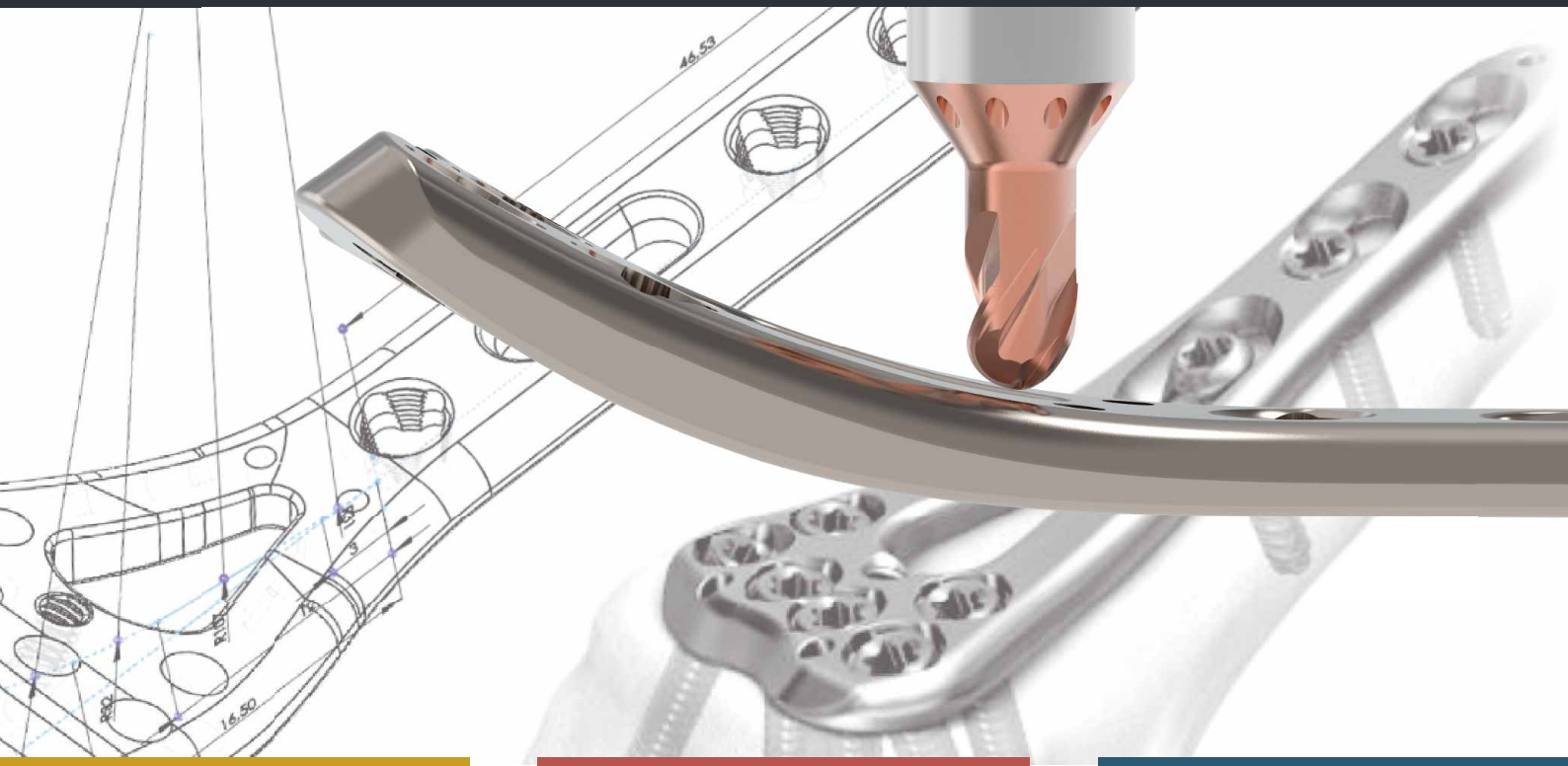
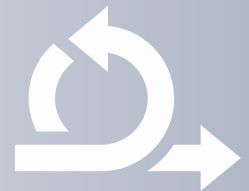


INOX MILLS

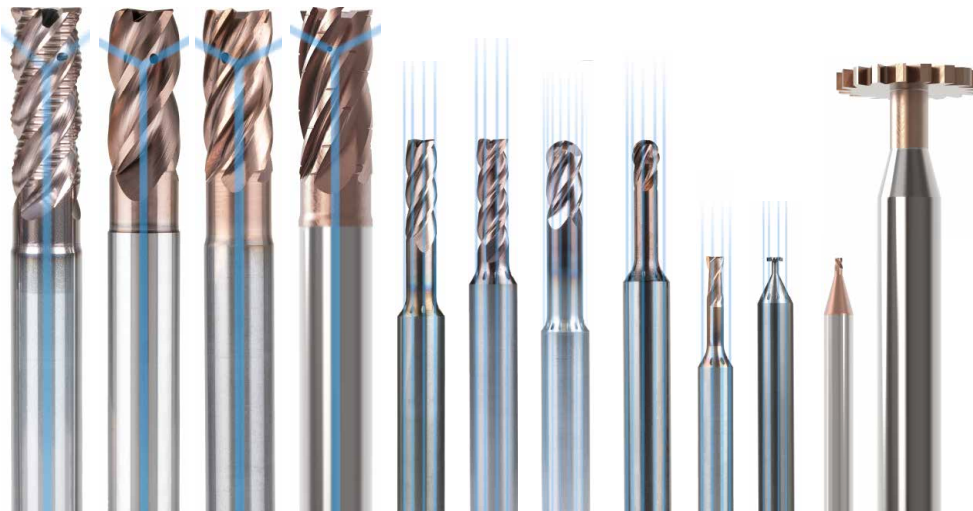
HBmicrotec[®]
ACTIONTOOLS & ENGINEERING



ACTIONMILL[®]
by HB microtec



TARGETMILL[®]
by HB microtec





ACTIONMILL[®] **TARGETMILL[®]**
by HB microtec by HB microtec



Standard Range

As specialists in machining, we consistently present pioneering manufacturing processes and tools for the automotive industry and medical technology. Customers can rely on our outstanding expertise. Our highly trained and highly motivated specialists focus their know-how and qualifications on developing innovative and forward-looking machining solutions and putting them into practice for the benefit of our customers. Together with our customers, we develop forward-looking tool technologies, carefully matching substrates, geometries and coatings to the respective requirements. We focus on rotationally symmetrical tools from 0.1 to 12 mm in diameter. Maximum machining accuracy and process reliability are our top priorities.

Our standard range includes tools for milling, drilling and deburring. Our aim is to create measurable added value for our customers with our tools. The ACTIONMILL[®] and TARGETMILL[®] tool series are successful examples of our innovative strength. We continuously develop these tools further and expand the product lines with additional variants and new products.

HB microtec - Who we are

HB microtec GmbH & Co. KG is a technologically leading manufacturer of tools for producing precision components from difficult-to-machine materials. Particularly in medical technology, aerospace, tool and mold making and hydraulics, components have to be made from hard, heat-resistant and abrasive materials such as cobalt-chrome, nickel and titanium alloys. With our new standard milling tools ACTIONMILL[®] and TARGETMILL[®], this is achieved far more economically and reliably than before.



Consulting and Service

We provide practical advice to our customers on the entire manufacturing process. In addition to selecting suitable drilling, turning, milling and deburring tools, this also covers machining strategies and programming.

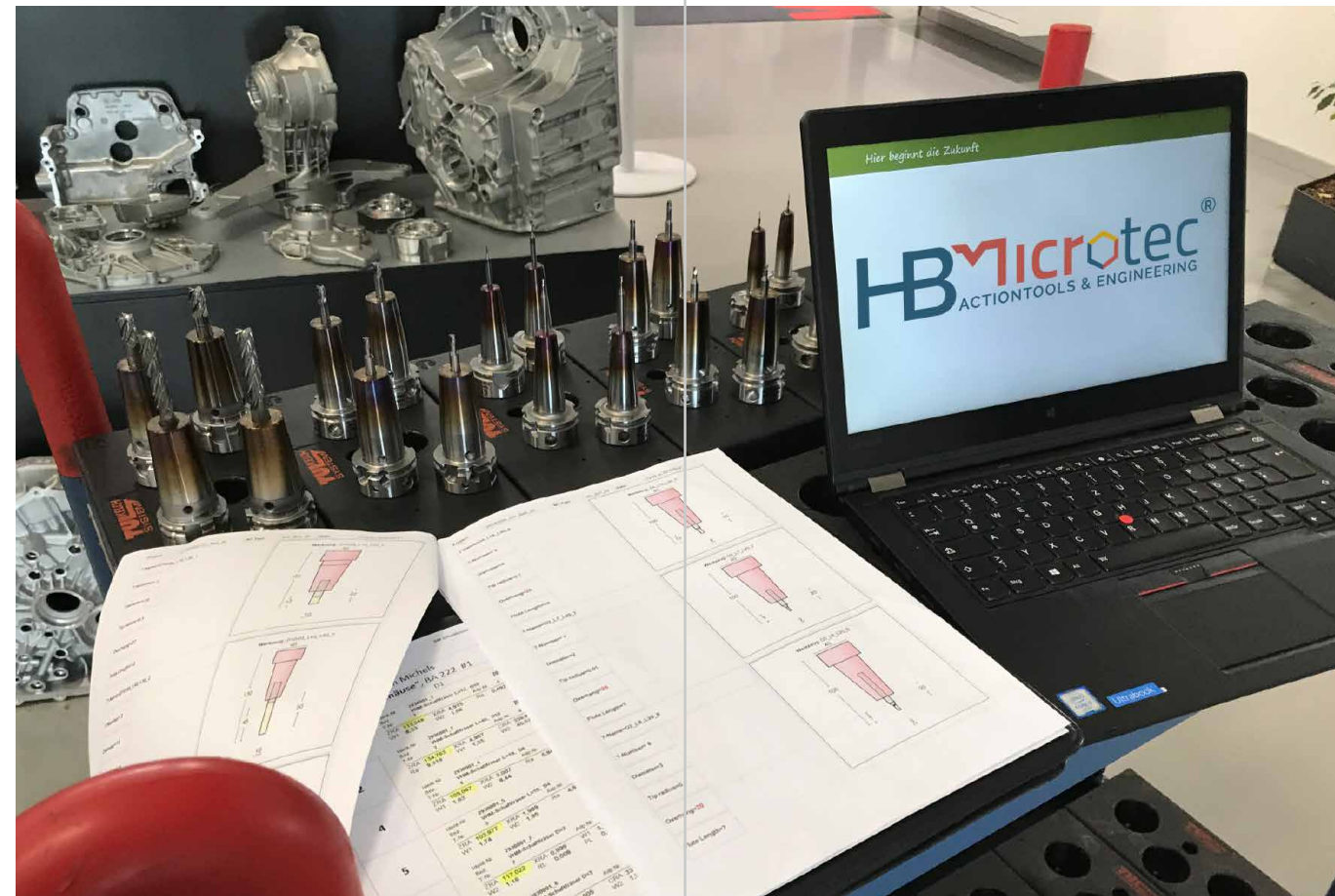
With our process-oriented and holistic solutions and our complete machining service, we are your ideal partner.

Our comprehensive services also make us a convincing OEM partner for machine tools.

Core competencies

- Comprehensive engineering
- Design of machining processes and cutting tools
- Concepts, project planning, design and manufacture of special tools
- Optimization of processes and machining strategies with the aim of process reliability, shorter run times and accuracy
- CNC and CAM programming (Solid CAM)
- Specialist seminars in turning, milling, drilling
- Fundamental technological tests for drilling, milling or turning
- Practical feasibility studies and tests
- Contract grinding and prototype manufacturing of medical technology tools

We support you with sound technical advice and assistance. Make use of our extensive know-how. We master every challenge with passion and find the right solution for every machining task!



Technical advice included in the price!

With our ACTIONTOOLS® and TARGETTOOLS®, you get more than just a "micro" tool catalog from us. Expert advice is in demand – and this is precisely where the tool specialists at HB microtec shine.

We have very broad machining knowledge and sound training in the use of your "ACTION" & "TARGET" tools on a wide variety of machine tool types. Whether CNC machining centers, single- or multi-spindle automatic lathes, short- and long-turning machines or transfer machines – we work with you to define the necessary requirements in order to create the best conditions for an optimal result.

For us, customer satisfaction means that the customer has not only received a good tool, but that everything is right in the end.

This includes not only a good price-performance ratio, but also competent technical advice when buying tools and on-site support when setting up and programming the machine.

Our advice starts with questions such as:

- Which material do you machine?
- Which coolant do you use?
- What is the maximum speed of your machine?
- Which machine tool types do you use?
- What are the kinematic conditions in the overall process? (Vibrations, strategy)
- Which programming system do you use? (Control? CAM?)
- Which clamping devices are used? (For the tool and the workpiece)
- Which tolerance range must the hole be in?
- Which batch size is to be machined?

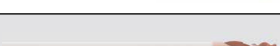
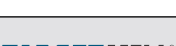


CHIRURGISCHER HAMMER / SURGICAL HAMMER

1.4057 (X17CrNi16-7)
 Ø 80 x 300 mm
 50 min // 2 set-ups // 21 tools

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		2xD INOX-Trochoid cooled	146
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Standard milling tools

ACTIONMILL INOX-micro Torx
Ø 0.2 - Ø 1.0



Overview:

- 3xD & 5xD micro mills from Ø0.2 with Z3, from Ø0.4 with Z4 up to Ø1.0
- For milling Torx® types from T4 to T30
- High profile accuracy & minimal burr formation
- Shorter process times & high process reliability
- Chrome-free coating prevents cross-contamination with medical parts

Page 18-25

ACTIONMILL INOX-micro cooled
Ø 0.1 - Ø 2.0 integrated cooling



Overview:

- 2xD cutting length & 5xD neck length micro end mills from Ø0.3 to Ø2.0
- Protected & sharp mill corner with Z2
- Integrated cooling prevents chip accumulation
- Short process times & high process reliability
- Very long tool life
- Chrome-free coating prevents cross-contamination with medical parts

Page 26-29

TARGETMILL INOX-micro
Ø 0.2 - Ø 2.0



Overview:

- 2xD to 3xD cutting edge length from Ø0.2 to Ø2.0
- Protected & sharp mill corner with Z2
- Optimum price/performance ratio
- Short process times and high process reliability
- Very long tool life
- Chrome-free coating prevents cross-contamination with medical parts

Page 30-33

ACTIONMILL INOX-Groover cooled
Ø 0.7 - Ø 8.0 integrated cooling



Overview:

- 1.5xD & 3xD cutting edge length from Ø0.7 to Ø8.0 with Z3
- Plunging, ramping (70°) or vertical (90°) drilling possible
- Roughing and finishing with just one tool
- Integrated cooling prevents chip accumulation
- Very high feed rates possible
- Short process times and high process reliability (long service life)
- Chrome-free coating prevents cross-contamination with medical parts

Page 34-43

Standard milling tools

ACTIONMILL INOX-Groover

Ø 0.7 - Ø 8.0

Overview:

- 1.5xD & 3xD cutting edge length from Ø0.7 to Ø8.0 with Z3
- Plunging, ramping (70°) or vertical (90°) drilling possible
- Roughing & finishing with just one tool
- Very long tool life
- Very high feed rates possible
- Short process times and high process reliability
- Chrome-free coating prevents cross-contamination with medical parts



Page 44-53

ACTIONMILL INOX torus cooled

Ø 1.0 - Ø 6.35 integrated cooling

Overview:

- 3xD cutting edge length and 5xD neck clearance
- Z4 torus mill from Ø1.0 to Ø6.35
- ER 0.15 to ER1.5 available from stock
- Roughing & finishing with just one tool
- Integrated cooling prevents chip accumulation
- Very high feed rates possible
- Chrome-free coating prevents cross-contamination with medical parts



Page 54-59

ACTIONMILL micro INOX Ball cooled

Ø 0.2 - Ø 1.0 integrated cooling

Overview:

- Short + rigid variant 3xD Internally cooled micro mill
- Very high feed rates possible
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Very long tool life (center cutting)



Page 60-67

ACTIONMILL INOX Ball cooled

Ø 1.0 - Ø 6.0 integrated cooling

Overview:

- 3xD & 5xD micro full radius milling cutters from Ø1.0 to Ø8.0 with Z4
- Integrated cooling prevents chip accumulation
- High-quality and precise surfaces
- Center cutting
- Short process times and high process reliability (long service life)
- Chrome-free coating prevents cross-contamination with medical parts



Page 68-73

Standard milling tools

ACTIONMILL INOX Ball

Ø 1.0 - Ø 6.0

Overview:

- 1.5xD HSC – Ball from Ø3 to Ø8 with Z4
- 3xD & 5xD micro full radius milling cutters from Ø1.0 to Ø8.0 with Z4
- High-quality and precise surfaces
- Center cutting
- Short process times and high process reliability (long service life)
- Chrome-free coating prevents cross-contamination with medical parts



Page 74-81

ACTIONMILL INOX Ball Z3 cooled

Ø 1.0 - Ø 10.0 integrated cooling

Overview:

- Very high feed rates possible
- Very long service life
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Integrated cooling prevents chip accumulation



Page 72-75

ACTIONMILL INOX Ball Z3

Ø 1.0 - Ø 6.0

Overview:

- Very high feed rates possible
- Very long service life
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Stable short version



Page 82-89

ACTIONMILL INOX Ball 260° cooled

Ø 1.0 - Ø 10.0 integrated cooling

Overview:

- 260° cutting edge circumference of the full radius mill from Ø1.0 to Ø10.0 with Z4
- Integrated cooling prevents chip accumulation
- High-quality and precise surfaces
- Undercuts possible & center cutting
- Short process times and high process reliability (long service life)
- Chrome-free coating prevents cross-contamination with medical parts



Page 90-93

Standard milling tools

ACTIONMILL INOX Ball 260° Ø 1.0 - Ø 10.0



Overview:

- 260° cutting edge circumference of the full radius mill from Ø1.0 to Ø10.0 with Z4
- Undercuts possible
- High-quality and precise surfaces
- Center cutting
- Short process times and high process reliability (long service life)
- Chrome-free coating prevents cross-contamination with medical parts

Page 94-97

ACTIONMILL INOX whirl thread cooled Ø 1.0 - Ø 10.0 integrated cooling



Overview:

- 260° cutting edge circumference of the full radius mill from Ø1.0 to Ø10.0 with Z4
- Integrated cooling prevents chip accumulation
- High-quality and precise surfaces
- Undercuts possible & center cutting
- Short process times and high process reliability (long service life)
- Chrome-free coating prevents cross-contamination with medical parts

Page 98-103

ACTIONMILL Lollipop Ø 0.8 - Ø 10.0



Overview:

- 305° cutting edge circumference of the full radius mill from Ø0.8 to Ø10.0 with Z3
- Milling or deburring of demanding and complex contours
- High-quality & precise surfaces
- Undercuts possible & center cutting
- No secondary burrs thanks to the 3 flutes
- Chrome-free coating prevents cross-contamination with medical parts

Page 104-109

ACTIONMILL INOX Cord cooled Ø 4.0 - Ø 12.0 Y-IK



Overview:

- 2xD cutting length, high-performance cord mill from Ø4 to Ø12
- Y-shaped integrated cooling
- Roughing of demanding materials such as CoCr or INOX
- Short chips increase service life
- Short process times and high process reliability
- Chrome-free coating prevents cross-contamination with medical parts

Page 110-113

Standard milling tools

ACTIONMILL INOX Cord Ø 4.0 - Ø 12.0 Y-IK



Overview:

- 2xD cutting length, high-performance cord mill from Ø4 to Ø12
- Y-shaped integrated cooling
- Roughing of demanding materials such as CoCr or INOX
- Short chips increase service life
- Short process times and high process reliability
- Chrome-free coating prevents cross-contamination with medical parts

Page 114-117

ACTIONMILL INOX HPC cooled Ø 4.0 - Ø 12.0 Y-IK



Overview:

- 2xD cutting length, high-performance HPC mill from Ø4 to Ø12
- Y-shaped integrated cooling
- Roughing and finishing of demanding materials such as CoCr or INOX
- Universally applicable
- Long service life and process reliability
- Chrome-free coating prevents cross-contamination with medical parts

Page 118-121

ACTIONMILL INOX HPC Ø 4.0 - Ø 12.0 Y-IK



Overview:

- 2xD cutting length, high-performance HPC mill from Ø4 to Ø12
- Roughing and finishing of demanding materials such as CoCr or INOX
- Universally applicable
- Long service life and process reliability
- Chrome-free coating prevents cross-contamination with medical parts

Page 122-127

ACTIONMILL INOX Finish cooled Ø 4.0 - Ø 12.0 Y-IK



Overview:

- 2xD & 3xD cutting length, high-performance HSC mill from Ø4 to Ø12
- Y-shaped integrated cooling
- Protected and sharp mill corner
- Can be used for TSC milling
- Long service life and process reliability when finishing
- Chrome-free coating prevents cross-contamination with medical parts

Page 128-135

Standard milling tools

ACTIONMILL INOX Finish XL & XXL Ø 4.0 - Ø 12.0



Overview:

- 4xD & 5xD cutting length, high-performance HSC mill from Ø4 to Ø12
- Finishing of demanding materials such as CoCr or INOX
- Protected and sharp mill corner
- Can be used for TSC milling
- Long service life and process reliability when finishing
- Chrome-free coating prevents cross-contamination with medical parts

Page 136-143

ACTIONMILL INOX Trochoid cooled Ø 4.0 - Ø 12.0 Y-IK



Overview:

- 2xD & 3xD high-performance TSC mill from Ø4 to Ø12
- High-performance tool for trochoidal machining with Y-shaped integrated cooling
- Protected & sharp mill corner
- Vibration-free machining thanks to uneven flute spacing
- Special cutting edge design for vibration damping
- Chip breaker geometry for process-reliable roughing of pockets and contours
- Chrome-free coating prevents cross-contamination with medical parts

Page 144-151

ACTIONMILL INOX Trochoid XL & XXL Ø 4.0 - Ø 12.0



Overview:

- 4xD & 5xD high-performance TSC mill from Ø4 to Ø12
- High-performance tool for trochoidal machining
- Protected and sharp mill corner
- Vibration-free machining thanks to uneven flute spacing and unequal helix angles
- Special cutting edge design for vibration damping
- Chip breaker geometry for process-reliable roughing of pockets and contours
- Chrome-free coating prevents cross-contamination with medical parts

Page 152-159

ACTIONMILL T-Slot cooled Ø 0.8 - Ø 12.0 integrated cooling



Overview:

- Quickly available, semi-standardized T-slot mill
- Integrated cooling prevents chip accumulation
- Micro and macro geometry at the highest level
- High performance at a very good price-performance ratio
- Ideal for specific applications, e.g. in medical technology
- Specialized also for difficult-to-cut materials

Page 166-167

Standard milling tools

ACTIONMILL T-Slot Ø 0.8 - Ø 16.0



Overview:

- Quickly available, semi-standardized T-slot mill
- Micro and macro geometry at the highest level
- High performance at a very good price-performance ratio
- Ideal for specific applications, e.g. in medical technology
- Specialized also for difficult-to-cut materials

Page 168-169

ACTIONMILL T-Slot Ø 20 - Ø 40.2



Overview:

- Quickly available, semi-standardized T-slot mill
- Micro and macro geometry at the highest level
- High performance at a very good price-performance ratio
- Ideal for specific applications, e.g. in medical technology
- Specialized also for difficult-to-cut materials

Page 170-177

ACTIONMILL Extern Starlobe External Torx® mill T4 to T30



Overview:

- Quickly available, semi-standardized Torx® contour mill
- For Torx® types 4 to 30
- Torx® shapes according to ISO 10664 or customized
- Micro and macro geometry at the highest level
- High performance at a very good price-performance ratio
- Ideal for specific applications, e.g. in medical technology
- High profile accuracy & minimal burr formation
- Chrome-free coating prevents cross-contamination with medical parts

Page 184-189

ACTIONMILL INOX quarter-circle mill Ø 0.2 - Ø 3.0



Overview:

- Quarter-circle mill from Ø 0.2 mm to Ø 3.0 mm
- Small inside diameters for precision engineering
- Mill radii directly – no more line milling required
- Thanks to the 4° -6° taper at both ends, no secondary burrs
- 3 flutes ensure excellent surface quality

Page 190-193

Standard milling tools

ACTIONMILL INOX quarter-circle mill Ø 0.2 - Ø 3.0

Overview:

- Quarter-circle mill from Ø 0.2 mm to Ø 3.0 mm
- Small inside diameters for precision engineering
- Mill radii directly – no more line milling required
- Thanks to the 4°-6° taper at both ends, no secondary burrs are formed
- 2 flutes ensure excellent surface quality



Page 194-197

ACTIONMILL INOX Front Chamfer Ø 0.5 - Ø 8.0 short and long XL

Overview:

- 90° mill for chamfering and deburring from Ø 0.5 mm to Ø 8.0 mm
- Deburring edges, grooves, holes, and threads
- No secondary burrs form
- Universally usable in a wide variety of materials
- 4 to 6 flutes ensure excellent surface quality



Page 198-201

TARGETMILL Double Chamfer Ø 0.2 - Ø 6.0

Overview:

- 90° forward & backward deburrer from Ø 2.0 mm to Ø 6.0 mm
- No secondary burrs form
- Universally usable in a wide variety of materials
- 3 to 4 flutes ensure excellent surface quality



Page 202-205

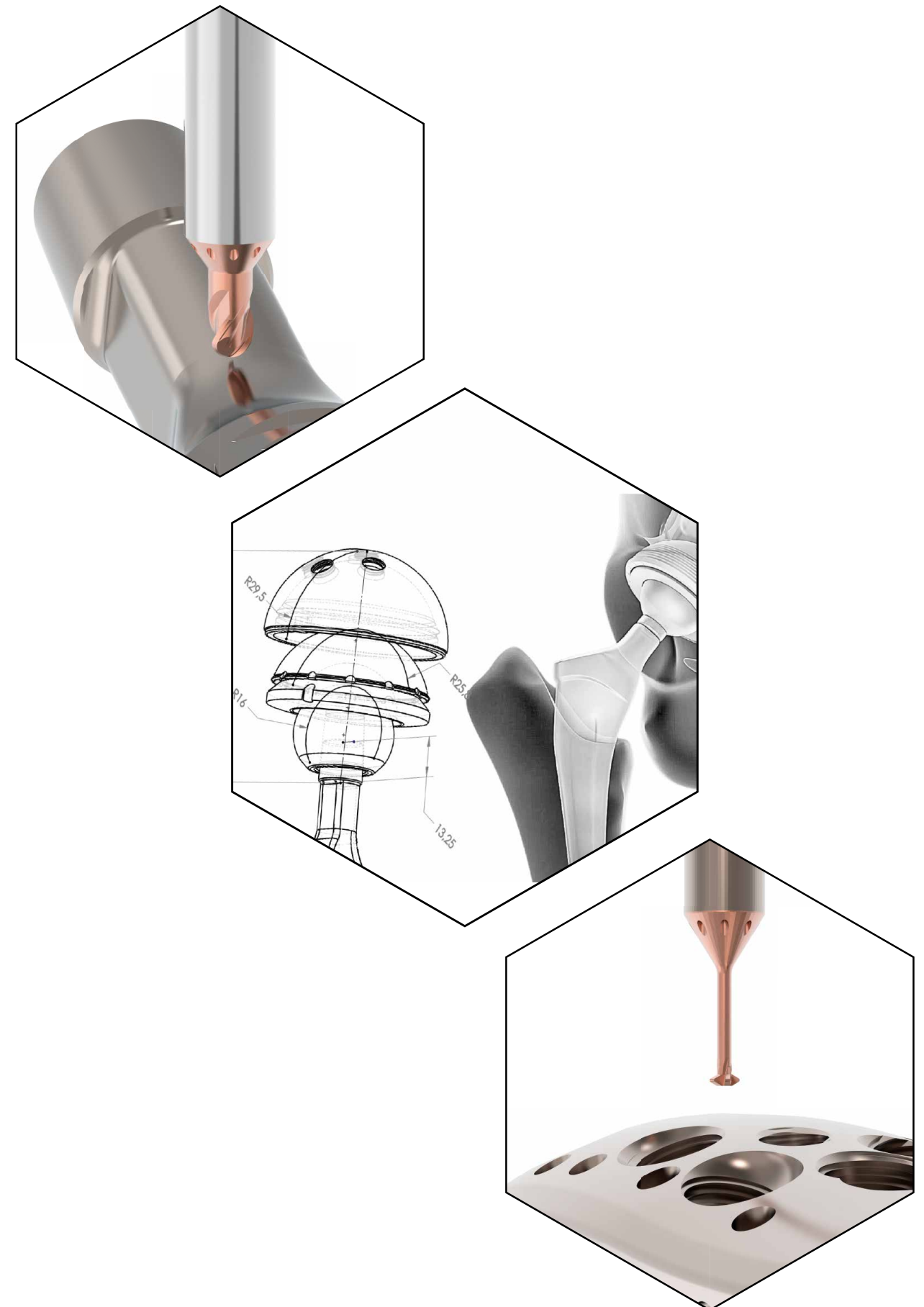
TARGETMILL Back-Chamfer Ø 0.5

Overview:

- Back deburrer for holes from Ø 0.5 mm
- "Micro" deburrer from Ø 0.46 mm to Ø 4.7 mm
- No secondary burrs form
- Universally usable in a wide variety of materials
- 3 to 6 cutting edges ensure excellent surface quality



Page 206-207



INOX-micro Torx® 3xD

INOX-micro Torx® 5xD

from Ø 0.2 mm
to Ø 1.0 mm

The high-performance α-INOX
coating guarantees a long tool life
and prevents the cutting edges from
sticking.

Z3-4 - Sharp

3xD Neck length

5xD Neck length

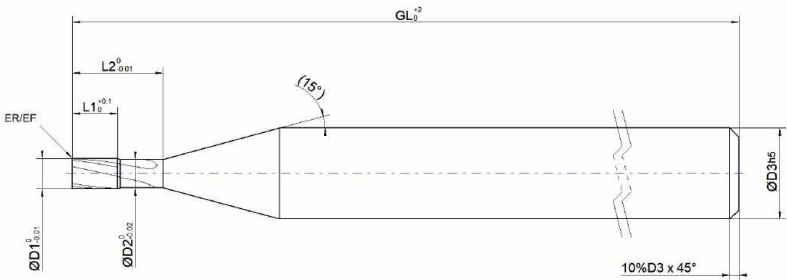
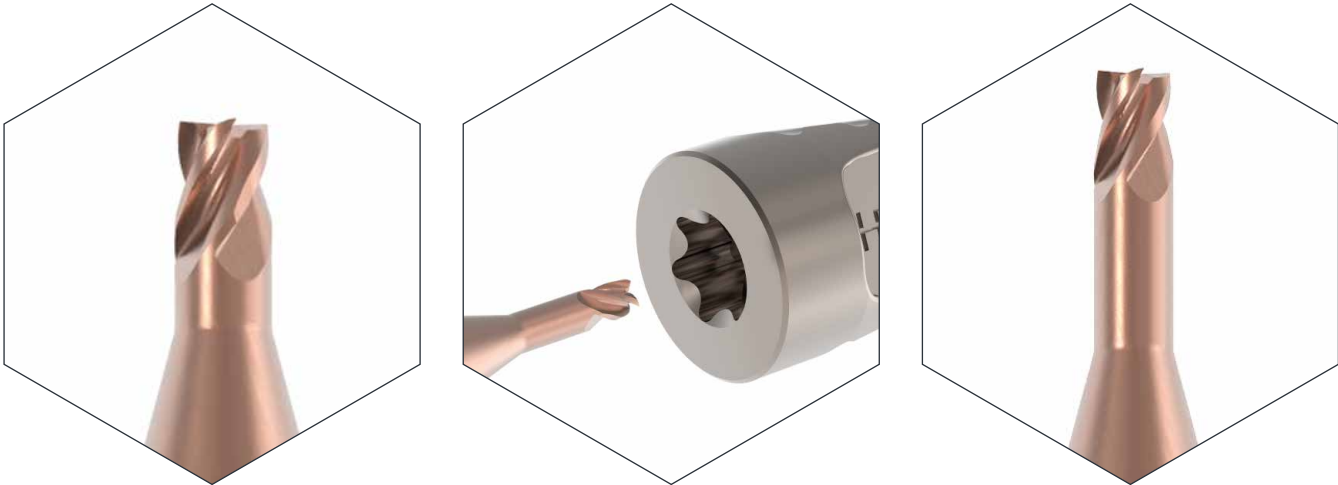
Z3-4 - Sharp

The reinforced shank in h6 quality
combined with an optimized effective
length makes the tool robust and
vibration-free.

High feed and cutting speeds are
made possible by the use of ultra-
fine grain solid carbide with high
fracture toughness.

ACTIONMILL®
by HB microtec
INOX-micro Torx®

ACTIONMILL®
by HB microtec
INOX-micro Torx®

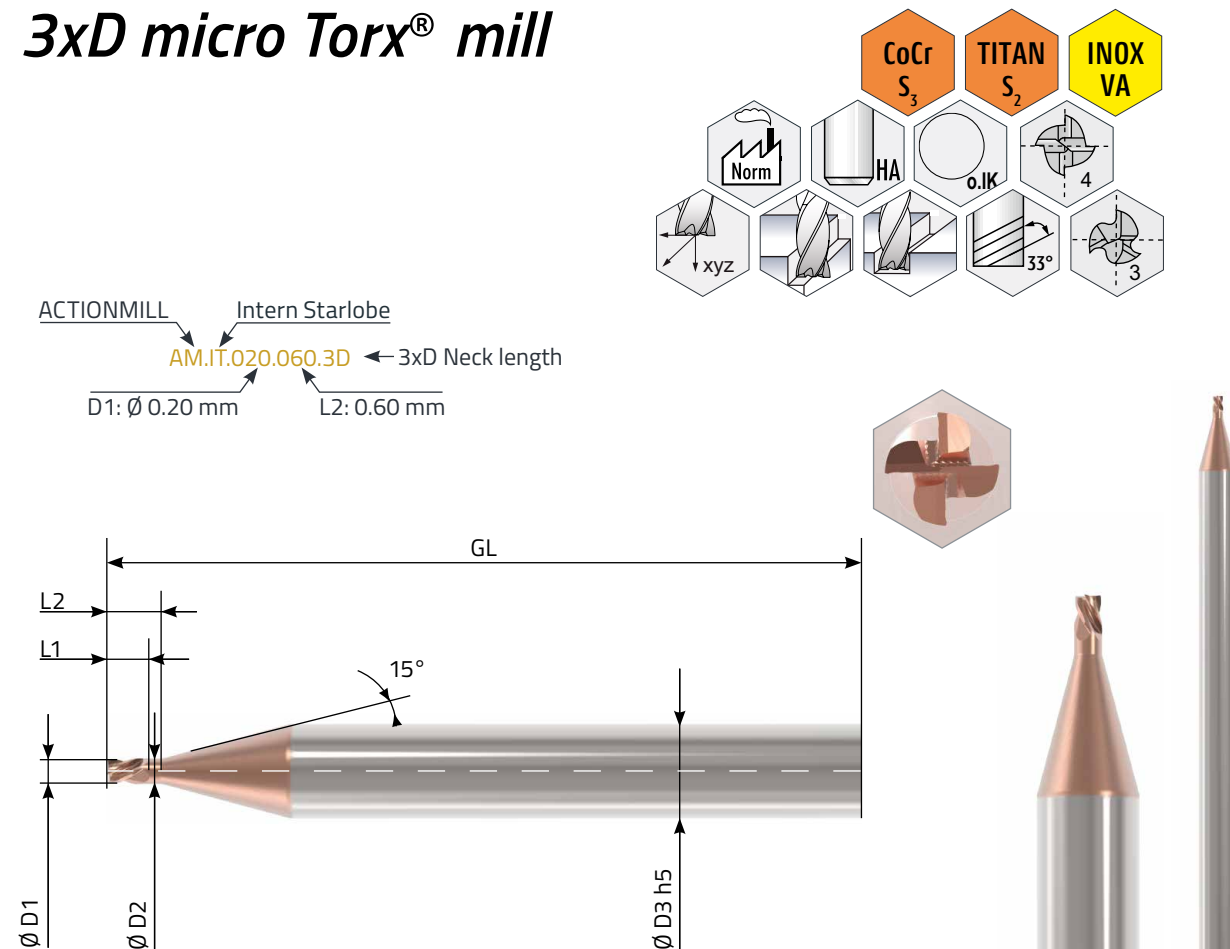


☐ Order Order number: _____ ☐ Inquiry

Dimensions: D ₁ : _____ GL: _____ EF: _____ D ₂ : _____ L ₁ : _____ ER: _____ D ₃ : _____ L ₂ : _____ Z: _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

3xD micro Torx[®] mill



■ α-INOX coated

5 PRO's of the ACTIONMILL:

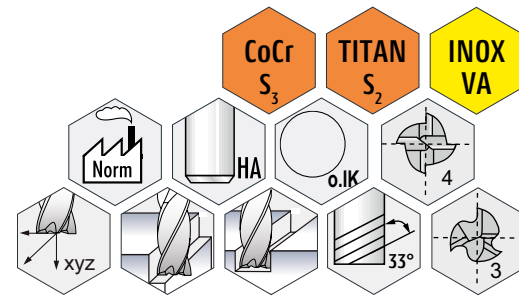
- Micro mill from Ø0.2 with Z3 from Ø0.4 with Z4
- For milling Torx[®] types from T4 to T30
- High profile accuracy & minimal burr formation
- Shorter process times and high process reliability
- Chrome-free coating prevents cross-contamination with medical parts

Article number	"Torx [®] " Starlobe	D1 0/-0.01	D2 0/-0.02	D3 h5	L1 0/+0.1	L2 0/-0.01	GL (mm)	No. of flutes
AM.IT.020.060.3D	T4	Ø 0.20	Ø 0.18	Ø 3.00	0.30	0.60	39.00	3
AM.IT.025.075.3D	T5	Ø 0.25	Ø 0.24	Ø 3.00	0.38	0.75	39.00	3
AM.IT.030.090.3D	T6/T7	Ø 0.30	Ø 0.28	Ø 3.00	0.45	0.90	39.00	3
AM.IT.040.120.3D	T8/T10	Ø 0.40	Ø 0.38	Ø 3.00	0.60	1.20	39.00	4
AM.IT.050.150.3D	T10/T15	Ø 0.50	Ø 0.47	Ø 3.00	0.75	1.50	39.00	4
AM.IT.060.180.3D	T20	Ø 0.60	Ø 0.56	Ø 3.00	0.90	1.80	39.00	4
AM.IT.080.240.3D	T25	Ø 0.80	Ø 0.75	Ø 3.00	1.20	2.40	39.00	4
AM.IT.100.300.3D	T30	Ø 1.00	Ø 0.94	Ø 3.00	1.50	3.00	39.00	4

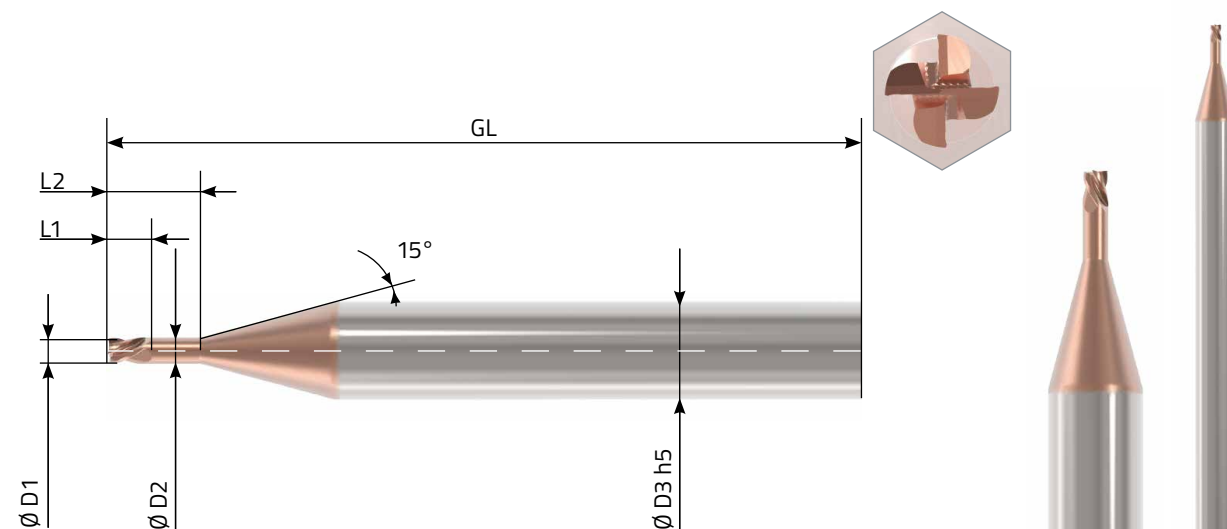
Available from stock



5xD micro Torx[®] mill



ACTIONMILL Intern Starlobe
AM.IT.020.100.5D ← 5xD Neck length
D1: Ø 0.20 mm L2: 1.00 mm



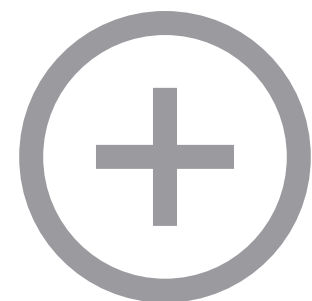
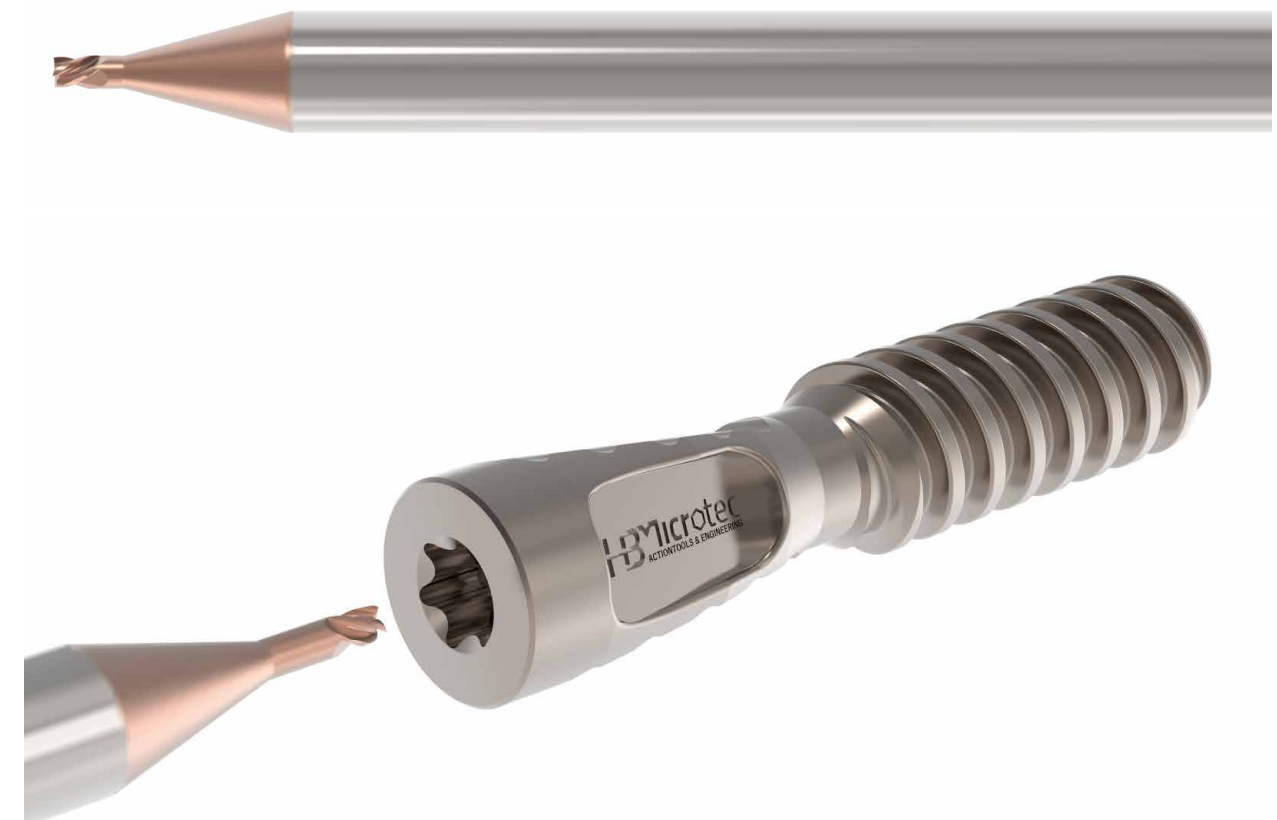
■ α-INOX coated

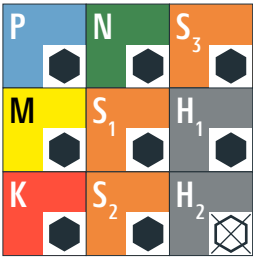
5 PRO's of the ACTIONMILL:

- Micro mill from Ø0.2 with Z3 from Ø0.4 with Z4
- For milling Torx[®] types from T4 to T30
- High profile accuracy & minimal burr formation
- Shorter process times and high process reliability
- Chrome-free coating prevents cross-contamination with medical parts

Article number	"Torx [®] " Starlobe	D1 0/-0.01	D2 0/-0.02	D3 h5	L1 0/+0.1	L2 0/-0.01	GL (mm)	No. of flutes
AM.IT.020.100.5D	T4	Ø 0.20	Ø 0.18	Ø 3.00	0.30	1.00	39.00	3
AM.IT.025.125.5D	T5	Ø 0.25	Ø 0.24	Ø 3.00	0.38	1.25	39.00	3
AM.IT.030.150.5D	T6/T7	Ø 0.30	Ø 0.28	Ø 3.00	0.45	1.50	39.00	3
AM.IT.040.200.5D	T8/T10	Ø 0.40	Ø 0.38	Ø 3.00	0.60	2.00	39.00	4
AM.IT.050.250.5D	T10/T15	Ø 0.50	Ø 0.47	Ø 3.00	0.75	2.50	39.00	4
AM.IT.060.300.5D	T20	Ø 0.60	Ø 0.56	Ø 3.00	0.90	3.00	39.00	4
AM.IT.080.400.5D	T25	Ø 0.80	Ø 0.75	Ø 3.00	1.20	4.00	39.00	4
AM.IT.100.500.5D	T30	Ø 1.00	Ø 0.94	Ø 3.00	1.50	5.00	39.00	4

Available from stock





Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537

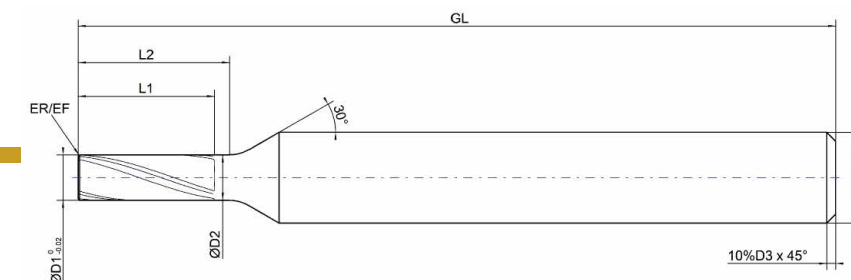
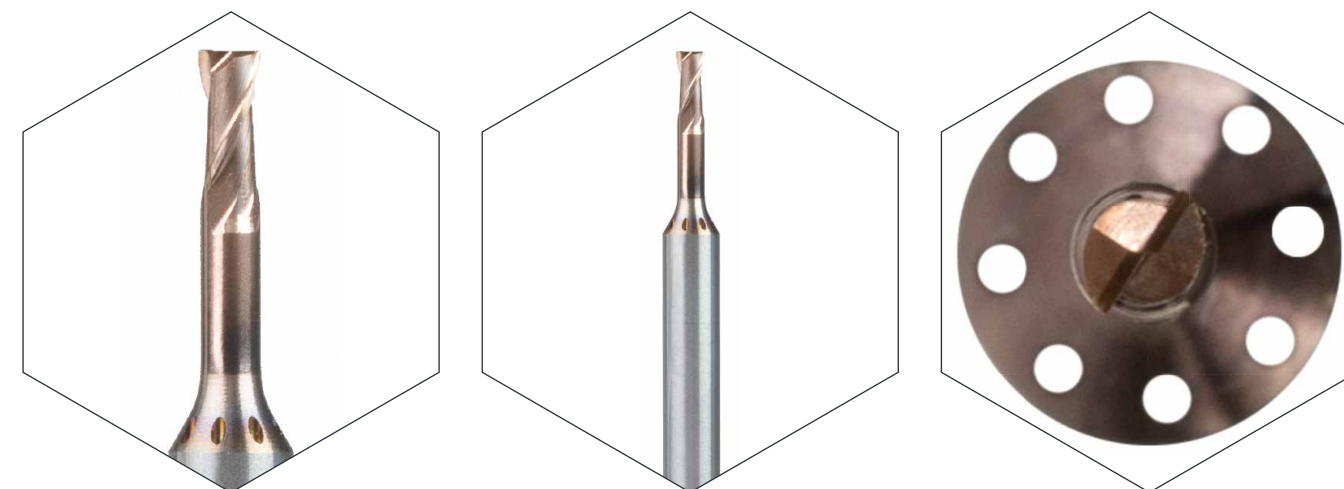
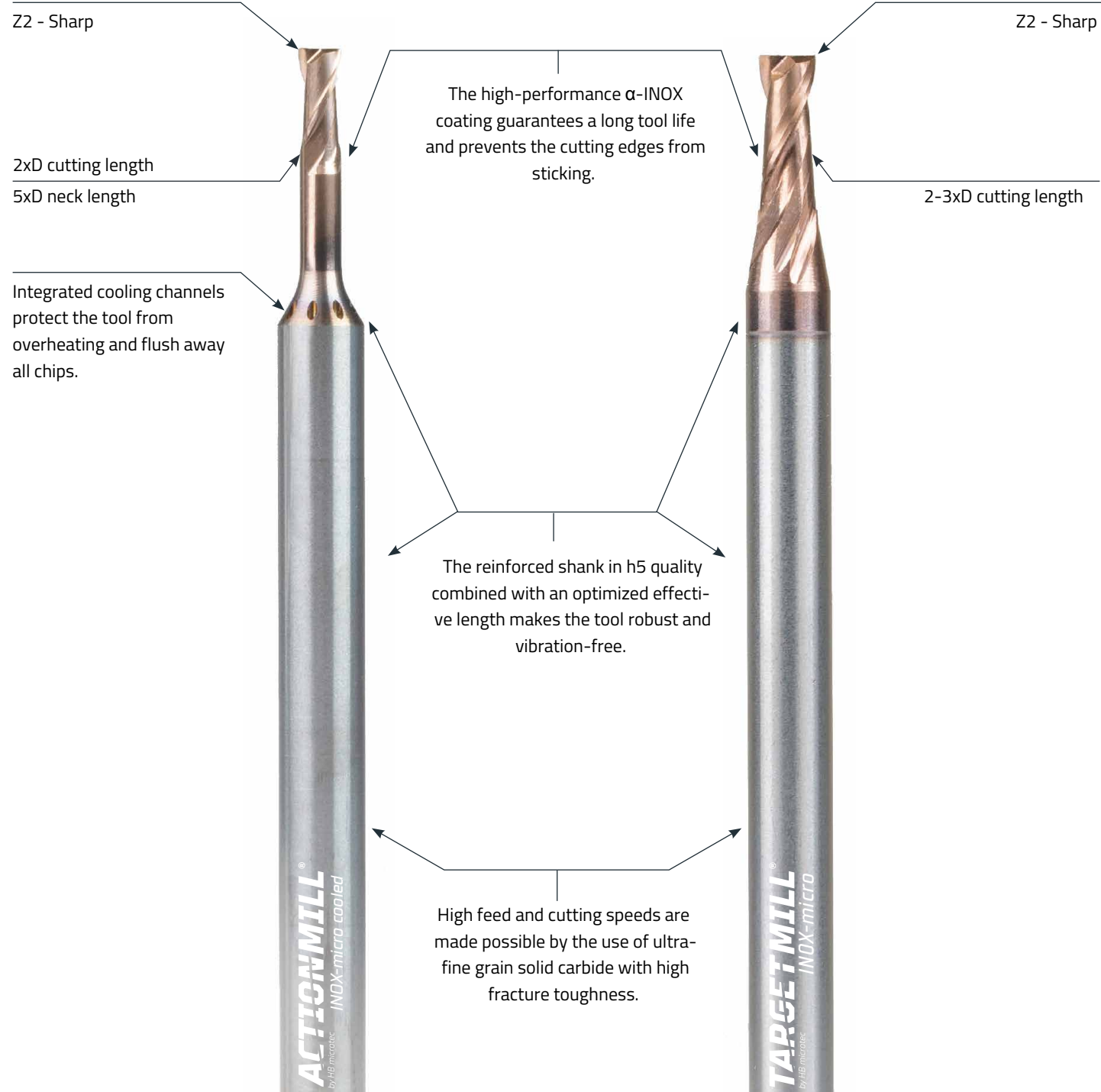
Recommended use Highly suitable Partially suitable Not recommended

T4-T7		T8-T15		T20-T30	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
30-50	0.001-0.003	40-70	0.003-0.006	60-100	0.006-0.010
30-50	0.003-0.006	40-70	0.008-0.015	60-100	0.015-0.03
30-50	0.001-0.003	40-70	0.008-0.015	60-100	0.015-0.03
30-50	0.001-0.003	40-70	0.008-0.015	60-100	0.015-0.03

INOX-micro cooled

INOX-micro

from Ø 0.2 mm
to Ø 2.0 mm



☐ Order

Order number: _____

☐ Inquiry

Dimensions:

D₁: _____ GL: _____ EF: _____

D₂: _____ L₁: _____ ER: _____

D₃: _____ L₂: _____ Z: _____

Coating:

☐ Coated*: _____

☐ Uncoated

Cooling channels:

☐ Yes ☐ No

Cutting direction:

☐ Left ☐ Right

Material to be machined:

Shank shape:

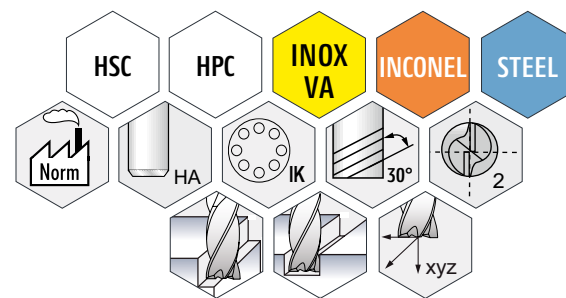
Quantity:

Date, signature & company stamp:

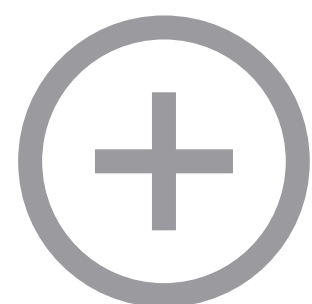
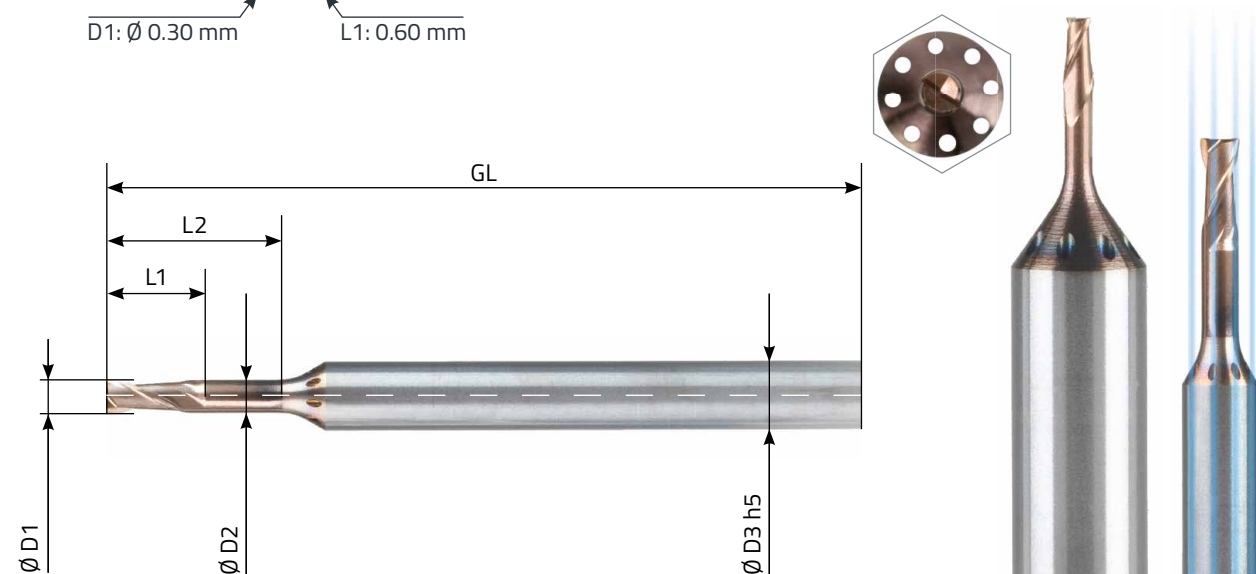
Contact person:

* Without further information, the most suitable coating will be used.

5xD INOX-micro cooled



ACTIONMILL
INOX-micro
AM.IM.030.060.IK ← Integrated cooling
D1: Ø 0.30 mm L1: 0.60 mm



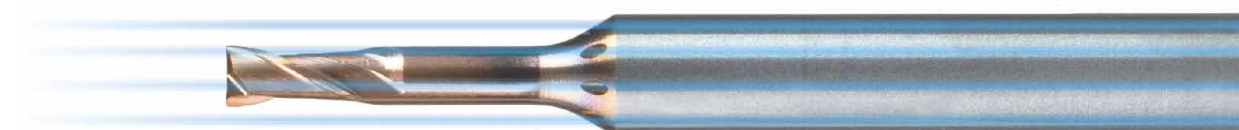
5 PRO's of the ACTIONMILL:

- Protected & sharp mill corner
- Integrated cooling prevents chip accumulation
- Very high feed rates possible
- Short process times and high process reliability
- Very long tool life

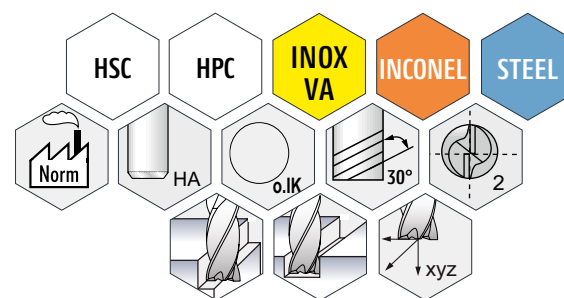
Article number	D1 (mm)	D2 (mm)	D3 h5 (mm)	L1 (mm)	L2 (5xD / mm)	GL (mm)
AM.IM.020.040.IK	Ø0.20	Ø0.18	Ø4.00	0.40	1.00	40.00
AM.IM.030.060.IK	Ø 0.30	Ø 0.25	Ø 4.00	0.60	1.50	40.00
AM.IM.040.080.IK	Ø 0.40	Ø 0.35	Ø 4.00	0.80	2.00	40.00
AM.IM.050.100.IK	Ø 0.50	Ø 0.45	Ø 4.00	1.00	2.50	40.00
AM.IM.060.120.IK	Ø 0.60	Ø 0.55	Ø 4.00	1.20	3.00	40.00
AM.IM.070.140.IK	Ø 0.70	Ø 0.65	Ø 4.00	1.40	3.50	40.00
AM.IM.080.160.IK	Ø 0.80	Ø 0.74	Ø 4.00	1.60	4.00	40.00
AM.IM.090.180.IK	Ø 0.90	Ø 0.82	Ø 4.00	1.80	4.50	40.00
AM.IM.100.200.IK	Ø 1.00	Ø 0.90	Ø 4.00	2.00	5.00	40.00
AM.IM.110.220.IK	Ø 1.10	Ø 1.00	Ø 4.00	2.20	5.50	40.00
AM.IM.120.240.IK	Ø 1.20	Ø 1.10	Ø 4.00	2.40	6.00	40.00
AM.IM.130.260.IK	Ø 1.30	Ø 1.20	Ø 4.00	2.60	6.50	40.00
AM.IM.140.280.IK	Ø 1.40	Ø 1.30	Ø 4.00	2.80	7.00	40.00
AM.IM.150.300.IK	Ø 1.50	Ø 1.40	Ø 4.00	3.00	7.50	50.00
AM.IM.160.320.IK	Ø 1.60	Ø 1.50	Ø 4.00	3.20	8.00	50.00
AM.IM.170.340.IK	Ø 1.70	Ø 1.60	Ø 4.00	3.40	8.50	50.00
AM.IM.180.360.IK	Ø 1.80	Ø 1.70	Ø 4.00	3.60	9.00	50.00
AM.IM.190.380.IK	Ø 1.90	Ø 1.80	Ø 4.00	3.80	9.50	50.00
AM.IM.200.400.IK	Ø 2.00	Ø 1.90	Ø 4.00	4.00	10.00	50.00

Available from stock

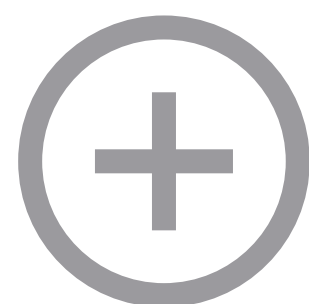
- α-INOX coated



INOX-micro



TARGETMILL INOX-micro
TM.IM.020.050
D1: Ø 0.20 mm L1: 0.50 mm



5 PRO's of the ACTIONMILL:

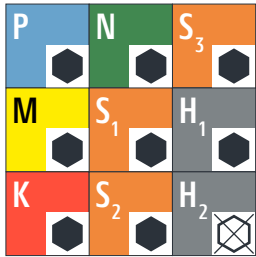
- Protected & sharp mill corner
- Optimum price/performance ratio
- High feed rates possible
- Short process times and high process reliability
- Long tool life

Article number	D1 (mm)	D3 h6 (mm)	L1 (mm)	Z	GL (mm)
TM.IM.020.050	Ø 0.20	3.00	0.50	2.00	38.00
TM.IM.025.050	Ø 0.25	3.00	0.50	2.00	38.00
TM.IM.030.100	Ø 0.30	3.00	1.00	2.00	38.00
TM.IM.040.100	Ø 0.40	3.00	1.00	2.00	38.00
TM.IM.050.150	Ø 0.50	3.00	1.50	2.00	38.00
TM.IM.060.150	Ø 0.60	3.00	1.50	2.00	38.00
TM.IM.070.200	Ø 0.70	3.00	2.00	2.00	38.00
TM.IM.080.200	Ø 0.80	3.00	2.00	2.00	38.00
TM.IM.090.250	Ø 0.90	3.00	2.50	2.00	38.00
TM.IM.100.300	Ø 1.00	3.00	3.00	2.00	38.00
TM.IM.110.300	Ø 1.10	3.00	3.00	2.00	38.00
TM.IM.120.400	Ø 1.20	3.00	4.00	2.00	38.00
TM.IM.130.400	Ø 1.30	3.00	4.00	2.00	38.00
TM.IM.140.400	Ø 1.40	3.00	4.00	2.00	38.00
TM.IM.150.400	Ø 1.50	3.00	4.00	2.00	38.00
TM.IM.160.400	Ø 1.60	3.00	4.00	2.00	38.00
TM.IM.170.400	Ø 1.70	3.00	4.00	2.00	38.00
TM.IM.180.500	Ø 1.80	3.00	5.00	2.00	38.00
TM.IM.190.500	Ø 1.90	3.00	5.00	2.00	38.00
TM.IM.200.500	Ø 2.00	3.00	5.00	2.00	38.00

Available from stock

- α-INOX coated





Recommended use Highly suitable Partially suitable Not recommended

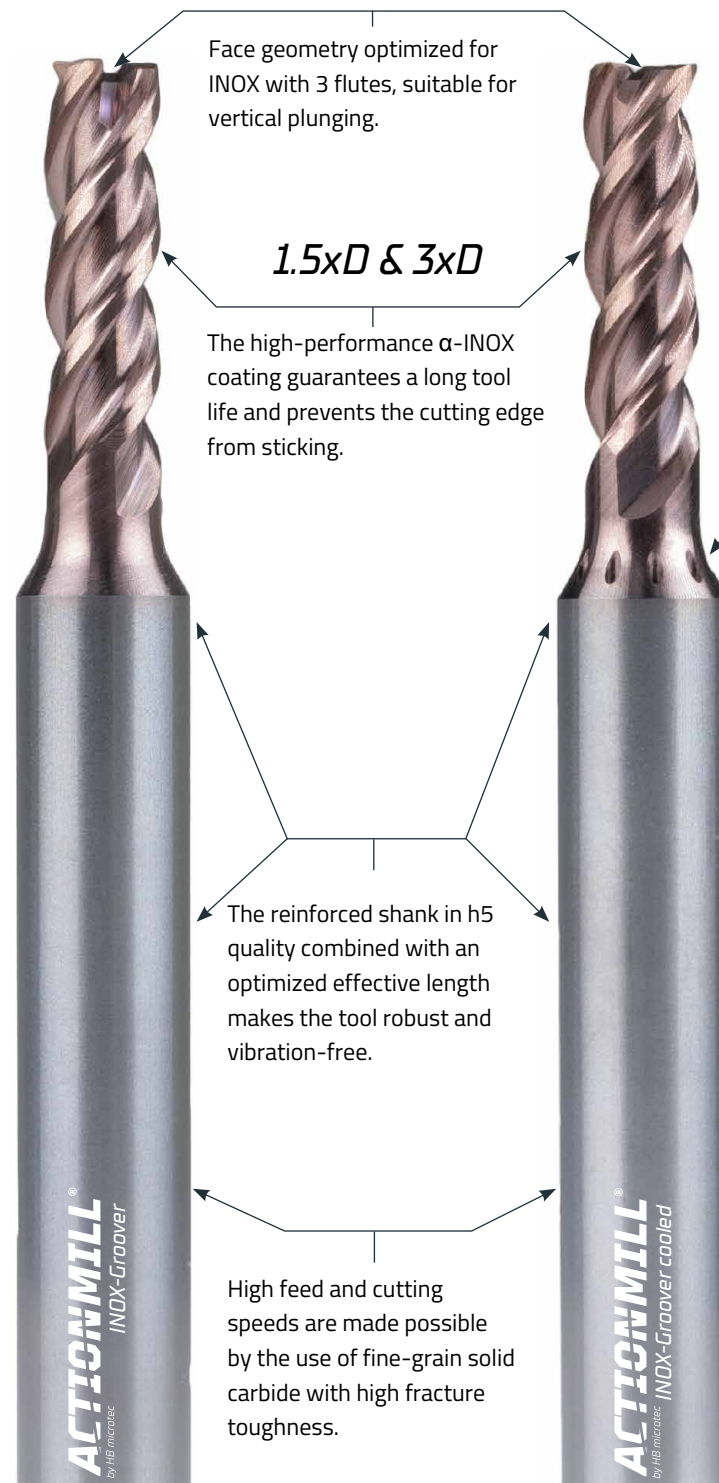
Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Ø 0.3 - 0.8 mm		Ø 0.8 - 1.4 mm		Ø 1.4 - 2.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
20-60	0.003 - 0.01	30-60	0.006 - 0.012	30-70	0.008 - 0.016
20-60	0.003 - 0.01	30-60	0.006 - 0.012	30-70	0.008 - 0.016
20-60	0.003 - 0.01	30-60	0.006 - 0.012	30-70	0.008 - 0.016
20-60	0.003 - 0.01	30-70	0.006 - 0.012	30-75	0.008 - 0.016
20-70	0.004 - 0.01	30-70	0.008 - 0.018	30-75	0.01 - 0.022
20-70	0.003 - 0.01	30-70	0.006 - 0.014	30-75	0.008 - 0.02
20-70	0.003 - 0.01	30-60	0.006 - 0.014	30-70	0.008 - 0.02
30-60	0.003 - 0.01	25-60	0.006 - 0.014	25-70	0.006 - 0.018
15-60	0.003 - 0.008	30-60	0.006 - 0.014	30-60	0.008 - 0.02
15-60	0.003 - 0.008	30-60	0.006 - 0.014	30-60	0.008 - 0.02
15-60	0.003 - 0.008	30-60	0.006 - 0.014	30-60	0.008 - 0.02
no data available					
no data available					

INOX-Groover

INOX-Groover cooled

from Ø 0.7
to Ø 8.0



Face geometry optimized for INOX with 3 flutes, suitable for vertical plunging.

1.5xD & 3xD

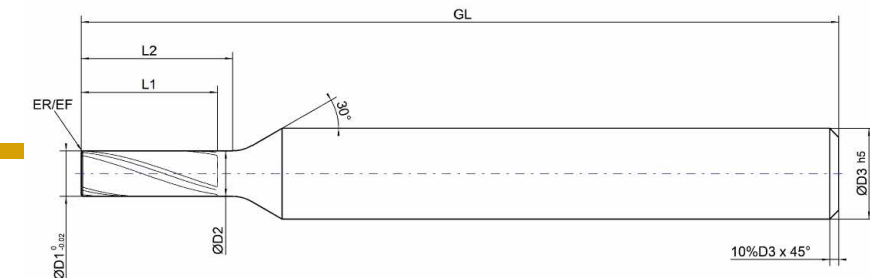
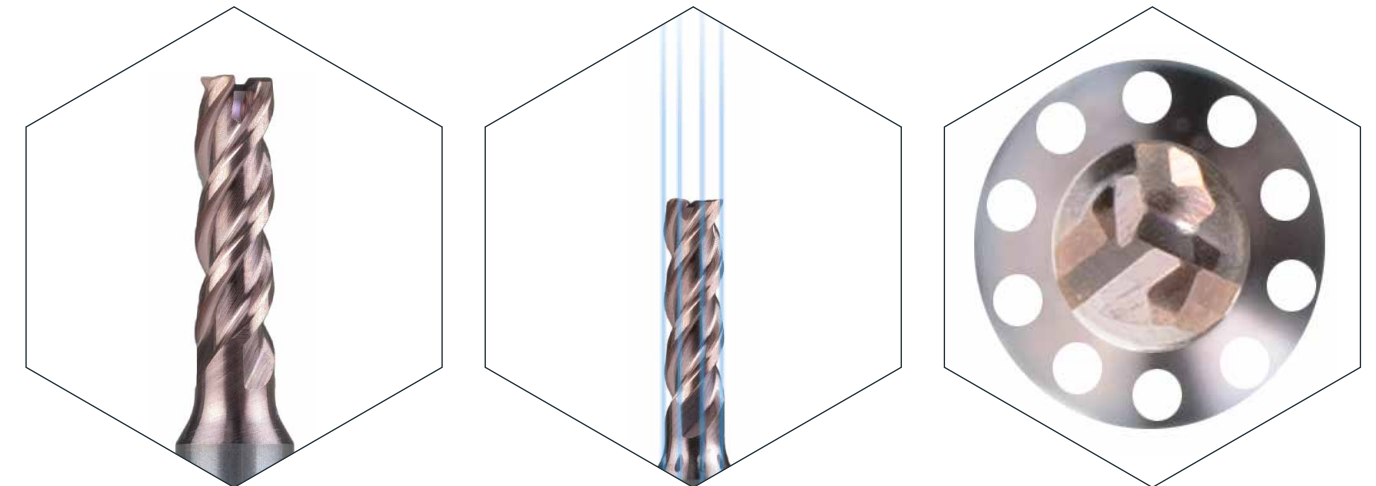
The high-performance α -INOX coating guarantees a long tool life and prevents the cutting edge from sticking.

Integrated cooling channels protect the tool from overheating when cutting titanium alloys and stainless steels.

The reinforced shank in h5 quality combined with an optimized effective length makes the tool robust and vibration-free.

High feed and cutting speeds are made possible by the use of fine-grain solid carbide with high fracture toughness.

from Ø 0.7
to Ø 8.0



☐ Order

Order number: _____

☐ Inquiry

Dimensions:

D₁: _____ GL: _____ EF: ☐

D₂: _____ L₁: _____ ER: ☐

D₃: _____ L₂: _____ Z: _____

Coating:

☐ Coated*: _____

☐ Uncoated

With cooling channels?

☐ Yes ☐ No

Cutting direction:

☐ Left ☐ Right

Material to be machined:

Shank shape:

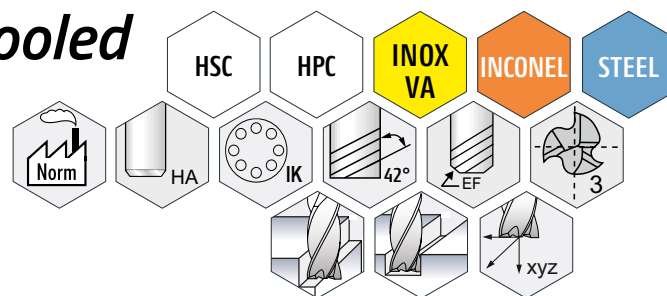
Quantity:

Date, signature & company stamp:

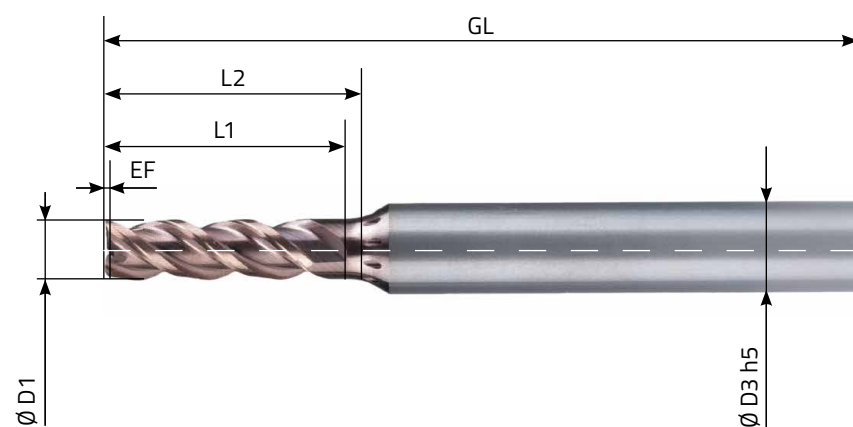
Contact person:

* Without further information, the most suitable coating will be used.

1.5xD INOX-Groover cooled



ACTIONMILL
Groover
Integrated cooling
AM.GR.100.150.IK-1.5D
D1: Ø 1.00 mm
L1: 1.50 mm



5 PRO's of the ACTIONMILL:

- Plunging, ramping (70°) or vertical (90°) drilling possible
- Roughing and finishing with just one tool
- Very high feed rates possible
- Short process times and high process reliability
- Very long tool life

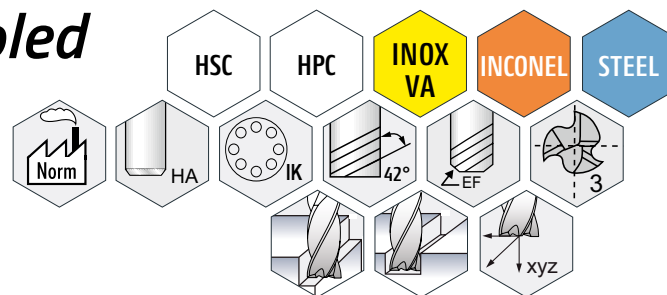
Article number	D1 +0/-0.02 (mm)	D1 (inch)	D3 h5 (mm)	L1 (1.5xD1/mm)	L2 (mm)	EF (45°) (mm)	GL (mm)
AM.GR.070.100.IK-1.5D	Ø 0.700	-	Ø 4.00	1.00	1.80	0.02	40.00
AM.GR.080.120.IK-1.5D	Ø 0.800	-	Ø 4.00	1.20	2.00	0.02	40.00
AM.GR.090.130.IK-1.5D	Ø 0.900	-	Ø 4.00	1.30	2.30	0.02	40.00
AM.GR.100.150.IK-1.5D	Ø 1.000	-	Ø 4.00	1.50	2.50	0.03	40.00
AM.GR.120.180.IK-1.5D	Ø 1.200	-	Ø 4.00	1.80	3.00	0.03	40.00
AM.GR.150.220.IK-1.5D	Ø 1.500	-	Ø 4.00	2.20	3.30	0.03	40.00
AM.GR.1587.240.IK-1.5D	Ø 1.587	1/16"	Ø 4.00	2.40	3.40	0.03	40.00
AM.GR.180.270.IK-1.5D	Ø 1.800	-	Ø 4.00	2.70	3.70	0.03	50.00
AM.GR.200.300.IK-1.5D	Ø 2.000	-	Ø 4.00	3.00	4.00	0.03	50.00
AM.GR.220.330.IK-1.5D	Ø 2.200	-	Ø 4.00	3.30	4.30	0.03	50.00
AM.GR.2381.360.IK-1.5D	Ø 2.381	3/32"	Ø 4.00	3.60	4.60	0.05	50.00
AM.GR.250.370.IK-1.5D	Ø 2.500	-	Ø 6.00	3.70	4.80	0.05	50.00
AM.GR.280.420.IK-1.5D	Ø 2.800	-	Ø 6.00	4.20	5.20	0.05	50.00
AM.GR.300.450.IK-1.5D	Ø 3.000	-	Ø 6.00	4.50	5.50	0.05	50.00
AM.GR.3175.480.IK-1.5D	Ø 3.175	1/8"	Ø 6.00	4.80	5.80	0.05	50.00
AM.GR.350.520.IK-1.5D	Ø 3.500	-	Ø 6.00	5.20	6.30	0.05	50.00
AM.GR.370.550.IK-1.5D	Ø 3.700	-	Ø 6.00	5.50	6.60	0.05	50.00
AM.GR.3968.600.IK-1.5D	Ø 3.968	5/32"	Ø 6.00	6.00	6.90	0.05	50.00
AM.GR.400.600.IK-1.5D	Ø 4.000	-	Ø 6.00	6.00	6.90	0.05	50.00
AM.GR.430.650.IK-1.5D	Ø 4.300	-	Ø 8.00	6.50	7.40	0.05	68.00
AM.GR.4762.710.IK-1.5D	Ø 4.762	3/16"	Ø 8.00	7.10	8.20	0.05	68.00
AM.GR.500.750.IK-1.5D	Ø 5.000	-	Ø 8.00	7.50	8.50	0.05	68.00
AM.GR.5556.830.IK-1.5D	Ø 5.556	7/32"	Ø 8.00	8.30	9.40	0.05	68.00
AM.GR.600.900.IK-1.5D	Ø 6.000	-	Ø 8.00	9.00	10.00	0.05	68.00
AM.GR.6350.900.IK-1.5D	Ø 6.350	1/4"	Ø 10.00	9.00	10.00	0.05	84.00
AM.GR.800.1200.IK-1.5D	Ø 8.000	-	Ø 10.00	12.00	13.00	0.05	84.00

Available from stock

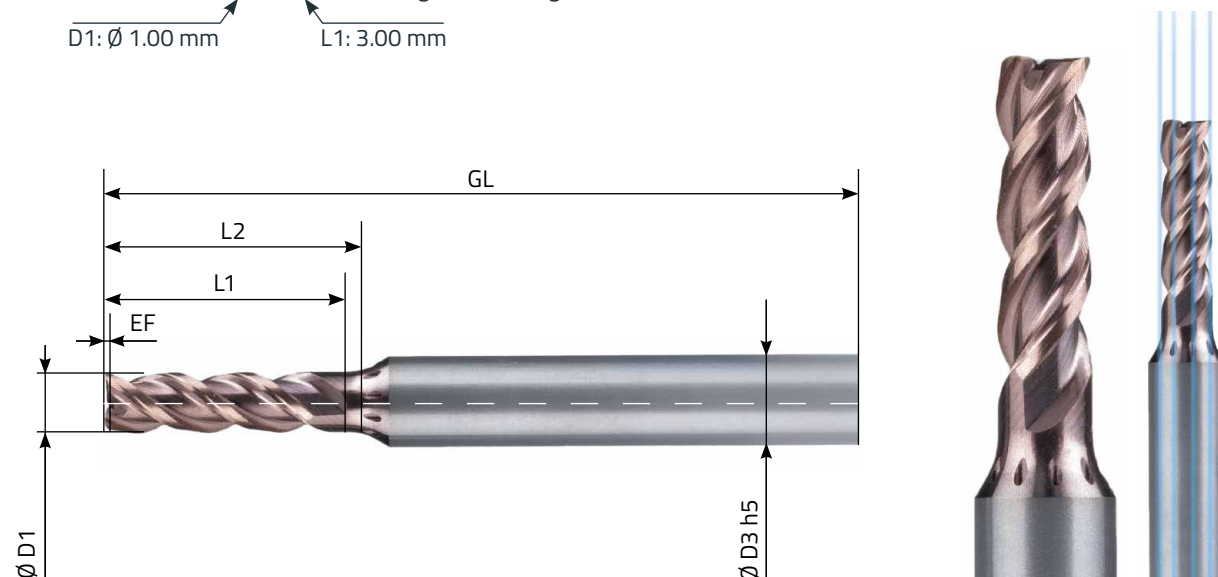
- α-INOX coated



3xD INOX-Groover cooled



ACTIONMILL
Groover
AM.GR.100.300.IK ← Integrated cooling
D1: Ø 1.00 mm L1: 3.00 mm



5 PRO's of the ACTIONMILL:

- Plunging, ramping (70°) or vertical (90°) drilling possible
- Roughing and finishing with just one tool
- Very high feed rates possible
- Short process times and high process reliability
- Very long tool life

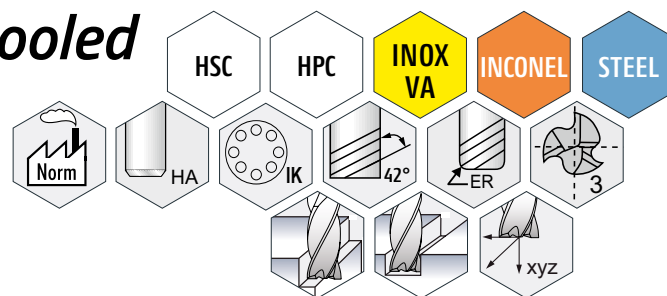
Article number	D1 +0/-0.02 (mm)	D1 (inch)	D3 h5 (mm)	L1 (3xD1/mm)	L2 (mm)	EF (45°) (mm)	GL (mm)
AM.GR.070.210.IK	Ø 0.700	-	Ø 4.00	2.10	2.80	0.02	40.00
AM.GR.080.240.IK	Ø 0.800	-	Ø 4.00	2.40	3.20	0.02	40.00
AM.GR.090.270.IK	Ø 0.900	-	Ø 4.00	2.70	3.60	0.02	40.00
AM.GR.100.300.IK	Ø 1.000	-	Ø 4.00	3.00	4.00	0.03	40.00
AM.GR.120.360.IK	Ø 1.200	-	Ø 4.00	3.60	4.80	0.03	40.00
AM.GR.150.450.IK	Ø 1.500	-	Ø 4.00	4.50	5.50	0.03	40.00
AM.GR.1587.480.IK	Ø 1.587	1/16"	Ø 4.00	4.60	5.80	0.03	40.00
AM.GR.180.540.IK	Ø 1.800	-	Ø 4.00	5.40	6.40	0.03	50.00
AM.GR.200.600.IK	Ø 2.000	-	Ø 4.00	6.00	7.00	0.03	50.00
AM.GR.220.660.IK	Ø 2.200	-	Ø 4.00	6.60	7.60	0.03	50.00
AM.GR.2381.720.IK	Ø 2.381	3/32"	Ø 4.00	7.20	8.20	0.05	50.00
AM.GR.250.750.IK	Ø 2.500	-	Ø 6.00	7.50	8.50	0.05	50.00
AM.GR.280.840.IK	Ø 2.800	-	Ø 6.00	8.40	9.40	0.05	50.00
AM.GR.300.900.IK	Ø 3.000	-	Ø 6.00	9.00	10.00	0.05	50.00
AM.GR.3175.960.IK	Ø 3.175	1/8"	Ø 6.00	9.60	10.60	0.05	50.00
AM.GR.350.1050.IK	Ø 3.500	-	Ø 6.00	10.50	11.50	0.05	50.00
AM.GR.370.1110.IK	Ø 3.700	-	Ø 6.00	11.10	12.10	0.05	50.00
AM.GR.3968.1190.IK	Ø 3.968	5/32"	Ø 6.00	11.90	12.90	0.05	50.00
AM.GR.400.1200.IK	Ø 4.000	-	Ø 6.00	12.00	13.00	0.05	50.00
AM.GR.430.1290.IK	Ø 4.300	-	Ø 8.00	12.90	13.90	0.05	68.00
AM.GR.4762.1430.IK	Ø 4.762	3/16"	Ø 8.00	14.30	15.30	0.05	68.00
AM.GR.500.1500.IK	Ø 5.000	-	Ø 8.00	15.00	16.00	0.05	68.00
AM.GR.5556.1670.IK	Ø 5.556	7/32"	Ø 8.00	16.70	17.70	0.05	68.00
AM.GR.600.1800.IK	Ø 6.000	-	Ø 8.00	18.00	19.00	0.05	68.00
AM.GR.6350.1910.IK	Ø 6.350	1/4"	Ø 10.00	19.10	20.10	0.05	84.00
AM.GR.800.2400.IK	Ø 8.000	-	Ø 10.00	24.00	25.00	0.05	84.00

Available from stock

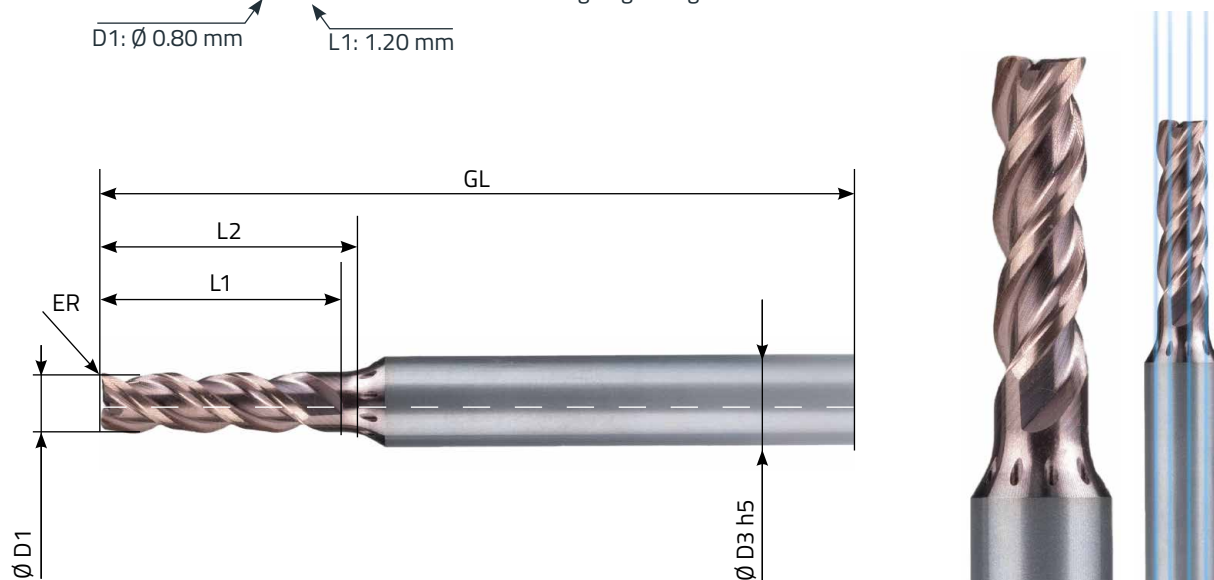
- α-INOX coated



1.5xD INOX-Groover cooled Toric



Groover ER: 0.05 mm Integrated cooling
ACTIONMILL → AM.GR.080.120.R005.IK-1.5D ← Cutting Edge Length
D1: Ø 0.80 mm L1: 1.20 mm



5 PRO's of the ACTIONMILL:

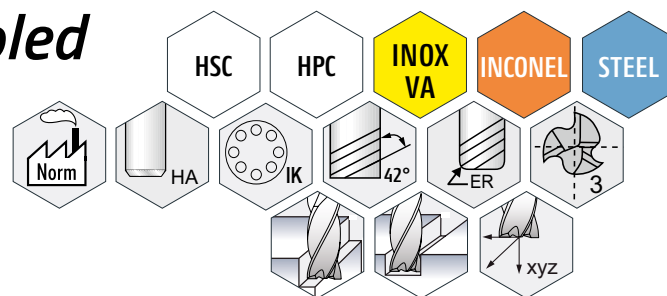
- Plunging, ramping (70°) or vertical (90°) drilling possible
- Roughing and finishing with just one tool
- Very high feed rates enable short process times and high process reliability
- Very long tool life
- The corner radii increase edge stability and reduce stresses

Article number	D1 +0/-0.02 (mm)	D1 (inch)	D2	D3 h5 (mm)	L1 (1.5xD1/mm)	L2 (mm)	GL (mm)	ER (mm)	ER (inch)
AM.GR.0793.120.R0076.IK-1.5D	Ø 0.793	1/32"	Ø 0.70	Ø 4.00	1.20	2.00	40.00	0.076	0.0030
AM.GR.0793.120.R0076.IK-1.5D	Ø 0.793	1/32"	Ø 0.70	Ø 4.00	1.20	2.00	40.00	0.0127	0.0050
AM.GR.080.120.R005.IK-1.5D	Ø 0.800		Ø 0.70	Ø 4.00	1.20	2.00	40.00	0.05	
AM.GR.080.120.R010.IK-1.5D	Ø 0.800		Ø 0.70	Ø 4.00	1.20	2.00	40.00	0.10	
AM.GR.100.150.R010.IK-1.5D	Ø 1.000		Ø 0.90	Ø 4.00	1.50	2.50	40.00	0.10	
AM.GR.100.150.R020.IK-1.5D	Ø 1.000		Ø 0.90	Ø 4.00	1.50	2.50	40.00	0.20	
AM.GR.120.180.R010.IK-1.5D	Ø 1.200		Ø 1.10	Ø 4.00	1.80	3.00	40.00	0.10	
AM.GR.120.180.R010.IK-1.5D	Ø 1.200		Ø 1.10	Ø 4.00	1.80	3.00	40.00	0.20	
AM.GR.150.225.R010.IK-1.5D	Ø 1.500		Ø 1.40	Ø 4.00	2.25	3.30	40.00	0.10	
AM.GR.150.225.R030.IK-1.5D	Ø 1.500		Ø 1.40	Ø 4.00	2.25	3.30	40.00	0.30	
AM.GR.1587.240.R0127.IK-1.5D	Ø 1.587	1/16"	Ø 1.48	Ø 4.00	2.40	3.40	40.00	0.127	0.0050
AM.GR.1587.240.R0254.IK-1.5D	Ø 1.587	1/16"	Ø 1.48	Ø 4.00	2.40	3.40	40.00	0.254	0.0100
AM.GR.180.270.R010.IK-1.5D	Ø 1.800		Ø 1.70	Ø 4.00	2.70	3.70	50.00	0.10	
AM.GR.180.270.R030.IK-1.5D	Ø 1.800		Ø 1.70	Ø 4.00	2.70	3.70	50.00	0.30	
AM.GR.200.300.R010.IK-1.5D	Ø 2.000		Ø 1.90	Ø 4.00	3.00	4.00	50.00	0.10	
AM.GR.200.300.R020.IK-1.5D	Ø 2.000		Ø 1.90	Ø 4.00	3.00	4.00	50.00	0.20	
AM.GR.200.300.R050.IK-1.5D	Ø 2.000		Ø 1.90	Ø 4.00	3.00	4.00	50.00	0.50	
AM.GR.2381.360.R0127.IK-1.5D	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	3.60	4.60	50.00	0.127	0.0050
AM.GR.2381.360.R0254.IK-1.5D	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	3.60	4.60	50.00	0.254	0.0100
AM.GR.2381.360.R0381.IK-1.5D	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	3.60	4.60	50.00	0.381	0.0150
AM.GR.250.375.R020.IK-1.5D	Ø 2.500		Ø 2.40	Ø 6.00	3.75	4.80	50.00	0.20	
AM.GR.250.375.R050.IK-1.5D	Ø 2.500		Ø 2.40	Ø 6.00	3.75	4.80	50.00	0.50	
AM.GR.300.450.R020.IK-1.5D	Ø 3.000		Ø 2.90	Ø 6.00	4.50	5.50	50.00	0.20	
AM.GR.300.450.R050.IK-1.5D	Ø 3.000		Ø 2.90	Ø 6.00	4.50	5.50	50.00	0.50	
AM.GR.3175.480.R0254.IK-1.5D	Ø 3.175	1/8"	Ø 3.05	Ø 6.00	4.80	5.80	50.00	0.254	0.0100
AM.GR.3175.480.R0381.IK-1.5D	Ø 3.175	1/8"	Ø 3.05	Ø 6.00	4.80	5.80	50.00	0.381	0.0150
AM.GR.3968.600.R0254.IK-1.5D	Ø 3.968	5/32"	Ø 3.85	Ø 6.00	6.00	6.90	50.00	0.254	0.0100
AM.GR.3968.600.R0381.IK-1.5D	Ø 3.968	5/32"	Ø 3.85	Ø 6.00	6.00	6.90	50.00	0.381	0.0150
AM.GR.400.600.R020.IK-1.5D	Ø 4.000		Ø 3.90	Ø 6.00	6.00	6.90	50.00	0.20	
AM.GR.400.600.R050.IK-1.5D	Ø 4.000		Ø 3.90	Ø 6.00	6.00	6.90	50.00	0.50	
AM.GR.4762.730.R0254.IK-1.5D	Ø 4.762	3/16"	Ø 4.65	Ø 8.00	7.30	8.20	68.00	0.254	0.0100
AM.GR.4762.730.R0381.IK-1.5D	Ø 4.762	3/16"	Ø 4.65	Ø 8.00	7.30	8.20	68.00	0.381	0.0150
AM.GR.5556.830.R0381.IK-1.5D	Ø 5.556	7/32"	Ø 5.45	Ø 8.00	8.30	9.40	68.00	0.381	0.0150
AM.GR.5556.830.R0762.IK-1.5D	Ø 5.556	7/32"	Ø 5.45	Ø 8.00	8.30	9.40	68.00	0.762	0.0300
AM.GR.600.900.R050.IK-1.5D	Ø 6.000		Ø 5.90	Ø 8.00	9.00	10.00	68.00	0.50	
AM.GR.600.900.R100.IK-1.5D	Ø 6.000		Ø 5.90	Ø 8.00	9.00	10.00	68.00	1.00	
AM.GR.6350.960.R0762.IK-1.5D	Ø 6.350	1/4"	Ø 6.25	Ø 10.00	9.60	10.00	84.00	0.762	0.0300

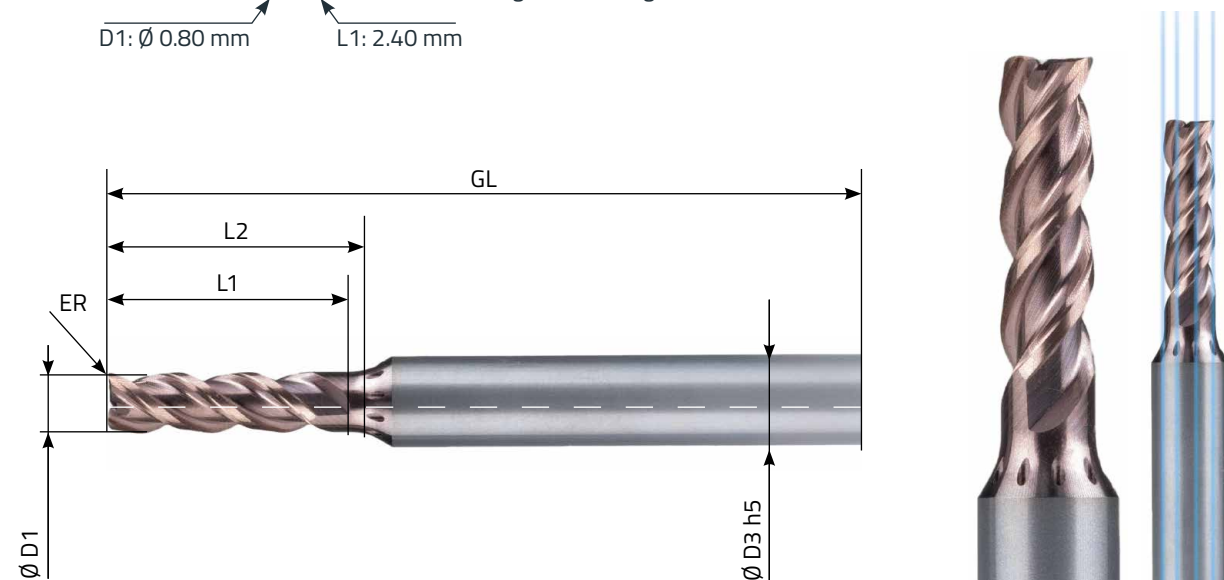
Delivery time: 3-4 weeks

- α-INOX coated

3xD INOX-Groover cooled Toric



ACTIONMILL Groover ER: 0.05 mm
AM.GR.080.240.R005.IK ← Integrated cooling
D1: Ø 0.80 mm L1: 2.40 mm



5 PRO's of the ACTIONMILL:

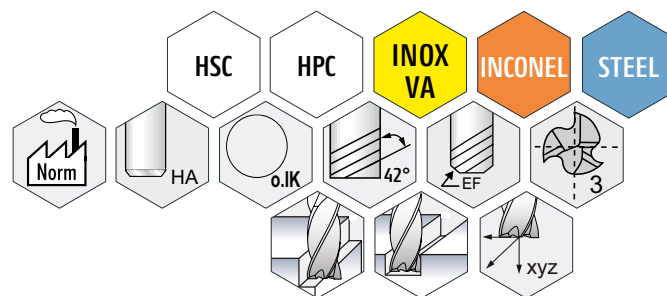
- Plunging, ramping (70°) or vertical (90°) drilling possible
- Roughing and finishing with just one tool
- Very high feed rates enable short process times and high process reliability
- Very long tool life
- The corner radii increase edge stability and reduce stresses

Article number	D1 +0/-0.02 (mm)	D1 (inch)	D2	D3 h5 (mm)	L1 (3xD1/mm)	L2 (mm)	GL (mm)	ER (mm)	ER (inch)
AM.GR.0793.240.R0076.IK	Ø 0.793	1/32"	Ø 0.70	Ø 4.00	2.40	3.20	40.00	0.076	0.0030
AM.GR.0793.240.R0076.IK	Ø 0.793	1/32"	Ø 0.70	Ø 4.00	2.40	3.20	40.00	0.0127	0.0050
AM.GR.080.240.R005.IK	Ø 0.800		Ø 0.70	Ø 4.00	2.40	3.20	40.00	0.05	
AM.GR.080.240.R010.IK	Ø 0.800		Ø 0.70	Ø 4.00	2.40	3.20	40.00	0.10	
AM.GR.100.300.R010.IK	Ø 1.000		Ø 0.90	Ø 4.00	3.00	4.00	40.00	0.10	
AM.GR.100.300.R020.IK	Ø 1.000		Ø 0.90	Ø 4.00	3.00	4.00	40.00	0.20	
AM.GR.120.360.R010.IK	Ø 1.200		Ø 1.10	Ø 4.00	3.60	4.60	40.00	0.10	
AM.GR.120.360.R010.IK	Ø 1.200		Ø 1.10	Ø 4.00	3.60	4.60	40.00	0.20	
AM.GR.150.450.R010.IK	Ø 1.500		Ø 1.40	Ø 4.00	4.50	5.50	40.00	0.10	
AM.GR.150.450.R030.IK	Ø 1.500		Ø 1.40	Ø 4.00	4.50	5.50	40.00	0.30	
AM.GR.1587.480.R0127.IK	Ø 1.587	1/16"	Ø 1.48	Ø 4.00	4.80	5.80	40.00	0.127	0.0050
AM.GR.1587.480.R0254.IK	Ø 1.587	1/16"	Ø 1.48	Ø 4.00	4.80	5.80	40.00	0.254	0.0100
AM.GR.180.540.R010.IK	Ø 1.800		Ø 1.70	Ø 4.00	5.40	6.40	50.00	0.10	
AM.GR.180.540.R030.IK	Ø 1.800		Ø 1.70	Ø 4.00	5.40	6.40	50.00	0.30	
AM.GR.200.600.R010.IK	Ø 2.000		Ø 1.90	Ø 4.00	6.00	7.00	50.00	0.10	
AM.GR.200.600.R020.IK	Ø 2.000		Ø 1.90	Ø 4.00	6.00	7.00	50.00	0.20	
AM.GR.200.600.R050.IK	Ø 2.000		Ø 1.90	Ø 4.00	6.00	7.00	50.00	0.50	
AM.GR.2381.720.R0127.IK	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	7.20	8.20	50.00	0.127	0.0050
AM.GR.2381.720.R0254.IK	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	7.20	8.20	50.00	0.254	0.0100
AM.GR.2381.720.R0381.IK	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	7.20	8.20	50.00	0.381	0.0150
AM.GR.250.750.R020.IK	Ø 2.500		Ø 2.40	Ø 6.00	7.50	8.50	50.00	0.20	
AM.GR.250.750.R050.IK	Ø 2.500		Ø 2.40	Ø 6.00	7.50	8.50	50.00	0.50	
AM.GR.300.900.R020.IK	Ø 3.000		Ø 2.90	Ø 6.00	9.00	10.00	50.00	0.20	
AM.GR.300.900.R050.IK	Ø 3.000		Ø 2.90	Ø 6.00	9.00	10.00	50.00	0.50	
AM.GR.3175.960.R0254.IK	Ø 3.175	1/8"	Ø 3.05	Ø 6.00	9.60	10.60	50.00	0.254	0.0100
AM.GR.3175.960.R0381.IK	Ø 3.175	1/8"	Ø 3.05	Ø 6.00	9.60	10.60	50.00	0.381	0.0150
AM.GR.3968.1190.R0254.IK	Ø 3.968	5/32"	Ø 3.85	Ø 6.00	11.90	12.90	50.00	0.254	0.0100
AM.GR.3968.1190.R0381.IK	Ø 3.968	5/32"	Ø 3.85	Ø 6.00	11.90	12.90	50.00	0.381	0.0150
AM.GR.400.1200.R020.IK	Ø 4.000		Ø 3.90	Ø 6.00	12.00	13.00	50.00	0.20	
AM.GR.400.1200.R050.IK	Ø 4.000		Ø 3.90	Ø 6.00	12.00	13.00	50.00	0.50	
AM.GR.4762.1430.R0254.IK	Ø 4.762	3/16"	Ø 4.65	Ø 8.00	14.30	15.30	68.00	0.254	0.0100
AM.GR.4762.1430.R0381.IK	Ø 4.762	3/16"	Ø 4.65	Ø 8.00	14.30	15.30	68.00	0.381	0.0150
AM.GR.5556.1670.R0381.IK	Ø 5.556	7/32"	Ø 5.45	Ø 8.00	16.70	17.70	68.00	0.381	0.0150
AM.GR.5556.1670.R0762.IK	Ø 5.556	7/32"	Ø 5.45	Ø 8.00	16.70	17.70	68.00	0.762	0.0300
AM.GR.600.1800.R050.IK	Ø 6.000		Ø 5.90	Ø 8.00	18.00	19.00	68.00	0.50	
AM.GR.600.1800.R100.IK	Ø 6.000		Ø 5.90	Ø 8.00	18.00	19.00	68.00	1.00	
AM.GR.6350.1910.R0762.IK	Ø 6.350	1/4"	Ø 6.25	Ø 10.00	19.10	20.10	84.00	0.762	0.0300

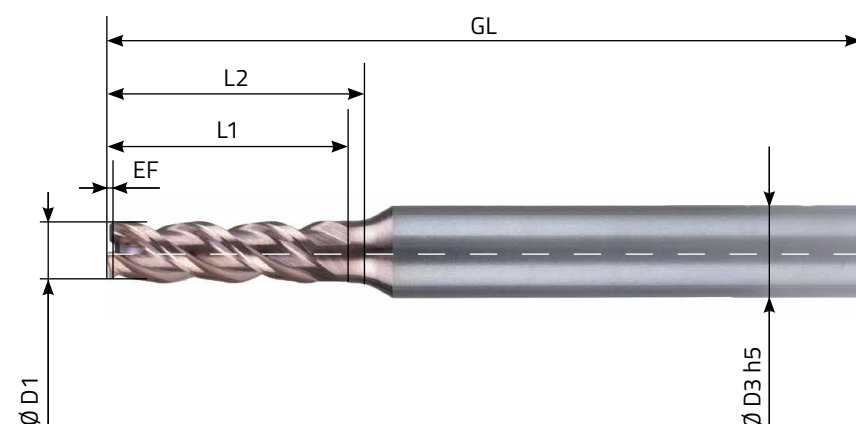
Delivery time: 3-4 weeks

- α-INOX coated

1.5xD INOX-Groover



ACTIONMILL
Groover
AM.GR.100.150-1.5D
D1: Ø 1.00 mm
L1: 1.50 mm



5 PRO's of the ACTIONMILL:

- Plunging, ramping (70°) or vertical (90°) drilling possible
- Roughing and finishing with just one tool
- High feed rates possible
- Short process times and high process reliability
- Long tool life

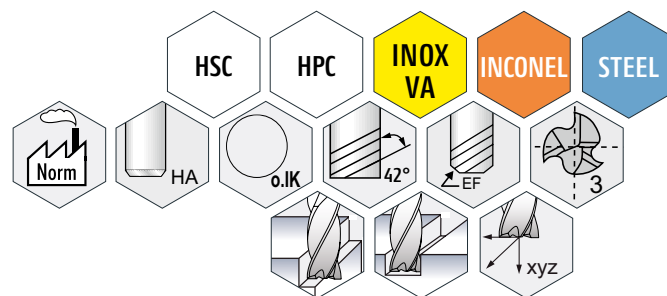
Article number	D1 +0/-0.02 (mm)	D1 (inch)	D3 h5 (mm)	L1 (1.5xD1/mm)	L2 (mm)	EF (45°) (mm)	GL (mm)
AM.GR.070.100-1.5D	Ø 0.700	-	Ø 4.00	1.00	1.80	0.02	40.00
AM.GR.080.120-1.5D	Ø 0.800	-	Ø 4.00	1.20	2.00	0.02	40.00
AM.GR.090.130-1.5D	Ø 0.900	-	Ø 4.00	1.30	2.30	0.02	40.00
AM.GR.100.150-1.5D	Ø 1.000	-	Ø 4.00	1.50	2.50	0.03	40.00
AM.GR.120.180-1.5D	Ø 1.200	-	Ø 4.00	1.80	3.00	0.03	40.00
AM.GR.150.220-1.5D	Ø 1.500	-	Ø 4.00	2.20	3.30	0.03	40.00
AM.GR.1587.240-1.5D	Ø 1.587	1/16"	Ø 4.00	2.40	3.40	0.03	40.00
AM.GR.180.270-1.5D	Ø 1.800	-	Ø 4.00	2.70	3.70	0.03	50.00
AM.GR.200.300-1.5D	Ø 2.000	-	Ø 4.00	3.00	4.00	0.03	50.00
AM.GR.220.330-1.5D	Ø 2.200	-	Ø 4.00	3.30	4.30	0.03	50.00
AM.GR.2381.360-1.5D	Ø 2.381	3/32"	Ø 4.00	3.60	4.60	0.05	50.00
AM.GR.250.370-1.5D	Ø 2.500	-	Ø 6.00	3.70	4.80	0.05	50.00
AM.GR.280.420-1.5D	Ø 2.800	-	Ø 6.00	4.20	5.20	0.05	50.00
AM.GR.300.450-1.5D	Ø 3.000	-	Ø 6.00	4.50	5.50	0.05	50.00
AM.GR.3175.480-1.5D	Ø 3.175	1/8"	Ø 6.00	4.80	5.80	0.05	50.00
AM.GR.350.520-1.5D	Ø 3.500	-	Ø 6.00	5.20	6.30	0.05	50.00
AM.GR.370.550-1.5D	Ø 3.700	-	Ø 6.00	5.50	6.60	0.05	50.00
AM.GR.3968.600-1.5D	Ø 3.968	5/32"	Ø 6.00	6.00	6.90	0.05	50.00
AM.GR.400.600-1.5D	Ø 4.000	-	Ø 6.00	6.00	6.90	0.05	50.00
AM.GR.430.650-1.5D	Ø 4.300	-	Ø 8.00	6.50	7.40	0.05	68.00
AM.GR.4762.710-1.5D	Ø 4.762	3/16"	Ø 8.00	7.10	8.20	0.05	68.00
AM.GR.500.750-1.5D	Ø 5.000	-	Ø 8.00	7.50	8.50	0.05	68.00
AM.GR.5556.830-1.5D	Ø 5.556	7/32"	Ø 8.00	8.30	9.40	0.05	68.00
AM.GR.600.900-1.5D	Ø 6.000	-	Ø 8.00	9.00	10.00	0.05	68.00
AM.GR.6350.900-1.5D	Ø 6.350	1/4"	Ø 10.00	9.00	10.00	0.05	80.00
AM.GR.800.1200-1.5D	Ø 8.000	-	Ø 10.00	12.00	13.00	0.05	80.00

Available from stock

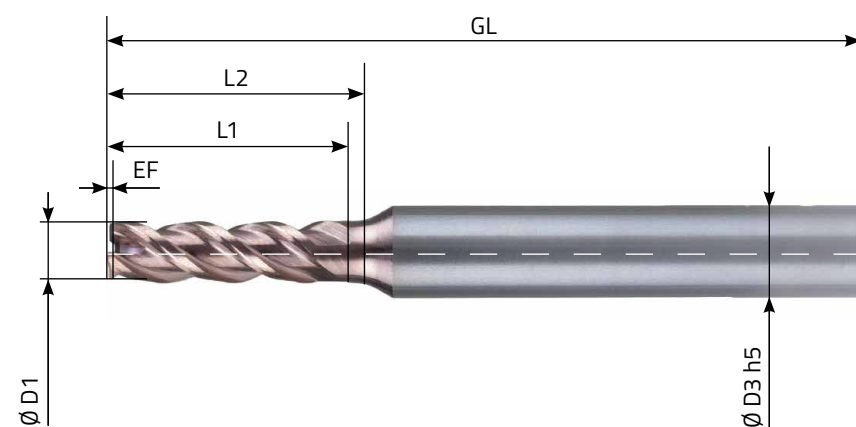
- α-INOX coated



3xD INOX-Groover



ACTIONMILL Groover
AM.GR.100.300
D1: Ø 1.00 mm L1: 3.00 mm



5 PRO's of the ACTIONMILL:

- Plunging, ramping (70°) or vertical (90°) drilling possible
- Roughing and finishing with just one tool
- High feed rates possible
- Short process times and high process reliability
- Long tool life

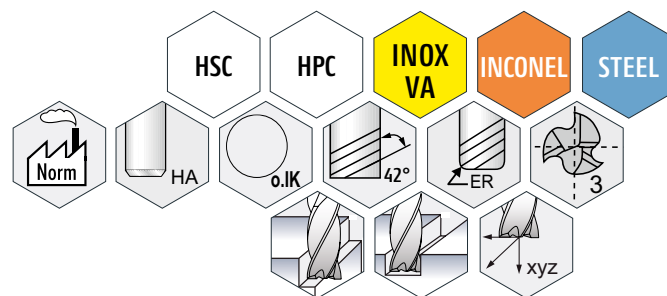
Article number	D1 +0/-0.02 (mm)	D1 (inch)	D3 h5 (mm)	L1 (3xD1/mm)	L2 (mm)	EF (45°) (mm)	GL (mm)
AM.GR.070.210	Ø 0.700	-	Ø 4.00	2.10	2.80	0.02	40.00
AM.GR.080.240	Ø 0.800	-	Ø 4.00	2.40	3.20	0.02	40.00
AM.GR.090.270	Ø 0.900	-	Ø 4.00	2.70	3.60	0.02	40.00
AM.GR.100.300	Ø 1.000	-	Ø 4.00	3.00	4.00	0.03	40.00
AM.GR.120.360	Ø 1.200	-	Ø 4.00	3.60	4.80	0.03	40.00
AM.GR.150.450	Ø 1.500	-	Ø 4.00	4.50	5.50	0.03	40.00
AM.GR.1587.480	Ø 1.587	1/16"	Ø 4.00	4.60	5.80	0.03	40.00
AM.GR.180.540	Ø 1.800	-	Ø 4.00	5.40	6.40	0.03	50.00
AM.GR.200.600	Ø 2.000	-	Ø 4.00	6.00	7.00	0.03	50.00
AM.GR.220.660	Ø 2.200	-	Ø 4.00	6.60	7.60	0.03	50.00
AM.GR.2381.720	Ø 2.381	3/32"	Ø 4.00	7.20	8.20	0.05	50.00
AM.GR.250.750	Ø 2.500	-	Ø 6.00	7.50	8.50	0.05	50.00
AM.GR.280.840	Ø 2.800	-	Ø 6.00	8.40	9.40	0.05	50.00
AM.GR.300.900	Ø 3.000	-	Ø 6.00	9.00	10.00	0.05	50.00
AM.GR.3175.960	Ø 3.175	1/8"	Ø 6.00	9.60	10.60	0.05	50.00
AM.GR.350.1050	Ø 3.500	-	Ø 6.00	10.50	11.50	0.05	50.00
AM.GR.370.1110	Ø 3.700	-	Ø 6.00	11.10	12.10	0.05	50.00
AM.GR.3968.1190	Ø 3.968	5/32"	Ø 6.00	11.90	12.90	0.05	50.00
AM.GR.400.1200	Ø 4.000	-	Ø 6.00	12.00	13.00	0.05	50.00
AM.GR.430.1290	Ø 4.300	-	Ø 8.00	12.90	13.90	0.05	68.00
AM.GR.4762.1430	Ø 4.762	3/16"	Ø 8.00	14.30	15.30	0.05	68.00
AM.GR.500.1500	Ø 5.000	-	Ø 8.00	15.00	16.00	0.05	68.00
AM.GR.5556.1670	Ø 5.556	7/32"	Ø 8.00	16.70	17.70	0.05	68.00
AM.GR.600.1800	Ø 6.000	-	Ø 8.00	18.00	19.00	0.05	68.00
AM.GR.6350.1910	Ø 6.350	1/4"	Ø 8.00	19.10	20.10	0.05	80.00
AM.GR.800.2400	Ø 8.000	-	Ø 8.00	24.00	25.00	0.05	80.00

Available from stock

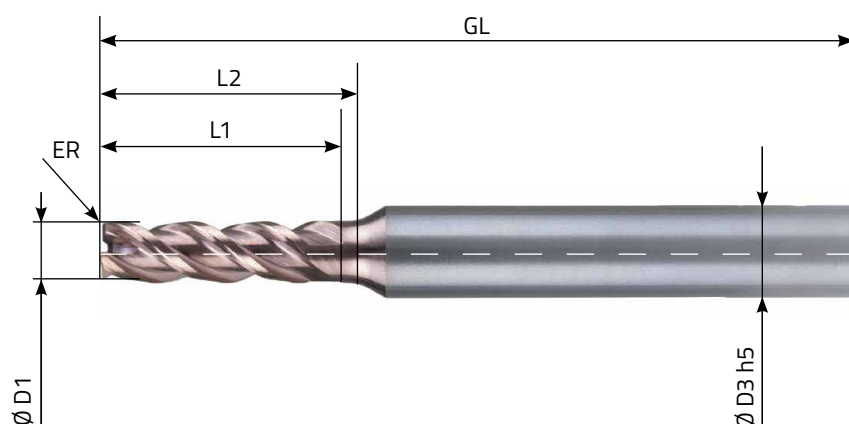
- α-INOX coated



1.5xD INOX-Groover Toric



ACTIONMILL Groover ER: 0.05 mm
AM.GR.080.120.R005-1.5D ← Cutting Edge Length
D1: Ø 0.80 mm L1: 1.20 mm



5 PRO's of the ACTIONMILL:

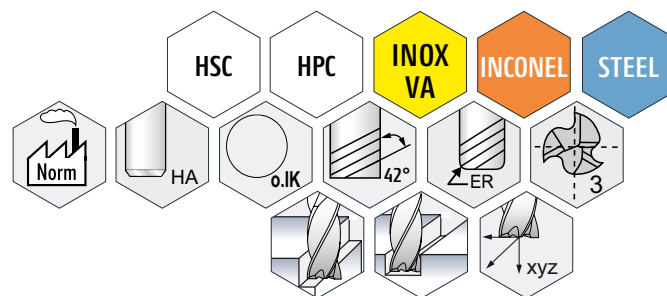
- Plunging, ramping (70°) or vertical (90°) drilling possible
- Roughing and finishing with just one tool
- Very high feed rates enable short process times and high process reliability
- Very long tool life
- The corner radii increase edge stability and reduce stresses

Article number	D1 +0/-0.02 (mm)	D1 (inch)	D2	D3 h5 (mm)	L1 (1.5xD1/mm)	L2 (mm)	GL (mm)	ER (mm)	ER (inch)
AM.GR.0793.120.R0076-1.5D	Ø 0.793	1/32"	Ø 0.70	Ø 4.00	1.20	2.00	40.00	0.076	0.0030
AM.GR.0793.120.R0076-1.5D	Ø 0.793	1/32"	Ø 0.70	Ø 4.00	1.20	2.00	40.00	0.0127	0.0050
AM.GR.080.120.R005-1.5D	Ø 0.800		Ø 0.70	Ø 4.00	1.20	2.00	40.00	0.05	
AM.GR.080.120.R010-1.5D	Ø 0.800		Ø 0.70	Ø 4.00	1.20	2.00	40.00	0.10	
AM.GR.100.150.R010-1.5D	Ø 1.000		Ø 0.90	Ø 4.00	1.50	2.50	40.00	0.10	
AM.GR.100.150.R020-1.5D	Ø 1.000		Ø 0.90	Ø 4.00	1.50	2.50	40.00	0.20	
AM.GR.120.180.R010-1.5D	Ø 1.200		Ø 1.10	Ø 4.00	1.80	3.00	40.00	0.10	
AM.GR.120.180.R010-1.5D	Ø 1.200		Ø 1.10	Ø 4.00	1.80	3.00	40.00	0.20	
AM.GR.150.225.R010-1.5D	Ø 1.500		Ø 1.40	Ø 4.00	2.25	3.30	40.00	0.10	
AM.GR.150.225.R030-1.5D	Ø 1.500		Ø 1.40	Ø 4.00	2.25	3.30	40.00	0.30	
AM.GR.1587.240.R0127-1.5D	Ø 1.587	1/16"	Ø 1.48	Ø 4.00	2.40	3.40	40.00	0.127	0.0050
AM.GR.1587.240.R0254-1.5D	Ø 1.587	1/16"	Ø 1.48	Ø 4.00	2.40	3.40	40.00	0.254	0.0100
AM.GR.180.270.R010-1.5D	Ø 1.800		Ø 1.70	Ø 4.00	2.70	3.70	50.00	0.10	
AM.GR.180.270.R030-1.5D	Ø 1.800		Ø 1.70	Ø 4.00	2.70	3.70	50.00	0.30	
AM.GR.200.300.R010-1.5D	Ø 2.000		Ø 1.90	Ø 4.00	3.00	4.00	50.00	0.10	
AM.GR.200.300.R020-1.5D	Ø 2.000		Ø 1.90	Ø 4.00	3.00	4.00	50.00	0.20	
AM.GR.200.300.R050-1.5D	Ø 2.000		Ø 1.90	Ø 4.00	3.00	4.00	50.00	0.50	
AM.GR.2381.360.R0127-1.5D	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	3.60	4.60	50.00	0.127	0.0050
AM.GR.2381.360.R0254-1.5D	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	3.60	4.60	50.00	0.254	0.0100
AM.GR.2381.360.R0381-1.5D	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	3.60	4.60	50.00	0.381	0.0150
AM.GR.250.375.R020-1.5D	Ø 2.500		Ø 2.40	Ø 6.00	3.75	4.80	50.00	0.20	
AM.GR.250.375.R050-1.5D	Ø 2.500		Ø 2.40	Ø 6.00	3.75	4.80	50.00	0.50	
AM.GR.300.450.R020-1.5D	Ø 3.000		Ø 2.90	Ø 6.00	4.50	5.50	50.00	0.20	
AM.GR.300.450.R050-1.5D	Ø 3.000		Ø 2.90	Ø 6.00	4.50	5.50	50.00	0.50	
AM.GR.3175.480.R0254-1.5D	Ø 3.175	1/8"	Ø 3.05	Ø 6.00	4.80	5.80	50.00	0.254	0.0100
AM.GR.3175.480.R0381-1.5D	Ø 3.175	1/8"	Ø 3.05	Ø 6.00	4.80	5.80	50.00	0.381	0.0150
AM.GR.3968.600.R0254-1.5D	Ø 3.968	5/32*	Ø 3.85	Ø 6.00	6.00	6.90	50.00	0.254	0.0100
AM.GR.3968.600.R0381-1.5D	Ø 3.968	5/32*	Ø 3.85	Ø 6.00	6.00	6.90	50.00	0.381	0.0150
AM.GR.400.600.R020-1.5D	Ø 4.000		Ø 3.90	Ø 6.00	6.00	6.90	50.00	0.20	
AM.GR.400.600.R050-1.5D	Ø 4.000		Ø 3.90	Ø 6.00	6.00	6.90	50.00	0.50	
AM.GR.4762.730.R0254-1.5D	Ø 4.762	3/16*	Ø 4.65	Ø 8.00	7.30	8.20	68.00	0.254	0.0100
AM.GR.4762.730.R0381-1.5D	Ø 4.762	3/16*	Ø 4.65	Ø 8.00	7.30	8.20	68.00	0.381	0.0150
AM.GR.5556.830.R0381-1.5D	Ø 5.556	7/32*	Ø 5.45	Ø 8.00	8.30	9.40	68.00	0.381	0.0150
AM.GR.5556.830.R0762-1.5D	Ø 5.556	7/32*	Ø 5.45	Ø 8.00	8.30	9.40	68.00	0.762	0.0300
AM.GR.600.900.R050-1.5D	Ø 6.000		Ø 5.90	Ø 8.00	9.00	10.00	68.00	0.50	
AM.GR.600.900.R100-1.5D	Ø 6.000		Ø 5.90	Ø 8.00	9.00	10.00	68.00	1.00	
AM.GR.6350.960.R0762-1.5D	Ø 6.350	1/4*	Ø 6.25	Ø 8.00	9.60	10.00	80.00	0.762	0.0300

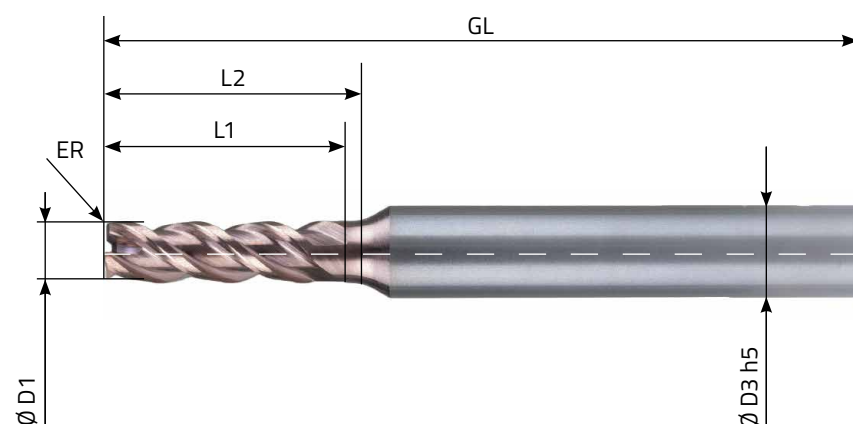
Delivery time: 3-4 weeks

■ α-INOX coated

3xD INOX-Groover Toric



ACTIONMILL Groover ER: 0.05 mm
AM.GR.080.240.R005
D1: Ø 0.80 mm L1: 2.40 mm



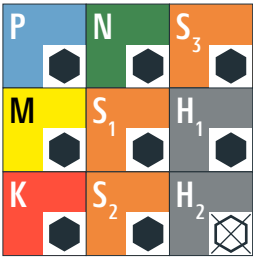
5 PRO's of the ACTIONMILL:

- Plunging, ramping (70°) or vertical (90°) drilling possible
- Roughing and finishing with just one tool
- Very high feed rates enable short process times and high process reliability
- Very long tool life
- The corner radii increase edge stability and reduce stresses

Article number	D1 +0/-0.02 (mm)	D1 (inch)	D2	D3 h5 (mm)	L1 (3xD1/mm)	L2 (mm)	GL (mm)	ER (mm)	ER (inch)
AM.GR.0793.240.R0076	Ø 0.793	1/32"	Ø 0.70	Ø 4.00	2.40	3.20	40.00	0.076	0.0030
AM.GR.0793.240.R0076	Ø 0.793	1/32"	Ø 0.70	Ø 4.00	2.40	3.20	40.00	0.0127	0.0050
AM.GR.080.240.R005	Ø 0.800		Ø 0.70	Ø 4.00	2.40	3.20	40.00	0.05	
AM.GR.080.240.R010	Ø 0.800		Ø 0.70	Ø 4.00	2.40	3.20	40.00	0.10	
AM.GR.100.300.R010	Ø 1.000		Ø 0.90	Ø 4.00	3.00	4.00	40.00	0.10	
AM.GR.100.300.R020	Ø 1.000		Ø 0.90	Ø 4.00	3.00	4.00	40.00	0.20	
AM.GR.120.360.R010	Ø 1.200		Ø 1.10	Ø 4.00	3.60	4.60	40.00	0.10	
AM.GR.120.360.R010	Ø 1.200		Ø 1.10	Ø 4.00	3.60	4.60	40.00	0.20	
AM.GR.150.450.R010	Ø 1.500		Ø 1.40	Ø 4.00	4.50	5.50	40.00	0.10	
AM.GR.150.450.R030	Ø 1.500		Ø 1.40	Ø 4.00	4.50	5.50	40.00	0.30	
AM.GR.1587.480.R0127	Ø 1.587	1/16"	Ø 1.48	Ø 4.00	4.80	5.80	40.00	0.127	0.0050
AM.GR.1587.480.R0254	Ø 1.587	1/16"	Ø 1.48	Ø 4.00	4.80	5.80	40.00	0.254	0.0100
AM.GR.180.540.R010	Ø 1.800		Ø 1.70	Ø 4.00	5.40	6.40	50.00	0.10	
AM.GR.180.540.R030	Ø 1.800		Ø 1.70	Ø 4.00	5.40	6.40	50.00	0.30	
AM.GR.200.600.R010	Ø 2.000		Ø 1.90	Ø 4.00	6.00	7.00	50.00	0.10	
AM.GR.200.600.R020	Ø 2.000		Ø 1.90	Ø 4.00	6.00	7.00	50.00	0.20	
AM.GR.200.600.R050	Ø 2.000		Ø 1.90	Ø 4.00	6.00	7.00	50.00	0.50	
AM.GR.2381.720.R0127	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	7.20	8.20	50.00	0.127	0.0050
AM.GR.2381.720.R0254	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	7.20	8.20	50.00	0.254	0.0100
AM.GR.2381.720.R0381	Ø 2.381	3/32"	Ø 2.28	Ø 4.00	7.20	8.20	50.00	0.381	0.0150
AM.GR.250.750.R020	Ø 2.500		Ø 2.40	Ø 6.00	7.50	8.50	50.00	0.20	
AM.GR.250.750.R050	Ø 2.500		Ø 2.40	Ø 6.00	7.50	8.50	50.00	0.50	
AM.GR.300.900.R020	Ø 3.000		Ø 2.90	Ø 6.00	9.00	10.00	50.00	0.20	
AM.GR.300.900.R050	Ø 3.000		Ø 2.90	Ø 6.00	9.00	10.00	50.00	0.50	
AM.GR.3175.960.R0254	Ø 3.175	1/8"	Ø 3.05	Ø 6.00	9.60	10.60	50.00	0.254	0.0100
AM.GR.3175.960.R0381	Ø 3.175	1/8"	Ø 3.05	Ø 6.00	9.60	10.60	50.00	0.381	0.0150
AM.GR.3968.1190.R0254	Ø 3.968	5/32"	Ø 3.85	Ø 6.00	11.90	12.90	50.00	0.254	0.0100
AM.GR.3968.1190.R0381	Ø 3.968	5/32"	Ø 3.85	Ø 6.00	11.90	12.90	50.00	0.381	0.0150
AM.GR.400.1200.R020	Ø 4.000		Ø 3.90	Ø 6.00	12.00	13.00	50.00	0.20	
AM.GR.400.1200.R050	Ø 4.000		Ø 3.90	Ø 6.00	12.00	13.00	50.00	0.50	
AM.GR.4762.1430.R0254	Ø 4.762	3/16"	Ø 4.65	Ø 8.00	14.30	15.30	68.00	0.254	0.0100
AM.GR.4762.1430.R0381	Ø 4.762	3/16"	Ø 4.65	Ø 8.00	14.30	15.30	68.00	0.381	0.0150
AM.GR.5556.1670.R0381	Ø 5.556	7/32"	Ø 5.45	Ø 8.00	16.70	17.70	68.00	0.381	0.0150
AM.GR.5556.1670.R0762	Ø 5.556	7/32"	Ø 5.45	Ø 8.00	16.70	17.70	68.00	0.762	0.0300
AM.GR.600.1800.R050	Ø 6.000		Ø 5.90	Ø 8.00	18.00	19.00	68.00	0.50	
AM.GR.600.1800.R100	Ø 6.000		Ø 5.90	Ø 8.00	18.00	19.00	68.00	1.00	
AM.GR.6350.1910.R0762	Ø 6.350	1/4"	Ø 6.25	Ø 8.00	19.10	20.10	80.00	0.762	0.0300

Delivery time: 3-4 weeks

■ α-INOX coated

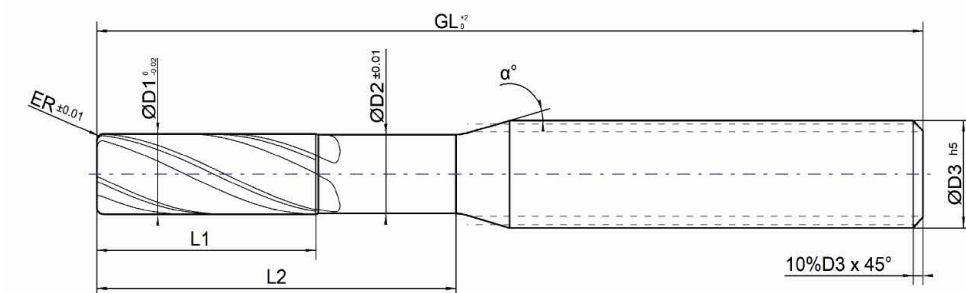
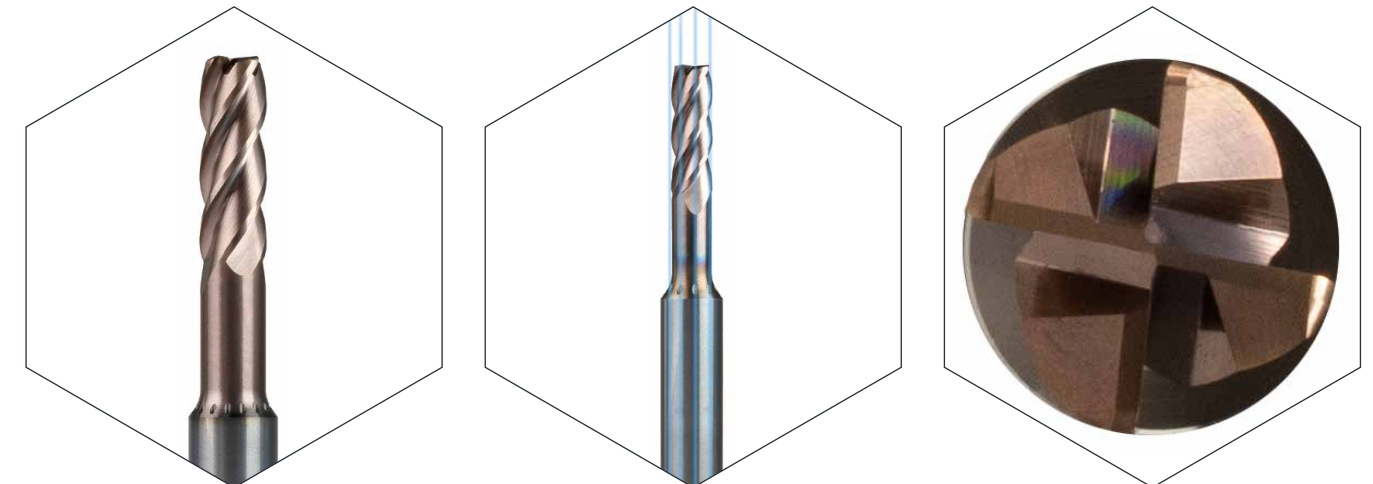
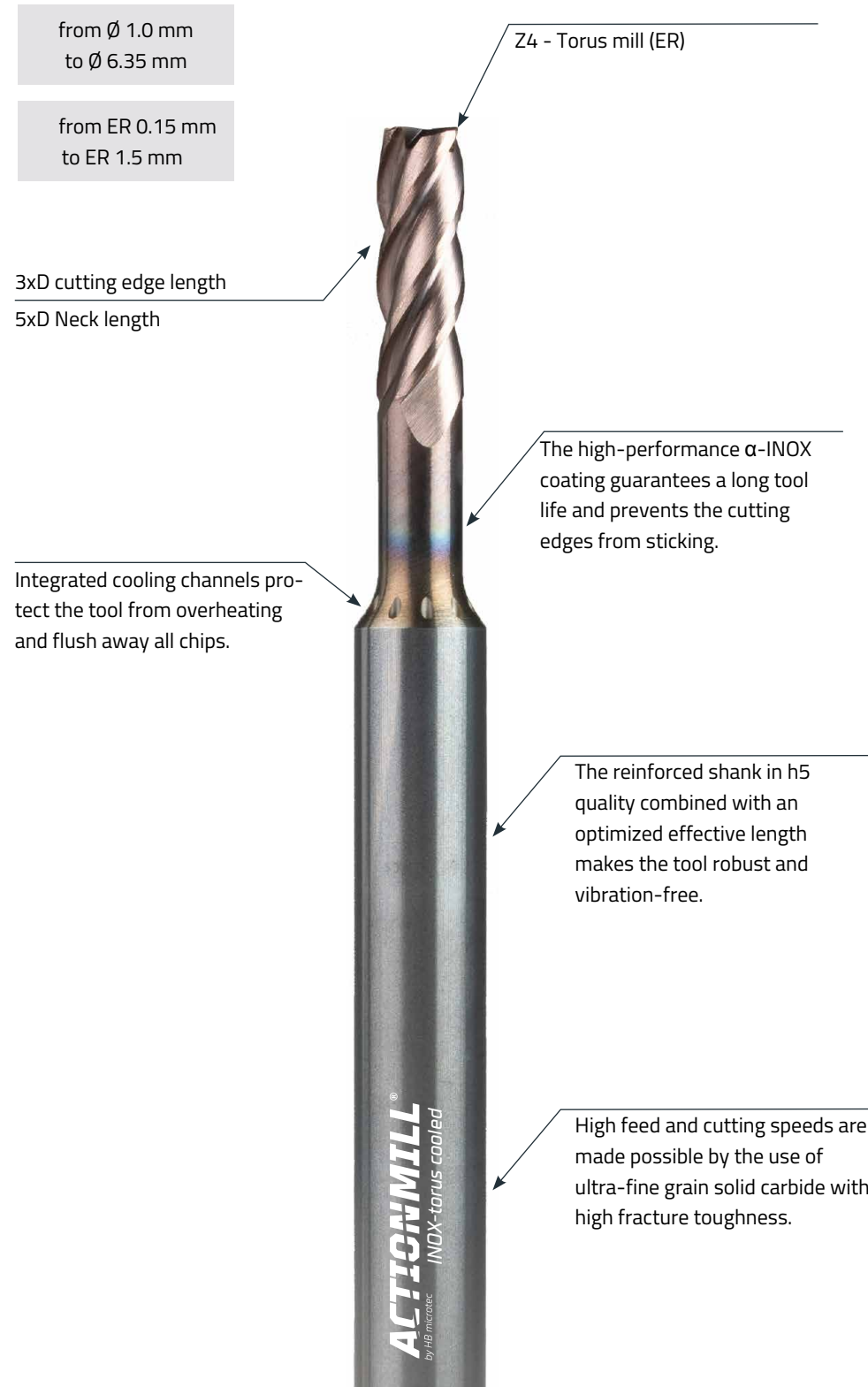


Recommended use Highly suitable Partially suitable Not recommended

Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

up to ap=2xD Ø 1.0 - 2.0 mm		up to ap=2xD Ø 2.0 - 3.0 mm		up to ap=2xD Ø 3.0 - 4.0 mm		up to ap=2xD Ø 4 - 6.0 mm		up to ap=2xD Ø 6.0- 8.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
100-140	0.011 - 0.025	100-140	0.013 - 0.050	100-140	0.026 - 0.065	100-140	0.03 - 0.075	100-140	0.035 - 0.085
100-140	0.011 - 0.025	100-140	0.013 - 0.052	100-140	0.026 - 0.055	100-140	0.03 - 0.065	100-140	0.035 - 0.075
80-110	0.011 - 0.025	80-110	0.013 - 0.05	80-110	0.026 - 0.055	80-110	0.035 - 0.065	80-110	0.035 - 0.075
70-100	0.016 - 0.025	70-100	0.013 - 0.05	70-100	0.026 - 0.055	70-100	0.035 - 0.065	70-100	0.035 - 0.075
80-140	0.016 - 0.025	80-140	0.02 - 0.055	80-140	0.026 - 0.065	80-140	0.035 - 0.07	80-140	0.035 - 0.085
80-160	0.016 - 0.025	80-160	0.022 - 0.07	80-160	0.035 - 0.08	80-160	0.035 - 0.085	80-160	0.035 - 0.075
80-140	0.016 - 0.025	80-140	0.022 - 0.07	80-140	0.035 - 0.08	80-140	0.035 - 0.085	80-140	0.035 - 0.09
80-120	0.016 - 0.025	80-120	0.022 - 0.07	80-120	0.035 - 0.08	80-120	0.025 - 0.085	80-120	0.035 - 0.09
50 - 80	0.01 - 0.025	50 - 80	0.01 - 0.035	50 - 80	0.013 - 0.05	50 - 80	0.018 - 0.06	50 - 80	0.025 - 0.07
50-80	0.01 - 0.025	50-80	0.01 - 0.035	50-80	0.013 - 0.05	50-80	0.018 - 0.06	50-80	0.025 - 0.07
50-80	0.01 - 0.025	50-80	0.01 - 0.035	50-80	0.013 - 0.05	50-80	0.018 - 0.06	50-80	0.025 - 0.07
no data available									
no data available									

INOX-torus cooled

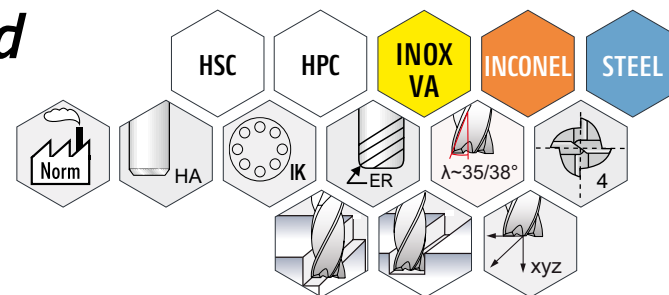


☐ Order Order number: _____ ☐ Inquiry

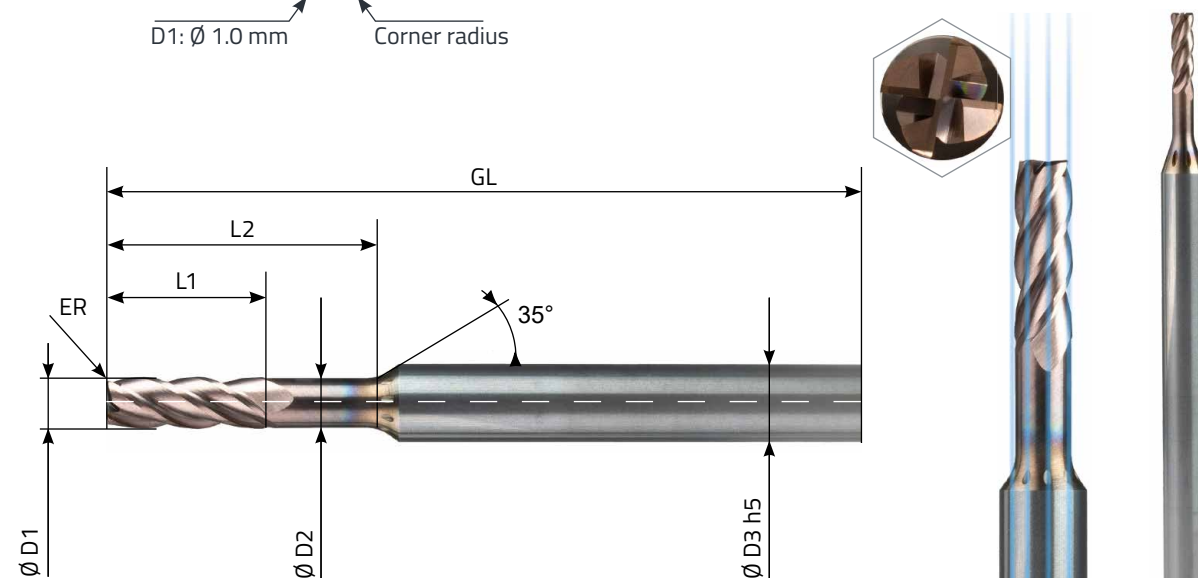
Dimensions: D ₁ : _____ GL: _____ ER: _____ D ₂ : _____ L ₁ : _____ EF: _____ D ₃ : _____ L ₂ : _____ Z: _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

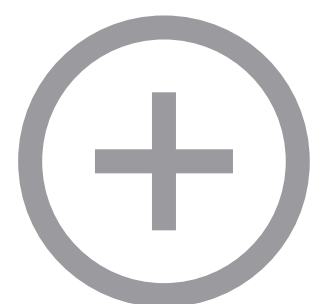
5xD INOX-torus cooled



ACTIONMILL Product name
AM.TORUS.100.015.IK ← Integrated cooling
D1: Ø 1.0 mm Corner radius



■ α-INOX coated

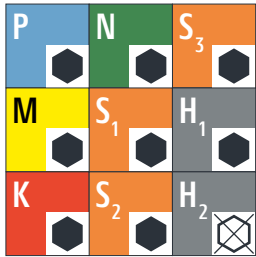


5 PRO's of the ACTIONMILL:

- Z4 Torus mill from Ø1.0
- Integrated cooling prevents chip accumulation
- Very high feed rates possible
- Short process times and high process reliability
- Very long tool life

Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h5 (mm)	L1 (mm)	L2 (mm)	ER	GL (mm)
AM.TORUS.100.015.IK	Ø 1.00		Ø 0.92	Ø 4.00	3.00	5.00	0.15	50.00
AM.TORUS.100.025.IK	Ø 1.00		Ø 0.92	Ø 4.00	3.00	5.00	0.25	50.00
AM.TORUS.1587.015.IK	Ø 1.59	1/16"	Ø 1.48	Ø 4.00	4.80	8.00	0.15	50.00
AM.TORUS.1587.025.IK	Ø 1.59	1/16"	Ø 1.48	Ø 4.00	4.80	8.00	0.25	50.00
AM.TORUS.200.015.IK	Ø 2.00		Ø 1.90	Ø 4.00	6.00	10.00	0.15	50.00
AM.TORUS.200.025.IK	Ø 2.00		Ø 1.90	Ø 4.00	6.00	10.00	0.25	50.00
AM.TORUS.2381.015.IK	Ø 2.38	3/32"	Ø 2.28	Ø 4.00	7.20	12.00	0.15	50.00
AM.TORUS.2381.025.IK	Ø 2.38	3/32"	Ø 2.28	Ø 4.00	7.20	12.00	0.25	50.00
AM.TORUS.300.025.IK	Ø 3.00		Ø 2.90	Ø 6.00	9.00	15.00	0.25	60.00
AM.TORUS.300.050.IK	Ø 3.00		Ø 2.90	Ø 6.00	9.00	15.00	0.50	60.00
AM.TORUS.300.100.IK	Ø 3.00		Ø 2.90	Ø 6.00	9.00	15.00	1.00	60.00
AM.TORUS.3175.025.IK	Ø 3.18	1/8"	Ø 3.05	Ø 6.00	9.60	16.00	0.25	60.00
AM.TORUS.3175.050.IK	Ø 3.18	1/8"	Ø 3.05	Ø 6.00	9.60	16.00	0.50	60.00
AM.TORUS.3175.100.IK	Ø 3.18	1/8"	Ø 3.05	Ø 6.00	9.60	16.00	1.00	60.00
AM.TORUS.3968.025.IK	Ø 3.97	5/32"	Ø 3.85	Ø 6.00	12.00	20.00	0.25	60.00
AM.TORUS.3968.050.IK	Ø 3.97	5/32"	Ø 3.85	Ø 6.00	12.00	20.00	0.50	60.00
AM.TORUS.3968.100.IK	Ø 3.97	5/32"	Ø 3.85	Ø 6.00	12.00	20.00	1.00	60.00
AM.TORUS.400.025.IK	Ø 4.00		Ø 3.85	Ø 6.00	12.00	20.00	0.25	60.00
AM.TORUS.400.050.IK	Ø 4.00		Ø 3.85	Ø 6.00	12.00	20.00	0.50	60.00
AM.TORUS.400.100.IK	Ø 4.00		Ø 3.85	Ø 6.00	12.00	20.00	1.00	60.00
AM.TORUS.4762.025.IK	Ø 4.76	3/16"	Ø 4.60	Ø 8.00	14.40	24.00	0.25	68.00
AM.TORUS.4762.050.IK	Ø 4.76	3/16"	Ø 4.60	Ø 8.00	14.40	24.00	0.50	68.00
AM.TORUS.4762.100.IK	Ø 4.76	3/16"	Ø 4.60	Ø 8.00	14.40	24.00	1.00	68.00
AM.TORUS.500.025.IK	Ø 5.00		Ø 4.85	Ø 8.00	15.00	25.00	0.25	68.00
AM.TORUS.500.050.IK	Ø 5.00		Ø 4.85	Ø 8.00	15.00	25.00	0.50	68.00
AM.TORUS.500.100.IK	Ø 5.00		Ø 4.85	Ø 8.00	15.00	25.00	1.00	68.00
AM.TORUS.5556.025.IK	Ø 5.56	7/32"	Ø 5.40	Ø 8.00	16.80	28.00	0.25	68.00
AM.TORUS.5556.050.IK	Ø 5.56	7/32"	Ø 5.40	Ø 8.00	16.80	28.00	0.50	68.00
AM.TORUS.5556.100.IK	Ø 5.56	7/32"	Ø 5.40	Ø 8.00	16.80	28.00	1.00	68.00
AM.TORUS.600.025.IK	Ø 6.00		Ø 5.85	Ø 8.00	18.00	30.00	0.25	68.00
AM.TORUS.600.050.IK	Ø 6.00		Ø 5.85	Ø 8.00	18.00	30.00	0.50	68.00
AM.TORUS.600.100.IK	Ø 6.00		Ø 5.85	Ø 8.00	18.00	30.00	1.00	68.00
AM.TORUS.600.150.IK	Ø 6.00		Ø 5.85	Ø 8.00	18.00	30.00	1.50	68.00
AM.TORUS.635.025.IK	Ø 6.35	1/4"	Ø 6.20	Ø 10.00	19.20	32.00	0.25	84.00
AM.TORUS.635.050.IK	Ø 6.35	1/4"	Ø 6.20	Ø 10.00	19.20	32.00	0.50	84.00
AM.TORUS.635.100.IK	Ø 6.35	1/4"	Ø 6.20	Ø 10.00	19.20	32.00	1.00	84.00
AM.TORUS.635.150.IK	Ø 6.35	1/4"	Ø 6.20	Ø 10.00	19.20	32.00	1.50	84.00

Available from stock



Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD
Ø 1.0 - 2.0 mm		Ø 2.0 - 3.0 mm		Ø 3.0 - 4.0 mm		Ø 4.0 - 6.35 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
70-140	0.009 - 0.025	100-140	0.016 - 0.050	100-140	0.026 - 0.065	100-140	0.03 - 0.075
70-140	0.009 - 0.025	100-140	0.016 - 0.052	100-140	0.026 - 0.055	100-140	0.03 - 0.065
70-110	0.009 - 0.025	80-110	0.016 - 0.05	80-110	0.026 - 0.055	80-110	0.035 - 0.065
70-100	0.009 - 0.025	70-100	0.016 - 0.05	70-100	0.026 - 0.055	70-100	0.035 - 0.065
80-140	0.012 - 0.025	80-140	0.03 - 0.055	80-140	0.026 - 0.065	80-140	0.035 - 0.07
70-160	0.010 - 0.025	80-160	0.025 - 0.07	80-160	0.035 - 0.08	80-160	0.035 - 0.085
70-140	0.010 - 0.025	80-140	0.025 - 0.07	80-140	0.035 - 0.08	80-140	0.035 - 0.085
70-120	0.010 - 0.025	80-120	0.025 - 0.07	80-120	0.035 - 0.08	80-120	0.025 - 0.085
50 - 80	0.01 - 0.025	50 - 80	0.01 - 0.035	50 - 80	0.015 - 0.05	50 - 80	0.02 - 0.06
50-80	0.01 - 0.025	50-80	0.01 - 0.035	50-80	0.015 - 0.05	50-80	0.02 - 0.06
50-80	0.01 - 0.025	50-80	0.01 - 0.035	50-80	0.015 - 0.05	50-80	0.02 - 0.06
no data available							
no data available							

INOX-micro Ball cooled

INOX high-performance full radius milling cutter Geometry, Z2 and center cutting.

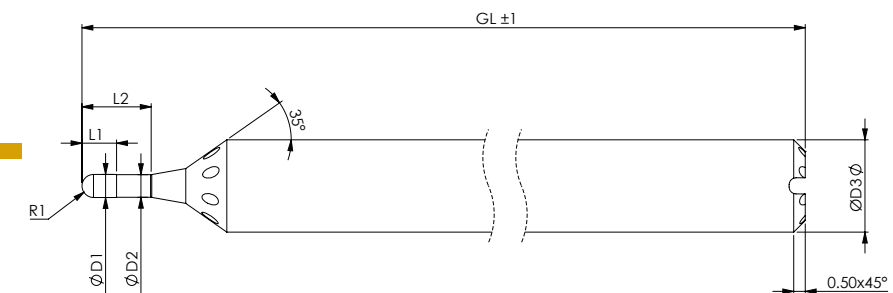
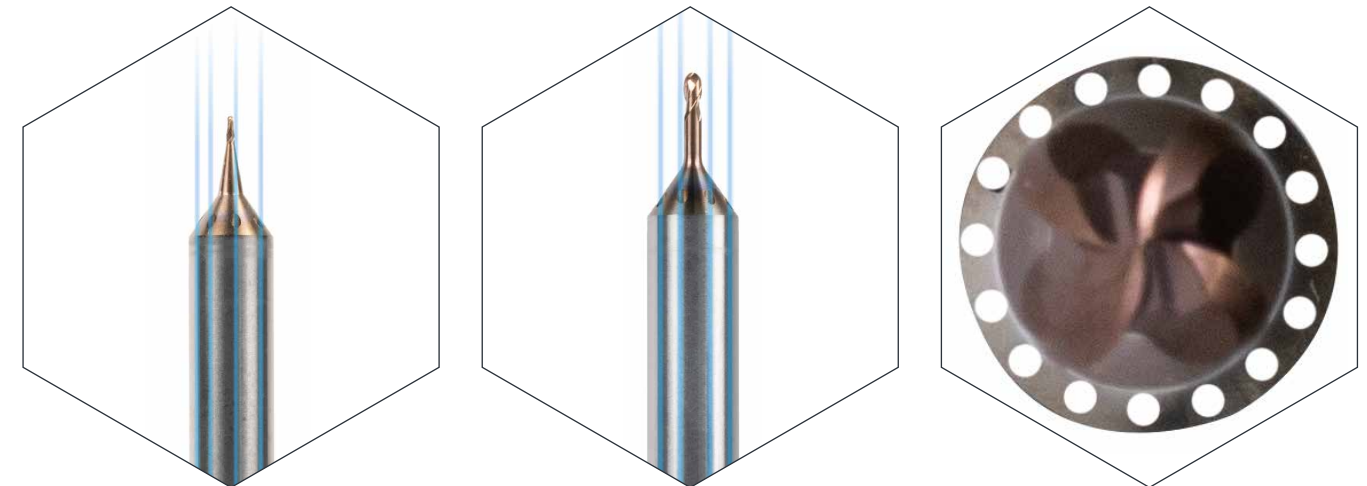
Integrated cooling channels protect the tool from overheating when cutting titanium alloys and stainless steels.

from Ø 0.2
to Ø 1.0

The high-performance α -INOX coating guarantees a long tool life and prevents the cutting edge from sticking.

The reinforced shank in h5 quality combined with an optimized effective length makes the tool robust and vibration-free.

High feed and cutting speeds are made possible by the use of fine-grain solid carbide with high fracture toughness.



☐ Inquiry

☐ Order

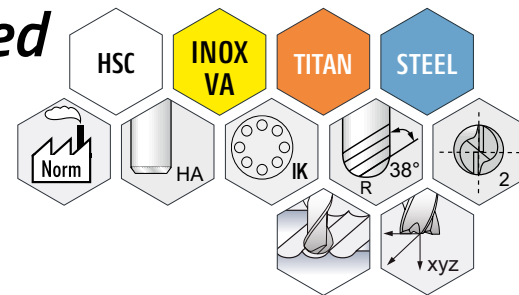
Order number: _____

Other: _____

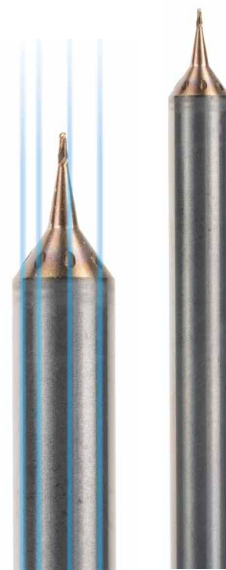
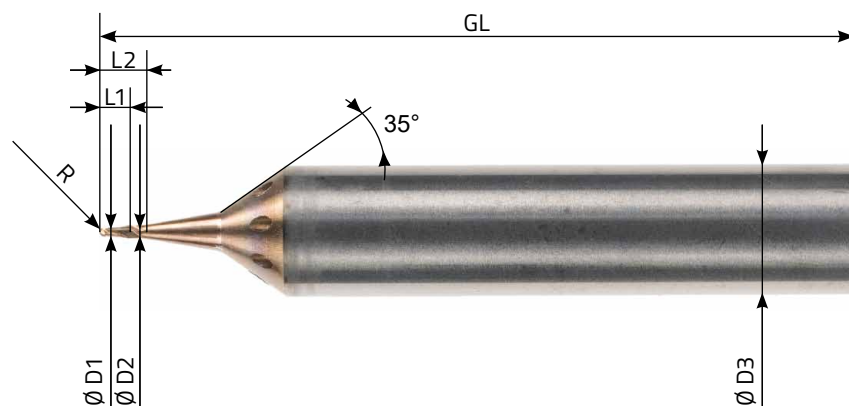
Dimensions: D ₁ : _____ GL: _____ R ₁ : _____ D ₂ : _____ L ₁ : _____ Z: _____ D ₃ : _____ L ₂ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

3xD INOX-micro Ball cooled



ACTIONMILL Full radius mill
AM.VRF.020.IK.3D 3xD
D1: Ø 0.20 mm Integrated cooling



■ α-INOX coated



5 PRO's of the ACTIONMILL:

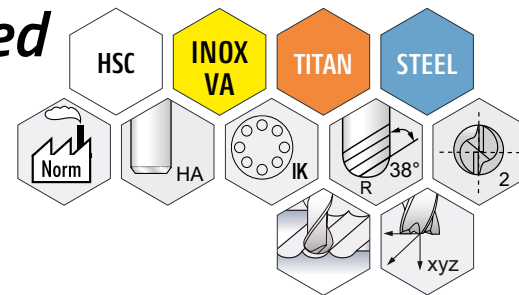
- Short + rigid variant 3xD Internally cooled micro mill
- Very high feed rates possible
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Very long tool life (center cutting)

Article number	D1 (mm)	R1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	GL (mm)
AM.VRF.020.IK.3D	Ø 0.20	0.10	Ø 0.18	Ø 4.00	0.35	0.70	40.00
AM.VRF.025.IK.3D	Ø 0.25	0.13	Ø 0.23	Ø 4.00	0.38	0.75	40.00
AM.VRF.030.IK.3D	Ø 0.30	0.15	Ø 0.28	Ø 4.00	0.45	0.90	40.00
AM.VRF.040.IK.3D	Ø 0.40	0.20	Ø 0.38	Ø 4.00	0.60	1.20	40.00
AM.VRF.045.IK.3D	Ø 0.45	0.23	Ø 0.43	Ø 4.00	0.68	1.35	40.00
AM.VRF.050.IK.3D	Ø 0.50	0.25	Ø 0.48	Ø 4.00	0.75	1.50	40.00
AM.VRF.060.IK.3D	Ø 0.60	0.30	Ø 0.58	Ø 4.00	0.90	1.80	40.00
AM.VRF.070.IK.3D	Ø 0.70	0.35	Ø 0.68	Ø 4.00	1.05	2.10	40.00
AM.VRF.075.IK.3D	Ø 0.75	0.38	Ø 0.73	Ø 4.00	1.13	2.25	40.00
AM.VRF.080.IK.3D	Ø 0.80	0.40	Ø 0.78	Ø 4.00	1.20	2.40	40.00
AM.VRF.090.IK.3D	Ø 0.90	0.45	Ø 0.88	Ø 4.00	1.35	2.70	40.00
AM.VRF.100.IK.3D	Ø 1.00	0.50	Ø 0.98	Ø 4.00	1.50	3.00	40.00

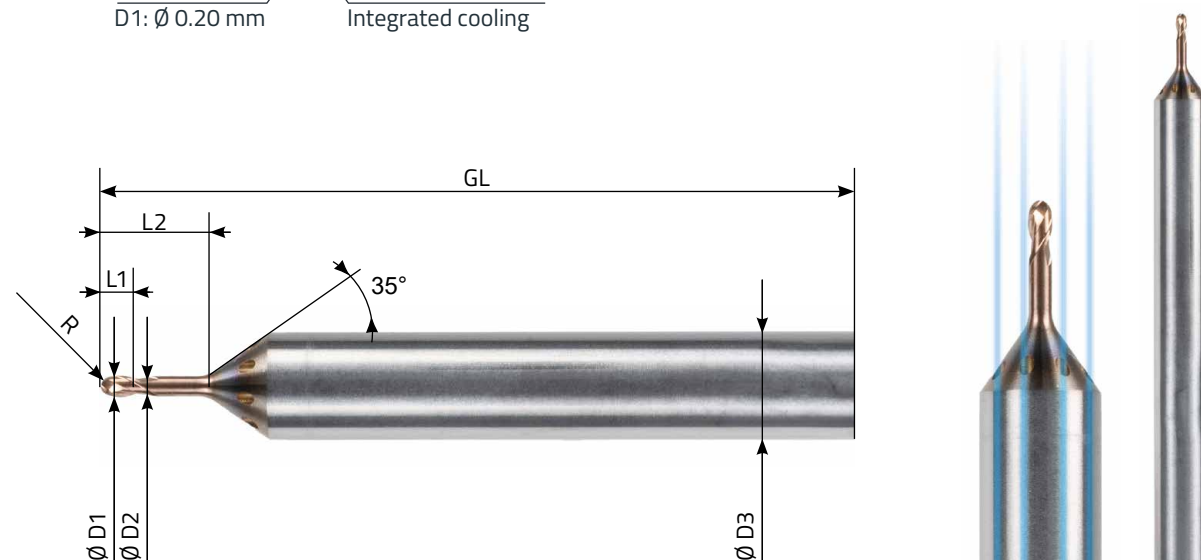
Available from stock



5xD INOX-micro Ball cooled



ACTIONMILL
Full radius mill
AM.VRF.020.IK.5D ← 5xD
D1: Ø 0.20 mm
Integrated cooling



■ α-INOX coated

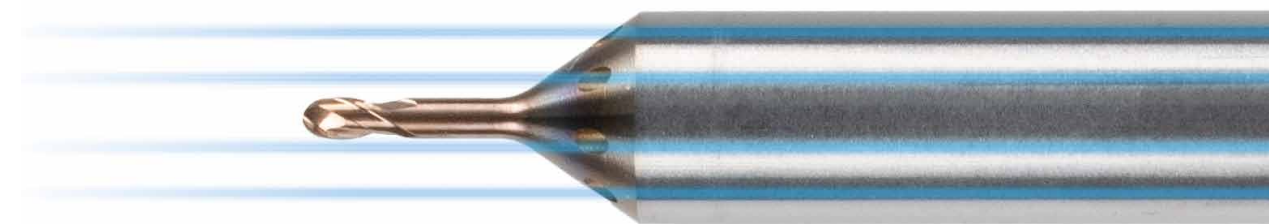


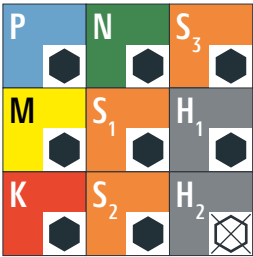
5 PRO's of the ACTIONMILL:

- Short + rigid variant 5xD neck length, internally cooled micro mill
- Very high feed rates possible
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Very long tool life (center cutting)

Article number	D1 (mm)	R1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	GL (mm)
AM.VRF.020.IK.5D	Ø 0.20	0.100	Ø 0.18	Ø 4.00	0.30	1.00	40.00
AM.VRF.025.IK.5D	Ø 0.25	0.125	Ø 0.23	Ø 4.00	0.38	1.25	40.00
AM.VRF.030.IK.5D	Ø 0.30	0.150	Ø 0.28	Ø 4.00	0.45	1.50	40.00
AM.VRF.040.IK.5D	Ø 0.40	0.200	Ø 0.38	Ø 4.00	0.60	2.00	40.00
AM.VRF.045.IK.5D	Ø 0.45	0.225	Ø 0.43	Ø 4.00	0.68	2.25	40.00
AM.VRF.050.IK.5D	Ø 0.50	0.250	Ø 0.48	Ø 4.00	0.75	2.50	40.00
AM.VRF.060.IK.5D	Ø 0.60	0.300	Ø 0.58	Ø 4.00	0.90	3.00	40.00
AM.VRF.070.IK.5D	Ø 0.70	0.350	Ø 0.68	Ø 4.00	1.05	3.50	40.00
AM.VRF.075.IK.5D	Ø 0.75	0.375	Ø 0.73	Ø 4.00	1.13	3.75	40.00
AM.VRF.080.IK.5D	Ø 0.80	0.400	Ø 0.78	Ø 4.00	1.20	4.00	40.00
AM.VRF.090.IK.5D	Ø 0.90	0.450	Ø 0.88	Ø 4.00	1.35	4.50	40.00
AM.VRF.100.IK.5D	Ø 1.00	0.500	Ø 0.98	Ø 4.00	1.50	5.00	40.00

Available from stock





Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

Ø 0.2-0.3		Ø 0.3-0.4		Ø 0.5 - Ø 0.6 mm		Ø 0.7 - Ø 0.8 mm		Ø 0.9-1.0 mm	
ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
20-60	0.008 - 0.015	20-60	0.010 - 0.035	20-60	0.01 - 0.065	20-60	0.01 - 0.075	20-60	0.015 - 0.085
20-60	0.008 - 0.015	20-60	0.010 - 0.035	20-60	0.01 - 0.055	20-60	0.01 - 0.065	20-60	0.015 - 0.075
15-60	0.008 - 0.02	15-60	0.010 - 0.04	15-60	0.01 - 0.055	15-60	0.01 - 0.065	15-60	0.015 - 0.075
15-60	0.008 - 0.025	15-60	0.010 - 0.04	15-60	0.01 - 0.055	15-60	0.01 - 0.065	15-60	0.015 - 0.075
20-60	0.008 - 0.025	20-60	0.01 - 0.045	20-60	0.01 - 0.065	20-60	0.01 - 0.065	20-60	0.015 - 0.085
20-60	0.008 - 0.028	20-60	0.015 - 0.06	20-60	0.01 - 0.06	20-60	0.01 - 0.06	20-60	0.015 - 0.075
15-55	0.008 - 0.03	15-55	0.015 - 0.06	15-55	0.01 - 0.06	15-55	0.01 - 0.06	15-55	0.015 - 0.08
15-55	0.008 - 0.035	15-55	0.015 - 0.06	15-55	0.01 - 0.06	15-55	0.01 - 0.06	15-55	0.015 - 0.085
15-45	0.006 - 0.02	15-45	0.008 - 0.025	15-45	0.01 - 0.05	15-45	0.01 - 0.06	15-45	0.015 - 0.07
15-45	0.006 - 0.02	15-45	0.008 - 0.025	15-45	0.01 - 0.05	15-45	0.01 - 0.06	15-45	0.015 - 0.07
15-45	0.006 - 0.02	15-45	0.008 - 0.025	15-45	0.01 - 0.05	15-45	0.01 - 0.06	15-45	0.015 - 0.07
no data available									
no data available									

INOX-Ball

INOX-Ball cooled

from Ø 1.0
to Ø 8.0

INOX high-performance full
radius mill geometry, Z4 and
center cutting.

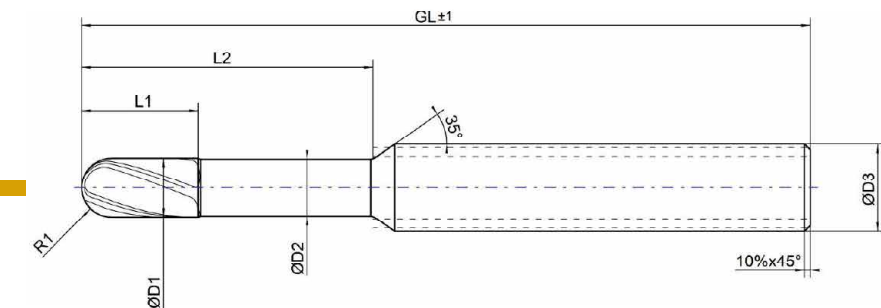
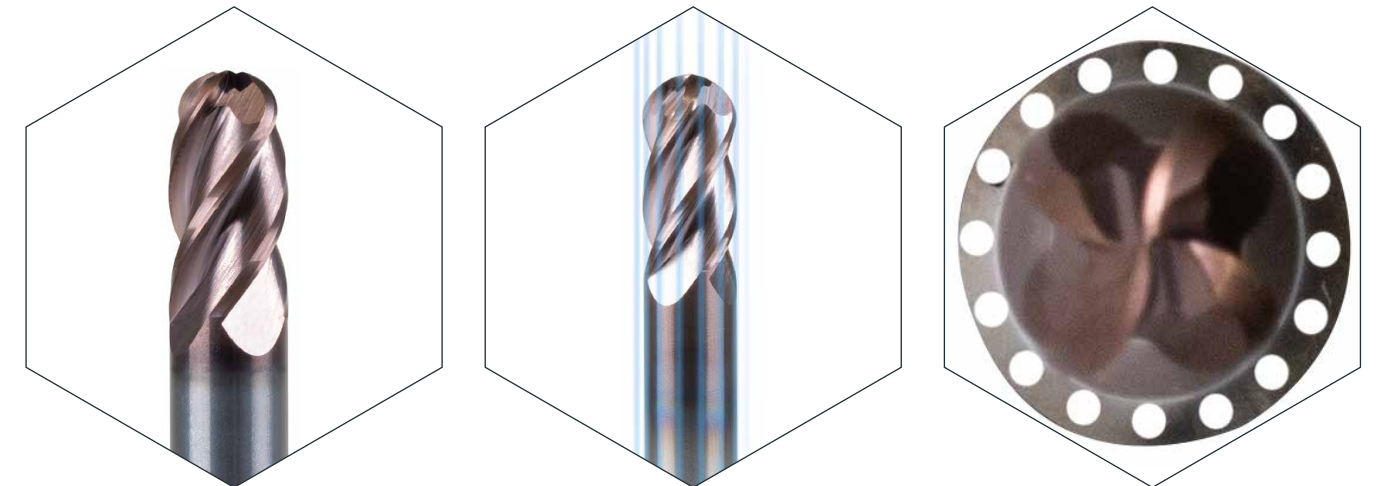
The high-performance α -INOX
coating guarantees a long tool
life and prevents the cutting
edge from sticking.

The reinforced h5 shank
combined with an optimized
usable length makes the tool
robust and vibration-free.

High feed and cutting
speeds are made possible
by the use of fine-grain solid
carbide with high fracture
toughness.

from Ø 1.0
to Ø 8.0

Integrated cooling channels
protect the tool from overheating
when machining titanium alloys
and stainless steels.



☐ Inquiry

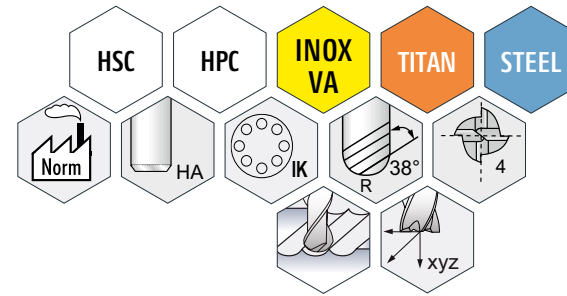
☐ Order

Order number: _____ Other: _____

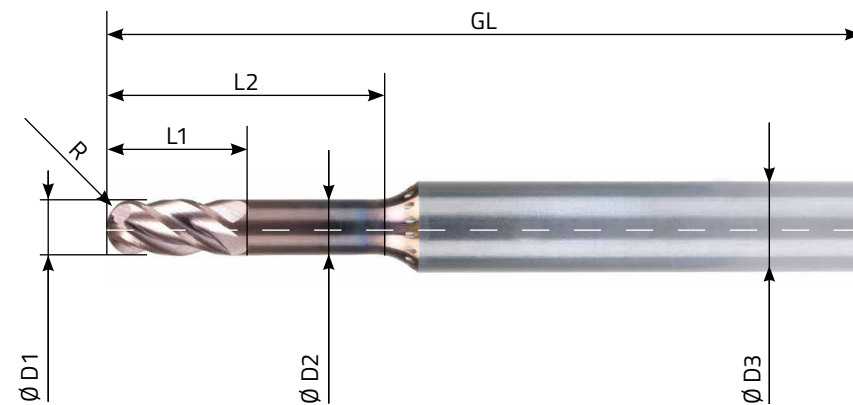
Dimensions: D ₁ : _____ GL: _____ R ₁ : _____ D ₂ : _____ L ₁ : _____ Z: _____ D ₃ : _____ L ₂ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

3xD INOX-Ball cooled



ACTIONMILL Full radius mill
AM.VRF.100.200.IK.3D ← Integrated cooling 3xD
D1: Ø 1.00 mm L1: 2.00 mm



■ α-INOX coated



5 PRO's of the ACTIONMILL:

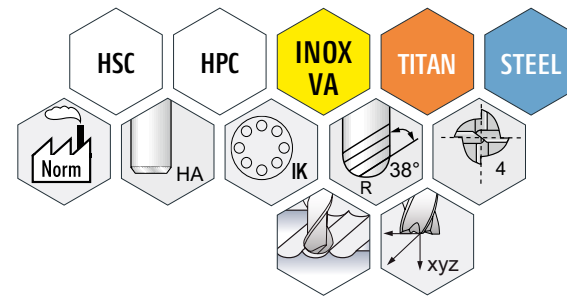
- Very high feed rates possible
- Very long service life
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Center cutting

Article number	D1 h9		R	D2	D3 h5	L1	L2	GL
	(mm)	(inch)	(mm)	(mm)	(mm)	(2xD1 / mm)	(3xD1 / mm)	(mm)
AM.VRF.100.200.IK.3D	Ø 1.000	-	0.5000	Ø 0.92	Ø 4.00	2.00	3.25	40.00
AM.VRF.120.240.IK.3D	Ø 1.200	-	0.6000	Ø 1.10	Ø 4.00	2.40	3.85	40.00
AM.VRF.150.300.IK.3D	Ø 1.500	-	0.7500	Ø 1.40	Ø 4.00	3.00	4.75	40.00
AM.VRF.1587.3174.IK.3D	Ø 1.587	1/16"	0.7935	Ø 1.48	Ø 4.00	3.20	5.05	40.00
AM.VRF.180.360.IK.3D	Ø 1.800	-	0.9000	Ø 1.70	Ø 4.00	3.60	5.65	50.00
AM.VRF.200.400.IK.3D	Ø 2.000	-	1.0000	Ø 1.90	Ø 4.00	4.00	6.25	50.00
AM.VRF.2381.4762.IK.3D	Ø 2.381	3/32"	1.1905	Ø 2.28	Ø 6.00	4.80	7.45	60.00
AM.VRF.250.500.IK.3D	Ø 2.500	-	1.2500	Ø 2.40	Ø 6.00	5.00	7.75	60.00
AM.VRF.300.600.IK.3D	Ø 3.000	-	1.5000	Ø 2.90	Ø 6.00	6.00	9.25	60.00
AM.VRF.3175.6350.IK.3D	Ø 3.175	1/8"	1.5875	Ø 3.05	Ø 6.00	6.40	9.75	60.00
AM.VRF.3968.7936.IK.3D	Ø 3.968	5/32"	1.9840	Ø 3.85	Ø 6.00	8.00	12.25	60.00
AM.VRF.400.800.IK.3D	Ø 4.000	-	2.0000	Ø 3.90	Ø 6.00	8.00	12.25	60.00
AM.VRF.4762.9524.IK.3D	Ø 4.762	3/16"	2.3810	Ø 4.65	Ø 8.00	9.60	14.65	68.00
AM.VRF.500.1000.IK.3D	Ø 5.000	-	2.5000	Ø 4.90	Ø 8.00	10.00	15.25	68.00
AM.VRF.5556.11112.IK.3D	Ø 5.556	7/32"	2.7800	Ø 5.45	Ø 8.00	11.20	17.05	68.00
AM.VRF.600.1200.IK.3D	Ø 6.000	-	3.0000	Ø 5.90	Ø 8.00	12.00	18.05	68.00
AM.VRF.635.1270.IK.3D	Ø 6.350	1/4"	3.1750	Ø 6.25	Ø 10.00	12.70	19.30	84.00
AM.VRF.700.1400.IK.3D	Ø 7.000	-	3.5000	Ø 6.90	Ø 10.00	14.00	21.00	93.00
AM.VRF.800.1600.IK.3D	Ø 8.000	-	4.0000	Ø 7.90	Ø 10.00	16.00	24.00	93.00

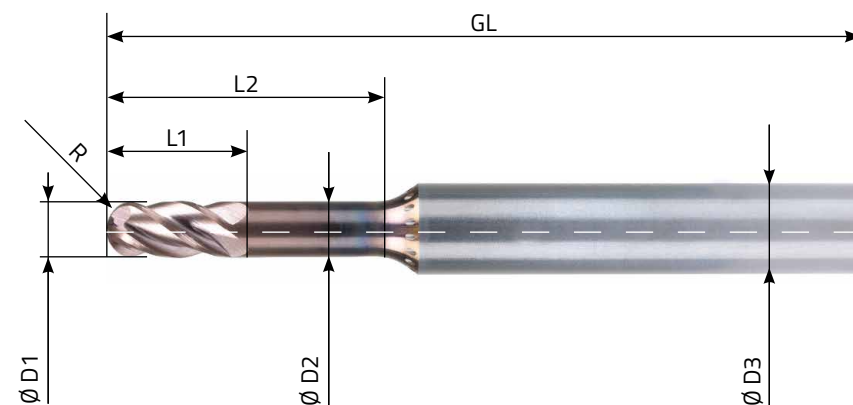
Available from stock



5xD INOX-Ball cooled



ACTIONMILL Full radius mill
AM.VRF.100.200.IK ← Integrated cooling
D1: Ø 1.00 mm L1: 2.00 mm



■ α-INOX coated



5 PRO's of the ACTIONMILL:

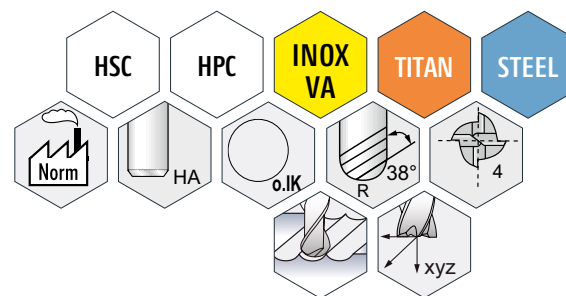
- Very high feed rates possible
- Very long service life
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Center cutting

Article number	D1 h9		R	D2	D3 h5	L1	L2	GL
	(mm)	(inch)	(mm)	(mm)	(mm)	(2xD1 / mm)	(5xD1 / mm)	(mm)
AM.VRF.100.200.IK	Ø 1.000	-	0.5000	Ø 0.92	Ø 4.00	2.00	5.25	40.00
AM.VRF.120.240.IK	Ø 1.200	-	0.6000	Ø 1.10	Ø 4.00	2.40	6.25	40.00
AM.VRF.150.300.IK	Ø 1.500	-	0.7500	Ø 1.40	Ø 4.00	3.00	7.75	40.00
AM.VRF.1587.3174.IK	Ø 1.587	1/16"	0.7935	Ø 1.48	Ø 4.00	3.20	8.25	40.00
AM.VRF.180.360.IK	Ø 1.800	-	0.9000	Ø 1.70	Ø 4.00	3.60	9.25	50.00
AM.VRF.200.400.IK	Ø 2.000	-	1.0000	Ø 1.90	Ø 4.00	4.00	10.25	50.00
AM.VRF.2381.4762.IK	Ø 2.381	3/32"	1.1905	Ø 2.28	Ø 6.00	4.80	12.25	60.00
AM.VRF.250.500.IK	Ø 2.500	-	1.2500	Ø 2.40	Ø 6.00	5.00	12.75	60.00
AM.VRF.300.600.IK	Ø 3.000	-	1.5000	Ø 2.90	Ø 6.00	6.00	15.25	60.00
AM.VRF.3175.6350.IK	Ø 3.175	1/8"	1.5875	Ø 3.05	Ø 6.00	6.40	16.25	60.00
AM.VRF.3968.7936.IK	Ø 3.968	5/32"	1.9840	Ø 3.85	Ø 6.00	8.00	20.25	60.00
AM.VRF.400.800.IK	Ø 4.000	-	2.0000	Ø 3.90	Ø 6.00	8.00	20.25	60.00
AM.VRF.4762.9524.IK	Ø 4.762	3/16"	2.3810	Ø 4.65	Ø 8.00	9.60	24.25	68.00
AM.VRF.500.1000.IK	Ø 5.000	-	2.5000	Ø 4.90	Ø 8.00	10.00	25.25	68.00
AM.VRF.5556.11112.IK	Ø 5.556	7/32"	2.7800	Ø 5.45	Ø 8.00	11.20	28.25	68.00
AM.VRF.600.1200.IK	Ø 6.000	-	3.0000	Ø 5.90	Ø 8.00	12.00	30.25	68.00
AM.VRF.635.1270.IK	Ø 6.350	1/4"	3.1750	Ø 6.25	Ø 10.00	12.70	19.30	84.00
AM.VRF.700.1400.IK	Ø 7.000	-	3.5000	Ø 6.90	Ø 10.00	14.00	21.00	93.00
AM.VRF.800.1600.IK	Ø 8.000	-	4.0000	Ø 7.90	Ø 10.00	16.00	24.00	93.00

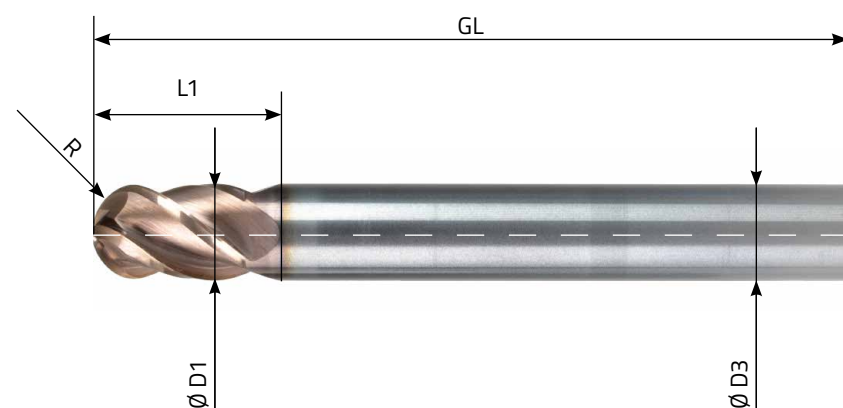
Available from stock



1.5xD INOX-Ball



ACTIONMILL Full radius mill
AM.VRF.300.450.1.5D ← 1.5xD
D1: Ø 3.00 mm L1: 4.50 mm



■ α-INOX coated



5 PRO's of the ACTIONMILL:

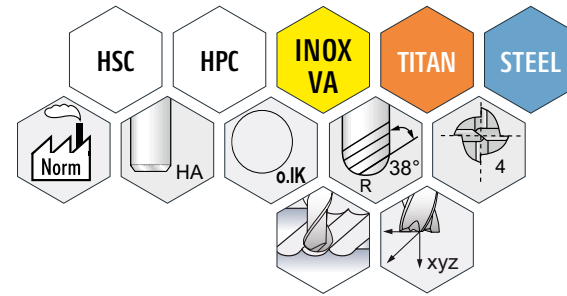
- Short + rigid version
- Very high feed rates possible
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Very long tool life (center cutting)

Article number	D1 h9 (mm)	R (mm)	D3 h5 (mm)	L1 (1.5xD1/mm)	GL (mm)
AM.VRF.300.450.1.5D	Ø 3.00	1.50	Ø 3.00	4.50	39.00
AM.VRF.400.600.1.5D	Ø 4.00	2.00	Ø 4.00	6.00	51.00
AM.VRF.600.900.1.5D	Ø 6.00	3.00	Ø 6.00	9.00	51.00
AM.VRF.800.1200.1.5D	Ø 8.00	4.00	Ø 8.00	12.00	59.00

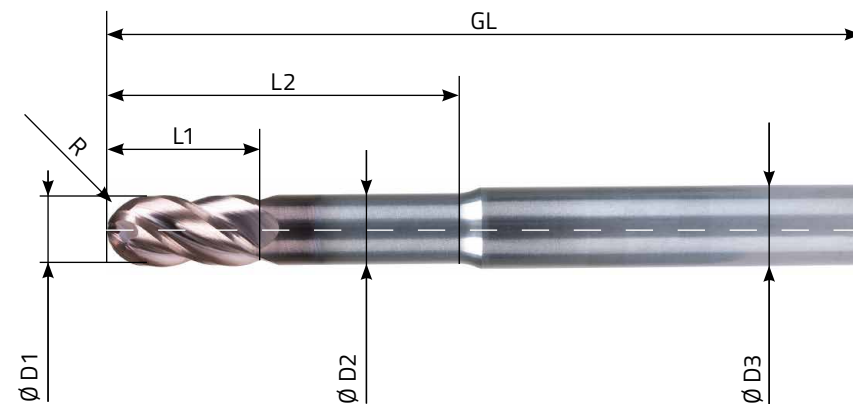
Available from stock



3xD INOX-Ball



ACTIONMILL Full radius mill
AM.VRF.100.200
D1: Ø 1 mm L1: 2.00 mm



■ α-INOX coated



5 PRO's of the ACTIONMILL:

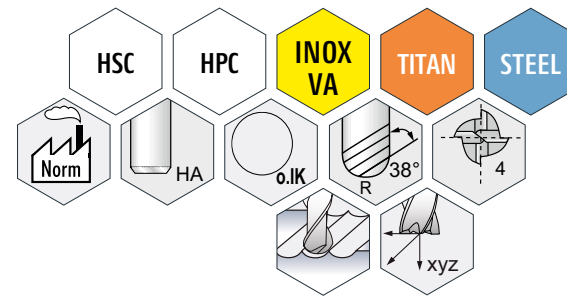
- Very high feed rates possible
- Long tool life
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Center cutting

Article number	D1 h9		R1	D2	D3 h5	L1	L2	GL
	(mm)	(inch)	(mm)	(mm)	(mm)	(2xD1 / mm)	(5xD1 / mm)	(mm)
AM.VRF.100.200.3D	Ø 1.000	-	0.5000	Ø 0.92	Ø 4.00	2.00	3.25	40.00
AM.VRF.120.240.3D	Ø 1.200	-	0.6000	Ø 1.10	Ø 4.00	2.40	3.85	40.00
AM.VRF.150.300.3D	Ø 1.500	-	0.7500	Ø 1.40	Ø 4.00	3.00	4.75	40.00
AM.VRF.1587.3174.3D	Ø 1.587	1/16"	0.7935	Ø 1.48	Ø 4.00	3.20	5.05	40.00
AM.VRF.180.360.3D	Ø 1.800	-	0.9000	Ø 1.70	Ø 4.00	3.60	5.65	50.00
AM.VRF.200.400.3D	Ø 2.000	-	1.0000	Ø 1.90	Ø 4.00	4.00	6.25	50.00
AM.VRF.2381.4762.3D	Ø 2.381	3/32"	1.1905	Ø 2.28	Ø 6.00	4.80	7.45	50.00
AM.VRF.250.500.3D	Ø 2.500	-	1.2500	Ø 2.40	Ø 6.00	5.00	7.75	60.00
AM.VRF.300.600.3D	Ø 3.000	-	1.5000	Ø 2.90	Ø 6.00	6.00	9.25	60.00
AM.VRF.3175.6350.3D	Ø 3.175	1/8"	1.5875	Ø 3.05	Ø 6.00	6.40	9.75	60.00
AM.VRF.3968.7936.3D	Ø 3.968	5/32"	1.9840	Ø 3.85	Ø 6.00	8.00	12.25	60.00
AM.VRF.400.800.3D	Ø 4.000	-	2.0000	Ø 3.90	Ø 6.00	8.00	12.25	60.00
AM.VRF.4762.9524.3D	Ø 4.762	3/16"	2.3810	Ø 4.65	Ø 6.00	9.60	14.65	68.00
AM.VRF.500.1000.3D	Ø 5.000	-	2.5000	Ø 4.90	Ø 6.00	10.00	15.25	68.00
AM.VRF.5556.11112.3D	Ø 5.556	7/32"	2.7800	Ø 5.45	Ø 6.00	11.20	17.05	68.00
AM.VRF.600.1200.3D	Ø 6.000	-	3.0000	Ø 5.90	Ø 6.00	12.00	18.05	68.00
AM.VRF.635.1270.3D	Ø 6.350	1/4"	3.1750	Ø 6.25	Ø 8.00	12.70	19.30	80.00
AM.VRF.700.1400.3D	Ø 7.000	-	3.5000	Ø 6.90	Ø 8.00	14.00	21.25	80.00
AM.VRF.800.1600.3D	Ø 8.000	-	4.0000	Ø 7.90	Ø 8.00	16.00	24.25	80.00

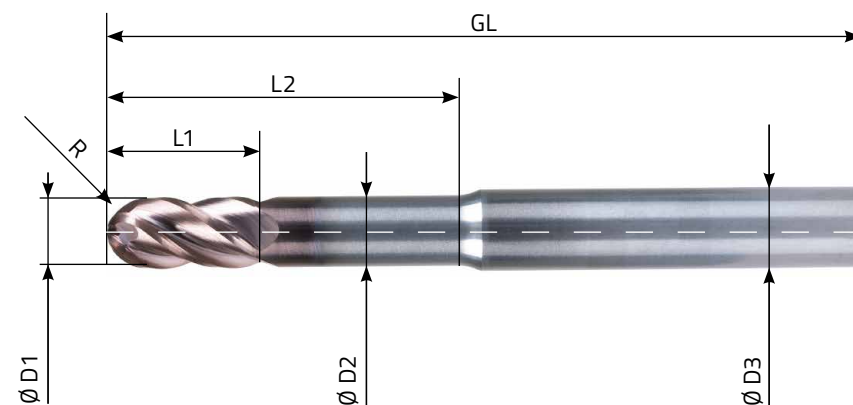
Available from stock



5xD INOX-Ball



ACTIONMILL Full radius mill
AM.VRF.100.200
D1: Ø 1 mm L1: 2.00 mm



■ α-INOX coated



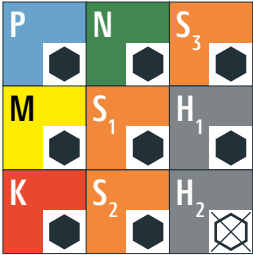
5 PRO's of the ACTIONMILL:

- Very high feed rates possible
- Long tool life
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Center cutting

Article number	D1 h9		R1	D2	D3 h5	L1	L2	GL
	(mm)	(inch)	(mm)	(mm)	(mm)	(2xD1 / mm)	(5xD1 / mm)	(mm)
AM.VRF.100.200	Ø 1.000	-	0.5000	Ø 0.92	Ø 4.00	2.00	5.25	40.00
AM.VRF.120.240	Ø 1.200	-	0.6000	Ø 1.10	Ø 4.00	2.40	6.25	40.00
AM.VRF.150.300	Ø 1.500	-	0.7500	Ø 1.40	Ø 4.00	3.00	7.75	40.00
AM.VRF.1587.3174	Ø 1.587	1/16"	0.7935	Ø 1.48	Ø 4.00	3.20	8.25	40.00
AM.VRF.180.360	Ø 1.800	-	0.9000	Ø 1.70	Ø 4.00	3.60	9.25	50.00
AM.VRF.200.400	Ø 2.000	-	1.0000	Ø 1.90	Ø 4.00	4.00	10.25	50.00
AM.VRF.2381.4762	Ø 2.381	3/32"	1.1905	Ø 2.28	Ø 6.00	4.80	12.25	50.00
AM.VRF.250.500	Ø 2.500	-	1.2500	Ø 2.40	Ø 6.00	5.00	12.75	60.00
AM.VRF.300.600	Ø 3.000	-	1.5000	Ø 2.90	Ø 6.00	6.00	15.25	60.00
AM.VRF.3175.6350	Ø 3.175	1/8"	1.5875	Ø 3.05	Ø 6.00	6.40	16.25	60.00
AM.VRF.3968.7936	Ø 3.968	5/32"	1.9840	Ø 3.85	Ø 6.00	8.00	20.25	60.00
AM.VRF.400.800	Ø 4.000	-	2.0000	Ø 3.90	Ø 6.00	8.00	20.25	60.00
AM.VRF.4762.9524	Ø 4.762	3/16"	2.3810	Ø 4.65	Ø 6.00	9.60	24.25	68.00
AM.VRF.500.1000	Ø 5.000	-	2.5000	Ø 4.90	Ø 6.00	10.00	25.25	68.00
AM.VRF.5556.11112	Ø 5.556	7/32"	2.7800	Ø 5.45	Ø 6.00	11.20	28.25	68.00
AM.VRF.600.1200	Ø 6.000	-	3.0000	Ø 5.90	Ø 6.00	12.00	30.25	68.00
AM.VRF.635.1270	Ø 6.350	1/4"	3.1750	Ø 6.25	Ø 8.00	12.70	32.25	80.00
AM.VRF.700.1400	Ø 7.000	-	3.5000	Ø 6.90	Ø 8.00	14.00	35.25	80.00
AM.VRF.800.1600	Ø 8.000	-	4.0000	Ø 7.90	Ø 8.00	16.00	40.25	80.00

Available from stock





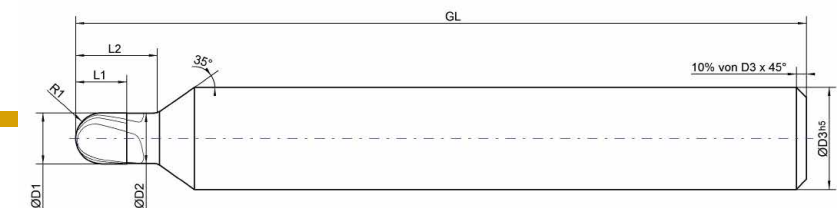
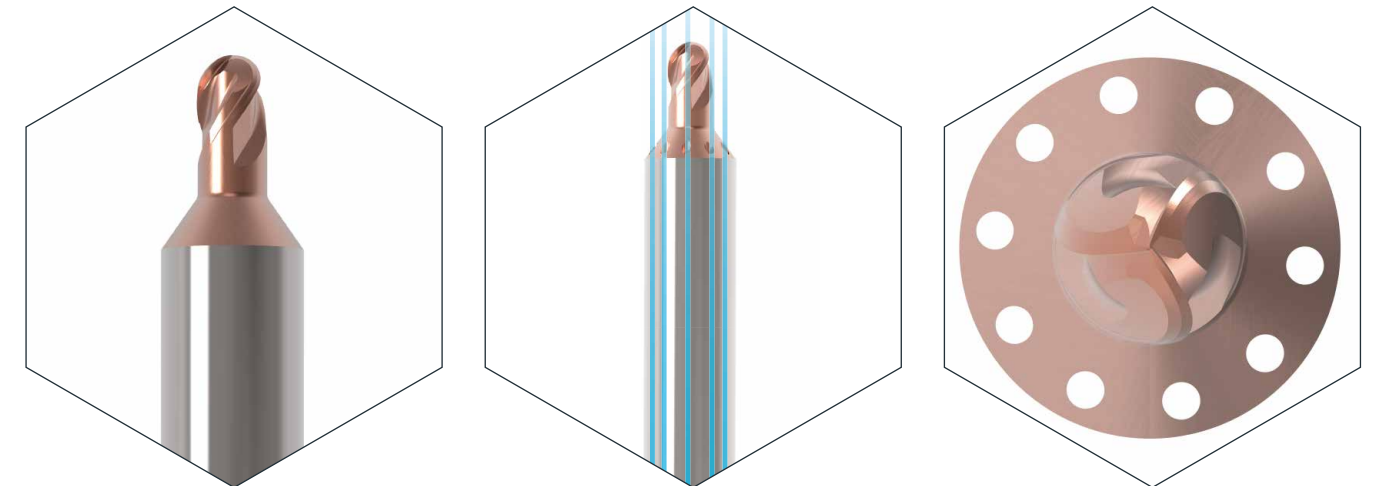
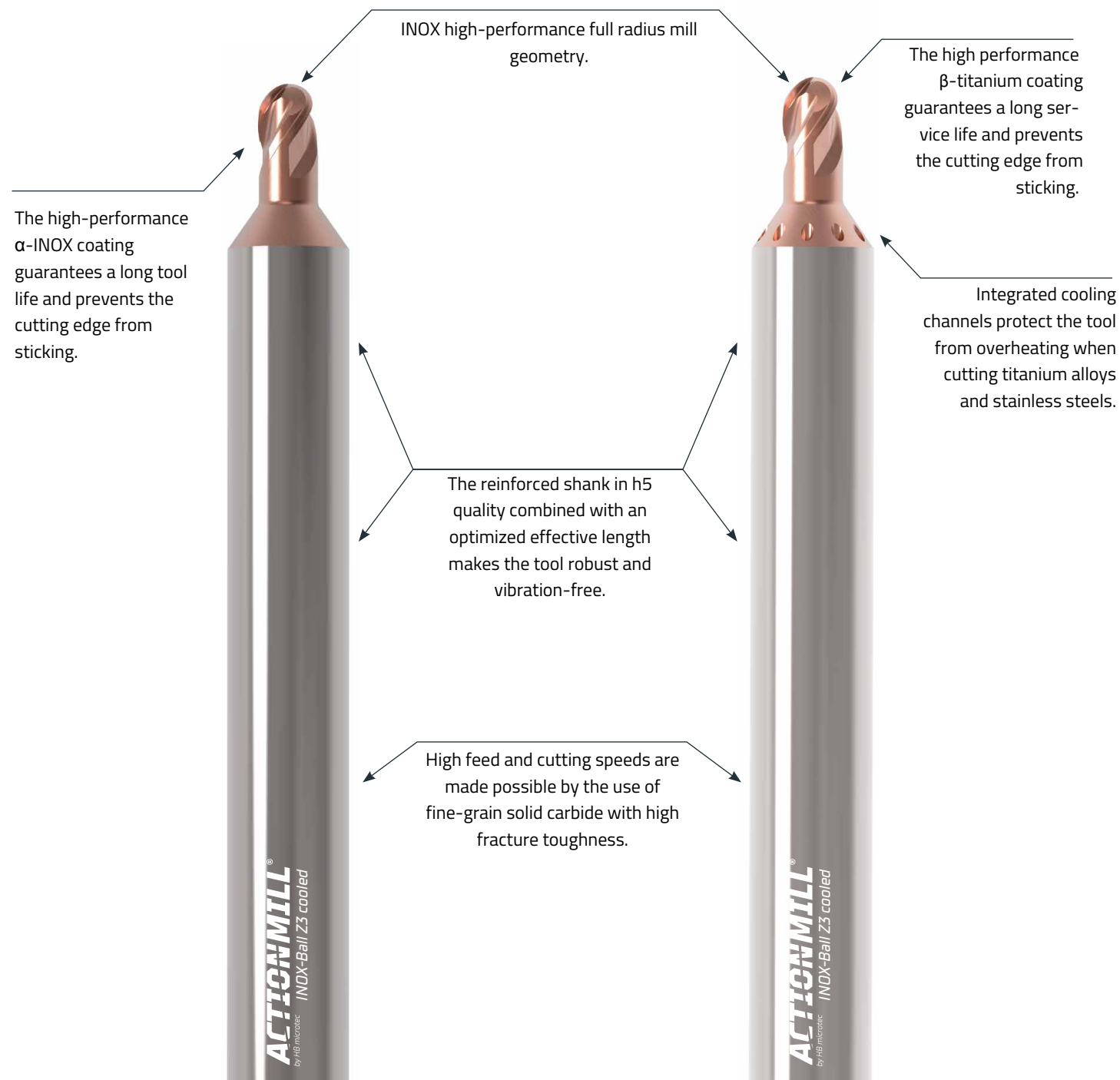
Recommended use Highly suitable Partially suitable Not recommended

Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Ø 0.2 - 0.3		Ø 0.3 - 0.4		Ø 0.4 - 0.6 mm		Ø 0.6 - 0.8 mm		Ø 0.8 - 1.0 mm	
ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD	ap=0.25xD	ae=0.5xD
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
100-140	0.01 - 0.015	100-140	0.015 - 0.035	100-140	0.025 - 0.065	100-140	0.03 - 0.075	100-140	0.035 - 0.085
100-140	0.01 - 0.015	100-140	0.015 - 0.035	100-140	0.025 - 0.055	100-140	0.03 - 0.065	100-140	0.035 - 0.075
80-110	0.01 - 0.02	80-110	0.015 - 0.04	80-110	0.025 - 0.055	80-110	0.035 - 0.065	80-110	0.035 - 0.075
70-100	0.015 - 0.025	70-100	0.015 - 0.04	70-100	0.025 - 0.055	70-100	0.035 - 0.065	70-100	0.035 - 0.075
80-140	0.015 - 0.025	80-140	0.03 - 0.045	80-140	0.025 - 0.065	80-140	0.035 - 0.065	80-140	0.035 - 0.085
80-160	0.02 - 0.028	80-160	0.025 - 0.06	80-160	0.035 - 0.06	80-160	0.035 - 0.06	80-160	0.035 - 0.075
80-140	0.02 - 0.03	80-140	0.025 - 0.06	80-140	0.035 - 0.06	80-140	0.035 - 0.06	80-140	0.035 - 0.08
80-120	0.02 - 0.035	80-120	0.025 - 0.06	80-120	0.035 - 0.06	80-120	0.025 - 0.06	80-120	0.035 - 0.085
50 - 80	0.01 - 0.02	50 - 80	0.01 - 0.025	50 - 80	0.015 - 0.05	50 - 80	0.02 - 0.06	50 - 80	0.025 - 0.07
50-80	0.01 - 0.02	50-80	0.01 - 0.025	50-80	0.015 - 0.05	50-80	0.02 - 0.06	50-80	0.025 - 0.07
50-80	0.01 - 0.02	50-80	0.01 - 0.025	50-80	0.015 - 0.05	50-80	0.02 - 0.06	50-80	0.025 - 0.07
no data available									
no data available									

INOX-Ball Z3

INOX-Ball Z3 cooled



☐ Inquiry

☐ Order

Order number: _____

Other: _____

Dimensions:

D₁: _____ GL: _____ R₁: _____

D₂: _____ L₁: _____ Z: _____

D₃: _____ L₂: _____

Coating:

☐ Coated*: _____

☐ Uncoated

Cooling channels:

☐ Yes ☐ No

Cutting direction:

☐ Left ☐ Right

Material to be machined:

Shank shape:

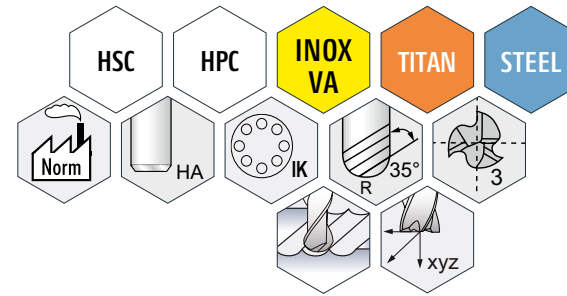
Quantity:

Date, signature & company stamp:

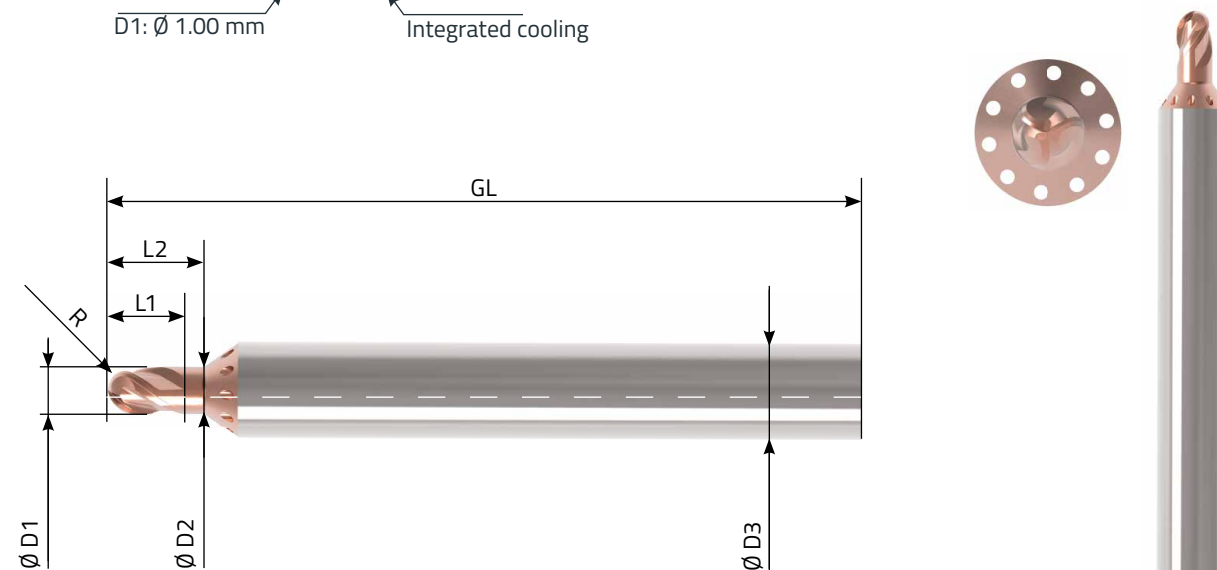
Contact person:

* Without further information, the most suitable coating will be used.

INOX-Ball Z3 cooled



ACTIONMILL Full radius mill
AM.VRF.100.Z3.1D.IK.01 ← α-INOX coating
D1: Ø 1.00 mm Integrated cooling



■ α-INOX coated

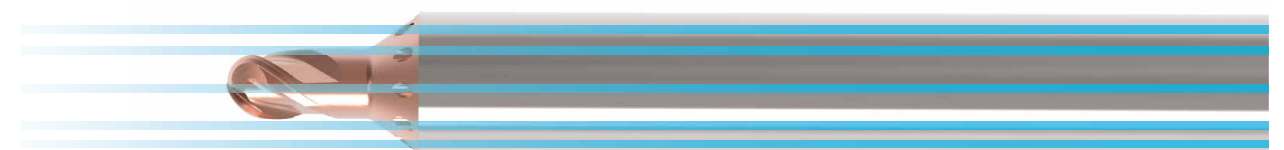


5 PRO's of the ACTIONMILL:

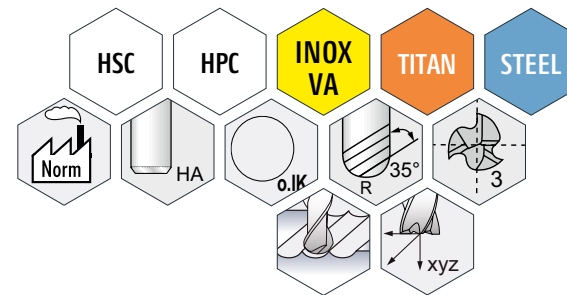
- Very high feed rates possible
- Very long service life
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Integrated cooling prevents chip accumulation

Article number	D1 h9 (mm)	R (mm)	D2 (mm)	D3 h5 (mm)	L1 (2xD1 / mm)	L2 (3xD1 / mm)	GL (mm)
AM.VRF.100.Z3.1D.IK.01	1.00	0.50	0.95	4.00	1.00	2.00	50.00
AM.VRF.120.Z3.1D.IK.01	1.20	0.60	1.15	4.00	1.20	2.50	50.00
AM.VRF.150.Z3.1D.IK.01	1.50	0.75	1.45	4.00	1.50	3.00	50.00
AM.VRF.180.Z3.1D.IK.01	1.80	0.90	1.75	4.00	1.80	3.50	50.00
AM.VRF.200.Z3.1D.IK.01	2.00	1.00	1.95	4.00	2.00	3.80	50.00
AM.VRF.250.Z3.1D.IK.01	2.50	1.25	2.45	6.00	2.50	5.50	50.00
AM.VRF.300.Z3.1D.IK.01	3.00	1.50	2.90	6.00	3.00	6.00	50.00
AM.VRF.350.Z3.1D.IK.01	3.50	1.75	3.45	6.00	3.50	7.00	50.00
AM.VRF.400.Z3.1D.IK.01	4.00	2.00	3.40	6.00	4.00	7.50	50.00
AM.VRF.450.Z3.1D.IK.01	4.50	2.25	4.40	8.00	4.50	8.00	60.00
AM.VRF.500.Z3.1D.IK.01	5.00	2.50	4.90	8.00	5.00	8.50	60.00
AM.VRF.600.Z3.1D.IK.01	6.00	3.00	5.90	8.00	6.00	10.00	60.00

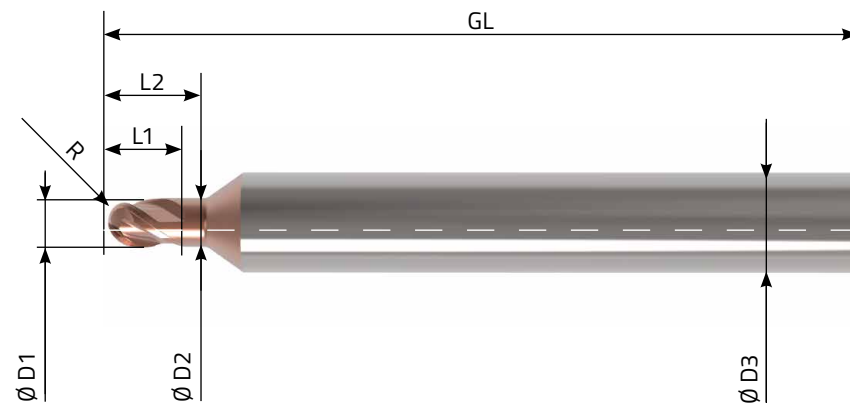
Available from stock



INOX-Ball Z3



ACTIONMILL Full radius mill
AM.VRF.100.Z3.1D.01 ← α-INOX coating
D1: Ø 1.00 mm Amount of teeth: 3



■ α-INOX coated



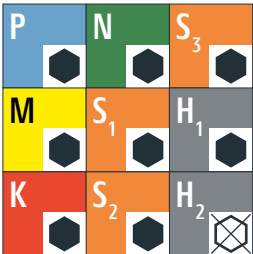
5 PRO's of the ACTIONMILL:

- Very high feed rates possible
- Very long service life
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Stable short version

Article number	D1 h9 (mm)	R (mm)	D2 (mm)	D3 h5 (mm)	L1 (2xD1 / mm)	L2 (3xD1 / mm)	GL (mm)
AM.VRF.100.Z3.1D.01	1.00	0.50	0.95	4.00	1.00	2.00	50.00
AM.VRF.120.Z3.1D.01	1.20	0.60	1.15	4.00	1.20	2.50	50.00
AM.VRF.150.Z3.1D.01	1.50	0.75	1.45	4.00	1.50	3.00	50.00
AM.VRF.180.Z3.1D.01	1.80	0.90	1.75	4.00	1.80	3.50	50.00
AM.VRF.200.Z3.1D.01	2.00	1.00	1.95	4.00	2.00	3.80	50.00
AM.VRF.250.Z3.1D.01	2.50	1.25	2.45	6.00	2.50	5.50	50.00
AM.VRF.300.Z3.1D.01	3.00	1.50	2.90	6.00	3.00	6.00	50.00
AM.VRF.350.Z3.1D.01	3.50	1.75	3.45	6.00	3.50	7.00	50.00
AM.VRF.400.Z3.1D.01	4.00	2.00	3.40	6.00	4.00	7.50	50.00
AM.VRF.450.Z3.1D.01	4.50	2.25	4.40	8.00	4.50	8.00	60.00
AM.VRF.500.Z3.1D.01	5.00	2.50	4.90	8.00	5.00	8.50	60.00
AM.VRF.600.Z3.1D.01	6.00	3.00	5.90	8.00	6.00	10.00	60.00

Available from stock





Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

Ø 1 - Ø 2 mm		Ø 2 - Ø 3 mm		Ø 3 - Ø 4 mm		Ø 4 - Ø 5 mm		Ø 5 - Ø 6 mm	
ap=0.5xD	ae=2xD	ap=0.5xD	ae=2xD	ap=0.5xD	ae=2xD	ap=0.5xD	ae=2xD	ap=0.5xD	ae=2xD
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
100-140	0.011 - 0.025	100-140	0.016 - 0.035	100-140	0.026 - 0.065	100-140	0.03 - 0.075	100-140	0.035 - 0.085
100-140	0.011 - 0.025	100-140	0.016 - 0.035	100-140	0.026 - 0.055	100-140	0.03 - 0.065	100-140	0.035 - 0.075
80-110	0.011 - 0.025	80-110	0.016 - 0.04	80-110	0.026 - 0.055	80-110	0.035 - 0.065	80-110	0.035 - 0.075
70-100	0.016 - 0.032	70-100	0.016 - 0.04	70-100	0.026 - 0.055	70-100	0.035 - 0.065	70-100	0.035 - 0.075
80-140	0.016 - 0.032	80-140	0.03 - 0.045	80-140	0.026 - 0.065	80-140	0.035 - 0.065	80-140	0.035 - 0.085
80-160	0.02 - 0.035	80-160	0.025 - 0.06	80-160	0.035 - 0.06	80-160	0.035 - 0.06	80-160	0.035 - 0.075
80-140	0.02 - 0.036	80-140	0.025 - 0.06	80-140	0.035 - 0.06	80-140	0.035 - 0.06	80-140	0.035 - 0.08
80-120	0.02 - 0.036	80-120	0.025 - 0.06	80-120	0.035 - 0.06	80-120	0.025 - 0.06	80-120	0.035 - 0.085
50 - 80	0.01 - 0.02	50 - 80	0.01 - 0.025	50 - 80	0.015 - 0.05	50 - 80	0.02 - 0.06	50 - 80	0.025 - 0.07
50-80	0.01 - 0.02	50-80	0.01 - 0.025	50-80	0.015 - 0.05	50-80	0.02 - 0.06	50-80	0.025 - 0.07
50-80	0.01 - 0.02	50-80	0.01 - 0.025	50-80	0.015 - 0.05	50-80	0.02 - 0.06	50-80	0.025 - 0.07
no data available									
no data available									

INOX-Ball 260°

INOX-Ball 260° cooled

from Ø 1.0
to Ø 10.0

INOX high-performance 260° ball
nose mill geometry, Z4 and center
cutting.

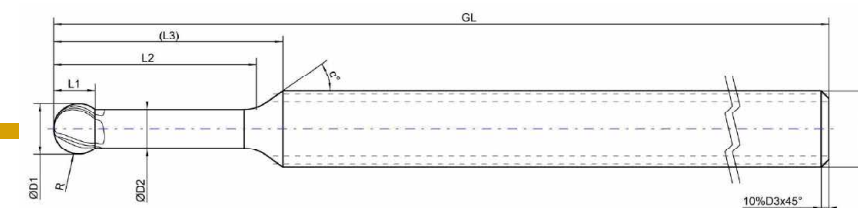
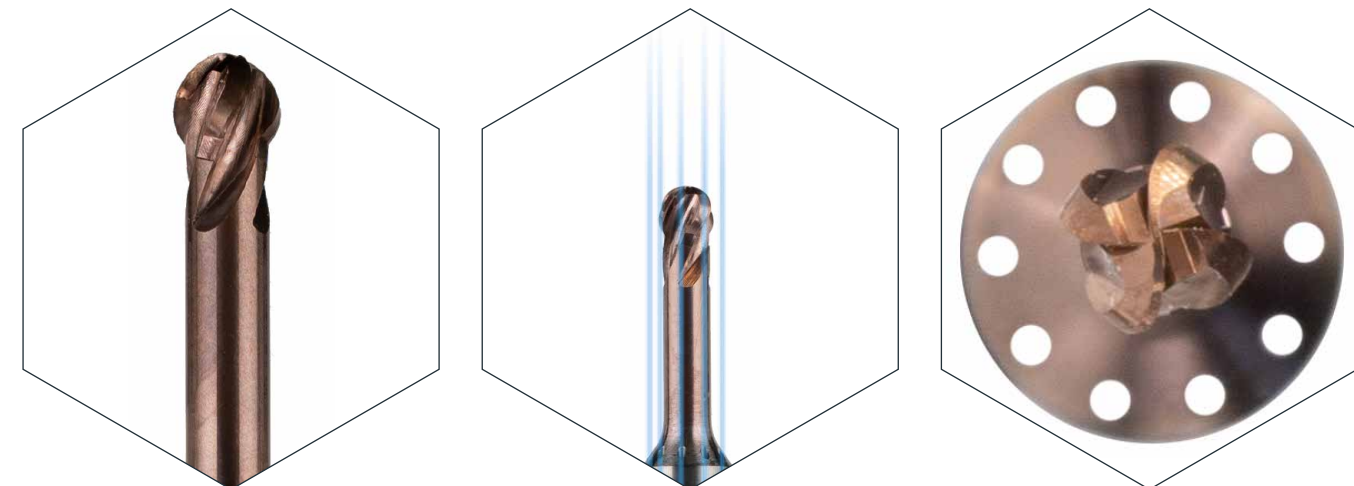
The high-performance α -INOX
coating guarantees a long tool
life and prevents the cutting
edge from sticking.

The reinforced shank in h6
quality combined with an
optimized effective length
makes the tool robust and
vibration-free.

High feed and cutting
speeds are made possible
by the use of fine-grain solid
carbide with high fracture
toughness.

from Ø 1.0
to Ø 10.0

Integrated cooling channels
protect the tool from over-
heating when cutting titanium
alloys and stainless steels.



☐ Inquiry

☐ Order

Order number: _____

Other: _____

Dimensions:

D₁: _____ GL: _____ R₁: _____
D₂: _____ L₁: _____ Z: _____
D₃: _____ L₂: _____
L₃: _____

Coating:

☐ Coated*: _____
☐ Uncoated

Cooling channels:

☐ Yes ☐ No

Cutting direction:

☐ Left ☐ Right

Material to be machined:

Shank shape:

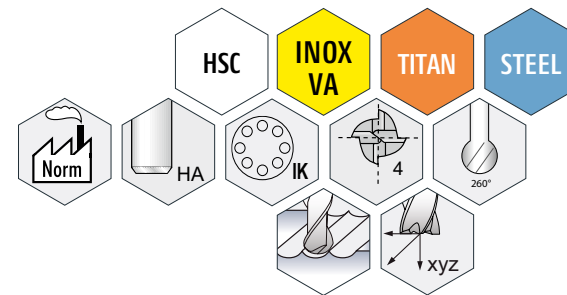
Quantity:

Date, signature & company stamp:

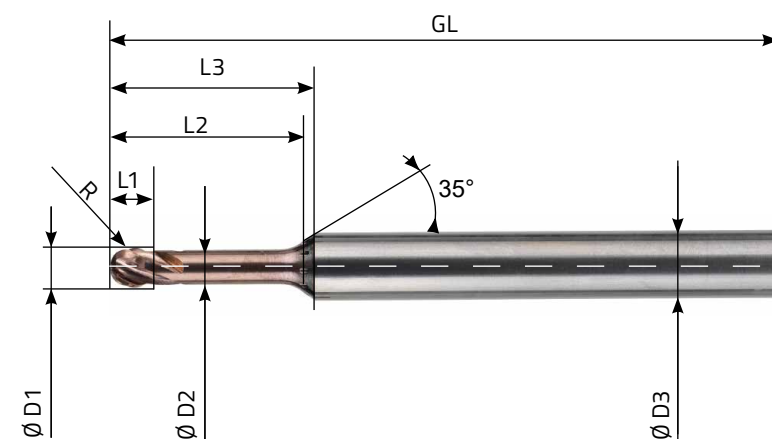
Contact person:

* Without further information, the most suitable coating will be used.

INOX-Ball 260° cooled



ACTIONMILL 260° Ball-shaped head
AM.260.100.070.IK ← Integrated cooling
D1: 1.00 mm



■ α-INOX coated

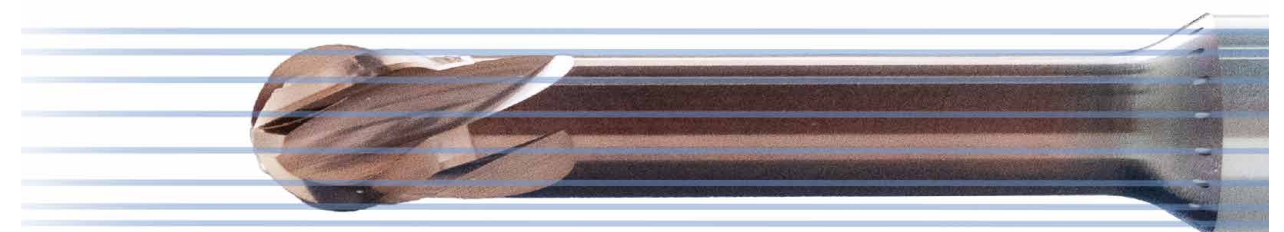


5 PRO's of the ACTIONMILL:

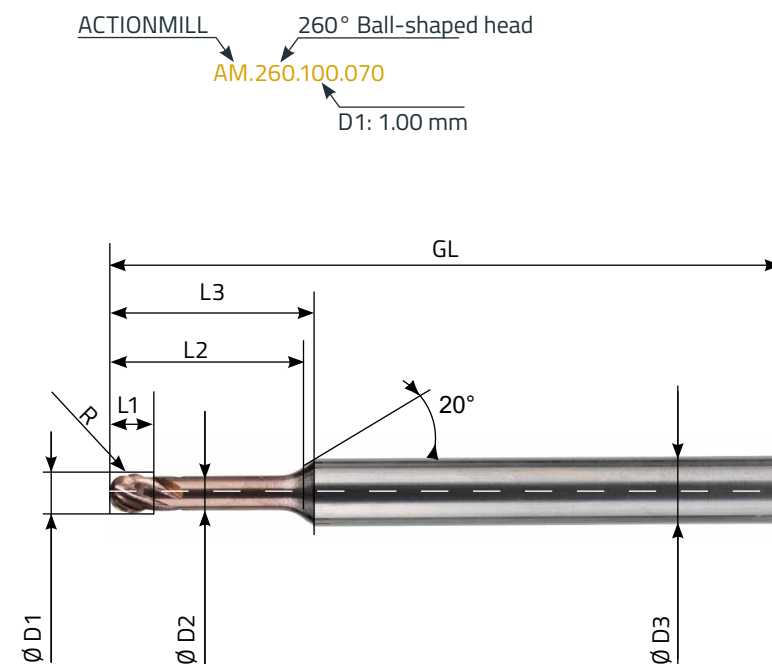
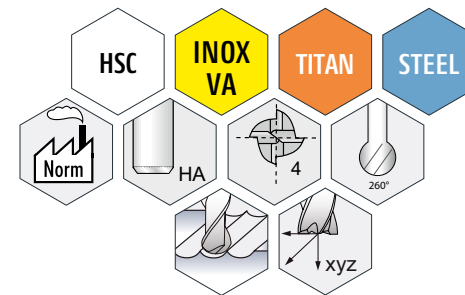
- Very high feed rates possible
- Undercuts possible
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Center cutting

Article number	D1 (mm) (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (4xD1 / mm)	L3 (mm)	R (mm)	GL (mm)
AM.260.100.070.IK	Ø 1.000	Ø 0.77	Ø 4.00	0.82	4.00	6.34	0.500	60.00
AM.260.150.120.IK	Ø 1.500	Ø 1.15	Ø 4.00	1.23	6.00	8.06	0.750	60.00
AM.260.1587.130.IK	Ø 1.587 1/16"	Ø 1.22	Ø 4.00	1.30	6.35	8.37	0.794	60.00
AM.260.200.170.IK	Ø 2.000	Ø 1.53	Ø 4.00	1.64	8.00	9.79	1.000	60.00
AM.260.2381.200.IK	Ø 2.381 3/32"	Ø 1.83	Ø 4.00	1.96	9.52	11.10	1.191	60.00
AM.260.250.210.IK	Ø 2.500	Ø 1.92	Ø 4.00	2.05	10.00	11.52	1.250	60.00
AM.260.300.260.IK	Ø 3.000	Ø 2.30	Ø 6.00	2.46	12.00	14.67	1.500	60.00
AM.260.3175.280.IK	Ø 3.175 1/8"	Ø 2.43	Ø 6.00	2.61	12.70	15.28	1.588	60.00
AM.260.3968.350.IK	Ø 3.968 5/32"	Ø 3.04	Ø 6.00	3.26	15.87	18.03	1.984	60.00
AM.260.400.350.IK	Ø 4.000	Ø 3.06	Ø 6.00	3.29	16.00	18.14	2.000	60.00
AM.260.4762.400.IK	Ø 4.762 3/16"	Ø 3.65	Ø 6.00	3.91	19.05	20.77	2.381	84.00
AM.260.500.430.IK	Ø 5.000	Ø 3.83	Ø 8.00	4.11	20.00	23.02	2.500	84.00
AM.260.5556.460.IK	Ø 5.556 7/32"	Ø 2.26	Ø 8.00	4.56	22.22	24.94	2.778	84.00
AM.260.600.520.IK	Ø 6.000	Ø 4.60	Ø 8.00	4.93	24.00	26.49	3.000	84.00
AM.260.6350.550.IK	Ø 6.350 1/4"	Ø 4.87	Ø 8.00	5.22	25.40	27.70	3.175	84.00
AM.260.800.700.IK	Ø 8.000	Ø 6.13	Ø 10.00	6.57	32.00	34.82	4.000	93.00
AM.260.1000.990.IK	Ø 10.000	Ø 7.66	Ø 12.00	8.21	40.00	43.16	5.000	101.00

Available from stock



INOX-Ball 260°



■ α -INOX coated



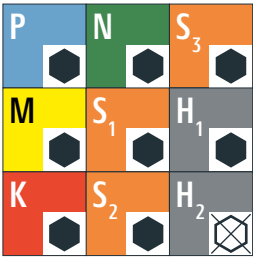
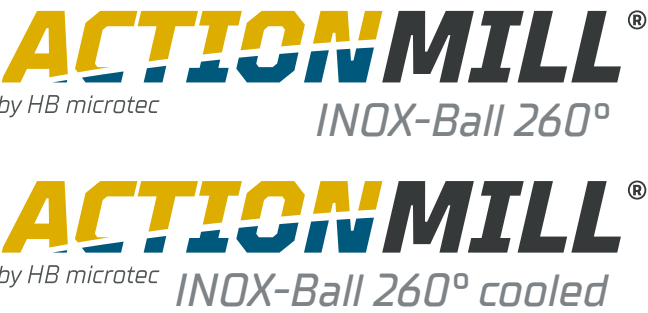
5 PRO's of the ACTIONMILL:

- Very high feed rates possible
- Undercuts possible
- Shorter process times and high process reliability
- High-quality and precise surfaces
- Center cutting

Article number	D1 (mm)	(inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (4xD1 / mm)	L3 (mm)	R (mm)	GL (mm)
AM.260.100.070	Ø 1.000		Ø 0.77	Ø 4.00	0.82	4.00	8.45	0.500	60.00
AM.260.150.120	Ø 1.500		Ø 1.15	Ø 4.00	1.23	6.00	9.92	0.750	60.00
AM.260.1587.130	Ø 1.587	1/16"	Ø 1.22	Ø 4.00	1.30	6.35	10.18	0.794	60.00
AM.260.200.170	Ø 2.000		Ø 1.53	Ø 4.00	1.64	8.00	11.40	1.000	60.00
AM.260.2381.200	Ø 2.381	3/32"	Ø 1.83	Ø 4.00	1.96	9.52	12.51	1.191	60.00
AM.260.250.210	Ø 2.500		Ø 1.92	Ø 4.00	2.05	10.00	12.87	1.250	60.00
AM.260.300.260	Ø 3.000		Ø 2.30	Ø 6.00	2.46	12.00	17.09	1.500	60.00
AM.260.3175.280	Ø 3.175	1/8"	Ø 2.43	Ø 6.00	2.61	12.70	17.61	1.588	60.00
AM.260.3968.350	Ø 3.968	5/32"	Ø 3.04	Ø 6.00	3.26	15.87	19.95	1.984	60.00
AM.260.400.350	Ø 4.000		Ø 3.06	Ø 6.00	3.29	16.00	20.04	2.000	60.00
AM.260.4762.400	Ø 4.762	3/16"	Ø 3.65	Ø 6.00	3.91	19.05	22.29	2.381	80.00
AM.260.500.430	Ø 5.000		Ø 3.83	Ø 8.00	4.11	20.00	25.74	2.500	80.00
AM.260.5556.460	Ø 5.556	7/32"	Ø 2.26	Ø 8.00	4.56	22.22	27.37	2.778	80.00
AM.260.600.520	Ø 6.000		Ø 4.60	Ø 8.00	4.93	24.00	28.69	3.000	80.00
AM.260.6350.550	Ø 6.350	1/4"	Ø 4.87	Ø 8.00	5.22	25.40	29.72	3.175	80.00
AM.260.800.700	Ø 8.000		Ø 6.13	Ø 10.00	6.57	32.00	37.33	4.000	100.00
AM.260.1000.990	Ø 10.000		Ø 7.66	Ø 12.00	8.21	40.00	45.97	5.000	101.00

Available from stock





Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

ap=0.1xD Ø 1.0 - 2.0 mm	ae=0.1xD	ap=0.1xD Ø 2.0 - 3.0 mm	ae=0.1xD	ap=0.1xD Ø 3.0 - 4.0 mm	ae=0.1xD	ap=0.1xD Ø 4.0 - 6.0 mm	ae=0.1xD	ap=0.1xD Ø 6.0 - 10.0 mm	ae=0.1xD
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
100-140	0.011 - 0.025	100-140	0.016 - 0.035	100-140	0.026 - 0.065	100-140	0.03 - 0.075	100-140	0.035 - 0.085
100-140	0.011 - 0.025	100-140	0.016 - 0.035	100-140	0.026 - 0.055	100-140	0.03 - 0.065	100-140	0.035 - 0.075
80-110	0.011 - 0.025	80-110	0.016 - 0.04	80-110	0.026 - 0.055	80-110	0.035 - 0.065	80-110	0.035 - 0.075
70-100	0.016 - 0.032	70-100	0.016 - 0.04	70-100	0.026 - 0.055	70-100	0.035 - 0.065	70-100	0.035 - 0.075
80-140	0.016 - 0.032	80-140	0.03 - 0.045	80-140	0.026 - 0.065	80-140	0.035 - 0.065	80-140	0.035 - 0.085
80-160	0.02 - 0.035	80-160	0.025 - 0.06	80-160	0.035 - 0.06	80-160	0.035 - 0.06	80-160	0.035 - 0.075
80-140	0.02 - 0.036	80-140	0.025 - 0.06	80-140	0.035 - 0.06	80-140	0.035 - 0.06	80-140	0.035 - 0.08
80-120	0.02 - 0.036	80-120	0.025 - 0.06	80-120	0.035 - 0.06	80-120	0.025 - 0.06	80-120	0.035 - 0.085
50 - 80	0.01 - 0.02	50 - 80	0.01 - 0.025	50 - 80	0.015 - 0.05	50 - 80	0.02 - 0.06	50 - 80	0.025 - 0.07
50-80	0.01 - 0.02	50-80	0.01 - 0.025	50-80	0.015 - 0.05	50-80	0.02 - 0.06	50-80	0.025 - 0.07
50-80	0.01 - 0.02	50-80	0.01 - 0.025	50-80	0.015 - 0.05	50-80	0.02 - 0.06	50-80	0.025 - 0.07
no data available									
no data available									

60° thread whirler

from M1
to M2.5

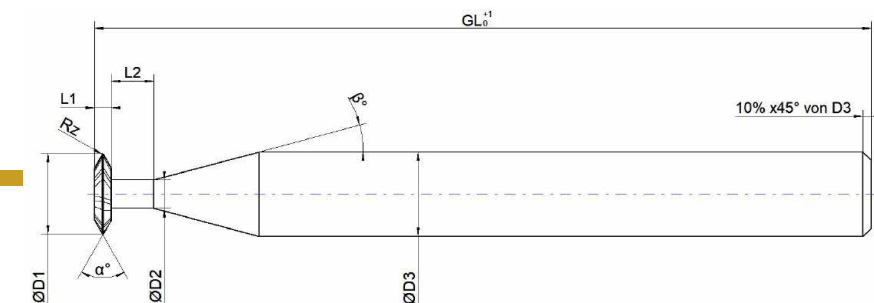
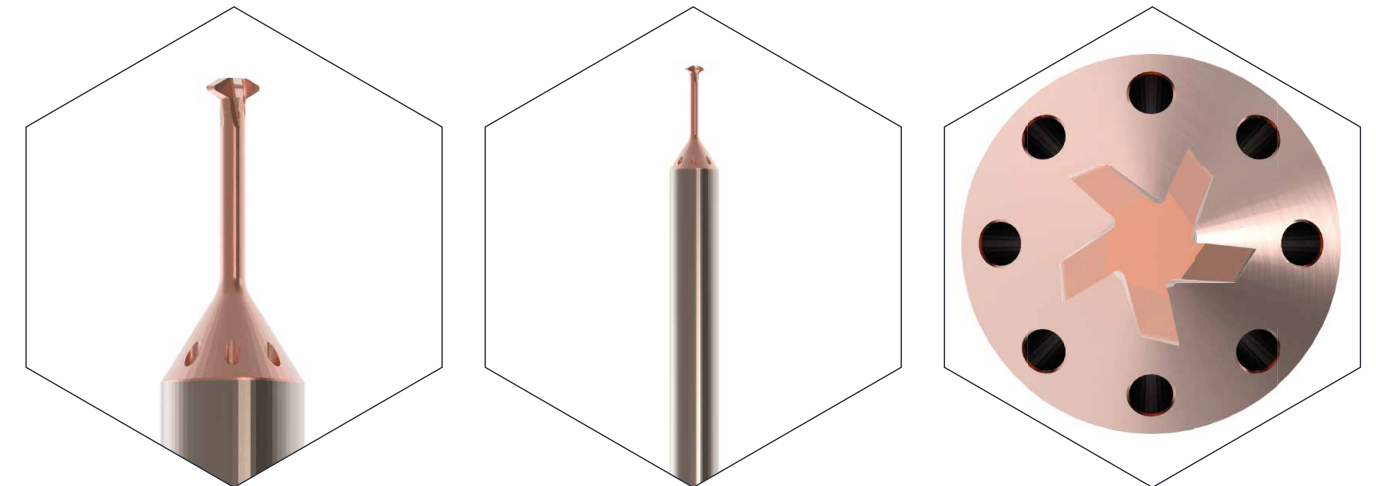
Z5 from M1

Integrated cooling channels protect the tool from overheating and flush away the chips.

The high-performance α -INOX coating guarantees a long tool life and prevents the cutting edges from sticking.

The reinforced shank in h5 quality combined with an optimized effective length makes the tool robust and vibration-free.

High feed and cutting speeds are made possible by the use of ultra-fine grain solid carbide with high fracture toughness.



☐ Inquiry

☐ Order

Order number: _____

Other: _____

Dimensions:

D₁: _____ GL: _____ α : _____

D₂: _____ L₁: _____ β : _____

D₃: _____ L₂: _____ R_Z: _____

Z: _____

Coating:

☐ Coated*: _____

☐ Uncoated

Cooling channels:

☐ Yes ☐ No

Cutting direction:

☐ Left ☐ Right

Material to be machined:

Shank shape:

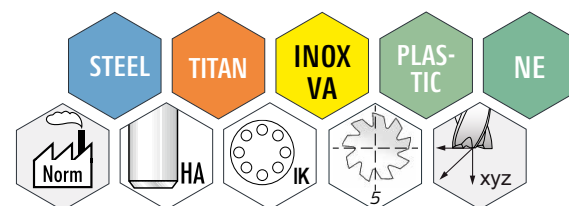
Quantity:

Date, signature & company stamp:

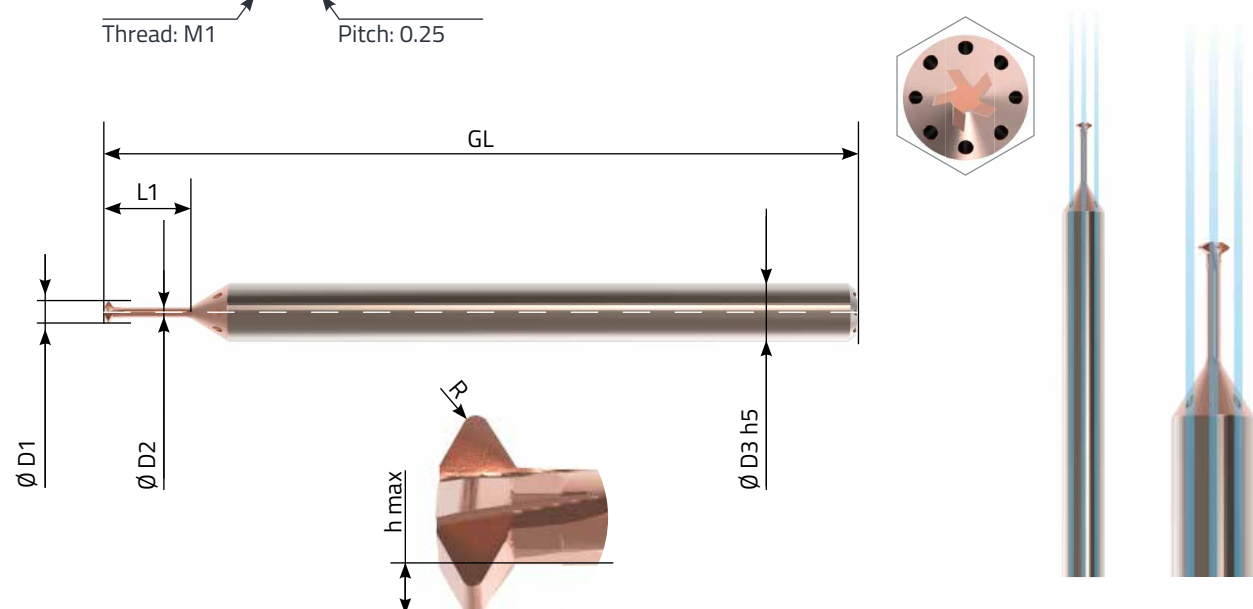
Contact person:

* Without further information, the most suitable coating will be used.

60° thread whirler



ACTIONMILL
whirl-thread
AM.WT.100.025.IK ← Integrated cooling
Thread: M1 Pitch: 0.25



5 PRO's of the ACTIONMILL:

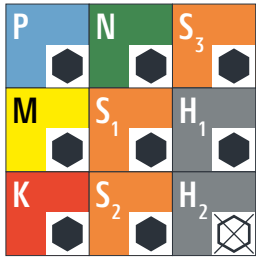
- Five cutting edges from M1
- Integrated cooling prevents chip accumulation
- Very high feed rates possible
- Short process times and high process reliability
- Very long tool life

Article number	Internal thread mill M 60°	h max (mm)	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	R (mm)	GL (mm)	Z	Pitch range
AM.WT.100.025.IK	M1x0.25	0.17	Ø 0.74	Ø 0.36	Ø 4.00	3.00	0.04	40.00	5	0.20-0.25
AM.WT.120.025.IK	M1.2x0.25	0.20	Ø 0.90	Ø 0.46	Ø 4.00	3.50	0.04	40.00	5	0.20-0.25-0.3
AM.WT.140.030.IK	M1.4x0.3	0.25	Ø 1.00	Ø 0.46	Ø 4.00	3.50	0.04	40.00	5	0.20-0.25-0.35
AM.WT.160.035.IK	M1.6x0.35	0.28	Ø 1.20	Ø 0.60	Ø 4.00	4.00	0.05	40.00	5	0.35-0.40
AM.WT.180.035.IK	M1.8x0.35	0.33	Ø 1.35	Ø 0.65	Ø 4.00	4.00	0.05	40.00	5	0.35-0.40-0.45
AM.WT.200.040.IK	M2x0.40	0.37	Ø 1.50	Ø 0.72	Ø 4.00	4.00	0.06	40.00	5	0.35-0.40-0.45
AM.WT.250.045.IK	M2.5x0.45	0.40	Ø 1.90	Ø 1.06	Ø 4.00	6.00	0.06	40.00	5	0.4-0.45-0.50

Available from stock

■ α-INOX coated





Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

M1 to M1.4		M1.6 to M2		M2.5	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
20-60	0.003 - 0.01	20-60	0.004 - 0.012	30-70	0.006 - 0.016
20-60	0.003 - 0.01	20-60	0.004 - 0.012	30-70	0.006 - 0.016
20-60	0.003 - 0.01	20-60	0.004 - 0.012	30-70	0.006 - 0.016
20-60	0.003 - 0.01	20-70	0.004 - 0.012	30-75	0.006 - 0.016
20-70	0.004 - 0.01	20-70	0.004 - 0.018	30-75	0.006 - 0.022
20-70	0.003 - 0.01	20-70	0.004 - 0.014	30-75	0.006 - 0.020
20-70	0.003 - 0.01	20-60	0.004 - 0.014	30-70	0.006 - 0.020
20-60	0.003 - 0.01	20-60	0.004 - 0.014	25-70	0.006 - 0.018
15-40	0.003 - 0.008	15-60	0.004 - 0.014	20-60	0.006 - 0.020
15-40	0.003 - 0.008	15-60	0.004 - 0.014	20-60	0.006 - 0.020
15-40	0.003 - 0.008	15-60	0.004 - 0.014	20-60	0.006 - 0.020
no data available					
no data available					

INOX-Lollipop

from $\varnothing 0.8 \pm 0.02$ mm
to $\varnothing 10 \pm 0.02$ mm

Coating color:
Brown

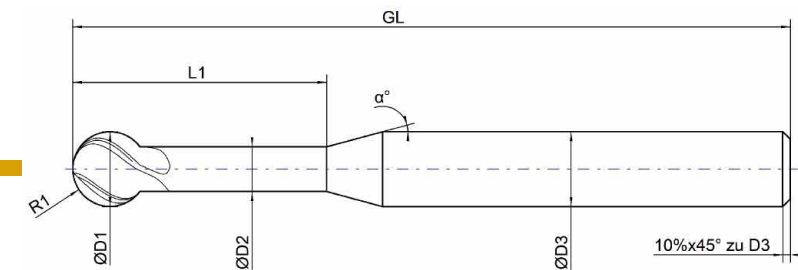
The high-performance α -INOX
coating guarantees a long tool
life and prevents the cutting edge
from sticking.

305°

Sharply ground, positive
geometries to prevent
secondary burrs.
■ 3 flutes.

Reinforced h6 shank combined
with an optimized usable
length. Robust and
vibration-free.

Thermal shock resistant, fine-grain
carbide with high fracture toughness.



☐ Inquiry

☐ Order

Order number: _____

Other: _____

Dimensions:

D₁: _____ GL: _____ R₁: _____

D₂: _____ L₁: _____ α: _____

D₃: _____ Z: _____

Coating:

☐ Coated*: _____

☐ Uncoated

Cooling channels:

☐ No ☐ Yes

Cutting direction:

☐ Right ☐ Left

Material to be machined:

Shank shape:

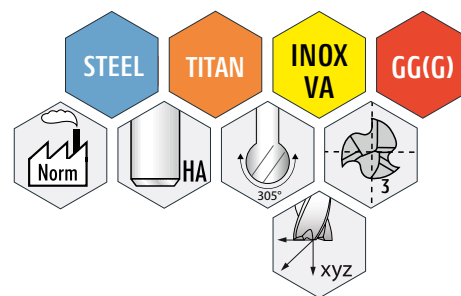
Quantity:

Date, signature & company stamp

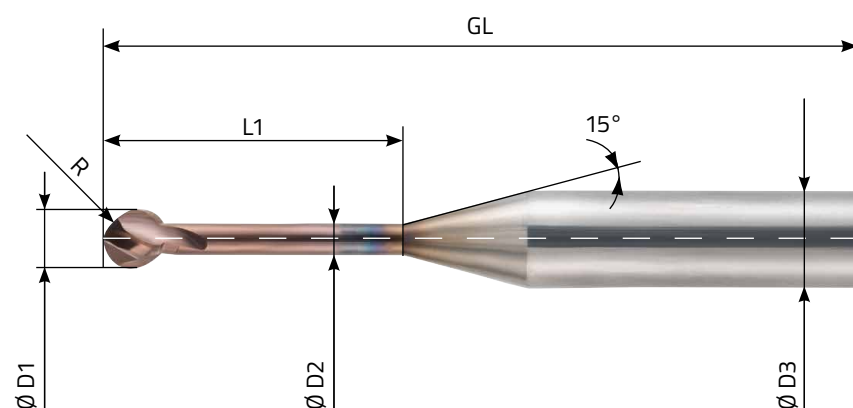
Contact person:

* Without further information, the most suitable coating will be used.

INOX-Lollipop



ACTIONMILL
AM.VRE.0600.080
Full radius deburrer
D1: Ø 0.8 mm
L1: 6.00 mm



5 PRO's of the ACTIONMILL:

- High-performance mill Lollipop from Ø 0.8 mm to Ø 10.0 mm
- Milling of demanding and complex contours
using the 305° cutting edges
- No secondary burrs thanks to the 3 flutes
- For INOX (stainless steel), titanium G3 to G5, steel and cast iron
- Deburring, chamfering or line milling with one tool

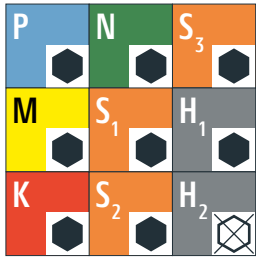
Article number	Coating	Flutes	D1 (mm)	D1 (inch)	R (mm)	D2 (mm)	D3 h6 (mm)	L1 (mm)	GL (mm)
AM.VRE.0600.080	α-INOX	3	Ø 0.800	-	0.4000	0.40	4.00	6.00	50.00
AM.VRE.0600.100	α-INOX	3	Ø 1.000	-	0.5000	0.50	4.00	6.00	50.00
AM.VRE.0800.120	α-INOX	3	Ø 1.200	-	0.6000	0.60	4.00	8.00	50.00
AM.VRE.0800.150	α-INOX	3	Ø 1.500	-	0.7500	0.75	4.00	8.00	50.00
AM.VRE.0800.1587	α-INOX	3	Ø 1.587	1 / 16"	0.7935	0.79	4.00	8.00	60.00
AM.VRE.1000.180	α-INOX	3	Ø 1.800	-	0.9000	0.90	4.00	10.00	60.00
AM.VRE.1000.200	α-INOX	3	Ø 2.000	-	1.0000	1.00	4.00	10.00	60.00
AM.VRE.1100.220	α-INOX	3	Ø 2.200	-	1.1000	1.10	4.00	11.00	60.00
AM.VRE.1100.2381	α-INOX	3	Ø 2.381	3 / 32"	1.1905	1.19	4.00	11.00	60.00
AM.VRE.1200.250	α-INOX	3	Ø 2.500	-	1.2500	1.25	4.00	12.00	60.00
AM.VRE.1400.280	α-INOX	3	Ø 2.800	-	1.4000	1.40	4.00	14.00	60.00
AM.VRE.1400.300	α-INOX	3	Ø 3.000	-	1.5000	1.50	4.00	14.00	60.00
AM.VRE.1600.3175	α-INOX	3	Ø 3.175	1 / 8"	1.5875	1.59	4.00	16.00	60.00
AM.VRE.1800.350	α-INOX	3	Ø 3.500	-	1.7500	1.75	6.00	18.00	70.00
AM.VRE.1800.380	α-INOX	3	Ø 3.800	-	1.9000	1.90	6.00	18.00	70.00
AM.VRE.1800.3968	α-INOX	3	Ø 3.968	5 / 32"	1.9840	1.99	6.00	18.00	70.00
AM.VRE.1800.400	α-INOX	3	Ø 4.000	-	2.0000	2.00	6.00	18.00	70.00
AM.VRE.1800.420	α-INOX	3	Ø 4.200	-	2.1000	2.10	6.00	18.00	70.00
AM.VRE.2400.450	α-INOX	3	Ø 4.500	-	2.2500	2.25	6.00	24.00	80.00
AM.VRE.2400.4762	α-INOX	3	Ø 4.762	3 / 16"	2.3810	2.38	6.00	24.00	80.00
AM.VRE.2500.500	α-INOX	3	Ø 5.000	-	2.5000	2.50	6.00	25.00	80.00
AM.VRE.2500.520	α-INOX	3	Ø 5.200	-	2.6000	2.60	6.00	25.00	80.00
AM.VRE.2600.5556	α-INOX	3	Ø 5.556	7 / 32"	2.7780	2.78	6.00	26.00	80.00
AM.VRE.2600.580	α-INOX	3	Ø 5.800	-	2.9000	2.90	8.00	26.00	80.00
AM.VRE.2600.600	α-INOX	3	Ø 6.000	-	3.0000	3.00	8.00	26.00	80.00
AM.VRE.2600.620	α-INOX	3	Ø 6.200	-	3.1000	3.10	8.00	26.00	80.00
AM.VRE.2600.635	α-INOX	3	Ø 6.350	1 / 4"	3.1750	3.18	8.00	26.00	80.00
AM.VRE.2800.680	α-INOX	3	Ø 6.800	-	3.4000	3.40	8.00	28.00	90.00
AM.VRE.2800.700	α-INOX	3	Ø 7.000	-	3.5000	3.50	8.00	28.00	90.00
AM.VRE.2800.800	α-INOX	3	Ø 8.000	-	4.0000	4.00	10.00	28.00	90.00
AM.VRE.3000.900	α-INOX	3	Ø 9.000	-	4.5000	4.50	10.00	30.00	90.00
AM.VRE.3200.1000	α-INOX	3	Ø 10.000	-	5.0000	5.00	12.00	32.00	100.00

Available from stock

Overview:

305° ±5° full-wrap cutting edges

The α-INOX coating is very temperature-stable and adhesion-reducing, with a layer thickness of 1.5 ± 0.5 µm and a microhardness of (HV) 3700 + 400, max. operating temperature 1100°C.



Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

Ø 0.8 - 2.0 mm		Ø 2.0 - 4.0 mm		Ø 4.0 - 10.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
100-140	0.02 - 0.035	100-140	0.03 - 0.045	100-140	0.05 - 0.065
100-140	0.02 - 0.03	100-140	0.03 - 0.04	100-140	0.05 - 0.055
80-110	0.02 - 0.03	80-110	0.035 - 0.045	80-110	0.045 - 0.055
70-100	0.015 - 0.025	70-100	0.035 - 0.045	70-100	0.045 - 0.055
80-140	0.02 - 0.04	80-140	0.04 - 0.055	80-140	0.05 - 0.065
80-160	0.02 - 0.04	80-160	0.035 - 0.06	80-160	0.055 - 0.06
80-140	0.02 - 0.045	80-140	0.035 - 0.06	80-140	0.055 - 0.06
80-120	0.02 - 0.045	80-120	0.035 - 0.06	80-120	0.055 - 0.06
50 - 80	0.02 - 0.03	50 - 80	0.03 - 0.04	50 - 80	0.03 - 0.05
50-80	0.02 - 0.03	50-80	0.03 - 0.04	50-80	0.03 - 0.05
50-80	0.02 - 0.03	50-80	0.03 - 0.04	50-80	0.03 - 0.05
no data available					
no data available					

INOX-CORD cooled

Corner radius ER 0.3 for Ø 4 and ER 0.5 from Ø 6 protects the cutting edge.

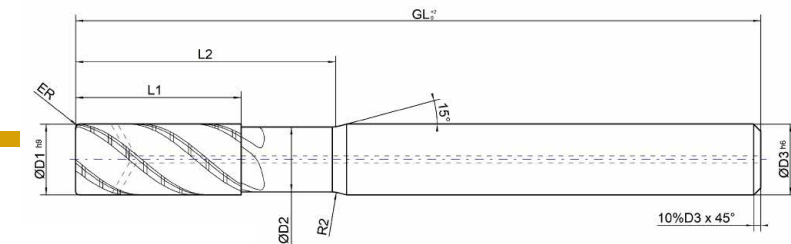
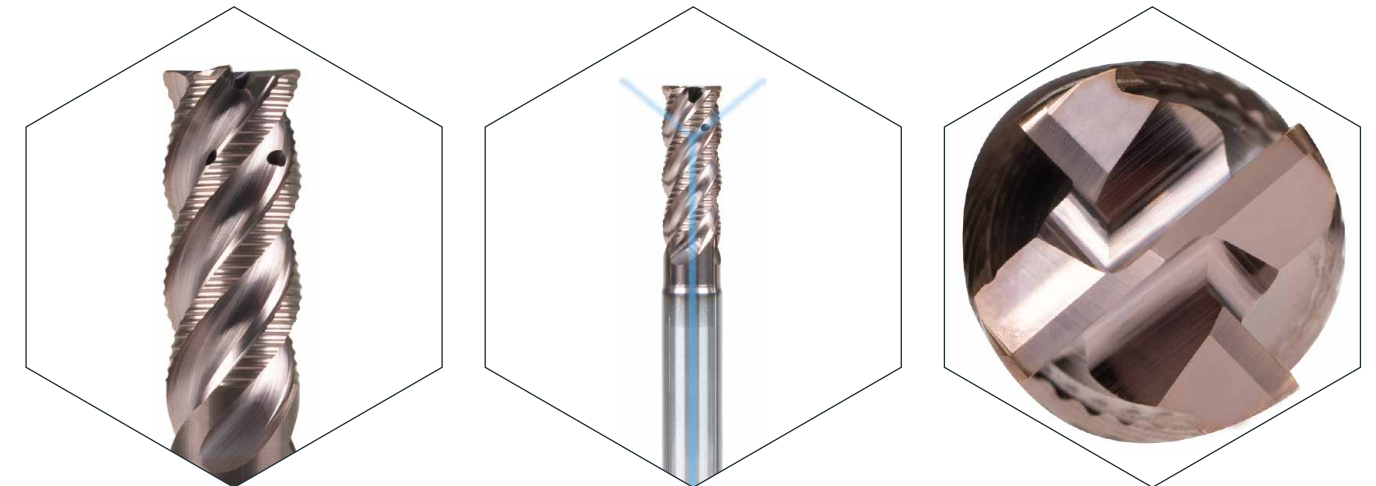
From Ø 4 to Ø 12 with 4 flutes.

Y-shaped cooling channels protect against overheating.

Surface-treated cord geometry (edge preparation).

The high-performance α -INOX coating guarantees a long tool life and prevents the cutting edge from sticking.

Solid carbide - thermal shock resistant in ultra-fine grain with high fracture toughness.



☐ Order

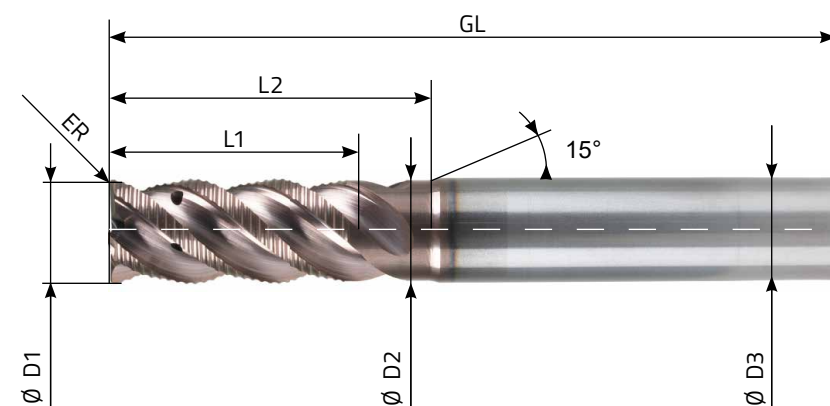
Order number: _____

☐ Inquiry

Dimensions: D ₁ : _____ GL: _____ ER: _____ D ₂ : _____ L ₁ : _____ Z: _____ D ₃ : _____ L ₂ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

The diagram illustrates various materials and manufacturing processes for dental prosthetics. The materials are represented by colored hexagons: ALU (green), STEEL (blue), HPC (white), INOX VA (yellow), TITAN (orange), and GG(G) (red). The manufacturing processes are represented by icons: Norm (factory icon), HA (cylinder icon), Y-1K (welding icon), $\lambda \sim 35/38^\circ$ (welding angle icon), Z-ER (welding icon), 4 (cylinder icon), and XY (cylinder icon).



- | Article number | D1
(mm) | D1
(inch) | D2
(mm) | D3 h6
(mm) | L1
(mm) | L2
(mm) | ER
(mm) | GL
(mm) | HB-Shank |
|------------------------|------------|--------------|------------|---------------|------------|------------|------------|------------|----------|
| AM.CORD.03968.10.06.IK | Ø 3.968 | 5/32" | Ø 3.40 | Ø 6.00 | 10.00 | 18.00 | 0.30 | 58.00 | .HB |
| AM.CORD.04.10.06.IK | Ø 4.000 | | Ø 3.50 | Ø 6.00 | 10.00 | 18.00 | 0.30 | 58.00 | .HB |
| AM.CORD.04762.14.06.IK | Ø 4.762 | 3/16" | Ø 4.20 | Ø 6.00 | 14.00 | 20.00 | 0.30 | 58.00 | .HB |
| AM.CORD.05.14.06.IK | Ø 5.000 | | Ø 4.20 | Ø 6.00 | 14.00 | 20.00 | 0.30 | 58.00 | .HB |
| AM.CORD.05556.14.06.IK | Ø 5.556 | 7/32" | Ø 5.00 | Ø 6.00 | 14.00 | 22.00 | 0.50 | 58.00 | .HB |
| AM.CORD.06.14.06.IK | Ø 6.000 | | Ø 5.50 | Ø 6.00 | 14.00 | 22.00 | 0.50 | 58.00 | .HB |
| AM.CORD.0635.14.08.IK | Ø 6.350 | 1/4" | Ø 5.80 | Ø 8.00 | 14.00 | 22.00 | 0.50 | 64.00 | .HB |
| AM.CORD.08.18.08.IK | Ø 8.000 | | Ø 7.50 | Ø 8.00 | 18.00 | 26.00 | 0.50 | 64.00 | .HB |
| AM.CORD.10.22.10.IK | Ø 10.000 | | Ø 9.50 | Ø 10.00 | 22.00 | 32.00 | 0.50 | 73.00 | .HB |
| AM.CORD.12.26.12.IK | Ø 12.000 | | Ø 11.50 | Ø 12.00 | 26.00 | 36.00 | 0.50 | 84.00 | .HB |

Available from stock



INOX-CORD

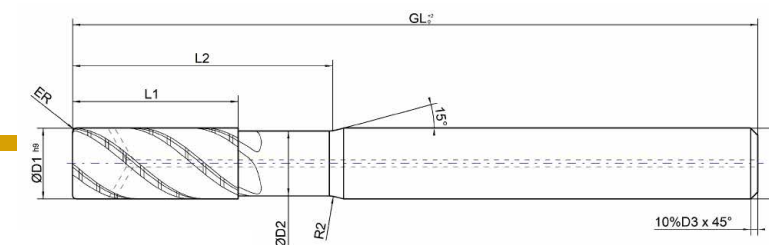
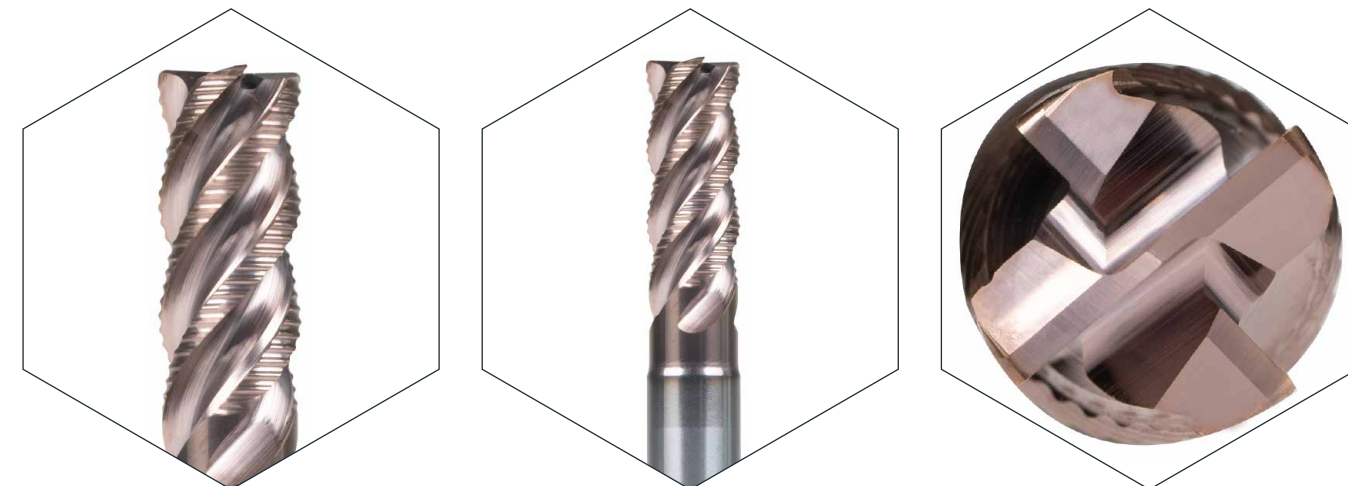
Corner radius ER 0.3 for
Ø 4 and ER 0.5 from Ø 6
protects the cutting edge.

From Ø 4 to Ø 12 with 4
flutes.

The high-performance
α-INOX coating guaran-
tees a long tool life and
prevents the cutting edge
from sticking.

Surface-treated cord
geo- metry (edge
preparation).

Solid carbide - thermal shock
resistant in ultra-fine grain
with high fracture toughness.



☐ Order

Order number: _____

☐ Inquiry

Dimensions:

D₁: _____ GL: _____ ER: _____

D₂: _____ L₁: _____ Z: _____

D₃: _____ L₂: _____

Coating:

☐ Coated*: _____

☐ Uncoated

Cooling channels:

☐ Yes ☐ No

Cutting direction:

☐ Left ☐ Right

Material to be machined:

Shank shape:

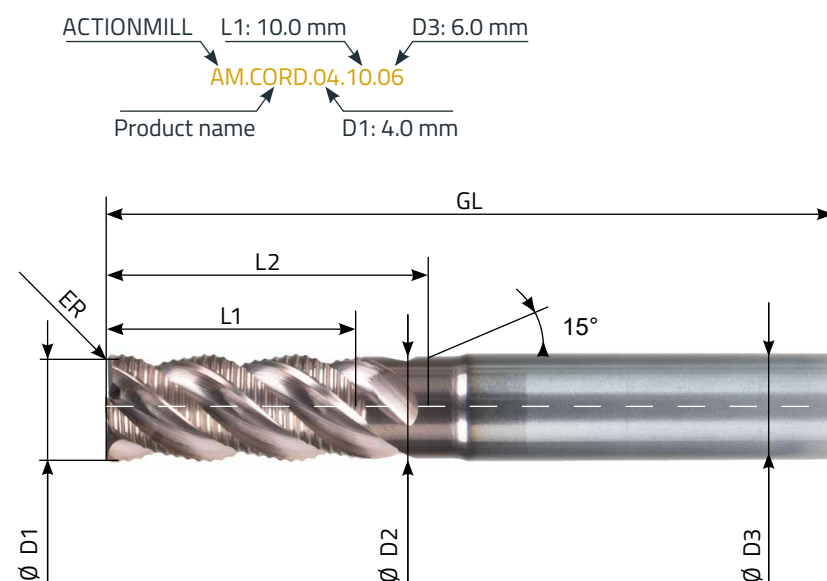
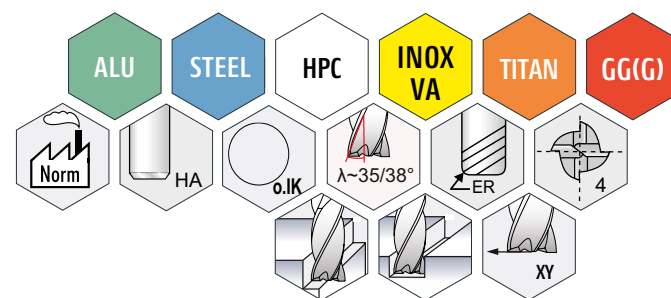
Quantity:

Date, signature & company stamp:

Contact person:

* Without further information, the most suitable coating will be used.

INOX-CORD



■ α-INOX coated



5 PRO's of the ACTIONMILL:

- High-performance cord mill from Ø4 to Ø12
- Roughing of demanding materials such as CoCr or INOX
- Short chips increase tool life
- High performance
- Perfect price-performance ratio

Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	ER (mm)	GL (mm)	HB-Shank
AM.CORD.03968.10.06	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	10.00	18.00	0.30	58.00	.HB
AM.CORD.04.10.06	Ø 4.000	-	Ø 3.50	Ø 6.00	10.00	18.00	0.30	58.00	.HB
AM.CORD.04762.14.06	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	14.00	20.00	0.30	58.00	.HB
AM.CORD.05.14.06	Ø 5.000	-	Ø 4.20	Ø 6.00	14.00	20.00	0.30	58.00	.HB
AM.CORD.05556.14.06	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	14.00	22.00	0.50	58.00	.HB
AM.CORD.06.14.06	Ø 6.000	-	Ø 5.50	Ø 6.00	14.00	22.00	0.50	58.00	.HB
AM.CORD.0635.14.08	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	14.00	22.00	0.50	64.00	.HB
AM.CORD.08.18.08	Ø 8.000	-	Ø 7.50	Ø 8.00	18.00	26.00	0.50	64.00	.HB
AM.CORD.10.22.10	Ø 10.000	-	Ø 9.50	Ø 10.00	22.00	32.00	0.50	73.00	.HB
AM.CORD.12.26.12	Ø 12.000	-	Ø 11.50	Ø 12.00	26.00	36.00	0.50	84.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.CORD.04.10.06.IK.HB

Available from stock



INOX-HPC cooled

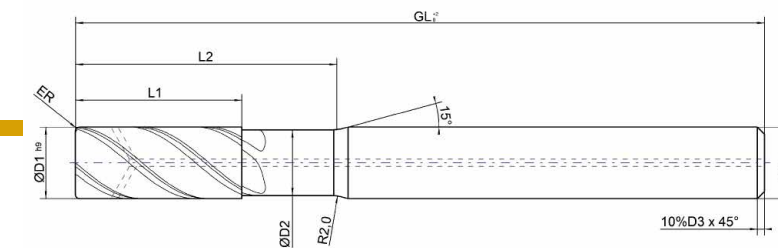
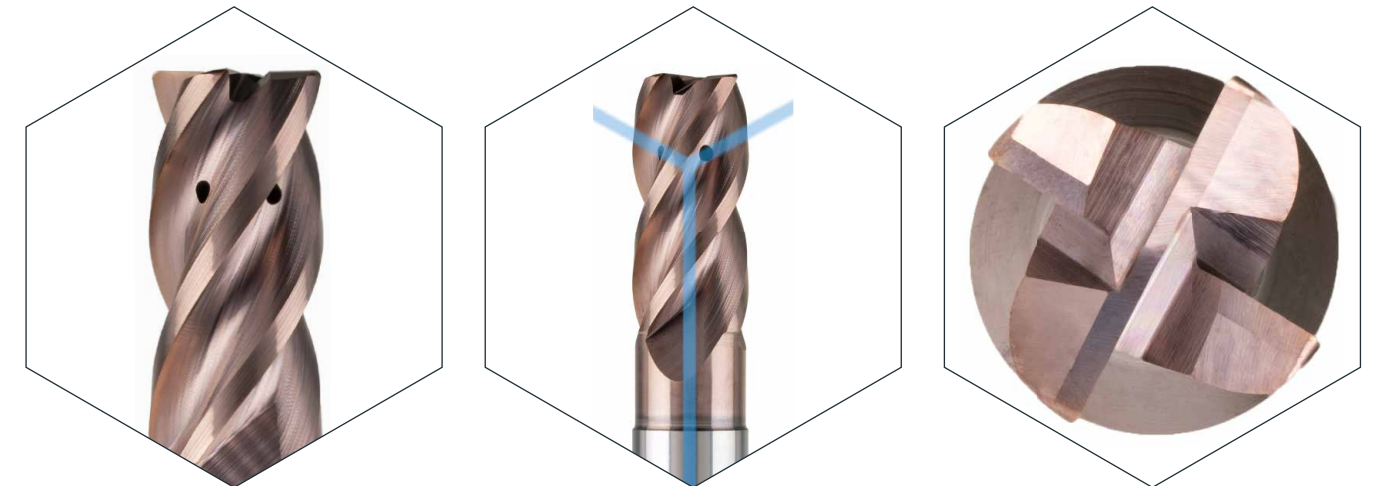
Corner radius ER 0.3 for
Ø 4 and ER 0.5 from Ø 6
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Y-shaped cooling channels
protect against overhea-
ting.

From Ø 4 to Ø 12 with 4
flutes.

The high-performance
α-INOX coating guaran-
tees a long tool life and
prevents the cutting edge
from sticking.

Solid carbide - thermal shock
resistant in ultra-fine grain
with high fracture toughness.



☐ Order

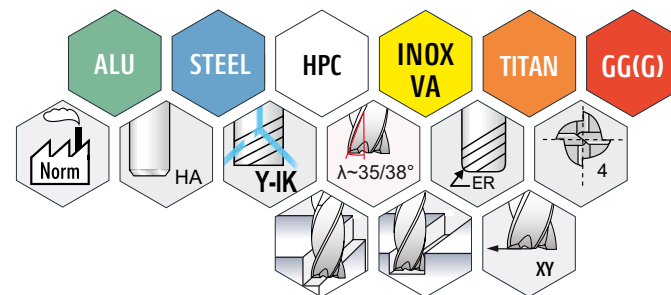
Order number: _____

☐ Inquiry

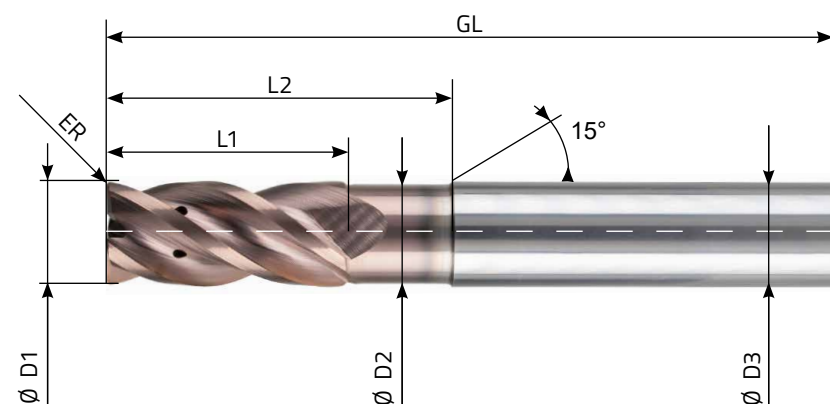
Dimensions: D ₁ : _____ GL: _____ ER: _____ D ₂ : _____ L ₁ : _____ Z: _____ D ₃ : _____ L ₂ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

INOX-HPC cooled



ACTIONMILL L1: 10.0 mm D3: 6.0 mm
AM.HPC.04.10.06.IK ← Internal cooling
Product name D1: 4.0 mm



■ α-INOX coated



5 PRO's of the ACTIONMILL:

- High-performance HPC mill from Ø4 to Ø12
- Roughing & finishing of demanding materials
such as CoCr or INOX
- Long tool life and process reliability
- Universally applicable
- Perfect price-performance ratio

Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	ER (mm)	GL (mm)	HB-Shank
AM.HPC.03968.10.06.IK	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	10.00	18.00	0.30	58.00	.HB
AM.HPC.04.10.06.IK	Ø 4.000		Ø 3.50	Ø 6.00	10.00	18.00	0.30	58.00	.HB
AM.HPC.04762.14.06.IK	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	14.00	20.00	0.30	58.00	.HB
AM.HPC.05.14.06.IK	Ø 5.000		Ø 4.20	Ø 6.00	14.00	20.00	0.30	58.00	.HB
AM.HPC.05556.14.06.IK	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	14.00	22.00	0.50	58.00	.HB
AM.HPC.06.14.06.IK	Ø 6.000		Ø 5.50	Ø 6.00	14.00	22.00	0.50	58.00	.HB
AM.HPC.0635.14.08.IK	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	14.00	22.00	0.50	64.00	.HB
AM.HPC.08.18.08.IK	Ø 8.000		Ø 7.50	Ø 8.00	18.00	26.00	0.50	64.00	.HB
AM.HPC.10.22.10.IK	Ø 10.000		Ø 9.50	Ø 10.00	22.00	32.00	0.50	73.00	.HB
AM.HPC.12.26.12.IK	Ø 12.000		Ø 11.50	Ø 12.00	26.00	36.00	0.50	84.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.HPC.04.10.06.IK.HB

Available from stock



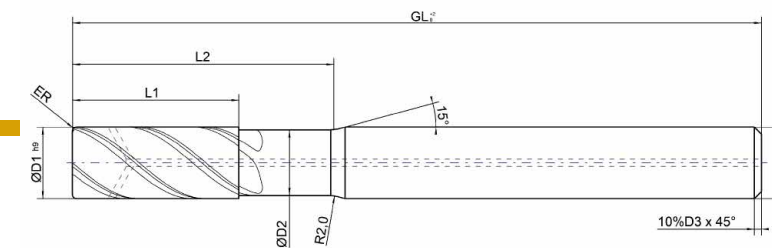
INOX-HPC

Corner radius ER 0.3 for
Ø 4 and ER 0.5 from Ø 6
protects the cutting edge.

From Ø 4 to Ø 12 with 4
flutes.

The high-performance
α-INOX coating guaran-
tees a long tool life and
prevents the cutting edge
from sticking.

Solid carbide - thermal shock
resistant in ultra-fine grain
with high fracture toughness.



☐ Order

Order number: _____

☐ Inquiry

Dimensions:

D₁: _____ GL: _____ ER: _____

D₂: _____ L₁: _____ Z: _____

D₃: _____ L₂: _____

Coating:

☐ Coated*: _____

☐ Uncoated

Cooling channels:

☐ Yes ☐ No

Cutting direction:

☐ Left ☐ Right

Material to be machined:

Shank shape:

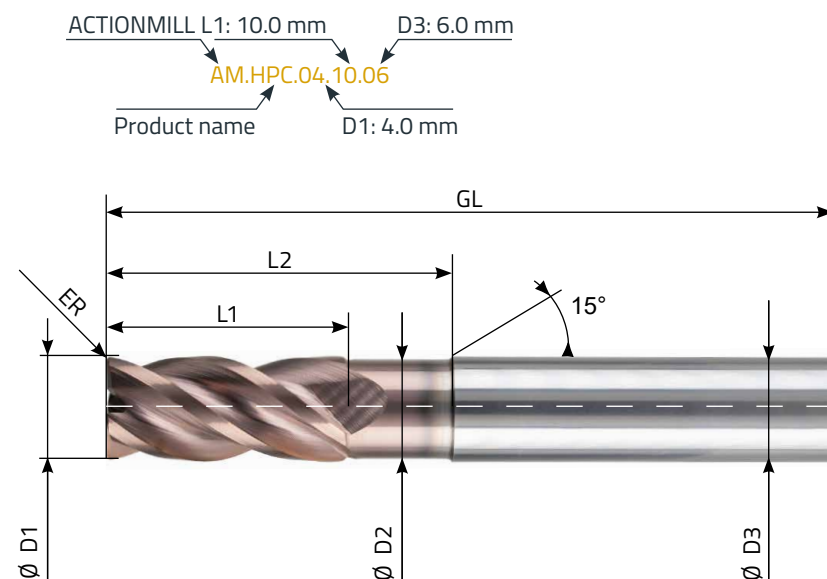
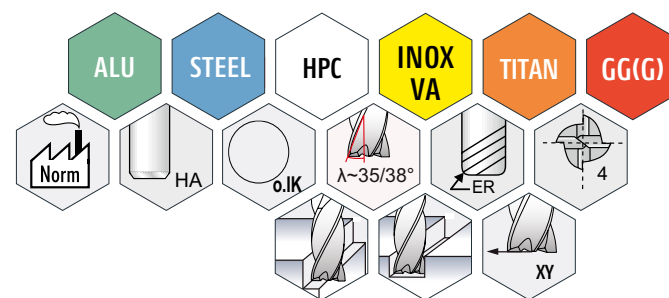
Quantity:

Date, signature & company stamp:

Contact person:

* Without further information, the most suitable coating will be used.

INOX-HPC



■ α-INOX coated



5 PRO's of the ACTIONMILL:

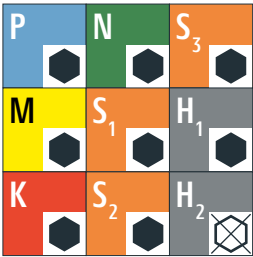
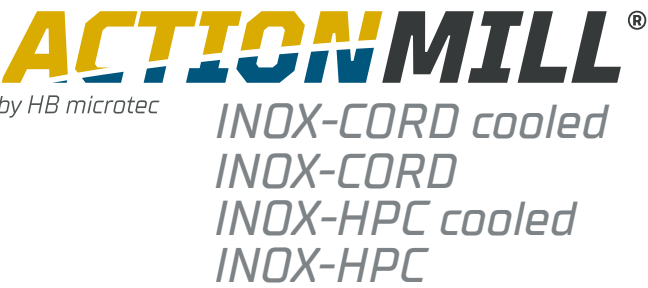
- High-performance HPC mill from Ø4 to Ø12
- Roughing & finishing of demanding materials
such as CoCr or INOX
- Long tool life and process reliability
- Universally applicable
- Perfect price-performance ratio

Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	ER (mm)	GL (mm)	HB-Shank
AM.HPC.03968.10.06	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	10.00	18.00	0.30	58.00	.HB
AM.HPC.04.10.06	Ø 4.000		Ø 3.50	Ø 6.00	10.00	18.00	0.30	58.00	.HB
AM.HPC.04762.14.06	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	14.00	20.00	0.30	58.00	.HB
AM.HPC.05.14.06	Ø 5.000		Ø 4.20	Ø 6.00	14.00	20.00	0.30	58.00	.HB
AM.HPC.05556.14.06	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	14.00	22.00	0.50	58.00	.HB
AM.HPC.06.14.06	Ø 6.000		Ø 5.50	Ø 6.00	14.00	22.00	0.50	58.00	.HB
AM.HPC.0635.14.08	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	14.00	22.00	0.50	64.00	.HB
AM.HPC.08.18.08	Ø 8.000		Ø 7.50	Ø 8.00	18.00	26.00	0.50	64.00	.HB
AM.HPC.10.22.10	Ø 10.000		Ø 9.50	Ø 10.00	22.00	32.00	0.50	73.00	.HB
AM.HPC.12.26.12	Ø 12.000		Ø 11.50	Ø 12.00	26.00	36.00	0.50	84.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.HPC.04.10.06.HB

Available from stock





Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

ap=1xD Ø 3.968 - 4.0 mm		ap=1xD Ø 4.0 - 6.0 mm		ap=1xD Ø 6.0 - 8.0 mm		ap=1xD Ø 8.0 - 10.0 mm		ap=1xD Ø 10.0 - 12.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
100-140	0.02 - 0.035	100-140	0.03 - 0.045	100-140	0.05 - 0.065	100-140	0.06 - 0.075	100-140	0.07 - 0.085
100-140	0.02 - 0.03	100-140	0.03 - 0.04	100-140	0.05 - 0.055	100-140	0.06 - 0.065	100-140	0.07 - 0.075
80-110	0.02 - 0.03	80-110	0.035 - 0.045	80-110	0.045 - 0.055	80-110	0.055 - 0.065	80-110	0.065 - 0.075
70-100	0.015 - 0.025	70-100	0.035 - 0.045	70-100	0.045 - 0.055	70-100	0.055 - 0.065	70-100	0.065 - 0.075
80-140	0.02 - 0.04	80-140	0.04 - 0.055	80-140	0.05 - 0.065	80-140	0.06 - 0.065	80-140	0.065 - 0.085
80-160	0.02 - 0.04	80-160	0.035 - 0.06	80-160	0.055 - 0.06	80-160	0.055 - 0.06	80-160	0.065 - 0.075
80-140	0.02 - 0.045	80-140	0.035 - 0.06	80-140	0.055 - 0.06	80-140	0.055 - 0.06	80-140	0.065 - 0.08
80-120	0.02 - 0.045	80-120	0.035 - 0.06	80-120	0.055 - 0.06	80-120	0.055 - 0.06	80-120	0.065 - 0.085
50 - 80	0.02 - 0.03	50 - 80	0.03 - 0.04	50 - 80	0.03 - 0.05	50 - 80	0.04 - 0.06	50 - 80	0.05 - 0.07
50-80	0.02 - 0.03	50-80	0.03 - 0.04	50-80	0.03 - 0.05	50-80	0.04 - 0.06	50-80	0.05 - 0.07
50-80	0.02 - 0.03	50-80	0.03 - 0.04	50-80	0.03 - 0.05	50-80	0.04 - 0.06	50-80	0.05 - 0.07
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no data available									

INOX-Finish cooled

Protected and sharp
corner chamfer

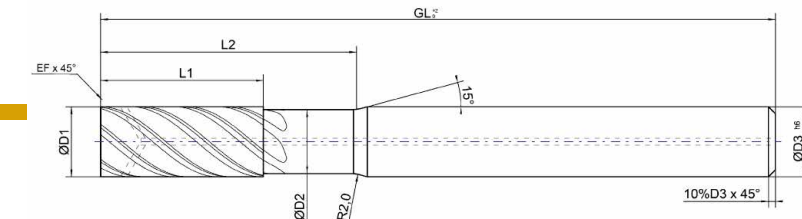
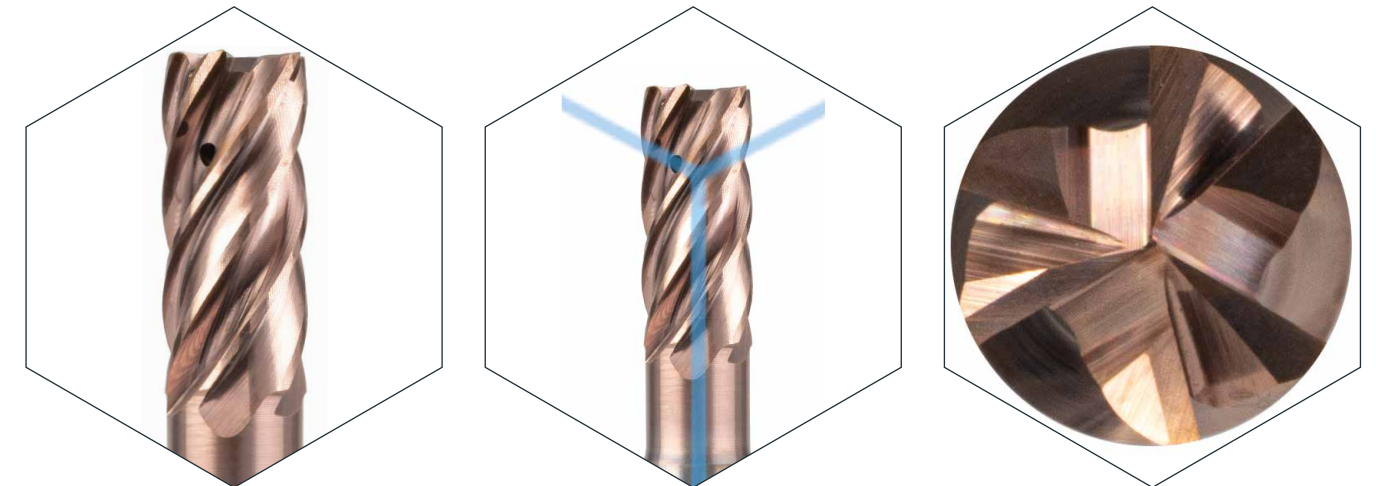
From Ø 4 to Ø 12 with 6 flutes,
vibration-free machining thanks to
unequal spacing

Y-shaped cooling
channels protect against
overheating

High-performance coatings
guarantee long tool life and
prevent the cutting edges from
sticking

Surface-treated cutting
edge geometry

Solid carbide – thermal shock
resistant in ultra-fine grain with
high fracture toughness



☐ Order

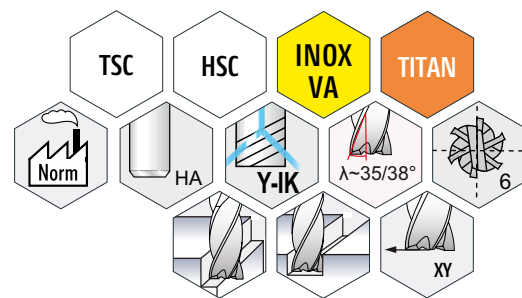
Order number: _____

☐ Inquiry

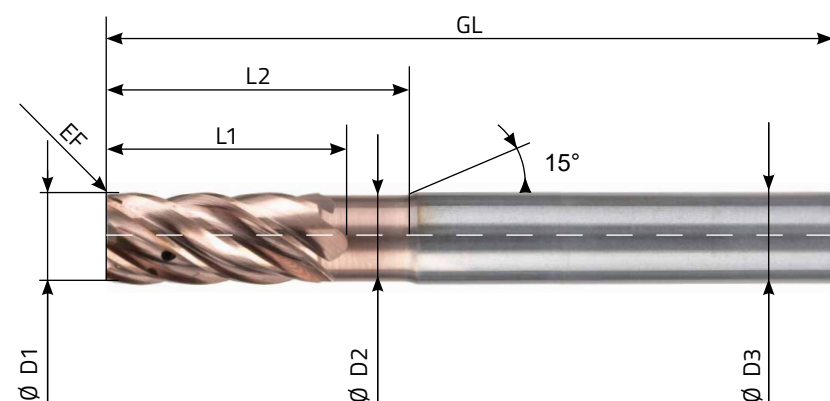
Dimensions: D ₁ : _____ GL: _____ EF: _____ D ₂ : _____ L ₁ : _____ Z: _____ D ₃ : _____ L ₂ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

2xD INOX-Finish cooled



ACTIONMILL L1: 10.0 mm D3: 6.0 mm
AM.FINISH.04.10.06.IK.01 ← Coating
Product name D1: 4.0 mm Internal cooling



■ α-INOX coated



5 PRO's of the ACTIONMILL:

- Protected and sharp mill corner
- High-performance finishing mill from Ø4 to Ø12 with Z6
- Finishing of demanding materials such as titanium and INOX
- High-quality and precise surfaces
- Long tool life and process reliability

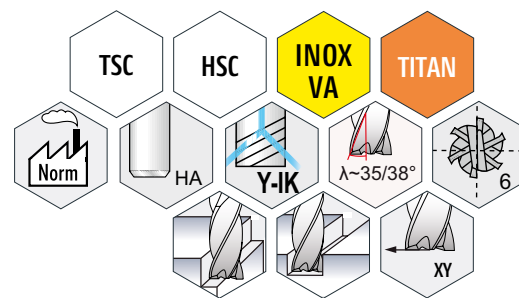
Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	EF (mm) sharp	GL (mm)	HB-Shank
AM.FINISH.03968.10.06.IK.01	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	10.00	18.00	0.03	58.00	.HB
AM.FINISH.04.10.06.IK.01	Ø 4.000		Ø 3.50	Ø 6.00	10.00	18.00	0.03	58.00	.HB
AM.FINISH.04762.14.06.IK.01	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	14.00	20.00	0.03	58.00	.HB
AM.FINISH.05.14.06.IK.01	Ø 5.000		Ø 4.20	Ø 6.00	14.00	20.00	0.03	58.00	.HB
AM.FINISH.05556.14.06.IK.01	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	14.00	22.00	0.03	58.00	.HB
AM.FINISH.06.14.06.IK.01	Ø 6.000		Ø 5.50	Ø 6.00	14.00	22.00	0.03	58.00	.HB
AM.FINISH.0635.14.08.IK.01	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	14.00	22.00	0.03	64.00	.HB
AM.FINISH.08.18.08.IK.01	Ø 8.000		Ø 7.50	Ø 8.00	18.00	26.00	0.05	64.00	.HB
AM.FINISH.10.22.10.IK.01	Ø 10.000		Ø 9.50	Ø 10.00	22.00	32.00	0.05	73.00	.HB
AM.FINISH.12.26.12.IK.01	Ø 12.000		Ø 11.50	Ø 12.00	26.00	36.00	0.05	84.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.FINISH.04.10.06.IK.01.HB

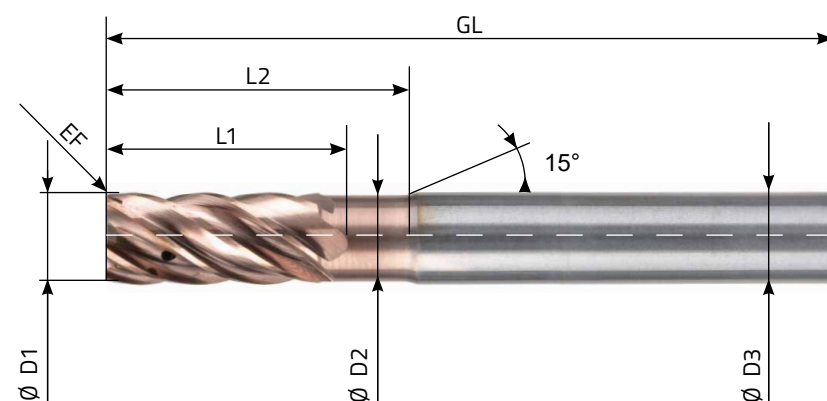
Available from stock



3xD INOX-Finish cooled



ACTIONMILL L1: 13.0 mm D3: 6.0 mm
AM.FINISH.04.13.06.IK.01 ← Coating
Product name D1: 4.0 mm Internal cooling



■ α-INOX coated



5 PRO's of the ACTIONMILL:

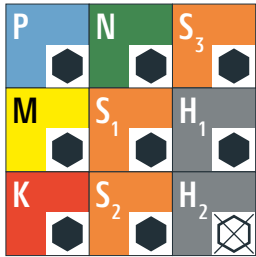
- Protected and sharp mill corner
- High-performance finishing mill from Ø4 to Ø12 with Z6
- Finishing of demanding materials such as titanium and INOX
- High-quality and precise surfaces
- Long tool life and process reliability

Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	EF (mm) sharp	GL (mm)	HB-Shank
AM.FINISH.03968.13.06.IK.01	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	13.00	18.00	0.03	58.00	.HB
AM.FINISH.04.13.06.IK.01	Ø 4.000		Ø 3.50	Ø 6.00	13.00	18.00	0.03	58.00	.HB
AM.FINISH.04762.15.06.IK.01	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	15.00	20.00	0.03	58.00	.HB
AM.FINISH.05.15.06.IK.01	Ø 5.000		Ø 4.20	Ø 6.00	15.00	20.00	0.03	58.00	.HB
AM.FINISH.05556.18.06.IK.01	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	18.00	22.00	0.03	58.00	.HB
AM.FINISH.06.18.06.IK.01	Ø 6.000		Ø 5.50	Ø 6.00	18.00	22.00	0.03	58.00	.HB
AM.FINISH.0635.20.08.IK.01	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	20.00	24.00	0.03	64.00	.HB
AM.FINISH.08.24.08.IK.01	Ø 8.000		Ø 7.50	Ø 8.00	24.00	28.00	0.05	64.00	.HB
AM.FINISH.10.30.10.IK.01	Ø 10.000		Ø 9.50	Ø 10.00	30.00	36.00	0.05	73.00	.HB
AM.FINISH.12.36.12.IK.01	Ø 12.000		Ø 11.50	Ø 12.00	36.00	40.00	0.05	84.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.FINISH.04.10.06.IK.01.HB

Available from stock





Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

ap=L1	ae=0.06xD1	ap=L1	ae=0.06xD1	ap=L1	ae=0.06xD1	ap=L1	ae=0.06xD1	ap=L1	ae=0.06xD1
Ø 3.968 - 4.0 mm		Ø 4.0 - 6.0 mm		Ø 6.0 - 8.0 mm		Ø 8.0 - 10.0 mm		Ø 10.0 - 12.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	vc [m/min]	vc [m/min]	fz [mm]
100-200	0.02 - 0.035	100-200	0.03 - 0.045	100-200	0.05 - 0.065	100-200	0.06 - 0.075	100-200	0.07 - 0.085
100-200	0.02 - 0.03	100-200	0.03 - 0.04	100-200	0.05 - 0.055	100-200	0.06 - 0.065	100-200	0.07 - 0.075
80-110	0.02 - 0.03	80-110	0.035 - 0.045	80-110	0.045 - 0.055	80-110	0.055 - 0.065	80-110	0.065 - 0.075
70-100	0.015 - 0.025	70-100	0.035 - 0.045	70-100	0.045 - 0.055	70-100	0.055 - 0.065	70-100	0.065 - 0.075
80-170	0.02 - 0.04	80-170	0.04 - 0.055	80-170	0.05 - 0.065	80-170	0.06 - 0.065	80-170	0.065 - 0.085
80-160	0.02 - 0.04	80-160	0.035 - 0.06	80-160	0.055 - 0.06	80-160	0.055 - 0.06	80-160	0.065 - 0.075
100-200	0.02 - 0.045	100-200	0.035 - 0.06	100-200	0.055 - 0.06	100-200	0.055 - 0.06	100-200	0.065 - 0.08
80-120	0.02 - 0.045	80-120	0.035 - 0.06	80-120	0.055 - 0.06	80-120	0.055 - 0.06	80-120	0.065 - 0.085
50 - 80	0.02 - 0.03	50 - 80	0.03 - 0.04	50 - 80	0.03 - 0.05	50 - 80	0.04 - 0.06	50 - 80	0.05 - 0.07
40-70	0.02 - 0.03	40-70	0.03 - 0.04	40-70	0.03 - 0.05	40-70	0.04 - 0.06	40-70	0.05 - 0.07
25-40	0.02 - 0.03	25-40	0.03 - 0.04	25-40	0.03 - 0.05	25-40	0.04 - 0.06	25-40	0.05 - 0.07
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no data available									

INOX-FinishXL

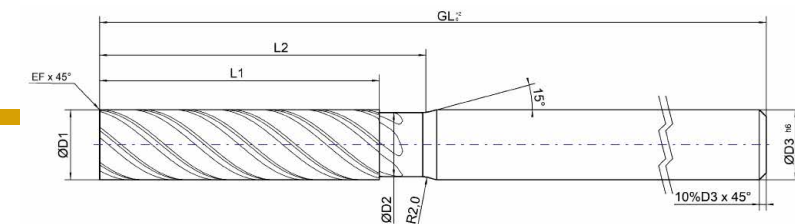
Protected and sharp
corner chamfer

From Ø 4 to Ø 12 with 6 flutes,
vibration-free machining thanks to
unequal spacing

High-performance coatings
guarantee long tool life and
prevent the cutting edges from
sticking

Surface-treated cutting
edge geometry

Solid carbide – thermal shock
resistant in ultra-fine grain with
high fracture toughness



☐ Order

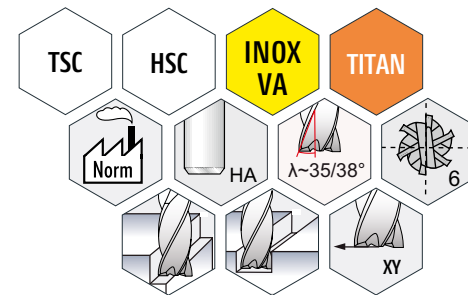
Order number: _____

☐ Inquiry

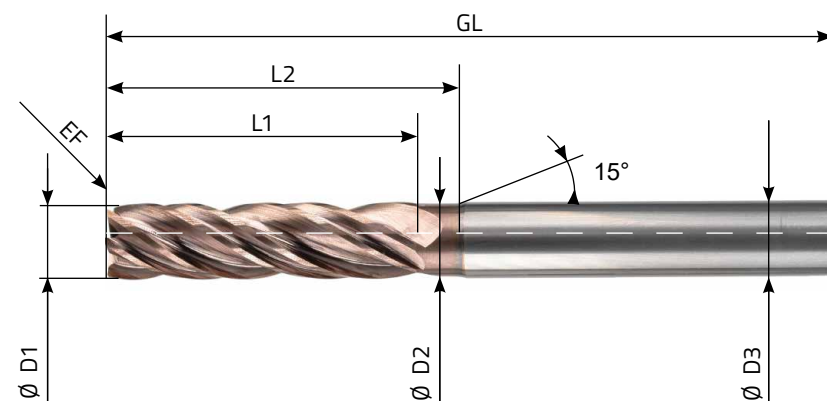
Dimensions: D ₁ : _____ GL: _____ EF: _____ D ₂ : _____ L ₁ : _____ Z: _____ D ₃ : _____ L ₂ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

4xD INOX-FinishXL



ACTIONMILL L1: 16.0 mm D3: 6.0 mm
AM.FINISH.04.16.06.XL.01 ← Coating
Product name D1: 4.0 mm XL-Variant



■ α-INOX coated



5 PRO's of the ACTIONMILL:

- Protected and sharp mill corner
- High-performance finishing mill from Ø4 to Ø12 with Z6
- Finishing of demanding materials such as CoCr or INOX
- High-quality and precise surfaces
- Long tool life and process reliability

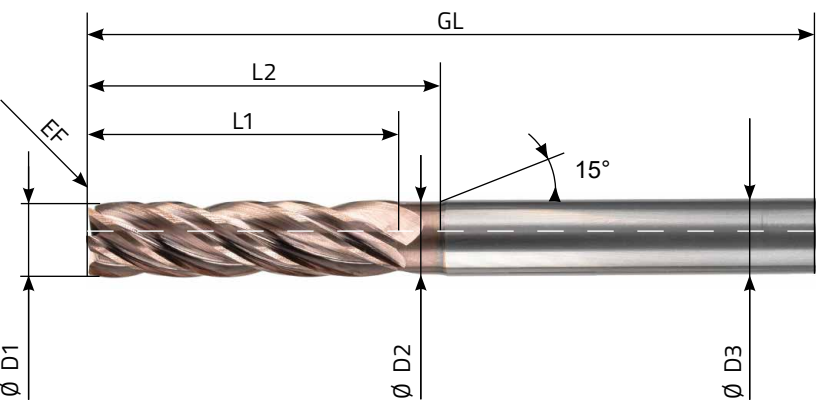
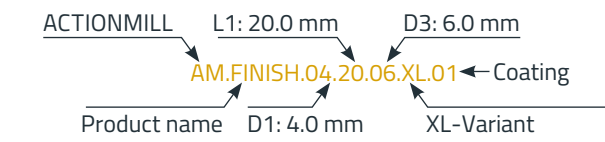
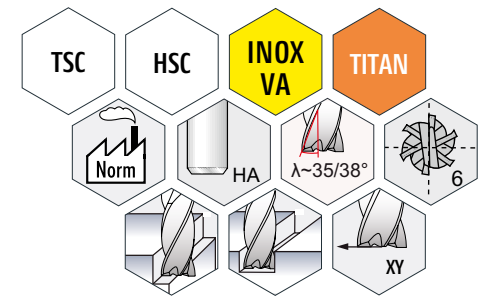
Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	EF (mm) sharp	GL (mm)	HB-Shank
AM.FINISH.03968.16.06.XL.01	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	16.00	20.00	0.03	83.00	.HB
AM.FINISH.04.16.06.XL.01	Ø 4.000		Ø 3.50	Ø 6.00	16.00	20.00	0.03	83.00	.HB
AM.FINISH.04762.20.06.XL.01	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	20.00	25.00	0.03	83.00	.HB
AM.FINISH.05.20.06.XL.01	Ø 5.000		Ø 4.20	Ø 6.00	20.00	25.00	0.03	83.00	.HB
AM.FINISH.05556.22.06.XL.01	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	22.00	25.00	0.03	83.00	.HB
AM.FINISH.06.24.06.XL.01	Ø 6.000		Ø 5.50	Ø 6.00	24.00	28.00	0.03	83.00	.HB
AM.FINISH.0635.25.08.XL.01	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	25.00	28.00	0.03	80.00	.HB
AM.FINISH.08.32.08.XL.01	Ø 8.000		Ø 7.50	Ø 8.00	32.00	36.00	0.05	80.00	.HB
AM.FINISH.10.40.10.XL.01	Ø 10.000		Ø 9.50	Ø 10.00	40.00	44.00	0.05	100.00	.HB
AM.FINISH.12.48.12.XL.01	Ø 12.000		Ø 11.50	Ø 12.00	48.00	52.00	0.05	101.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.FINISH.04.16.06.XL.01.HB

Available from stock



5xD INOX-FinishXXL



■ α-INOX coated



5 PRO's of the ACTIONMILL:

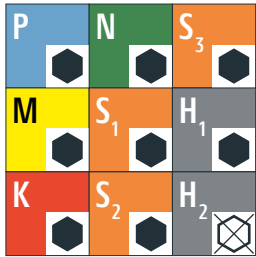
- Protected and sharp mill corner
- High-performance finishing mill from Ø4 to Ø12 with Z6
- Finishing of demanding materials such as CoCr or INOX
- High-quality and precise surfaces
- Long tool life and process reliability

Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	EF (mm) sharp	GL (mm)	HB-Shank
AM.FINISH.03968.20.06.XXL.01	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	20.00	24.00	0.03	83.00	.HB
AM.FINISH.04.20.06.XXL.01	Ø 4.000		Ø 3.50	Ø 6.00	20.00	24.00	0.03	83.00	.HB
AM.FINISH.04762.25.06.XXL.01	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	25.00	29.00	0.03	83.00	.HB
AM.FINISH.05.25.06.XXL.01	Ø 5.000		Ø 4.20	Ø 6.00	25.00	29.00	0.03	83.00	.HB
AM.FINISH.05556.30.06.XXL.01	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	30.00	34.00	0.03	83.00	.HB
AM.FINISH.06.30.06.XXL.01	Ø 6.000		Ø 5.50	Ø 6.00	30.00	34.00	0.03	83.00	.HB
AM.FINISH.0635.32.08.XXL.01	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	32.00	36.00	0.03	83.00	.HB
AM.FINISH.08.40.08.XXL.01	Ø 8.000		Ø 7.50	Ø 8.00	40.00	44.00	0.05	83.00	.HB
AM.FINISH.10.50.10.XXL.01	Ø 10.000		Ø 9.50	Ø 10.00	50.00	54.00	0.05	101.00	.HB
AM.FINISH.12.60.12.XXL.01	Ø 12.000		Ø 11.50	Ø 12.00	60.00	64.00	0.05	110.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.FINISH.04.16.06.XL.01.HB

Available from stock





Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

ap=L1	ae=0.05xD1	ap=L1	ae=0.05xD1	ap=L1	ae=0.05xD1	ap=L1	ae=0.05xD1	ap=L1	ae=0.05xD1
Ø 3.968 - 4.0 mm		Ø 4.0 - 6.0 mm		Ø 6.0 - 8.0 mm		Ø 8.0 - 10.0 mm		Ø 10.0 - 12.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	vc [m/min]	vc [m/min]	fz [mm]
100-200	0.02 - 0.035	100-200	0.03 - 0.045	100-200	0.05 - 0.065	100-200	0.06 - 0.075	100-200	0.07 - 0.085
100-200	0.02 - 0.03	100-200	0.03 - 0.04	100-200	0.05 - 0.055	100-200	0.06 - 0.065	100-200	0.07 - 0.075
80-110	0.02 - 0.03	80-110	0.035 - 0.045	80-110	0.045 - 0.055	80-110	0.055 - 0.065	80-110	0.065 - 0.075
70-100	0.015 - 0.025	70-100	0.035 - 0.045	70-100	0.045 - 0.055	70-100	0.055 - 0.065	70-100	0.065 - 0.075
80-170	0.02 - 0.04	80-170	0.04 - 0.055	80-170	0.05 - 0.065	80-170	0.06 - 0.065	80-170	0.065 - 0.085
80-160	0.02 - 0.04	80-160	0.035 - 0.06	80-160	0.055 - 0.06	80-160	0.055 - 0.06	80-160	0.065 - 0.075
100-200	0.02 - 0.045	100-200	0.035 - 0.06	100-200	0.055 - 0.06	100-200	0.055 - 0.06	100-200	0.065 - 0.08
80-120	0.02 - 0.045	80-120	0.035 - 0.06	80-120	0.055 - 0.06	80-120	0.055 - 0.06	80-120	0.065 - 0.085
50 - 80	0.02 - 0.03	50 - 80	0.03 - 0.04	50 - 80	0.03 - 0.05	50 - 80	0.04 - 0.06	50 - 80	0.05 - 0.07
40-70	0.02 - 0.03	40-70	0.03 - 0.04	40-70	0.03 - 0.05	40-70	0.04 - 0.06	40-70	0.05 - 0.07
25-40	0.02 - 0.03	25-40	0.03 - 0.04	25-40	0.03 - 0.05	25-40	0.04 - 0.06	25-40	0.05 - 0.07
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no data available									

INOX-Trochoid cooled

Protected and sharp
mill corner

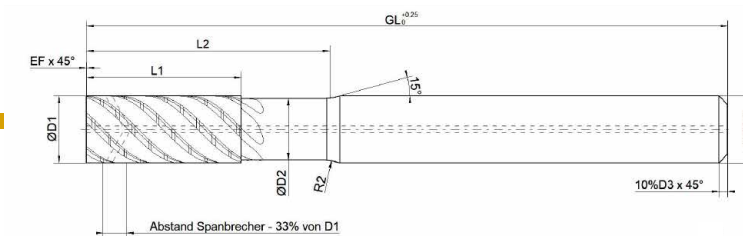
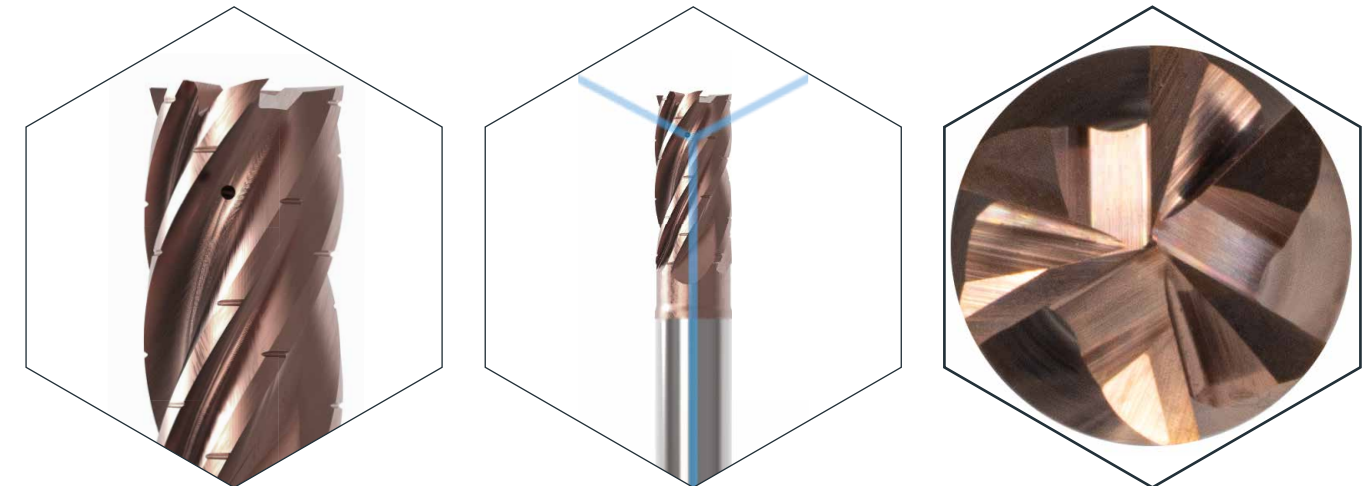
Chip splitter for reliable
roughing of pockets and
contours

Surface-treated cutting
edge geometry

From Ø 4 to Ø 12 with 6
flutes, vibration-free
machining thanks to
unequal spacing

The high-performance
α-INOX coating guarantees
long tool life and prevents
the cutting edge from
sticking

Solid carbide – thermal
shock resistant in ultra-fine
grain with high fracture
toughness



☐ Order

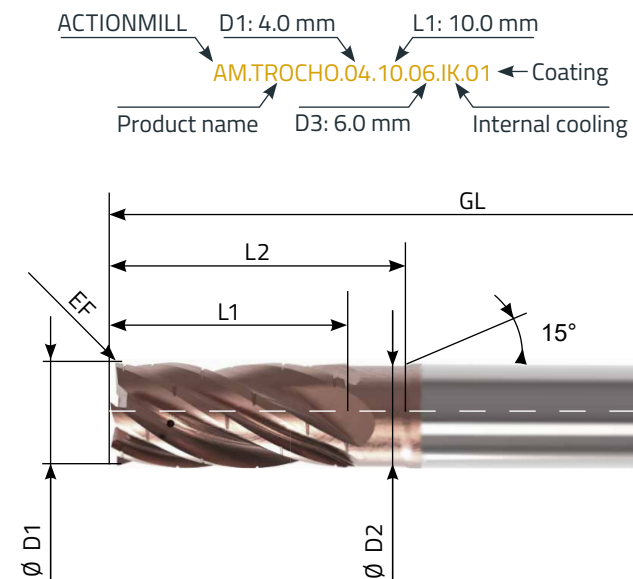
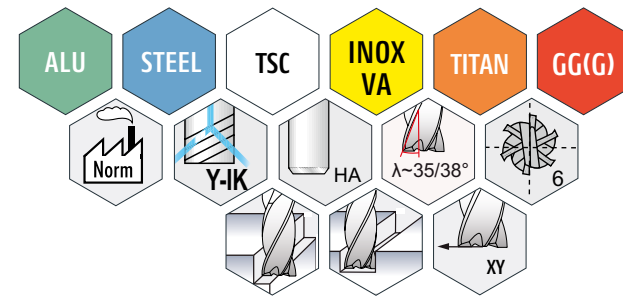
Order number: _____

☐ Inquiry

Dimensions: D ₁ : _____ GL: _____ ER: _____ D ₂ : _____ L ₁ : _____ Z: _____ D ₃ : _____ L ₂ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

2xD INOX-Trochoid cooled



■ α-INOX coated



5 PRO's of the ACTIONMILL:

- Vibration-free machining thanks to uneven flute spacing
- Special cutting edge design for vibration damping
- Internal cooling lubricant supply, Y-discharge
- Chip breaker geometry for process-reliable roughing of pockets and contours
- Protected and sharp mill corner

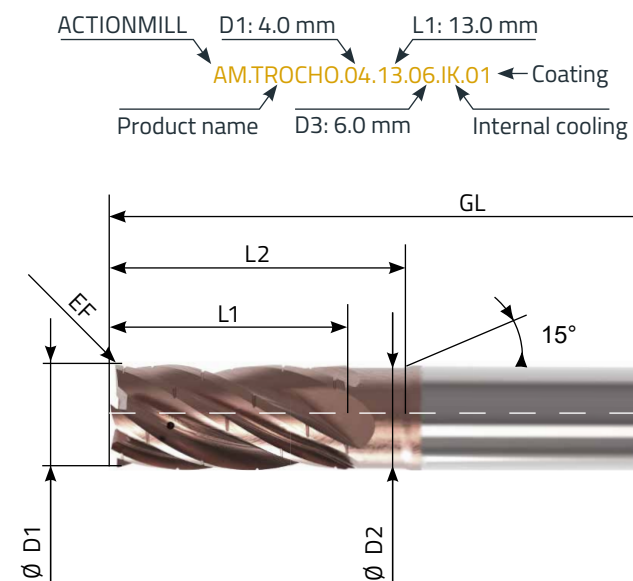
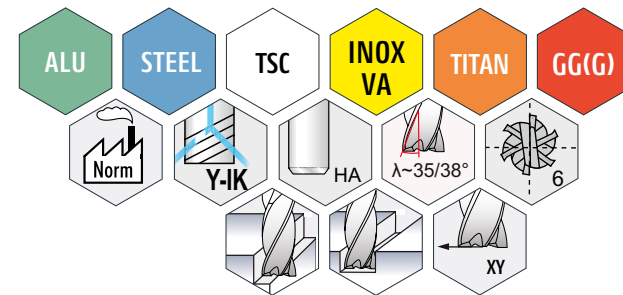
Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	EF (mm) sharp	GL (mm)	HB-Shank
AM.TROCHO.03968.10.06.IK.01	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	10.00	18.00	0.03	58.00	.HB
AM.TROCHO.04.10.06.IK.01	Ø 4.000		Ø 3.50	Ø 6.00	10.00	18.00	0.03	58.00	.HB
AM.TROCHO.04762.14.06.IK.01	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	14.00	20.00	0.03	58.00	.HB
AM.TROCHO.05.14.06.IK.01	Ø 5.000		Ø 4.20	Ø 6.00	14.00	20.00	0.03	58.00	.HB
AM.TROCHO.05556.14.06.IK.01	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	14.00	22.00	0.03	58.00	.HB
AM.TROCHO.06.14.06.IK.01	Ø 6.000		Ø 5.50	Ø 6.00	14.00	22.00	0.03	58.00	.HB
AM.TROCHO.0635.14.08.IK.01	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	14.00	22.00	0.03	64.00	.HB
AM.TROCHO.08.18.08.IK.01	Ø 8.000		Ø 7.50	Ø 8.00	18.00	26.00	0.05	64.00	.HB
AM.TROCHO.10.22.10.IK.01	Ø 10.000		Ø 9.50	Ø 10.00	22.00	32.00	0.05	73.00	.HB
AM.TROCHO.12.26.12.IK.01	Ø 12.000		Ø 11.50	Ø 12.00	26.00	36.00	0.05	84.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.TROCHO.04.10.06.IK.01.HB

Available from stock



3xD INOX-Trochoid cooled



■ α-INOX coated



5 PRO's of the ACTIONMILL:

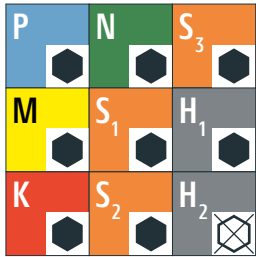
- Vibration-free machining thanks to uneven flute spacing
- Special cutting edge design for vibration damping
- Internal cooling lubricant supply, Y-discharge
- Chip breaker geometry for process-reliable roughing of pockets and contours
- Protected and sharp mill corner

Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	EF (mm) sharp	GL (mm)	HB-Shank
AM.TROCHO.03968.13.06.IK.01	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	13.00	18.00	0.03	58.00	.HB
AM.TROCHO.04.13.06.IK.01	Ø 4.000		Ø 3.50	Ø 6.00	13.00	18.00	0.03	58.00	.HB
AM.TROCHO.04762.15.06.IK.01	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	15.00	20.00	0.03	58.00	.HB
AM.TROCHO.05.15.06.IK.01	Ø 5.000		Ø 4.20	Ø 6.00	15.00	20.00	0.03	58.00	.HB
AM.TROCHO.05556.18.06.IK.01	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	18.00	22.00	0.03	58.00	.HB
AM.TROCHO.06.18.06.IK.01	Ø 6.000		Ø 5.50	Ø 6.00	18.00	22.00	0.03	58.00	.HB
AM.TROCHO.0635.20.08.IK.01	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	20.00	24.00	0.03	64.00	.HB
AM.TROCHO.08.24.08.IK.01	Ø 8.000		Ø 7.50	Ø 8.00	24.00	28.00	0.05	64.00	.HB
AM.TROCHO.10.30.10.IK.01	Ø 10.000		Ø 9.50	Ø 10.00	30.00	36.00	0.05	73.00	.HB
AM.TROCHO.12.36.12.IK.01	Ø 12.000		Ø 11.50	Ø 12.00	36.00	40.00	0.05	84.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.TROCHO.04.13.06.IK.01.HB

Available from stock





Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

ap=L1	ae=0.06xD1	ap=L1	ae=0.06xD1	ap=L1	ae=0.06xD1	ap=L1	ae=0.06xD1	ap=L1	ae=0.06xD1
Ø 3.968 - 4.0 mm		Ø 4.0 - 6.0 mm		Ø 6.0 - 8.0 mm		Ø 8.0 - 10.0 mm		Ø 10.0 - 12.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	vc [m/min]	vc [m/min]	fz [mm]
100-200	0.02 - 0.035	100-200	0.03 - 0.045	100-200	0.05 - 0.065	100-200	0.06 - 0.075	100-200	0.07 - 0.085
100-200	0.02 - 0.03	100-200	0.03 - 0.04	100-200	0.05 - 0.055	100-200	0.06 - 0.065	100-200	0.07 - 0.075
80-110	0.02 - 0.03	80-110	0.035 - 0.045	80-110	0.045 - 0.055	80-110	0.055 - 0.065	80-110	0.065 - 0.075
70-100	0.015 - 0.025	70-100	0.035 - 0.045	70-100	0.045 - 0.055	70-100	0.055 - 0.065	70-100	0.065 - 0.075
80-170	0.02 - 0.04	80-170	0.04 - 0.055	80-170	0.05 - 0.065	80-170	0.06 - 0.065	80-170	0.065 - 0.085
80-160	0.02 - 0.04	80-160	0.035 - 0.06	80-160	0.055 - 0.06	80-160	0.055 - 0.06	80-160	0.065 - 0.075
100-200	0.02 - 0.045	100-200	0.035 - 0.06	100-200	0.055 - 0.06	100-200	0.055 - 0.06	100-200	0.065 - 0.08
80-120	0.02 - 0.045	80-120	0.035 - 0.06	80-120	0.055 - 0.06	80-120	0.055 - 0.06	80-120	0.065 - 0.085
50 - 80	0.02 - 0.03	50 - 80	0.03 - 0.04	50 - 80	0.03 - 0.05	50 - 80	0.04 - 0.06	50 - 80	0.05 - 0.07
40-70	0.02 - 0.03	40-70	0.03 - 0.04	40-70	0.03 - 0.05	40-70	0.04 - 0.06	40-70	0.05 - 0.07
25-40	0.02 - 0.03	25-40	0.03 - 0.04	25-40	0.03 - 0.05	25-40	0.04 - 0.06	25-40	0.05 - 0.07
no data available									
no data available									

INOX-TrochoidXL

Protected and sharp
mill corner

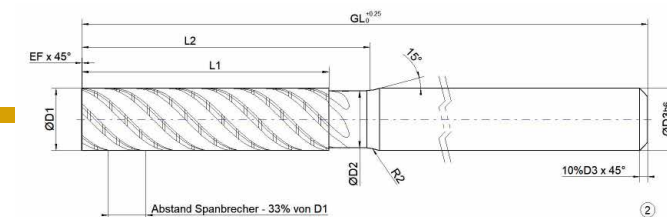
Chip splitter for reliable
roughing of pockets and
contours

Surface-treated cutting
edge geometry

From Ø 4 to Ø 12 with 6
flutes, vibration-free
machining thanks to
unequal spacing

The high-performance
α-INOX coating guarantees
long tool life and prevents
the cutting edge from
sticking

Solid carbide – thermal
shock resistant in ultra-fine
grain with high fracture
toughness



☐ Order

Order number: _____

☐ Inquiry

Dimensions:

D₁: _____ GL: _____ ER: _____

D₂: _____ L₁: _____ Z: _____

D₃: _____ L₂: _____

Coating:

☐ Coated*: _____

☐ Uncoated

Cooling channels:

☐ Yes ☐ No

Cutting direction:

☐ Left ☐ Right

Material to be machined:

Shank shape:

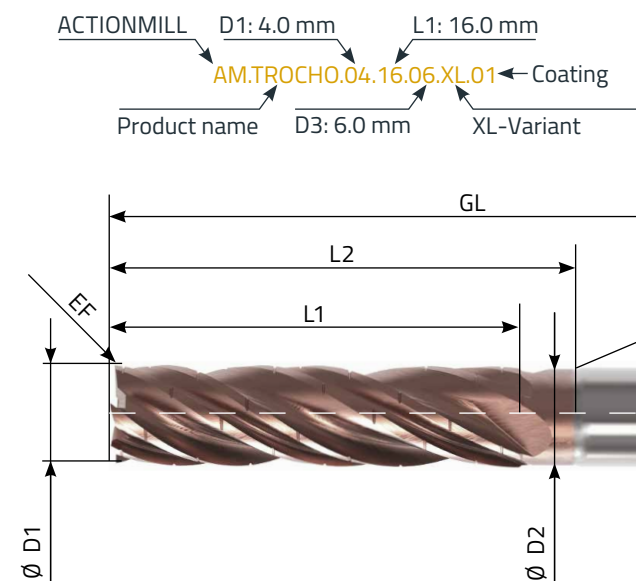
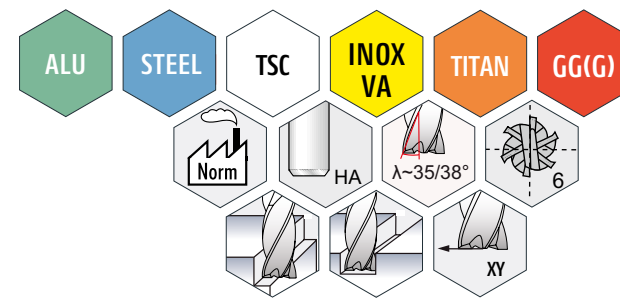
Quantity:

Date, signature & company stamp:

Contact person:

* Without further information, the most suitable coating will be used.

4xD INOX-TrochoidXL



■ α-INOX coated



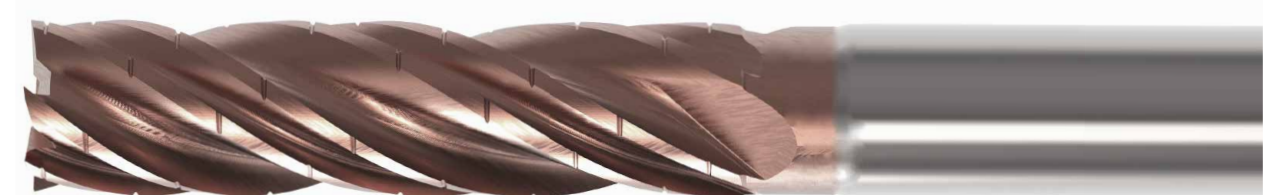
5 PRO's of the ACTIONMILL:

- Vibration-free machining thanks to uneven flute spacing and unequal helix angles
- Special cutting edge design for vibration damping
- High-performance tool for trochoidal machining with a cutting edge length of 4xD
- Chip breaker geometry for process-reliable roughing of pockets and contours
- Protected and sharp mill corner

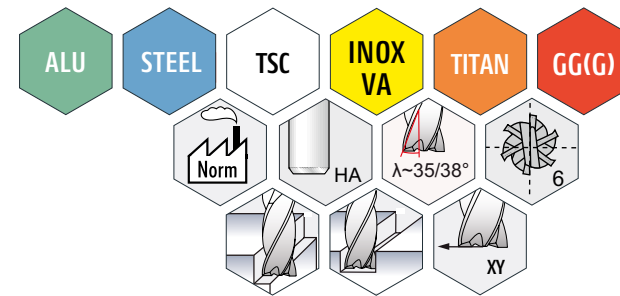
Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	EF (mm) sharp	GL (mm)	HB-Shank
AM.TROCHO.03968.16.06.XL.01	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	16.00	20.00	0.03	83.00	.HB
AM.TROCHO.04.16.06.XL.01	Ø 4.000		Ø 3.50	Ø 6.00	16.00	20.00	0.03	83.00	.HB
AM.TROCHO.04762.20.06.XL.01	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	20.00	25.00	0.03	83.00	.HB
AM.TROCHO.05.20.06.XL.01	Ø 5.000		Ø 4.20	Ø 6.00	20.00	25.00	0.03	83.00	.HB
AM.TROCHO.05556.22.06.XL.01	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	22.00	25.00	0.03	83.00	.HB
AM.TROCHO.06.24.06.XL.01	Ø 6.000		Ø 5.50	Ø 6.00	24.00	28.00	0.03	83.00	.HB
AM.TROCHO.0635.25.08.XL.01	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	25.00	28.00	0.03	83.00	.HB
AM.TROCHO.08.32.08.XL.01	Ø 8.000		Ø 7.50	Ø 8.00	32.00	36.00	0.05	83.00	.HB
AM.TROCHO.10.40.10.XL.01	Ø 10.000		Ø 9.50	Ø 10.00	40.00	44.00	0.05	101.00	.HB
AM.TROCHO.12.48.12.XL.01	Ø 12.000		Ø 11.50	Ø 12.00	48.00	52.00	0.05	110.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.TROCHO.04.16.06.XL.01.HB

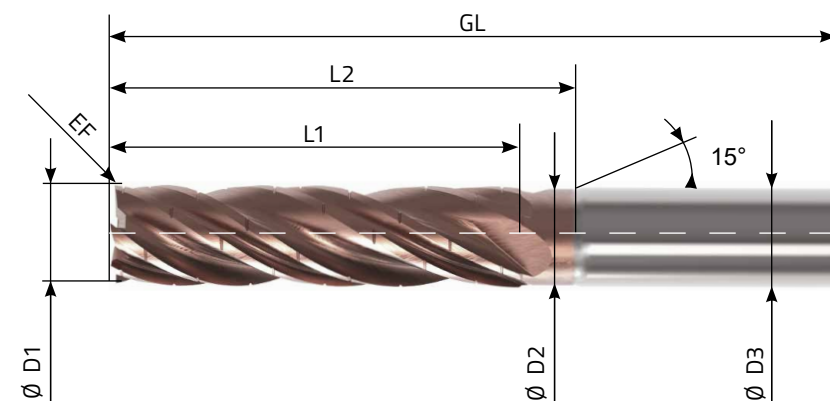
Available from stock



5xD INOX-TrochoidXXL



ACTIONMILL D1: 4.0 mm L1: 20.0 mm
AM.TROCHO.04.20.06.XXL.01 ← Coating
Product name D3: 6.0 mm XXL-Variant



■ α-INOX coated



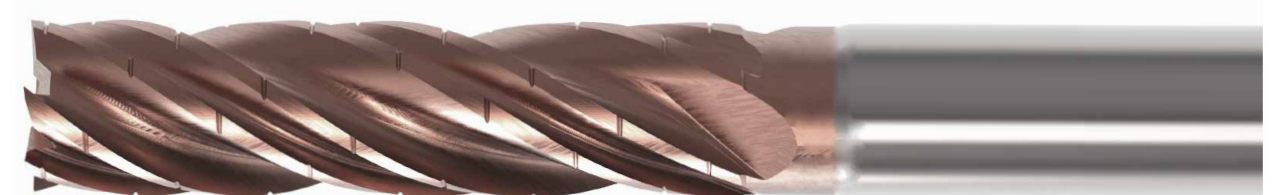
5 PRO's of the ACTIONMILL:

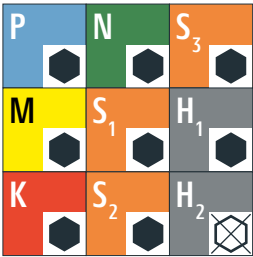
- Vibration-free machining thanks to uneven flute spacing and unequal helix angles
- Special cutting edge design for vibration damping
- High-performance tool for trochoidal machining with a cutting edge length of 5xD
- Chip breaker geometry for process-reliable roughing of pockets and contours
- Protected and sharp mill corner

Article number	D1 (mm)	D1 (inch)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	EF (mm) sharp	GL (mm)	HB-Shank
AM.TROCHO.03968.20.06.XXL.01	Ø 3.968	5/32"	Ø 3.40	Ø 6.00	20.00	24.00	0.03	83.00	.HB
AM.TROCHO.04.20.06.XXL.01	Ø 4.000		Ø 3.50	Ø 6.00	20.00	24.00	0.03	83.00	.HB
AM.TROCHO.04762.25.06.XXL.01	Ø 4.762	3/16"	Ø 4.20	Ø 6.00	25.00	29.00	0.03	83.00	.HB
AM.TROCHO.05.25.06.XXL.01	Ø 5.000		Ø 4.20	Ø 6.00	25.00	29.00	0.03	83.00	.HB
AM.TROCHO.05556.30.06.XXL.01	Ø 5.556	7/32"	Ø 5.00	Ø 6.00	30.00	34.00	0.03	83.00	.HB
AM.TROCHO.06.30.06.XXL.01	Ø 6.000		Ø 5.50	Ø 6.00	30.00	34.00	0.03	83.00	.HB
AM.TROCHO.0635.32.08.XXL.01	Ø 6.350	1/4"	Ø 5.80	Ø 8.00	32.00	36.00	0.03	83.00	.HB
AM.TROCHO.08.40.08.XXL.01	Ø 8.000		Ø 7.50	Ø 8.00	40.00	44.00	0.05	83.00	.HB
AM.TROCHO.10.50.10.XXL.01	Ø 10.000		Ø 9.50	Ø 10.00	50.00	54.00	0.05	101.00	.HB
AM.TROCHO.12.60.12.XXL.01	Ø 12.000		Ø 11.50	Ø 12.00	60.00	64.00	0.05	110.00	.HB

■ For a mill with HB shank, add ".HB" to the article number, e.g. AM.TROCHO.04.20.06.XXL.01.HB

Available from stock





Recommended use Highly suitable Partially suitable Not recommended

Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

ap=L1	ae=0.05xD1	ap=L1	ae=0.05xD1	ap=L1	ae=0.05xD1	ap=L1	ae=0.05xD1	ap=L1	ae=0.05xD1
Ø 3.968 - 4.0 mm		Ø 4.0 - 6.0 mm		Ø 6.0 - 8.0 mm		Ø 8.0 - 10.0 mm		Ø 10.0 - 12.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	vc [m/min]	vc [m/min]	fz [mm]
100-200	0.02 - 0.035	100-200	0.03 - 0.045	100-200	0.05 - 0.065	100-200	0.06 - 0.075	100-200	0.07 - 0.085
100-200	0.02 - 0.03	100-200	0.03 - 0.04	100-200	0.05 - 0.055	100-200	0.06 - 0.065	100-200	0.07 - 0.075
80-110	0.02 - 0.03	80-110	0.035 - 0.045	80-110	0.045 - 0.055	80-110	0.055 - 0.065	80-110	0.065 - 0.075
70-100	0.015 - 0.025	70-100	0.035 - 0.045	70-100	0.045 - 0.055	70-100	0.055 - 0.065	70-100	0.065 - 0.075
80-170	0.02 - 0.04	80-170	0.04 - 0.055	80-170	0.05 - 0.065	80-170	0.06 - 0.065	80-170	0.065 - 0.085
80-160	0.02 - 0.04	80-160	0.035 - 0.06	80-160	0.055 - 0.06	80-160	0.055 - 0.06	80-160	0.065 - 0.075
100-200	0.02 - 0.045	100-200	0.035 - 0.06	100-200	0.055 - 0.06	100-200	0.055 - 0.06	100-200	0.065 - 0.08
80-120	0.02 - 0.045	80-120	0.035 - 0.06	80-120	0.055 - 0.06	80-120	0.055 - 0.06	80-120	0.065 - 0.085
50 - 80	0.02 - 0.03	50 - 80	0.03 - 0.04	50 - 80	0.03 - 0.05	50 - 80	0.04 - 0.06	50 - 80	0.05 - 0.07
40-70	0.02 - 0.03	40-70	0.03 - 0.04	40-70	0.03 - 0.05	40-70	0.04 - 0.06	40-70	0.05 - 0.07
25-40	0.02 - 0.03	25-40	0.03 - 0.04	25-40	0.03 - 0.05	25-40	0.04 - 0.06	25-40	0.05 - 0.07
no data available									
no data available									

Description

Thanks to its performance and versatility, the HB microtec® "T-slot cutter" ACTIONMILL® T-SLOT is the ideal all-purpose tool for producing T-slots. The ACTIONMILL® T-SLOT is characterized by excellent tool life and exceptionally high cutting values. The positive side effect for you: shorter cycle times and no more tedious tool changes.

A sophisticated, specially designed cutting edge geometry combined with a mirror-smooth surface to which a high-performance coating is applied guarantees the user maximum performance for every component.

The shank, made of an in-house developed ultra-fine-grain solid carbide with innovative cooling channels, is our basis for the T-SLOT and your benefit for the best possible machining.

Customization is what makes the ACTIONMILL® T-SLOT really strong. From Ø0.8 to Ø40, there is something for every application.

Our customers value the range of applications in the most diverse and demanding materials – whether titanium grade 5 (Ti6Al4V) or the classic stainless steel X20Cr13 (1.4021).

The ACTIONMILL® T-SLOT can do it all.

As a semi-standard tool, the ACTIONMILL® T-SLOT is quickly in use at your site and brings action. When it comes to performance, the details often make the difference. Your individual ACTIONMILL® T-SLOT is tailored specifically to your application, your material and your component.

We round the cutting edges and literally give the tool the finishing touch – and thus a class of its own.

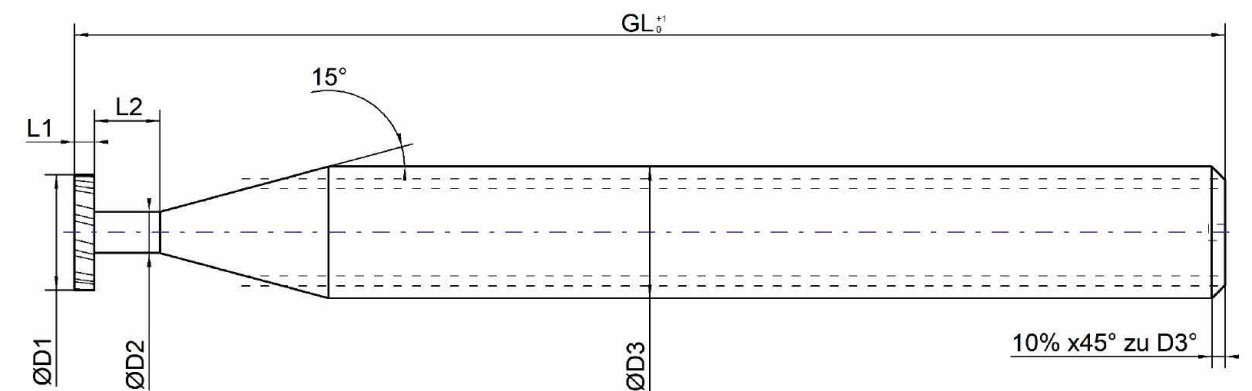
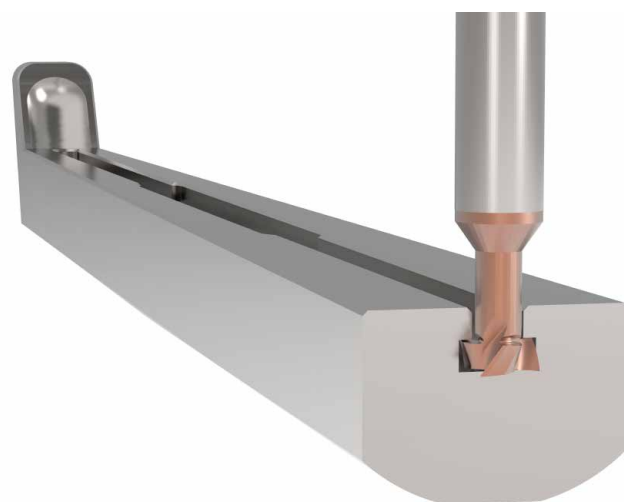
The ACTIONMILL® T-SLOT is available in two versions:

ACTIONMILL® T-SLOT cooled – with integrated cooling channels, which ensure better flushing out of the chips.

ACTIONMILL® T-SLOT – without cooling channels, as the classic version.

HB microtec® stands for action tools and engineering. Professional advice and all-round support are important parts of our philosophy.

Together with you, we develop your custom-ground T-slot cutter.



T-Slot cooled

High-performance coatings guarantee long tool life and prevent the cutting edges from sticking.

High-performance cutting edge geometries that can be individually designed.

Integrated cooling channels protect the tool from overheating when cutting titanium alloys and stainless steels.

from Ø 0.8
to Ø 12.0



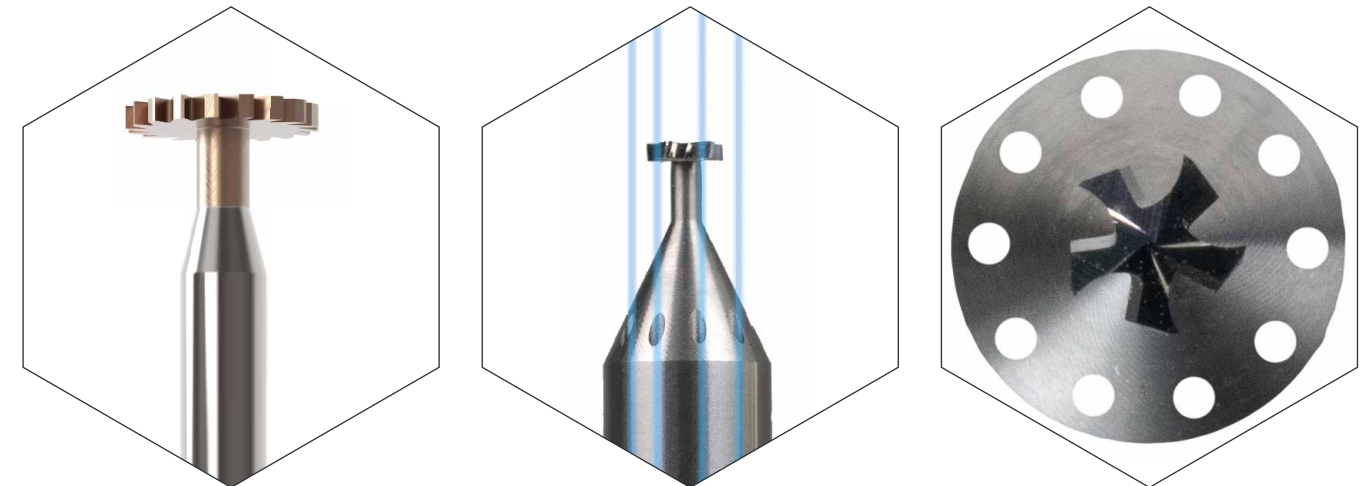
T-Slot



from Ø 0.8
to Ø 16.0

The reinforced shank in h6 quality combined with an optimized effective length makes the tool robust and vibration-free.

High feed and cutting speeds are made possible by the use of fine-grain solid carbide with high fracture toughness.



Semi-standardized T-slot cutters

Product features

From Ø0.8 to Ø12 with integrated cooling

- From Ø0.8 to Ø40 without cooling
- 3 to 18 flutes depending on diameter
- Straight flutes from Ø4 or helical flutes selectable
- Rounding of sharp corners between 0.004 and 0.01 mm (edge preparation)
- Further customization possible on request

Short delivery times

- 2 weeks blank
- 3 – 4 weeks coated
- Always select the right high-performance coating:
 - .00 = blank for plastics and non-ferrous metals
 - .01 = α -INOX for stainless steels ferritic, martensitic, austenitic & heat-resistant steels, titanium alloys, CrCo (M & S)
 - .02 = β -Titan for non-ferrous metals and titanium (N & S1)
 - .03 = γ -Steel for steels up to RM < 1200N/mm² & cast iron (P & K)

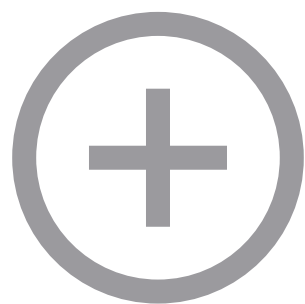
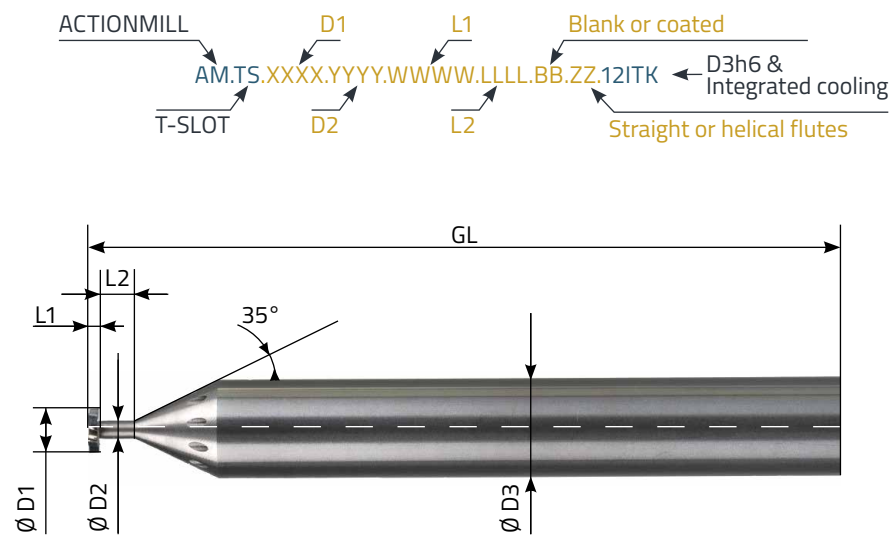
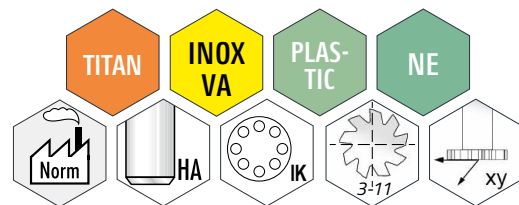


Material short code	Material number	Shank-Ø [mm]	Overall length [mm]	Maximum cutting Ø [mm]	Amount of flutes [n]
4 ITK	R_HB.040.500.ITK	4	50	2	Z3
6 ITK	R_HB.060.600.ITK	6	60	4	Z3 / Z5 from Ø3
8 ITK	R_HB.080.681.ITK	8	68	6	Z5 / Z7 from Ø5
10 ITK	R_HB.100.840.ITK	10	84	8	Z7
12 ITK	R_HB.120.1010.ITK	12	101	10	Z9
14 ITK	R_HB.140.1010.ITK	14	101	12	Z11



Material short code	Material number	Shank-Ø [mm]	Overall length [mm]	Maximum cutting Ø [mm]	Amount of flutes [n]
T-SLOT 3	R_HB.030.500.h6	3	50	3	Z3
T-SLOT 4	R_HB.040.600.h6	4	60	4	Z3 / Z5 from Ø3
T-SLOT 6	R_HB.060.760.h6	6	76	6	Z5 / Z7 from Ø5
T-SLOT 8	R_HB.080.800.h6	8	80	8	Z7
T-SLOT 10	R_HB.100.900.h6	10	90	10	Z9
T-SLOT 12	R_HB.120.1010.h6	12	101	12	Z11
T-SLOT 14	R_HB.140.1010.h6	14	101	14	Z13
T-SLOT 16	R_HB.160.1010.h6	16	101	16	Z15

T-SLOT cooled Ø0.8 - Ø12



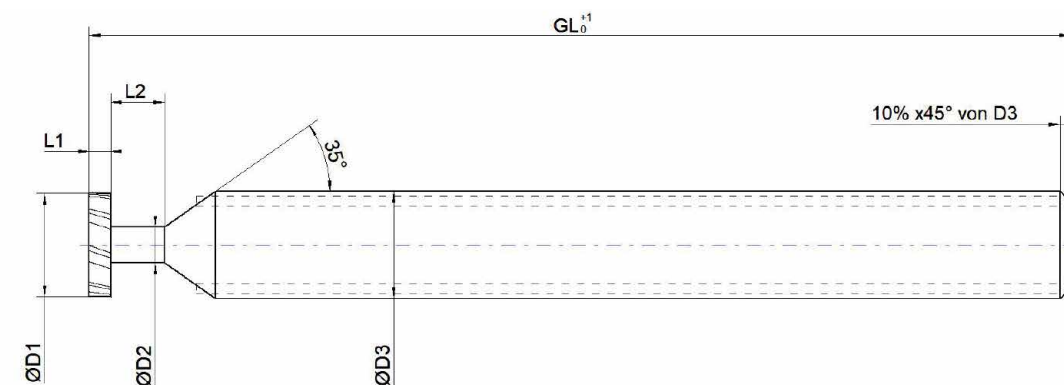
5 PRO's of the ACTIONMILL:

- Quickly available, semi-standardized T-slot mill
- Micro and macro geometry at the highest level
- High performance at a very good price-performance ratio
- Perfect for individualized applications
- Specialized also for difficult-to-cut materials

Example: T-Slot Ø9.0x5.0 mm; Neck Ø4.5x14.0 mm; Helical flutes and β-Titan coated

Article number XXXX.YYYY.WWWW.LLLL	D1 (mm) XXXX	D2 (mm) YYYY	D3 h6 (mm)	L1 ±0.005 (mm) WWW	L2 (mm) LLL	GL (mm)
AM.TS.XXXX.YYYY.WWWW.LLLL.BB.ZZ.12ITK	Ø8.0-Ø10.0	Ø3.5-Ø5.0	Ø12	0.5-10.5 mm	3.0-24 mm	101
AM.TS.0900.0450.0500.1400.02.ZD.12ITK	9.0	4.5	12h6	5.0	14.0	101

$D_1 = 0.8 \text{ mm} - 12.0 \text{ mm}$



Article number: _____

Raw material: _____

☐ Inquiry

☐ Order Order number: _____ Other: _____

Dimensions (XXXX.YYYY.WWWW.LLLL):

D₁ (XXXX) _____ L₁ (WWW) _____

D₂ (YYY) _____ L₂ (LLL) _____

Material to be machined _____

Coating (BB):

- ☐ (.00) blank
☐ (.01) α-INOX
☐ (.02) β-Titan
☐ (.03) γ-Steel

Flute form (ZZ):

- ☐ (.ZG) Straight
☐ (.ZD) Helical

Material selection (short code):

The table for material selection can be found on page 202.

Minimum order quantity from 5 pieces:

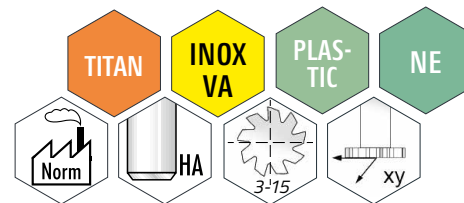
* Without further information, the most suitable coating will be used.

Z	blank BB	α-INOX BB	β-Titan BB	γ-Steel BB	Z-Straight ZZ	Z-Helix ZZ
Z9	.00	.01	.02	.03	.ZG	.ZD
Z9			.02			.ZD

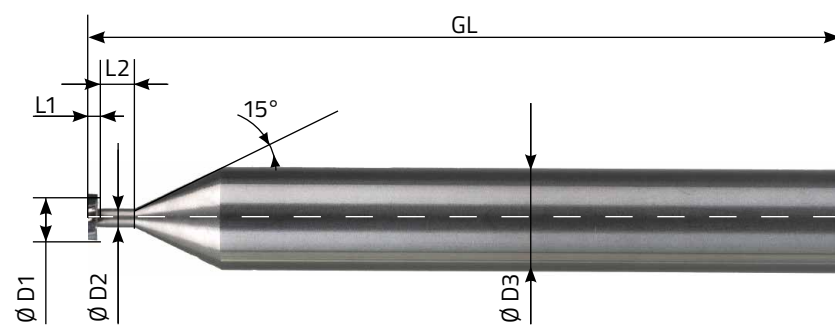
Minimum order quantity: 5 pieces

Delivery time: Blank 2 weeks; Coated 3-4 weeks

T-SLOT Ø0.8 - Ø16



ACTIONMILL
T-SLOT
D1
D2
L1
L2
Blank or coated
D3h6
Straight or helical flutes



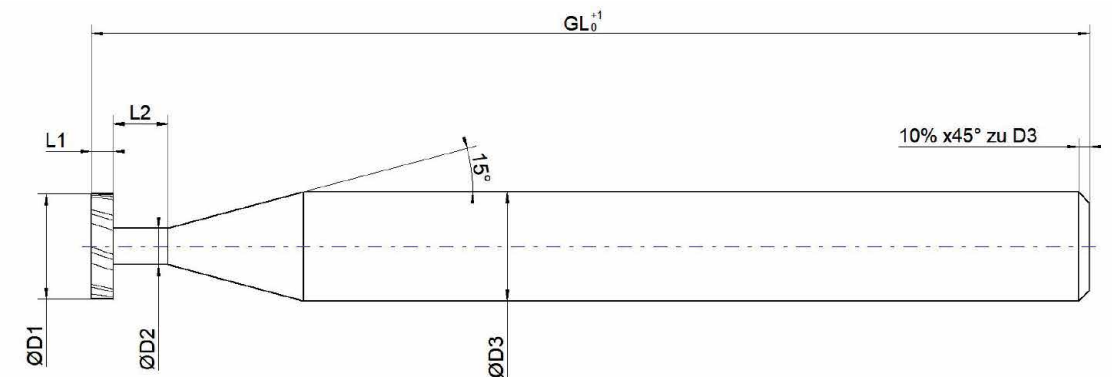
5 PRO's of the ACTIONMILL:

- Quickly available, semi-standardized T-slot mill
- Micro and macro geometry at the highest level
- High performance at a very good price-performance ratio
- Perfect for individualized applications
- Specialized also for difficult-to-cut materials

Example: T-Slot Ø12.0x6.0 mm; Neck Ø6.0x20.0 mm; Straight and α-INOX coated

Article number XXXX.YYYY.WWWW.LLLL	D1 (mm) XXXX	D2 (mm) YYYY	D3 h6 (mm)	L1 ±0.005 (mm) WWW	L2 (mm) LLL	GL (mm)
AM.TS.XXXX.YYYY.WWWW.LLLL.BB.ZZ.16	Ø14.0-Ø16.0	Ø7.0-Ø12.0	Ø16	0.5-16.5 mm	3.0-28 mm	101
AM.TS.1450.1000.0800.1400.02.ZD.16	14.5	10.0	16h6	8.0	14.0	101

$D_1 = 0.8\text{mm} - 16.0\text{mm}$



Article number

Raw material:

☐ Inquiry

☐ Order

Order number:

Other:

Dimensions (XXXX.YYYY.WWWW.LLLL):

D₁ (XXXX)

L₁ (WWW)

D₂ (YYY)

L₂ (LLL)

Material to be machined

Coating (BB):

☐ (.00) blank

☐ (.01) α-INOX

☐ (.02) β-Titan

☐ (.03) γ-Steel

Flute form (ZZ):

☐ (.ZG) Straight

☐ (.ZD) Helical

Material selection (short code):

The table for material selection can be found on page 203.

Minimum order quantity from 5 pieces:

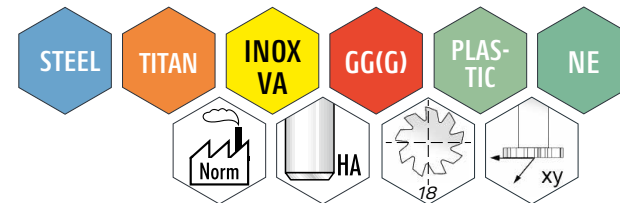
* Without further information, the most suitable coating will be used.

Z	blank BB	α-INOX BB	β-Titan BB	γ-Steel BB	Z-Straight ZZ	Z-Helix ZZ
Z15	.00	.01	.02	.03	.ZG	.ZD
Z15			.02			.ZD

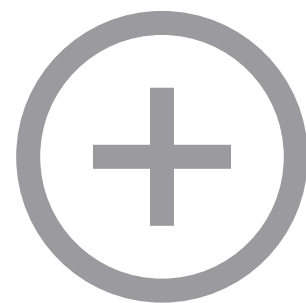
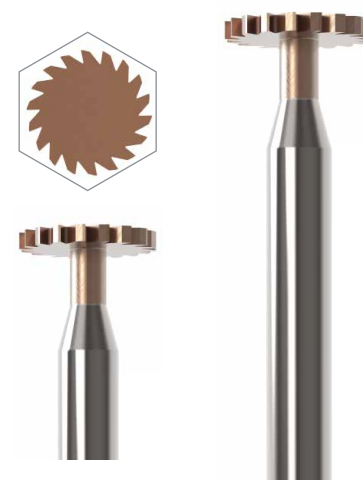
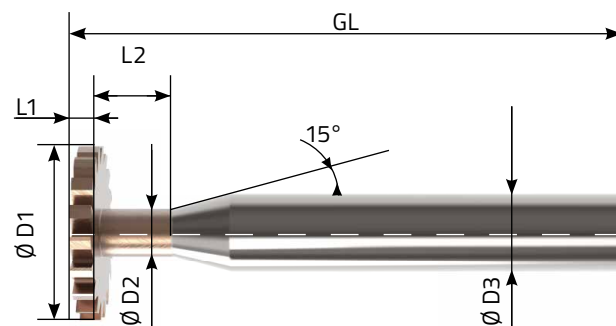
Minimum order quantity: 5 pieces

Delivery time: Blank 2 weeks; Coated 3-4 weeks

T-SLOT 20



ACTIONMILL
T-SLOT
D1 L1 Blank or coated
AM.TS.XXXX.WWWW.BB.ZZ.20 ← D1 max
Straight or helical flutes



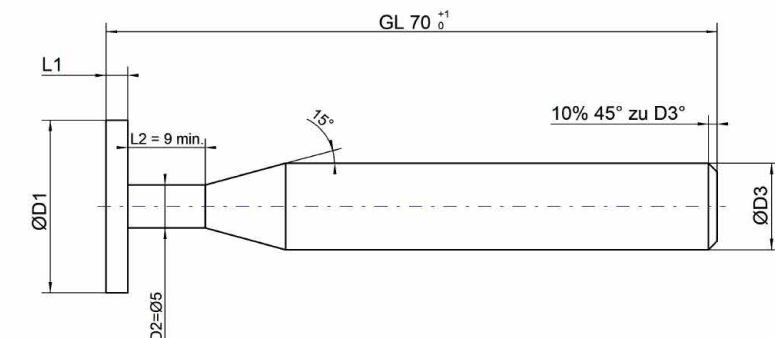
5 PRO's of the ACTIONMILL:

- Quickly available, semi-standardized T-slot mill
- Micro and macro geometry at the highest level
- High performance at a very good price-performance ratio
- Perfect for individualized applications
- Specialized also for difficult-to-cut materials

Example: T-Slot Ø17.5 x 2.0 mm; Neck Ø6.0 x 9.0 mm; Helical flutes and α-INOX coated

Article number XXXX.WWWW	D1 (mm) XXXX	D2 (mm)	D3 h6 (mm)	L1 ±0.005 (mm) WWW	L2 (mm)	GL (mm)
AM.TS.XXXX.WWWW.BB.ZZ.20	Ø16.1-Ø20.2	Ø6	Ø10 h6	2.0-3.0 mm	min. 9	70
AM.TS.1750.0200.01.ZD.20	17.5	6	10h6	2.0	9	70

$D_1 = 16.1\text{mm} - 20.2\text{mm}$



Article number

(AM.TS.XXXX.WWWW.BB.ZZ.20): _____

☐ Inquiry

☐ Order

Order number: _____ Other: _____

Dimensions (XXXX.WWWW):

D1 (XXXX) L1 (WWW)
Ø16.1-Ø20.2 2.0-3.0 mm

Material to be machined _____

Coating (BB):

- ☐ (.00) blank
☐ (.01) α-INOX
☐ (.02) β-Titan
☐ (.03) γ-Steel

Flute form (ZZ):

- ☐ (.ZG) Straight
☐ (.ZD) Helical

Product attributes:

- Shank shape: HA
- Shank diameter D3h6: Ø10
- Raw material: 2017440-2
- Overall length: 70
- Amount of flutes: Z18

Minimum order quantity from 3 pieces:

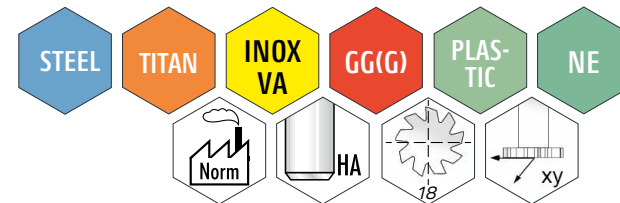
* Without further information, the most suitable coating will be used.

Z	blank BB	α-INOX BB	β-Titan BB	γ-Steel BB	Z-Straight ZZ	Z-Helix ZZ
Z18	.00	.01	.02	.03	.ZG	.ZD
Z18		.01				.ZD

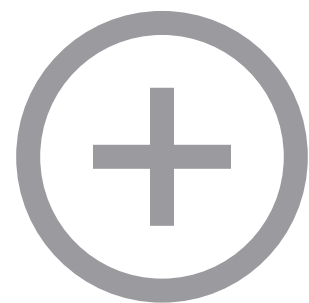
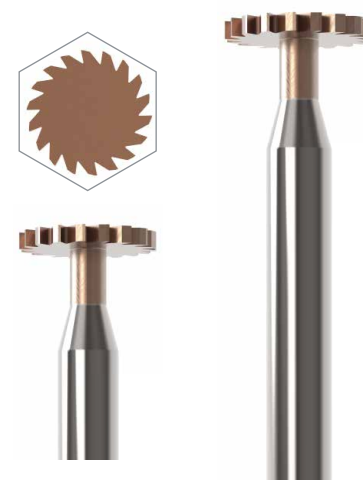
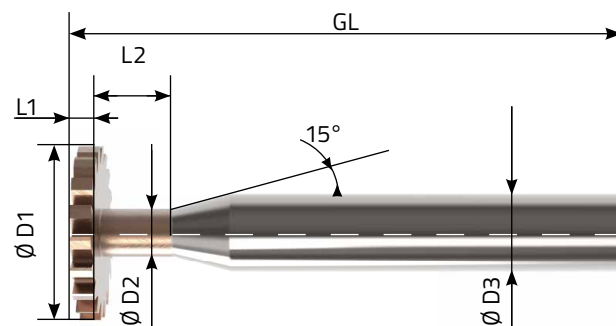
Minimum order quantity: 3 pieces

Delivery time: Blank 2 weeks; Coated 3-4 weeks

T-SLOT 25



ACTIONMILL
T-SLOT
AM.TS.XXXX.WWWW.BB.ZZ.25
D1 L1 Blank or coated
D1 max
Straight or helical flutes



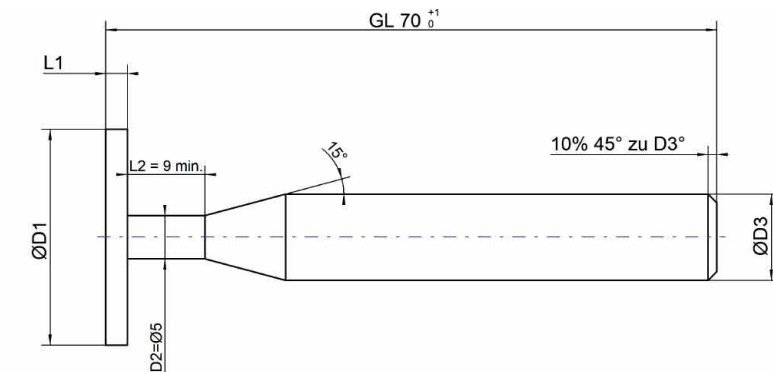
5 PRO's of the ACTIONMILL:

- Quickly available, semi-standardized T-slot mill
- Micro and macro geometry at the highest level
- High performance at a very good price-performance ratio
- Perfect for individualized applications
- Specialized also for difficult-to-cut materials

Example: T-Slot Ø23.5 x 2.5 mm, Neck Ø6.0 x 9.0mm, Helical flutes and blank (uncoated)

Article number XXXX.WWWW	D1 (mm) XXXX	D2 (mm)	D3 h6 (mm)	L1 ±0.005 (mm) WWW	L2 (mm)	GL (mm)
AM.TS.XXXX.WWWW.BB.ZZ.25	Ø20.2-Ø25.2	Ø6	Ø10 h6	2.0-3.0 mm	min. 9	70
AM.TS.2350.0250.00.ZD.25	23.5	6	10h6	2.5	9	70

$D_1 = 20.2\text{mm} - 25.2\text{mm}$



Article number

(AM.TS.XXXX.WWWW.BB.ZZ.25): _____

☐ Inquiry

☐ Order

Order number: _____ Other: _____

Dimensions (XXXX.WWWW):

D1 (XXXX) _____ L1 (WWW) _____
Ø20.2-Ø25.2 2.0-3.0 mm

Material to be machined _____

Coating (BB):

- ☐ (.00) blank
☐ (.01) α-INOX
☐ (.02) β-Titan
☐ (.03) γ-Steel

Flute form (ZZ):

- ☐ (.ZG) Straight
☐ (.ZD) Helical

Product attributes:

- Shank shape: HA
- Shank diameter D3h6: Ø10
- Raw material: 201744 1-2
- Overall length: 70
- Amount of flutes: Z18

Minimum order quantity from 3 pieces:

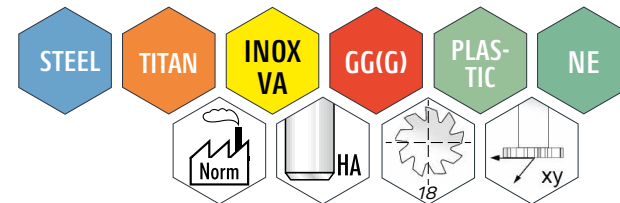
* Without further information, the most suitable coating will be used.

Z	blank BB	α-INOX BB	β-Titan BB	γ-Steel BB	Z-Straight ZZ	Z-Helix ZZ
Z18	.00	.01	.02	.03	.ZG	.ZD
Z18	.00					.ZD

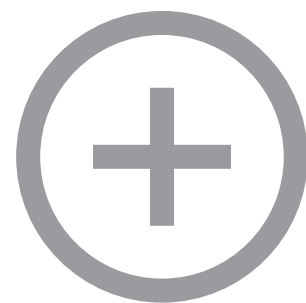
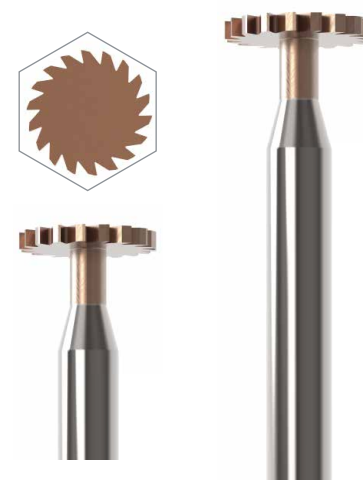
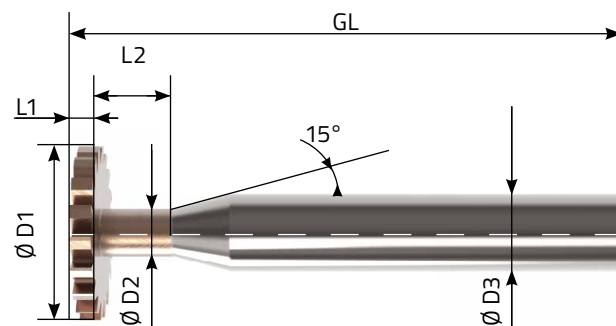
Minimum order quantity: 3 pieces

Delivery time: Blank 2 weeks; Coated 3-4 weeks

T-SLOT 30



ACTIONMILL
T-SLOT
AM.TS.XXXX.WWWW.BB.ZZ.30
D1 L1 Blank or coated
D1 max
Straight or helical flutes



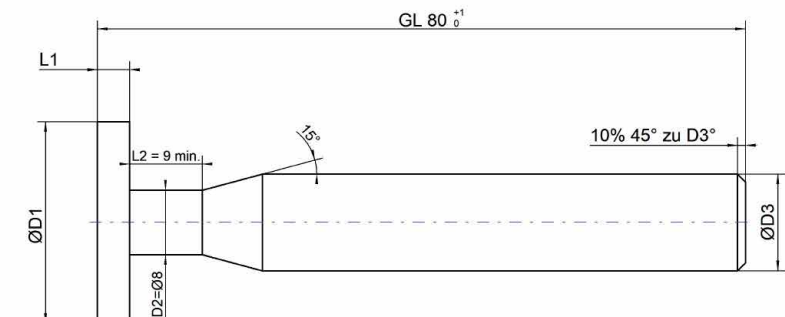
5 PRO's of the ACTIONMILL:

- Quickly available, semi-standardized T-slot mill
- Micro and macro geometry at the highest level
- High performance at a very good price-performance ratio
- Perfect for individualized applications
- Specialized also for difficult-to-cut materials

Example: T-Slot Ø28.25 x 3.8 mm, Neck Ø6.0 x 9.0mm, Straight flutes and β-Titan coated

Article number XXXX.WWWW	D1 (mm) XXXX	D2 (mm)	D3 h6 (mm)	L1 ±0.005 (mm) WWW	L2 (mm)	GL (mm)
AM.TS.XXXX.WWWW.BB.ZZ.30	Ø25.2-Ø30.2	Ø6	Ø10 h6	2.5-4.0 mm	min. 9	80
AM.TS.2825.0380.02.ZG.30	28.25	6	10h6	3.8	9	80

$D_1 = 25.2\text{mm} - 30.2\text{mm}$



Article number

(AM.TS.XXXX.WWWW.BB.ZZ.30): _____

☐ Inquiry

☐ Order

Order number: _____ Other: _____

Dimensions (XXXX.YYYY.WWWW.LLLL):

D1 (XXXX) _____ L1 (WWW) _____
Ø25.2-Ø30.2 2.5-4.0 mm

Material to be machined _____

Coating (BB):

- ☐ (.00) blank
☐ (.01) α-INOX
☐ (.02) β-Titan
☐ (.03) γ-Steel

Flute form (ZZ):

- ☐ (.ZG) Straight
☐ (.ZD) Helical

Product attributes:

- Shank shape: HA
- Shank diameter D3h6: Ø10
- Raw material: 2018639-2
- Overall length: 80
- Amount of flutes: Z18

Minimum order quantity from 3 pieces:

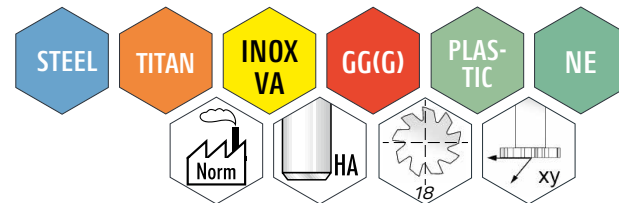
* Without further information, the most suitable coating will be used.

Z	blank BB	α-INOX BB	β-Titan BB	γ-Steel BB	Z-Straight ZZ	Z-Helix ZZ
Z18	.00	.01	.02	.03	.ZG	.ZD
Z18			.02		.ZG	

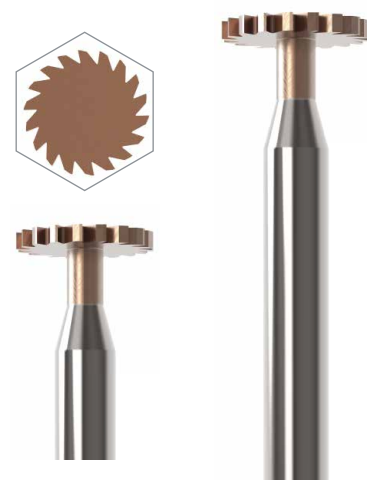
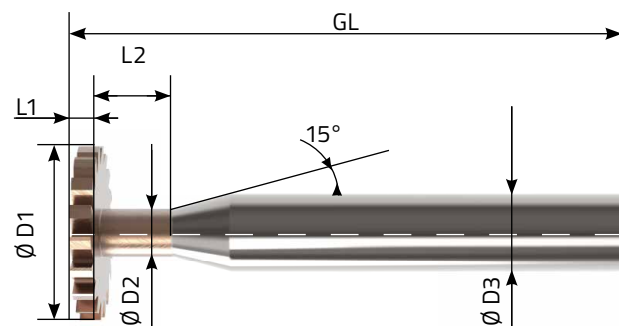
Minimum order quantity: 3 pieces

Delivery time: Blank 2 weeks; Coated 3-4 weeks

T-SLOT 40



ACTIONMILL
T-SLOT
D1 L1 Blank or coated
AM.TS.XXXX.WWWW.BB.ZZ.40 ← D1 max
Straight or helical flutes



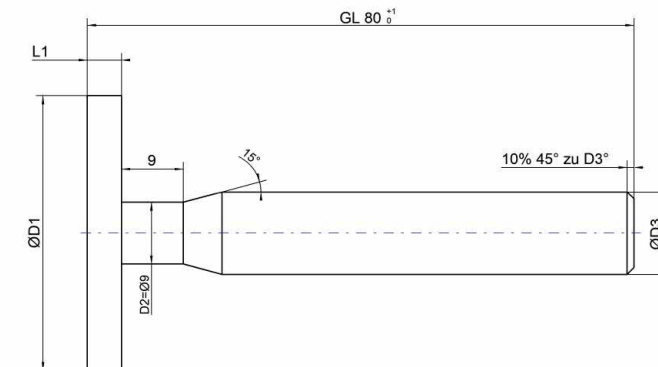
5 PRO's of the ACTIONMILL:

- Quickly available, semi-standardized T-slot mill
- Micro and macro geometry at the highest level
- High performance at a very good price-performance ratio
- Perfect for individualized applications
- Specialized also for difficult-to-cut materials

Example: T-Slot Ø39.0 x 4.7 mm, Neck Ø9.0 x 9.0mm, Straight and γ-Steel coated

Article number XXXX.WWWW	D1 (mm) XXXX	D2 (mm)	D3 h6 (mm)	L1 ±0.005 (mm) WWW	L2 (mm)	GL (mm)
AM.TS.XXXX.WWWW.BB.ZZ.40	Ø30.2-Ø40.2	Ø9	Ø12	3.0-5.0 mm	min. 9 mm	80
AM.TS.3900.0470.03.ZG.40	39.0	9	12	4.7	9	80

$D_1 = 30.2\text{mm} - 40.2\text{mm}$



Article number

(AM.TS.XXXX.WWWW.BB.ZZ.40): _____

☐ Inquiry

☐ Order

Order number: _____ Other: _____

Dimensions (XXXX.WWWW):

D1 (XXXX) _____ L1 (WWW) _____
Ø30.2-Ø40.2 3.0-5.0 mm

Material to be machined _____

Coating (BB):

- ☐ (.00) blank
☐ (.01) α-INOX
☐ (.02) β-Titan
☐ (.03) γ-Steel

Flute form (ZZ):

- ☐ (.ZG) Straight
☐ (.ZD) Helical

Product attributes:

- Shank shape: HA
- Shank diameter D3h6: Ø12
- Raw material: 2017442-2
- Overall length: 80
- Amount of flutes: Z18

Minimum order quantity from 3 pieces:

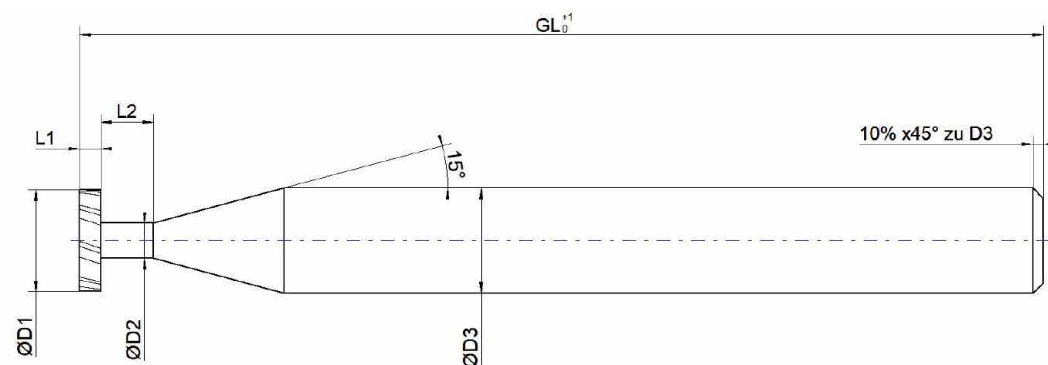
* Without further information, the most suitable coating will be used.

Z	blank BB	α-INOX BB	β-Titan BB	γ-Steel BB	Z-Straight ZZ	Z-Helix ZZ
Z18	.00	.01	.02	.03	.ZG	.ZD
Z18				.03	.ZG	

Minimum order quantity: 3 pieces

Delivery time: Blank 2 weeks; Coated 3-4 weeks

Classic



Corner alignment "sharp" = 0.004 mm - 0.01 mm rounded
(cutting edge protection)

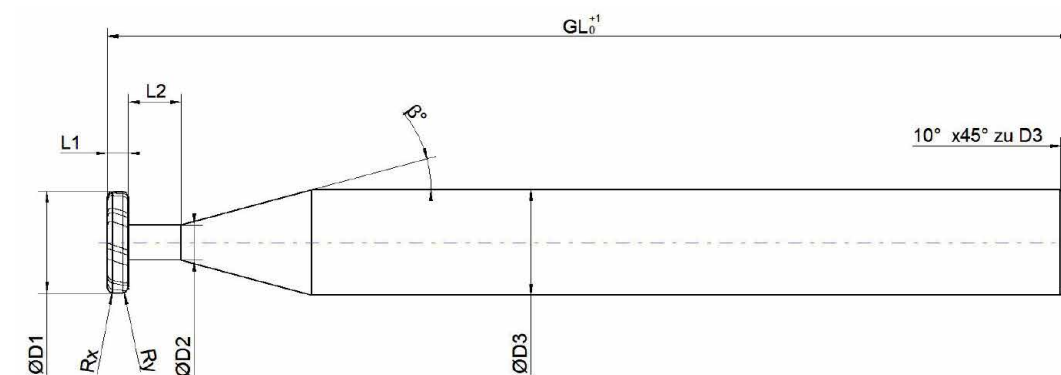
☐ Inquiry

☐ Order Order number: _____ Other: _____

Dimensions: D ₁ : _____ GL: _____ D ₂ : _____ L ₁ : _____ D ₃ : _____ L ₂ : _____ Z: _____ β: _____	Flute form (ZZ): ☐ Straight ☐ Helical	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____		Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____			Contact person: _____

* Without further information, the most suitable coating will be used.

Corner radius



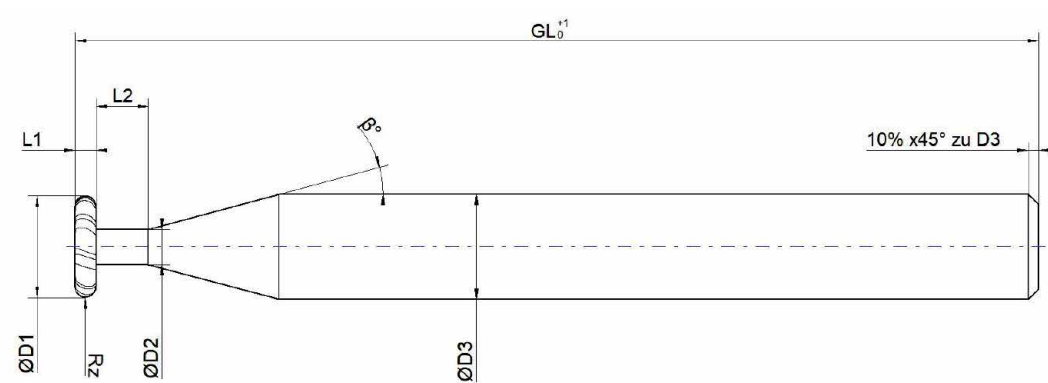
☐ Inquiry

☐ Order Order number: _____ Other: _____

Dimensions: D ₁ : _____ GL: _____ β: _____ D ₂ : _____ L ₁ : _____ R _x : _____ D ₃ : _____ L ₂ : _____ R _y : _____ Z: _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____		Shank shape: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Full radius



☐ Inquiry

☐ Order

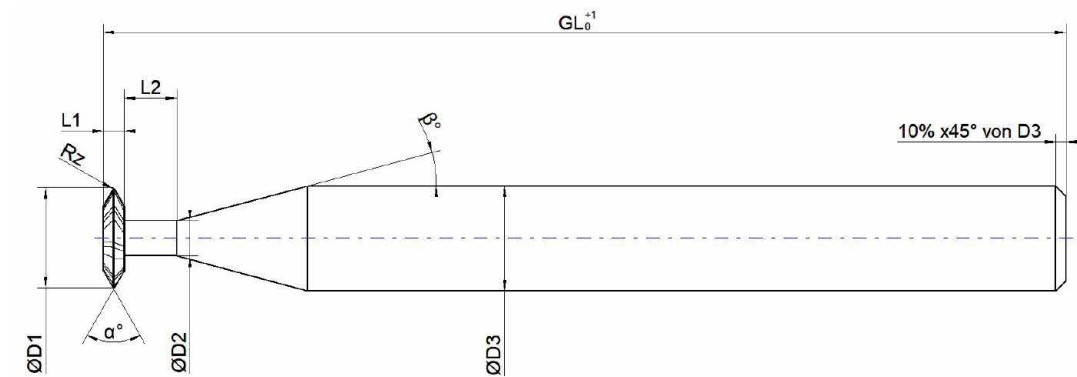
Order number: _____

Other: _____

Dimensions: D ₁ : _____ GL: _____ β: _____ D ₂ : _____ L ₁ : _____ R _Z : _____ D ₃ : _____ L ₂ : _____ Z: _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Prism



Corner alignment "sharp" = 0.004 mm - 0.01 mm rounded
(cutting edge protection)

☐ Inquiry

☐ Order

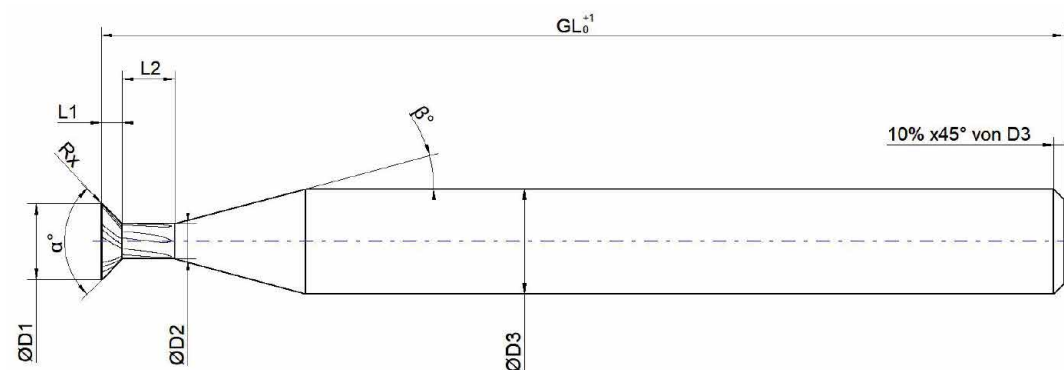
Order number: _____

Other: _____

Dimensions: D ₁ : _____ GL: _____ α: _____ D ₂ : _____ L ₁ : _____ β: _____ D ₃ : _____ L ₂ : _____ R _Z : _____ Z: _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Dovetail



Corner alignment "sharp" = 0.004 mm - 0.01 mm rounded
(cutting edge protection)

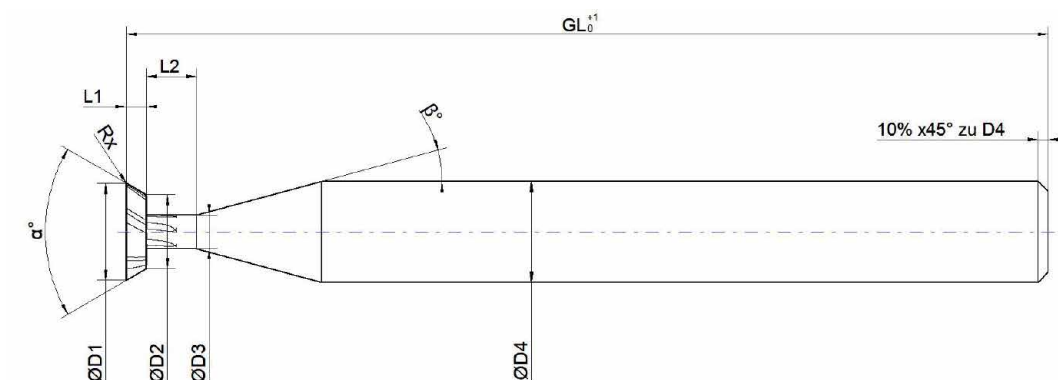
☐ Inquiry

☐ Order Order number: _____ Other: _____

Dimensions: D ₁ : _____ GL: _____ α: _____ D ₂ : _____ L ₁ : _____ β: _____ D ₃ : _____ L ₂ : _____ R _x : _____ Z: _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

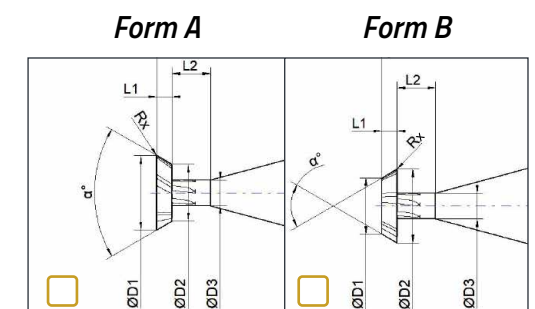
Conical



Corner alignment "sharp" = 0.004 mm - 0.01 mm rounded
(cutting edge protection)

☐ Inquiry

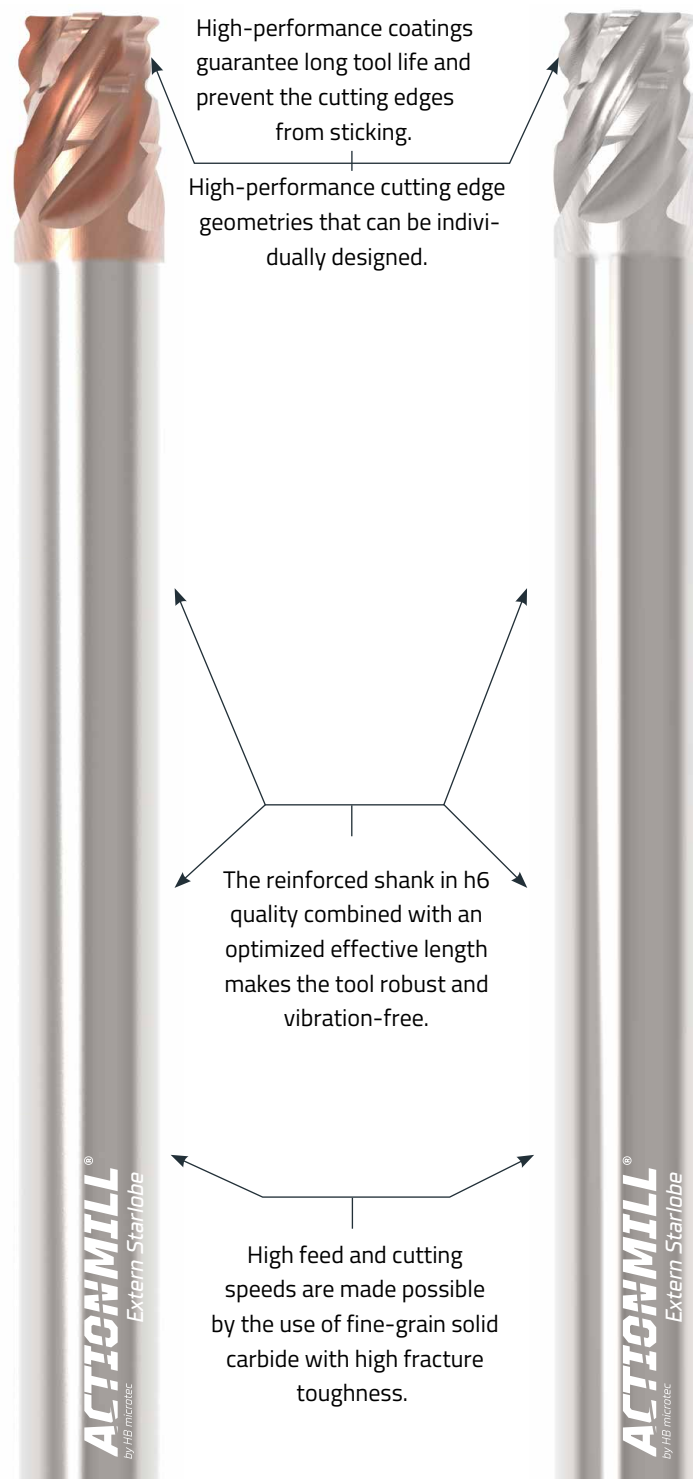
☐ Order Order number: _____ Other: _____



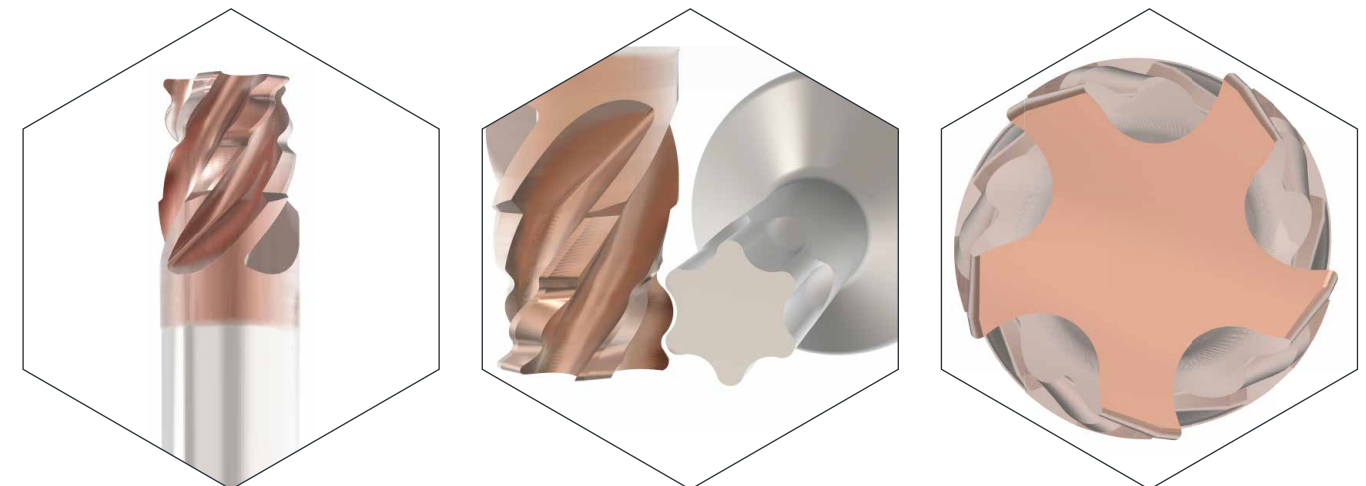
Dimensions: D ₁ : _____ GL: _____ α: _____ D ₂ : _____ L ₁ : _____ β: _____ D ₃ : _____ L ₂ : _____ R _x : _____ D ₄ : _____ Z: _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Extern Starlobe



Torx® T4
to T30



Semi-standardized external Torx® mills

Product features

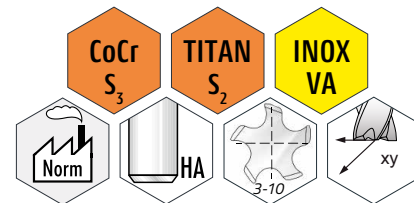
For Torx® types 4 to 30

- Torx® shapes according to ISO 10664 or customized
- 3-10 flutes depending on diameter
- Straight or helical flutes selectable
- Unequal or equal flute spacing
- Technical advice and implementation according to your requirements

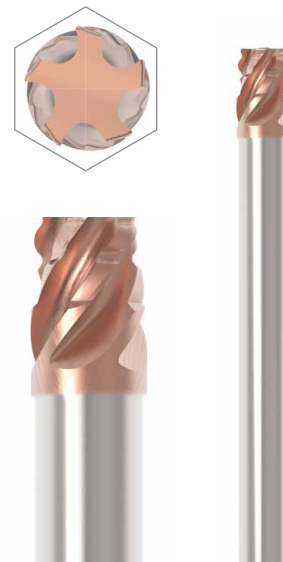
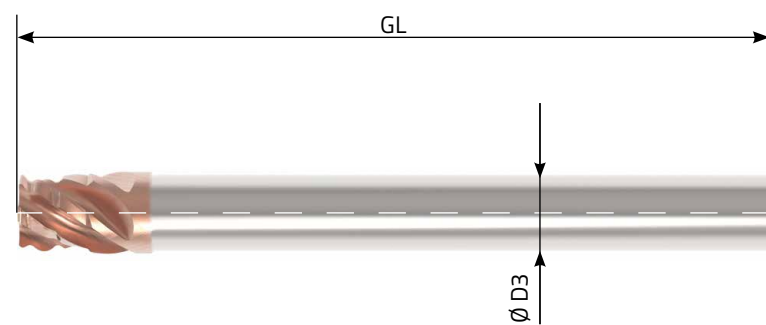
Short delivery times

- 2 weeks blank
- 3 – 4 weeks coated
- Always select the right high-performance coating:
 - .00 = blank for plastics and non-ferrous metals
 - .01 = α -INOX for stainless steels ferritic, martensitic, austenitic & heat-resistant steels, titanium alloys, CrCo (M&S)
 - .02 = β -Titan for non-ferrous metals and titanium (N & S1)
 - .03 = γ -Steel for steels up to RM < 1200N/mm² & cast iron (P & K)

Torx® T4 - T30



ACTIONMILL Torx® type $\emptyset$ -DA Amount of flutes Blank or coated
AM.EX.T4.XXX.YYY.AAA.BBB.Z.BE.ZF.ZT ← Flute pitch
Extern Starlobe Rx Ry $\emptyset$ -DB Flute form



5 PRO's of the ACTIONMILL:

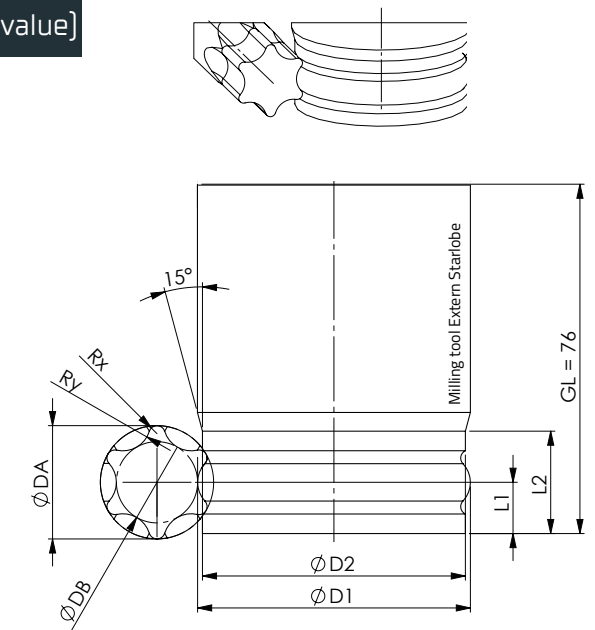
- Quickly available, semi-standardized external Torx® mill
- For milling Torx® types T4 to T30 according to ISO10664 or customized
- High profile accuracy & minimal burr formation
- Shorter process times and high process reliability
- Chrome-free coating prevents cross-contamination with medical parts

Example: Torx® mill; type 4, 6 cutting edges; straight with equal flute spacing and α -INOX coated

Article number XXX.YYY.AAA.BBB	"Torx®" type	D1 (mm)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	GL (mm)
AM.EX.T4.XXX.YYY.AAA.BBB.Z.BE.ZF.ZT	T4	$\emptyset$ 5.5 - 6.0	$\emptyset$ 5.0 - 5.4	$\emptyset$ 6 h6	1.0 - 1.5	3.0 - 5.0	76
AM.EX.T4.009.031.130.092.6.01.ZG.G	T4	6	5.4	$\emptyset$ 6 h6	1.5	4.0	76

Torx®- Standard dimensions according to ISO 10664 [mean value]

Torx®	$\emptyset$ DA	$\emptyset$ DB	Rx	Ry
4	1.30	0.92	0.09	0.31
5	1.42	1.02	0.11	0.33
6	1.70	1.22	0.13	0.38
7	2.02	1.44	0.16	0.45
8	2.34	1.68	0.19	0.51
10	2.77	1.99	0.23	0.60
15	3.30	2.36	0.27	0.71
20	3.88	2.77	0.31	0.86
25	4.46	3.18	0.38	0.92
30	5.55	3.96	0.45	1.19



Article number

(AM.EX.Torx-type.XXX.YYY.AAA.BBB.Z.BE.ZF.ZT): _____

☐ Inquiry

☐ Order

Order number: _____

Other: _____

Dimensions (XXX,YYY,AAA,BBB):

D₁ _____ D₂ _____ R_x (xxx) _____
D_A (AAA) _____ L₁ _____ R_y (yyy) _____
D_B (BBB) _____ L₂ _____ Z _____

Material to be machined _____

Coating:

- ☐ (.00) blank
☐ (.01) α -INOX
☐ (.02) β -Titan
☐ (.03) γ -Steel

Flute form

- ☐ (.ZG) Straight
☐ (.ZD) Helical

Product features

	Material short code	Material number	Shank- $\emptyset$ [mm]	Overall length [mm]	Amount of flutes [n]
☐	Torx® T4-T7	R_HB.060.760.h6	6	76	Z3 - Z6
☐	Torx® T8-T20	R_HB.080.800.h6	8	80	Z5 - Z8
☐	Torx® T25-T30	R_HB.100.900.h6	10	90	Z7 - Z10

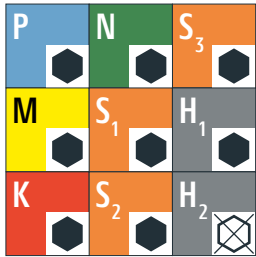
Minimum order quantity from 5 pieces:

* Without further information, the most suitable coating will be used.

$\emptyset$ DA AAA	$\emptyset$ DB BBB	Rx XXX	Ry YYY	No. of flutes (Z)	Coating (BE)				Flute form (ZF)		Flute spacing (ZT)	
				Z3 - Z6	blank .00	α -INOX .01	β -Titan .02	γ -Steel .03	.ZG	.ZD	.G	.U
1.30	0.92	0.09	0.31	6	.01 (α -INOX)				.ZG (Z-Straight)		.G (even)	

Minimum order quantity: 5 pieces

Delivery time: Blank 2 weeks; Coated 3-4 weeks



Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537

Recommended use Highly suitable Partially suitable Not recommended

T4-T7		T8-T10		T15-T20		T20-T30	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
50-80	0.008-0.018	50-100	0.008-0.022	60-120	0.010-0.025	60-140	0.010-0.03
20-50	0.006-0.013	30-70	0.006-0.020	30-80	0.008-0.022	30-80	0.008-0.025

INOX quarter-circle mill

from R 0.2 ± 0.01 mm
to R 3.0 ± 0.01 mm

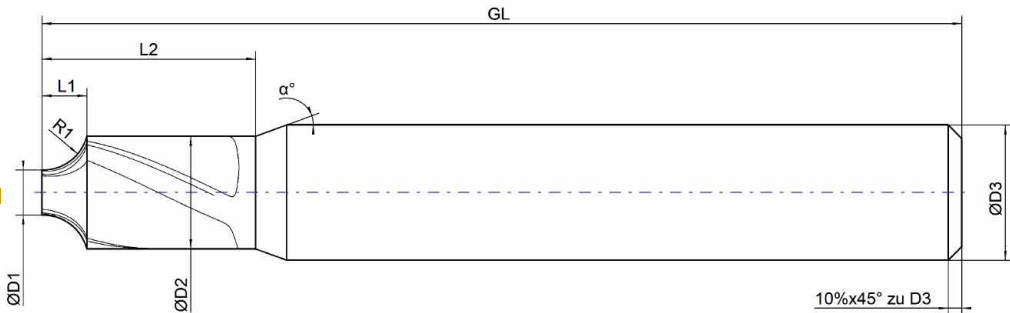
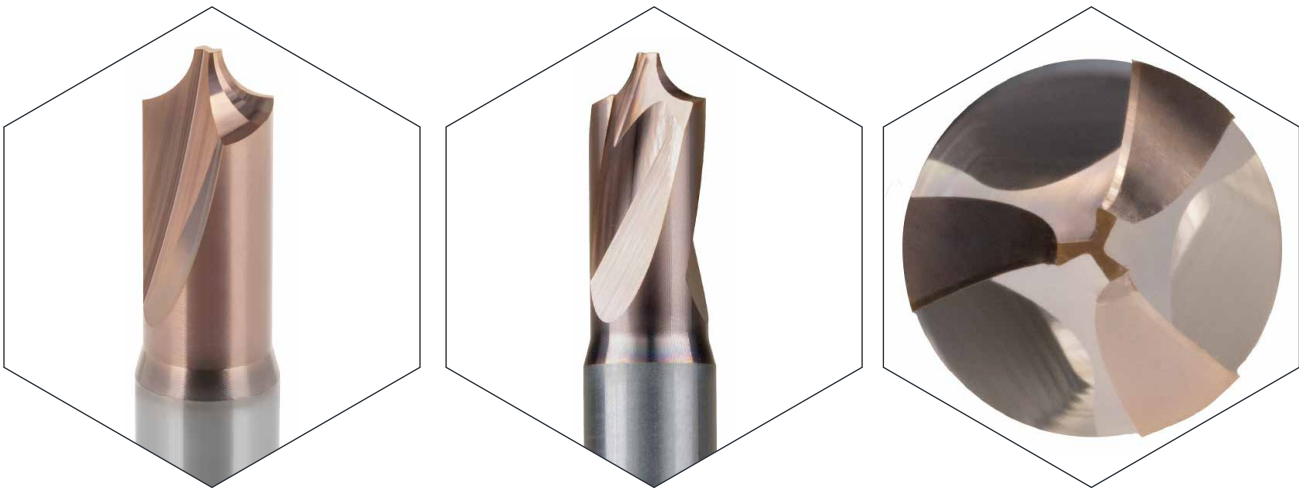
The high-performance α-INOX coating guarantees a long tool life and prevents the cutting edge from sticking.
▪ 2 flutes

Sharply ground, positive geometries to prevent secondary burrs.

The high-performance α-INOX coating guarantees a long tool life and prevents the cutting edge from sticking.
▪ 3 flutes

Reinforced h6 shank, combined with an optimized usable length. Robust and vibration-free.

Thermal shock resistant, fine-grain carbide with high fracture toughness.



☐ Inquiry

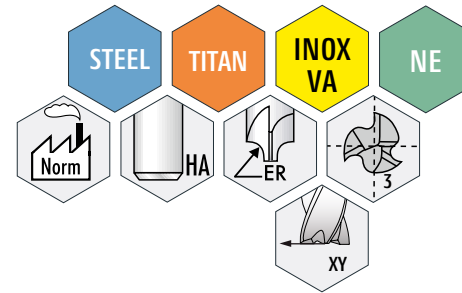
☐ Order

Order number: _____ Other: _____

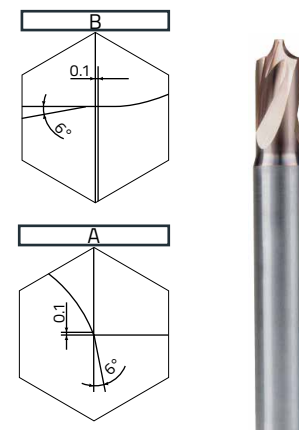
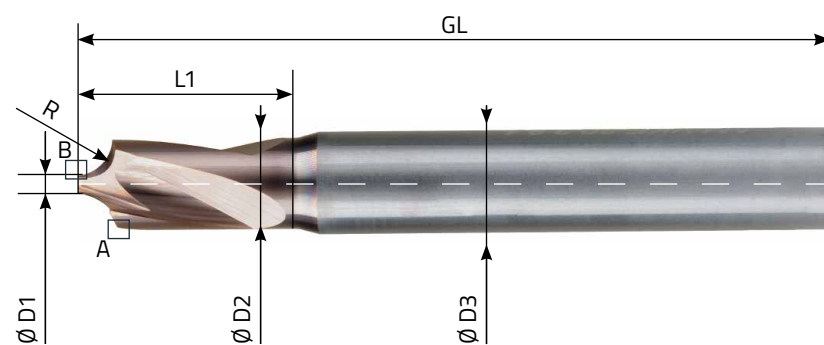
Dimensions: D ₁ : _____ GL: _____ Z: _____ D ₂ : _____ L ₁ : _____ α: _____ D ₃ : _____ L ₂ : _____ R ₁ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ No ☐ Yes Cutting direction: ☐ Right ☐ Left
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

INOX-Quarter-Chamfer Z3



ACTIONMILL Flutes D3: Ø3.00 mm
Quarter-Chamfer AM.VKE.02.3.3.1 R: 0.20 mm



5 PRO's of the ACTIONMILL:

- INOX quarter circle milling cutters from R 0.2 mm to R 3.0 mm
- Mill radii directly – no more line milling required
- Thanks to the 4°-6° taper at both ends
no secondary burrs are formed
- Universally usable in a wide variety of materials
- 3 flutes ensure excellent surface qualities

Article number	Coating	Flutes	D1 (mm)	R (mm)	D2 (mm)	D3 (mm)	L1 (mm)	GL (mm)
AM.VKE.02.3.3.1	α-INOX	3	Ø0.50	0.20	Ø1.00	Ø3.00	4.00	50.00
AM.VKE.03.3.3.1	α-INOX	3	Ø0.50	0.30	Ø1.25	Ø3.00	4.00	50.00
AM.VKE.04.3.3.1	α-INOX	3	Ø0.50	0.40	Ø1.40	Ø3.00	5.00	50.00
AM.VKE.05.3.3.1	α-INOX	3	Ø0.50	0.50	Ø1.60	Ø3.00	6.00	50.00
AM.VKE.10.3.3.1	α-INOX	3	Ø0.80	1.00	Ø2.80	Ø3.00	8.00	50.00
AM.VKE.15.3.6.1	α-INOX	3	Ø1.50	1.50	Ø4.40	Ø6.00	12.00	50.00
AM.VKE.20.3.6.1	α-INOX	3	Ø1.50	2.00	Ø5.30	Ø6.00	14.00	50.00
AM.VKE.25.3.8.1	α-INOX	3	Ø1.50	2.50	Ø6.20	Ø8.00	16.00	60.00
AM.VKE.30.3.8.1	α-INOX	3	Ø1.50	3.00	Ø7.10	Ø8.00	17.00	60.00

Available from stock

Overview:

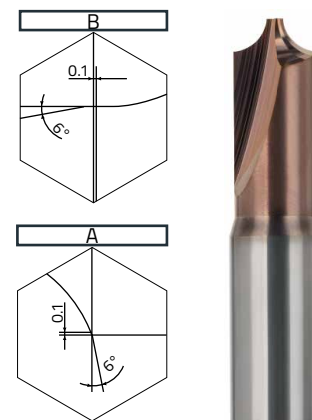
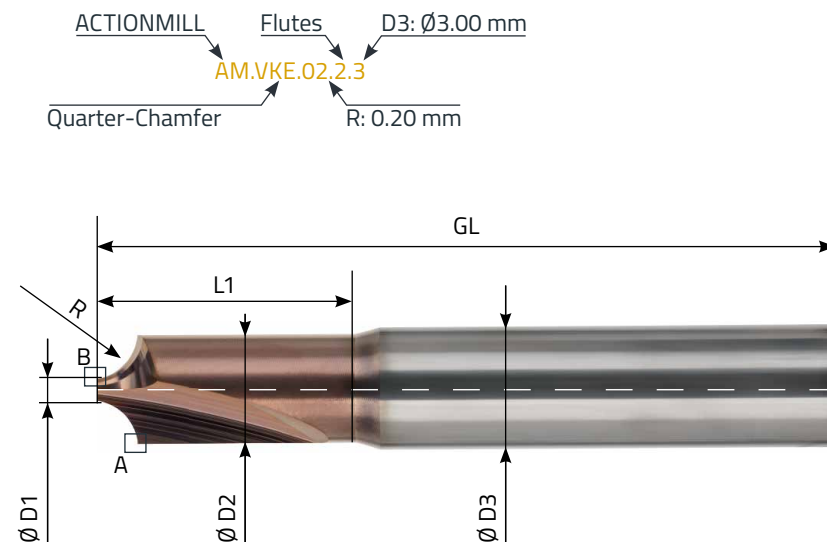
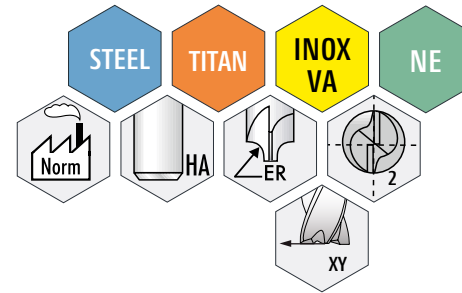
INOX quarter-circle mill Z3 with 4°-6° taper at both ends.

The α-INOX coating is very temperature-stable and adhesion-reducing, with a layer thickness of $1.5 \pm 0.5 \mu\text{m}$ and a microhardness of (HV) 3700 + 400, max. operating temperature 1100°C.

Ideal material application range when machining stainless steel alloys (INOX), CoCr alloys, titanium alloys (G5), steel alloys, cast iron, aluminum alloys and plastic alloys.



INOX-Quarter-Chamfer Z2



5 PRO's of the ACTIONMILL:

- INOX quarter circle milling cutters from R 0.2 mm to R 3.0 mm
- Mill radii directly – no more line milling required
- Thanks to the 4°-6° taper at both ends
no secondary burrs are formed
- Small inside diameters from Ø0.5 for precision engineering
- 2 flutes ensure sufficient chip space

Article number	Coating	Flutes	D1 (mm)	R (mm)	D2 (mm)	D3 (mm)	L1 (mm)	GL (mm)
AM.VKE.02.2.3	α-INOX	2	Ø0.50	0.20	Ø1.00	Ø3.00	4.00	50.00
AM.VKE.03.2.3	α-INOX	2	Ø0.50	0.30	Ø1.25	Ø3.00	4.00	50.00
AM.VKE.04.2.3	α-INOX	2	Ø0.50	0.40	Ø1.40	Ø3.00	5.00	50.00
AM.VKE.05.2.3	α-INOX	2	Ø0.50	0.50	Ø1.60	Ø3.00	6.00	50.00
AM.VKE.10.2.3	α-INOX	2	Ø0.80	1.00	Ø2.80	Ø3.00	8.00	50.00
AM.VKE.15.2.6	α-INOX	2	Ø1.50	1.50	Ø4.40	Ø6.00	12.00	50.00
AM.VKE.20.2.6	α-INOX	2	Ø1.50	2.00	Ø5.30	Ø6.00	14.00	50.00
AM.VKE.25.2.8	α-INOX	2	Ø1.50	2.50	Ø6.20	Ø8.00	16.00	60.00
AM.VKE.30.2.8	α-INOX	2	Ø1.50	3.00	Ø7.10	Ø8.00	17.00	60.00

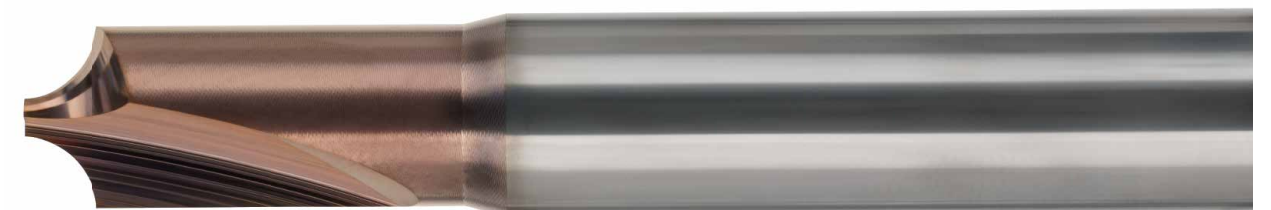
Available from stock

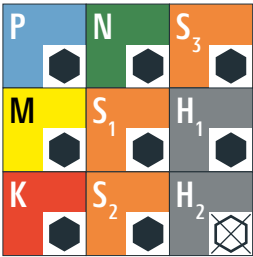
Overview:

INOX quarter-circle mill Z2 with 4°-6° taper at both ends.

The α-INOX coating is very temperature-stable and adhesion-reducing, with a layer thickness of $1.5 \pm 0.5 \mu\text{m}$ and a microhardness of (HV) $3700 + 400$, max. operating temperature 1100°C .

Ideal material application range when machining stainless steel alloys (INOX), CoCr alloys, titanium alloys (G5), steel alloys, cast iron, aluminum alloys and plastic alloys.



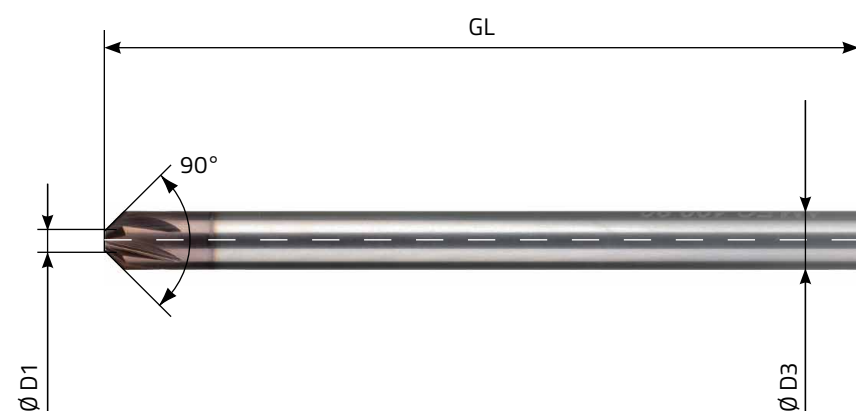
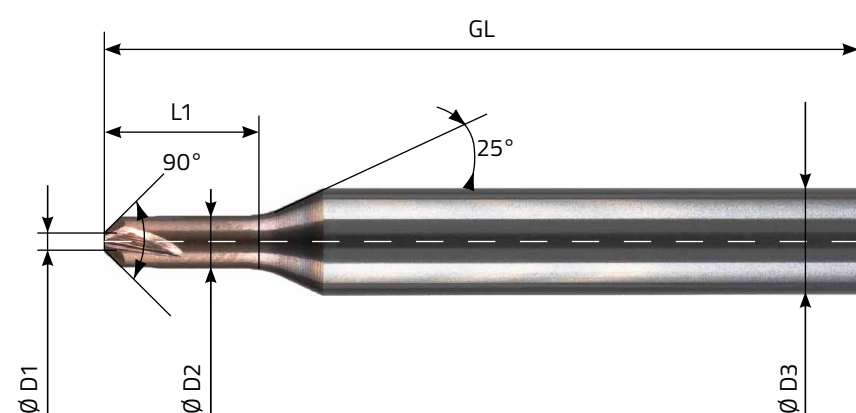
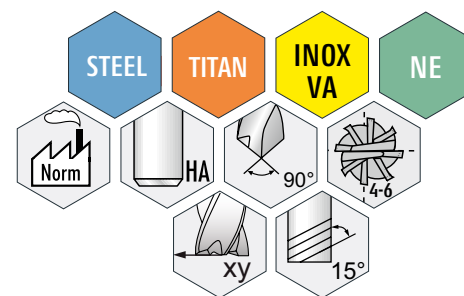


Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
H	Hardened steels ≥ 55 HRC		CrCoMo28	ASTM F1537
		1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

Ø0.2 - 1.0 mm		Ø1.0 - 2.0 mm		Ø2.0 - 3.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
100-140	0.02 - 0.035	100-140	0.03 - 0.045	100-140	0.05 - 0.065
100-140	0.02 - 0.03	100-140	0.03 - 0.04	100-140	0.05 - 0.055
80-110	0.02 - 0.03	80-110	0.035 - 0.045	80-110	0.045 - 0.055
70-100	0.015 - 0.025	70-100	0.035 - 0.045	70-100	0.045 - 0.055
80-140	0.02 - 0.04	80-140	0.04 - 0.055	80-140	0.05 - 0.065
80-160	0.02 - 0.04	80-160	0.035 - 0.06	80-160	0.055 - 0.06
80-140	0.02 - 0.045	80-140	0.035 - 0.06	80-140	0.055 - 0.06
80-120	0.02 - 0.045	80-120	0.035 - 0.06	80-120	0.055 - 0.06
50-80	0.02 - 0.03	50 - 80	0.03 - 0.04	50 - 80	0.03 - 0.05
50-80	0.02 - 0.03	50-80	0.03 - 0.04	50-80	0.03 - 0.05
50-80	0.02 - 0.03	50-80	0.03 - 0.04	50-80	0.03 - 0.05
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no data available					

INOX-Front-Chamfer



Shank version available in short and long;

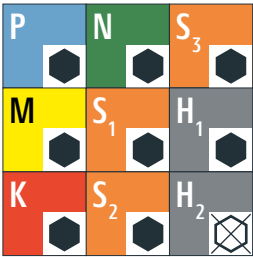
Article number	Coating	Flutes	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	GL (mm)
AM.FC.050.90	α-INOX	4	0.20	0.50	4.00	3.00	55.00
AM.FC.050.90.XL	α-INOX	4	0.20	0.50	4.00	6.00	70.00
AM.FC.100.90	α-INOX	4	0.30	1.00	4.00	3.00	55.00
AM.FC.100.90.XL	α-INOX	4	0.30	1.00	4.00	6.00	70.00
AM.FC.200.90	α-INOX	4	0.60	2.00	4.00	6.00	55.00
AM.FC.200.90.XL	α-INOX	4	0.60	2.00	4.00	9.00	80.00
AM.FC.300.90	α-INOX	5	1.00	3.00	4.00	9.00	55.00
AM.FC.300.90.XL	α-INOX	5	1.00	3.00	4.00	12.00	80.00
AM.FC.400.90	α-INOX	6	1.50	-	6.00	-	55.00
AM.FC.400.90.XL	α-INOX	6	1.50	-	6.00	-	80.00
AM.FC.600.90	α-INOX	6	2.00	-	6.00	-	57.00
AM.FC.600.90.XL	α-INOX	6	2.00	-	6.00	-	100.00
AM.FC.800.90	α-INOX	6	2.50	-	8.00	-	58.00
AM.FC.800.90.XL	α-INOX	6	2.50	-	8.00	-	101.00

Available from stock



5 PRO's of the ACTIONMILL:

- "Micro" front deburrer from Ø 0.5 mm to Ø 8.0 mm
- Deburring and chamfering of edges, grooves, holes and threads
- Reinforced model for long service life
- Universally usable in a wide variety of materials
- 4 to 6 flutes ensure excellent surface qualities

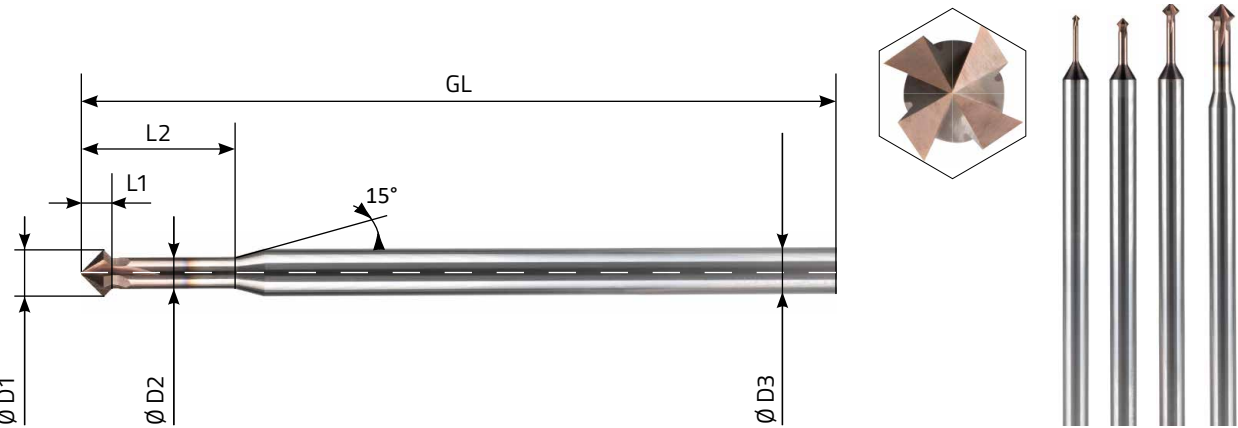
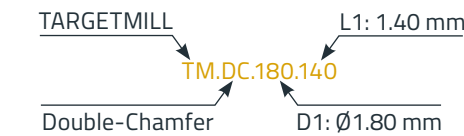
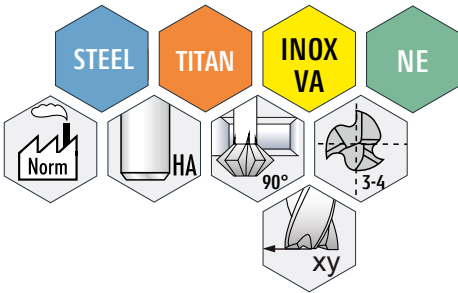


Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

Ø 0.5 - 2.0 mm		Ø 2.0 - 4.0 mm		Ø 4.0 - 8.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
100-140	0.02 - 0.035	100-140	0.02 - 0.045	100-140	0.05 - 0.065
100-140	0.02 - 0.03	100-140	0.02 - 0.04	100-140	0.05 - 0.055
80-110	0.01 - 0.03	80-110	0.015 - 0.045	80-110	0.045 - 0.055
70-100	0.01 - 0.025	70-100	0.015 - 0.045	70-100	0.045 - 0.055
80-140	0.01 - 0.04	80-140	0.02 - 0.055	80-140	0.05 - 0.065
80-160	0.02 - 0.04	80-160	0.035 - 0.06	80-160	0.055 - 0.06
80-140	0.02 - 0.045	80-140	0.035 - 0.06	80-140	0.055 - 0.06
80-120	0.02 - 0.045	80-120	0.035 - 0.06	80-120	0.055 - 0.06
50 - 80	0.008 - 0.015	50 - 80	0.015 - 0.04	50 - 80	0.03 - 0.05
50-80	0.008 - 0.015	50-80	0.015 - 0.04	50-80	0.03 - 0.05
50-80	0.008 - 0.015	50-80	0.015 - 0.04	50-80	0.03 - 0.05
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no data available					

Double-Chamfer



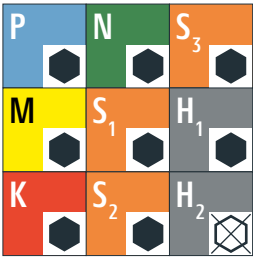
5 PRO's of the TARGETMILL:

- Forward & backward deburrer from Ø 1.8 mm to Ø 6 mm (D1)
- High flexibility in the variety of applications
- No secondary burrs form
- Universally usable in a wide variety of materials
- 3 to 4 flutes ensure excellent surface quality

Article number	Coating	Flutes	D1 (mm)	D2 h6 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	GL (mm)
TM.DC.180.140	α-INOX	3	Ø 1.80	Ø 1.00	Ø 6.00	1.30	10.00	100.00
TM.DC.200.140	α-INOX	3	Ø 2.00	Ø 1.20	Ø 6.00	1.40	10.00	100.00
TM.DC.280.200	α-INOX	4	Ø 2.80	Ø 1.80	Ø 6.00	1.90	10.00	100.00
TM.DC.300.200	α-INOX	4	Ø 3.00	Ø 2.00	Ø 6.00	2.00	10.00	100.00
TM.DC.380.300	α-INOX	4	Ø 3.80	Ø 1.80	Ø 6.00	2.90	14.00	100.00
TM.DC.400.300	α-INOX	4	Ø 4.00	Ø 2.00	Ø 6.00	3.00	13.00	100.00
TM.DC.580.400	α-INOX	4	Ø 5.80	Ø 3.80	Ø 6.00	3.90	20.00	100.00
TM.DC.600.400	α-INOX	4	Ø 6.00	Ø 4.00	Ø 6.00	4.00	19.00	100.00

Available from stock



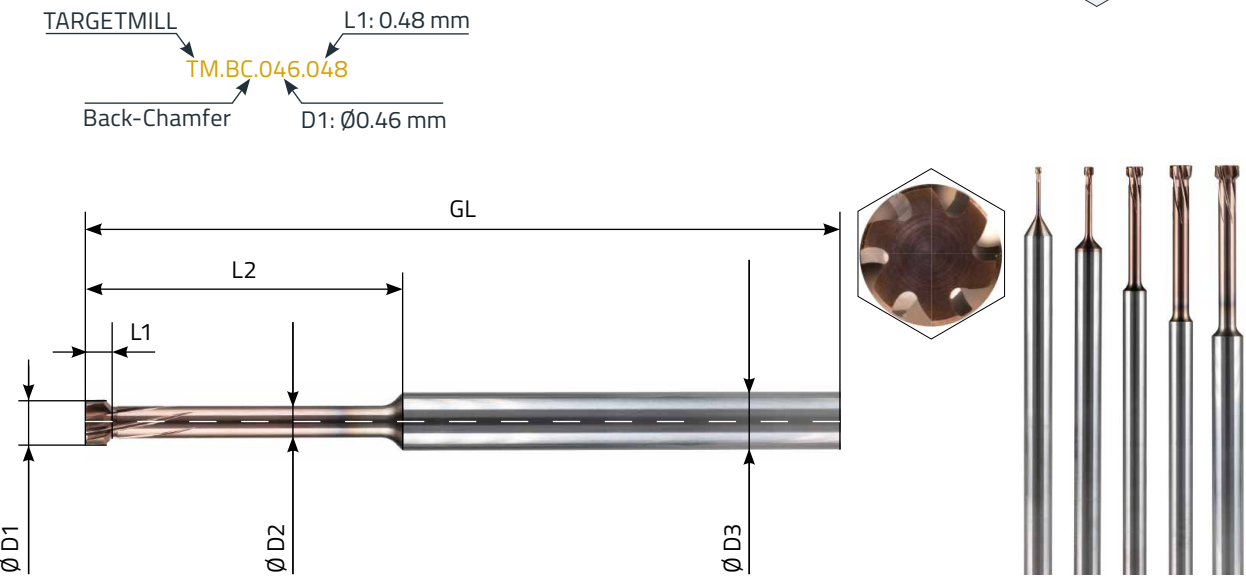
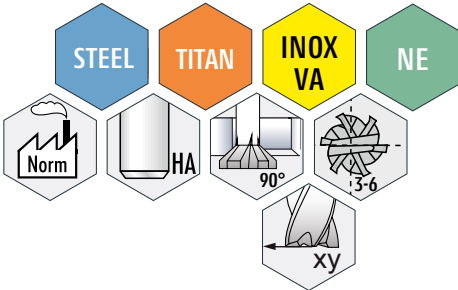


Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
			CrCoMo28	ASTM F1537
H	Hardened steels ≥ 55 HRC	1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

Ø 1.8 - 3.0 mm		Ø 3.0 - 4.0 mm		Ø 4.0 - 6.0 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
100-140	0.02 - 0.035	100-140	0.02 - 0.045	100-140	0.05 - 0.065
100-140	0.02 - 0.03	100-140	0.02 - 0.04	100-140	0.05 - 0.055
80-110	0.01 - 0.03	80-110	0.015 - 0.045	80-110	0.045 - 0.055
70-100	0.01 - 0.025	70-100	0.015 - 0.045	70-100	0.045 - 0.055
80-140	0.01 - 0.04	80-140	0.02 - 0.055	80-140	0.05 - 0.065
80-160	0.02 - 0.04	80-160	0.035 - 0.06	80-160	0.055 - 0.06
80-140	0.02 - 0.045	80-140	0.035 - 0.06	80-140	0.055 - 0.06
80-120	0.02 - 0.045	80-120	0.035 - 0.06	80-120	0.055 - 0.06
50 - 80	0.008 - 0.015	50 - 80	0.015 - 0.04	50 - 80	0.03 - 0.05
50-80	0.008 - 0.015	50-80	0.015 - 0.04	50-80	0.03 - 0.05
50-80	0.008 - 0.015	50-80	0.015 - 0.04	50-80	0.03 - 0.05
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no data available					

Back-Chamfer



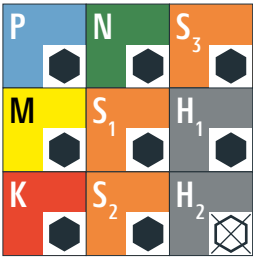
5 PRO's of the TARGETMILL:

- "Micro" deburrer from Ø 0.46 mm to Ø 4.7 mm
- Back deburrer for holes from Ø 0.5 mm
- No secondary burrs form
- Universally usable in a wide variety of materials
- 3 to 6 cutting edges ensure excellent surface quality

Article number	Coating	Flutes	D1 (mm)	D2 (mm)	D3 h6 (mm)	L1 (mm)	L2 (mm)	GL (mm)
TM.BC.046.048	α-INOX	3	Ø 0.46	Ø 0.30	Ø 3.00	0.48	3.00	50.00
TM.BC.090.100	α-INOX	4	Ø 0.90	Ø 0.60	Ø 4.00	1.00	6.00	60.00
TM.BC.140.133	α-INOX	4	Ø 1.40	Ø 0.95	Ø 4.00	1.33	9.00	60.00
TM.BC.290.190	α-INOX	5	Ø 2.90	Ø 2.10	Ø 4.00	1.90	18.00	70.00
TM.BC.370.250	α-INOX	5	Ø 3.70	Ø 2.70	Ø 4.00	2.50	24.00	70.00
TM.BC.470.270	α-INOX	6	Ø 4.70	Ø 3.30	Ø 6.00	2.70	30.00	80.00

Available from stock





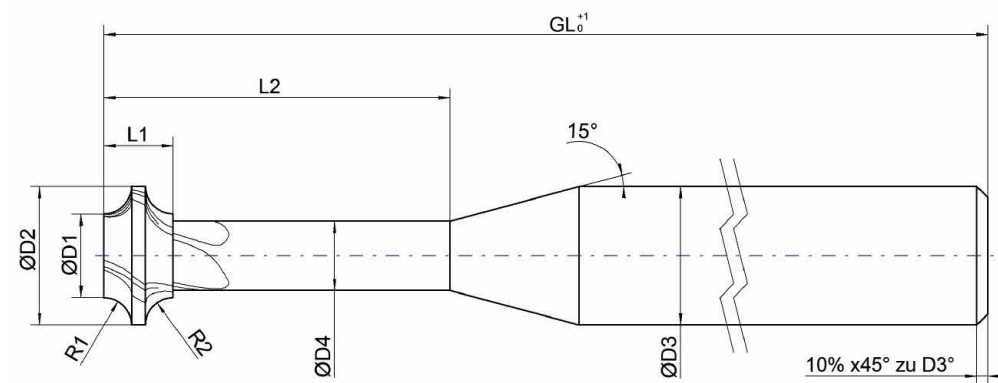
Material group	Material group	Mat. no.	DIN	AISI/ASTM/UNS
P	Steels up to RM < 1200N/mm ²	1.0044	S275JR	AISI 1020
		1.0715	11SMn30	AISI 1215
		1.7131	16MnCr5	AISI 5115
		1.3505	100Cr6	AISI 52100
		1.7225	42CrMo4	AISI 4140
M	Stainless steels: ferritic, martensitic, austenitic	1.4034	X46Cr13	AISI 420C
		1.4542	X5CrNiCuNb 16-4	AISI 630 / ASTM 17-4 PH
		1.4545	X5CrNiCuNb 15-5	ASTM 15-5 PH
		1.4301	X5CrNi 18-10	AISI 304
		1.4435	X2CrNiMo 18-14-3	AISI 316L
K	Cast iron	0.6020	GG20	ASTM 30
		0.6030	GG30	ASTM 40B
		0.7040	GGG40	ASTM 60-40-18
		0.7060	GGG60	ASTM 80-60-03
N	Non-ferrous metals	3.2315	AlMgSi1	ASTM 6351
		2.0065	Cu-ETP / CW004A	UNS C11000
		2.0321	CuZn37 CW508L	UNS C27400
		2.0401	CuZn39Pb3 / CW614N	UNS C38500
		2.0966	CuAl10Ni5Fe4	UNS C63000
S (S1, S2, S3)	Heat-resistant steels, titanium, CrCo	2.4617	NiMo28	Hastelloy B-2
		2.4665	NiCr22Fe18Mo	Hastelloy X
		3.7165	TiAl6V4	ASTM B348 / F136
		9.9367	TiAl6Nb7	ASTM F1295
		2.4964	CoCr20W15Ni	Haynes 25
H	Hardened steels ≥ 55 HRC		CrCoMo28	ASTM F1537
		1.2510	100MnCrMoW4	AISI O1
		1.2379	X153CrMoV12	AISI D2

Recommended use Highly suitable Partially suitable Not recommended

Ø 0.46 - 1.4 mm		Ø 1.4 - 3.7 mm		Ø 3.7 - 4.7 mm	
vc [m/min]	fz [mm]	vc [m/min]	fz [mm]	vc [m/min]	fz [mm]
100-140	0.02 - 0.035	100-140	0.02 - 0.045	100-140	0.025 - 0.065
100-140	0.02 - 0.03	100-140	0.02 - 0.04	100-140	0.025 - 0.055
80-110	0.01 - 0.03	80-110	0.015 - 0.045	80-110	0.025 - 0.055
70-100	0.01 - 0.025	70-100	0.015 - 0.045	70-100	0.025 - 0.055
80-140	0.01 - 0.04	80-140	0.02 - 0.055	80-140	0.03 - 0.065
80-160	0.02 - 0.04	80-160	0.035 - 0.06	80-160	0.025 - 0.06
80-140	0.02 - 0.045	80-140	0.035 - 0.06	80-140	0.025 - 0.06
80-120	0.02 - 0.045	80-120	0.035 - 0.06	80-120	0.025 - 0.06
50 - 80	0.008 - 0.015	50 - 80	0.015 - 0.04	50 - 80	0.02 - 0.05
50-80	0.008 - 0.015	50-80	0.015 - 0.04	50-80	0.02 - 0.05
50-80	0.008 - 0.015	50-80	0.015 - 0.04	50-80	0.02 - 0.05
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no data available					

Forward and reverse radius mill

Custom-ground special mills suited to your application



☐ Inquiry

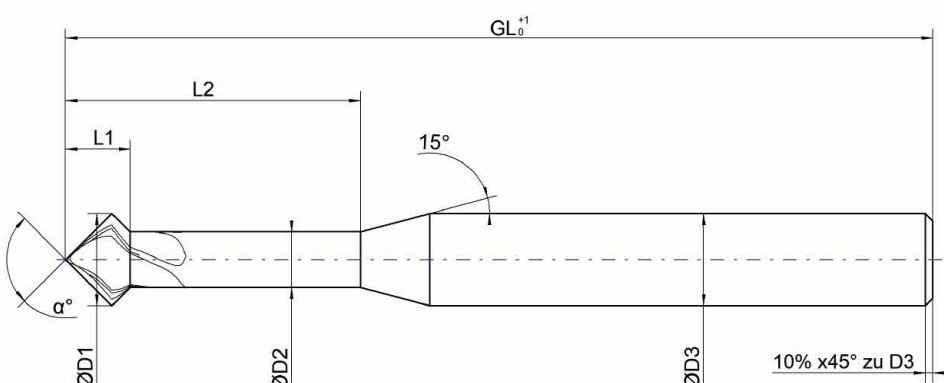
☐ Order Order number: _____ Other: _____

Dimensions: D ₁ : _____ GL: _____ R ₁ : _____ D ₂ : _____ L ₁ : _____ R ₂ : _____ D ₃ : _____ L ₂ : _____ Z: _____ D ₄ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Forward and backward deburrer

Custom-ground special mills suited to your application



☐ Inquiry

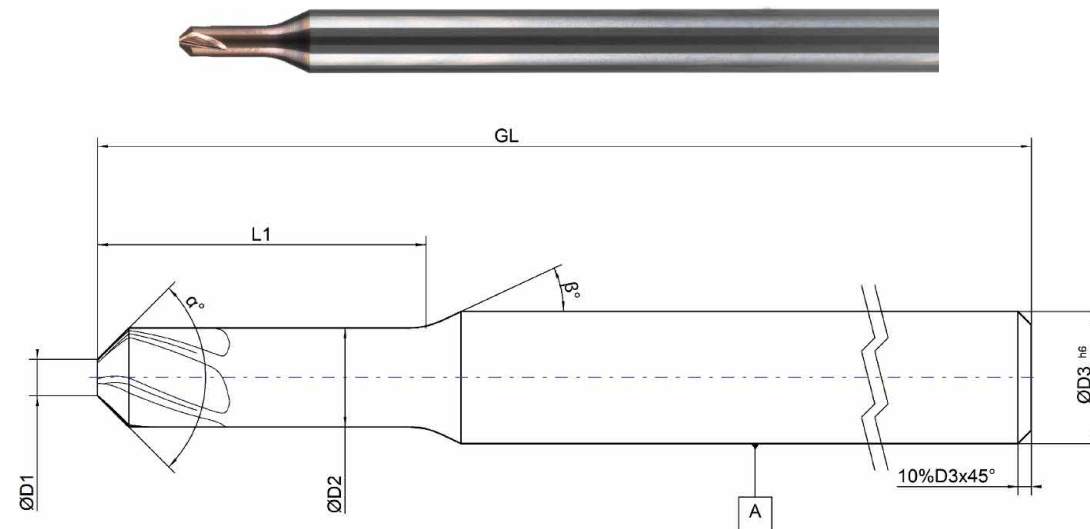
☐ Order Order number: _____ Other: _____

Dimensions: D ₁ : _____ GL: _____ α: _____ D ₂ : _____ L ₁ : _____ β: _____ D ₃ : _____ L ₂ : _____ Z: _____ L ₃ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Front-Chamfer

High-feed deburring or chamfering tools



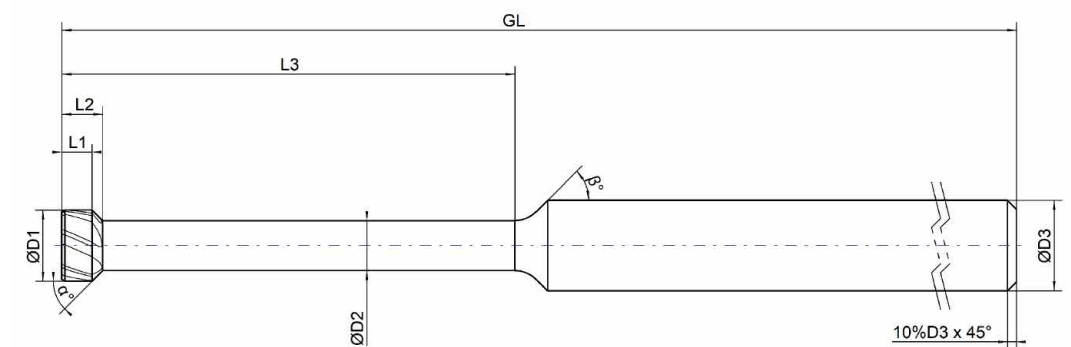
☐ Inquiry

☐ Order Order number: _____ Other: _____

Dimensions: D ₁ : _____ GL: _____ α: _____ D ₂ : _____ L ₁ : _____ β: _____ D ₃ : _____ Z: _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Back-Chamfer



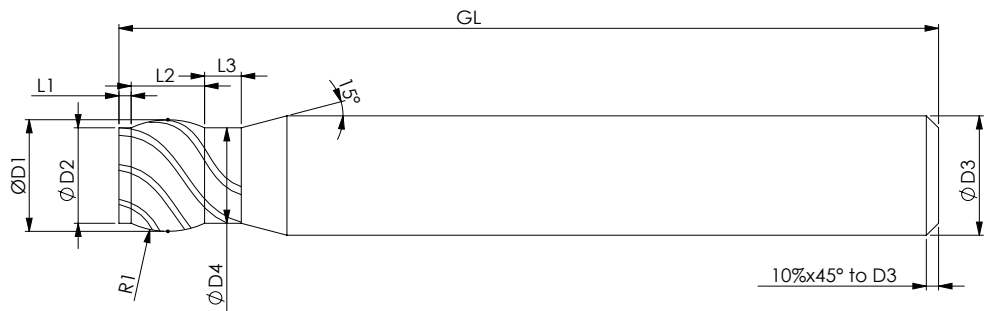
☐ Inquiry

☐ Order Order number: _____ Other: _____

Dimensions: D ₁ : _____ GL: _____ α: _____ D ₂ : _____ L ₁ : _____ β: _____ D ₃ : _____ L ₂ : _____ Z: _____ L ₃ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Convex semicircular mill



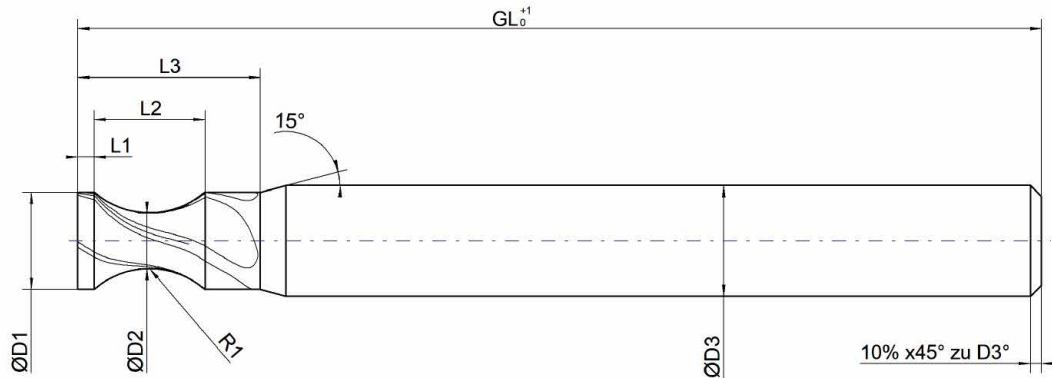
☐ Inquiry

☐ Order Order number: _____ Other: _____

Dimensions: D ₁ : _____ GL: _____ R ₁ : _____ D ₂ : _____ L ₁ : _____ Z: _____ D ₃ : _____ L ₂ : _____ L ₃ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No
		Cutting direction: ☐ Left ☐ Right
	Material to be machined: _____	Shank shape: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Concave semicircular mill

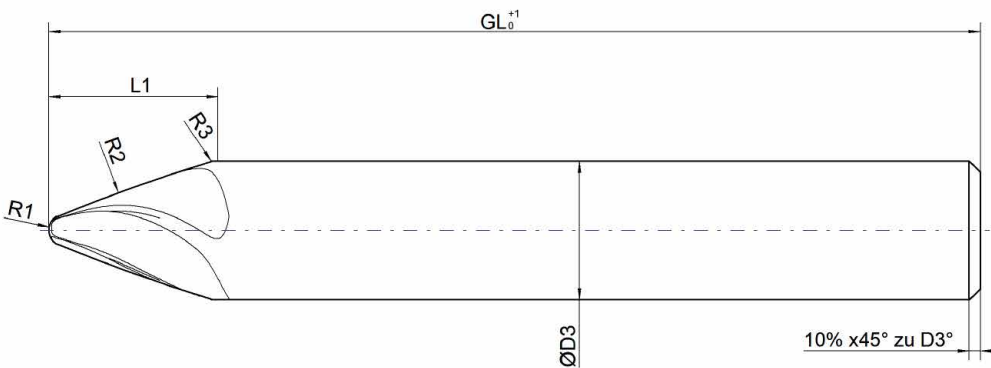


☐ Inquiry

☐ Order Order number: _____ Other: _____

Dimensions: D ₁ : _____ GL: _____ R ₁ : _____ D ₂ : _____ L ₁ : _____ Z: _____ D ₃ : _____ L ₂ : _____ L ₃ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No
		Cutting direction: ☐ Left ☐ Right
	Material to be machined: _____	Shank shape: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

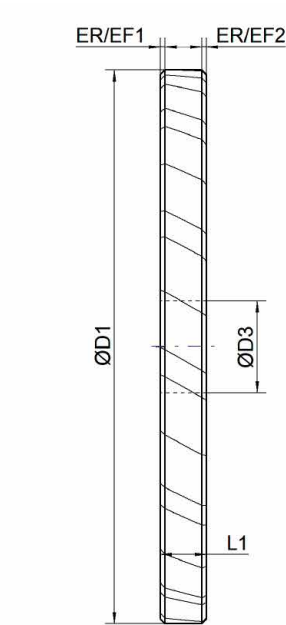


☐ Inquiry

☐ Order Order number: _____ Other: _____

Dimensions: R ₁ : _____ GL: _____ Z: _____ R ₂ : _____ L ₁ : _____ R ₃ : _____ D ₃ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.



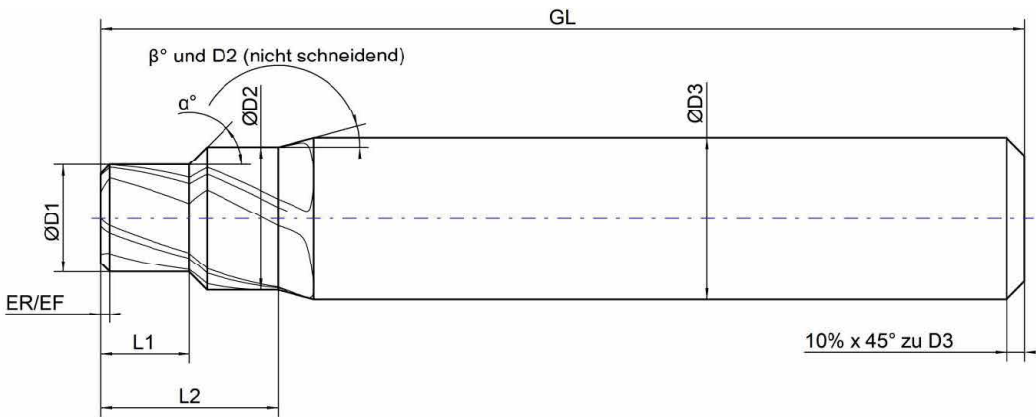
☐ Inquiry

☐ Order Order number: _____ Other: _____

Dimensions: D ₁ : _____ L: _____ Z: _____ D ₃ : _____ ER/EF ₁ : _____ ER/EF ₂ : _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

* Without further information, the most suitable coating will be used.

Shaping mill combination tool: milling + chamfering



☐ Inquiry

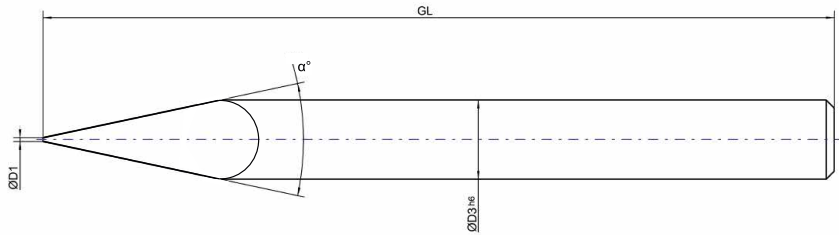
☐ Order

Order number: _____

Other: _____

Dimensions: D ₁ : _____ GL: _____ α: _____ D ₂ : _____ L ₁ : _____ β: _____ D ₃ : _____ L ₂ : _____ Z: _____ ER/EF: _____	Coating: ☐ Coated*: _____ ☐ Uncoated	Cooling channels: ☐ Yes ☐ No
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☐ Inquiry

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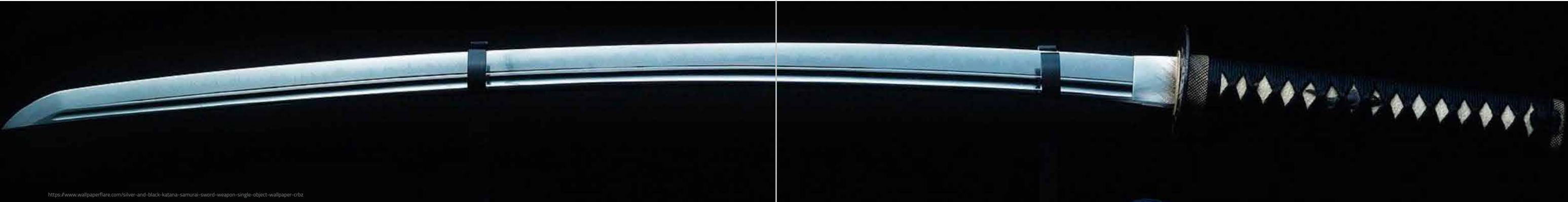
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		Cutting direction: ☐ Left ☐ Right
Material to be machined: _____	Shank shape: _____	Quantity: _____
Date, signature & company stamp: _____		Contact person: _____

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Your used precision tool is in the best hands with us.



High-quality tools such as mills, countersinks, centering drills and reamers only perform their service perfectly if the cutting edges are always optimally sharpened. Where re-sharpening is possible, the price drops significantly the second and third time the cutting tools are used. No new raw material is required, only the cutting edges are resharpened and refined. With the regrinding service from HB microtec, we ensure that the economic efficiency is realized through the reconditioning of worn tool cutting edges to a high quality.

HB microtec expertise at a glance:

- Tool reconditioning to perfection
- Competent customer care and advice
- Everything from a single source: grinding, edge treatment and coating
- Original regrinding with the original geometry and coating of our own products
- Highest quality: 99% of the original HB microtec or partner tool
- Inspection report service for special tools
- Check for regrindability
- Short delivery time
- Best price guarantee - transparent pricing
- Pick-up and delivery service

Advantages that will convince you!

We carry out precise regrinding on state-of-the-art CNC grinding machines. We increase the service life of our tools by using a specially developed cutting edge preparation process. All our standardized and special tools are reconditioned using the same machines, the same processes and the same coatings. We can offer this service for all our own and related (e.g. our partner manufacturers) cutting tools.

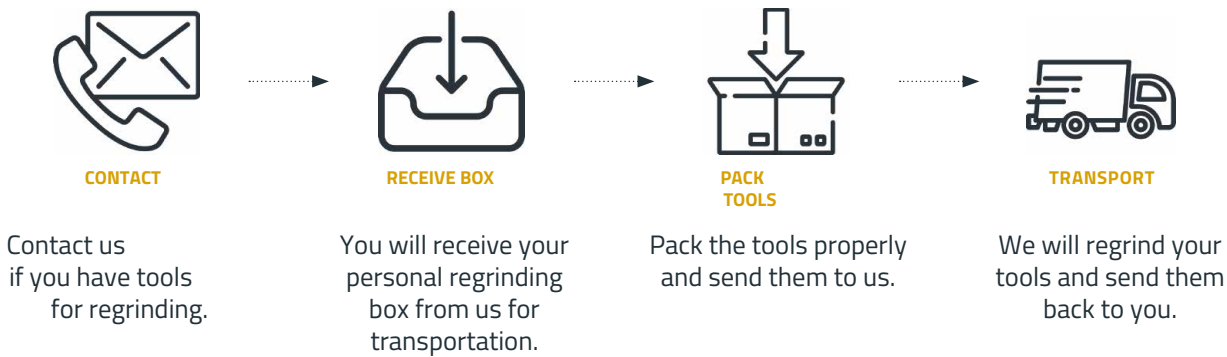
Our customers receive a transport-safe plastic box for shipping the tools to be reground, in which you can collect your worn tools. Then simply send us your tools for resharpening, or we will collect them from you by arrangement.

Would you like to learn more about our regrinding service for your tools?

Our experts will be happy to advise you.
Call +49 7461 1657280 or
Write to us at kontakt@hb-microtec.de



NEW SHARPNESS IN JUST 4 STEPS



ACTIONMILL regrinding
99% like new!



Problem solution milling

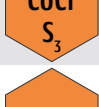
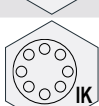
Problem	Cause	Possible solutions
Vibration at the mill	Cutting speed too low Feed rate too low Tool clamping not stable Tool too long Tool too unstable Groove length too long	Increase cutting speed Increase feed rate Check clamping devices and replace if necessary If possible, choose a shorter version Use a stronger shank If possible, choose a shorter version
	Clamping not stable enough	Check tool clamping, optimize if necessary
Cutting edge breakage	Tool wear Incorrect cutting data Vibration Conventional milling Tool stability Workpiece stability	Replace or resharpen tool in good time Adjust cutting data to the machining process. Reduce speed Use climb milling If possible, choose a shorter version Check clamping devices and optimize if necessary
	Tool stability Workpiece stability Vibration Feed rate too high Conventional milling Cutting material too brittle Incorrect tool	If possible, choose a shorter version Check clamping devices and optimize if necessary Reduce speed Reduce feed rate Use climb milling Use a tool made of higher-quality cutting material. Select the tool according to the machining operation.
Milled groove too small	Tool wear too high	Replace or resharpen tool in good time
Milled groove too large	Tool concentricity error	Minimize concentricity errors
Tool breakage	Cutting cross-section too large Feed rate too high Tool length too long	Reduce or adjust feed per tooth Reduce feed rate If possible, choose a shorter version
	Excessive friction Incorrect tool selection Incorrect rake angle Incorrect tool relief angle	Use coated tool Adapt tools to the machining process Select tools with the correct rake angle Grind or resharpen tools correctly
Too short service life	Excessive friction Incorrect tool selection Incorrect rake angle Incorrect tool relief angle	Use coated tool Adapt tools to the machining process Select tools with the correct rake angle Grind or resharpen tools correctly
	Excessive friction Incorrect tool selection Incorrect rake angle Incorrect tool relief angle	Use coated tool Adapt tools to the machining process Select tools with the correct rake angle Grind or resharpen tools correctly
Bad surface quality	Incorrect tool selection Coolant supply incorrect Feed rate too high Rotational speed too low Formation of a built-up edge Chip removal not optimal Chip size too large Tool wear	Adapt tools to the machining process Ensure correct coolant supply. Reduce feed rate Increase speed Use a tool with a higher helix angle. Optimize coolant supply. Reduce cutting cross-section. Replace or regrind tool in good time
	Incorrect tool selection Coolant supply incorrect Feed rate too high Rotational speed too low Formation of a built-up edge Chip removal not optimal Chip size too large Tool wear	Adapt tools to the machining process Ensure correct coolant supply. Reduce feed rate Increase speed Use a tool with a higher helix angle. Optimize coolant supply. Reduce cutting cross-section. Replace or regrind tool in good time
Chatter marks on the surface	Tool concentricity error Tool not stable Tool clamping unstable	Reduce concentricity error Use a tool with a larger shank Check the tightening device and replace if necessary
	Tool concentricity error Tool not stable Tool clamping unstable	Reduce concentricity error Use a tool with a larger shank Check the tightening device and replace if necessary
Extreme flank wear	Machining temperature too high Incorrect choice of cutting material	Reduce cutting speed Select a tool made of a suitable cutting material
	Machining temperature too high Incorrect choice of cutting material	Reduce cutting speed Select a tool made of a suitable cutting material
Excessive tool wear	Incorrect cutting data Incorrect helix angle Conventional milling Incorrect tool	Adjust cutting data to machining Select tool with correct helix angle Use the tool in climb milling Adapt tools to the machining process
	Incorrect cutting data Incorrect helix angle Conventional milling Incorrect tool	Adjust cutting data to machining Select tool with correct helix angle Use the tool in climb milling Adapt tools to the machining process
Longitudinal marking on the surface	Cutting pressure too high Cutting temperature too high	Reduce feed rate Reduce cutting speed
	Cutting pressure too high Cutting temperature too high	Reduce feed rate Reduce cutting speed

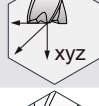
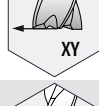
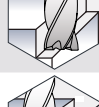
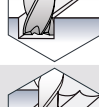
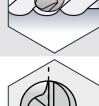
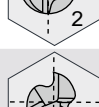
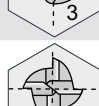
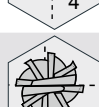
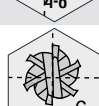
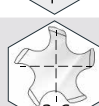
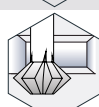
Problem solution Thread cutting & sawing

Problem	Cause	Possible solutions
Thread too large	Incorrect tap Incorrect tolerance Tap does not run centrally	Match the tap to the correct material group Check the tolerance of the tap and replace the tool if necessary Check the tool holder and position the center of the tap over the hole Reduce cutting speed Ensure good coolant supply Ensure correct core hole drilling (see core hole drill table) Use the correct tool geometry Reduce feed by 5-10% or check the contact pressure of the tapping device
	Cutting speed too high Insufficient cooling lubricant Core hole too small Chip jam Wrong axial feed selected	Reduce cutting speed Ensure good coolant supply Ensure correct core hole drilling (see core hole drill table) Use the correct tool geometry Reduce feed by 5-10% or check the contact pressure of the tapping device
Thread is too tight	Incorrect tap Incorrect tolerance Core hole too small Thread too tight	Match the tap to the correct material group Check the tolerance of the tap and replace the tool if necessary Ensure correct core hole drilling (see core hole drill table) Ensure correct tool geometry
	Incorrect tap Insufficient cooling lubricant supply Incorrect cooling lubricant composition Cutting speed too high	Match the tap to the correct material group and select the correct geometry Ensure a good supply of cooling lubricant Ensure correct cooling lubricant composition Reduce cutting speed
Excessive wear	Incorrect tap Insufficient cooling lubricant supply Incorrect cooling lubricant composition Cutting speed too high	Match the tap to the correct material group and select the correct geometry Ensure a good supply of cooling lubricant Ensure correct cooling lubricant composition Reduce cutting speed
	Incorrect tap Insufficient cooling lubricant supply Incorrect cooling lubricant composition Cutting speed too high	Match the tap to the correct material group and select the correct geometry Ensure a good supply of cooling lubricant Ensure correct cooling lubricant composition Reduce cutting speed
Chipping on the tool	Incorrect tap Work hardening Core hole too narrow Insufficient cooling lubricant supply Incorrect cooling lubricant composition	Match the tap to the correct material group and select the correct geometry Reduce speed, select a coated tool Ensure correct core hole drilling (see core hole drill table) Ensure a good supply of cooling lubricant Ensure correct cooling lubricant composition
	Incorrect tap Work hardening Core hole too narrow Insufficient cooling lubricant supply Incorrect cooling lubricant composition	Match the tap to the correct material group and select the correct geometry Reduce speed, select a coated tool Ensure correct core hole drilling (see core hole drill table) Ensure a good supply of cooling lubricant Ensure correct cooling lubricant composition
Unclean thread surface	Chip jam Cold welding on tap flanks Unsuitable tool geometry Cutting speed too high Insufficient cooling lubricant supply Incorrect cooling lubricant composition	Ensure correct tool geometry Remove cold welds or use new tools Ensure correct choice of tap Reduce cutting speeds Ensure good coolant supply Ensure correct coolant composition
	Chip jam Cold welding on tap flanks Unsuitable tool geometry Cutting speed too high Insufficient cooling lubricant supply Incorrect cooling lubricant composition	Ensure correct tool geometry Remove cold welds or use new tools Ensure correct choice of tap Reduce cutting speeds Ensure good coolant supply Ensure correct coolant composition
Tap breakage	Chip accumulation or jamming Tool geometry unsuitable for the application Excessive wear of the tap Torque is too high Thread core hole too narrow	Select the tap according to the machining application. Ensure correct tool geometry Replace the tap in good time. Use a thread cutting device with overload clutch. Ensure correct core hole drilling (see core hole drill table)
	Chip accumulation or jamming Tool geometry unsuitable for the application Excessive wear of the tap Torque is too high Thread core hole too narrow	Select the tap according to the machining application. Ensure correct tool geometry Replace the tap in good time. Use a thread cutting device with overload clutch. Ensure correct core hole drilling (see core hole drill table)
Overheating of the tap	Insufficient cooling lubricant supply Incorrect cooling lubricant composition Thread tap worn	Ensure a good supply of cooling lubricant Ensure correct cooling lubricant composition Replace the tap in good time
	Insufficient cooling lubricant supply Incorrect cooling lubricant composition Thread tap worn	Ensure a good supply of cooling lubricant Ensure correct cooling lubricant composition Replace the tap in good time
Thread axially miscut	Left-hand thread taps receive too little cutting pressure Strongly right-hand spiral taps are used with too much initial cutting pressure	Keep the tap within the compression range of the tapping chuck. Stronger axial Pressing during the initial cut Only minimal pressure during the initial cut
	Left-hand thread taps receive too little cutting pressure Strongly right-hand spiral taps are used with too much initial cutting pressure	Keep the tap within the compression range of the tapping chuck. Stronger axial Pressing during the initial cut Only minimal pressure during the initial cut
Problem	Cause	Possible solutions
Excessive wear	Teeth clog up. Chip overload in the chip space Unclean cut Insufficient cooling lubricant supply Incorrect cooling lubricant composition	Select a coarser tooth pitch Select a finer tooth pitch and reduce the cutting pressure Ensure a good supply of cooling lubricant Ensure the correct cooling lubricant composition
	Teeth clog up. Chip overload in the chip space Unclean cut Insufficient cooling lubricant supply Incorrect cooling lubricant composition	Select a coarser tooth pitch Select a finer tooth pitch and reduce the cutting pressure Ensure a good supply of cooling lubricant Ensure the correct cooling lubricant composition
Teeth break out	Poor chip removal Workpiece clamping not stable Teeth catch in the material	Select a coarser tooth pitch Clamp the workpiece securely Select a finer tooth pitch
	Poor chip removal Workpiece clamping not stable Teeth catch in the material	Select a coarser tooth pitch Clamp the workpiece securely Select a finer tooth pitch
Circular saw blade breakage	Blunt circular saw blade Incorrect positioning when making the initial cut	Replace or resharpen circular saw blade in good time Circular saw blade must run before it touches the material
	Blunt circular saw blade Incorrect positioning when making the initial cut	Replace or resharpen circular saw blade in good time Circular saw blade must run before it touches the material
Sticking and jamming on the saw blade	Incorrect feed rate Insufficient cooling lubricant supply Incorrect cooling lubricant composition	Adjust feed rate to suit material and conditions Ensure a good supply of cooling lubricant Ensure the correct cooling lubricant composition
	Incorrect feed rate Insufficient cooling lubricant supply Incorrect cooling lubricant composition	Adjust feed rate to suit material and conditions Ensure a good supply of cooling lubricant Ensure the correct cooling lubricant composition

Description	Formula	Legend
Speed	$n = \frac{V_c * 1000}{D * \pi} \quad [1/\text{min}]$	D = Mill diameter
Cutting speed	$V_c = \frac{D * \pi * n}{1000} \quad [\text{m/min}]$	Dc = Cutting diameter
Feed per flute	$f_z = \frac{f}{z} = \frac{V_f}{z * n} \quad [\text{mm/U}]$	ae = Radial cutting width
Feed per revolution	$V_f = f_z * z * n \quad [\text{mm/U}]$	ap = Axial cutting depth
Feed rate	$f = f_z * n \quad [\text{mm/min}]$	fz = Feed per flute
Chip removal rate	$Q = \frac{a_p * a_e * V_f}{1000} \quad \left[\frac{\text{cm}^3}{\text{min}} \right]$	z = Number of flutes
Mean chip thickness (face & shoulder milling) wenn 1)	$h_m = f_z \sqrt{\frac{a_e}{D_c}} = \text{mm}$	n = Revolutions per min.
Drive power	$P_a = \frac{a_p * a_e * V_f * k_c}{60 * 10^6 * \eta_{mt}} = \text{KW}$	De = Effective cutting diameter
Mean chip thickness (wenn .1)	$h_m = \frac{\sin k_r * 180 * a_e * f_z}{\pi * D_c * \arcsin\left(\frac{a_e}{D_c}\right)} = \text{mm}$	Vc = Cutting speed
Machining time	$T_c = \frac{l}{V_f} = \text{min}$	Q = Metal removal rate
Conversions between systems	1 [mm]= .0394 [inch] 1 [m/min]= 3.28 [SFM]	I = Working length
		Vf = Feed rate
		hm = Mean chip thickness
		kr = Approach angle
		Pa = Power
		kc = Specific cutting force
		ηmt = Efficiency, torque
		Tc = Machining time
		1 [bar]= 14.5[psi]

Rm [N/mm²]	HV 10	HB	HRC	Rm [N/mm²]	HV 10	HB	HRC
240	75	71	-	920	287	273	28
255	80	76	-	940	293	278	29
270	85	81	-	970	302	287	30
285	90	86	-	995	310	295	31
305	95	90	-	1020	317	301	32
320	100	95	-	1050	327	311	33
335	105	100	-	1080	336	319	34
350	110	105	-	1110	345	328	35
370	115	109	-	1140	355	337	36
385	120	114	-	1170	364	346	37
400	125	119	-	1200	373	354	38
415	130	124	-	1230	382	363	39
430	135	128	-	1260	392	372	40
450	140	133	-	1300	403	383	41
465	145	138	-	1330	413	393	42
480	150	143	-	1360	423	402	43
495	155	147	-	1400	434	413	44
510	160	152	-	1440	446	424	45
530	165	157	-	1480	458	435	46
545	170	162	-	1530	473	449	47
560	175	166	-	1570	484	460	48
575	180	171	-	1620	497	472	49
595	185	176	-	1680	514	488	50
610	190	181	-	1730	527	501	51
625	195	185	-	1790	544	517	52
640	200	190	-	1845	560	532	53
660	205	195	-	1910	578	549	54
675	210	199	-	1980	596	567	55
690	215	204	-	2050	615	584	56
705	220	209	-	2140	639	607	57
720	225	214	-	-	655	622	58
740	230	219	-	-	675	-	59
755	235	223	-	-	698	-	60
770	240	228	-	-	720	-	61
785	245	233	-	-	745	-	62
800	250	238	22	-	773	-	63
820	255	242	23	-	800	-	64
835	260	247	24	-	829	-	65
860	268	255	25	-	864	-	66
870	272	258	26	-	900	-	67
900	280	266	27	-	940	-	68

Number	Icon	Description
1		Material: Steel
2		Material: Titanium
3		Material: INOX
4		Material: Cast iron
5		Material: Plastic
6		Non-ferrous metal
7		CrCo alloy
8		S1 Heat-resistant steels
9		High Speed Cutting
10		High Performance Cutting
11		Trochoidal Speed Cutting
12		Works standard HB microtec
13		Shank design HA
14		Integrated cooling With integrated cooling
15		Without integrated cooling

Number	Icon	Description
16		With integrated Y-cooling
17		Cutting edges
18		Cutting direction xy
19		Cutting direction xyz
20		Cutting direction xy
21		Lateral milling
22		Slot milling
23		Radius milling
24		2 cutting edges
25		3 cutting edges
26		4 cutting edges
27		4-6 cutting edges
28		6 cutting edges
29		3-6 cutting edges
30		Forward and backward machining

Number	Icon	Description
31		Back chamfering tool
32		Corner radius
33		Helix angle 15°
34		Helix angle 30° Spiral Angle 30°
35		Helix angle 33°
36		Helix angle 38°
37		Helix angle 42°
38		260° cutting edge circumference
39		305° cutting edge circumference
40		90° countersink
41		Corner chamfer
42		Variable helix 35° - 38°

We love challenges!

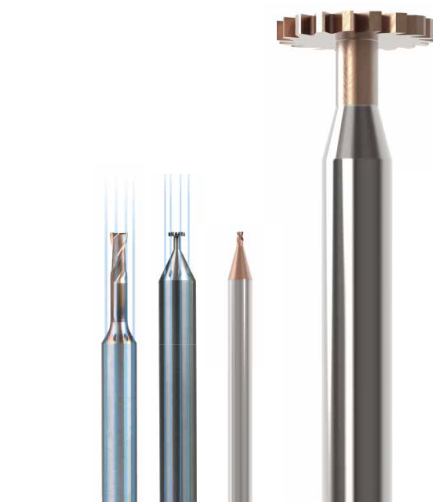
Put us to the test and send us your requirements today! At HB microtec, we love challenges – and the more special they are, the clearer it becomes that we can deliver the unique features you are looking for.

Call +49 7461 1657280 or write to us at kontakt@hb-microtec.de



ACTIONMILL®
by HB microtec

TARGETMILL®
by HB microtec



HB microtec®
ACTIONTOOLS & ENGINEERING

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