08+	11	2459463	●

Cutting dataECHO XM7

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v_c [sfm]	f_z [ipt]	a_p [inch]
P	Steel	12HP	WDCP235	720 – 200	0.016 – 0.043	0.037 – 0.008
M	Stainless steel		WDPP240	660 – 200	0.0126 – 0.037	0.032 – 0.006
S	Heat-resistant alloys		WDC5235			
S	Titanium		WDC5235	250 – 80	0.010 – 0.032	0.032 – 0.004
H	Hard materials	–	WDC5240			
			WDP6215	590 – 330	0.010 – 0.028	0.020 – 0.004



Application

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

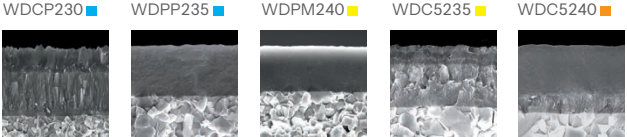
Chipbreaker

IDN: Steel – Cast iron*
TDN: Stainless Steel – Titanium*

4 effective cutting edges



Grades



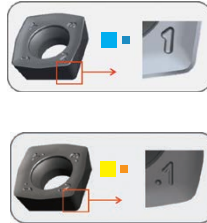
Customer benefits

- With feed rates up to 0.119 inch / tooth and closely pitched tools. very high chip removal rates are achieved.
- Maximal tool life thanks to HyperCoat coating.
- Maximised economy thanks to 4 cutting edges.
- Reduced machining noise and vibration. light cutting geometries.
- Flexibility thanks to coolant holes with minimum quantity lubrication design.

Available in 3 dimensions



Which chipbreaker to use?



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

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

Available rangeMIKO XM7

Insert	Designation	Chipbreaker	Material #	Available
	YQMU 070305SR-IDN WDCP230	...-IDN	23204592	●
	YQMU 070305SR-IDN WDPP235	...-IDN	23204593	●
	YQMU 070305ER-TDN WDPM240	...-TDN	25763750	●
	YQMU 070305ER-TDN WDC5235	...-TDN	22980884	●
	YQMU 070305ER-TDN WDC5240	...-TDN	22970884	●

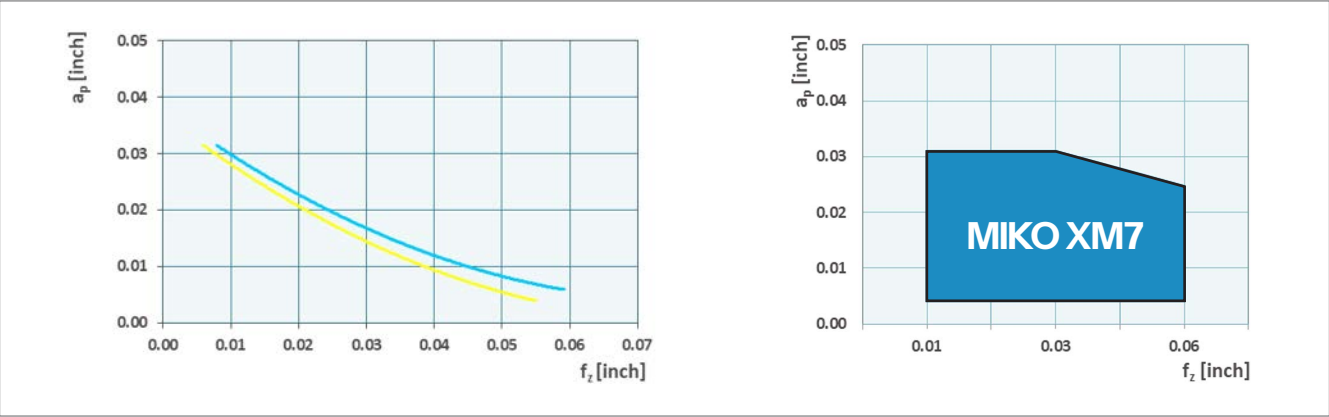
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-MKO-HFM07-0625.R.02-A0625-200-800-I	0.625	2	23215881	●
	C-MKO-HFM07-075.R.03-A075-200-800-I	0.750	3	23215883	●
	C-MKO-HFM07-100.R.04-A100-200-800-I	1.000	4	23215884	●
	G-MKO-HFM07-0625.R.02-100-I	0.625	2	23215888	●
	G-MKO-HFM07-075.R.03-125-I	0.750	3	23215891	●
	G-MKO-HFM07-100.R.04-150-I	1.000	4	23215892	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M2.5x5.0 – T08	11	87024	●

● available from stock, ○ available upon request

Cutting dataMIKO XM7

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v _c [sfm]	Cutting data	
					f _z [ipt]	a _p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.008 – 0.059	0.032 – 0.006
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.006 – 0.055	0.032 – 0.004
			WDC5235			
			WDC5240			

Available rangeMIKO XM10

Insert	Designation	Chipbreaker	Material #	Available
	YEMU 10T308SR-IDN WDCP230	...-IDN	23204596	●
	YEMU 10T308SR-IDN WDPP235	...-IDN	23204598	●
	YEMU 10T308ER-TDN WDPM240	...-TDN	25763737	●
	YEMU 10T308ER-TDN WDC5235	...-TDN	22051863	●
	YEMU 10T308ER-TDN WDC5240	...-TDN	22051864	●

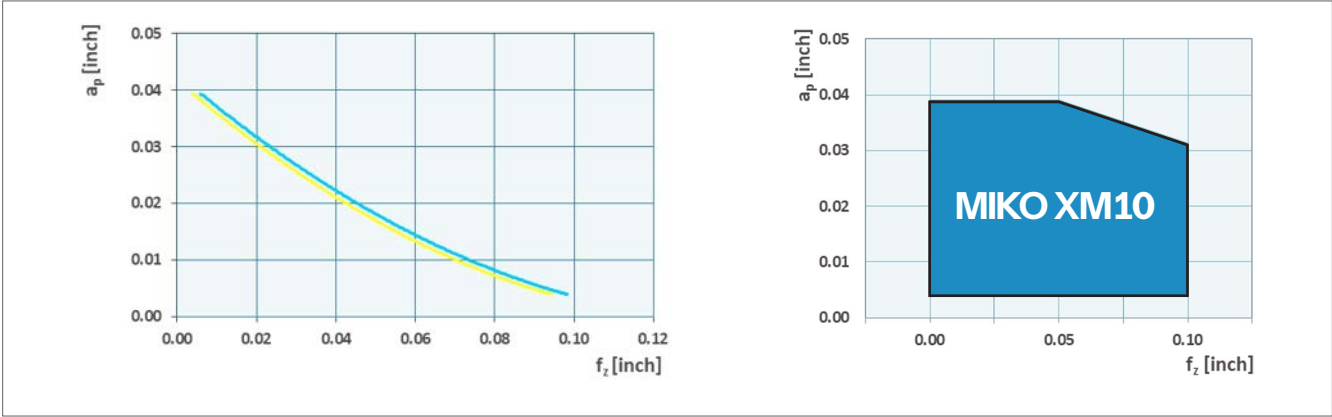
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-MKO-HFC10-100.R.03-A100-200-500-I	1.000	3		○
	C-MKO-HFM10-100.R.03-A100-200-900-I	1.000	3	23180016	●
	A-MKO-HFM10-150.R.04-A050-150-I	1.500	4	23180970	●
	A-MKO-HFM10-200.R.05-A075-150-I	2.000	5	23180983	●
	A-MKO-HFM10-250.R.06-A075-150-I	2.500	6	23180985	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M3.5 x 7.2 – T15 (only for C-)	28	65087	●
	M3.5 x 8.6 – T15 (only for A-)	28	276806	●
	Power screw M8.0 x 30.0 (only for A-MKO-HFC10-150.R.04)	132	22147991	●

● available from stock, ○ available upon request

Cutting dataMIKO XM10

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v_c [sfm]	Cutting data	
					f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.006 – 0.098	0.039 – 0.004
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.004 – 0.095	0.039 – 0.004
			WDC5235			
			WDC5240			

Available rangeMIKO XM10

Your advantages / benefits

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



Insert	Designation	Chipbreaker	Material #	Available
	YEMY 10T308SR-IDN WDCP230	...-IDN	23419930	●
	YEMY 10T308SR-IDN WDPP235	...-IDN	23359445	●
	YEMY 10T308SR-TDN WDPM240	...-TDN	25763739	●
	YEMY 10T308SR-TDN WDC5235	...-TDN	23299615	●

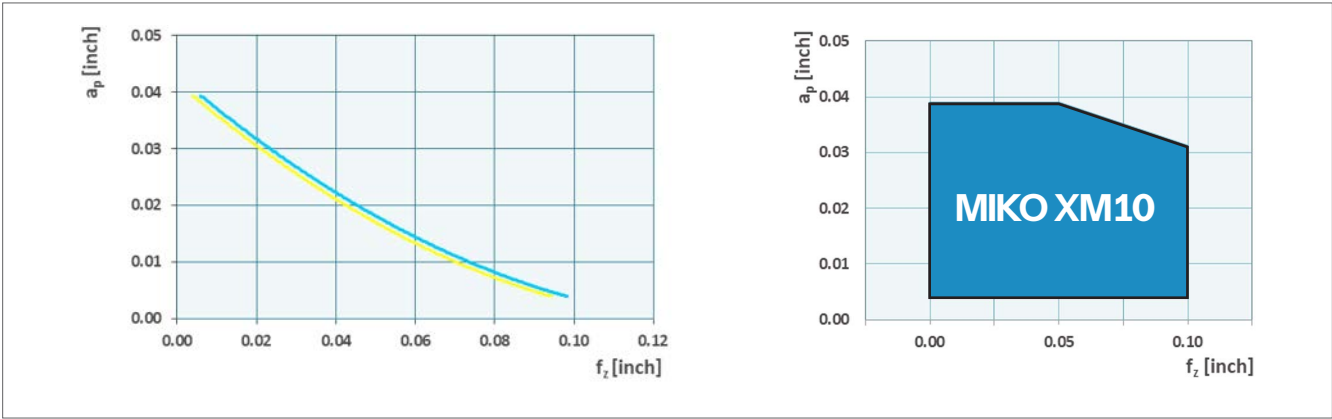
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-MKO-HFC10-100.R.03-A100-200-500-I	1.000	3		○
	C-MKO-HFM10-100.R.03-A100-200-900-I	1.000	3	23180016	●
	A-MKO-HFM10-150.R.04-A050-150-I	1.500	4	23180970	●
	A-MKO-HFM10-200.R.05-A075-150-I	2.000	5	23180983	●
	A-MKO-HFM10-250.R.06-A075-150-I	2.500	6	23180985	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M3.5 x 7.2 – T15 (only for C-)	28	65087	●
	M3.5 x 8.6 – T15 (only for A-)	28	276806	●
	Power screw M8.0 x 30.0 (only for A-MKO-HFC10-150.R.04)	132	22147991	●

● available from stock, ○ available upon request

Cutting dataMIKO XM10

Starting parameters:



Grades and materials:

		Cutting data				
Material group		Chipbreaker	Grade	v_c [sfm]	f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.006 – 0.098	0.039 – 0.004
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.004 – 0.095	0.039 – 0.004
			WDC5235			
			WDC5240			

Available rangeMIKO XM13

Insert	Designation	Chipbreaker	Material #	Available
	YPMU 130410SR-IDN WDCP230	...-IDN	23204500	●
	YPMU 130410SR-IDN WDPP235	...-IDN	23204619	●
	YPMU 130410ER-TDN WDPM240	...-TDN	25763741	●
	YPMU 130410ER-TDN WDC5235	...-TDN	22051874	●
	YPMU 130410ER-TDN WDC5240	...-TDN	22051876	●

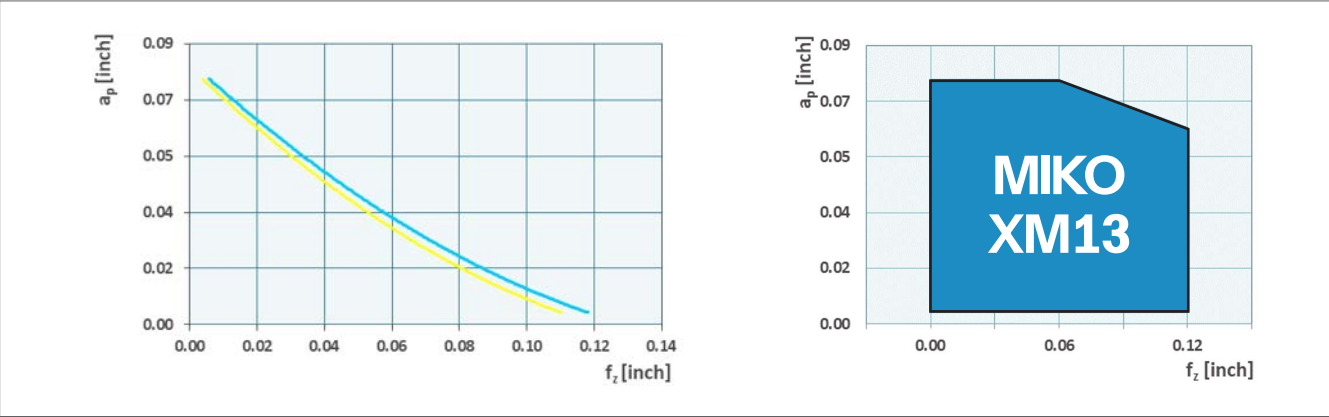
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	C-MKO-HFC13-150.R.03-A150-250-550-I	1.500	3		○
	C-MKO-HFM13-150.R.03-A150-250-1000-I	1.500	3	23180018	●
	G-MKO-HFC13-150.R.03-150-I	1.500	3		○
	A-MKO-HFM13-200.R.04-A075-150-I	2.000	4	23180987	●
	A-MKO-HFM13-250.R.05-A075-150-I	2.500	5	23180988	●
	A-MKO-HFM13-300.R.07-A100-200-I	3.000	7	23180991	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.5 x 10.5 – T20	44	217133	●

● available from stock, ○ available upon request

Cutting dataMIKO XM13

Starting parameters:



Grades and materials:

Material group		Chipbreaker	Grade	v _c [sfm]	Cutting data	
					f _z [ipt]	a _p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.006 – 0.118	0.079 – 0.004
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.004 – 0.110	0.079 – 0.004
			WDC5235			
			WDC5240			

Available rangeMIKO XM13 (LO₂)

Insert	Designation	Chipbreaker	Material #	Available
	YPMU 130410ER-COOL-TDN WDC5240	...-TDN	23756570	●
	YPMU 130410ER-COOL-TDN- WDC5235	...-TDN	23756090	●
	YPMU 130410ER-COOL-TDN WDPM240	...-TDN	23756006	●

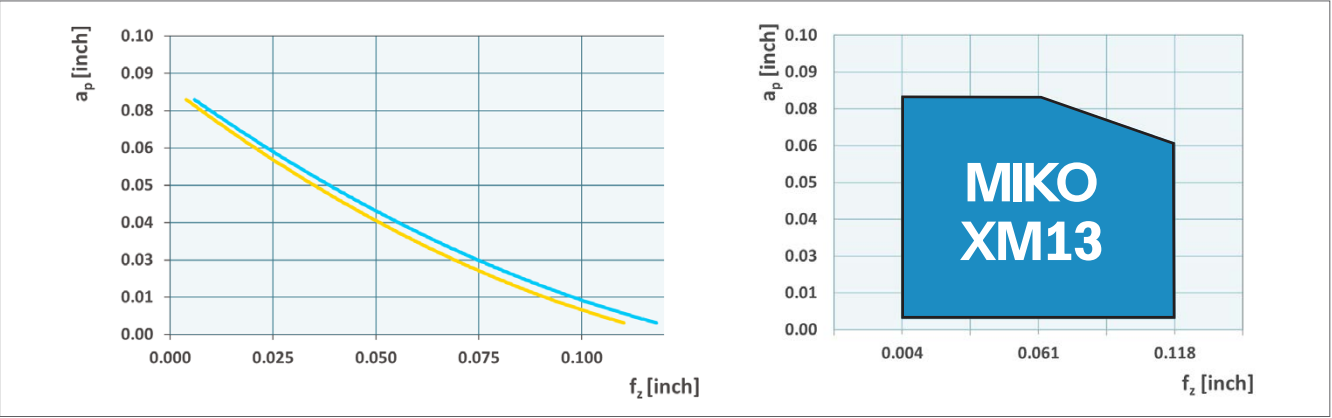
Body	Designation	ø Milling cutter [inch]	z	Material #	Available
	A-MKO-HFC13-200.R.04-A075-150-LF-I	2.000	4	26187253	●
	A-MKO-HFC13-250.R.05-A075-150-LF-I	2.500	5	25098200	●
	A-MKO-HFC13-300.R.06-A100-200-LF-I	3.000	7	26187259	●
	A-MKO-HFC13-400.R.08-B150-200-LF-I	4.000	8	26187262	●
	A-MKO-HFC13-400.R.09-B150-200-LF-I	4.000	9	26187265	●

Spare parts	Designation	Screw Torque [lb-in]	Material #	Available
	M4.5 x 15 T20 Head8.6 (110809)	44	25071965	●

● available from stock, ○ available upon request

Cutting dataMIKO XM13 (LO₂)

Starting parameters:



Grades and materials:

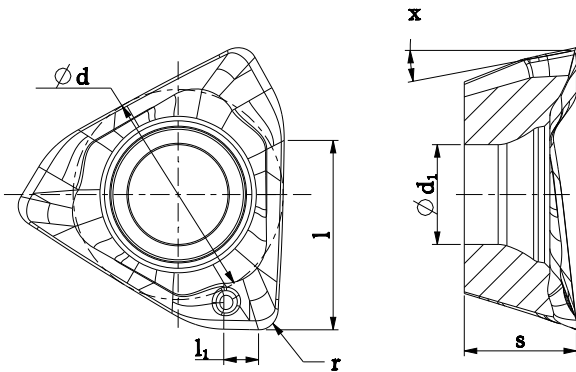
Material group		Chipbreaker	Grade	v_c [sfm]	Cutting data	
					f_z [ipt]	a_p [inch]
P	Steel	IDN	WDCP230	720 – 200	0.006 – 0.118	0.079 – 0.004
			WDPP235			
M	Stainless steel	TDN	WDPM240	660 – 200	0.004 – 0.110	0.079 – 0.004
			WDC5235			
			WDC5240			

Technical Data



LDR-T / Shouldering 3 x 90°

Insert (LADRA)

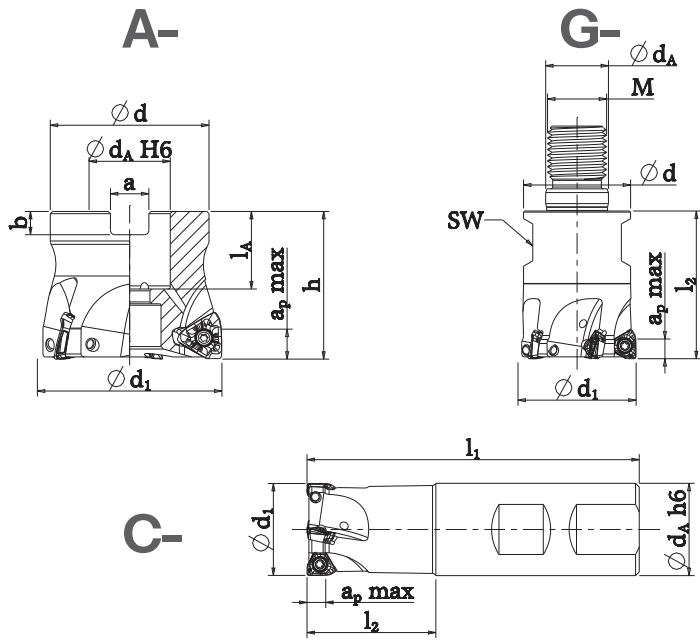


Description	Ø d [inch]	l [inch]	s [inch]	l ₁ [inch]	r [inch]	Ø d ₁ [inch]	α [°]
UPLY 070305PDER-IDN	0.232	0.217	0.124	0.039	0.020	0.110	14
UPLY 070305PDER-TDN	0.232	0.217	0.124	0.039	0.020	0.110	14
UPLY 070308PDER-IDN	0.232	0.217	0.124	0.039	0.031	0.110	14
UPLY 070308PDER-TDN	0.232	0.217	0.124	0.039	0.031	0.110	14
UPLY 09T308PDER-IDN	0.375	0.362	0.150	0.059	0.031	0.134	12
UPLY 09T308PDER-TDN	0.375	0.362	0.150	0.059	0.031	0.134	12
UPLY 09T312PDER-IDN	0.375	0.362	0.150	0.059	0.047	0.134	12
UPLY 09T312PDER-TDN	0.375	0.362	0.150	0.059	0.047	0.134	12
UPLY 09T316PDER-IDN	0.375	0.362	0.150	0.059	0.063	0.134	12
UPLY 09T316PDER-TDN	0.375	0.362	0.150	0.059	0.063	0.134	12

LDR-T / Shouldering 3 x 90°

Milling body (LADRA 07)

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

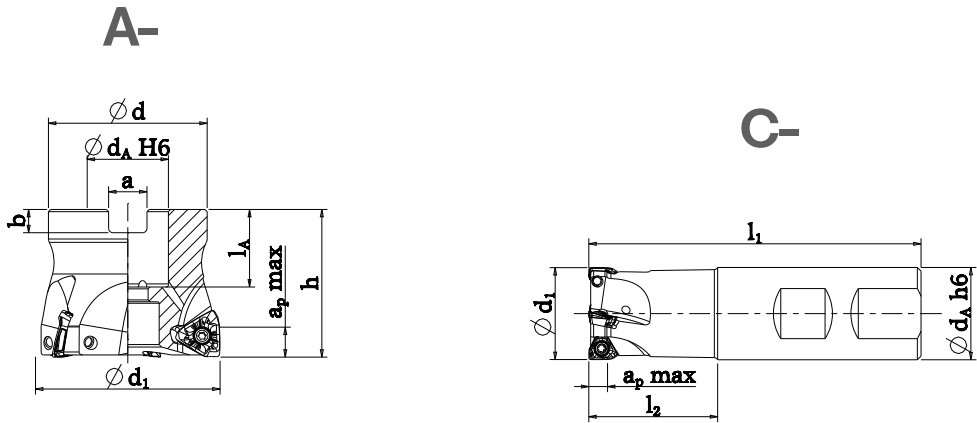


Description	Ø d ₁ [inch]	l ₁ [inch]	l ₂ [inch]	h [inch]	Ø d _A H6/h6 [inch]	a _{p max} [inch]	n _{max} [min ⁻¹]	z	Ø d [inch]	SW	M	l _A [inch]	a [inch]	b [inch]
C-LDR-T07-075.R.03-B075-100-300-I	0.750	3.000	1.000	-	0.750	0.200	22000	3	-	-	-	-	-	-
C-LDR-T07-100.R.04-B100-150-350-I	1.000	3.500	1.500	-	1.000	0.200	20000	4	-	-	-	-	-	-
C-LDRT07-125.R.05-B125-200-400-I	1.250	4.000	2.000	-	1.250	0.200	19700	5	-	-	-	-	-	-
G-LDR-T07-075.R.03-125-I	0.750	-	1.250	-	0.413	0.200	36900	3	0.665	SW15	M10	-	-	-
G-LDR-T07-100.R.04-150-I	1.000	-	1.500	-	0.492	0.200	33200	4	0.848	SW17	M12	-	-	-
G-LDR-T07-125.R.05-150-I	1.250	-	1.500	-	0.669	0.200	30200	5	1.142	SW24	M16	-	-	-
A-LDR-T07-150.R.05-A050-150-I	1.500	-	-	1.500	0.500	0.200	17000	5	1.457	-	-	0.750	0.266	0.185
A-LDR-T07-200.R.06-A075-150-I	2.000	-	-	1.500	0.750	0.200	14800	6	1.772	-	-	0.750	0.321	0.197

LDR-T / Shouldering 3 x 90°

Milling body (LADRA 09)

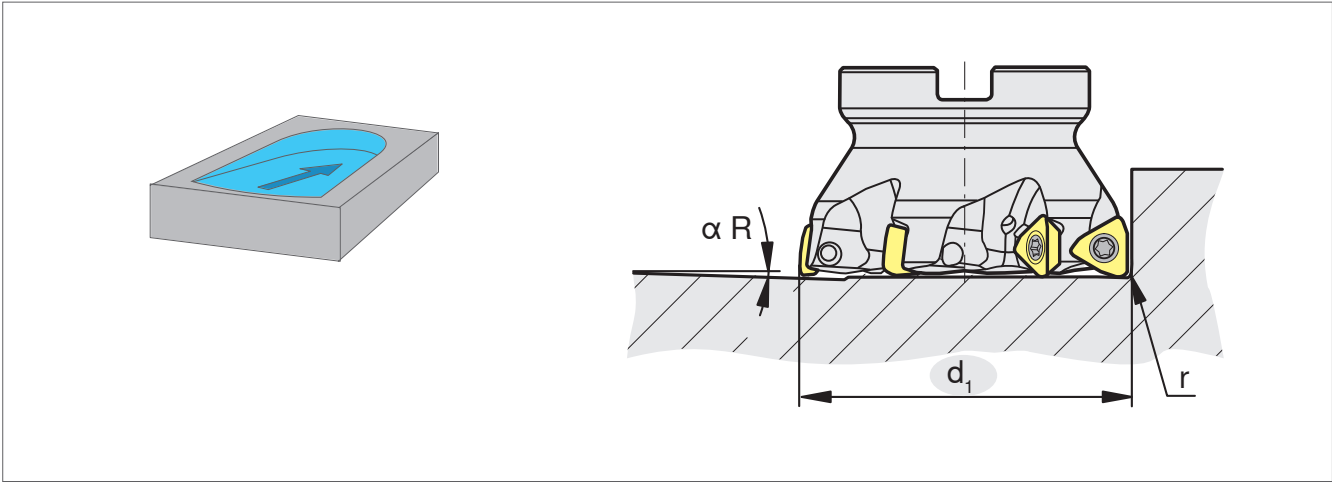
- Face milling
- Angled milling
- Helical plunging
- Shoulder milling
- Slot milling
- Pocket milling



Description	ϕd_1 [inch]	l_1 [inch]	l_2 [inch]	h [inch]	ϕd_A H6/h6 [inch]	$a_{p \max}$ [inch]	$n_{\max}$ [min ⁻¹]	z	ϕd [inch]	l_A [inch]	a [inch]	b [inch]
C-LDR-T09-125.R.03-B125-200-400-I	1.250	4.000	2.000	-	1.250	0.315	19700	3	-	-	-	-
A-LDR-T09-150.R.04-A050-150-I	1.500	-	-	1.500	0.500	0.315	17000	4	1.457	0.807	0.266	0.185
A-LDR-T09-200.R.05-A075-150-I	2.000	-	-	1.500	0.750	0.315	14800	5	1.772	0.750	0.321	0.197
A-LDR-T09-250.R.06-A075-150-I	2.500	-	-	1.500	0.750	0.315	12850	6	1.968	0.827	0.321	0.197

LDR-T / Shouldering 3 x 90°

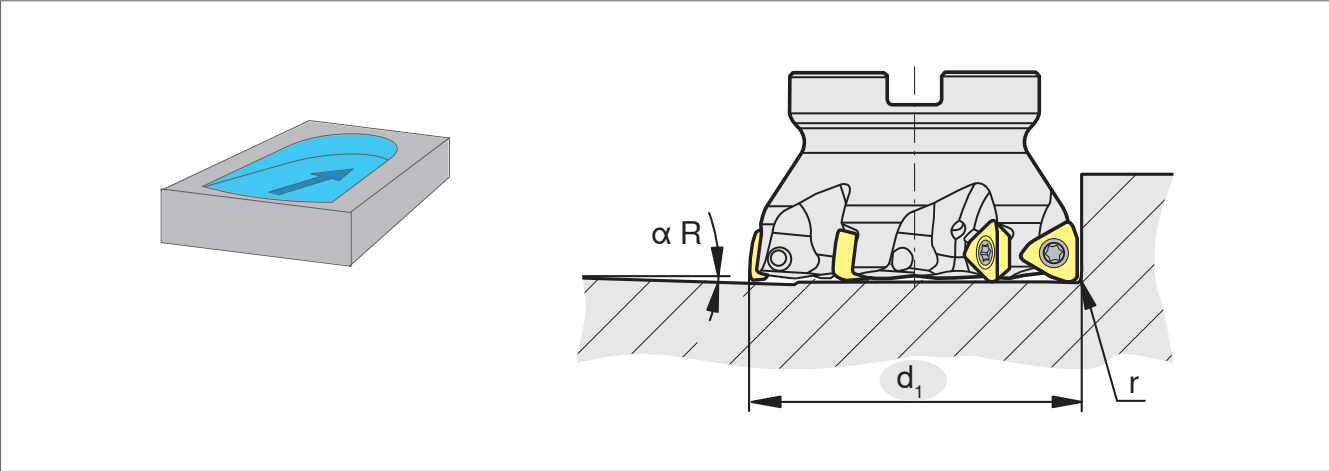
Application data (angled ramping (LADRA 09))



Description	ϕd_1 [inch]	α_R [°]
C-LDR-T07-075.R.03-B075-100-300-I	0.750	1.4
C-LDR-T07-100.R.04-B100-150-350-I	1.000	1.2
C-LDR-T07-125.R.05-B125-200-400-I	1.250	0.8
G-LDR-T07-075.R.03-125-I	0.750	1.4
G-LDR-T07-100.R.04-150-I	1.000	1.2
G-LDR-T07-125.R.05-150-I	1.250	0.8
A-LDR-T07-150.R.05-A050-150-I	1.500	0.6
A-LDR-T07-200.R.06-A075-150-I	2.000	0.5

LDR-T / Shouldering 3 x 90°

Application data (angled ramping LADRA 09)

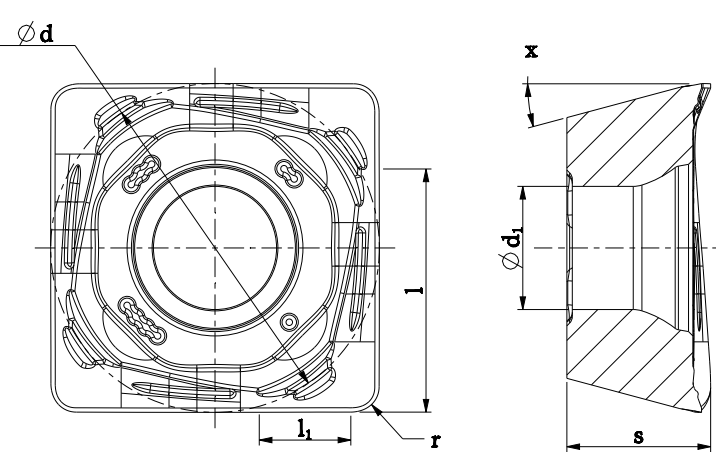


Description	Ø d ₁ [inch]	□ _r [°]
C-LDR-T09-125.R.03-B125-200-400-I	1.250	1.1
A-LDR-T09-150.R.04-A050-150-I	1.500	0.8
A-LDR-T09-200.R.05-A075-150-I	2.000	0.5
A-LDR-T09-250.R.06-A075-150-I	2.500	0.5



BRT-S / Shouldering 4 x 90°

Insert (BRUTE XM9)

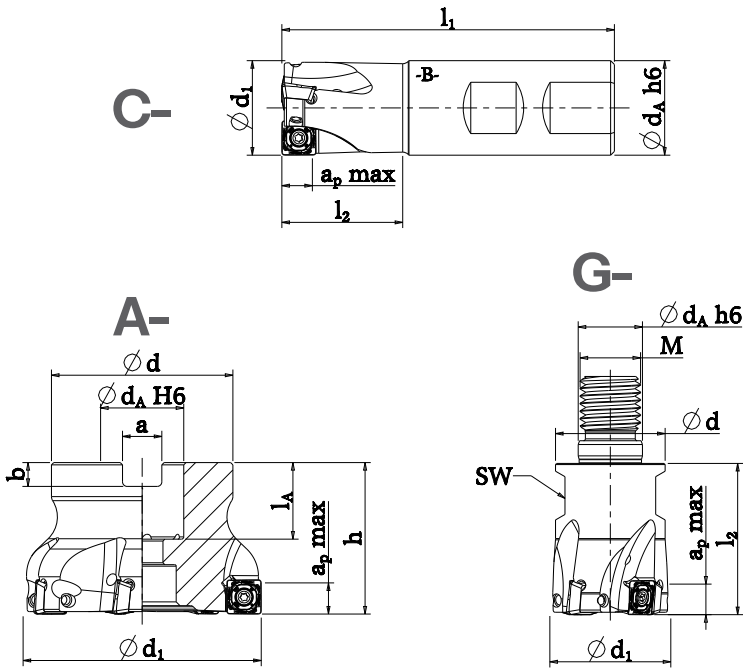


Description	Ø d [inch]	l [inch]	s [inch]	l ₁ [inch]	r [inch]	Ø d ₁ [inch]	x [°]
TELU 09T308SR-IDN	0.390	0.291	0.156	0.098	0.031	0.134	15
TELU 09T308SR-TDN	0.390	0.291	0.156	0.098	0.031	0.134	15
TELU 09T308SR-DDN	0.390	0.291	0.156	0.098	0.031	0.134	15
TEIU 09T308FR-MNN	0.390	0.291	0.156	0.098	0.031	0.134	15

BRT-S / Shouldering 4 x 90°

Milling body (BRUTE XM9)

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

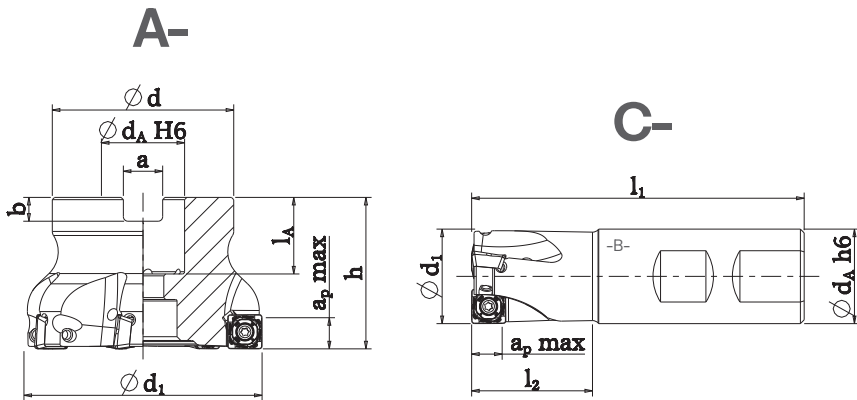


Description	Ø d ₁ [inch]	l ₁ [inch]	l ₂ [inch]	h [inch]	Ø d _A H6/h6 [inch]	a _{p max} [inch]	n _{max} [min ⁻¹]	z	Ø d [inch]	SW	M	l _A [inch]	a [inch]	b [inch]
C-BRT-S09-100.R.03-B100-150-380-I	1.000	3.800	1.500	-	1.000	0.315	23700	3	-	-	-	-	-	-
C-BRT-S09-125.R.04-B125-200-450-I	1.250	4.500	2.000	-	1.250	0.315	19700	4	-	-	-	-	-	-
G-BRT-S09-100.R.03-150-I	1.000	-	1.500	-	0.492	0.315	23700	3	0.848	SW17	M12	-	-	-
G-BRT-S09-125.R.04-150-I	1.250	-	1.500	-	0.669	0.315	19700	4	1.142	SW24	M16	-	-	-
A-BRT-S09-150.R.05-A050-150-I	1.500	-	-	1.500	0.500	0.315	17000	5	1.475	-	-	0.797	0.266	0.185
A-BRT-S09-200.R.06-A075-150-I	2.000	-	-	1.500	0.750	0.315	14800	6	1.772	-	-	0.750	0.321	0.197
A-BRT-S09-250.R.07-A075-150-I	2.500	-	-	1.500	0.750	0.315	12855	7	1.968	-	-	0.750	0.321	0.197
A-BRT-S09-300.R.09-A100-200-I	3.000	-	-	2.000	1.000	0.315	11250	9	2.362	-	-	0.906	0.384	0.250

BRT-S / Shouldering 4 x 90°

Milling body (BRUTE XM9)

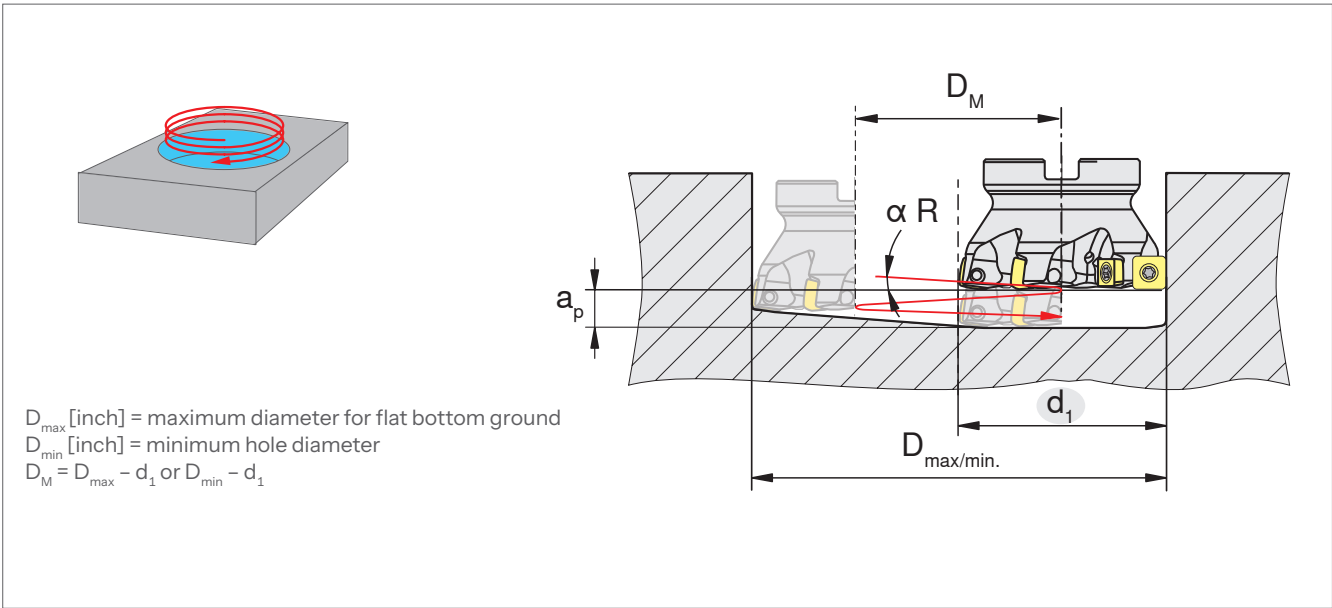
- Face milling
- Angled milling
- Helical plunging
- Shoulder milling
- Slot milling
- Peripheral milling
- Trochoidal slot milling



Description	Ø d ₁ [inch]	l ₁ [inch]	l ₂ [inch]	h [inch]	Ø d _A H6/h6 [inch]	a _{p max} [inch]	n _{max} [min ⁻¹]	z	Ø d [inch]	l _A [inch]	a [inch]	b [inch]
C-BRT-S12-125.R.03-B125-200-450-I	1.250	4.500	2.000	-	1.250	0.400	19700	3	-	-	-	-
A-BRT-S12-150.R.04-A050-150-I	1.500	-	-	1.500	0.500	0.400	17000	4	1.457	0.800	0.266	0.185
A-BRT-S12-200.R.05-A075-150-I	2.000	-	-	1.500	0.750	0.400	14800	5	1.772	0.750	0.321	0.197
A-BRT-S12-250.R.06-A075-150-I	2.500	-	-	1.500	0.750	0.400	12850	6	1.968	0.827	0.321	0.197
A-BRT-S12-300.R.07-A100-200-I	3.000	-	-	2.000	1.000	0.400	11250	7	2.362	0.906	0.384	0.250

BRT-S / Shouldering 4 x 90°

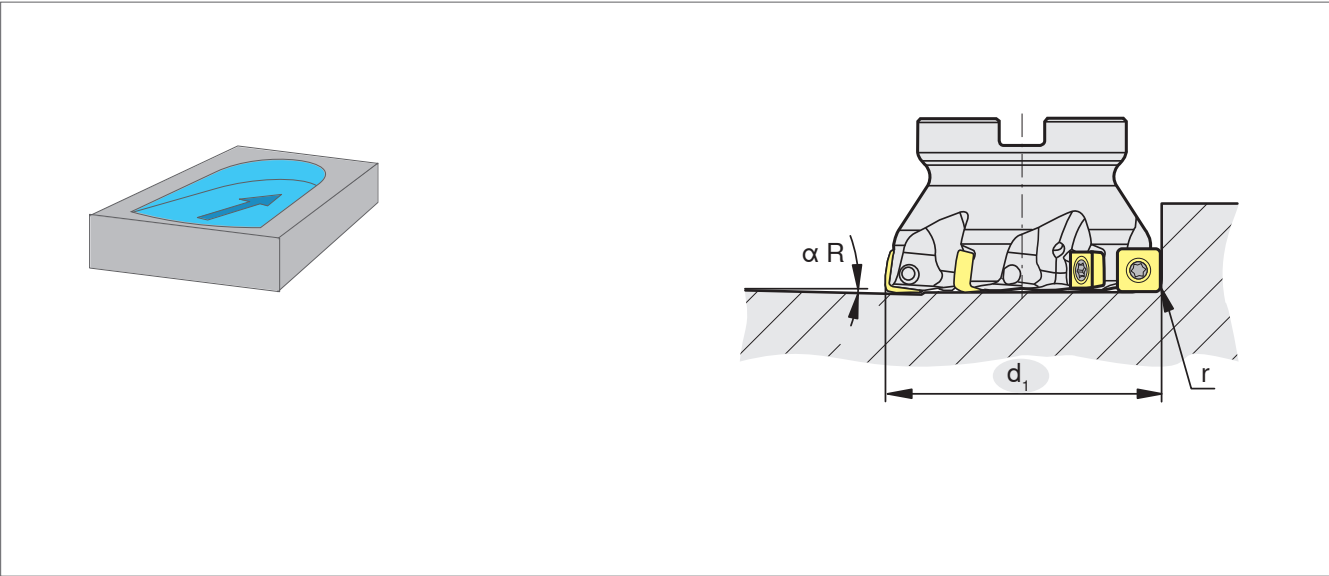
Application data (helical plunge milling BRUTE XM9)



Description	Ø d ₁ [inch]	D _{max} [inch]	D _{min} [inch]	α _R [°]
C-BRT-S09-100.R.03-B100-150-380-I	1.000	1.890	1.457	4.4
C-BRT-S09-125.R.04-B125-200-450-I	1.250	2.441	1.850	2.2
G-BRT-S09-100.R.03-150-I	1.000	1.890	1.457	4.4
G-BRT-S09-125.R.04-150-I	1.250	2.441	1.850	2.2
A-BRT-S09-150.R.05-A050-150-I	1.500	3.071	2.480	0.75
A-BRT-S09-200.R.06-A075-150-I	2.000	3.858	3.268	0.5
A-BRT-S09-250.R.07-A075-150-I	2.500	4.882	4.291	0.35
A-BRT-S09-400.R.09-A100-200-I	3.000	6.220	5.630	0.25

BRT-S / Shouldering 4 x 90°

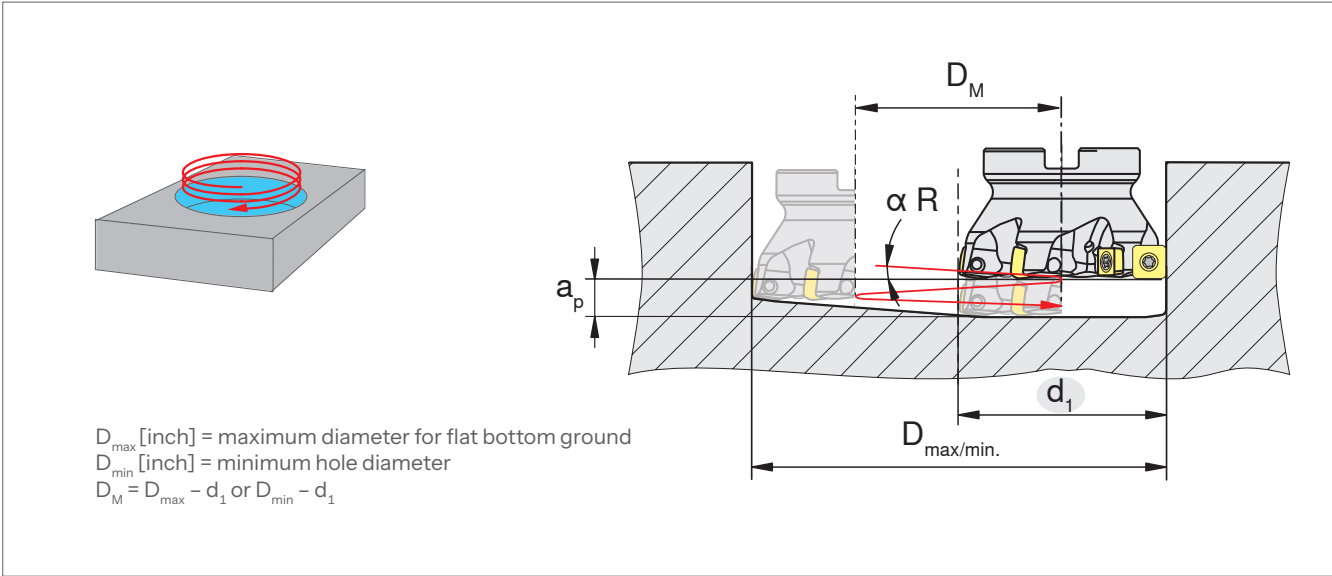
Application data (angled ramping BRUTE XM9)



Description	Ø d ₁ [inch]	α _R [°]
C-BRT-S09-100.R.03-B100-150-380-I	1.000	4.4
C-BRT-S09-125.R.04-B125-200-450-I	1.250	2.2
G-BRT-S09-100.R.03-150-I	1.000	4.4
G-BRT-S09-125.R.04-150-I	1.250	2.2
A-BRT-S09-150.R.05-A050-150-I	1.500	0.8
A-BRT-S09-200.R.06-A075-150-I	2.000	0.5
A-BRT-S09-250.R.07-A075-150-I	2.500	0.4
A-BRT-S09-400.R.09-A100-200-I	3.000	0.3

BRT-S / Shouldering 4 x 90°

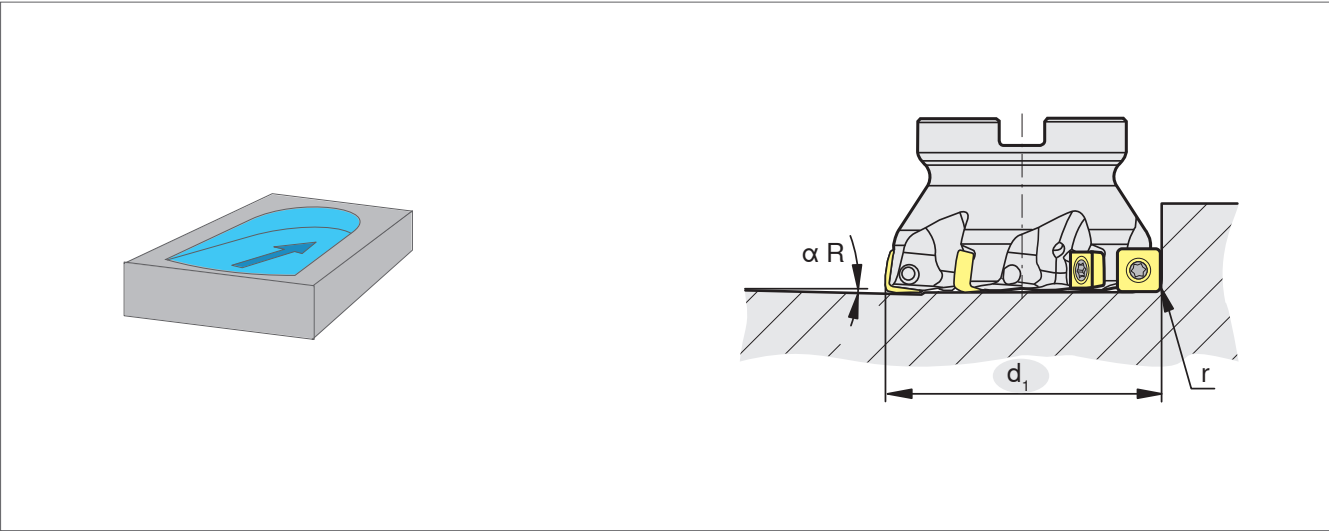
Application data (helical plunge milling BRUTE XM9)



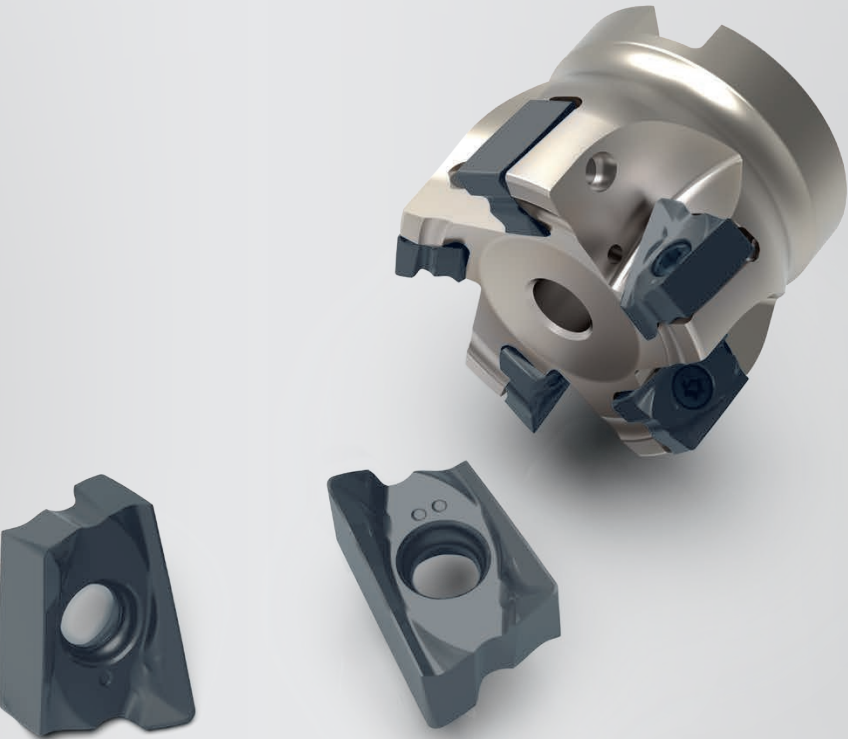
Description	Ø d ₁ [inch]	D _{max} [inch]	D _{min} [inch]	α _R [°]
C-BRT-S12-125.R.03-B125-200-450-I	1.250	2.441	1.614	2.0
A-BRT-S12-150.R.04-A050-150-I	1.500	3.071	2.244	2.0
A-BRT-S12-200.R.05-A075-150-I	2.000	3.858	3.031	1.2
A-BRT-S12-250.R.06-A075-150-I	2.500	4.882	4.055	0.7
A-BRT-S12-300.R.07-A100-200-I	3.000	6.220	5.394	0.6

BRT-S / Shouldering 4 x 90°

Application data (angled ramping BRUTE XM9)

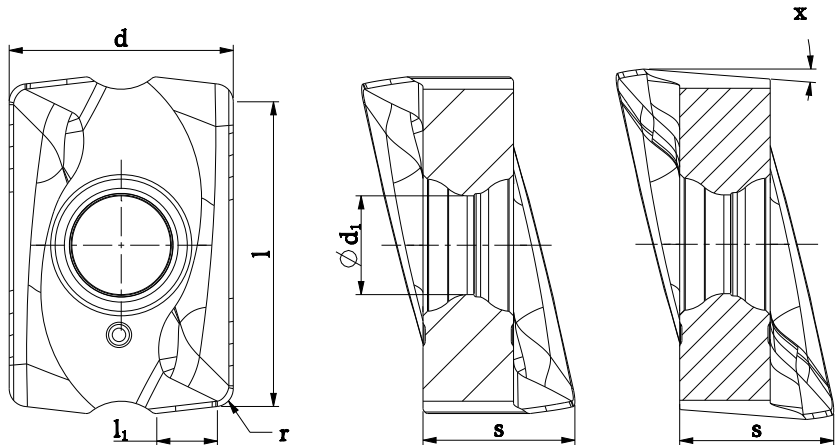


Description	Ø d ₁ [inch]	α _R [°]
C-BRT-S12-125.R.03-B125-200-450-I	1.250	2.0
A-BRT-S12-150.R.04-A050-150-I	1.500	2.0
A-BRT-S12-200.R.05-A075-150-I	2.000	1.2
A-BRT-S12-250.R.06-A075-150-I	2.500	0.7
A-BRT-S12-300.R.07-A100-200-I	3.000	0.6



TOC-L / Shouldering 4 x 90°

Insert (ATOC XM12)

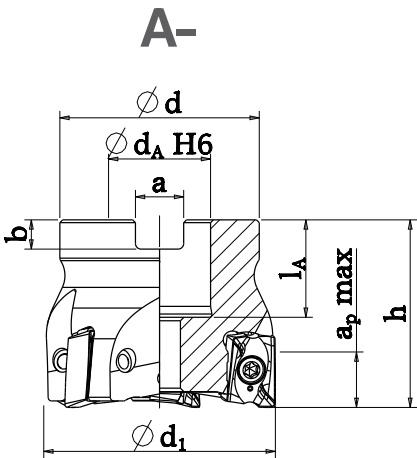


Description	d [inch]	l [inch]	s [inch]	l ₁ [inch]	r [inch]	Ø d ₁ [inch]	x [°]
MOLV 120608ER-IDN	0.394	0.528	0.267	0.106	0.031	0.173	0
MOLV 120608ER-TDN	0.394	0.528	0.267	0.106	0.031	0.173	0
MOLV 120608ER-DDN	0.394	0.528	0.267	0.106	0.031	0.173	0
MPLV 120608ER-TDN	0.394	0.528	0.270	0.106	0.031	0.173	5

TOC-L / Shouldering 4 x 90°

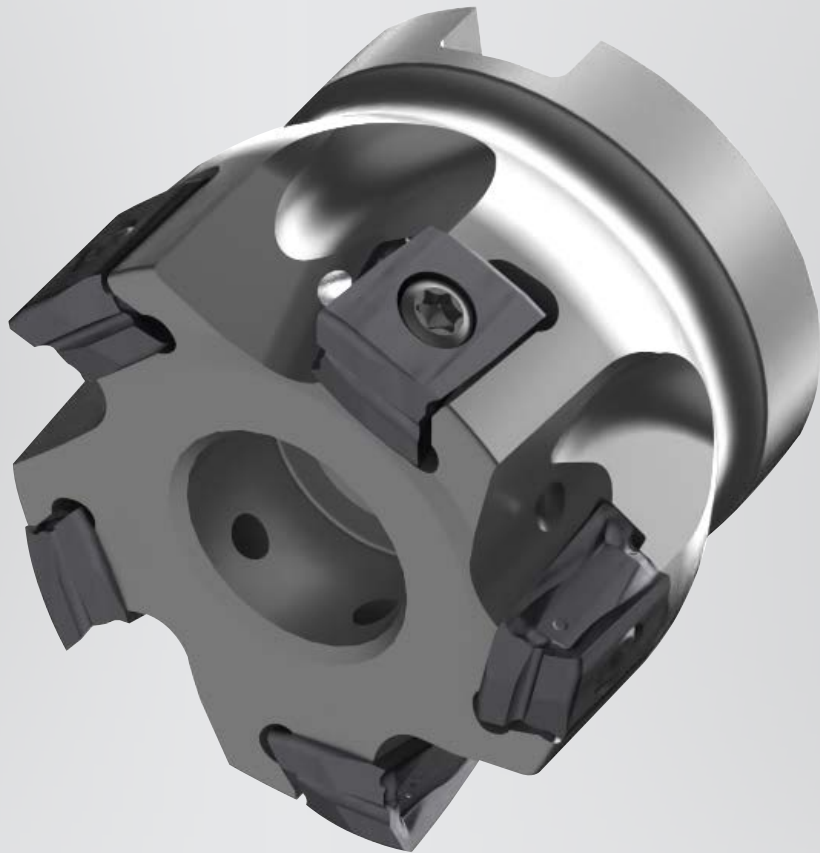
Milling body (ATOC XM12)

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



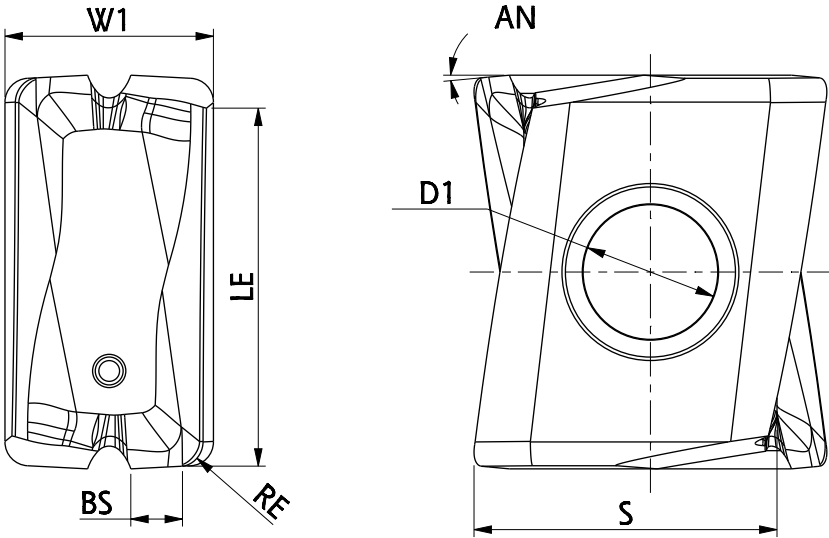
Description	Ø d ₁ [inch]	h [inch]	Ø d _A H6/h6 [inch]	a _{p max} [inch]	n _{max} [min ⁻¹]	z	Ø d [inch]	l _A [inch]	a [inch]	b [inch]
A-TOC-LO/LN12-150.R.04-A050-150-I	1.500	1.500 / 1.517*	0.500	0.470	21050	4	1.496	0.787	0.266	0.185
A-TOC-LO/LN12-200.R.05-A075-150-I	2.000	1.500 / 1.517*	0.750	0.470	16800	5	1.772	0.750	0.321	0.197
A-TOC-LO/LN12-250.R.06-A075-150-I	2.500	1.500 / 1.517*	0.750	0.470	13300	6	1.890	0.827	0.321	0.197
A-TOC-LO/LN12-300.R.07-A100-200-I	3.000	2.000 / 2.017*	1.000	0.470	10450	7	2.362	0.866	0.384	0.250
A-TOC-LO/LN12-400.R.08-B150-200-I	4.000	2.000 / 2.017*	1.500	0.470	8350	8	3.071	1.024	0.634	0.386
A-TOC-LO/LN12-500.R.09-B150-250-I	5.000	2.500 / 2.517*	1.500	0.470	6650	9	3.780	1.024	0.634	0.386
A-TOC-LO/LN12-600.R.11-B200-250-I	6.000	2.500 / 2.517*	2.000	0.470	4800	11	3.858	1.142	0.750	0.438

*with ATOC insert



TOC-L / Shouldering 4 x 90°

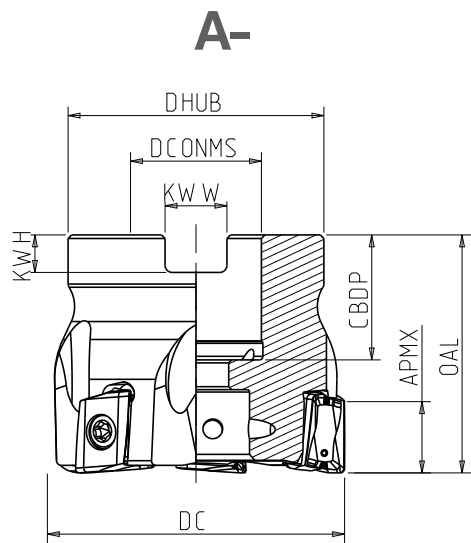
Insert (ATOC XM12)



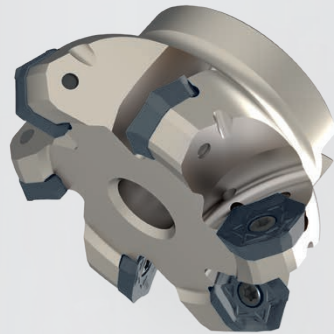
Description	W1/IC [inch]	LE [inch]	S [inch]	BS [inch]	RE [inch]	D1 [inch]	AN [°]
MOIV 120608-IDN	0.276	0.472	0.400	0.075	0.031	0.178	11
MOIV 120608R-TDN	0.276	0.472	0.400	0.075	0.031	0.178	11
MOIV 120608-DDN	0.276	0.472	0.400	0.075	0.031	0.178	11
MPJW 120608-YDN	0.276	0.472	0.400	0.075	0.031	0.178	11

TOC-L / Shouldering 4 x 90°

Insert (ATOC XM12)

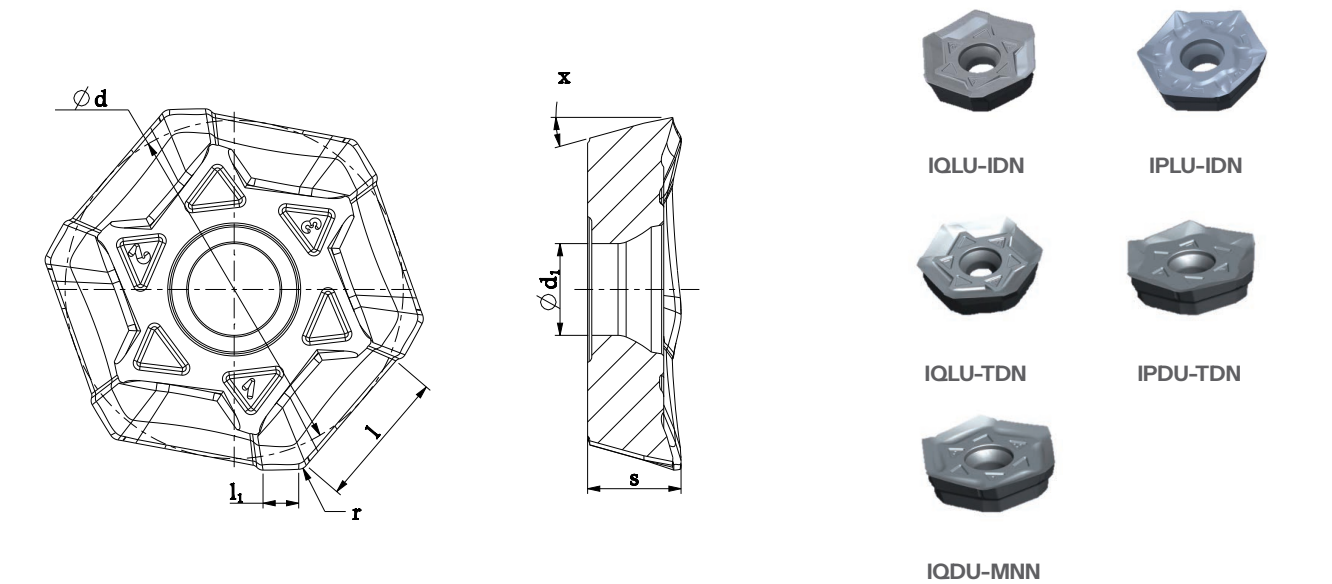


Description	DC [inch]	OAL [inch]	DCONMS		SONY [tr/min.]	ZNF	DHUB [inch]	CDBP [inch]	KWW [inch]	KWH [inch]
			H6/h6 [inch]	APMX [inch]						
A-TOC-T-LN12-1.50.R.04-^^A0.50-1.50-I	1.500	1.500	0.500	0.470	21050	4	1.496	0.787	0.266	0.185
A-TOC-T-LN12-2.00.R.05-A0.75-1.50-I	2.000	1.500	0.750	0.470	16800	5	1.693	0.750	0.321	0.197
A-TOC-T-LN12-2.50.R.06-A0.75-1.50-I	2.500	1.500	0.750	0.470	13300	6	1.890	0.827	0.321	0.197
A-TOC-T-LN12-3.00.R.07-A1.00-2.00-I	3.000	2.000	1.000	0.470	10450	7	2.283	0.866	0.384	0.250
A-TOC-T-LN12-4.00.R.08-B1.50-2.00-I	4.000	2.000	1.500	0.470	8350	8	3.071	1.024	0.634	0.386
A-TOC-T-LN12-5.00.R.09-B1.50-2.50-I	5.000	2.500	10.500	0.470	6650	9	3.465	1.024	0.634	0.386
A-TOC-T-LN12-6.00.R.11-B2.00-2.50-I	3.000	2.500	2.000	0.470	4800	11	4.875	1.008	0.760	0.453



DLT-H / Face milling 6 x 45°

Insert (DELTA XM6)

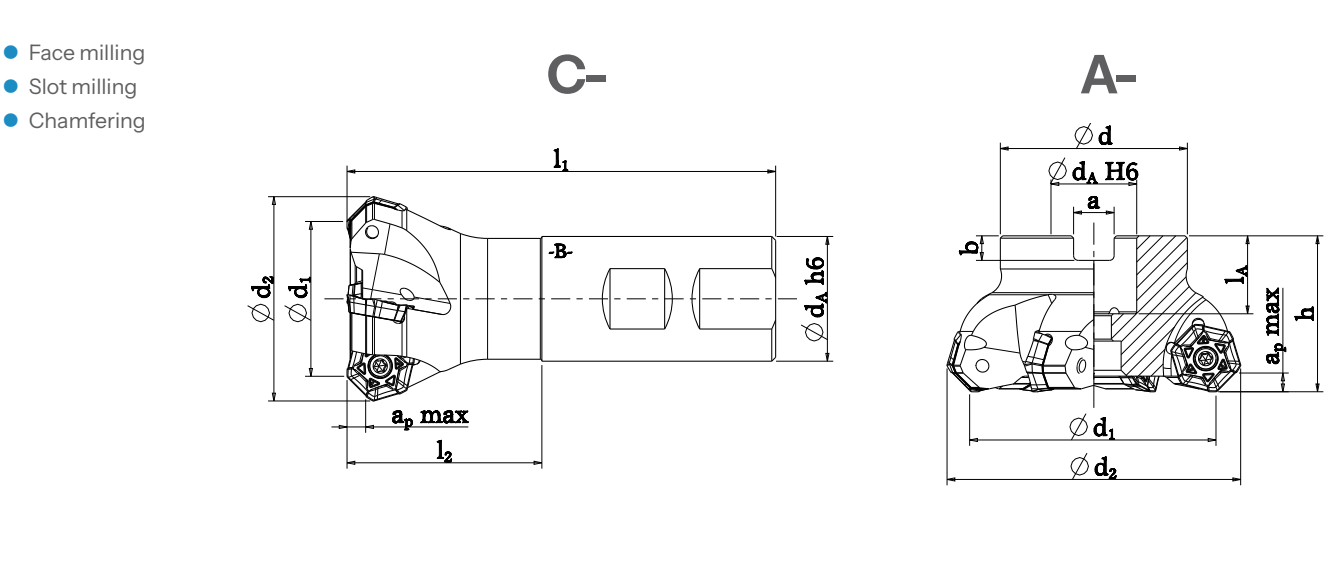


Description	$\varnothing d$ [inch]	l [inch]	s [inch]	l_1 [inch]	r [inch]	$\varnothing d_1$ [inch]	x [°]
IQLU 0604AZER-IDN	0.642	0.256	0.177	0.067	0.020	0.173	11
IQLU 0604AZER-TDN	0.642	0.256	0.177	0.067	0.020	0.173	11
IQDU 0604AZFR-MNN	0.642	0.256	0.177	0.067	0.016	0.173	11
IPLU 0604AZER-IDN	0.642	0.256	0.177	0.067	0.020	0.173	10
IPDU 0604AZER-TDN	0.642	0.256	0.177	0.067	0.016	0.173	10

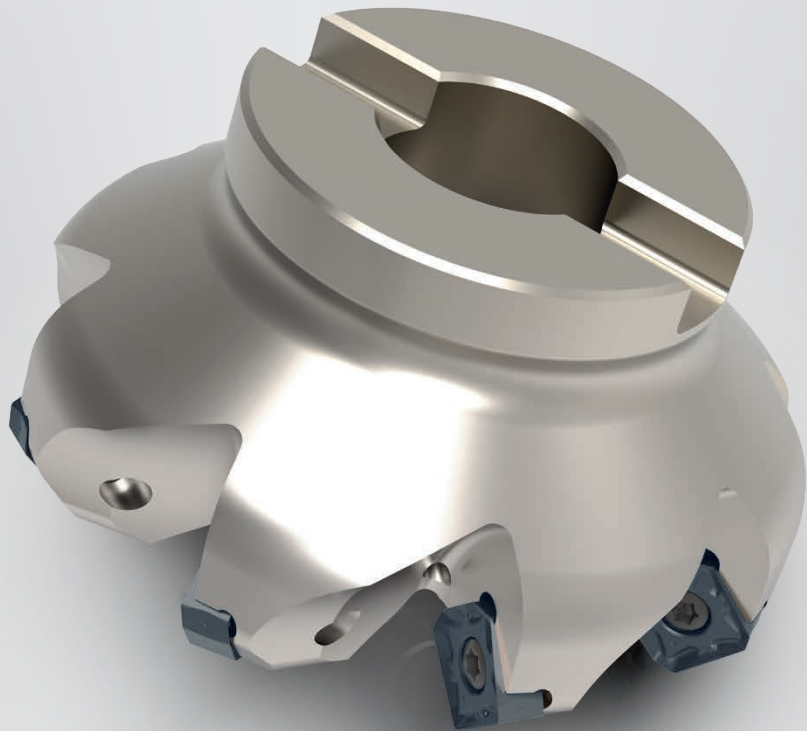
DLT-H / Face milling 6 x 45°

Milling body (DELTA XM6)

- Face milling
- Slot milling
- Chamfering

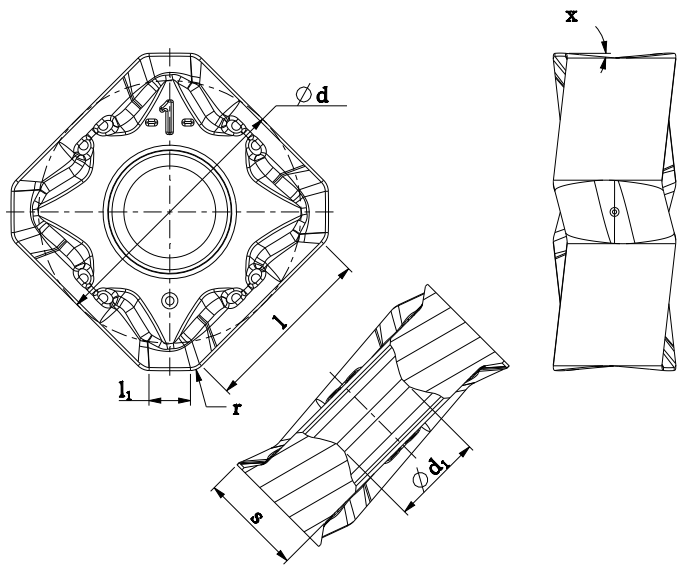


Description	$\varnothing d_1$ [inch]	$\varnothing d_2$ [inch]	l_1 [inch]	l_2 [inch]	h [inch]	$\varnothing d_A H6/h6$ [inch]	$a_{p \max}$ [inch]	$n_{\max}$ [min ⁻¹]	z	$\varnothing d$ [inch]	l_A [inch]	a [inch]	b [inch]
C-DLT-H06-150.R.04-B150-200-400-I	1.500	1.980	4.000	2.000	-	1.500	0.177	17000	4	-	-	-	-
A-DLT-H06-150.R.04-A050-150-I	1.500	1.980	-	-	1.500	0.500	0.177	19900	4	1.457	0.709	0.266	0.185
A-DLT-H06-200.R.05-A075-150-I	2.000	2.480	-	-	1.500	0.750	0.177	15900	5	1.772	0.768	0.321	0.197
A-DLT-H06-250.R.06-A075-150-I	2.500	2.980	-	-	1.500	0.750	0.177	12600	6	1.929	0.748	0.321	0.197
A-DLT-H06-300.R.07-A100-200-I	3.000	3.480	-	-	2.000	1.000	0.177	9900	7	2.283	0.925	0.384	0.250
A-DLT-H06-400.R.09-B150-200-I	4.000	4.480	-	-	2.000	1.500	0.177	7900	9	3.780	1.023	0.634	0.386
A-DLT-H06-500.R.10-B150-250-I	5.000	5.480	-	-	2.500	1.500	0.177	6300	10	3.780	1.004	0.634	0.386



GNT-S / Face milling 8 x 45°

Insert (GRUNT XM12)

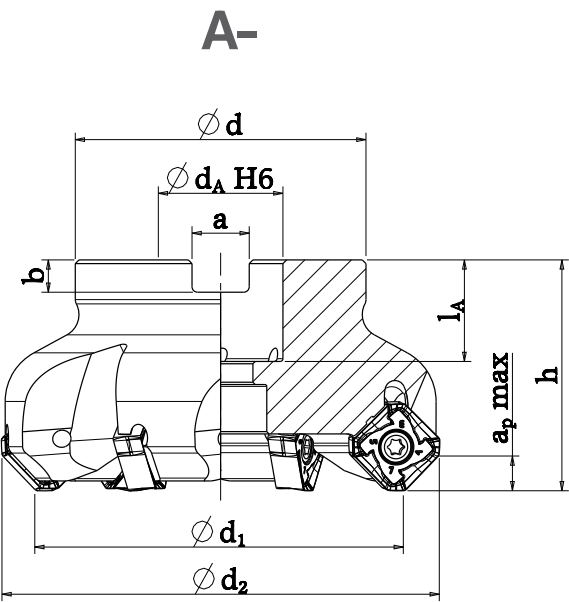


Description	Ø d [inch]	l [inch]	s [inch]	l ₁ [inch]	r [inch]	Ø d ₁ [inch]	x [°]
TPLV 1205AZER-IDN	0.512	0.335	0.201	0.079	0.031	0.179	6
TPLV 1205AZER-TDN	0.512	0.335	0.201	0.079	0.031	0.179	6
TPLV 1505AZER-DDN	0.512	0.335	0.201	0.079	0.031	0.179	6
TPLV 1505AZER-IDN	0.625	0.413	0.236	0.106	0.039	0.226	6
TPLV 1505AZER-TDN	0.625	0.413	0.236	0.106	0.039	0.226	6
TPLV 1505AZER-DDN	0.625	0.413	0.236	0.106	0.039	0.226	6

GNT-S / Face milling 8 x 45°

Milling body (GRUNT XM12)

- Face milling
- Slot milling
- Chamfering

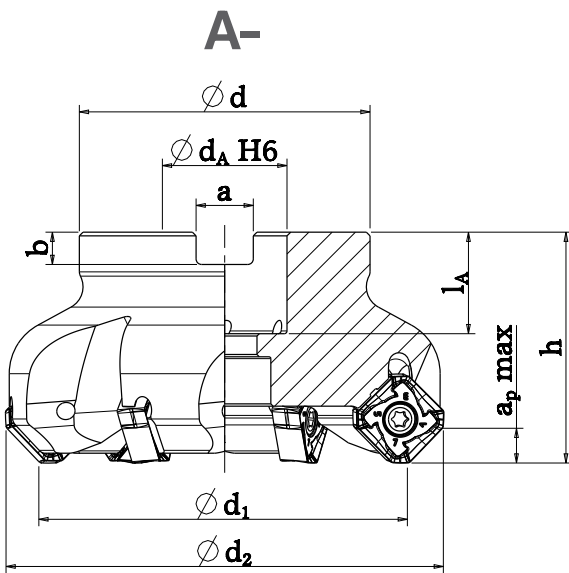


Description	Ø d ₁ [inch]	Ø d ₂ [inch]	h [inch]	Ø d _A H6/h6 [inch]	a _{p max} [inch]	n _{max} [min ⁻¹]	z	Ø d [inch]	l _A [inch]	a [inch]	b [inch]
A-GNT-S12-150.R.04-A050-175-I	1.500	1.988	1.750	0.500	0.236	19900	4	1.496	0.758	0.266	0.185
A-GNT-S12-200.R.05-A075-175-I	2.000	2.488	1.750	0.750	0.236	15900	5	1.772	0.748	0.321	0.197
A-GNT-S12-250.R.06-A075-175-I	2.500	2.988	1.750	0.750	0.236	12600	6	1.929	0.740	0.321	0.197
A-GNT-S12-300.R.08-A100-200-I	3.000	3.488	2.000	1.000	0.236	9900	8	2.323	0.906	0.384	0.250
A-GNT-S12-400.R.10-B150-250-I	4.000	4.488	2.500	1.500	0.236	7900	10	3.780	0.984	0.634	0.386
A-GNT-S12-500.R.12-B150-250-I	5.000	5.488	2.500	1.500	0.236	6300	12	3.780	1.024	0.634	0.386

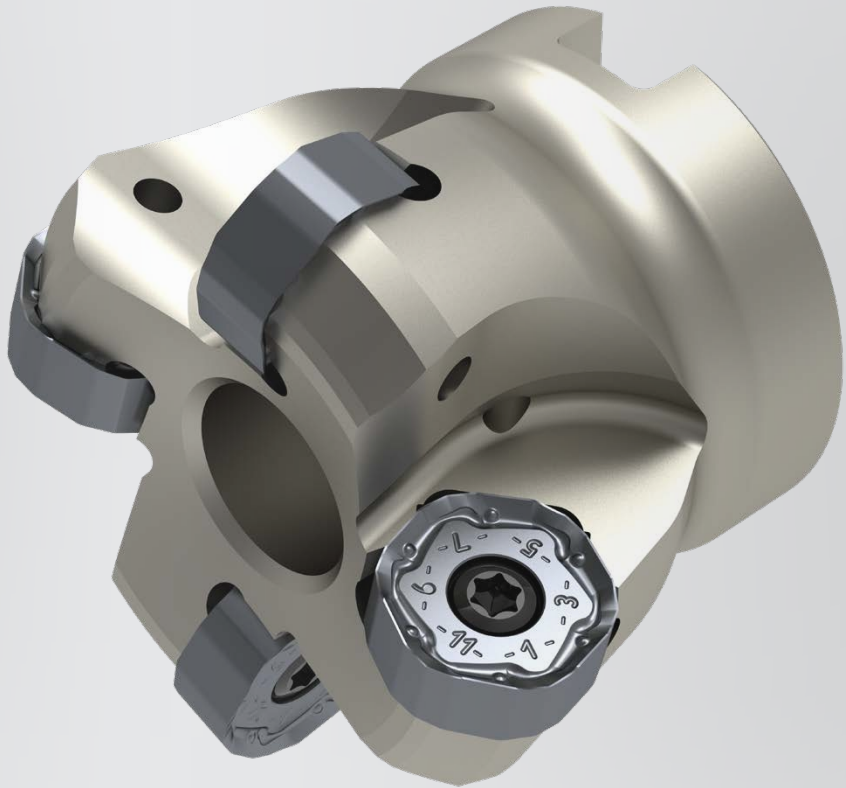
GNT-S / Face milling 8 x 45°

Milling body (GRUNT XM12)

- Face milling
- Slot milling
- Chamfering

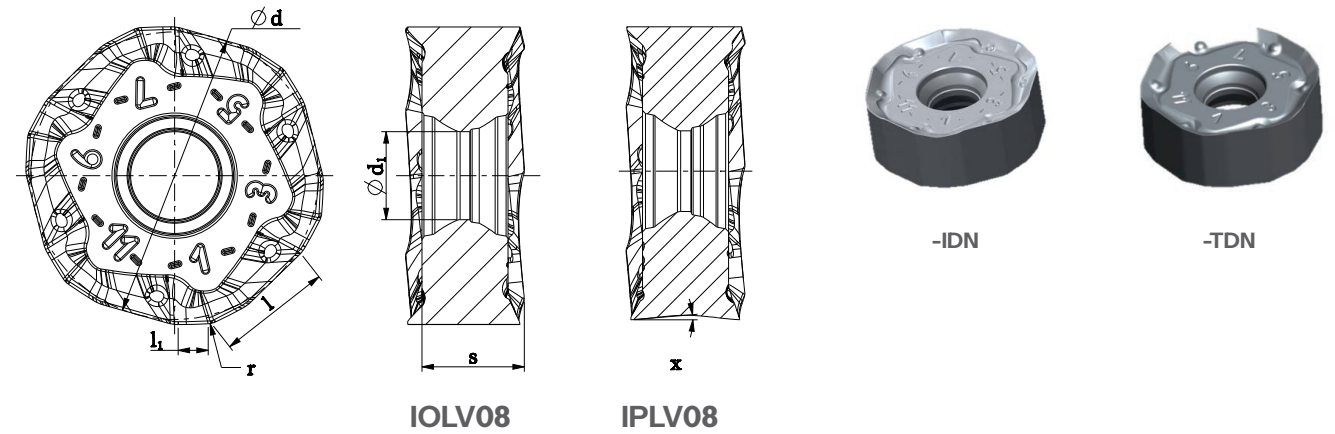


Description	Ø d ₁ [inch]	Ø d ₂ [inch]	h [inch]	Ø d _A H6/h6 [inch]	a _{p max} [inch]	n _{max} [min ⁻¹]	z	Ø d [inch]	l _A [inch]	a [inch]	b [inch]
A-GNT-S15-150.R.04-A050-175-I	1.500	2.091	1.750	0.500	0.250	15900	4	1.811	0.709	0.266	0.185
A-GNT-S15-200.R.04-A075-175-I	2.000	2.591	1.750	0.750	0.250	12700	4	1.772	0.750	0.321	0.197
A-GNT-S15-250.R.05-A075-175-I	2.500	3.091	1.750	0.750	0.250	10100	5	1.969	0.750	0.321	0.197
A-GNT-S15-300.R.06-A100-200-I	3.000	3.591	2.000	1.000	0.250	7900	6	2.362	0.866	0.384	0.250
A-GNT-S15-400.R.07-B150-250-I	4.000	4.591	2.500	1.500	0.250	6300	7	3.780	1.024	0.634	0.386
A-GNT-S15-500.R.08-B150-250-I	5.000	5.591	2.500	1.500	0.250	5000	8	3.780	1.024	0.634	0.386
A-GNT-S15-600.R.10-B200-250-I	6.000	6.591	2.500	2.000	0.250	3800	10	3.858	1.142	0.750	0.438



LBW-H / Face milling 12 x 45°

Insert (IOLV, IPLV)

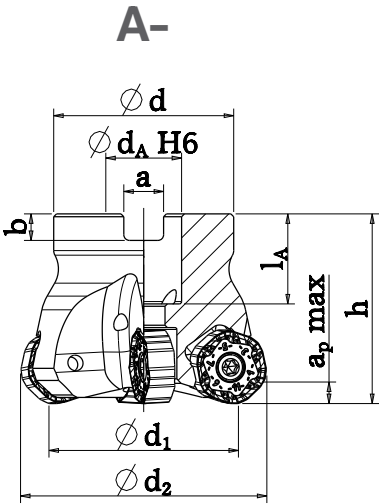


Description	Ø d [inch]	l [inch]	s [inch]	l ₁ [inch]	r [inch]	Ø d ₁ [inch]	x [°]
IOLV 0806AZER-IDN	0.579	0.295	0.204	0.059	0.039	0.177	-
IOLV 0806AZER-TDN	0.579	0.295	0.204	0.059	0.039	0.177	-
IPLV 0806AZER-IDN	0.579	0.295	0.206	0.059	0.039	0.177	4.5
IPLV 0806AZER-TDN	0.579	0.295	0.206	0.059	0.039	0.177	4.5

LBW-H / Face milling 12 x 45°

Milling body (LONGBOW XM8)

- Face milling
- Slot milling
- Chamfering

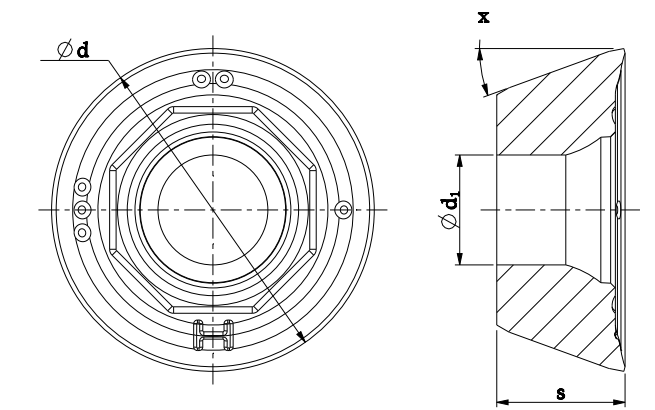


Description	$\varnothing d_1$ [inch]	$\varnothing d_2$ [inch]	h [inch]	$\varnothing d_A$ H6/h6 [inch]	$a_{p \max}$ [inch]	$n_{\max}$ [min ⁻¹]	z	$\varnothing d$ [inch]	l_A [inch]	a [inch]	b [inch]
A-LBW-H08-150.R.04-A050-150-I	1.500	1.972	1.500	0.500	0.157	15900	4	1.496	0.748	0.266	0.185
A-LBW-H08-200.R.04-A075-150-I	2.000	2.472	1.500	0.750	0.157	12700	4	1.693	0.787	0.321	0.197
A-LBW-H08-250.R.05-A075-150-I	2.500	2.972	1.500	0.750	0.157	10100	5	1.890	0.787	0.321	0.197
A-LBW-H08-300.R.06-A100-200-I	3.000	3.472	2.000	1.000	0.157	7900	6	2.283	0.866	0.384	0.250
A-LBW-H08-400.R.08-B150-200-I	4.000	4.472	2.000	1.500	0.157	6400	8	3.071	0.984	0.634	0.386
A-LBW-H08-500.R.09-B150-250-I	5.000	5.472	2.500	1.500	0.157	5100	9	3.465	1.102	0.634	0.386



MRK-R / Form milling

Insert (SQNY, SQIY, SEIX and SEIY)



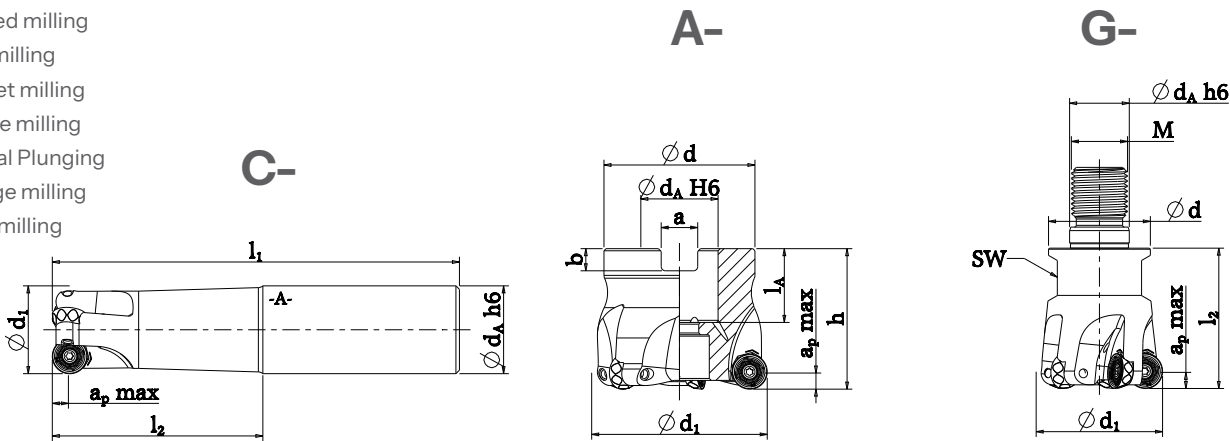
Description	Ø d [inch]	s [inch]	Ø d ₁ [inch]	x [°]
SQNY 10T3MO-IDN	0.394	0.156	0.134	11
SQNY 10T3MO-TDN	0.394	0.156	0.134	11
SEIY 10T3MO-LMM	0.394	0.156	0.134	15
SQIY 10T3MO-XCM	0.394	0.156	0.134	11
SEIX 10T3MOSN	0.394	0.156	0.134	15
SQNY 1204MO-IDN	0.472	0.187	0.173	11
SQNY 1204MO-TDN	0.472	0.187	0.173	11
SEIY 1204MO-LMM	0.472	0.187	0.173	15
SQIY 1204MO-XCM	0.472	0.187	0.173	11
SQIY 1204MO-COOL-XCM	0.472	0.187	0.189	11
SEIX 1204MOSN	0.472	0.187	0.173	15
SQNY 1605MO-IDN	0.630	0.219	0.217	11
SQNY 1605MO-TDN	0.630	0.219	0.217	11
SEIY 1605MO-LMM	0.630	0.219	0.217	15
SQIY 1605MO-XCM	0.630	0.219	0.217	11
SQIY 1605MO-COOL-XCM	0.630	0.219	0.217	11
SEIX 1605MOSN	0.630	0.219	0.217	15



MRK-R / Form milling

Milling body (MERIK XM10)

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

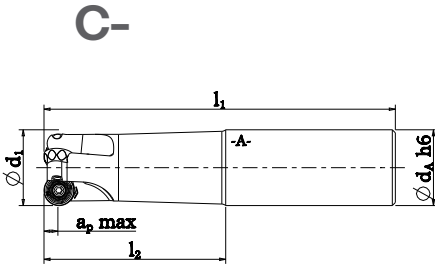


Description	Ø d ₁ [inch]	l ₁ [inch]	l ₂ [inch]	h [inch]	Ø d _A H6/h6 [inch]	a _{p max} [inch]	n _{max} [min ⁻¹]	z	Ø d [inch]	SW	M	l _A [inch]	a [inch]	b [inch]
C-MRK-R10-075.R.02-B075-200-400-I	0.750	4.000	2.000	-	0.750	0.197	31800	2	-	-	-	-	-	-
C-MRK-R10-075.R.02-B075-200-650-I	0.750	6.500	2.000	-	0.750	0.197	22260	2	-	-	-	-	-	-
C-MRK-R10-100.R.03-B100-250-450-I	1.000	4.500	2.500	-	1.000	0.197	20000	3	-	-	-	-	-	-
C-MRK-R10-100.R.03-B100-250-650-I	1.000	6.500	2.500	-	1.000	0.197	20000	3	-	-	-	-	-	-
C-MRK-R10-125.R.04-B125-275-500-I	1.250	5.000	2.750	-	1.250	0.197	19000	4	-	-	-	-	-	-
C-MRK-R10-125.R.04-B125-275-650-I	1.250	6.500	2.750	-	1.250	0.197	18000	4	-	-	-	-	-	-
G-MRK-R10-075.R.02-125-I	0.750	-	1.250	-	0.413	0.197	36900	2	0.665	SW15	M10	-	-	-
G-MRK-R10-100.R.03-150-I	1.000	-	1.500	-	0.492	0.197	33200	3	0.848	SW17	M12	-	-	-
G-MRK-R10-125.R.04-150-I	1.250	-	1.500	-	0.669	0.197	30200	4	1.142	SW24	M16	-	-	-
A-MRK-R10-150.R.04-A050-150-I	1.500	-	-	1.500	0.500	0.197	15900	4	1.457	-	-	0.807	0.266	0.185
A-MRK-R10-200.R.05-A075-150-I	2.000	-	-	1.500	0.750	0.197	12700	5	1.575	-	-	0.758	0.321	0.197

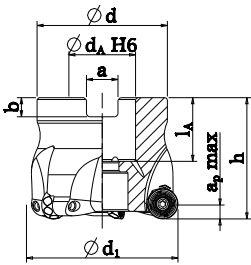
MRK-R / Form milling

Milling body (MERIK XM12)

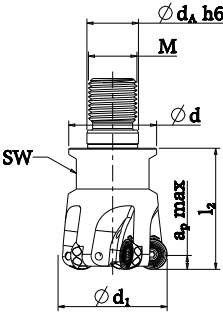
- Face milling
- Angled milling
- Slot milling
- Pocket milling
- Profile milling
- Helical Plunging
- Plunge milling
- Turn milling



A-



G-



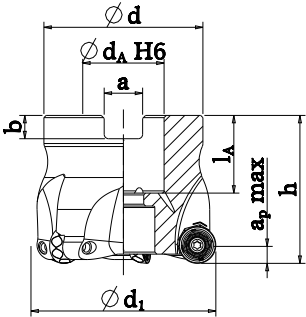
Description	Ø d ₁ [inch]	l ₁ [inch]	l ₂ [inch]	h [inch]	Ø d _A H6/h6 [inch]	a _{p max} [inch]	n _{max} [min ⁻¹]	z	Ø d [inch]	SW	M	l _A [inch]	a [inch]	b [inch]
C-MRK-R12-100.R.02-B100-125-350-I	1.000	3.500	1.250	-	1.000	0.236	25000	2	-	-	-	-	-	-
C-MRK-R12-100.R.02-B100-250-450-I	1.000	4.500	2.500	-	1.000	0.236	18000	2	-	-	-	-	-	-
C-MRK-R12-125.R.03-B125-150-400-I	1.250	4.000	1.500	-	1.250	0.236	19000	3	-	-	-	-	-	-
C-MRK-R12-125.R.03-B125-300-500-I	1.250	5.000	3.000	-	1.250	0.236	17000	3	-	-	-	-	-	-
C-MRK-R12-150.R.03-B100-150-350-LF-I	1.500	3.500	1.500	-	1.000	0.236	15900	3	-	-	-	-	-	-
C-MRK-R12-175.R.04-B100-150-350-LF-I	1.750	3.500	1.500	-	1.000	0.236	15900	4	-	-	-	-	-	-
G-MRK-R12-100.R.02-150-I	1.000	-	1.500	-	0.492	0.236	25000	2	0.848	SW17	M12	-	-	-
G-MRK-R12-125.R.03-150-I	1.250	-	1.500	-	0.669	0.236	15900	3	1.142	SW24	M16	-	-	-
A-MRK-R12-150.R.04-A050-150-I	1.500	-	-	1.500	0.500	0.236	15900	4	1.457	-	-	0.787	0.266	0.185
A-MRK-R12-175.R.04-A075-150-LF-I	1.750	1.500	-	-	0.750	0.236	1590	4	1.457	-	-	0.787	0.266	0.185
A-MRK-R12-175.R.04-A075-150-LF-I	1.750	1.500	-	-	0.750	0.236	1590	4	1.457	-	-	0.787	0.266	0.185
A-MRK-R12-200.R.05-A075-150-LF-I	2.000	1.500	-	-	0.750	0.236	12700	5	1.772	-	-	0.738	0.321	0.197
A-MRK-R12-250.R.06-A075-150-I	2.500	-	-	1.500	0.750	0.236	10100	6	1.929	-	-	0.768	0.321	0.197
A-MRK-R12-250.R.06-A075-150-LF-I	2.500	1.500	-	-	0.750	0.236	10100	6	1.929	-	-	0.768	0.321	0.197
A-MRK-R12-300.R.08-A100-200-I	3.000	-	-	2.000	1.000	0.236	9750	8	2.283	-	-	0.925	0.384	0.250
A-MRK-R12-300.R.08-A100-200-LF-I	3.000	2.000	-	-	1.000	0.236	7950	8	2.283	-	-	0.925	0.384	0.250
A-MRK-R12-400.R.10-B150-200-I	4.000	-	-	2.000	1.500	0.236	6350	10	3.780	-	-	1.063	0.634	0.386
A-MRK-R12-400.R.10-B150-200-LF-I	4.000	2.000	-	-	1.000	0.236	6350	10	3.780	-	-	1.063	0.634	0.386

MRK-R / Form milling

Milling body (MERIK XM16)

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

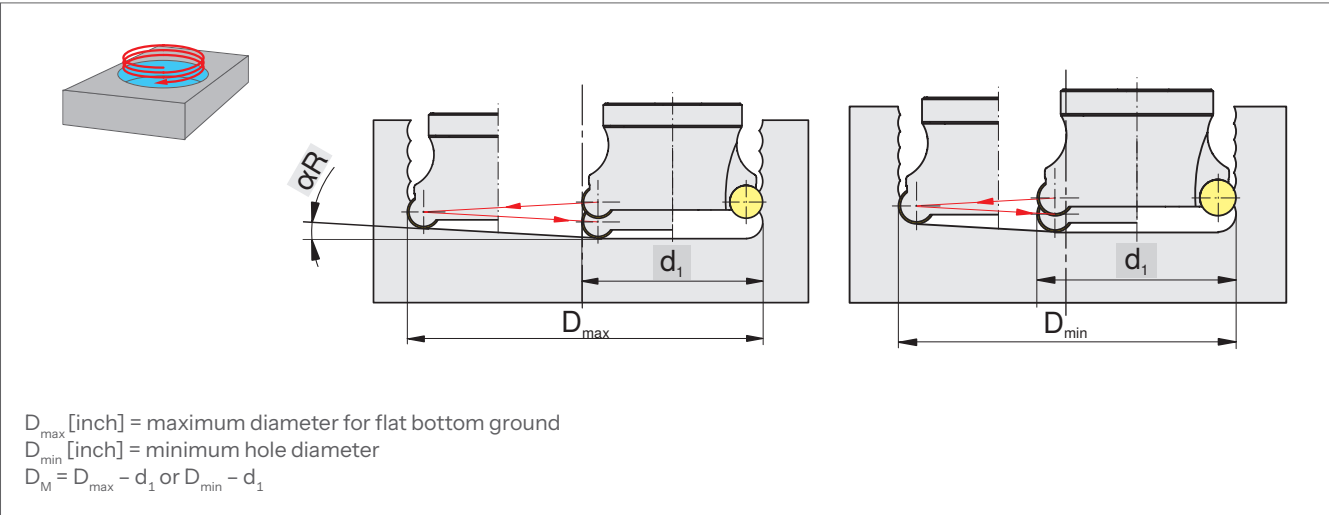
A-



Description	Ø d ₁ [inch]	h [inch]	Ø d _A H6/h6 [inch]	a _{p max} [inch]	n _{max} [min ⁻¹]	z	Ø d [inch]	l _A [inch]	a [inch]	b [inch]
A-MRK-R16-200.R.03-A075-150-I	2.000	1.500	0.750	0.315	12700	3	1.890	0.866	0.321	0.197
A-MRK-R16-200.R.03-A075-150-LF-I	2.000	1.500	0.750	0.315	12700	3	1.890	0.866	0.321	0.197
A-MRK-R16-250.R.05-A075-150-I	2.500	1.500	0.750	0.315	10100	5	1.890	0.827	0.321	0.197
A-MRK-R16-250.R.05-A075-150-LF-I	2.500	1.500	0.750	0.315	10100	5	1.890	0.827	0.321	0.197
A-MRK-R16-300.R.06-A100-200-I	3.000	2.000	1.000	0.315	7950	6	2.283	0.906	0.384	0.250
A-MRK-R16-300.R.06-A100-200-LF-I	3.000	2.000	1.000	0.315	7950	6	2.283	0.906	0.384	0.250
A-MRK-R16-400.R.07-B150-200-I	4.000	2.000	1.500	0.315	6350	7	3.071	1.024	0.634	0.386
A-MRK-R16-400.R.07-B150-200-LF-I	4.000	2.000	1.500	0.315	6350	7	3.071	1.024	0.634	0.386
A-MRK-R16-500.R.08-B150-250-I	5.000	2.500	1.500	0.315	5050	8	3.465	1.102	0.634	0.386
A-MRK-R16-500.R.08-B150-250-LF-I	5.000	2.500	1.500	0.315	5050	8	3.465	1.102	0.634	0.386

MRK-R / Form milling

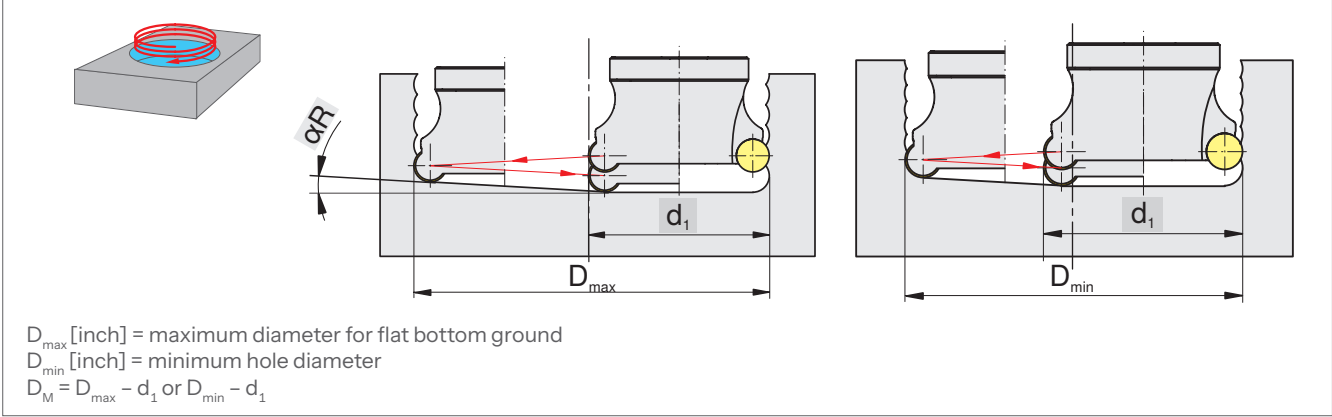
Application data (helical plunge milling MERIK XM10)



Description	$\varnothing d_1$ [inch]	D_{max} [inch]	D_{min} [inch]	α_R [°]
C-MRK-R10-075.R.02-B075-200-400-I	0.750	1.181	1.024	1.3
C-MRK-R10-075.R.02-B075-200-650-I	0.750	1.181	1.024	1.3
C-MRK-R10-100.R.03-B100-250-450-I	1.000	1.575	1.457	1.8
C-MRK-R10-100.R.03-B100-250-650-I	1.000	1.575	1.457	1.8
C-MRK-R10-125.R.04-B125-275-500-I	1.250	2.126	1.969	1.5
C-MRK-R10-125.R.04-B125-275-650-I	1.250	2.126	1.969	1.5
G-MRK-R10-075.R.02-125-I	0.750	1.181	1.024	1.3
G-MRK-R10-100.R.03-150-I	1.000	1.575	1.457	1.8
G-MRK-R10-125.R.04-150-I	1.250	2.126	1.969	1.5
A-MRK-R10-150.R.04-A050-150-I	1.500	2.756	2.520	1.1
A-MRK-R10-200.R.05-A075-150-I	2.000	2.913	2.677	1.1

MRK-R / Form milling

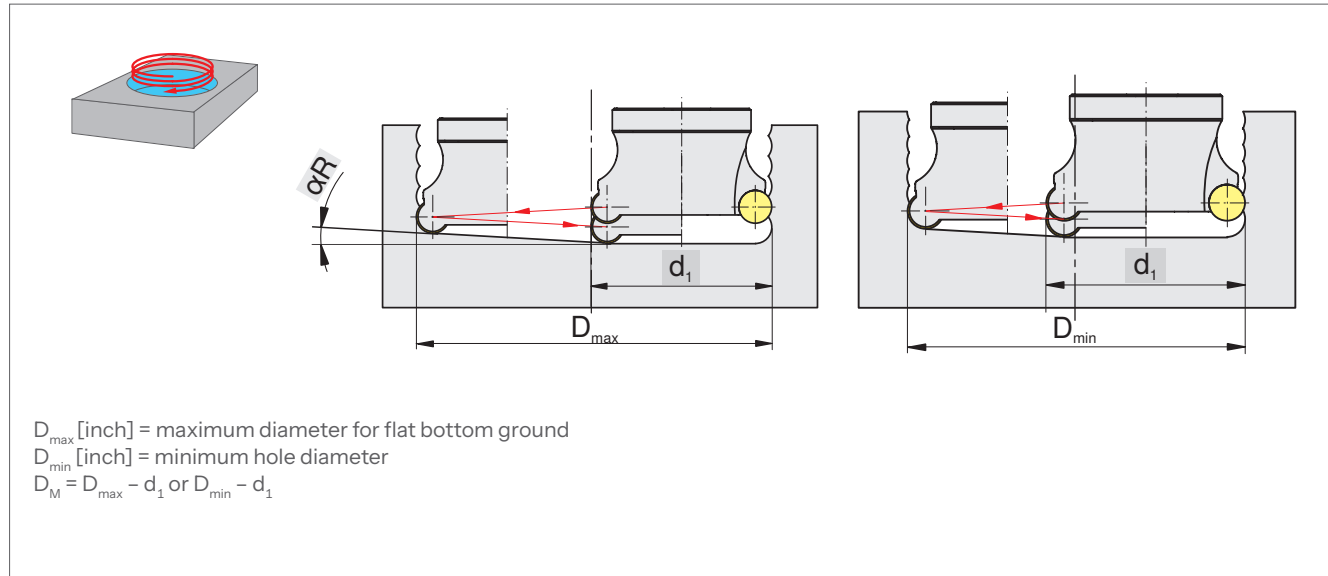
Application data (helical plunge milling MERIK XM12)



Description	$\varnothing d_1$ [inch]	D_{max} [inch]	D_{min} [inch]	α_R [°]
C-MRK-R12-100.R.02-B100-125-350-I	1.000	1.496	1.220	2.2
C-MRK-R12-100.R.02-B100-250-450-I	1.000	1.496	1.220	2.2
C-MRK-R12-125.R.03-B125-150-400-I	1.250	2.047	1.811	1.7
C-MRK-R12-125.R.03-B125-300-500-I	1.250	2.047	1.811	1.7
C-MRK-R12-150.R.03-B100-150-350-LF-I	1.500	2.677	2.441	1.2
G-MRK-R12-100.R.02-150-I	1.000	1.496	1.220	2.2
G-MRK-R12-125.R.03-150-I	1.250	2.047	1.811	1.7
A-MRK-R12-150.R.04-A050-150-I	1.500	2.677	2.441	1.4
A-MRK-R12-175.R.04-A075-150-LF-I	1.750	2.927	2.691	1.2
C-MRK-R12-175.R.04-B100-150-350-LF-I	1.750	2.927	2.691	1.2
A-MRK-R12-200.R.05-A075-150-I	2.000	3.465	3.189	1.1
A-MRK-R12-200.R.05-A075-150-LF-I	2.000	3.465	3.189	1.1
A-MRK-R12-250.R.06-A075-150-I	2.500	4.488	4.213	0.9
A-MRK-R12-250.R.06-A075-150-LF-I	2.500	4.488	4.213	0.9
A-MRK-R12-300.R.08-A100-200-I	3.000	5.827	5.591	0.7
A-MRK-R12-300.R.08-A100-200-LF-I	3.000	5.827	5.591	0.7
A-MRK-R12-400.R.10-A150-200-I	4.000	7.402	7.126	0.5
A-MRK-R12-400.R.10-B150-200-LF-I	4.000	7.402	7.126	0.5

MRK-R / Form milling

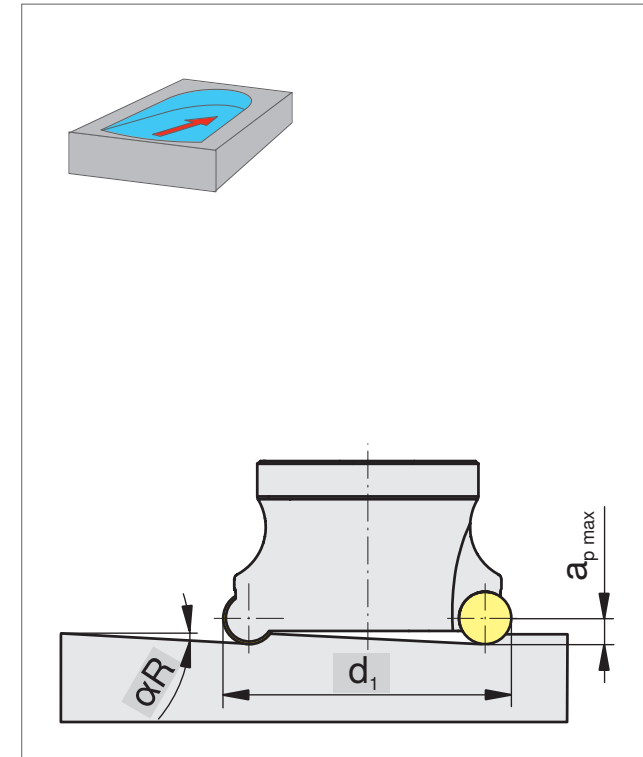
Application data (helical plunge milling MERIK XM16)



Description	$\varnothing d_1$ [inch]	D_{max} [inch]	D_{min} [inch]	α_R [°]
A-MRK-R16-200.R.03-A075-150-I	2.000	3.307	2.953	1.5
A-MRK-R16-200.R.03-A075-150-LF-I	2.000	3.307	2.953	1.5
A-MRK-R16-250.R.05-A075-150-I	2.500	4.331	3.976	1.1
A-MRK-R16-250.R.05-A075-150-LF-I	2.500	4.331	3.976	1.1
A-MRK-R16-300.R.06-A100-200-I	3.000	5.669	5.315	0.9
A-MRK-R16-300.R.06-A100-200-LF-I	3.000	5.669	5.315	0.9
A-MRK-R16-400.R.07-B150-200-I	4.000	7.244	6.890	0.7
A-MRK-R16-400.R.07-B150-200-LF-I	4.000	7.244	6.890	0.7
A-MRK-R16-500.R.08-B150-250-I	5.000	9.213	8.858	0.5
A-MRK-R16-500.R.08-B150-250-LF-I	5.000	9.213	8.858	0.5

MRK-R / Form milling

Application data (angled ramping)

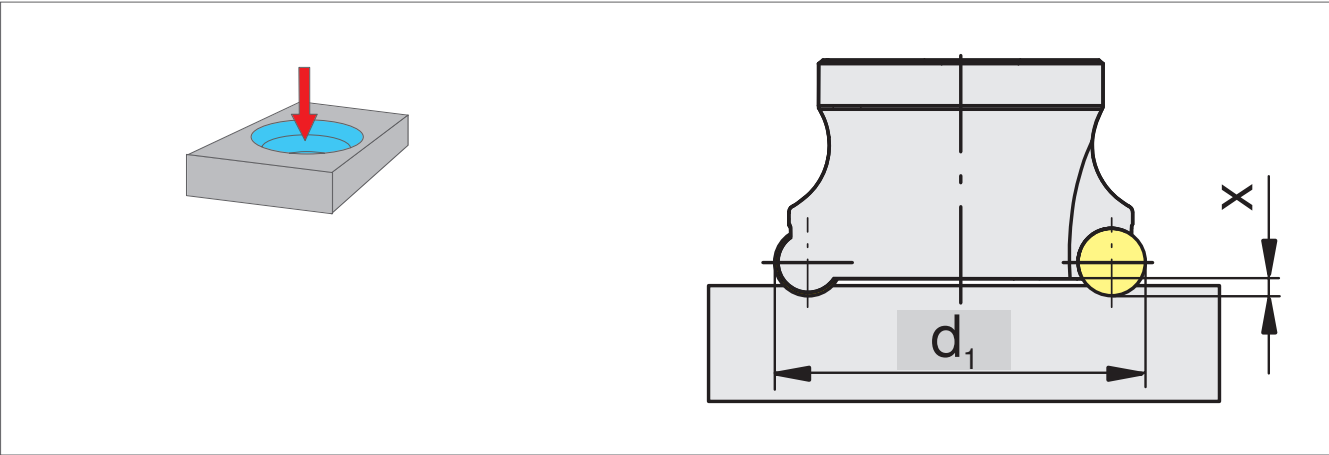


Description	$\varnothing d_1$ [inch]	α_R [°]
C-MRK-R10-075.R.02-B075-200-400-I	0.750	1.3
C-MRK-R10-075.R.02-B075-200-650-I	0.750	1.3
C-MRK-R10-100.R.03-B100-250-450-I	1.000	2.0
C-MRK-R10-100.R.03-B100-250-650-I	1.000	2.0
C-MRK-R10-125.R.04-B125-275-500-I	1.250	3.0
C-MRK-R10-125.R.04-B125-275-650-I	1.250	3.0

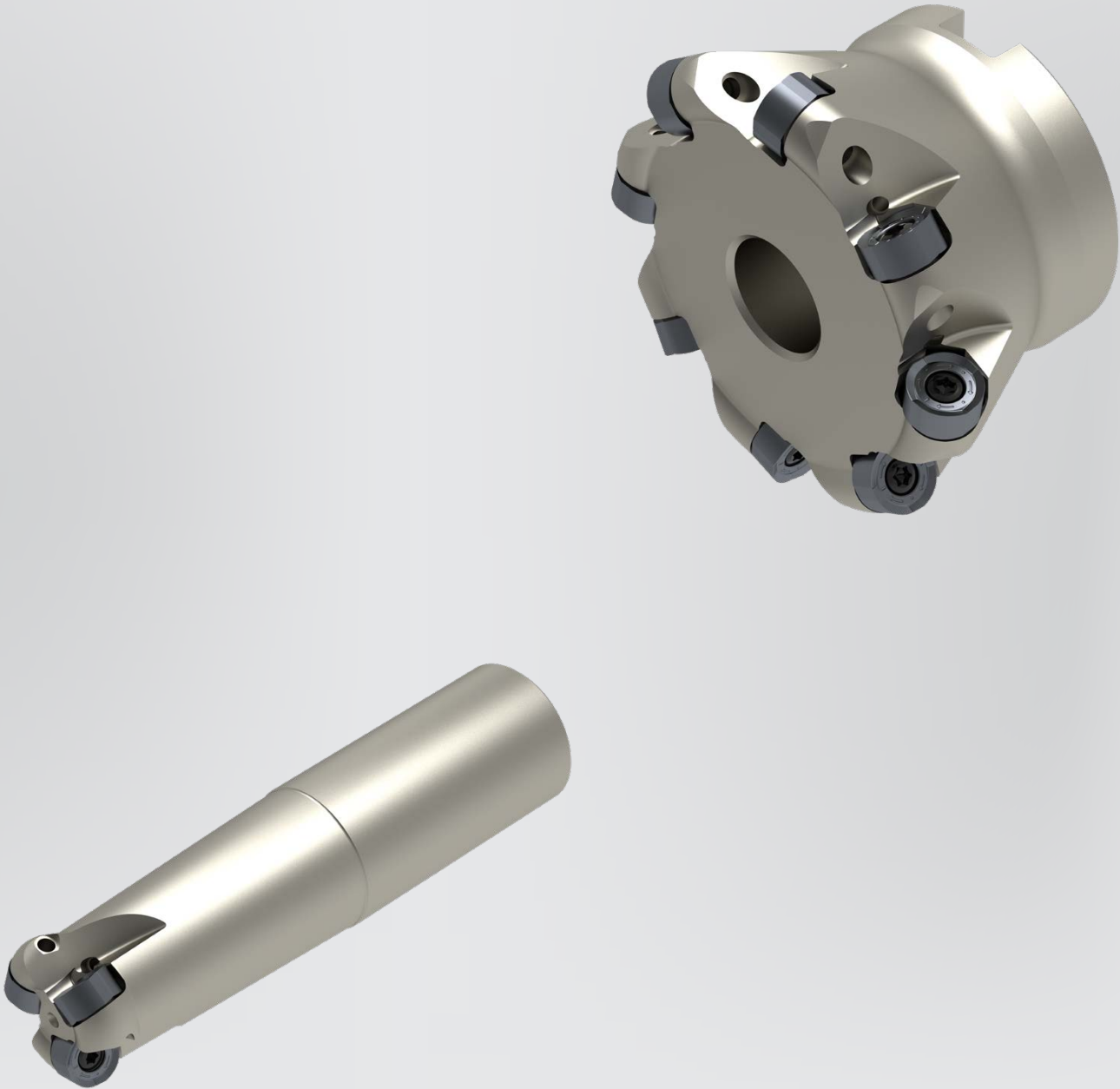
Description	$\varnothing d_1$ [inch]	α_R [°]
G-MRK-R10-075.R.02-125-I	0.750	1.3
G-MRK-R10-100.R.03-150-I	1.000	2.0
G-MRK-R10-125.R.04-150-I	1.250	3.0
A-MRK-R10-150.R.04-A050-150-I	1.500	3.3
A-MRK-R10-200.R.05-A075-150-I	2.000	2.4
C-MRK-R12-100.R.02-B100-125-350-I	1.000	6.4
C-MRK-R12-100.R.02-B100-250-450-I	1.000	6.4
C-MRK-R12-125.R.03-B125-150-400-I	1.250	4.0
C-MRK-R12-125.R.03-B125-300-500-I	1.250	4.0
C-MRK-R12-150.R.03-B100-150-350-LF-I	1.500	2.4
C-MRK-R12-175.R.04-B100-150-350-LF-I	1.750	2.4
G-MRK-R12-100.R.02-150-I	1.000	6.4
G-MRK-R12-125.R.03-150-I	1.250	4.0
A-MRK-R12-150.R.04-A050-150-I	1.500	2.8
A-MRK-R12-175.R.04-A075-150-LF-I	1.750	2.4
A-MRK-R12-200.R.05-A075-150-I	2.000	2.6
A-MRK-R12-250.R.06-A075-150-I	2.500	1.9
A-MRK-R12-200.R.05-A075-150-LF-I	2.000	2.6
A-MRK-R12-250.R.06-A075-150-LF-I	2.500	1.9
A-MRK-R12-300.R.08-A100-200-I	3.000	1.3
A-MRK-R12-300.R.08-A100-200-LF-I	3.000	1.3
A-MRK-R12-400.R.10-B150-200-LF-I	4.000	1.0
A-MRK-R16-200.R.03-A075-150-I	2.000	4.0
A-MRK-R16-200.R.03-A075-150-LF-I	2.000	4.0
A-MRK-R16-250.R.05-A075-150-I	2.500	2.8
A-MRK-R16-250.R.05-A075-150-LF-I	2.500	2.8
A-MRK-R16-300.R.06-A100-200-I	3.000	2.0
A-MRK-R16-300.R.06-A100-200-LF-I	3.000	2.0
A-MRK-R16-400.R.07-B150-200-I	4.000	1.5
A-MRK-R16-400.R.07-B150-200-LF-I	4.000	1.5
A-MRK-R16-500.R.08-B150-250-I	5.000	1.0
A-MRK-R16-500.R.08-B150-250-LF-I	5.000	1.0

MRK-R / Form milling

Application data (axial plunging)

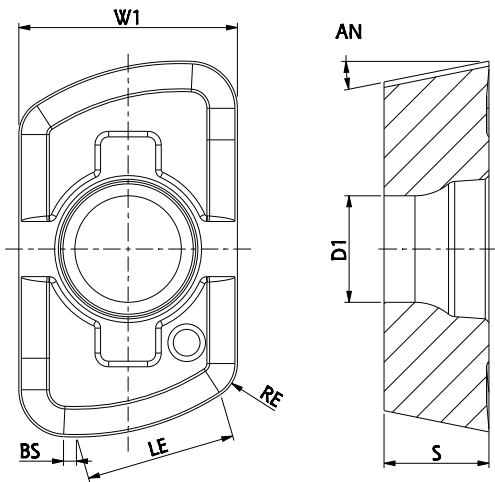


Ø [mm]	Ø d ₁ [inch]	X _{max} [inch]
10	0.750 – 2.000	0.094
12	1.000 – 4.000	0.122
	2.000 – 5.000	0.122



EHO- E07 / High feed cutting

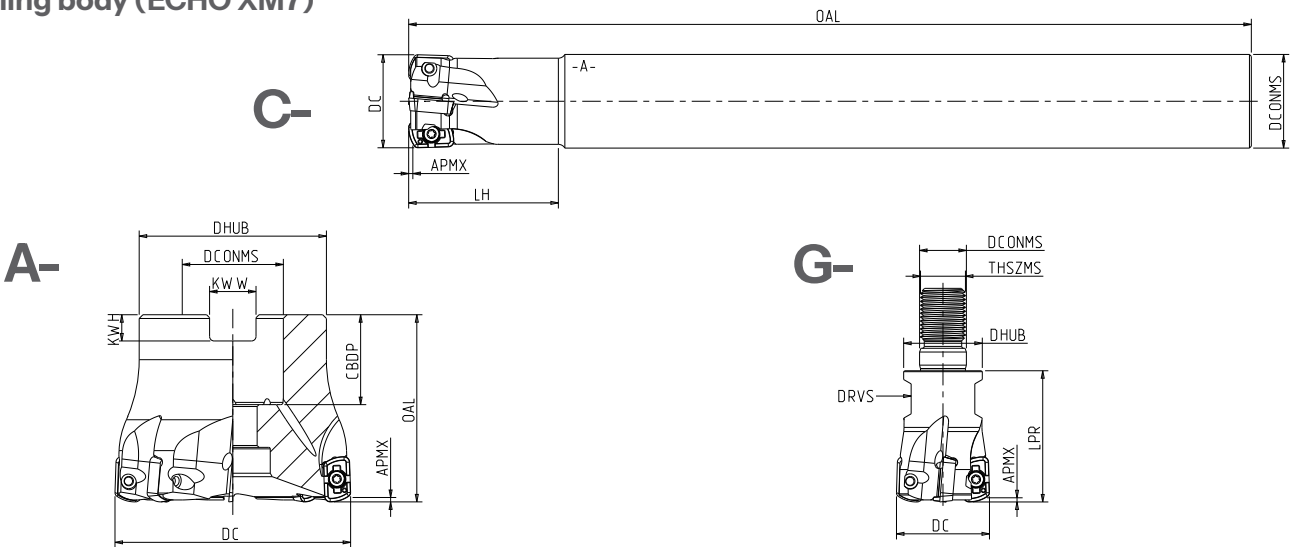
Insert (FQIU, FQIX)



Description	W1/IC [inch]	LE [inch]	S [inch]	BS [inch]	RE [inch]	D1 [inch]	AN [°]
FQIU 070315-12HP	0.275	0.169	0.132	0.016	0.047	0.134	11
FQIX 070315-12HP	0.275	0.169	0.132	0.016	0.047	0.134	11

EHO-E07 / High feed cutting

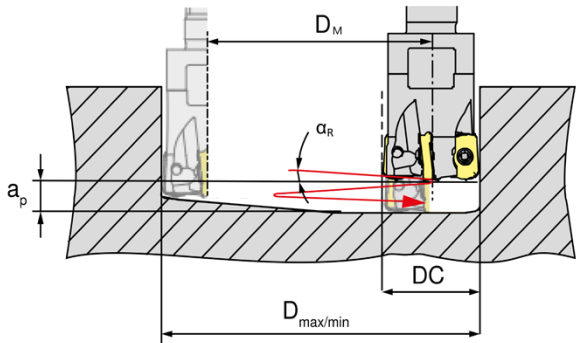
Milling body (ECHO XM7)



Description	DC [inch]	OAL [inch]	(C-) LH [inch]	(G-) LPR [inch]	DCONMS H6/h6 [inch]	APMX [inch]	SQNY [tr/min.]	ZNF	DHUB [inch]	DRVS [inch]	THSZMS [inch]	CBDP [inch]	KWW [inch]	KWH [inch]
C-EHO-HFC-E07-0625.R.02-A0625-200-800-I	0.625	8.000	2.000	-	0.625	0.043	4600	2	-	-	-	-	-	-
C-EHO-HFC-E07-0750.R.03-A075-200-800-I	0.750	8.000	2.000	-	0-750	0.043	4200	3	-	-	-	-	-	-
C-EHO-HFC-E07-100.R.04-A100-200-800-I	1.000	8.000	2.000	-	1.000	0.043	3900	4	-	-	-	-	-	-
C-EHO-HFC-E07-125.R.05-A125-250-900-I	1.250	9.000	2.500	-	1.250	0.043	4600	5	-	-	-	-	-	-
G-EHO-HFC-E07-0625.R.02-100-I	0.625	-	-	1.000	0.335	0.043	20800	2	0.543	SW10	M8	-	-	-
G-EHO-HFC-E07-0750.R.03-125-I	0.750	-	-	1.250	0.413	0.043	19200	3	0.665	SW15	M10	-	-	-
G-EHO-HFC-E07-100.R.04-150-I	1.000	-	-	1.500	0.492	0.043	18700	4	0.848	SW17	M12	-	-	-
G-EHO-HFC-E07-125.R.05-150-I	1.250	-	-	1.500	0.669	0.043	17500	5	1.142	SW24	M16	-	-	-
G-EHO-HFC-E07-150.R.06-150-I	1.500	-	-	1.500-	0.669	0.043	16400	6	1.142	SW24-	M16-	-	-	-
A-EHO-HFC-E07-150.R.06-A050-150-I	1.500	-	-	-	0.500	0.043	26400	6	1.457	-	-	0.789	0.266	0.185
A-EHO-HFC-E07-200.R.07-A075-150-I	2.000	-	-	-	0.750	0.043	23500	7	1.772	-	-	0.738	0.321	0.197
A-EHO-HFC-E07-250.R.08-A075-150-I	2.500	-	-	-	0.750	0.043	20500	8	1.929	-	-	0.768	0.321	0.197
A-EHO-HFC-E07-300.R.10-A100-200-I	3.000	-	-	-	1.000	0.043	14000	10	2.362	-	-	0.907	0.384	0.250

EHO- E07 / High feed cutting

Application data (helical plunge milling ECHO XM7)

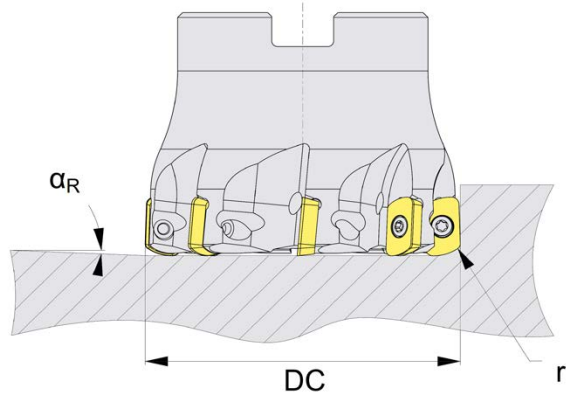
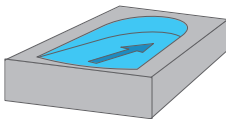


D_{max} [mm] = maximum diameter for flat bottom ground
 D_{min} [mm] = minimum hole diameter
 $D_M = D_{max} - DC$ or $D_{min} - DC$

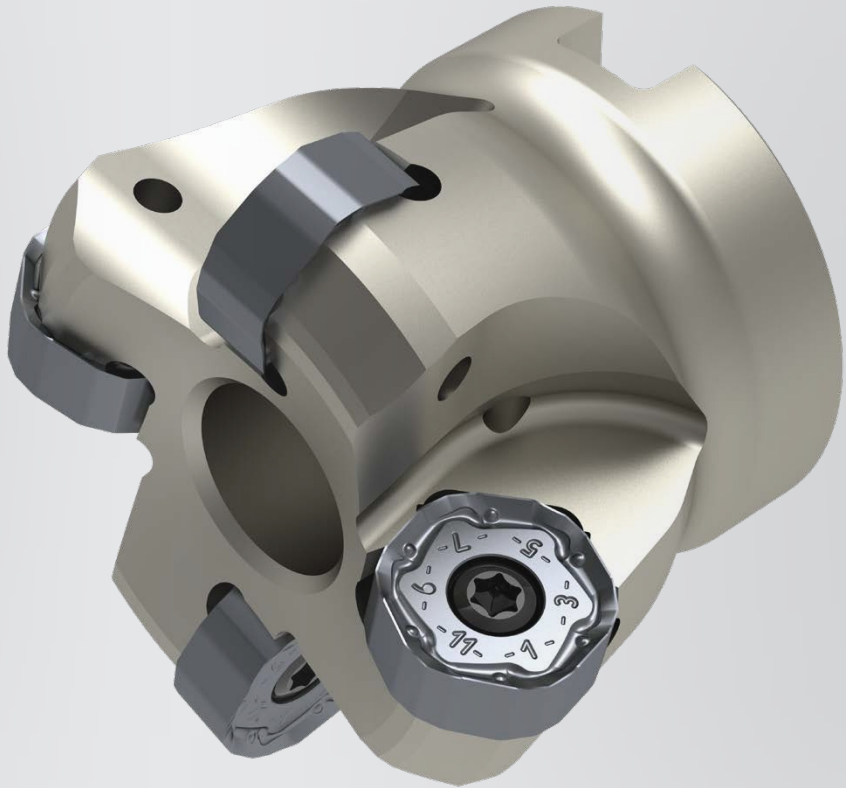
Description	DC [inch]	D_{max} [inch]	D_{min} [inch]	α_R [°]
C-EHO-HFC-E07-0625.R.02-A0625-200-800-I	0.625	1.171	0.778	2
C-EHO-HFC-E07-0750.R.03-A075-200-800-I	0.750	1.421	1.028	2
C-EHO-HFC-E07-100.R.04-A100-200-800-I	1.000	1.921	1,528	2
C-EHO-HFC-E07-125.R.05-A125-250-900-I	1.250	2.421	2.028	2
G-EHO-HFC-E07-0625.R.02-100-I	0.625	1.171	0.778	2
G-EHO-HFC-E07-0750.R.03-125-I	0.750	1.421	1.028	2
G-EHO-HFC-E07-100.R.04-150-I	1.000	1.921	1.528	2
G-EHO-HFC-E07-125.R.05-150-I	1.250	2.421	2.028	2
G-EHO-HFC-E07-150.R.06-150-I	1.500	2.921	2.528	2
A-EHO-HFC-E07-150.R.06-A050-150-I	1.500	2.921	2.528	1.5
A-EHO-HFC-E07-200.R.07-A075-150-I	2.000	3.921	3.528	1.5
A-EHO-HFC-E07-250.R.08-A075-150-I	2.500	4.921	4.528	1
A-EHO-HFC-E07-300.R.10-A100-200-I	3.000	5.921	5.528	

EHO- E07 / High feed cutting

Application data (angled ramping)

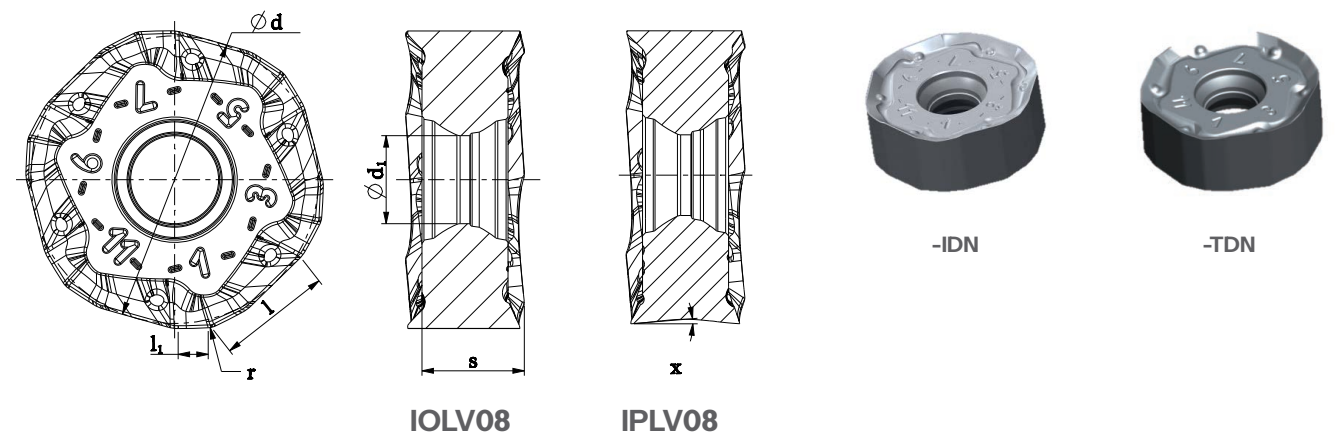


Description	DC [inch]	α_R [°]
C-EHO-HFC-E07-0625.R.02-A0625-200-800-I	0.625	2
C-EHO-HFC-E07-0750.R.03-A075-200-800-I	0.750	2
C-EHO-HFC-E07-100.R.04-A100-200-800-I	1.000	2
C-EHO-HFC-E07-125.R.05-A125-250-900-I	1.250	2
G-EHO-HFC-E07-0625.R.02-100-I	0.625	2
G-EHO-HFC-E07-0750.R.03-125-I	0.750	2
G-EHO-HFC-E07-100.R.04-150-I	1.000	2
G-EHO-HFC-E07-125.R.05-150-I	1.250	2
G-EHO-HFC-E07-150.R.06-150-I	1.500	2
A-EHO-HFC-E07-150.R.06-A050-150-I	1.500	1.5
A-EHO-HFC-E07-200.R.07-A075-150-I	2.000	1.5
A-EHO-HFC-E07-250.R.08-A075-150-I	2.500	1
A-EHO-HFC-E07-300.R.10-A100-200-I	3.000	0.7



LBW-H / Face milling 12 x 45°

Insert (LONGBOW XM8)

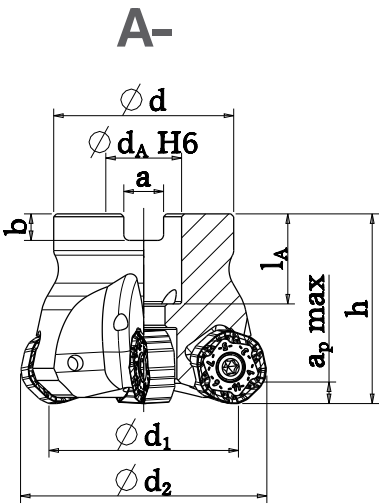


Description	Ø d [inch]	l [inch]	s [inch]	l ₁ [inch]	r [inch]	Ø d ₁ [inch]	x [°]
IOLV 0806AZER-IDN	0.579	0.295	0.204	0.059	0.039	0.177	-
IOLV 0806AZER-TDN	0.579	0.295	0.204	0.059	0.039	0.177	-
IPLV 0806AZER-IDN	0.579	0.295	0.206	0.059	0.039	0.177	4.5
IPLV 0806AZER-TDN	0.579	0.295	0.206	0.059	0.039	0.177	4.5

LBW-H / Face milling 12 x 45°

Milling body (LONGBOW XM8)

- Face milling
- Slot milling
- Chamfering

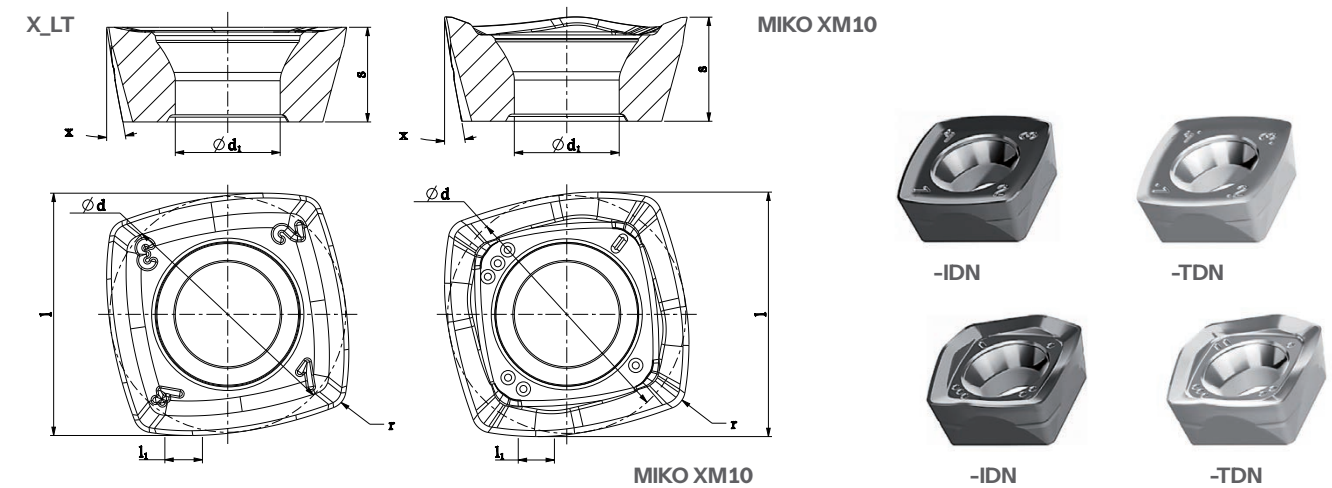


Description	$\varnothing d_1$ [inch]	$\varnothing d_2$ [inch]	h [inch]	$\varnothing d_A$ H6/h6 [inch]	$a_{p \max}$ [inch]	$n_{\max}$ [min ⁻¹]	z	$\varnothing d$ [inch]	l_A [inch]	a [inch]	b [inch]
A-LBW-H08-150.R.04-A050-150-I	1.500	1.972	1.500	0.500	0.157	15900	4	1.496	0.748	0.266	0.185
A-LBW-H08-200.R.04-A075-150-I	2.000	2.472	1.500	0.750	0.157	12700	4	1.693	0.787	0.321	0.197
A-LBW-H08-250.R.05-A075-150-I	2.500	2.972	1.500	0.750	0.157	10100	5	1.890	0.787	0.321	0.197
A-LBW-H08-300.R.06-A100-200-I	3.000	3.472	2.000	1.000	0.157	7900	6	2.283	0.866	0.384	0.250
A-LBW-H08-400.R.08-B150-200-I	4.000	4.472	2.000	1.500	0.157	6400	8	3.071	0.984	0.634	0.386
A-LBW-H08-500.R.09-B150-250-I	5.000	5.472	2.500	1.500	0.157	5100	9	3.465	1.102	0.634	0.386



MKO-HFC / High feed cutting

Insert (YQMU, YEMU, YEMY, YPMU)



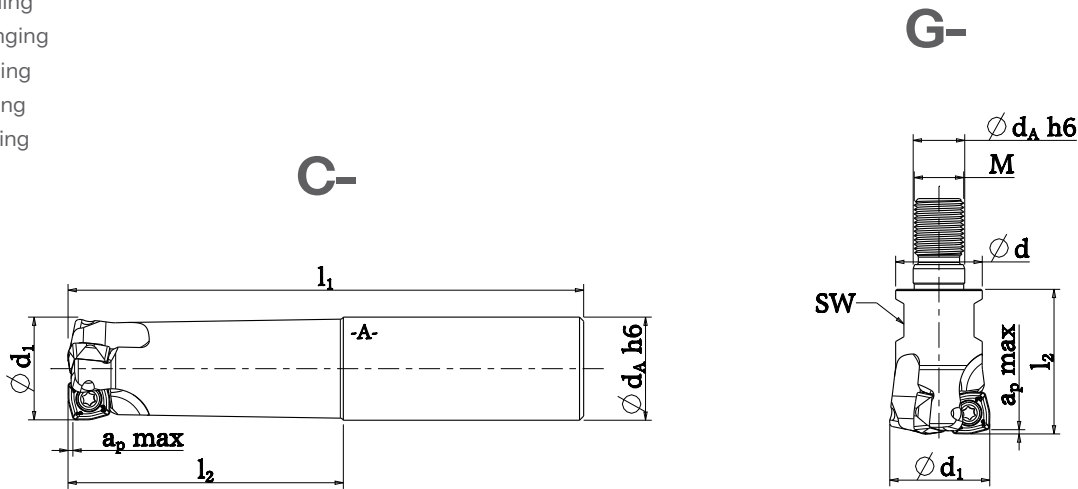
Description	ϕd [inch]	l [inch]	s [inch]	l_1 [inch]	r [inch]	ϕd_1 [inch]	x [°]
YQMU 070305SR-IDN	0.272	0.281	0.108	0.039	0.020	0.110	11
YQMU 070305ER-TDN	0.272	0.281	0.108	0.039	0.020	0.110	11
YEMU 10T308SR-IDN	0.390	0.402	0.156	0.059	0.031	0.173	15
YEMU 10T308ER-TDN	0.390	0.402	0.156	0.059	0.031	0.173	15

Description	ϕd [inch]	l [inch]	s [inch]	l_1 [inch]	r [inch]	ϕd_1 [inch]	x [°]
YEMY 10T308SR-IDN	0.390	0.402	0.172	0.059	0.033	0.173	15
YEMY 10T308SR-TDN	0.390	0.402	0.172	0.059	0.033	0.173	15
YPMU 130410SR-IDN	0.516	0.531	0.187	0.079	0.039	0.217	9
YPMU 130410ER-TDN	0.516	0.531	0.187	0.079	0.039	0.217	9

MKO-HFC / High feed cutting

Milling body (MIKO XM7)

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

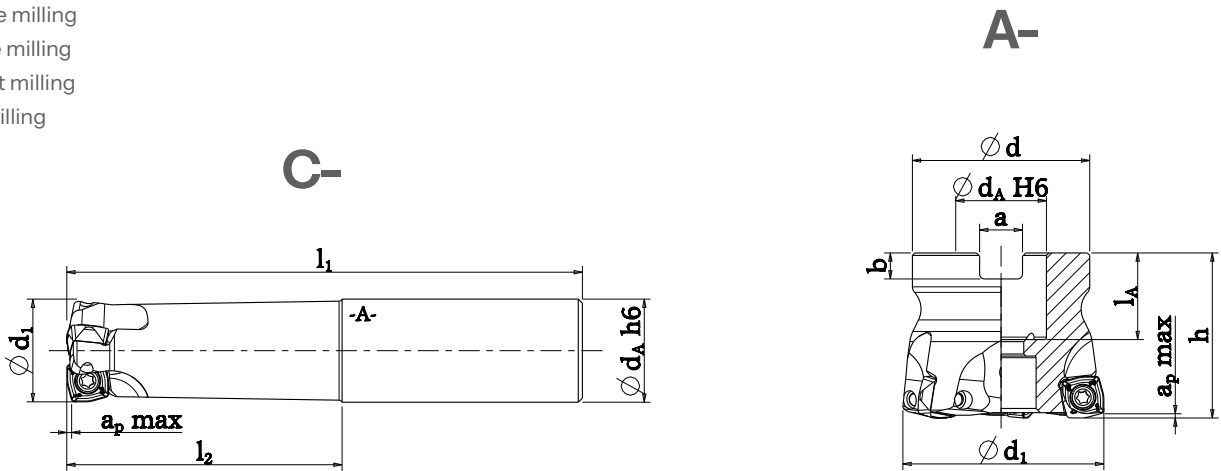


Description	ϕd_1 [inch]	l_1 [inch]	l_2 [inch]	$\phi d_A h_6/h6$ [inch]	$a_p \max$ [inch]	$n_{\max}$ [min ⁻¹]	z	ϕd [inch]	SW	M
C-MKO-HFM07-0625.R.02-A0625-200-800-I	0.625	8.000	2.000	0.625	0.032	4600	2	-	-	-
C-MKO-HFM07-075.R.03-A075-200-800-I	0.750	8.000	2.000	0.750	0.032	4200	3	-	-	-
C-MKO-HFM07-100.R.04-A100-200-800-I	1.000	8.000	2.000	1.000	0.032	3900	4	-	-	-
G-MKO-HFM07-0625.R.02-100-I	0.625	-	1.000	0.335	0.032	20800	2	0.543	SW10	M8
G-MKO-HFM07-075.R.03-125-I	0.750	-	1.250	0.413	0.032	19800	3	0.665	SW15	M10
G-MKO-HFM07-100.R.04-150-I	1.000	-	1.500	0.492	0.032	18700	4	0.848	SW17	M12

MKO-HFC / High feed cutting

Milling body (MIKO XM10)

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

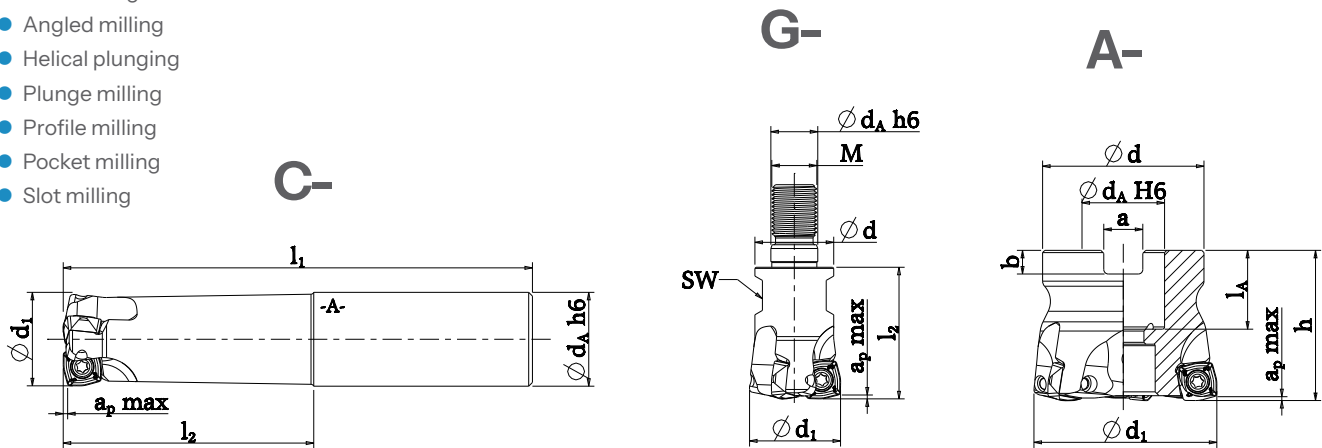


Description	$\varnothing d_1$ [inch]	l_1 [inch]	l_2 [inch]	h [inch]	$\varnothing d_A$ H6/h6 [inch]	$a_{p \max}$ [inch]	$n_{\max}$ [min ⁻¹]	z	$\varnothing d$ [inch]	l_A [inch]	a [inch]	b [inch]
C-MKO-HFC10-100.R.03-A100-200-500-I	1.000	5.000	2.000	-	1.000	0.039	15600	3	-	-	-	-
C-MKO-HFM10-100.R.03-A100-200-900-I	1.000	9.000	2.000	-	1.000	0.039	9000	3	-	-	-	-
A-MKO-HFM10-150.R.04-A050-150-I	1.500	-	-	1.500	0.500	0.039	26400	4	1.457	0.787	0.266	0.185
A-MKO-HFM10-200.R.05-A075-150-I	2.000	-	-	1.500	0.750	0.039	23500	5	1.772	0.748	0.321	0.197
A-MKO-HFM10-250.R.06-A075-150-I	2.500	-	-	1.500	0.750	0.039	20500	6	1.929	0.768	0.321	0.197

MKO-HFC / High feed cutting

Milling body (MIKO XM13)

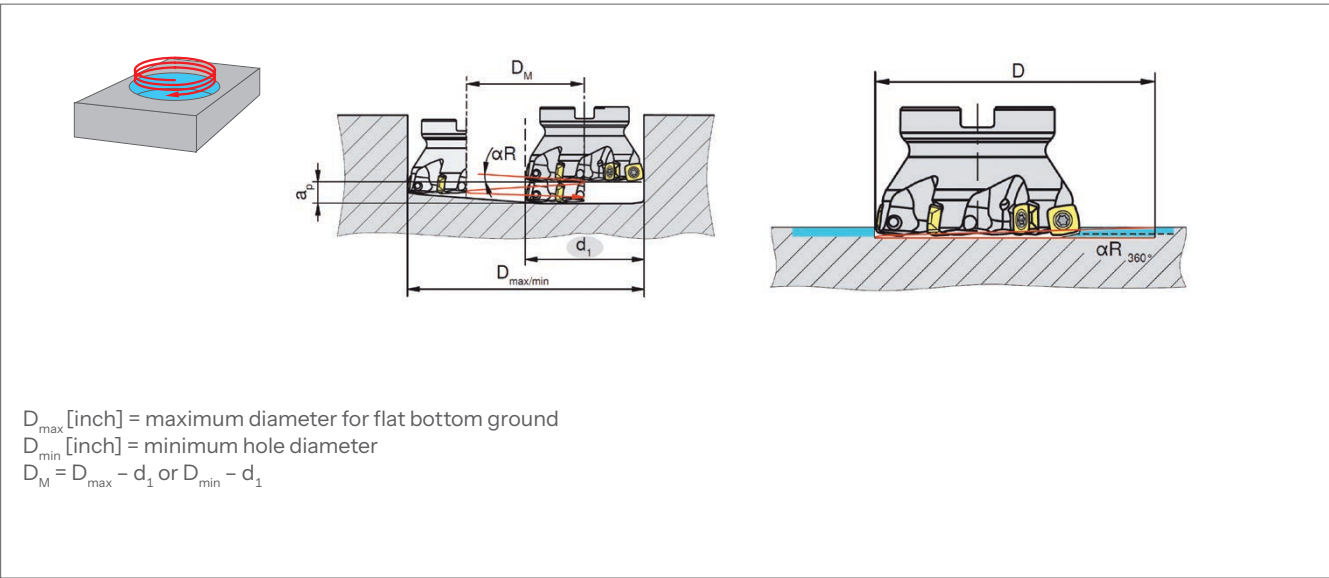
- Face milling
- Angled milling
- Helical plunging
- Plunge milling
- Profile milling
- Pocket milling
- Slot milling



Description	$\varnothing d_1$ [inch]	l_1 [inch]	l_2 [inch]	h [inch]	$\varnothing d_A$ H6/h6 [inch]	$a_{p \max}$ [inch]	$n_{\max}$ [min ⁻¹]	z	$\varnothing d$ [inch]	SW	M	l_A [inch]	a [inch]	b [inch]
C-MKO-HFC13-150.R.03-A150-250-550-I	1.500	5.500	2.500	-	1.500	0.079	9000	3	-	-	-	-	-	-
C-MKO-HFM13-150.R.03-A150-250-1000-I	1.500	10.000	2.500	-	1.500	0.079	6400	3	-	-	-	-	-	-
G-MKO-HFC13-150.R.03-150-I	1.500	-	-	1.500	0.669	0.079	21360	3	1.142	SW24	M16	-	-	-
A-MKO-HFM13-200.R.04-A075-150-I	2.000	1.500	-	-	0.750	0.079	18800	4	1.772	-	-	0.787	0.321	0.197
A-MKO-HFC13-200.R.04-A075-150-LF-I	2.000	1.500	-	-	0.750	0.079	18800	4	1.772	-	-	0.787	0.321	0.197
A-MKO-HFM13-250.R.05-A075-150-I	2.500	1.500	-	-	0.750	0.079	16400	5	1.969	-	-	0.748	0.321	0.197
A-MKO-HFC13-250.R.05-A075-150-LF-I	2.500	1.500	-	-	0.750	0.079	16400	5	1.969	-	-	0.748	0.321	0.197
A-MKO-HFC13-300.R.06-A100-200-LF-I	3.000	2.000	-	-	1.000	0.079	14000	7	2.283	-	-	0.925	0.384	0.250
A-MKO-HFM13-300.R.07-A100-200-I	3.000	2.000	-	-	1.000	0.079	14000	7	2.283	-	-	0.925	0.384	0.250
A-MKO-HFC13-400.R.08-A125-200-I	4.000	2.000	-	-	1.250	0.079	10550	8	2.750	-	-	0.750	0.509	0.309
A-MKO-HFC13-400.R.08-B150-200-LF-I	4.000	2.000	-	-	1.500	0.079	10550	8	2.750	-	-	0.750	0.509	0.309
A-MKO-HFC13-400.R.09-B150-200-LF-I	4.000	2.000	-	-	1.500	0.079	10550	9	2.750	-	-	0.750	0.509	0.309

MKO-HFC / High feed cutting

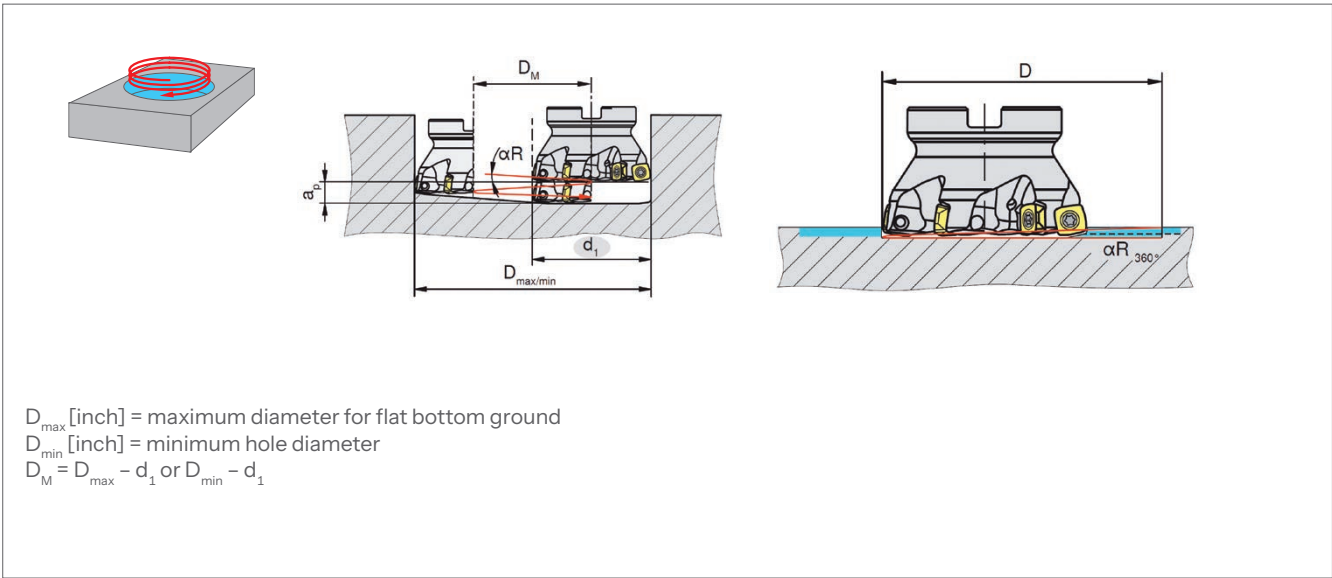
Application data (helical plunge milling MIKO XM7)



Description	$\varnothing d_1$ [inch]	D_{max} [inch]	D_{min} [inch]	α_R [°]
C-MKO-HFM07-0625.R.02-A0625-200-800-I	0.625	1.220	0.866	4.5
C-MKO-HFM07-075.R.03-A075-200-800-I	0.750	1.535	1.181	2.3
C-MKO-HFM07-100.R.04-A100-200-800-I	1.000	1.929	1.575	1.3
G-MKO-HFM07-0625.R.02-100-I	0.625	1.220	0.866	4.5
G-MKO-HFM07-075.R.03-125-I	0.750	1.535	1.181	2.3
G-MKO-HFM07-100.R.04-150-I	1.000	1.929	1.575	1.3

MKO-HFC / High feed cutting

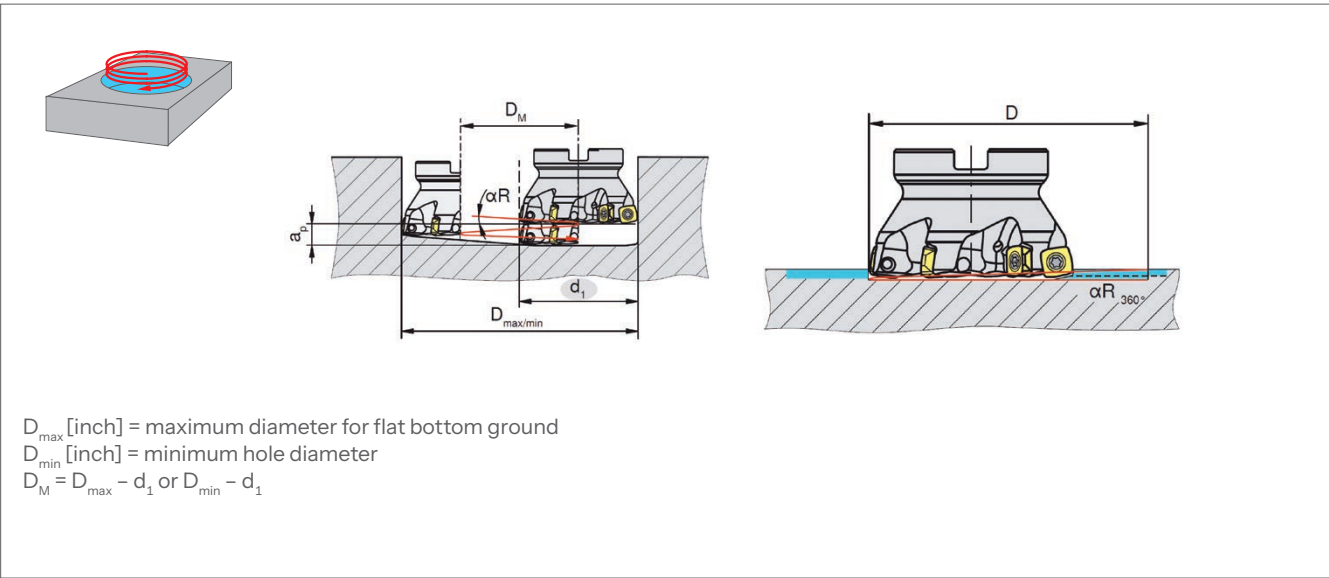
Application data (helical plunge milling MIKO XM10)



Description	$\varnothing d_1$ [inch]	D_{max} [inch]	D_{min} [inch]	α_R [°]
C-MKO-HFC10-100.R.03-A100-200-500-I	1.000	1.890	1.378	3.1
C-MKO-HFM10-100.R.03-A100-200-900-I	1.000	1.890	1.378	3.1
A-MKO-HFM10-150.R.04-A050-150-I	1.500	3.071	2.559	1.0
A-MKO-HFM10-200.R.05-A075-150-I	2.000	3.858	3.346	0.8
A-MKO-HFM10-250.R.06-A075-150-I	2.500	4.882	4.370	0.7

MKO-HFC / High feed cutting

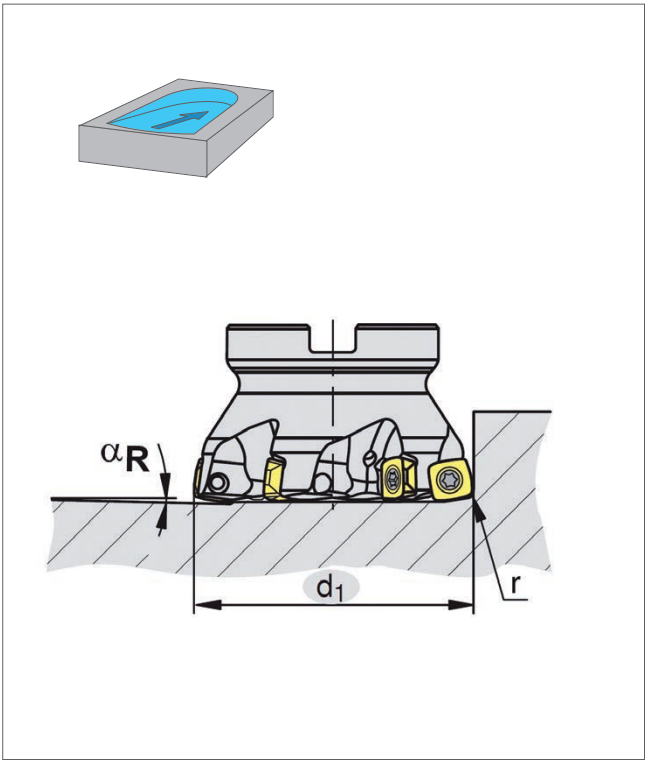
Application data (helical plunge milling MIKO XM13)



Designation	$\varnothing d_1$ [inch]	D_{max} [inch]	D_{min} [inch]	α_R [°]
C-MKO-HFC13-150.R.03-A150-250-550-I	1.500	2.921	2.213	3.7
C-MKO-HFM13-150.R.03-A150-250-1000-I	1.500	2.921	2.213	3.7
G-MKO-HFC13-150.R.03-150-I	1.500	2.921	2.213	3.7
A-MKO-HFM13-200.R.04-A075-150-I	2.000	3.921	3.213	1.3
A-MKO-HFC13-200.R.04-A075-150-LF-I	2.000	4.921	4.213	0.9
A-MKO-HFM13-250.R.05-A075-150-I	2.500	5.921	5.213	1.1
A-MKO-HFC13-250.R.05-A075-150-LF-I	2.500	7.921	7.213	0.6
A-MKO-HFM13-300.R.07-A100-200-I	3.000	3.921	3.213	1.3
A-MKO-HFC13-300.R.06-A100-200-LF-I	3.000	4.921	4.213	0.9
A-MKO-HFC13-400.R.08-A125-200-I	4.000	5.921	5.213	1.1
A-MKO-HFC13-400.R.08-B150-200-LF-I	4.000	7.921	7.213	0.6
A-MKO-HFC13-400.R.09-B150-200-LF-I	4.000	7.921	7.213	0.7

MKO-HFC / High feed cutting

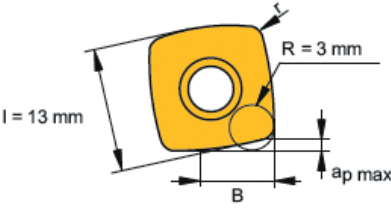
Application data (angled ramping)



Description	$\varnothing d_1$ [inch]	α_R [°]
C-MKO-HFM07-0625.R.02-A0625-200-800-I	0.625	5.9
C-MKO-HFM07-075.R.03-A075-200-800-I	0.750	3.2
C-MKO-HFM07-100.R.04-A100-200-800-I	1.000	2.0
G-MKO-HFM07-0625.R.02-100-I	0.625	5.9
G-MKO-HFM07-075.R.03-125-I	0.750	3.2
G-MKO-HFM07-100.R.04-150-I	1.000	2.0
C-MKO-HFC10-100.R.03-A100-200-500-I	1.000	3.6
C-MKO-HFM10-100.R.03-A100-200-900-I	1.000	3.6
A-MKO-HFM10-150.R.04-A050-150-I	1.500	1.2
A-MKO-HFM10-200.R.05-A075-150-I	2.000	0.9
A-MKO-HFM10-250.R.06-A075-150-I	2.500	0.8
C-MKO-HFC13-150.R.03-A150-250-550-I	1.000	4.4
C-MKO-HFM13-150.R.03-A150-250-1000-I	1.500	4.4
G-MKO-HFC13-150.R.03-150-I	1.500	4.4
A-MKO-HFM13-200.R.04-A075-150-I	2.000	1.5
A-MKO-HFC13-200.R.04-A075-150-LF-I	2.000	1.5
A-MKO-HFM13-250.R.05-A075-150-I	2.500	1.1
A-MKO-HFC13-250.R.05-A075-150-LF-I	2.500	1.1
A-MKO-HFM13-300.R.07-A100-200-I	3.000	1.3
A-MKO-HFC13-300.R.06-A100-200-LF-I	3.000	1.3
A-MKO-HFC13-400.R.08-A125-200-I	4.000	1.2
A-MKO-HFC13-400.R.08-B150-200-LF-I	4.000	1.2
A-MKO-HFC13-400.R.09-B150-200-LF-I	4.000	1.3

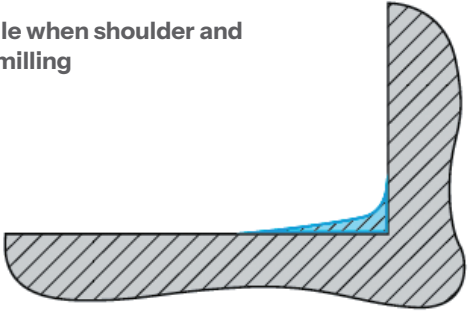
MKO-HFC / High feed cutting

Depth of cut and remaining material



R = programmed radius
Recommended $f_z \geq 0.0197$ inch/tooth

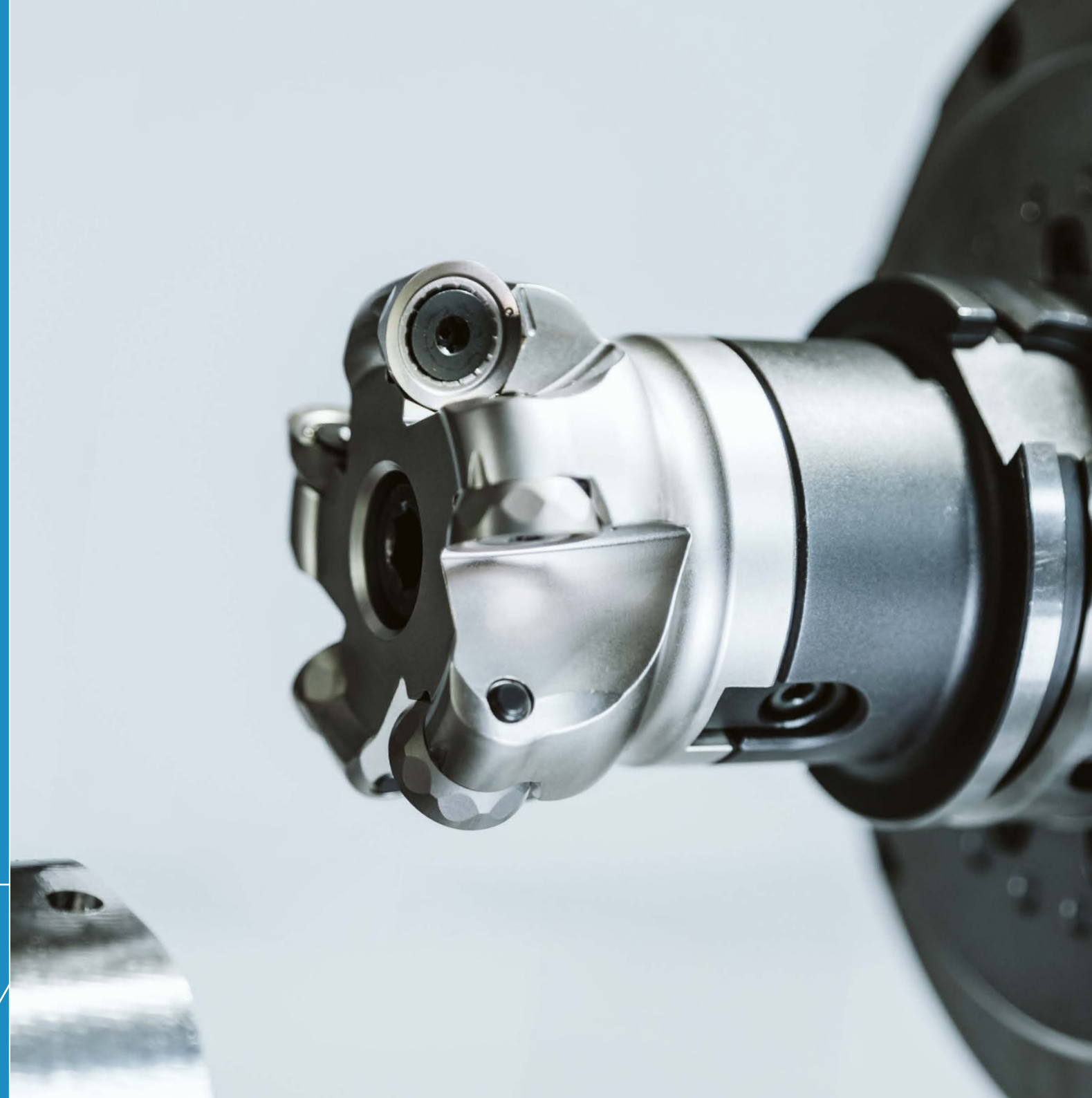
Profile when shoulder and slot milling



Insert	I [inch]	R [inch]	B [inch]	r [inch]	$a_{p\ max}$ [inch]
YQMU07	0.281	0.047	0.169	0.020	0.031
YEMU10	0.402	0.079	0.232	0.031	0.039
YEMY10	0.402	0.079	0.232	0.031	0.039
YPMU13	0.531	0.118	0.335	0.039	0.079



Technical Information



Designation system - Insert designation

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



Insert thickness

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



Facet corner radius

1st sign	s [mm]	2nd sign	α°
	r	A	3°
A	45°	B	5°
D	60°	C	7°
E	75°	D	15°
F	85°	E	20°
P	90°	F	25°
Z	Others	G	30°
		N	0°
		P	11°
		Z	Others
		O	

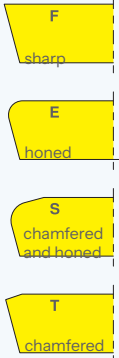
Chipbreaker designation

IDN = Steel machining
TDN = Stainless steel machining
DDN = Cast iron machining
MNN = Non-ferrous machining
YDN = Exotic machining
- = Hard material machining
RCM = Insert with specific radius

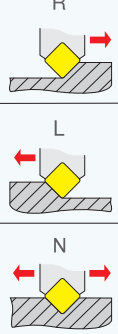
Chipbreaker

03	PD	E	R	IDN
T3	MO	E	N	MNN

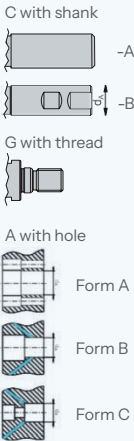
Cutting edge



Cutting direction

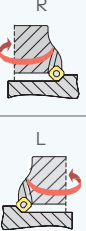


Designation system - Body designation

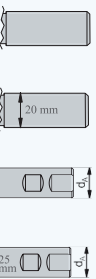


Connection / interface

Insert shape and size



Cutting direction



Connection / interface

A	MRK	S12	32	R	03	B	40	100
A	MRK	R12	32	R	03	A	70	165

Milling system

BRT = BRUTE
DLT = DELTA
EHO = ECHO
GNT = GRUNT
LBW = LONGBOW
LDR = LADRA
MKO = MIKO
MRK = MERIK
TOC = ATOC
OXM = OXMILL

Diameter

shoulder/slot cutters



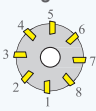
face milling cutters



round insert cutters



Effective No. of cutting edges



Working length



Overall length



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



IDN

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



TDN

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



MNN

Sharp cutting edge for aluminium and non-ferrous metals.



YDN

Stable cutting edge for dedicated exotic materials and titanium.



DDN

Strong cutting edge for cast iron applications.



MOSN

Strong reinforced cutting edge for hard material.

Grade Overview

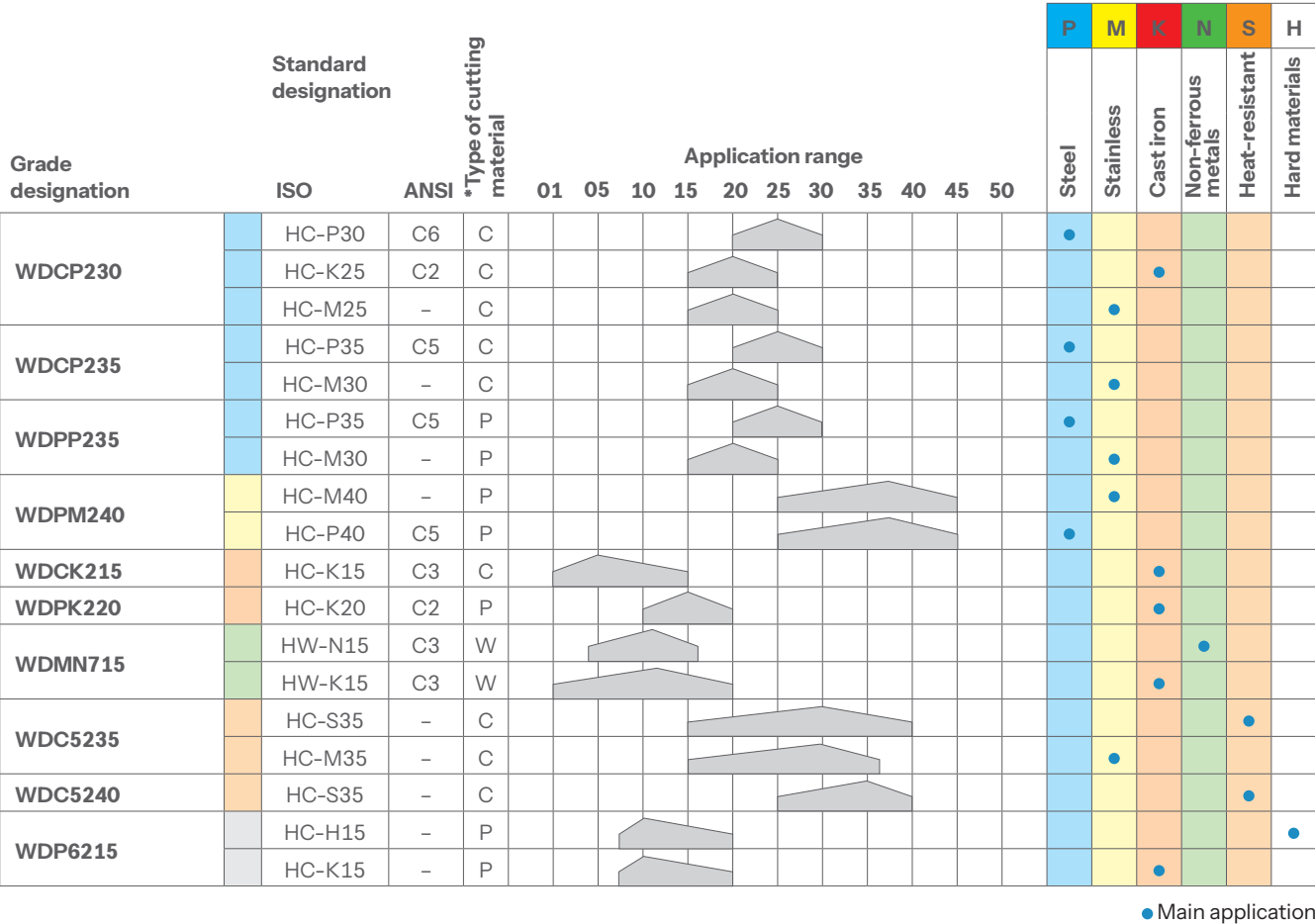
Designation system

1	Steel
2	Stainless steel
3	Cast iron
4	Light and non-ferrous metals, non metals
5	Heat resistant alloys, titanium
6	Hard materials
7	Universal grade for a variety of applications

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

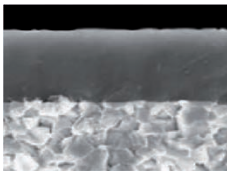
P	P	2	35
2	3	4	5
Cutting material	Main application (machining method)	ISO 513 Application range	
W Uncoated carbide	1 Turning	For example:	
C CVD coated carbide	2 Milling	05	
P PVD coated carbide	3 Parting and grooving	10	
T Uncoated cermet	4 Drilling	15	
E Coated cermet	5 Threading	25	
N Uncoated silicon nitride	6 Others	35 ISO P35	
M Coated silicon nitride	7 Universal grade for a variety of applications	...	
S Mixed ceramic			
I SiAlon			
D PCD			
B CBN			
L CBN coated			
H Sintered HSS			

Grade overview



WDPK220

HC-K20

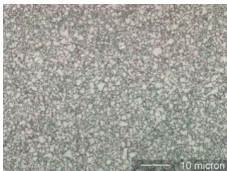


Specification:
Composition: Co 6.0 %; mixed carbides 2.0%, WC balance | Grain size: 1 μ m | Hardness: HV₃₀ 1630 |
Coating specification: PVD TiAlTaN

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

WDWN715

HW-N15 | HW-K15

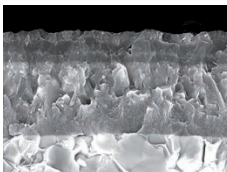


Specification:
Composition: Co 6.0 %; WC balance | Grain size: 1 μ m | Hardness: HV₃₀ 1630

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

WDC5235

HC-S35 | HC-M35

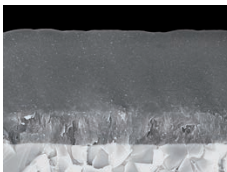


Specification:
Composition: 10.0 % binder; WC balance | Grain size: 2 μ m | Hardness: HV₃₀ 1330 |
Coating specification: CVD TiCN-Al₂O₃ multi-layer

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

WDC5240

HC-S35

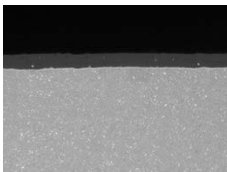


Specification:
Composition: Co 10.0 %; WC balance | Grain size: 2 μ m | Hardness: HV 1330 |
Coating specification: CVD TiN + TiB₂; 4 μ m

Recommended application:
Recommended for the machining of titanium materials.

WDP6215

HC-H15 | HC-K15

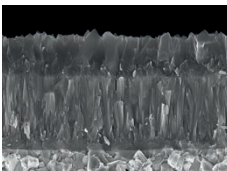


Specification:
Composition: Co 12.0 %; WC balance | Grain size: 4 μ m | Hardness: HV 1730 |
Coating specification: PVD (TiA)N; 4 μ m

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

WDPC230

HC-P30 | HC-K25 | HC-M25

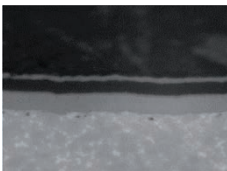


Specification:
Composition: Co 10.5 %; mixed carbides 2.0 %; WC balance | Grain size: 1-2 μ m | Hardness: HV₃₀ 1400 |
Coating specification: CVD TiCN-Al₂O₃

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

WDPC235

HC-P35 | HC-M30

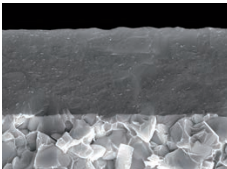


Specification:
Composition: Co 12.5%; mixed carbides 2.0%; WC balance | Grain size: fine
Hardness: HV₃₀ 1380 | Coating specification: CVD TiCN-Al₂O₃ + TiN; 7 μ m

Recommended application:
Milling Grade designed for Alloyed Steel cutting.

WDPP235

HC-P35 | HC-M30

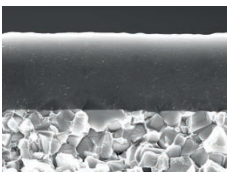


Specification:
Composition: Co 10.5 %; mixed carbide 2.0 %; WC balance | Grain size: 1-2 μ m | Hardness: HV₃₀ 1400 |
Coating specification: PVD TiAlTaN

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

WDPM240

HC-M40 | HC-P40

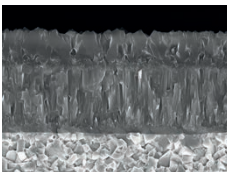


Specification:
Composition: Co 12.5 %; mixed carbides 2.0 %; WC balance | Grain size: 1 μ m | Hardness: HV₃₀ 1380 |
Coating specification: PVD TiAlTaN

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

WDCK215

HC-K15



Specification:
Composition: Co 6.0 %; mixed carbides 2.0 %; WC balance | Grain size: 1 μ m | Hardness: HV₃₀ 1600 |
Coating specification: CVD TiN, MT-TiCN; Al₂O₃

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

We reserve the right to make technical changes and product improvements.

Contact W Dynamics

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Our catalog reflects more than a collection of products — it's a toolkit for precision. Inside, you'll find cutting heads engineered for strength, stability, and speed. Each design represents thousands of hours of testing, refinement, and feedback from the field. Together, they form a system built to maximize machine potential and operator control.

In an industry defined by microns and milliseconds, W Dynamics stands for the pursuit of better — not just in what we make, but in how we think.

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