

**DATRON**

Smart Manufacturing Solutions



DATRON **CNC Milling Tools**

Every care has been taken that the information stated in this catalogue is correct at the time of publication. However, in the case of any information being incorrect no responsibility can be accepted by the company. At any time, information in this catalogue may be subject to technical alterations.

As of: May 2014

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# DATRON CNC Milling Tools

For more than 25 years DATRON has designed and supplied top-quality Solid Carbide tools. As a manufacturer of high-precision CNC milling, drilling, engraving machines, cutting technology has always been a key issue of our research. The technological design and quality of the CNC tools determine to a large extent the economic efficiency and quality of the CNC machining process.

This catalogue presents our latest product range.

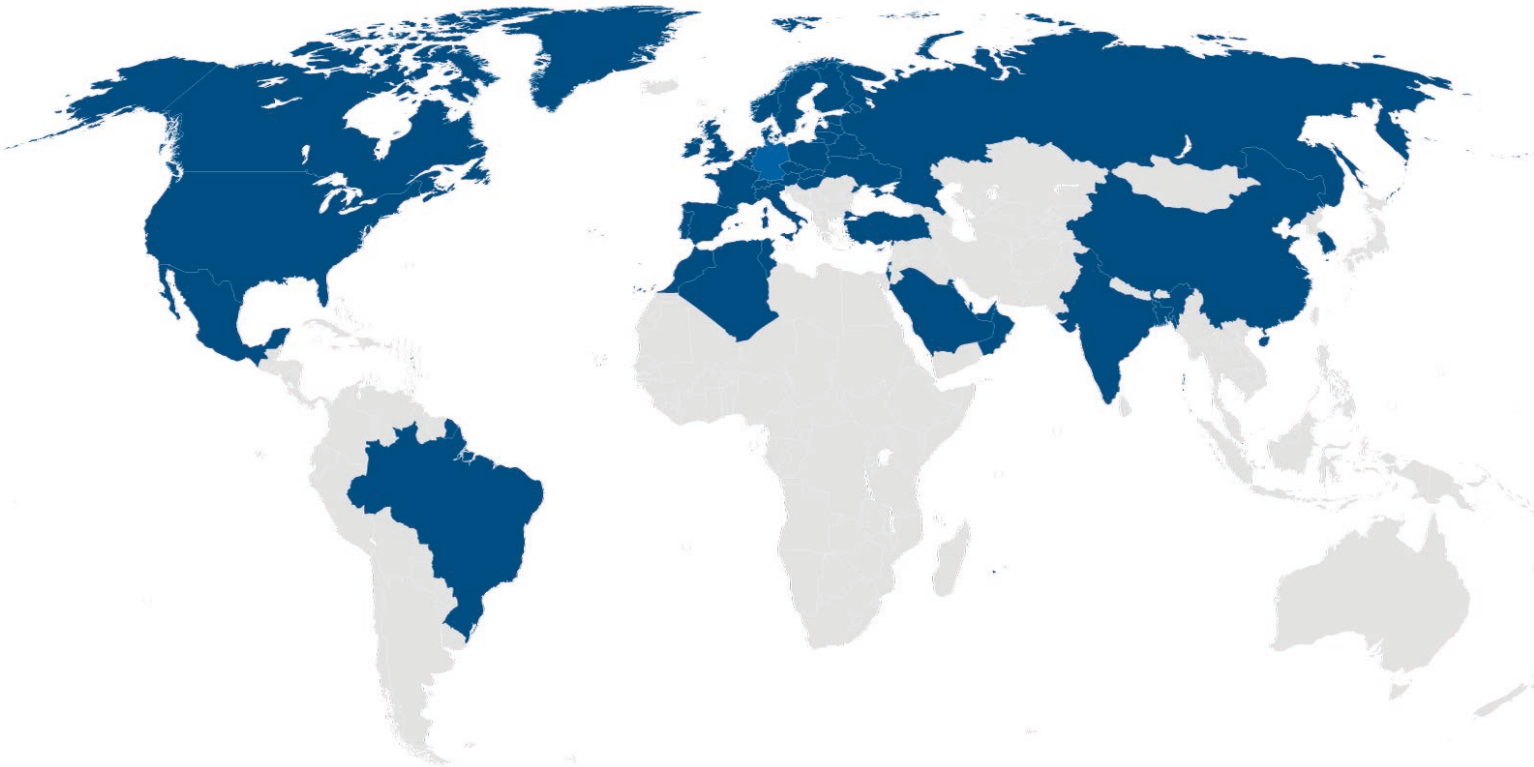
As a result of our own development and research as well as our customers' experience we are able to offer you tools optimised for high-speed machining applications.



DATRON AG

## DATRON has a worldwide presence!


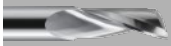














DATRON distributes CNC milling tools via 6 national and 20 international agencies worldwide. Thereby DATRON is in a position to grant fast delivery, partly within 24 hours.\*



\* Only selected standard tools







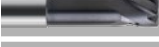











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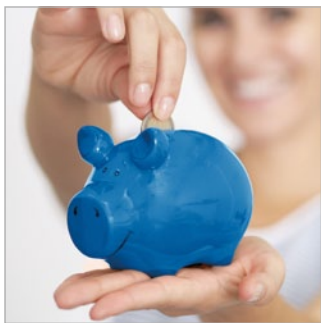




## Quality and Precision "Made in Germany"

The tools are manufactured on top-of-the-range, fully automatic grinding machines which results in constant high quality and an excellent price/efficiency ratio. Permanent quality control and research on our inhouse milling machines – also under extreme milling conditions – are your guarantee for the extraordinary quality and efficiency of the DATRON tools.

- Development
- Testing
- Production
- Drilling from 0.1 mm
- Milling from 0.1 mm
- Thread milling from M1



## Profitability:

Using DATRON's high-quality micrograin Solid Carbide tools will result in especially long tool life. The tool's efficiency is further increased by a new coating.

- Maximum milling ability
- Maximum tool life
- Maximum process reliability



## DATRON Technology:

The cutting geometry of the DATRON milling tools contains the DATRON know-how of more than 25 years in HSC cutting. Constant advancement and optimisation stand for state-of-the-art tools.

- Intelligent geometry
- Latest grinding machines
- Top-quality micro-grain Solid Carbide



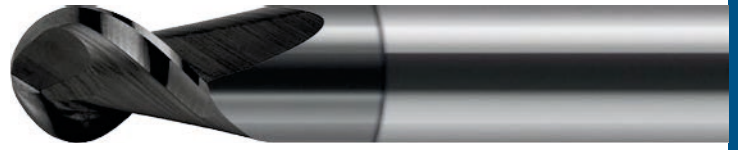
## Individual Tool Service:

DATRON special-purpose tools will solve your machining problem! On the basis of your drawings or specifications we will manufacture a Solid Carbide special-purpose tool in the high DATRON quality you can expect. Here we offer e. g. special mills for musical instruments, multi-level drills and special tools for forms and moulds.

## ALCRONA Coating

Low frictional value and hot hardness

Layer properties	
Material	AlCrN
Micro hardness	3200 HV
Frictional value	0,35 (dry against steel)
Max. application temperature	1100°C
Colour	light-gray



Excellent wear-resistance, thermal shock stability and hot hardness – those are the properties, which have been decisively modified, in order to further improve the proven ALCRONA layer. By optimising the process parameters and modifying the layer structure, the performance profile of the new layer is significantly increased. ALCRONA is the new top allrounder in chip removal.

## X.CEED Coating

Hardness and high coating adhesion

Layer properties	
Material	AlTiN
Micro hardness	3300 HV
Frictional value	0,4 (dry against steel)
Max. application temperature	900°C
Colour	blue-gray

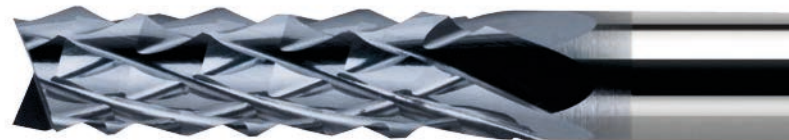


Hardness, oxidation-resistance and thermal stability of X.CEED have been optimised for use in hard and high-speed machining. Even for high-strength and hard-to-cut materials, the layer protects against abrasion and adhesion over the entire cutting speed range. The good sliding properties reduce the cutting forces.

## Diamond Coating

High hardness and chemical resistance












Layer properties	
Material	Diamond
Micro hardness	10.000 HV
Frictional value	0,40 (dry against steel)
Max. application temperature	700°C
Colour	dark-gray



The unique material properties of multilayer diamond coatings offer considerable performance potential, which can be used for machining graphite as well as carbide and ceramic green compacts. These highly abrasive materials can be machined very efficiently today, thanks to exactly constructed CVD diamond layers on carbide.

# DATRON Table of Abbreviations

## Legend

 <b>Machinable Materials</b>	 <b>Ball Nose</b>	 <b>Shank Form</b>
 <b>Number of Flutes</b>	 <b>Flute with Edge Radius</b>	 <b>Point Angle</b>
 <b>Hardness Grade</b>	 <b>Sharp-edged Flute</b>	 <b>Spiral Angle</b>
 <b>Solid Carbide</b>	 <b>Feed Direction</b>	

D1	Flute Diameter
D2	Shank Diameter
D3	Toric Cut Diameter
L1	Total Length
L2	Flute Length
L3	Usable Length
$\alpha$	Angle
R	Radius
CT	Coating
C	Code
A/R	Angle/Radius

**Do you need a special tool? This is no problem at DATRON!**

DATRON will produce individual tools for your special application starting in a minimum amount of time. The tools are produced at top DATRON quality according to your drawings/specifications on the most modern, fully automatic grinding machines.

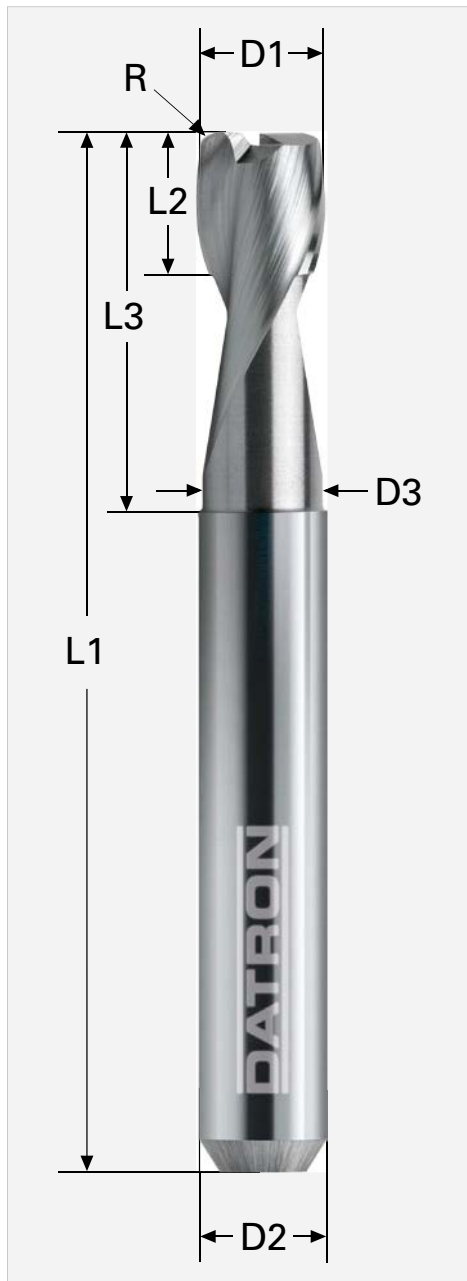
A few examples for this are stepped milling tool, stepped drill, special die and micro tools.

Simply enter the desired characteristic data in the table below and send it to us via fax or e-mail.

Please note that we charge an additional machining fee for the regrinding service.

By fax to: +49 (0) 61 51 - 14 19 - 39

By e-mail to: tools@datron.de



Name	Your individual data
Milling tool comparable with article number	Art. No.:
D1 Cutting edge diameter	
D2 Shaft diameter	
D3 Toric cut diameter	
L1 Total length*	
L2 Cutting edge length	
L3 Effective length, toric cut	
R Radius	
BS Coating	

\*The total length L1 can vary.

Remarks:

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## Tool order hotline: **+49(0)6151-14 19- 133**

Do you already know what you need?  
Then you can place your order by phone. If we receive your order by 3:00 p.m., your goods will be shipped on the same day!



## DATRON fax ordering: **+49(0)6151-14 19- 39**

Send your order conveniently and easily with our fax order form (see page 130).



## DATRON e-mail ordering: **tools@datron.de**



## DATRON online-shop: **www.datronshop.de**

LOGIMAT



## DATRON CNC milling tools express mail: **Nobody is faster!**

Order daily until 3:00 p.m. CET and we will send your package with DPD on its way. Express deliveries are possible until 4:00 p.m. CET. Details on the additional charges are available from our hotline.



We'll be happy to advise you! Our technology specialists will help you choose the right tool, parameters, milling strategy or clamping technique.

## Tool consultancy hotline:

**+49(0)6151-14 19 -480**



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DATRON's Sales Partner Team is constantly growing around the world. To find a Partner near you, check us out on:



**[agencies.datron.com](http://agencies.datron.com)**





# DATRON Single Flute End Mill

These tools are available with various cutting lengths and shank diameters. The patented balanced single flute end mill – an exclusive DATRON product. Powerful, economical and highly efficient.



DATRON Single Flute End Mill

Wood

Gold

Silver

Copper

Brass

Plastic

Aluminium

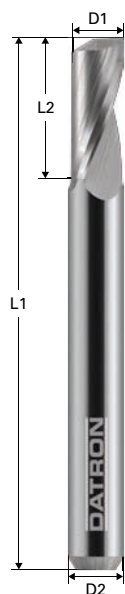
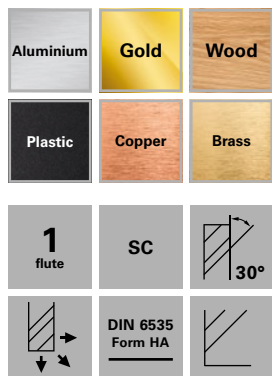


Order Hotline:  
+49 (0) 61 51 - 14 19 - 133

Tools Consultancy:  
+49 (0) 61 51 - 14 19 - 480

# DATRON Single Flute End Mill

DATRON Single Flute End Mill



- Micrograin solid carbide end mill
- with single flute and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

This specially-cut end mill is designed for very fast feed rates and very high chip removal capacity.

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0068003E	0.3	3.0	40.0	1.0	
0068004E	0.4	3.0	40.0	1.0	
0068005E	0.5	3.0	40.0	1.5	
0068006E	0.6	3.0	40.0	2.5	
0068606E	0.6	3.175	40.0	2.5	
0068008E	0.8	3.0	40.0	3.0	
0068608E	0.8	3.175	40.0	3.0	
0068010E	1.0	3.0	40.0	4.0	
0068610E	1.0	3.175	40.0	3.0	
0068410E	1.0	6.0	50.0	4.0	
0068612E	1.2	3.175	40.0	4.0	
0068015E	1.5	3.0	40.0	5.0	
0068615E	1.5	3.175	40.0	4.0	
0068415Y	1.5	4.0	40.0	5.0	
0068415E	1.5	6.0	50.0	7.0	
0068415A	1.5	6.0	50.0	3.0	
0078415E	1.5	6.0	58.0	7.0	
0068016E	1.6	3.0	38.0	5.0	
0068020G	2.0	3.0	40.0	6.0	
0068020E	2.0	3.0	40.0	8.0	
0068020L	2.0	3.0	40.0	10.0	
0068020W	2.0	3.0	65.0	15.0	
0068030Y	3.0	3.0	65.0	10.0	
0068030W	3.0	3.0	65.0	15.0	

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0068620G	2.0	3.175	40.0	5.0	
0068620E	2.0	3.175	40.0	8.0	
0068620F	2.0	3.175	40.0	11.5	
0068432Y	2.0	4.0	40.0	8.0	
0068432A	2.0	6.0	50.0	5.0	
0068432E	2.0	6.0	50.0	7.0	
0068432L	2.0	6.0	50.0	11.0	
0068932A	2.0	6.0	50.0	5.0	x
0068932E	2.0	6.0	50.0	7.0	x
0078420E	2.0	6.0	58.0	7.0	
0068024A	2.4	3.0	40.0	5.5	
0068024E	2.4	3.0	40.0	8.0	
0068624E	2.4	3.175	40.0	8.0	
0068024L	2.4	3.0	40.0	10.0	
0078424E	2.4	6.0	50.0	8.0	
0068425A	2.5	6.0	50.0	5.0	
0078425E	2.5	6.0	58.0	8.0	
0068030E	3.0	3.0	40.0	10.0	
0068030Z	3.0	3.0	40.0	10.5	
0068030Y	3.0	3.0	65.0	10.0	
0068630E	3.0	3.175	40.0	9.0	
0068630F	3.0	3.175	40.0	11.5	
0068430Y	3.0	4.0	40.0	10.0	
0068430A	3.0	6.0	50.0	5.0	

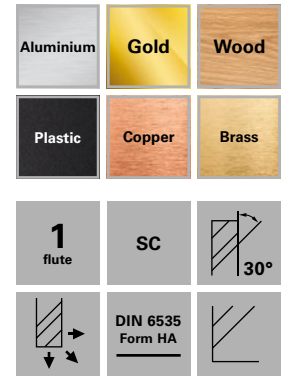
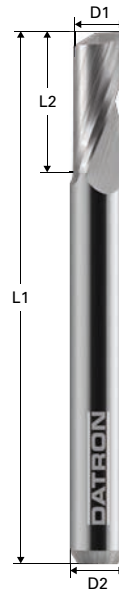
CT = Alcrona Coating



# DATRON Single Flute End Mill

- Micrograin solid carbide end mill
- with single flute and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

This specially-cut end mill is designed for very fast feed rates and very high chip removal capacity.

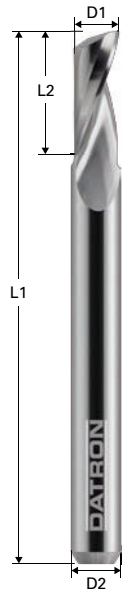
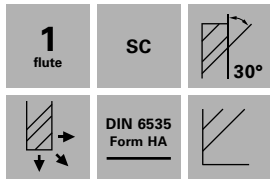


Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0068430E	3.0	6.0	50.0	8.0	
0068930E	3.0	6.0	50.0	8.0	x
0068430S	3.0	6.0	50.0	10.0	
0068930S	3.0	6.0	50.0	10.0	x
0068430L	3.0	6.0	50.0	12.0	
0068930L	3.0	6.0	50.0	12.0	x
0078430E	3.0	6.0	58.0	8.0	
0078430S	3.0	6.0	58.0	10.0	
0078435E	3.5	6.0	58.0	10.0	
0068434Y	4.0	4.0	40.0	10.0	
0068434Z	4.0	6.0	45.0	14.0	
0068434A	4.0	6.0	50.0	5.0	
0068434B	4.0	6.0	50.0	7.0	
0068434E	4.0	6.0	50.0	10.0	
0068434F	4.0	6.0	58.0	20.0	
0068934E	4.0	6.0	50.0	10.0	x
0068434L	4.0	6.0	50.0	12.0	
0068934S	4.0	6.0	50.0	14.0	x
0078440E	4.0	6.0	58.0	10.0	
0078440L	4.0	6.0	58.0	18.0	
0068934L	4.0	6.0	58.0	20.0	x
0068434F	4.0	6.0	58.0	20.0	

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0068434S	4.0	6.0	60.0	14.0	
0068435B	5.0	6.0	50.0	8.0	
0068435E	5.0	6.0	50.0	12.0	
0068935E	5.0	6.0	50.0	12.0	x
0068435L	5.0	6.0	60.0	22.0	
0068935L	5.0	6.0	60.0	22.0	x
0068460C	6.0	6.0	50.0	8.0	
0068460E	6.0	6.0	50.0	14.0	
0068960E	6.0	6.0	50.0	14.0	x
0068460L	6.0	6.0	60.0	20.0	
0068960L	6.0	6.0	60.0	20.0	x
0068460A	6.0	6.0	60.0	25.0	
0068460B	6.0	6.0	65.0	30.0	
0068079E	7.0	8.0	60.0	14.0	
0068080E	8.0	8.0	60.0	14.0	
0068080L	8.0	8.0	60.0	20.0	
0068080A	8.0	8.0	60.0	25.0	
0068080B	8.0	8.0	80.0	32.0	
0068470E	10.0	10.0	60.0	20.0	
0068470L	10.0	10.0	100.0	40.0	

CT = Alcrona Coating

# DATRON Single Flute End Mill with Polished Cutting Edge



- Micrograin solid carbide end mill
- with single flute and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

For this tool, optimised for plastic machining, in addition to the additional polish-grinding, the cutting geometry was also reworked, the cutting angles are now designed much sharper. Compared to universal single-flutes, this leads to a considerably more sharp cutting edge.

With this, top-quality surface results can be realised on plastic contours.

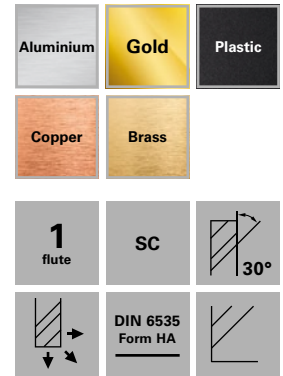
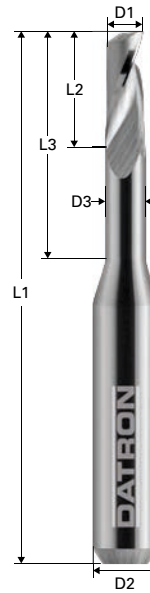
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0078310E	1.0	6.0	50.0	4.0
0078320E	2.0	6.0	50.0	7.0
0078320L	2.0	6.0	50.0	11.0
0078330E	3.0	6.0	50.0	8.0
0078330L	3.0	6.0	50.0	12.0
0078334E	4.0	6.0	50.0	10.0
0078334L	4.0	6.0	60.0	22.0
0078335E	5.0	6.0	50.0	12.0
0078335L	5.0	6.0	60.0	22.0
0078360E	6.0	6.0	50.0	14.0
0078360L	6.0	6.0	60.0	22.0
0078338E	8.0	8.0	60.0	22.0
0078338L	8.0	8.0	70.0	32.0
0078339E	10.0	10.0	75.0	32.0



# DATRON Single Flute End Mill with Toric Cut

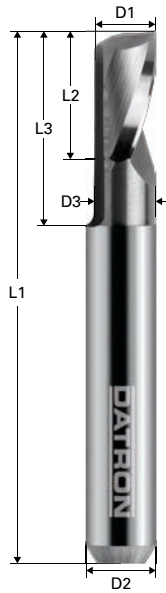
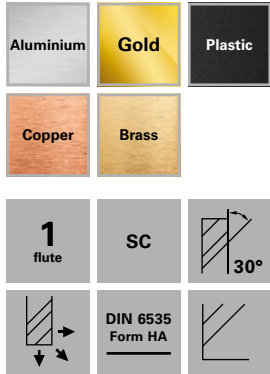
- Micrograin solid carbide end mill
- with single flute and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA
- toric cut

With this specially ground milling tool, you can perform particularly deep milling work with high feed rates in the material. The large chip groove allows optimal chip removal.



Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)
00684910	1.0	6.0	0.9	50.0	4.0	7.00
00684915	1.5	6.0	1.4	50.0	7.0	11.00
0068492K	2.0	6.0	1.8	50.0	4.0	12.00
0068492E	2.0	6.0	1.8	50.0	7.0	14.00
0068493K	3.0	6.0	2.8	50.0	4.0	14.00
0068493E	3.0	6.0	2.8	50.0	8.0	14.00
0068493D	3.0	6.0	2.8	50.0	4.0	17.00
0068493S	3.0	6.0	2.8	50.0	8.0	17.00
0068493F	3.0	6.0	2.8	50.0	4.0	21.00
0068493L	3.0	6.0	2.8	50.0	8.0	21.00
0068494K	4.0	6.0	3.8	50.0	5.0	18.00
0068494E	4.0	6.0	3.8	50.0	10.0	18.00
0068494D	4.0	6.0	3.8	50.0	5.0	21.00
0068494S	4.0	6.0	3.8	50.0	10.0	21.00
0068495K	5.0	6.0	4.8	60.0	5.0	22.00
0068495E	5.0	6.0	4.8	50.0	12.0	22.00
0068496K	6.0	6.0	5.8	60.0	5.0	24.00
0068496E	6.0	6.0	5.8	50.0	14.0	24.00
0068496F	6.0	6.0	5.8	60.0	5.0	30.00
0068496L	6.0	6.0	5.8	60.0	14.0	30.00

# DATRON Single Flute End Mill, Specially Balanced



- Micrograin solid carbide end mill
- with single flute and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA
- specially balanced
- toric cut

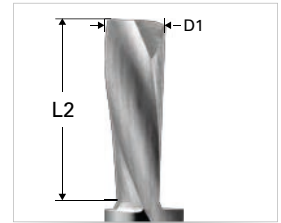
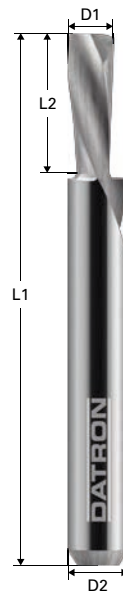
These tools are available with various cutting lengths and shank diameters. The patented balanced single flute end mill – an exclusive DATRON product. Powerful, economical and highly efficient.

Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)
0068085E	5.0	6.0	4.8	50.0	8.0	13.0
0068085S	5.0	8.0	4.8	50.0	8.0	13.0
0068086E	6.0	6.0	5.5	50.0	10.0	16.0
0068086S	6.0	8.0	5.5	50.0	10.0	16.0
0068086L	6.0	6.0	5.5	50.0	16.0	23.0
0068086X	6.0	6.0	5.5	55.0	21.0	27.0
0068088K	8.0	8.0	7.4	50.0	8.0	12.0
0068088E	8.0	8.0	7.4	60.0	14.0	26.0
0068088S	8.0	8.0	7.4	60.0	21.0	31.0
0068088L	8.0	8.0	7.4	60.0	26.0	34.0
0068080D	8.0	8.0	7.4	70.0	13.0	42.0
0068088X	8.0	8.0	7.4	70.0	31.0	42.0
0068090K	10.0	10.0	9.2	50.0	10.0	15.0
0068090E	10.0	10.0	9.2	60.0	17.0	27.0
0068090L	10.0	10.0	9.2	60.0	26.0	33.0
0068090M	10.0	10.0	9.2	85.0	26.0	33.0
0068090X	10.0	10.0	9.2	70.0	32.0	42.0
0068090S	10.0	10.0	9.2	80.0	17.0	52.0
0068090Z	10.0	10.0	9.2	125.0	25.0	85.0
0068092K	12.0	12.0	11.0	60.0	12.0	19.0
0068092E	12.0	12.0	11.0	70.0	21.0	33.0
0068092L	12.0	12.0	11.0	70.0	31.5	42.0

# DATRON Single Flute End Mill, Left Hand Spiral, Right Hand Cutting

- Micrograin solid carbide end mill
- with single flute and flat bottom
- 30° Downcut spiral
- shank without clamping surface DIN 6535-HA

Due to the downcut spiral, the cutting pressure during milling is exerted downward, preventing especially delicate work pieces from being lifted.



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068471E	1.5	6.0	50.0	7.0
0068472E	2.0	6.0	50.0	7.0
0068473E	3.0	6.0	50.0	8.0
0068474E	4.0	6.0	50.0	10.0
0068475E	5.0	6.0	50.0	12.0
0068476E	6.0	6.0	50.0	14.0
0068476L	6.0	6.0	60.0	20.0



# DATRON Double Flute End Mill

DATRON double flute end mills are available in special models.

With extra short cutting edge, toric cut, or stepped.

**New DATRON products:** coated micro-tools for steel machining with extra short flutes.

Gold

Silver

Steel

Copper

Wood

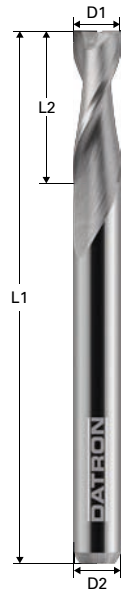
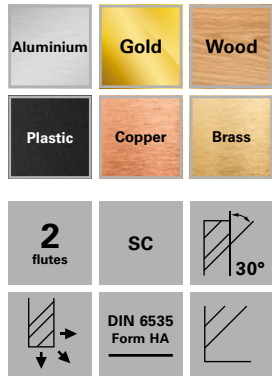
Brass

Plastic

Aluminium



# DATRON Double Flute End Mill, 3 mm Shank



- Micrograin solid carbide end mill
- with double flute and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

DATRON 's double flute end mills are available in special versions: with extra short flutes, toric cut or stepped. These tools are especially suitable to produce a high surface quality. The symmetrical arrangement of the flutes and the resulting high concentricity, make these tools also suitable for the production of fits. In addition, coated micro tools with an extremely short flute for steel machining are also available.

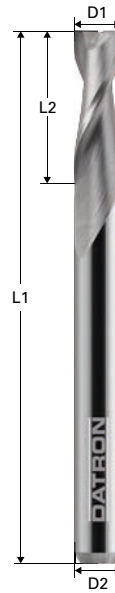
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
00680010	0.1	3.0	40.0	0.2
00680020	0.2	3.0	40.0	0.4
00680025	0.25	3.0	40.0	0.4
0068003	0.3	3.0	40.0	0.9
0068004K	0.4	3.0	40.0	0.6
0068004	0.4	3.0	40.0	2.5
0068604	0.4	3.175	38.0	2.5
0068005K	0.5	3.0	40.0	1.0
0068005	0.5	3.0	40.0	2.5
0068605	0.5	3.175	38.0	3.0
0068006K	0.6	3.0	40.0	1.0
0068006	0.6	3.0	40.0	3.0
0068606	0.6	3.175	40.0	3.0
0068008	0.8	3.0	40.0	4.0
0068608	0.8	3.175	40.0	5.0
0068009	0.9	3.0	40.0	5.0
0068609	0.9	3.175	40.0	5.0

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068010S	1.0	3.0	40.0	2.3
0068010K	1.0	3.0	40.0	3.0
0068010	1.0	3.0	40.0	5.0
0068010L	1.0	3.0	40.0	8.0
0068610K	1.0	3.175	40.0	3.0
0068610	1.0	3.175	40.0	4.0
0068012S	1.2	3.0	38.0	2.3
0068012K	1.2	3.0	40.0	3.0
0068012	1.2	3.0	40.0	5.0
0068613	1.3	3.175	38.0	5.0
0068612	1.2	3.175	40.0	5.0
0068015	1.5	3.0	40.0	5.0
0068615	1.5	3.175	40.0	6.0
0068015S	1.5	3.0	38.0	10.0
0068016	1.6	3.0	38.0	6.0
0068616	1.6	3.175	38.0	6.0
0068617	1.7	3.175	38.0	6.0

# DATRON Double Flute End Mill, 3 mm Shank

- Micrograin solid carbide end mill
- with double flute and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

DATRON 's double flute end mills are available in special versions: with extra short flutes, toric cut or stepped. These tools are especially suitable to produce a high surface quality. The symmetrical arrangement of the flutes and the resulting high concentricity, make these tools also suitable for the production of fits. In addition, coated micro tools with an extremely short flute for steel machining are also available.

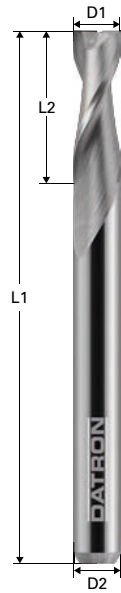
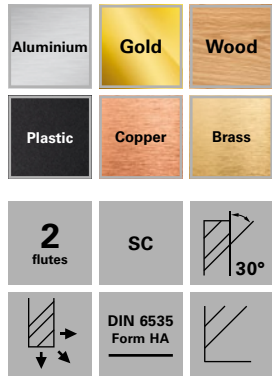


Aluminium	Gold	Wood
Plastic	Copper	Brass
2 flutes	SC	30°
	DIN 6535 Form HA	

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068618	1.8	3.175	38.0	6.0
0068020K	2.0	3.0	40.0	4.0
0068020	2.0	3.0	40.0	9.0
0068620K	2.0	3.175	40.0	4.0
0068620	2.0	3.175	40.0	8.0
0068024K	2.4	3.0	40.0	5.0
0068024	2.4	3.0	40.0	8.0
0068624K	2.4	3.175	40.0	5.0
0068624	2.4	3.175	40.0	8.0
0068625	2.5	3.175	40.0	8.0
0068030K	3.0	3.0	40.0	6.0
0068030A	3.0	3.0	40.0	10.0
0068030L	3.0	3.0	40.0	12.0
0068030X	3.0	3.0	60.0	25.0
0068630K	3.0	3.175	40.0	6.0
0068630	3.0	3.175	40.0	10.0



# DATRON Double Flute End Mill from 6 mm Shank



- Micrograin solid carbide end mill
- with double flute and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

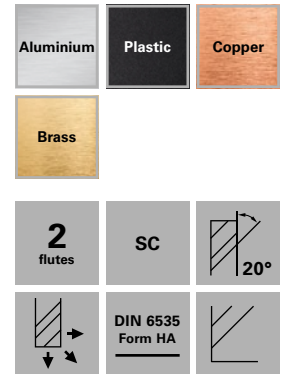
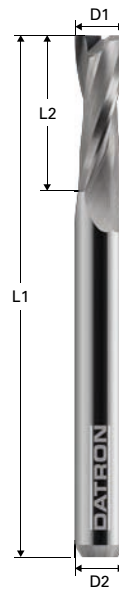
DATRON 's double flute end mills are available in special versions: with extra short flutes, toric cut or stepped. These tools are especially suitable to produce a high surface quality. The symmetrical arrangement of the flutes and the resulting high concentricity, make these tools also suitable for the production of fits. In addition, coated micro tools with an extremely short flute for steel machining are also available.

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068430K	3.0	6.0	40.0	6.0
0068430	3.0	6.0	50.0	7.0
0068430G	3.0	6.0	50.0	11.0
0068434K	4.0	6.0	40.0	6.0
0068434	4.0	6.0	50.0	8.0
0068435K	5.0	6.0	40.0	6.0
0068435A	5.0	6.0	50.0	8.0
0068435	5.0	6.0	50.0	10.0
0068460Y	6.0	6.0	40.0	6.0
0068460K	6.0	6.0	50.0	10.0
0068460	6.0	6.0	50.0	18.0
0068460G	6.0	6.0	60.0	20.0
0068460X	6.0	6.0	75.0	30.0
0068460W	6.0	6.0	75.0	40.0
0068460Z	6.0	6.0	100.0	40.0
0068081L	8.0	8.0	60.0	32.0
0068081	8.0	8.0	63.0	16.0
0068082	8.0	8.0	100.0	40.0
0068083	10.0	10.0	100.0	40.0
0068100	10.0	10.0	40.0	10.0
0068100A	10.0	10.0	72.0	25.0

# DATRON Double Flute End Mill, HSC-Fire

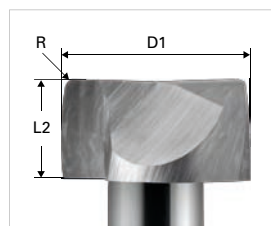
- Micrograin solid carbide end mill
- with double flute and flat bottom
- 20° upcut spiral
- shank without clamping surface DIN 6535-HA
- centre cut with one long flute

The special cutting geometry and the reinforced solid carbide core ensure even more stability when face milling. The 20° steep helix angle as well as the over centre cutting edge allow exceptional chip removal and a smooth floor surface.



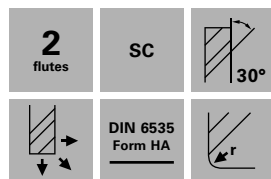
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068876S	6.00	6.0	50.00	12.00
0068876K	6.00	6.0	50.00	17.00
0068876	6.00	6.0	60.00	22.00
0068876L	6.00	6.0	70.00	32.00
0068878S	8.00	8.00	50.00	12.00
0068878K	8.00	8.00	50.00	17.00
0068878	8.00	8.00	60.00	22.00
0068878L	8.00	8.00	70.00	32.00
0068870S	10.00	10.00	50.00	12.00
0068870K	10.00	10.00	50.00	17.00
0068870	10.00	10.00	60.00	22.00
0068870L	10.00	10.00	70.00	32.00

# DATRON Double Flute End Mill with Edge Radius



- Micrograin solid carbide end mill
- with double flute and flat bottom
- edge radius
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

This tool has an edge radius, which increases the tool life. Models with toric cut have a large useable depth.

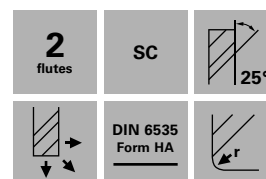
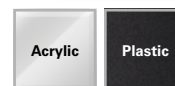
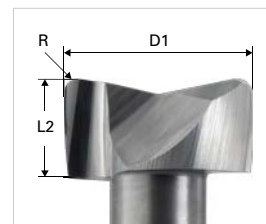
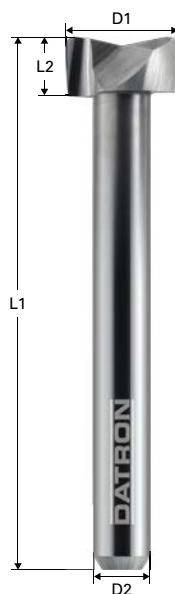


Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	R (mm)
0068460S	6.0	6.0	50.0	6.0	0.5
0068080K	8.0	8.0	50.0	12.0	1.0
0068442	12.0	6.0	50.0	6.0	0.5
0068443	14.0	8.0	50.0	6.0	0.5
0068444	20.0	8.0	50.0	8.0	0.5
0068442S	Regrinding service starting at 12 mm for more than 5 pieces (per piece)				
0068443S	Regrinding service starting at 14 mm for more than 5 pieces (per piece)				

# DATRON Double Flute End Mill with Edge Radius and Polished Flute

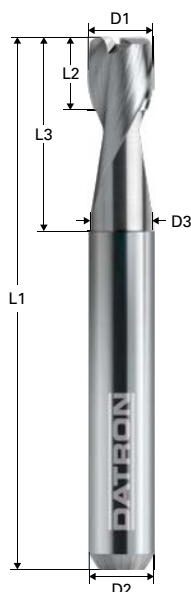
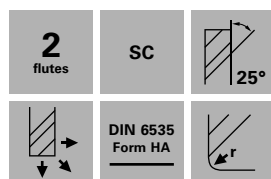
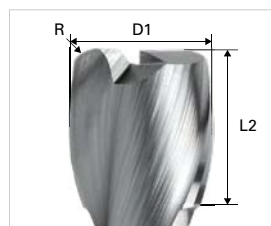
- Micrograin solid carbide end mill
- with double flute and flat bottom
- edge radius
- 25° upcut spiral
- shank without clamping surface DIN 6535-HA
- with polished cutting edge

The advanced face geometry of these face end mills, in conjunction with a polishing cut allows transparent results when face milling acrylic materials.



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	R (mm)
0078440	10.0	6.0	50.0	6.0	1.0
0078442	12.0	6.0	50.0	6.0	1.0
0078444	14.0	8.0	50.0	6.0	1.0
0078446	16.0	8.0	50.0	6.0	1.0

# DATRON Double Flute End Mill with Edge Radius



- Micrograin solid carbide end mill
- with double flute and flat bottom
- edge radius
- 25° upcut spiral
- shank without clamping surface DIN 6535-HA
- toric cut

This tool has an edge radius, which increases the tool life. Models with toric cut have a large useable depth.

Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	BS CT	R (mm)
00781043	3.0	3.0	2.7	50.0	4.0	14.0	x	0.3
00781063	3.0	3.0	2.7	50.0	4.0	14.0	x	1.0
00781044	4.0	4.0	3.7	50.0	5.0	16.0	x	0.4
00781064	4.0	4.0	3.7	50.0	5.0	16.0	x	1.0
00781045	5.0	5.0	4.6	54.0	6.0	18.0	x	0.5
00781065	5.0	5.0	4.6	54.0	6.0	18.0	x	1.0
0068460F	6.0	6.0	5.8	60.0	7.0	21.0		1.0
00781046	6.0	6.0	5.5	58.0	7.0	21.0	x	0.5
00781066	6.0	6.0	5.5	58.0	7.0	21.0	x	1.0
0068080	8.0	8.0	7.8	60.0	9.0	23.0		1.0
00781048	8.0	8.0	7.4	63.0	9.0	27.0	x	0.5
00781068	8.0	8.0	7.4	63.0	9.0	27.0	x	1.0
00781050	10.0	10.0	9.2	72.0	11.0	32.0	x	0.5
00781070	10.0	10.0	9.2	72.0	11.0	32.0	x	1.0

CT = Alcrona Coating

# DATRON Double Flute End Mill, Stepped

- Micrograin solid carbide end mill
- with two flutes and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

With stepped double flute end mills, the cutting edge diameter is considerably larger than the shaft diameter. This tool is ideally suited for milling over. With high feed rates and low infeed, large surfaces can be milled over in a short time. Due to the sharp-edged corners, it is also possible to perform contour machining.

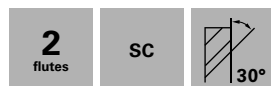
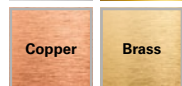
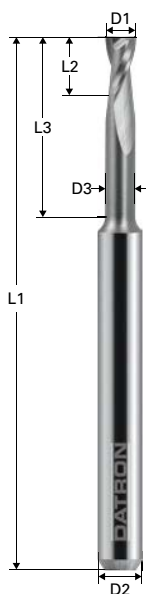
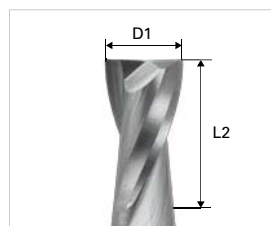


Aluminium	Gold	Plastic
Copper	Brass	
2 flutes	SC	30°
	DIN 6535 Form HA	

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0078806	6.0	6.0	60.0	10.0
0068441	8.0	6.0	50.0	10.0
0078808	8.0	8.0	60.0	10.0
0078808R	8.0	8.0	60.0	12.0
0068440	10.0	6.0	50.0	10.0
0078810	10.0	10.0	50.0	10.0
0078810L	10.0	10.0	70.0	17.0
0068083	10.0	10.0	100.0	40.0
0068442G	12.0	6.0	50.0	6.0
0078812A	12.0	10.0	50.0	10.0
0078812	12.0	12.0	50.0	10.0
0078812L	12.0	12.0	50.0	20.0
0078812B	12.0	12.0	60.0	30.0
0068442A	14.0	6.0	50.0	6.0

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068443G	14.0	8.0	50.0	6.0
0078814A	14.0	10.0	50.0	10.0
0078814	14.0	12.0	50.0	10.0
0078816A	16.0	10.0	50.0	10.0
0078816B	16.0	10.0	80.0	12.0
0078816C	16.0	10.0	125.0	10.0
0078816	16.0	12.0	50.0	10.0
0078818A	18.0	10.0	50.0	10.0
0078818B	18.0	10.0	125.0	10.0
0078818	18.0	12.0	50.0	10.0
0068444G	20.0	8.0	50.0	8.0
0078820A	20.0	10.0	50.0	10.0
0078820	20.0	12.0	50.0	10.0

# DATRON Double Flute End Mill with Toric Cut



- Micrograin solid carbide end mill
- with two flutes and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA
- toric cut

The shank's toric cut permits deeper machining.

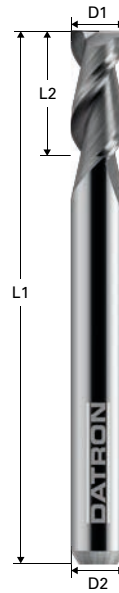
Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)
00781005	0.5	3.0	0.45	40.0	0.75	4.0
00781006	0.6	3.0	0.55	40.0	0.90	4.0
00781007	0.7	3.0	0.65	40.0	1.05	4.0
00781008	0.8	3.0	0.75	40.0	1.20	6.0
00781009	0.9	3.0	0.85	40.0	1.30	6.0
00781010	1.0	3.0	0.95	40.0	1.50	6.0
00781011	1.0	3.0	0.95	40.0	1.50	9.0
00781012	1.2	3.0	1.15	40.0	1.80	9.0
00781015	1.5	3.0	1.45	40.0	2.2	9.0
00781020	2.0	3.0	1.95	40.0	3.0	12.0
00781025	2.5	3.0	2.40	40.0	3.5	15.0
00781034	4.0	6.0	3.80	50.0	8.0	16.0
00781035	6.0	6.0	5.60	125.0	20	105.0
00781036	6.0	6.0	5.70	60.0	20.0	33.0
00781001	10.0	10.0	9.40	125.0	20.0	105.0



# DATRON Double Flute End Mill, Contour Milling

- Micrograin solid carbide end mill
- with two flutes and flat bottom
- 45° upcut spiral
- shank without clamping surface DIN 6535-HA

Thanks to the 45° upcut spiral these tools are specially suited for the machining of contours.



Aluminium	Gold	Plastic
Copper	Brass	
2 flutes	SC	45°
	DIN 6535 Form HA	

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068033	3.0	6.0	57.0	8.0
0068034	4.0	6.0	57.0	11.0
0068035	5.0	6.0	57.0	13.0
0068036	6.0	6.0	57.0	13.0
0068040	8.0	8.0	60.0	20.0
0068041	8.0	8.0	60.0	25.0
0068042	10.0	10.0	70.0	25.0
0068043	12.0	12.0	70.0	25.0

# DATRON Double Flute End Mill, HSC+

Aluminium	Plastic	Copper
Brass		
2 flutes	SC	15°
	DIN 6535 Form HA	



- Micrograin solid carbide end mill
- with two flutes and flat bottom
- 15° upcut spiral
- shank without clamping surface DIN 6535-HA

The special feature of this mill is the steep upcut angle. The chips are removed very quickly from the work piece. In many cases this results in extremely high feed rates.

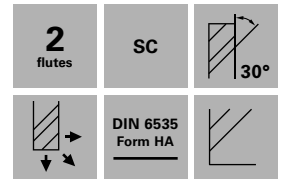
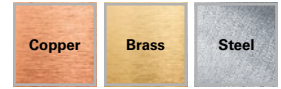
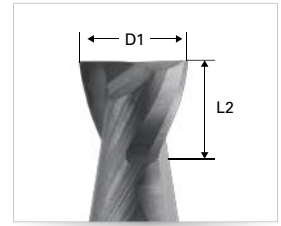
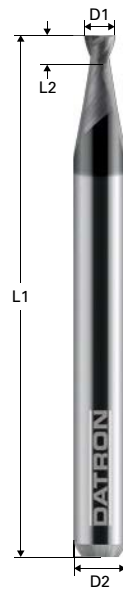
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068815A	1.5	3.0	40.0	6.0
0068815	1.5	3.175	40.0	6.0
0068866	1.9	6.0	50.0	6.0
0068820A	2.0	3.0	40.0	6.0
0068820	2.0	3.175	40.0	6.0
0068862K	2.0	6.0	50.0	4.0
0068862	2.0	6.0	50.0	6.0
0068824	2.4	3.175	40.0	8.0
0068867	2.4	6.0	50.0	5.0

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068830A	3.0	3.0	40.0	10.0
0068830K	3.0	3.175	40.0	6.0
0068830	3.0	3.175	40.0	10.0
0068863K	3.0	6.0	50.0	6.0
0068863	3.0	6.0	50.0	10.0
0068864	4.0	6.0	50.0	8.0
0068865	5.0	6.0	50.0	10.0
0068860K	6.0	6.0	50.0	7.0
0068860	6.0	6.0	50.0	12.0

# DATRON Double Flute End Mill for Steel Machining

- Micrograin solid carbide end mill
- with two flutes and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

The cutting geometry of these micro tools is designed for Steel machining. In combination with the standard X.CEED coating, these tools have a high tool life and provide excellent surface quality.



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0078009K	0.9	3.0	38.0	1.8	x
0078010K	1.0	3.0	38.0	2.0	x
0078011K	1.1	3.0	38.0	2.2	x
0078012K	1.2	3.0	38.0	2.4	x
0078013K	1.3	3.0	38.0	2.6	x
0078014K	1.4	3.0	38.0	2.8	x
0078015K	1.5	3.0	38.0	3.0	x
0078016K	1.6	3.0	38.0	3.2	x
0078017K	1.7	3.0	38.0	3.4	x
0078018K	1.8	3.0	38.0	3.6	x
0078019K	1.9	3.0	38.0	4.0	x
0078020K	2.0	3.0	38.0	6.0	x
0078021K	2.1	3.0	38.0	5.0	x
0078022K	2.2	3.0	38.0	5.0	x
0078023K	2.3	3.0	38.0	5.0	x
0078024K	2.4	3.0	38.0	5.0	x
0078025K	2.5	3.0	38.0	7.0	x
0078030K	3.0	3.0	38.0	7.0	x

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0078009S	0.9	3.0	38.0	1.1	x
0078010S	1.0	3.0	38.0	1.2	x
0078011S	1.1	3.0	38.0	1.2	x
0078012S	1.2	3.0	38.0	1.2	x
0078013S	1.3	3.0	38.0	1.2	x
0078014S	1.4	3.0	38.0	1.4	x
0078015S	1.5	3.0	38.0	1.4	x
0078016S	1.6	3.0	38.0	1.4	x
0078017S	1.7	3.0	38.0	1.4	x
0078018S	1.8	3.0	38.0	1.5	x
0078019S	1.9	3.0	38.0	1.5	x
0078020S	2.0	3.0	38.0	1.8	x
0078025S	2.5	3.0	38.0	2.0	x

CT = X.CEED Coating



# DATRON Three, Four, and Six Flute End Mill

Whether with three, four or six cutting edges – all DATRON tools developed for Steel machining have a stable cutting geometry and heavy-duty coatings.



Copper

Brass

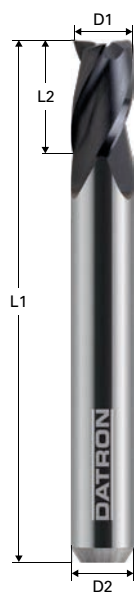
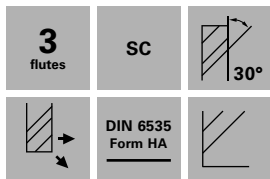
Steel



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# DATRON Triple Flute End Mill



- Micrograin solid carbide end mill
- with three flutes
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

This SC end mill has a very short flute length and a special coating, which results in a very long tool life.

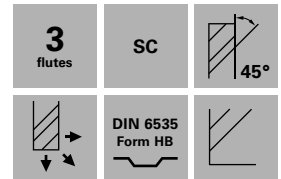
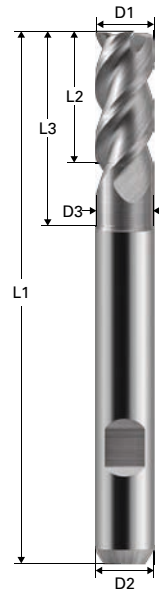
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0068551	1.75	3.0	40.0	3.0	x
0068552	2.0	6.0	50.0	6.0	x
0068553	3.0	6.0	50.0	6.0	x
0068554	4.0	6.0	50.0	8.0	x
0068555	5.0	6.0	50.0	10.0	x
0068556	6.0	6.0	50.0	10.0	x

CT = X.CEED Coating

# DATRON Triple Flute End Mill with Toric Cut

- Micrograin solid carbide end mill
- with three flutes and flat bottom
- 45° upcut spiral
- shank with clamping surface DIN 6535-HB
- centre cut with one long flute

Thanks to the toric cut these tools are specially suited for the machining without interfering contour.

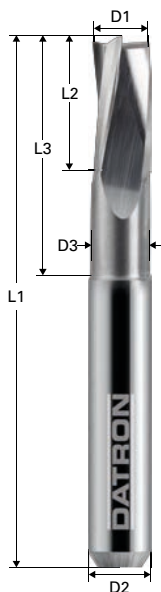


Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)
0068033A	3.0	6.0	2.8	58.0	8.0	12.00
0068034A	4.0	6.0	3.8	58.0	11.0	16.00
0068035A	5.0	6.0	4.8	58.0	13.0	19.00
0068036A	6.0	6.0	5.7	58.0	13.0	19.00
0068040A	8.0	8.0	7.8	63.0	19.0	27.00
0068042A	10.0	10.0	9.8	72.0	22.0	32.00
0068043A	12.0	12.0	11.8	83.0	26.0	38.00

# DATRON Triple Flute End Mill with Toric Cut for PU Foam



<b>3</b> flutes	SC	
	DIN 6535 Form HA	



- Micrograin solid carbide end mill
- with three flutes and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HB
- centre cut with one long flute
- with polished cutting edge

The new foam mills, besides having finely polished cutters also feature chip channels adjusted for PU foam machining. In addition, DATRON especially perfected the special blade geometries and helix angles of the foam tool series.

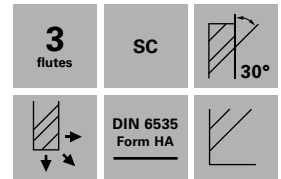
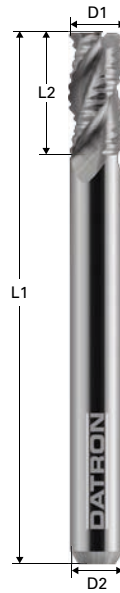
Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)
00680530	3.00	6.00	2.70	75.00	12.00	41.00
0068053K	3.00	6.00	2.70	50.00	6.00	22.00
00680540	4.00	6.00	3.60	75.00	15.00	41.00
0068054K	4.00	6.00	3.60	50.00	8.00	22.00
00680550	5.00	6.00	4.50	75.00	20.00	41.00
0068055K	5.00	6.00	4.50	50.00	10.00	22.00
00680560	6.00	6.00	5.50	75.00	27.00	42.00
0068056A	6.00	6.00	5.50	100.00	27.00	71.00
0068056K	6.00	6.00	5.50	50.00	12.00	22.00
00680580	8.00	8.00	7.50	75.00	28.00	42.00
0068058A	8.00	8.00	7.50	100.00	42.00	71.00
0068058K	8.00	8.00	7.50	50.00	16.00	25.00
00680510	10.00	10.00	9.50	115.00	52.00	82.00
0068051K	10.00	10.00	9.50	60.00	20.00	30.00



# DATRON Triple Flute End Mill, Copper Roughing Mill

- Micrograin solid carbide end mill
- with three flutes and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HB
- centre cut with one long flute
- Ground-in chip cutter

Due to the three flutes with ground-in chip cutter, very high feed rates are possible with the corresponding depth adjustment. Copper is machined almost burr free.



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
00685903	3.00	6.00	50.00	6.00
00685906	6.00	6.00	50.00	12.00
00685908	8.00	8.00	50.00	16.00
00685910	10.00	10.00	60.00	22.00

# DATRON Triple Flute End Mill, Smoothing Mill for Copper



<b>3</b> flutes	SC	30°
	DIN 6535 Form HA	



- Micrograin solid carbide end mill
- with three flutes and flat bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HB
- centre cut with one long flute

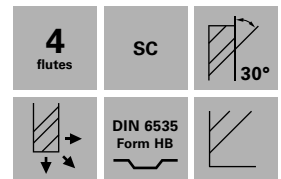
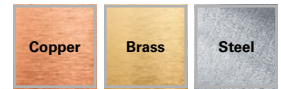
Due to the three flutes with a special clearance angle geometry an extremely good workpiece surface quality is achieved in the finishing process.

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
00685610	1.00	6.00	50.00	2.20
00685615	1.50	6.00	50.00	3.20
00685620	2.00	6.00	50.00	4.20
00685630	3.00	6.00	50.00	6.00
00685640	4.00	6.00	50.00	8.00
00685660	6.00	6.00	50.00	11.00
00685680	8.00	8.00	50.00	16.00

# DATRON Four Flute End Mill

- Micrograin solid carbide end mill
- with four flutes
- 30° upcut spiral
- shank with clamping surface DIN 6535-HB
- centre cut

The four-flute end mill is available in two versions. With a very short flute for even more stability and with a long flute for thick materials machining. Due to their standard Alcrona coating, these tools achieve very high durability even when machining hard materials.

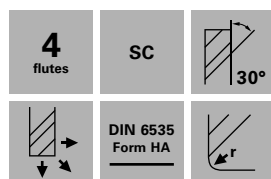
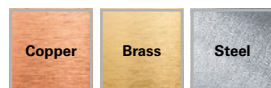
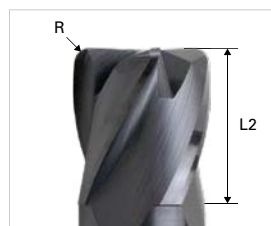


Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0078402	2.0	6.0	50.0	7.0	x
00784025	2.5	6.0	50.0	8.0	x
0078403	3.0	6.0	58.0	8.0	x
0078403A	3.0	6.0	57.0	19.0	x
00784035	3.5	6.0	58.0	10.0	x
0078404	4.0	6.0	58.0	11.0	x
0078404A	4.0	6.0	57.0	19.0	x
0078404B	4.0	6.0	75.0	25.0	x
00784045	4.5	6.0	58.0	11.0	x
0078405	5.0	6.0	58.0	13.0	x
0078405A	5.0	6.0	75.0	30.0	x
00784055	5.5	6.0	58.0	13.0	x
0078406	6.0	6.0	58.0	13.0	x
0078406A	6.0	6.0	75.0	30.0	x
0078406B	6.0	6.0	100.0	40.0	x
00784065	6.5	8.0	63.0	16.0	x
0078407	7.0	8.0	63.0	16.0	x
0078408	8.0	8.0	63.0	18.0	x
0078408A	8.0	8.0	75.0	30.0	x

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0078409	9.0	10.0	72.0	19.0	x
0078410	10.0	10.0	72.0	22.0	x
0078410A	10.0	10.0	75.0	30.0	x
0078410B	10.0	10.0	100.0	40.0	x
0078412	12.0	12.0	83.0	26.0	x
0078412A	12.0	12.0	100.0	45.0	x
0078412B	12.0	12.0	150.0	65.0	x
0078414	14.0	14.0	83.0	26.0	x
0078414A	14.0	14.0	100.0	45.0	x
0078416	16.0	16.0	92.0	32.0	x
0078416A	16.0	16.0	100.0	45.0	x
0078416B	16.0	16.0	150.0	65.0	x
0078418	18.0	18.0	92.0	32.0	x
0078418A	18.0	18.0	100.0	45.0	x
0078420	20.0	20.0	104.0	38.0	x
0078420A	20.0	20.0	100.0	45.0	x
0078420B	20.0	20.0	150.0	65.0	x

CT = Alcrona Coating

# DATRON Four Flute End Mill with Edge Radius



- Micrograin solid carbide end mill
- with four flutes
- 30° upcut spiral
- edge radius
- shank without clamping surface DIN 6535-HA
- centre cut
- toric cut

The special characteristics of this end mill are the rounded edges and the standard toric cut. These tools have a special X.CEED coating.

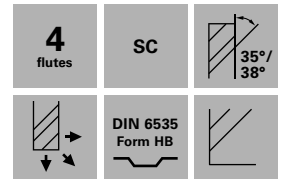
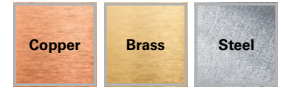
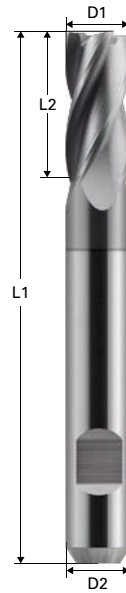
Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	R (mm)	CT
0078620	2.0	6.0	1.8	50.0	4.0	12.0	0.2	x
0078620A	2.0	6.0	1.8	50.0	4.0	16.0	0.2	x
0078623	3.0	6.0	2.7	50.0	4.0	14.0	0.3	x
0078623A	3.0	6.0	2.7	50.0	4.0	18.0	0.3	x
0078624	4.0	6.0	3.7	50.0	5.0	16.0	0.4	x
0078625	5.0	6.0	4.6	54.0	6.0	18.0	0.5	x
0078625A	5.0	6.0	4.6	54.0	6.0	18.0	1.0	x
0078626	6.0	6.0	5.5	57.0	7.0	21.0	0.5	x
0078626A	6.0	6.0	5.5	57.0	7.0	21.0	1.0	x
0078628	8.0	8.0	7.4	63.0	9.0	27.0	0.5	x
0078628A	8.0	8.0	7.4	63.0	9.0	27.0	1.0	x
0078630	10.0	10.0	9.2	72.0	11.0	32.0	0.5	x
0078630A	10.0	10.0	9.2	72.0	11.0	32.0	1.0	x

CT = X.CEED Coating

# DATRON Four Flute End Mill, Pitch 35°/38°

- Micrograin solid carbide end mill
- with four flutes
- 35°/38° upcut spiral
- shank with clamping surface DIN 6535-HB
- centre cut with two long front side flutes

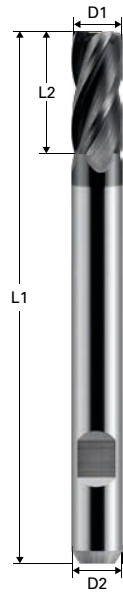
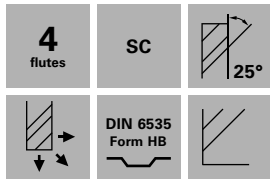
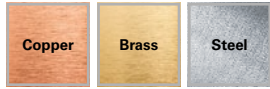
Due to its different helical pitch, this milling tool runs extremely smoothly and chips are removed very quickly. As standard these tools are supplied with an Alcrona coating.



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0078456	6.0	6.0	54.0	10.0	x
0078456A	6.0	6.0	57.0	13.0	x
0078458	8.0	8.0	58.0	12.0	x
0078458A	8.0	8.0	63.0	19.0	x
0078460	10.0	10.0	66.0	14.0	x
0078460A	10.0	10.0	72.0	22.0	x
0078460B	12.0	12.0	73.0	16.0	x
0078460C	12.0	12.0	83.0	26.0	x

CT = Alcrona Coating

# DATRON Four Flute End Mill, Roughing Mill



- Micrograin solid carbide end mill
- with four flutes
- 25° upcut spiral
- shank with clamping surface DIN 6535-HB
- centre cut with two long front side flutes

The roughing end mill is available in two versions. With a very short flute for even more stability and with a long flute for thick materials machining. Due to their standard X.CEED coating and the special cutting geometry, these tools achieve very high durability even when machining hard materials.

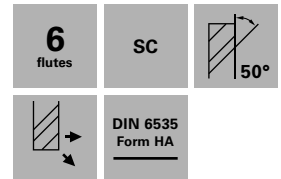
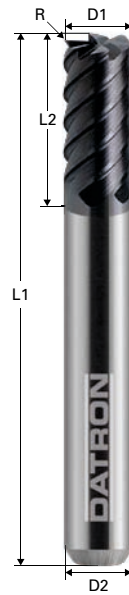
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0078474	4.0	6.0	54.0	8.0	x
0078474A	4.0	6.0	57.0	8.0	x
0078475	5.0	6.0	54.0	8.0	x
0078475A	5.0	6.0	57.0	10.0	x
0078476	6.0	6.0	54.0	8.0	x
0078476A	6.0	6.0	57.0	13.0	x
0078478	8.0	8.0	58.0	11.0	x
0078478A	8.0	8.0	63.0	19.0	x
0078480	10.0	10.0	66.0	13.0	x
0078480A	10.0	10.0	72.0	22.0	x
0078482	12.0	12.0	73.0	16.0	x
0078482A	12.0	12.0	83.0	26.0	x

CT = X.CEED Coating

# DATRON Six Flute End Mill

- Micrograin solid carbide end mill
- with six flutes
- 50° upcut spiral
- radial under cut
- shank without clamping surface DIN 6535-HA
- without centre cut
- partly with edge radius

This end mill has a very short flute length and a special coating, which results in a very long tool life.



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT	R (mm)
0078605	5.0	6.0	57.0	13.0	x	
0078606	6.0	6.0	57.0	13.0	x	
0078606A	6.0	6.0	57.0	13.0	x	1.0
0078608	8.0	8.0	63.0	16.0	x	
0078608A	8.0	8.0	63.0	16.0	x	1.0
0078610	10.0	10.0	72.0	19.0	x	
0078610A	10.0	10.0	72.0	19.0	x	1.5
0078612	12.0	12.0	83.0	22.0	x	
0078612A	12.0	12.0	83.0	22.0	x	1.5
0078614	14.0	14.0	83.0	22.0	x	

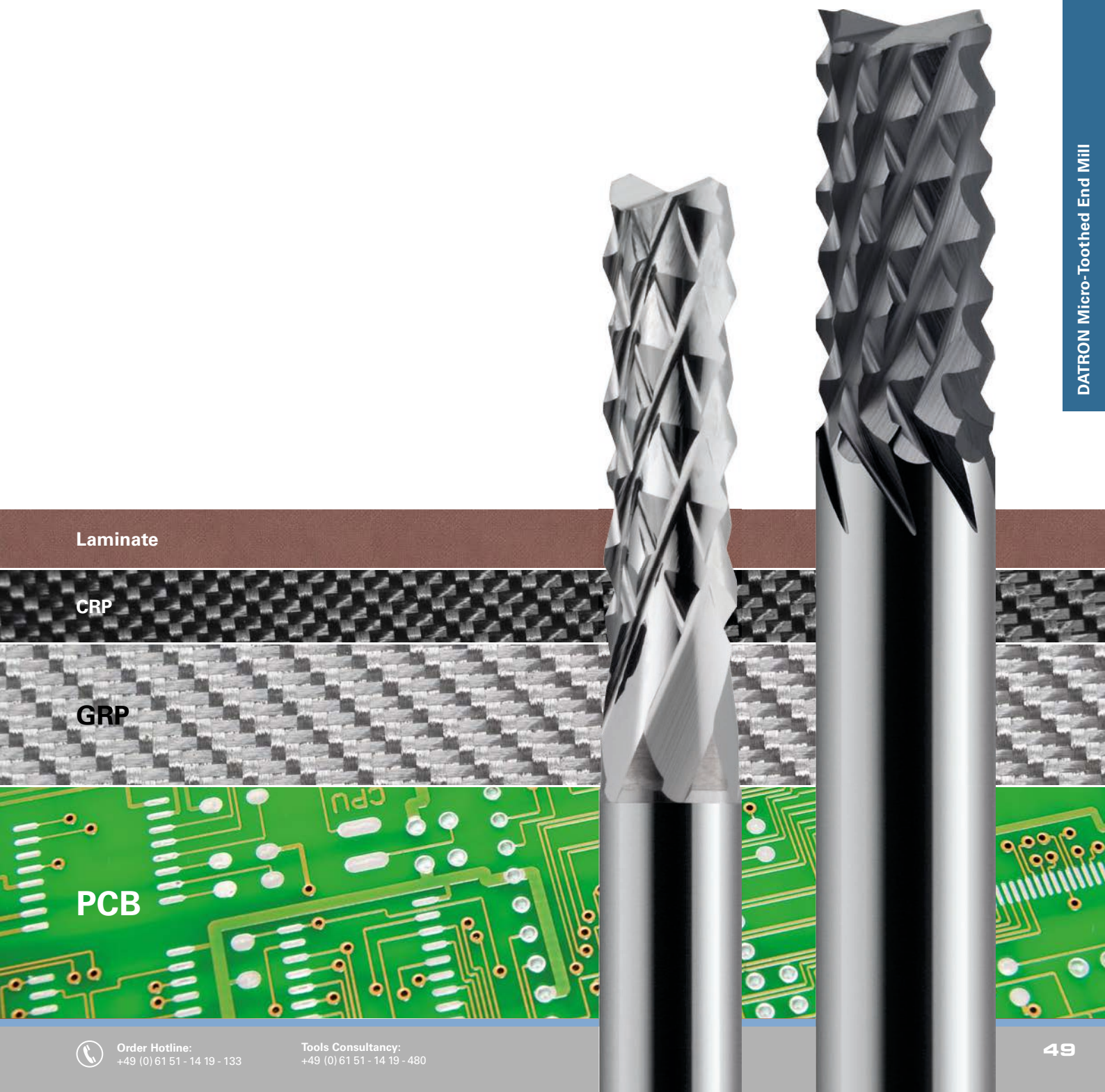
CT = X.CEED Coating





# DATRON Micro-Toothed End Mill

Abrasive materials, such as CRP, GRP or printed circuit board material, can be reliably machined at low cost with the micro-toothed end mills from DATRON.



Laminate

CRP

GRP

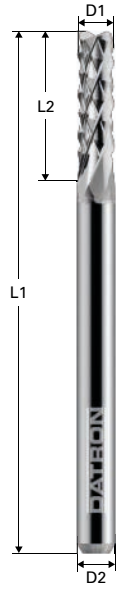
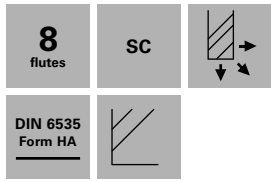
PCB



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# DATRON Micro-Toothed End Mill



- Micrograin solid carbide end mill
- micro-toothed
- fish tail-grinded bottom
- shank without clamping surface DIN 6535-HA

These tools are highly suitable for machining printed circuit boards or test adapters.

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068106	0.6	3.0	40.0	3.0
00686506	0.6	3.175	40.0	3.0
0068107	0.7	3.0	40.0	3.5
0068108	0.8	3.0	40.0	5.0
00686508	0.8	3.175	40.0	5.0
0068110	1.0	3.0	40.0	5.0
00686510	1.0	3.175	40.0	5.0
0068111	1.1	3.0	38.0	5.0
00686511	1.1	3.175	38.0	7.0
0068112	1.2	3.0	40.0	5.0
00686512	1.2	3.175	40.0	5.0
00686513	1.3	3.175	38.0	7.0
00686514	1.4	3.175	38.0	7.0
0068115	1.5	3.0	40.0	8.0

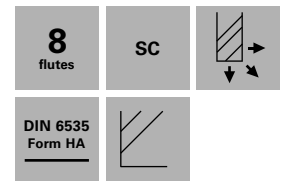
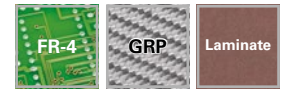
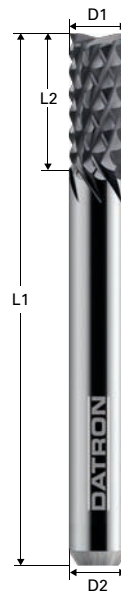
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
00686515	1.5	3.175	40.0	8.0
00686516	1.6	3.175	38.0	8.5
00686517	1.7	3.175	38.0	8.5
00686518	1.8	3.175	38.0	8.5
00686519	1.9	3.175	38.0	8.5
0068120	2.0	3.0	40.0	8.0
00686520	2.0	3.175	40.0	8.0
00686521	2.1	3.175	38.0	9.0
00686522	2.2	3.175	38.0	9.0
00686523	2.3	3.175	38.0	9.0
0068124	2.4	3.0	40.0	8.0
00686524	2.4	3.175	40.0	8.0
0068130	3.0	3.0	40.0	12.0
00686530	3.0	3.175	40.0	10.0

DATRON Micro-Toothed End Mill

# DATRON Micro-Toothed End Mill, Coated

- Micrograin solid carbide end mill
- micro-toothed
- fish tail-grinded bottom
- shank without clamping surface DIN 6535-HA
- X.CEED Coating/Diamond Coating

Due to micro-toothting and coating, these tools have a high tool life even with extremely abrasive materials.



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
006T106	0.6	3.0	40.0	3.0	X.CEED
006T107	0.7	3.0	40.0	3.5	X.CEED
006T110	1.0	3.0	40.0	5.0	X.CEED
006T115	1.5	3.0	40.0	8.0	X.CEED
006T120	2.0	3.0	40.0	8.0	X.CEED
006T124	2.4	3.0	40.0	8.0	X.CEED
006T130	3.0	3.0	40.0	12.0	X.CEED
0068164	4.0	6.0	50.0	16.0	X.CEED
0068165	5.0	6.0	50.0	22.0	X.CEED
0068166S	6.0	6.0	50.0	12.0	X.CEED

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT
0073126B	2.0	3.175	40.0	9.0	Diamond
0073126C	2.4	3.175	40.0	9.0	Diamond
0073126D	3.0	3.175	40.0	9.0	Diamond

CT = X.CEED Coating/Diamond Coating



# DATRON Drill and Thread Mill

Reliable drilling from a diameter of 0.1 mm. Thread milling in a flash from M1.0. Innovative milling thread mill: core hole drilling and thread milling with only one tool, in a single work step.



Wood

Gold

Silver

Copper

Brass

Plastic

Aluminium

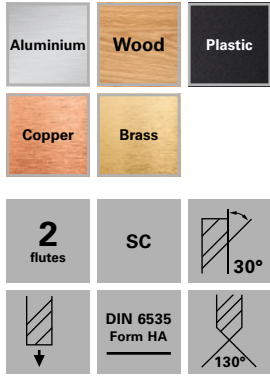
DATRON Drill and Thread Mill



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# DATRON Drill, 3 mm Shank



- Micrograin solid carbide drill
- with 130° point angle
- shank without clamping surface DIN 6535-HA

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
00682015	0.15	3.0	40.0	2.0
0068202	0.2	3.0	40.0	3.5
00682025	0.25	3.0	40.0	3.5
0068203	0.3	3.0	40.0	3.5
00682035	0.35	3.0	40.0	3.5
0068204	0.4	3.0	40.0	6.0
00682045	0.45	3.0	40.0	6.0
0068205	0.5	3.0	40.0	6.0
00682055	0.55	3.0	40.0	6.0
0068206	0.6	3.0	40.0	6.5
00682065	0.65	3.0	40.0	6.5
0068207	0.7	3.0	40.0	10.5
00682075	0.75	3.0	40.0	10.5
0068208	0.8	3.0	40.0	10.5
00682085	0.85	3.0	40.0	10.5
0068209	0.9	3.0	40.0	10.5
00682095	0.95	3.0	40.0	10.5

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068210	1.0	3.0	40.0	10.5
00682105	1.05	3.0	40.0	10.5
0068211	1.1	3.0	40.0	10.5
00682115	1.15	3.0	40.0	10.5
0068212	1.2	3.0	40.0	10.5
00682125	1.25	3.0	40.0	10.5
0068213	1.3	3.0	40.0	10.5
00682135	1.35	3.0	40.0	10.5
0068214	1.4	3.0	40.0	10.5
00682145	1.45	3.0	40.0	10.5
0068215	1.5	3.0	40.0	10.5
00682155	1.55	3.0	40.0	10.5
0068216	1.6	3.0	40.0	10.5
00682165	1.65	3.0	40.0	10.5
0068217	1.7	3.0	40.0	10.5
00682175	1.75	3.0	40.0	10.5

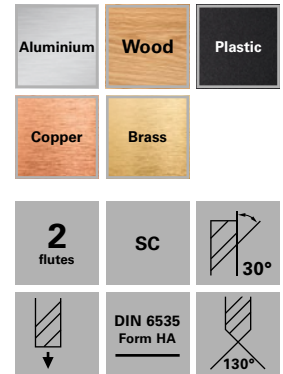
DATRON Drill and Thread Mill





# DATRON Drill, 3 mm Shank

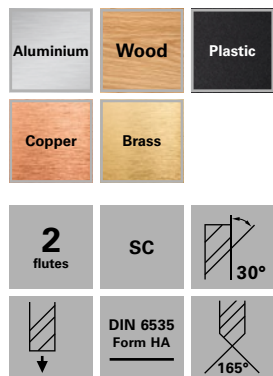
- Micrograin solid carbide drill
- with 130° point angle
- shank without clamping surface DIN 6535-HA



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068218	1.8	3.0	40.0	10.5
00682185	1.85	3.0	40.0	10.5
0068219	1.9	3.0	40.0	10.5
00682195	1.95	3.0	40.0	10.5
0068220	2.0	3.0	40.0	10.5
00682205	2.05	3.0	40.0	10.5
0068221	2.1	3.0	40.0	10.5
00682215	2.15	3.0	40.0	10.5
0068222	2.2	3.0	40.0	10.5
00682225	2.25	3.0	40.0	10.5
0068223	2.3	3.0	40.0	10.5
00682235	2.35	3.0	40.0	10.5
0068224	2.4	3.0	40.0	10.5

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
00682245	2.45	3.0	40.0	10.5
0068225	2.5	3.0	40.0	10.5
00682255	2.55	3.0	40.0	10.5
0068226	2.6	3.0	40.0	10.5
00682265	2.65	3.0	40.0	10.5
0068227	2.7	3.0	40.0	10.5
00682275	2.75	3.0	40.0	10.5
0068228	2.8	3.0	40.0	10.5
00682285	2.85	3.0	40.0	10.5
0068229	2.9	3.0	40.0	10.5
00682295	2.95	3.0	40.0	10.5
0068230	3.0	3.0	40.0	10.5

# DATRON Drill, 3 mm Shank



- Micrograin solid carbide drill
- with 165° point angle
- shank without clamping surface DIN 6535-HA

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068231	3.1	3.0	40.0	12.0
0068232	3.2	3.0	40.0	12.0
0068233	3.3	3.0	40.0	12.0
0068234	3.4	3.0	40.0	12.0
0068235	3.5	3.0	40.0	12.0
0068236	3.6	3.0	40.0	12.0
0068237	3.7	3.0	40.0	12.0
0068238	3.8	3.0	40.0	12.0
0068239	3.9	3.0	40.0	12.0
0068240	4.0	3.0	40.0	12.0
0068241	4.1	3.0	40.0	12.0
0068242	4.2	3.0	40.0	12.0
0068243	4.3	3.0	40.0	12.0
0068244	4.4	3.0	40.0	12.0
0068245	4.5	3.0	40.0	12.0
0068246	4.6	3.0	40.0	12.0
0068247	4.7	3.0	40.0	12.0
0068248	4.8	3.0	40.0	12.0

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068249	4.9	3.0	40.0	12.0
0068250	5.0	3.0	40.0	12.0
0068251	5.1	3.0	40.0	12.0
0068252	5.2	3.0	40.0	12.0
0068253	5.3	3.0	40.0	12.0
0068254	5.4	3.0	40.0	12.0
0068255	5.5	3.0	40.0	12.0
0068256	5.6	3.0	40.0	12.0
0068257	5.7	3.0	40.0	12.0
0068258	5.8	3.0	40.0	12.0
0068259	5.9	3.0	40.0	12.0
0068260	6.0	3.0	40.0	12.0
0068261	6.1	3.0	40.0	12.0
0068262	6.2	3.0	40.0	12.0
0068263	6.3	3.0	40.0	12.0
0068264	6.4	3.0	40.0	12.0
0068265	6.5	3.0	40.0	12.0

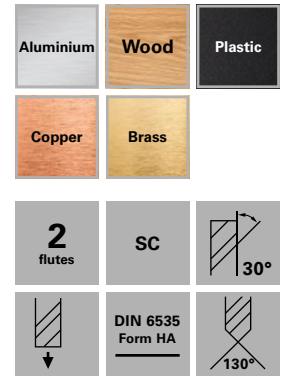
DATRON Drill and Thread Mill





# DATRON Drill, 1/8" Shank

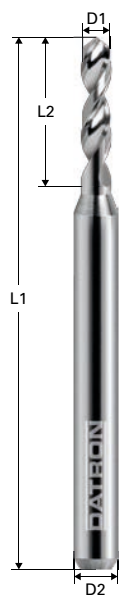
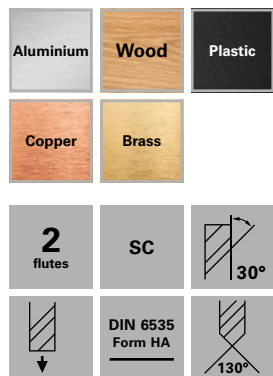
- Micrograin solid carbide drill
- with 130° point angle
- shank without clamping surface DIN 6535-HA



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068701	0.1	3.175	38.0	1.0
00687015	0.15	3.175	38.0	2.5
0068702	0.2	3.175	38.0	3.2
00687025	0.25	3.175	38.0	3.5
0068703	0.3	3.175	40.0	5.5
00687035	0.35	3.175	38.0	5.5
0068704	0.4	3.175	40.0	5.5
00687045	0.45	3.175	40.0	7.0
0068705	0.5	3.175	40.0	5.5
00687055	0.55	3.175	40.0	5.5
0068706	0.6	3.175	40.0	7.0
00687065	0.65	3.175	40.0	8.5
0068707	0.7	3.175	40.0	10.5
00687075	0.75	3.175	40.0	10.5
0068708	0.8	3.175	40.0	10.5
00687085	0.85	3.175	40.0	10.5
0068709	0.9	3.175	40.0	10.5

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
00687095	0.95	3.175	40.0	10.5
0068710	1.0	3.175	40.0	10.5
00687105	1.05	3.175	40.0	10.5
0068711	1.1	3.175	40.0	10.5
00687115	1.15	3.175	40.0	10.5
0068712	1.2	3.175	40.0	10.5
00687125	1.25	3.175	40.0	10.5
0068713	1.3	3.175	40.0	10.5
00687135	1.35	3.175	40.0	10.5
0068714	1.4	3.175	40.0	10.5
00687145	1.45	3.175	40.0	10.5
0068715	1.5	3.175	40.0	10.5
00687155	1.55	3.175	40.0	10.5
0068716	1.6	3.175	40.0	10.5
00687165	1.65	3.175	40.0	10.5
0068717	1.7	3.175	40.0	10.5
00687175	1.75	3.175	40.0	10.5

# DATRON Drill, 1/8" Shank



- Micrograin solid carbide drill
- with 130° point angle
- shank without clamping surface DIN 6535-HA

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068718	1.8	3.175	40.0	10.5
00687185	1.85	3.175	40.0	10.5
0068719	1.9	3.175	40.0	10.5
00687195	1.95	3.175	40.0	10.5
0068720	2.0	3.175	40.0	10.5
00687205	2.05	3.175	40.0	10.5
0068721	2.1	3.175	40.0	10.5
00687215	2.15	3.175	40.0	10.5
0068722	2.2	3.175	40.0	10.5
00687225	2.25	3.175	40.0	10.5
0068723	2.3	3.175	40.0	10.5
00687235	2.35	3.175	40.0	10.5
0068724	2.4	3.175	40.0	10.5
00687245	2.45	3.175	40.0	10.5

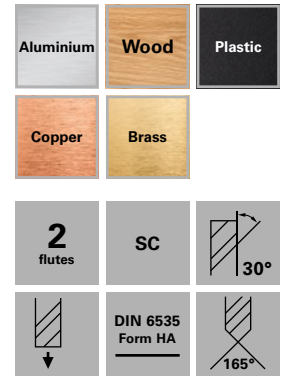
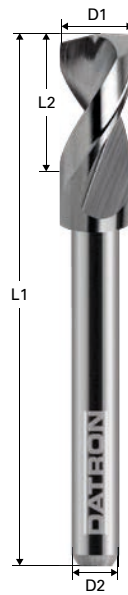
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068725	2.5	3.175	40.0	10.5
00687255	2.55	3.175	40.0	10.5
0068726	2.6	3.175	40.0	10.5
00687265	2.65	3.175	40.0	10.5
0068727	2.7	3.175	40.0	10.5
00687275	2.75	3.175	40.0	10.5
0068728	2.8	3.175	40.0	10.5
00687285	2.85	3.175	40.0	10.5
0068729	2.9	3.175	40.0	10.5
00687295	2.95	3.175	40.0	10.5
0068730	3.0	3.175	40.0	10.5
00687305	3.05	3.175	40.0	10.5
0068731	3.1	3.175	40.0	10.5

DATRON Drill and Thread Mill



# DATRON Drill, 1/8" Shank

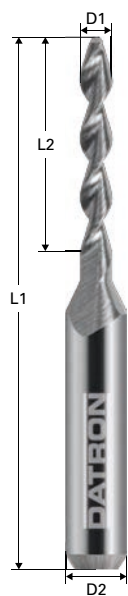
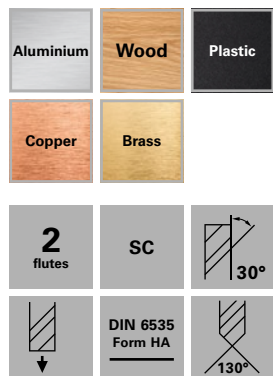
- Micrograin solid carbide drill
- with 165° point angle
- shank without clamping surface DIN 6535-HA



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068732	3.2	3.175	40.0	12.0
0068733	3.3	3.175	40.0	12.0
0068734	3.4	3.175	40.0	12.0
0068735	3.5	3.175	40.0	12.0
0068736	3.6	3.175	40.0	12.0
0068737	3.7	3.175	40.0	12.0
0068738	3.8	3.175	40.0	12.0
0068739	3.9	3.175	40.0	12.0
0068740	4.0	3.175	40.0	12.0
0068741	4.1	3.175	40.0	12.0
0068742	4.2	3.175	40.0	12.0
0068743	4.3	3.175	40.0	12.0
0068744	4.4	3.175	40.0	12.0
0068745	4.5	3.175	40.0	12.0
0068746	4.6	3.175	40.0	12.0
0068747	4.7	3.175	40.0	12.0
0068748	4.8	3.175	40.0	12.0

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068749	4.9	3.175	40.0	12.0
0068750	5.0	3.175	40.0	12.0
0068751	5.1	3.175	40.0	12.0
0068752	5.2	3.175	40.0	12.0
0068753	5.3	3.175	40.0	12.0
0068754	5.4	3.175	40.0	12.0
0068755	5.5	3.175	40.0	12.0
0068756	5.6	3.175	40.0	12.0
0068757	5.7	3.175	40.0	12.0
0068758	5.8	3.175	40.0	12.0
0068759	5.9	3.175	40.0	12.0
0068760	6.0	3.175	40.0	12.0
0068761	6.1	3.175	40.0	12.0
0068762	6.2	3.175	40.0	12.0
0068763	6.3	3.175	40.0	12.0
0068764	6.4	3.175	40.0	12.0
0068765	6.5	3.175	40.0	12.0

# DATRON Drill, 6 mm Shank



- Micrograin solid carbide drill
- with 130° point angle
- shank without clamping surface DIN 6535-HA
- suitable for thick sheet metal material up to 20 mm

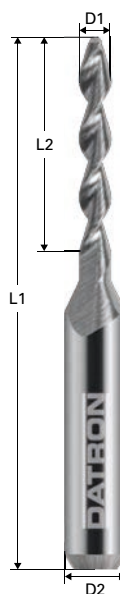
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068230L	3.0	6.0	50.0	21.0
0068231L	3.1	6.0	50.0	21.0
0068232L	3.2	6.0	50.0	21.0
0068233L	3.3	6.0	50.0	21.0
0068234L	3.4	6.0	50.0	21.0
0068235L	3.5	6.0	50.0	21.0
0068236L	3.6	6.0	50.0	21.0
0068237L	3.7	6.0	50.0	21.0
0068238L	3.8	6.0	50.0	21.0
0068239L	3.9	6.0	50.0	21.0
0068240L	4.0	6.0	50.0	21.0
0068241L	4.1	6.0	50.0	21.0
0068242L	4.2	6.0	50.0	21.0
0068243L	4.3	6.0	50.0	21.0
0068244L	4.4	6.0	50.0	21.0
0068245L	4.5	6.0	50.0	21.0

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068246L	4.6	6.0	50.0	21.0
0068247L	4.7	6.0	50.0	21.0
0068248L	4.8	6.0	50.0	21.0
0068249L	4.9	6.0	50.0	21.0
0068250L	5.0	6.0	50.0	21.0
0068251L	5.1	6.0	50.0	21.0
0068252L	5.2	6.0	50.0	21.0
0068253L	5.3	6.0	50.0	21.0
0068254L	5.4	6.0	50.0	21.0
0068255L	5.5	6.0	50.0	21.0
0068256L	5.6	6.0	50.0	21.0
0068257L	5.7	6.0	50.0	21.0
0068258L	5.8	6.0	50.0	21.0
0068259L	5.9	6.0	50.0	21.0
0068260L	6.0	6.0	50.0	21.0

DATRON Drill and Thread Mill

# DATRON Drill, 6 mm Shank

- Micrograin solid carbide drill
- with 130° point angle
- shank without clamping surface DIN 6535-HA
- suitable for thick sheet metal material up to 30 mm



Aluminium	Wood	Plastic
Copper	Brass	
2 flutes	SC	130°
↓	DIN 6535 Form HA	130°

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)
0068240X	4.0	6.0	60.0	31.0
0068245X	4.5	6.0	60.0	31.0
0068250X	5.0	6.0	60.0	31.0
0068255X	5.5	6.0	60.0	31.0
0068260X	6.0	6.0	60.0	31.0

# Thread Mill Parameters Tool Database

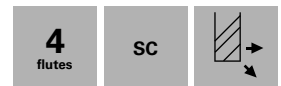
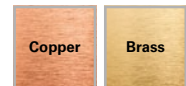
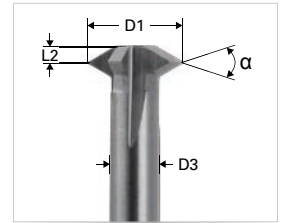
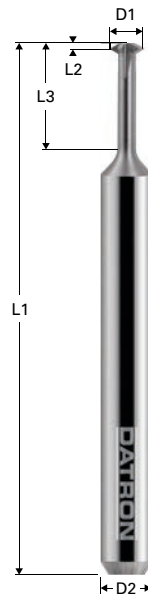
## Recommended thread mill parameters in the DATRON tool database

Art. No.	Nominal Dia	Actual Dia	RPM	C	D3	A/R	L2
0068418/L	0.80	0.80	35.000	40	0.49	60	0.09
0068418S	0.95	0.95	35.000	40	0.65	60	0.09
0068419	1.4	1.4	35.000	40	0.8	60	0.1
0068419L	1.4	1.4	30.000	40	0.8	60	0.1
0068419X	1.4	1.4	32.000	40	0.8	60	0.1
0068420	2.0	2.0	35.000	40	1.0	60	0.2
0068420L	2.0	2.0	30.000	40	1.0	60	0.2
0068420X	2.0	2.0	32.000	40	1.0	60	0.2
0068450	6.0	6.0	25.000	40	1.9	55	0.7
0068450A	8.0	8.0	25.000	40	3.0	55	1.55
0068451	4.0	4.08	25.000	40	1.97	60	0.5
0068451A	8.0	8.0	25.000	40	3.0	60	1.6
0068451L	4.0	4.08	22.000	40	1.97	60	0.5
0068451X	4.0	4.08	24.000	40	1.97	60	0.5
0068452	6.0	5.95	25.000	40	2.98	80	1.3

# DATRON Thread Mill

- Micrograin solid carbide thread mill
- with four flutes
- shank without clamping surface DIN 6535-HA

With this tool, threads from M1.0 onwards can be milled directly with an HF spindle. Threads no longer need to be machined outside the high-speed milling machine.



Art. No.	Thread	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	$\alpha$ Degree
0068418	M1.0 - M1.2	0.8	3.0	0.49	40.0	0.09	3.0	60
0068418L	M1.0 - M1.2	0.8	3.0	0.49	40.0	0.09	6.0	60
0068418S	M1.4	0.95	3.0	0.65	40.0	0.09	3.0	60
0068419	M1.6 - M2.5	1.4	3.0	0.9	40.0	0.1	6.0	60
0068419L	M1.6 - M2.5	1.4	3.0	0.9	40.0	0.1	10.0	60
0068419X	M1.6 - M2.5	1.4	3.0	0.9	60.0	0.1	6.0	60
0068420	M2.5 - M4	2.0	3.0	1.0	40.0	0.2	8.0	60
0068420L	M2.5 - M4	2.0	3.0	1.0	40.0	0.2	12.0	60
0068420X	M2.5 - M4	2.0	3.0	1.0	50.0	0.2	8.0	60
0068451	M5 - M10	4.0	6.0	2.0	50.0	0.5	12.0	60
0068451L	M5 - M10	4.0	6.0	2.0	50.0	0.5	16.0	60
0068451X	M5 - M10	4.0	6.0	2.0	60.0	0.5	30.0	60
0068451A	M10 - M36	8.0	6.0	3.0	50.0	1.6	12.0	60
0068450	Whitworth < 1/2"	6.0	6.0	3.0	50.0	0.7	12.0	55
0068450A	Whitworth > 1/2"	8.0	6.0	3.0	50.0	1.55	12.0	55
0068452	PG7 - PG48	6.0	6.0	3.0	50.0	1.3	12.0	80

# Milling Thread Mill Parameters Tool Database

Recommended milling thread mill parameters in the DATRON tool database

Art. No.	Nominal Dia	Actual Dia	RPM	C	D2	A/R	L2
0068419A	2.0	2.0	45.000	40	1.34	60	0.2
0068420A	3.0	3.0	40.000	40	1.97	60	0.3
0046454	6.0	5.95	33.000	40	4.14	80	1.2
0068454A	6.0	5.95	33.000	40	2.75	60	1.2
0068456	4.8	4.6	25.000	40	3.35	60	0.5
0068457	6.0	5.95	25.000	40	4.0	60	0.5
0068458	8.0	7.95	25.000	40	5.4	60	0.5

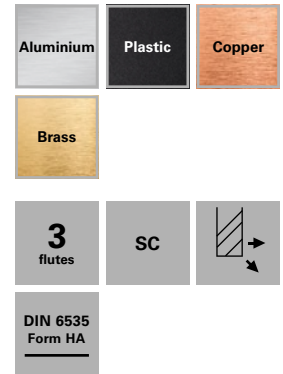
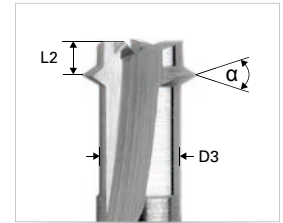
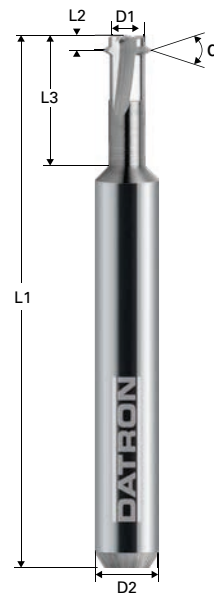




# DATRON Milling Thread Mill

- Micrograin solid carbide milling thread mill
- with three flutes
- shank without clamping surface DIN 6535-HA

Specially effective thread milling can be done with the innovative milling thread mill from DATRON. With this tool the centre hole and milling thread can be machined at one time. This special tool is legally protected by a utility patent.



Art. No.	Threads	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	$\alpha$ Degree
0068419A	M2.5 - M3	1.4	3.0	1.4	40.0	1.0	8.0	60
0068420A	M4 - M5	2.1	3.0	2.1	40.0	1.0	10.0	60
0068456	M6	3.3	6.0	3.5	50.0	1.3	12.0	60
0068457	M8 - M10	3.9	6.0	4.0	50.0	2.0	12.0	60
0068458	M12 - M16	5.2	6.0	5.4	50.0	2.0	12.0	60
0068454	PG7 - PG 48	4.0	6.0	4.2	50.0	2.5	12.0	80
0068454A	metric cable thread	3.9	6.0	4.0	50.0	2.5	12.0	60

# Multi Thread Mill Parameters Tool Database

Recommended multi thread mill parameters in the DATRON tool database

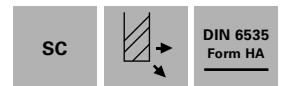
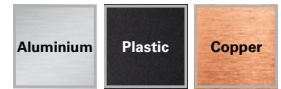
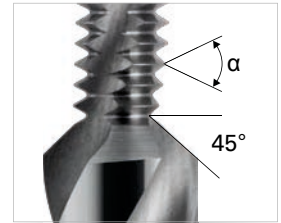
Art. No.	Nominal Dia	Actual Dia	RPM	Threads	D2	A/R	L2
00684503	2.3	2.3	21.200	M3	0	60	0
00684544	3.0	2.98	14.300	M4	0	60	0
00684555	3.8	3.72	12.800	M5	0	60	0
00684566	4.5	4.48	10.850	M6	0	60	0
00684568	6.1	6.0	8.000	M8	0	60	0



# DATRON Multi Thread Mill

- Micrograin solid carbide multi thread mill
- shank without clamping surface DIN 6535-HA
- with 45° countersink section

The multi-toothing of this tool allows a complete thread cut within one helix. This way, threads can be produced in an optimum amount of time and extremely efficiently. The integrated 45° countersink chamfer is for automatic deburring.



Art. No.	Threads	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	$\alpha$ Degree
00684503	M3	2.3	6.0	50.0	8.0	60
00684504	M4	3.0	6.0	50.0	8.0	60
00684544	M4	3.0	6.0	50.0	12.0	60
00684505	M5	3.8	6.0	50.0	12.0	60
00684555	M5	3.8	6.0	50.0	16.0	60
00684506	M6	4.5	8.0	50.0	12.0	60
00684566	M6	4.5	8.0	50.0	16.0	60
00684508	M8	6.0	10.0	50.0	12.0	60
00684588	M8	6.0	10.0	50.0	16.0	60



# DATRON Ball Nose End Mill, External Radius End Mill, Slotting Mill and Dovetail Milling Tool

Especially designed for 3D machining, DATRON's ball nose end mills are offered in several versions. In addition to one, two and four flute versions, exclusive polished variants as well as micro-versions are available, exclusive from DATRON.

Wood

Gold

Silver

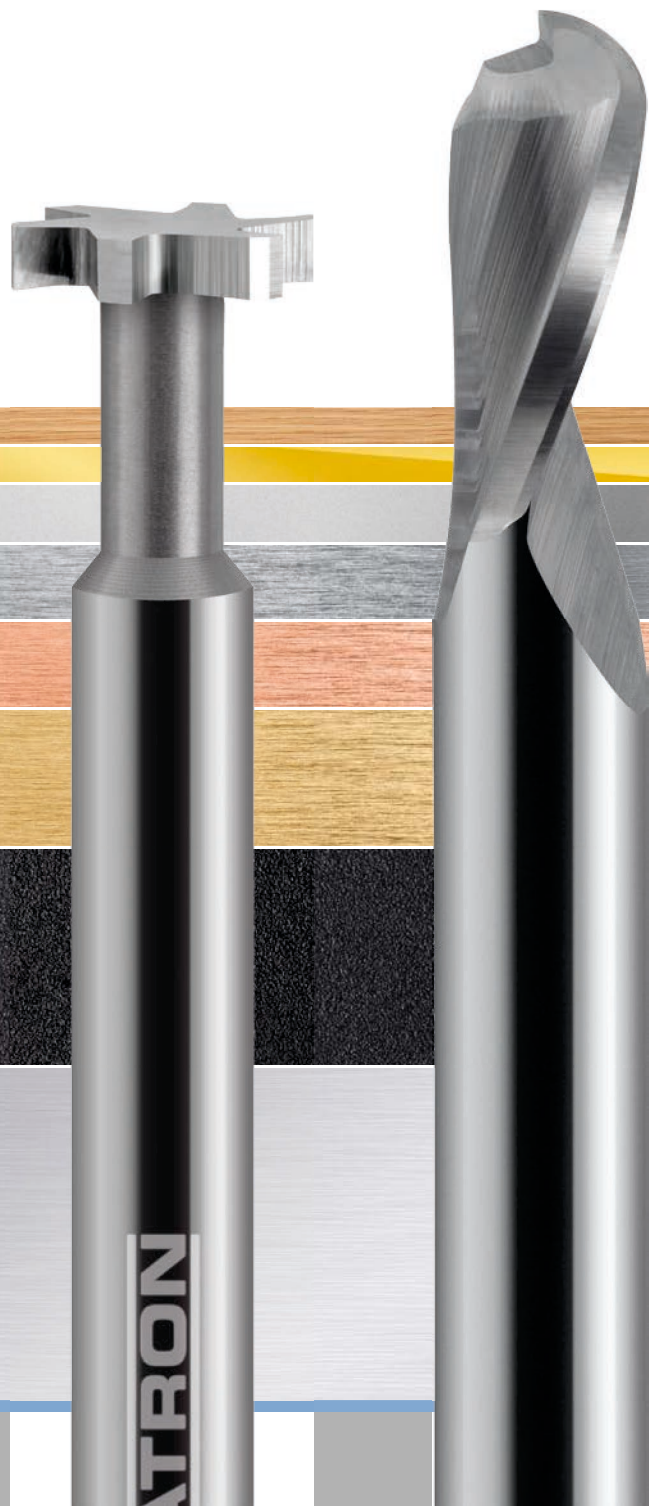
Steel

Copper

Brass

Plastic

Aluminium



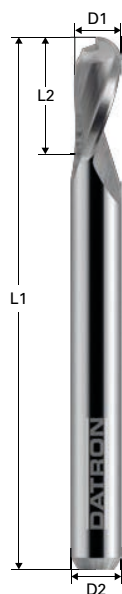
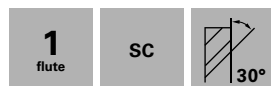
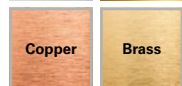
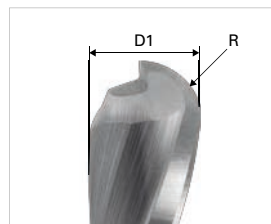
DATRON Ball Nose End Mill, External Radius End Mill, Slotting Mill and Dovetail Milling Tool



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# DATRON Ball Nose End Mill, One Flute



- Micrograin solid carbide end mill
- with single flute and radius bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA

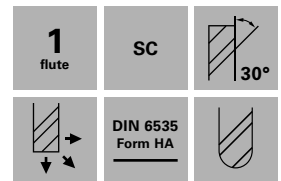
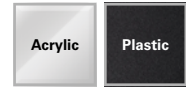
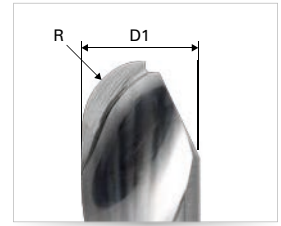
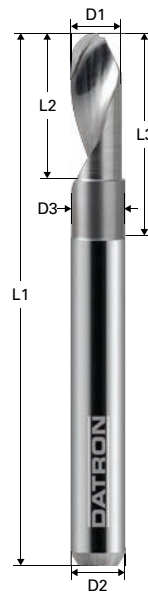
With this specially ground milling tool, with a small flute and ball nose end very outstanding results can be performed with high feed rates in the material. The large chip groove allows for optimal chip removal and an excellent surface finish.

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	R (mm)
0068171E	1.0	3.0	40.0	4.0	0.5
0068172E	2.0	6.0	50.0	7.0	1.0
0068173E	3.0	6.0	50.0	8.0	1.5
0068174E	4.0	6.0	50.0	10.0	2.0
0068175E	5.0	6.0	50.0	12.0	2.5
0068176E	6.0	6.0	50.0	14.0	3.0
0068178E	8.0	8.0	60.0	14.0	4.0
0068179E	10.0	10.0	60.0	20.0	5.0

# DATRON Ball Nose End Mill, Polished, One Flute

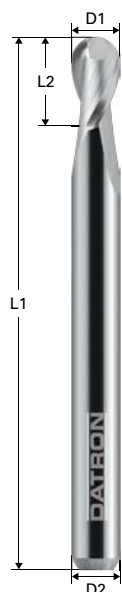
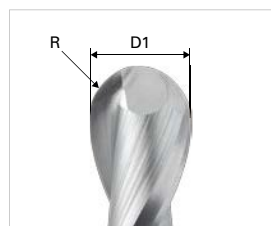
- Micrograin solid carbide end mill
- with single flute and radius bottom
- 30° upcut spiral
- shank without clamping surface DIN 6535-HA
- with polished cutting edge

Specially designed for 3D machining of transparent plastics. The extremely sharp cutting geometry with a polishing cut ensures highest-quality surface results, the cutting construction allows still higher material feed rates, which significantly shortens production times.

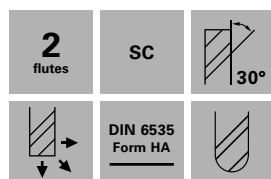


Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	R (mm)
0068191E	1.00	6.00	0.95	50.00	4.00	12.00	0.5
0068191S	1.50	6.00	1.45	50.00	5.00	12.00	0.75
0068192E	2.00	6.00	1.95	50.00	6.00	20.00	1.0
0068192S	2.50	6.00	2.45	50.00	7.00	20.00	1.25
0068193E	3.00	6.00	2.95	50.00	8.00	21.00	1.5
0068194E	4.00	6.00	3.95	50.00	10.00	21.00	2.0
0068195E	5.00	6.00	4.95	50.00	12.00	22.00	2.5
0068196E	6.00	6.00	5.95	50.00	14.00	22.00	3.0

# DATRON Ball Nose End Mill, Double Flute



- Micrograin solid carbide ball nose end mill
- with two flutes
- 30° upcut spiral
- centre cut
- shank without clamping surface DIN 6535-HA



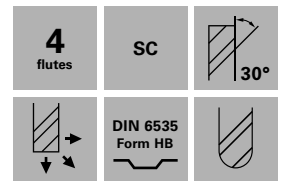
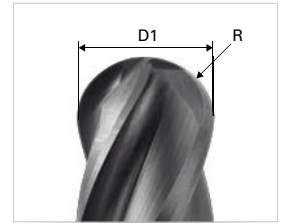
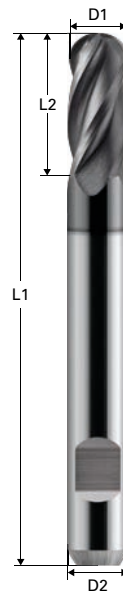
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT	R (mm)
00684003	0.3	3.0	40.0	0.5		0.15
00684004	0.4	3.0	40.0	1.2	x	0.2
00684005	0.5	3.0	40.0	0.8		0.25
00684010	0.5	3.0	40.0	1.5	x	0.25
00684006	0.6	3.0	40.0	1.8	x	0.3
00684007	0.7	3.0	40.0	2.1		0.35
00684008	0.8	3.0	40.0	2.4	x	0.4
0068400	1.0	3.0	40.0	3.0		0.50
00684015	1.5	3.0	40.0	3.0	x	0.75
0068402	2.0	3.0	40.0	4.0	x	1.0
00684025	2.5	3.0	40.0	5.0	x	1.25
0068401	3.0	3.0	40.0	6.0	x	1.5
0068403	3.0	6.0	50.0	4.0		1.5
0068404	4.0	6.0	50.0	5.0		2.0
0068405	5.0	6.0	50.0	8.0		2.5
0068406	6.0	6.0	50.0	10.0		3.0
0068408	8.0	8.0	50.0	12.0		4.0

CT = Alcrona Coating



# DATRON Ball Nose End Mill, Four Flutes, Short Version

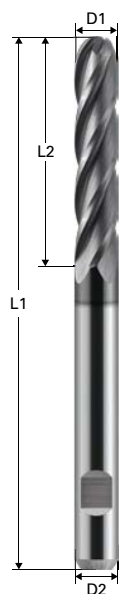
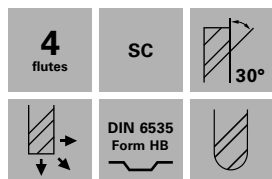
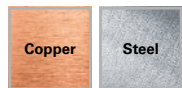
- Micrograin solid carbide ball nose end mill
- with four flutes
- 30° upcut spiral
- centre cut, full radius
- shank with clamping surface DIN 6535-HB
- with Alcrona coating



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT	R (mm)
0078542	2.0	6.0	57.0	6.0	x	1.0
0078543	3.0	6.0	57.0	8.0	x	1.5
0078544	4.0	6.0	57.0	11.0	x	2.0
0078545	5.0	6.0	57.0	13.0	x	2.5
0078546	6.0	6.0	57.0	13.0	x	3.0
0078548	8.0	8.0	63.0	19.0	x	4.0
0078550	10.0	10.0	72.0	22.0	x	5.0
0078552	12.0	12.0	83.0	26.0	x	6.0
0078554	14.0	14.0	83.0	26.0	x	7.0
0078556	16.0	16.0	92.0	32.0	x	8.0
0078558	18.0	18.0	92.0	32.0	x	9.0
0078560	20.0	20.0	104.0	38.0	x	10.0

CT = Alcrona Coating

# DATRON Ball Nose End Mill, Four Flutes, Long Version



- Micrograin solid carbide ball nose end mill
- with four flutes
- 30° upcut spiral
- centre cut, full radius
- shank with clamping surface DIN 6535-HB
- with Alcrona Coating

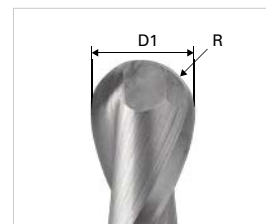
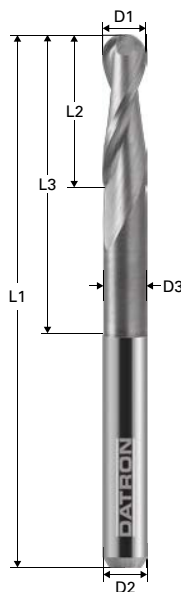
Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	CT	R (mm)
0078543A	3.0	6.0	57.0	20.0	x	1.5
0078544A	4.0	6.0	57.0	20.0	x	2.0
0078545A	5.0	6.0	75.0	30.0	x	2.5
0078546A	6.0	6.0	75.0	30.0	x	3.0
0078548A	8.0	8.0	75.0	30.0	x	4.0
0078550A	10.0	10.0	75.0	30.0	x	5.0
0078552A	12.0	12.0	100.0	45.0	x	6.0
0078554A	14.0	14.0	100.0	45.0	x	7.0
0078556A	16.0	16.0	100.0	45.0	x	8.0
0078558A	18.0	18.0	100.0	45.0	x	9.0
0078560A	20.0	20.0	100.0	45.0	x	10.0

CT = Alcrona Coating

# DATRON Ball Nose End Mill, Two Flutes with Toric Cut

- Micrograin solid carbide ball nose end mill
- with two flutes
- 30° upcut spiral
- centre cut
- toric cut
- shank without clamping surface DIN 6535-HA

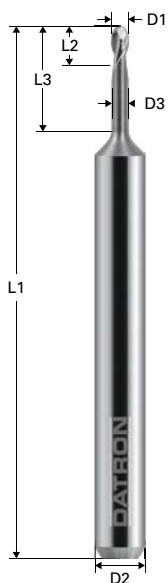
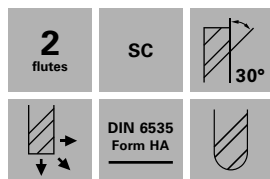
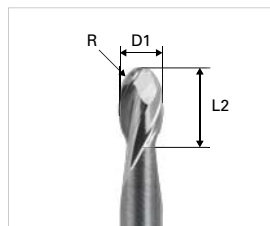
Thanks to the toric cut of the shaft the work piece can be machined more deeply.



Aluminium	Gold	Wood
Plastic	Copper	Brass
2 flutes	SC	30°
DIN 6535 Form HA		

Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	R (mm)
0078502	2.0	6.0	1.8	75.0	5.0	20.0	1.0
0078503	3.0	6.0	2.8	75.0	6.0	20.0	1.5
0078504	4.0	6.0	3.8	75.0	8.0	20.0	2.0
0078505	5.0	6.0	4.8	100.0	20.0	40.0	2.5
0078506	6.0	6.0	5.8	100.0	20.0	40.0	3.0
0078508	8.0	8.0	7.8	100.0	20.0	40.0	4.0
0078510	10.0	10.0	9.8	100.0	20.0	40.0	5.0
0078510A	10.0	10.0	9.8	150.0	20.0	60.0	5.0
0078512	12.0	12.0	11.7	100.0	20.0	40.0	6.0
0078512A	12.0	12.0	11.7	150.0	20.0	60.0	6.0
0078516	16.0	16.0	15.7	150.0	30.0	70.0	8.0
0078518	18.0	18.0	17.7	150.0	30.0	70.0	9.0
0078520	20.0	20.0	19.7	150.0	30.0	80.0	10.0

# DATRON Micro Ball Nose End Mill with Toric Cut



- Micrograin solid carbide ball nose end mill
- with two flutes
- 30° upcut spiral
- centre cut
- toric cut
- shank without clamping surface DIN 6535-HA

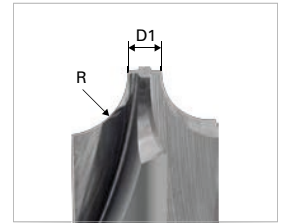
Thanks to the toric cut of the shaft the work piece can be machined more deeply.

Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	R (mm)
00782004	0.4	3.0	0.35	40.0	0.60	2	0.2
00782005	0.5	3.0	0.45	40.0	0.75	4	0.25
00782006	0.6	3.0	0.55	40.0	0.90	4	0.3
00782008	0.8	3.0	0.75	40.0	1.20	6	0.4
00782010	1.0	3.0	0.95	40.0	1.50	6	0.5
00782011	1.0	3.0	0.95	40.0	1.50	9	0.5
00782012	1.2	3.0	1.15	40.0	1.80	9	0.6
00782015	1.5	3.0	1.45	40.0	2.20	9	0.75
00782020	2.0	3.0	1.95	40.0	3.0	12	1.0

# DATRON External Radius End Mill

- Micrograin solid carbide external radius end mill
- with two flutes or up to four flutes
- with specially cut edges for the machining of external edges
- shank without clamping surface DIN 6535-HA

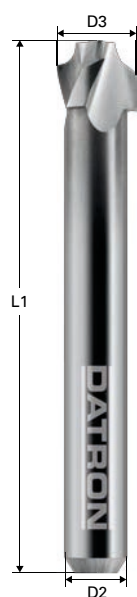
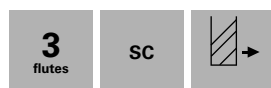
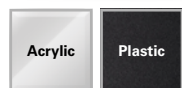
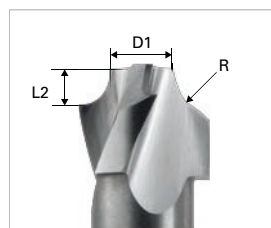
This end mill is specially designed for the optimum machining of external radii.



Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	R (mm)	F
0068410	5.0	6.0	6.0	50.0	0.5	0.5	2
0068411	4.0	6.0	6.0	50.0	1.0	1.0	2
00684115	3.0	6.0	6.0	50.0	1.5	1.5	2
0068412	2.0	6.0	6.0	50.0	2.0	2.0	2
00684125	3.0	6.0	8.0	50.0	2.5	2.5	4
0068413	4.0	6.0	10.0	50.0	3.0	3.0	4
00684135	4.0	6.0	11.0	50.0	3.5	3.5	4
0068414	4.0	6.0	12.0	50.0	4.0	4.0	4
00684145	3.0	6.0	12.0	50.0	4.5	4.5	4
0068415	3.0	6.0	13.0	50.0	5.0	5.0	4
0068416	4.0	6.0	16.0	50.0	6.0	6.0	4

F = Number of Flutes

# DATRON External Radius End Mill, Polished



- Micrograin solid carbide external radius end mill
- with three flutes
- with specially cut edges for the machining of external edges
- shank without clamping surface DIN 6535-HA
- with polished cutting edge

The external radius end mill especially developed for acrylic has an extremely sharp cutting geometry with a polishing cut and is therefore ideally suited for creating transparent edge rounding.

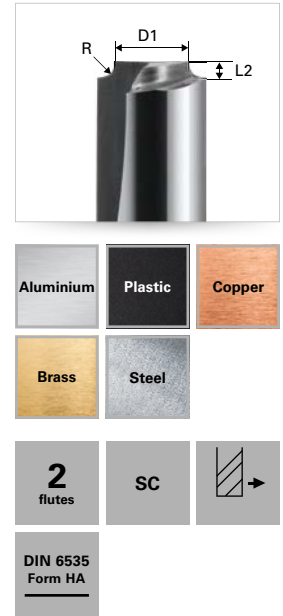
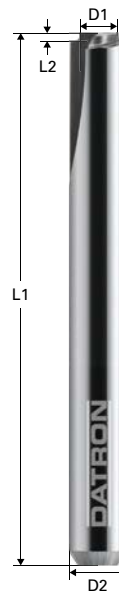
Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	R (mm)	F
00685710	4.00	6.00	6.00	50.00	1.00	1.00	3
00685715	5.00	6.00	8.00	50.00	1.50	1.50	3
00685720	4.00	6.00	8.00	50.00	2.00	2.00	3
00685725	5.00	6.00	10.00	50.00	2.50	2.50	3
00685730	4.00	6.00	10.00	50.00	3.00	3.00	3

F = Number of Flutes

# DATRON Deburring End Mill, Two Flutes

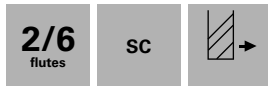
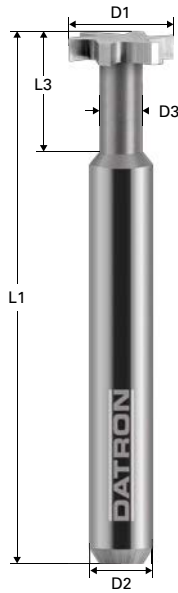
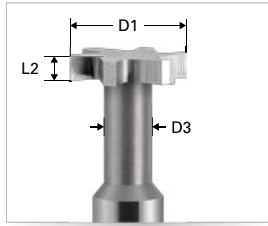
- Micrograin solid carbide external radius end mill
- with two flutes
- with specially cut edges for the machining of external edges
- shank without clamping surface DIN 6535-HA

These outer radius end mills were specifically designed for the automated deburring of counter plate grooves. The tools have a uniform outer radius of 0.3 mm. With face diameters between 0.9 and 2.4 mm all standard counter plate groove widths are covered. The flute geometry optimised for steel machining guarantees excellent cutting results with excellent durability.



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	R (mm)
00784908	0.8	3.0	40.0	0.3	0.3
00784909	0.9	3.0	40.0	0.3	0.3
00784910	1.0	3.0	40.0	0.3	0.3
00784911	1.1	3.0	40.0	0.3	0.3
00784912	1.2	3.0	40.0	0.3	0.3
00784913	1.3	3.0	40.0	0.3	0.3
00784914	1.4	3.0	40.0	0.3	0.3
00784915	1.5	3.0	40.0	0.3	0.3
00784916	1.6	3.0	40.0	0.3	0.3
00784917	1.7	3.0	40.0	0.3	0.3
00784918	1.8	3.0	40.0	0.3	0.3
00784919	1.9	3.0	40.0	0.3	0.3
00784920	2.0	3.0	40.0	0.3	0.3
00784921	2.1	3.0	40.0	0.3	0.3
00784922	2.2	3.0	40.0	0.3	0.3
00784923	2.3	3.0	40.0	0.3	0.3
00784924	2.4	3.0	40.0	0.3	0.3

# DATRON T-Slotting Mill



- Micrograin solid carbide T-slotting mill
- with two flutes or up to six flutes
- shank without clamping surface DIN 6535-HA

These special tools allow machining T-slots and lateral slots on contour surfaces. Thus, re-clamping operations can be reduced and production times shortened.

Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	F
0068425	3.0	3.0	1.6	40.0	0.8	6.0	2
0068424D	6.0	6.0	3.0	50.0	2.8	8.0	4
0068424L	8.0	6.0	3.5	50.0	0.7	6.0	4
0068424K	8.0	6.0	3.5	50.0	1.0	6.0	4
0068424	8.0	6.0	3.5	50.0	1.3	6.0	4
0068424S	8.0	6.0	3.5	50.0	4.5	9.0	4
0068424A	8.0	8.0	3.5	50.0	1.3	6.0	4
0068423	10.0	6.0	4.0	50.0	2.0	12.0	4
0068423A	10.0	6.0	4.0	50.0	2.0	12.0	6
0068426	15.0	6.0	6.0	50.0	3.0	25.0	4

F = Number of Flutes

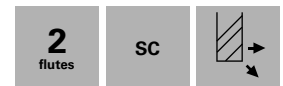
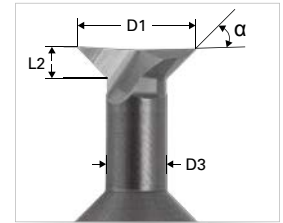
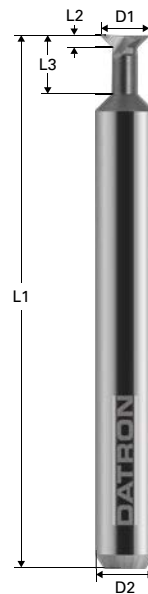


# DATRON Dovetail Milling Tool

- Micrograin solid carbide dovetail milling tool
- with two flutes
- shank without clamping surface DIN 6535-HA

The double-edged special milling tools are excellently suited for producing dovetail grooves and rear-side deburring or chamfering of the bottom sides of work pieces.

This minimises reclamping operations and reduces production times.



Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	$\alpha$ Degree
0068290	3.0	3.0	2.0	40.0	3.0	6.0	5
0068783	3.0	3.0	2.0	40.0	0.87	6.0	30
0068783A	3.0	3.0	2.0	40.0	0.5	6.0	45
0068783B	3.0	3.0	2.0	40.0	0.29	6.0	60
0068690	3.175	3.175	2.0	40.0	3.0	6.0	5
0068784	4.0	6.0	2.0	50.0	1.73	6.0	30
0068784A	4.0	6.0	2.0	50.0	1.0	6.0	45
0068784B	4.0	6.0	2.0	50.0	0.58	6.0	60
0068785	5.0	6.0	2.5	50.0	2.17	6.0	30
0068785A	5.0	6.0	2.5	50.0	1.25	6.0	45
0068785B	5.0	6.0	2.5	50.0	0.72	6.0	60
0068291	6.0	6.0	5.0	50.0	6.0	6.0	5
0068786	6.0	6.0	3.0	50.0	2.6	6.0	30
0068786A	6.0	6.0	3.0	50.0	1.5	6.0	45
0068786B	6.0	6.0	3.0	50.0	0.87	6.0	60



# DATRON Standard Engraving Tool, Countersink Tool and Cutting Diamond

Engraving, deburring and chamfering. Now the DATRON engraving tool is also available as a balanced model and for steel machining.



Wood

Gold

Silver

Steel

Copper

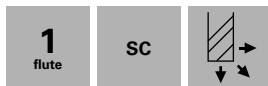
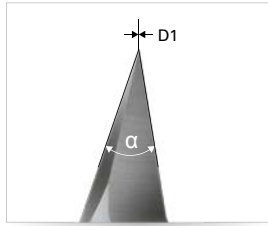
Brass

Plastic

Aluminium



# DATRON Standard Engraving Tool



DIN 6535  
Form HA



- Micrograin solid carbide engraving tool
- with single flute
- conic tool tip
- shank without clamping surface DIN 6535-HA

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	α Degree
0068278	0.05	3.0	40.0	20
0068279	0.1	3.0	40.0	20
0068679	0.1	3.175	40.0	20
0068270	0.1	4.0	40.0	20
0068279A	0.1	3.0	40.0	30
0068679A	0.1	3.175	40.0	30
0068273	0.1	4.0	40.0	30
0068283	0.1	6.0	50.0	30
0068278A	0.2	3.0	40.0	20
0068279B	0.2	3.0	40.0	30
0068283D	0.2	6.0	50.0	30
0068283E	0.3	6.0	50.0	30
0068283F	0.4	6.0	50.0	30
0068283G	0.6	6.0	50.0	30
0068283L	0.1	6.0	50.0	40
0068280	0.1	3.0	40.0	40
0068680	0.1	3.175	40.0	40
0068274	0.1	4.0	40.0	40
0068280B	0.2	3.0	40.0	40
0068280D	0.5	3.0	40.0	40
0068280A	0.1	3.0	40.0	45
0068284B	0.05	6.0	50.0	20
0068284C	0.1	6.0	50.0	20

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	α Degree
0068284D	0.2	6.0	50.0	20
0068284F	0.4	6.0	50.0	20
0068681	0.1	3.175	40.0	60
0068276	0.1	4.0	40.0	60
0068281	0.1	3.0	40.0	60
0068281A	0.2	3.0	40.0	60
0068285	0.1	6.0	50.0	50
0068285A	0.1	6.0	50.0	60
0068285D	0.2	6.0	50.0	60
0068285E	0.3	6.0	50.0	60
0068285F	0.4	6.0	50.0	60
0068282	0.1	3.0	40.0	90
0068682	0.1	3.175	40.0	90
0068277	0.1	4.0	40.0	90
0068286	0.1	6.0	50.0	90
0068286G*	0.1	6.0	50.0	90
0068287	0.1	6.0	50.0	120
0068284	3.0	3.0	40.0	180
0068288	6.0	6.0	50.0	180
0068293	Regrind service*	3.0	40.0	
0068296	Regrind service*	6.0	50.0	
0068298	Diamond hand lap			

\* Minimum 20 pieces, per piece

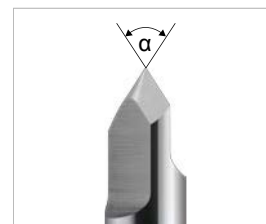
\* with balanced tool tip



# DATRON Standard Engraving Tool, Specially Balanced

- Micrograin solid carbide engraving tool
- with single flute
- conic tool tip
- shank without clamping surface DIN 6535-HA
- with counter-balancing cut

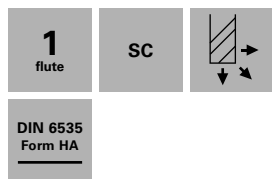
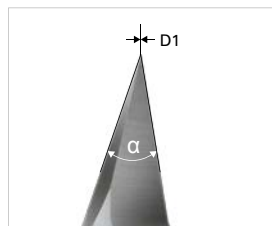
DATRON standard engraving tools are designed for engraving in aluminium, non-ferrous metals and plastics. The variants with patented counter-balancing cut allow high-speed applications without vibrations.



Aluminium	Gold	Plastic
Copper	Brass	Wood
1 flute	SC	
DIN 6535 Form HA		

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	α Degree
0068282G	0.10	6.00	50.00	30
0068284G	0.10	6.00	50.00	40
0068285G	0.10	6.00	50.00	60
0068286G	0.10	6.00	50.00	90

# DATRON Standard Engraving Tool for Steel Engraving



- Micrograin solid carbide engraving tool
- with single flute
- shank without clamping surface DIN 6535-HA
- for Steel engraving

DATRON's engraving tools for steel machining are clearly designed with a reinforced cutting geometry and achieve highest durability.

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	α Degree
0068510	0.1	6.0	50.0	20
0068511	0.1	6.0	50.0	30
0068512	0.1	6.0	50.0	40
0068513	0.1	6.0	50.0	60
0068514	0.1	6.0	50.0	90
0068510A	0.2	6.0	50.0	20
0068511A	0.2	6.0	50.0	30
0068512A	0.2	6.0	50.0	40
0068513A	0.2	6.0	50.0	60
0068514A	0.2	6.0	50.0	90

# DATRON Standard Engraving Tool for Hard-Metal Machining

- Micrograin solid carbide engraving tool
- with single flute
- shank without clamping surface DIN 6535-HA
- for Steel engraving
- with reinforced flutes

These engraving tools developed for hard-metal machining have a standard special coating, an extremely short halving and reinforced support geometry. Thus it is also possible to achieve cost-effective machining in standard times even with the hardest materials.

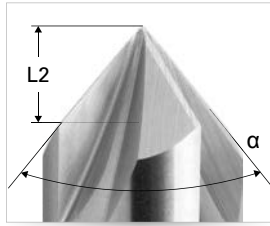


1 flute	SC	
DIN 6535 Form HA		

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	α Degree	CT
0068520	0.10	4.00	40.00	30	x
0068520A	0.20	4.00	40.00	30	x
0068521	0.10	4.00	40.00	45	x
0068521A	0.20	4.00	40.00	45	x

CT = X.CEED Coating

# DATRON Countersink Tool



DIN 6535  
Form HA

- Micrograin solid carbide countersink tool
- with two flutes or up to four flutes
- shank without clamping surface DIN 6535-HA

These mould tools allow machining countersinks and chamfers with highest surface quality. The deeply cut chip chambers guarantee optimum chip evacuation and allow high feed rates.

Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	$\alpha$ Degree	F
0068478A	3.0	3.0	40.0	2.5	60	2
0068478	3.0	3.0	40.0	1.5	90	2
0068479B	6.0	6.0	50.0	8.5	40	3
0068480B	6.0	6.0	50.0	5.1	60	3
0068479C	6.0	6.0	50.0	3.2	70	3
0068479	6.0	6.0	50.0	3.0	90	3
0068479A	6.0	6.0	50.0	1.7	120	3
0068479D	6.0	6.0	50.0	2.8	140	3
0068480	8.0	6.0	50.0	4.0	90	3
0068480A	8.0	6.0	50.0	2.3	120	3
0068480C	8.0	6.0	50.0	3.3	100	3
0068483	10.0	6.0	50.0	5.0	90	3
0068483B	10.0	10.0	50.0	5.0	90	3
0068483A	10.0	6.0	50.0	2.8	120	4
0068483E	12.0	6.0	50.0	3.4	120	4
0068483D	12.0	8.0	50.0	4.0	90	4
0068483H	14.0	8.0	50.0	7.0	90	4

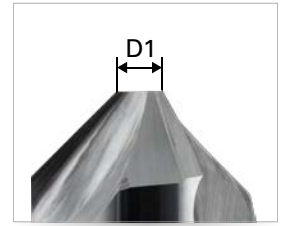
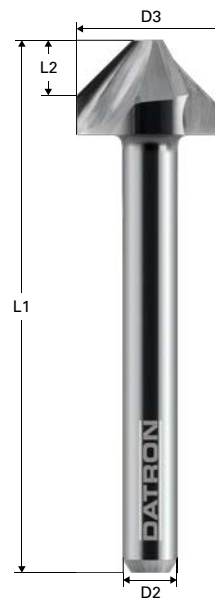
F = Number of Flutes



# DATRON Countersink Tool for Foam

- Micrograin solid carbide countersink tool
- with three flutes
- shank without clamping surface DIN 6535-HA

The new foam mills, besides having finely polished cutters also feature chip channels adjusted for PU foam machining. In addition, DATRON especially perfected the special blade geometries and helix angles of the foam tool series.

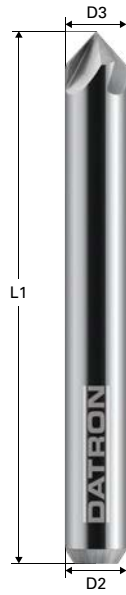
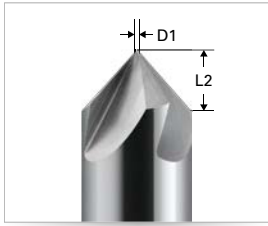


<b>3</b> flutes	<b>SC</b>	
<b>DIN 6535</b> Form HA		

Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	F
0068485C	4.00	6.00	10.00	50.00	3.00	3
0068485D	4.00	6.00	12.00	50.00	4.00	3
0068485E	4.00	6.00	14.00	50.00	5.00	3
0068485F	4.00	6.00	16.00	50.00	6.00	3

F = Number of Flutes

# DATRON Countersink Tool for Acrylic



- Micrograin solid carbide countersink tool
- with three or six flutes
- shank without clamping surface DIN 6535-HA
- with polished cutting edge

The especially developed countersink for acrylic machining has an extremely sharp cutting geometry with a polishing cut for high-quality chamfers and countersinks, as well as 15° helixes and large chip chambers for optimal chip evacuation.

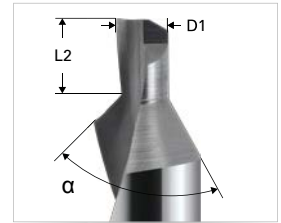
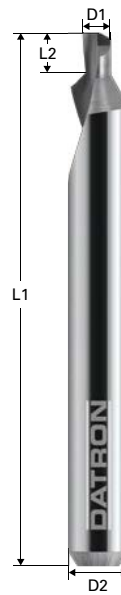
Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	F
00685806	0.10	6.00	6.00	50.00	3.00	6
00685808	0.10	6.00	8.00	50.00	4.00	6
00685810	4.00	6.00	10.00	50.00	3.00	3
00685812	4.00	6.00	12.00	50.00	4.00	3
00685814	4.00	6.00	14.00	50.00	5.00	3
00685816	4.00	6.00	16.00	50.00	6.00	3

F = Number of Flutes

# DATRON Milling Countersink Tool

- Micrograin solid carbide milling countersink tool
- with single flute
- centre cut
- shank without clamping surface DIN 6535-HA

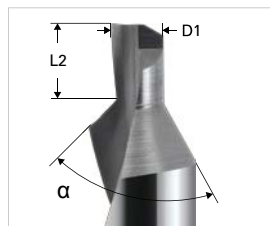
This combination tool has a cylindrical milling range, as well as a conical countersink part. The groove and chamfer can be realized in only one work step. This way, the tool change can be omitted, which reduces the production time.



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	$\alpha$ Degree
0068772	2.0	6.0	50.0	1.9	90
0068772A	2.0	6.0	50.0	2.9	90
0068772B	2.0	6.0	50.0	4.9	90
0068772D	2.0	6.0	50.0	1.0	90
0068772E	2.0	6.0	50.0	1.5	90
0068772F	2.0	6.0	50.0	2.5	90
0068772G	2.0	6.0	50.0	4.0	90
0068773	3.0	6.0	50.0	2.9	90
0068773A	3.0	6.0	50.0	3.9	90
0068773B	3.0	6.0	50.0	4.9	90
0068773D	3.0	6.0	50.0	1.0	90
0068773E	3.0	6.0	50.0	1.5	90
0068773F	3.0	6.0	50.0	2.5	90
0068773 G	3.0	6.0	50.0	2.0	90
0068774	4.0	6.0	50.0	2.9	90
0068774A	4.0	6.0	50.0	3.9	90
0068774B	4.0	6.0	50.0	5.0	90
0068774D	4.0	6.0	50.0	1.0	90
0068774E	4.0	6.0	50.0	1.5	90
0068774F	4.0	6.0	50.0	2.5	90
0068774G	4.0	6.0	50.0	2.0	90

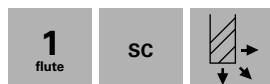
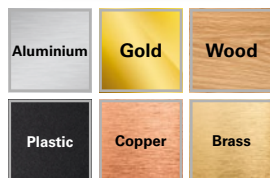
Continued on next page

# DATRON Milling Countersink Tool



- Micrograin solid carbide milling countersink tool
- with single flute
- centre cut
- shank without clamping surface DIN 6535-HA

This combination tool has a cylindrical milling range, as well as a conical countersink part. The groove and chamfer can be realized in only one work step. This way, the tool change can be omitted, which reduces the production time.

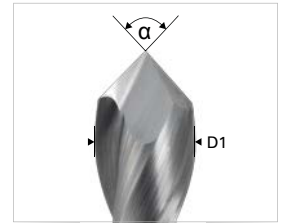
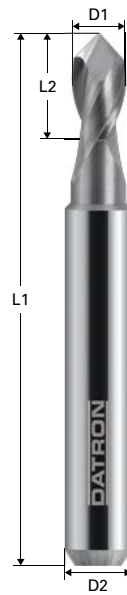


Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	$\alpha$ Degree
0068775D	5.0	6.0	50.0	1.0	90
0068775E	5.0	6.0	50.0	1.5	90
0068775G	5.0	6.0	50.0	2.0	90
0068775F	5.0	6.0	50.0	2.5	90
0068775	5.0	6.0	50.0	3.0	90
0068775A	5.0	6.0	50.0	4.0	90
0068775B	5.0	6.0	50.0	5.0	90

# DATRON V-Slotting End Mill

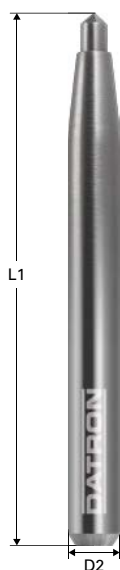
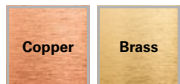
- Micrograin solid carbide V-groove end mill
- with two flutes
- centre cut
- shank without clamping surface DIN 6535-HA

The particular advantage of these special tools lies in their over centre cutting face geometry. This allows not only making of chamfers and countersinks but also the milling of V-Slots, which are needed especially in bending technology applications.



Art. No.	D1 (mm)	D2 (mm)	L1 (mm)	L2 (mm)	$\alpha$ Degree
0068795	5.0	6.0	50.0	10.0	90
0068795A	5.0	6.0	50.0	10.0	60
0068795B	5.0	6.0	50.0	10.0	120
0068796	6.0	8.0	58.0	12.0	90
0068796A	6.0	8.0	58.0	12.0	60
0068796B	6.0	8.0	58.0	12.0	120
0068798	8.0	10.0	70.0	16.0	90
0068798A	8.0	10.0	70.0	16.0	60
0068798B	8.0	10.0	70.0	16.0	120

# DATRON Cutting Diamond



This towing tool is used without rotary speed. A tip angle of 90° should be chosen for engravings on workpieces with curved surface. Otherwise, a tip angle of 120° is recommended.

Art. No.	Article Description	L1 (mm)	D2 (mm)	α Degree
0068501	Cutting Diamond, spring-mounted 90	60	6.0	90
0068502	Cutting Diamond, spring-mounted 120	60	6.0	120

# DATRON Face Milling Tool

Highly efficient face milling with HSK interface and replaceable cutting inserts.



Gold

Silver

Copper

Brass

Plastic

Aluminium

DATRON Face Milling Tool



Order Hotline:  
+49 (0) 61 51 - 14 19 - 133

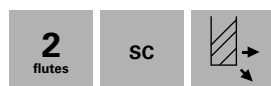
Tools Consultancy:  
+49 (0) 61 51 - 14 19 - 480

# DATRON Face Milling Tool



- Monoblock tool
- with two replaceable cutting inserts
- based on HSK

This HSK-E 25 based monoblock tool has been developed for highly efficient milling over. The required penetration angle is 3-5°. Solid carbide replaceable cutting inserts are available for various materials.



Art. No.	D1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	R (mm)
0078920	20.0	40.0	10.0	15.0	0.8

Art. No.	Article Description	for Face Milling Tool	R (mm)	Material
0078920A	Cutting insert (polished)	0078920	0.8	Aluminium
0078920B	Cutting insert	0078920	0.8	Steel

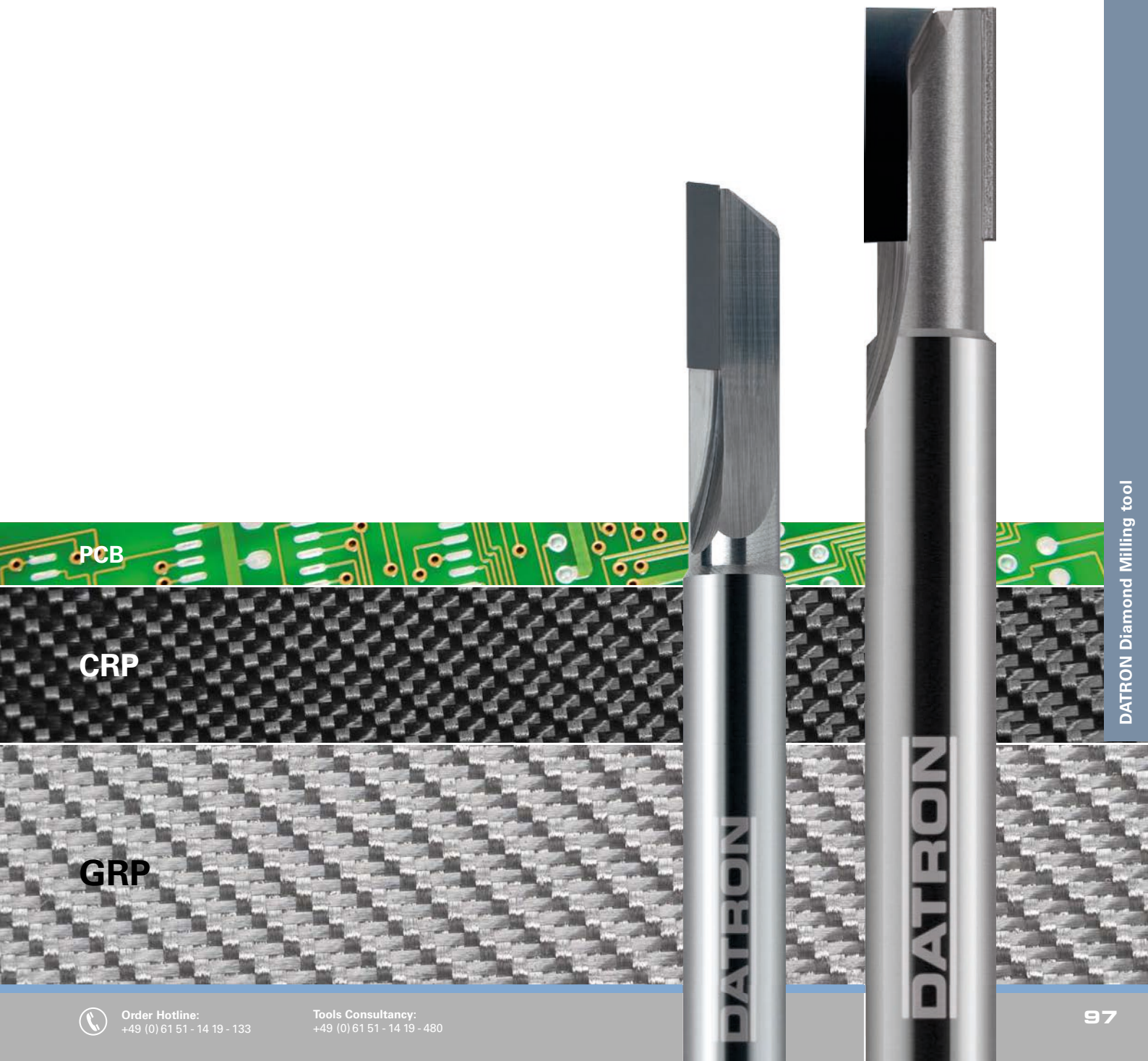
**Please note:** This tool can only be measured with the DATRON tool length sensor. Article numbers 0078920A and 0078920B are for Face Milling Tools with two cutting inserts.

Art. No.	Article Description
0078920C	Screw set with 10 screws and screwdriver



# DATRON Diamond Milling Tool

The new CVD cutting material for the cutting of CRP, GRP, PCB and Plastic exceeds the standard PCD cutting material with regard to abrasion resistance, tool life and surface finish.

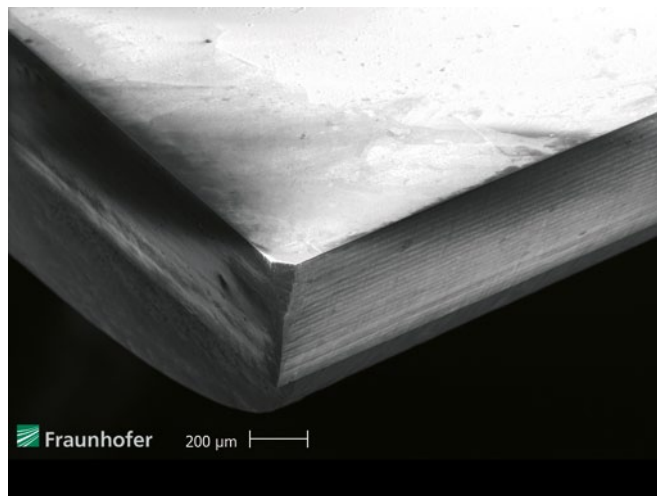


The new CVD cutting material for cutting abrasive materials surpasses the conventional PCD cutting material with regard to wear resistance and tool life.

### **This is made possible by the diamond tools' special manufacturing process:**

Conventional PCD cutting edges are manufactured by pressing. CVD cutting edges, however, are constructed by layers using chemical vapour deposition. This leads to an unexcelled homogeneous and low-stress structure. Micro disruptions on the cutting edge are kept to a minimum, thus slowing wear considerably.

Another advantage involves the high-quality cut quality due to the microscopically smooth cutting edge. The machining of highly abrasive materials up to now was characterised by an enormous amount of tool wear. With the DATRON CVD tools, 500 metres of cutting length in these materials could be quickly realised. This saves frequent tool changes and offers a considerable advantage in process reliability.



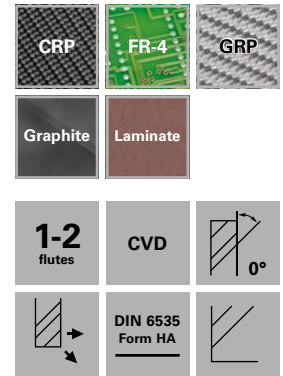
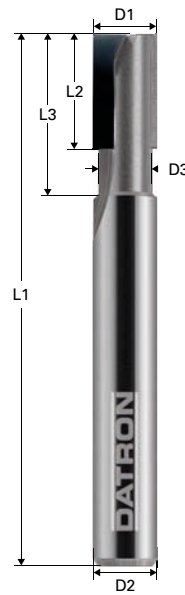
The scanning electron microscope illustrates the high surface quality of the CVD cutting edge. (Image: Fraunhofer Institut)



# DATRON **Diamond Mill** for CRP/GRP

- Micrograin solid carbide end mill with soldered Diamond flute
- with single/double flute and flat bottom
- shank without clamping surface DIN 6535-HA

Compared to Micrograin SC tools this specially designed CVD Diamond milling tool allows for higher feed rates at very high tool life.



Art. No.	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	F
00781203	3.0	6.0	2.8	50.0	5.0	10.0	1
00781204	4.0	6.0	3.8	50.0	6.0	6.0	2
00781206	6.0	6.0	5.6	50.0	10.0	14.0	2
00781208	8.0	8.0	7.2	50.0	12.0	16.0	2
00781210	10.0	10.0	9.2	60.0	8.0	17.0	2
00781299	Regrind service (if possible)						

F = Number of Flutes



## DATRON Accessories and Expendable Material

Our accessories and expendable material include change stations, collet chucks, limit stop rings and several other items.

And our innovation: VacuCard++, a "sacrificial layer" for vacuum clamping plates with adhesive structure for machining small, light parts.



# DATRON Collet Chucks for HF Spindles



Collets for DATRON high frequency spindles. The collets with the final letter "D" are suitable for spindles with a capacity of 1.2 and 2 kW, as well as for 0.6 kW spindles built since 2012 (throttled 2.0 kW spindle).

Art. No.	Article Description	Spindle Capacity in kW
0068320	Collet chuck D 3.0	0.6
0068320D	Collet chuck D 3.0	2.0
0068324	Collet chuck D 4.0	0.6
0068324D	Collet chuck D 4.0	2.0
0068325	Collet chuck D 5.0	0.6
0068326	Collet chuck D 6.0	0.6
0068326D	Collet chuck D 6.0	2.0
0068328D	Collet chuck D 8.0	2.0
0068330	Collet chuck D 3.175	0.6
0068330D	Collet chuck D 3.175	2.0

# DATRON **Service Kit** for HF Spindles

Service kit for the cleaning and greasing of the spindle. We recommend to clean the collet chuck within the spindle at least once a week according to the instructions of the manual.



Art. No.	Article Description
0068338	Service kit for spindle capacity 0,6 kW
0068338A	Service kit for spindle capacity 2,0 kW
0068339	Grease for HF spindle, tube, 8 g



# DATRON Tool Change Stations



Accessories for the automatic tool change. The tool change stations can be supplied in different tool diameter sizes.

Art. No.	Article Description	D3 (mm)
0069220	Tool change station for 3 mm and 1/8" shanks	7.55
0069220A	Brass clamp for tool change station (3 mm, 1/8")	7.55
0069221	Tool change station for 6 mm and 1/4" shanks	10.5
0069221A	Brass clamp for tool change station (6 mm, 1/4")	10.5
0069222	Tool change station for mills up to 8 mm shank	12.5
0069222A	Brass clamp for tool change station (8 mm)	12.5
0069223	Tool change station for mills up to 12 mm diameter	15.0
0069223A	Brass clamp for tool change station (12 mm)	15.0
0069227	Tool change station for mills up to 14 mm diameter	18.0
0069227A	Brass clamp for tool change station (14 mm)	18.0
0690234	Tool change station for HSK-E 25	
0069234A	Brass clamp for HSK-E 25	
0069231	Tool change station for HSK-E 32	
0069231A	Brass clamp for HSK-E 32	



# DATRON Limit Stop Rings and Insertion Tool

The limit stop rings are used to fasten the tool shafts in the automatic tool change. To push the rings on the 6 mm and 8 mm shanks we recommend the DATRON insertion tool.



Art. No.	Limit stop ring	D1 (mm)	D2 (mm)	Material
0068000	For tool change station <b>0069220</b>	3.0	7.55	Plastic
0068000Y	For tool change station <b>0069220</b>	4.0	10.50	Brass
0068001	For tool change station <b>0069220</b>	3.175	7.55	Plastic
0068002	For tool change station <b>0069221</b>	6.0	10.50	Brass
0068002H	For tool change station <b>0069223</b>	6.0	15.00	Brass
0068002J	For tool change station <b>0069227</b>	6.0	18.00	Brass
0068002Z	For tool change station <b>0069221</b>	6.35	10.50	Brass
0068001D	For tool change station <b>0069222</b>	8.0	12.50	Brass
0068002K	For tool change station <b>0069227</b>	8.0	18.00	Brass
0068180	<b>Limit stop ring insertion tool for 6 mm shank tools</b>			
0068180A	<b>Limit stop ring insertion tool for 8 mm shank tools</b>			

# DATRON Adapter Collets



With the DATRON adapter collets you may use different tool shank diameters in one spindle collet chunk only. The adapters are pre-stressed and therefore reusable. To open the adapter collets you need the DATRON adapter insertion tool Art. No. 0068337D for 6 mm and 8 mm adapters.

Art. No.	D1 (mm)	D2 (mm)	D3 (mm)
0068336G	1.0	6.0	7.55
0068336H	1.1	6.0	7.55
0068336J	1.2	6.0	7.55
0068336K	1.3	6.0	7.55
0068336L	1.4	6.0	7.55
0068336M	1.5	6.0	7.55
0068336N	1.6	6.0	7.55
0068336P	1.7	6.0	7.55
0068336Q	1.8	6.0	7.55
00683350	1/8"	6.0	7.55
00683350A	1/8"	6.35	7.55

Art. No.	D1 (mm)	D2 (mm)	D3 (mm)
00683350C	1/8"	8.0	10.5
0068336B	2.0	6.0	7.55
0068336A	2.0	8.0	10.5
0068336	3.0	6.0	7.55
0068336C	3.0	8.0	10.5
00683350D	4.0	6.0	7.55
0068336D	4.0	8.0	10.5
0068336R	5.0	8.0	10.5
0068336F	6.0	8.0	10.5
0068337D	Adapter insertion tool for 6 mm and 8 mm collet chucks		

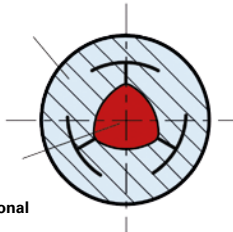
The HSK-E polygon collet chucks have been developed for precise and safe cutting, also at high speeds.

The stable, rotation-symmetrical design has an excellent concentricity of less than 3 µm. This permits high quality milling results at a speed of up to 48,000 RPM.

With passive vibration damping, the life of the high frequency spindle and the cutting tool is significantly improved.

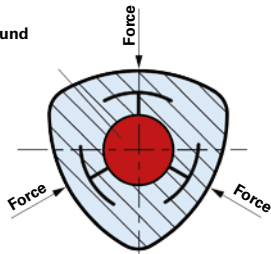


TRIBOS-RM Toolholder

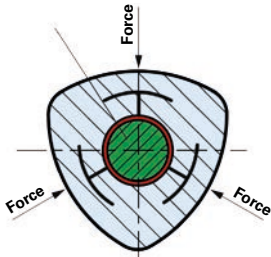


Clamping diameter polygonal

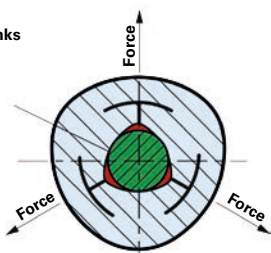
Clamping diameter is round



Joining shank



Clamping diameter shrinks



### 1. Before clamping

The polygon-shaped geometry of the shank insert can be clearly seen in the unloaded, relieved state.

### 2. In the clamping fixture

Force is applied at three points by means of the hydraulic clamping fixture. This makes the shank insert circular.

### 3. Inserting the tool shank

Now the tool shank can be easily and quickly mounted in the insert.

### 4. The tool is clamped

The pressure of the clamping fixture and the force transmission are reduced. The elastically deformed collet chuck comes back to its polygon shape. Now the tool is firmly and centrally clamped.



The HSK-E inserts developed by DATRON and Schunk are solidly built and come with a concentricity of  $<3 \mu\text{m}$  and guarantee highest precision during the machining process.

Art. No.	D1 (mm)	D2 (mm)	Type	L1 (mm)	L2 (mm)
0068300G	3.0	20.0	HSK-E 25	40.0	30.0
0068300S	3.0	14.0	HSK-E 25	40.0	30.0
0068311D	3.175	20.0	HSK-E 25	40.0	30.0
0068301G	4.0	20.0	HSK-E 25	40.0	30.0
0068302G	5.0	20.0	HSK-E 25	40.0	30.0
0068303G	6.0	20.0	HSK-E 25	40.0	30.0
0068303S	6.0	14.0	HSK-E 25	40.0	30.0
0068304G	8.0	20.0	HSK-E 25	40.0	30.0
0068305G	10.0	20.0	HSK-E 25	40.0	30.0
0068306D	3.0	20.0	HSK-E 32	50.0	30.0
0068307D	6.0	20.0	HSK-E 32	50.0	30.0
0068308D	8.0	20.0	HSK-E 32	50.0	30.0
0068309D	10.0	20.0	HSK-E 32	50.0	30.0

## Tribos Clamping device

The hydraulic Tribos clamping fixture for polygon clamping technique, equipped with hand pump and manometer, does not require any source of energy and can therefore be used in a very flexible manner. Just a few steps are required for the clamping process. Clamping is completed within 20 seconds.

Compared to the shrink technique, this wear-free process does not require any heating up or cooling down phases.



Art. No.	Article Description
0068340	Clamping device

## DATRON/Schunk Reduction Inserts

This clamping device is used to insert the DATRON/Schunk adapters in the clamping device.



Art. No.	Article Description	for D2 (mm)	Adapter Type
0068341D	Reduction insert	20	HSK-E 25
0068341S	Reduction insert	14	HSK-E 25

## VacuCard++: DATRON Defies the Rules of Physics

Clamping of small parts with vacuum

### What is VacuCard++?

VacuCard++ is a special, patent-pending paperboard which is used as a sacrificial layer between the work piece and the vacuum plate. Unlike the DATRON VacuCard, the VacuCard++ has an additional grid-like sealing/adhesive layer that significantly increases the holding force during vacuum clamping and considerably reduces vacuum loss.

### For which applications can the VacuCard++ be used?

- Milling small parts made of plate material
- Consolidated PCB machining without separating webs
- Milling thin and soft plate material
- Milling plate material with a rough surface

### How does the VacuCard++ work?

- The sealing/adhesive layer holds parts that are so small that vacuum alone would not be enough to hold them.
- Increases the holding force during vacuum clamping with suction-cup effect
- Prevents work pieces from slipping when large milling forces are used
- Reduces the vacuum consumption and prevents early collapse
- Distributes the vacuum evenly over the work piece
- Prevents raising of edges in soft and flexible work pieces
- Machined work pieces can be removed without any residue

### Technical data

- Paperboard with redundant suction-cup effect due to a grid-like sealing/adhesive layer
- Combination of adhesion and vacuum clamping
- Reduced vacuum consumption due to limited air permeability and protective film cover
- Disposed of as paper waste
- Durability depends on the storage

# DATRON Expendable Material

## DATRON VacuCard

This paperboard serves as the "sacrificial layer" during vacuum clamping. This special fabric structure distributes the vacuum homogeneously and ensures a uniform suction force over the entire clamping surface.

- distributes vacuum homogeneously
- uniform suction force
- format matches the DATRON vacuum plates



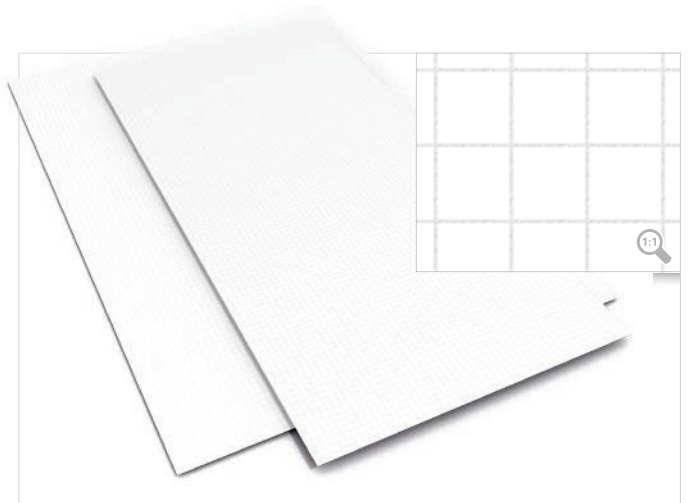
Art. No.	Article Description	Unit	Size
0A01616*	VacuCard	50	450 x 650 x 0.7 mm
0A01617*	VacuCard	50	500 x 1000 x 0.7 mm
0A01617A*	VacuCard	50	700 x 1000 x 0.7 mm

\* shipping/packing excluded

## DATRON VacuCard++

The patented VacuCard++ is based on the standard VacuCard and has a grid-like adhesive structure. Thanks to this special adhesive layer, the VacuCard++ has a considerably higher combined clamping force and fixes even small, light parts with high process reliability.

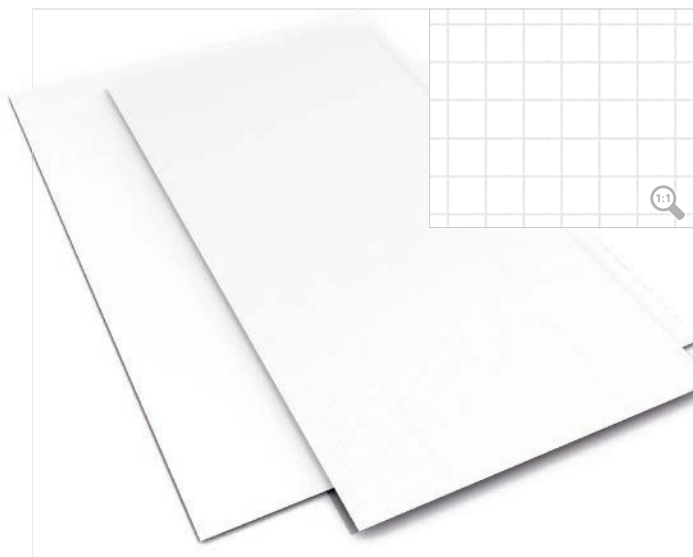
- grid-like adhesive layer (10 mm x 10 mm)
- delicate parts are firmly clamped
- homogeneous vacuum distribution
- format matches the DATRON vacuum plates



Art. No.	Article Description	Unit	Size
0A01618G	VacuCard++	10	450 x 650 x 0.7 mm
0A01618D	VacuCard++	50	450 x 650 x 0.7 mm
0A01618H	VacuCard++	10	500 x 1000 x 0.7 mm
0A01618E	VacuCard++	50	500 x 1000 x 0.7 mm
0A01618I	VacuCard++	10	700 x 1000 x 0.7 mm
0A01618F	VacuCard++	50	700 x 1000 x 0.7 mm

\* shipping/packing excluded

## DATRON VacuCard+++



The patented VacuCard+++ is based on the standard VacuCard and has a grid-like adhesive structure (5 mm x 5 mm). Thanks to this special adhesive layer, the VacuCard+++ has a considerably higher combined clamping force and fixes even small, light parts up to 10 mm diameter with high process reliability.

- grid-like adhesive layer (5 mm x 5 mm)
- smallest parts are firmly clamped
- homogeneous vacuum distribution
- format matches the DATRON vacuum plates

Art. No.	Article Description	Unit	Size
0A01618M	VacuCard+++	10	500 x 1000 x 0.7 mm
0A01618K	VacuCard+++	100	500 x 1000 x 0.7 mm
0A01618N	VacuCard+++	10	700 x 1000 x 0.7 mm

\* shipping/packing excluded



# DATRON Expendable Material

## DATRON Spraying Nozzles and Securing Brackets

Art. No.	Article Description		
0A01501S	Spraying nozzle incl. securing bracket		
07004461	Securing bracket		
07004462	Spraying nozzle		
0069725	PVC tube	red	1 m
0069725B	PVC tube	blue	1 m
0069725G	PVC tube	green	1 m
0069726	PVC tube	white	1 m
0069727	Silikon tube		1 m



## DATRON Slide Nuts and Centering Sleeves

Art. No.	Article Description	Size	Picture
07009360	Centering Sleeve for Module Clamping Plates		A
07009374	Centering Sleeve Counterpart		B
0069922	Slide nut M6	45 mm x 10 mm x 3.5 mm	
0069922A	Slide nut M6	45 mm x 13 mm x 6 mm	
0069926	Slide nut M6	25 mm x 10 mm x 3.5 mm	
0069926A	Slide nut M6	25 mm x 13 mm x 6 mm	



## DATRON Cleaner

Art. No.	Article Description	
0077105	Metal cleaner	500 ml can
0077105A	Foam cleaner	500 ml can



## Cooling lubricants for minimum lubrication

Beyond CNC machines and tools, DATRON is now also offering the appropriate cooling lubricants. These new cooling lubricants, called ProCut, are only appropriate for minimum lubrication. Due to the very low consumption, this puts the price per liter into perspective. In addition, operating and personnel costs for the machine and part cleaning are saved to a great degree, as well as, for example, changing the lubricant. DATRON is still offering minimum lubrication systems for Microjet, which optimally moisten the workpieces with their flexibly adjustable spray nozzles.

## DATRON ProCut 56



ProCut 56 is made of pure hydrocarbon and works as a replacement for ethanol. It shows its strengths in the machining of workpieces made of aluminium and plastics, especially in conjunction with DATRON's CleanCut chip extraction. The lubricant allows burr-free machining of the workpieces. It also prevents the formation of material work-ups on the tool. No explosion protection is required for chip extraction. ProCut 56 is completely volatile and leaves no residue on the workpiece. Thus, this MM-lubricant is especially appropriate for companies or departments where the use of ethanol is not allowed and for machining materials that react aggressively when in contact with ethanol. No further cleansing is required with this cooling lubricant.

Consumption without CleanCut: **80 ml/hour**  
(about 30% of ethanol consumption)  
CleanCut consumption: **270 ml/hour**

Art. No.	Package size
0069266	10 Liter

# DATRON Expendable Material

## DATRON ProCut 56-2

ProCut 56-2 is made of pure hydrocarbon with light lubrication and works as a replacement for ethanol. It is designed for Plexiglas machining or for materials with high surface quality. Thus, this MM-lubricant is especially appropriate for companies or departments where the use of ethanol is not allowed and for workpieces requiring high surface quality. Cleansing is required with this cooling lubricant.

Consumption without CleanCut: **95 ml/hour**

CleanCut consumption: **200 ml/hour**



Art. No.	Package size
0069266A	10 Liter

## DATRON ProCut 200

Especially for steel processing, the lubricant ProCut 200 was developed. Cleansing is required with this cooling lubricant.

Consumption: **20 ml/hour**



Art. No.	Package size
0069266B	10 Liter
0069266D	5 Liter

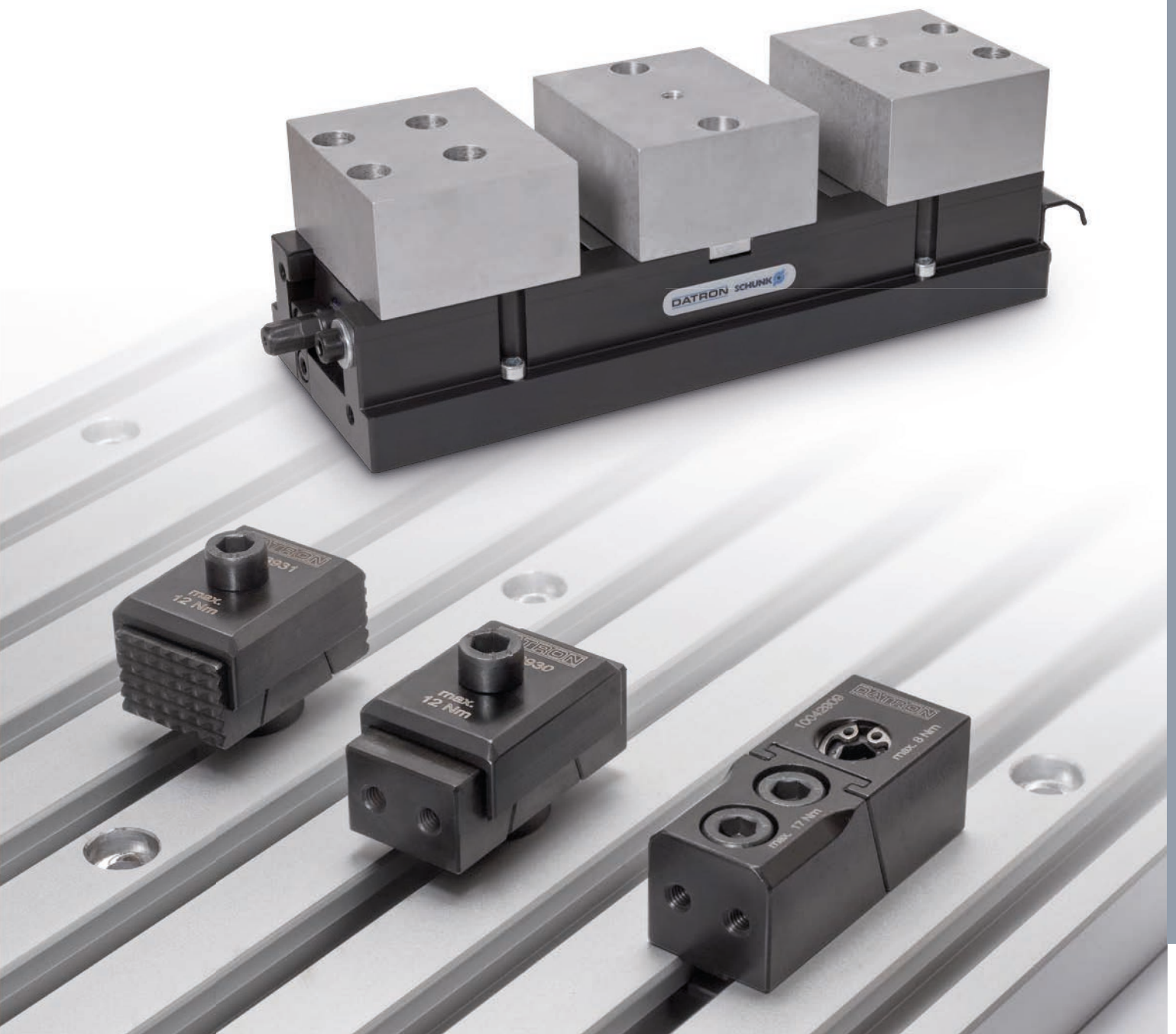


# DATRON Clamping Tools

DATRON offers flexible and process-reliable clamping techniques for optimised setup times on the machine table. Depending on the application and work piece size, wedge clamping elements KSE, compact centric clamps KZS or multi-functional clamps MFS are used.

These are characterised by high clamping forces, easy handling and fast retrofitting.

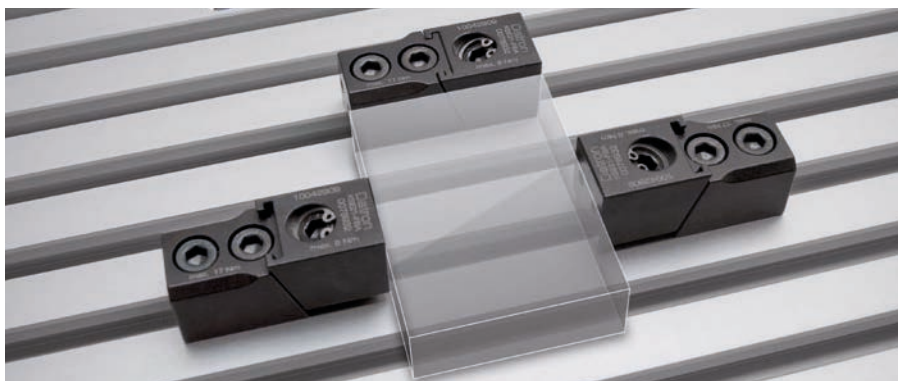
For further information please order our DATRON accessories catalogue.



## Examples of clamping options with the wedge clamping elements:

### Option 1:

Single clamping with lateral fixed stop. Clamping elements clamp on both sides in the pull-down device.



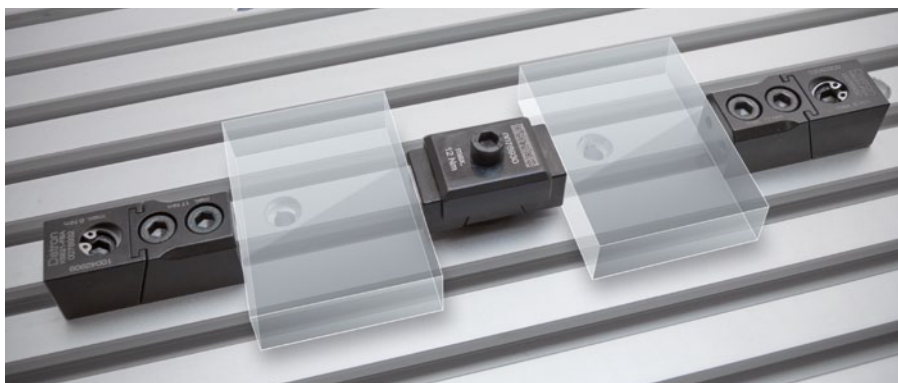
### Option 2:

Two fixed stops, one-sided clamping in the pull-down device.



### Option 3:

Double-clamping in the pull-down device thanks to wedge clamping element on both sides. One-sided wedge clamping element serves as fixed stop.



### Option 4:

Multiple-clamping thanks to wedge clamping element on both sides in the pull-down device. Additional one-sided clamping in the pull-down device via one-sided wedge clamping element with fixed stop.



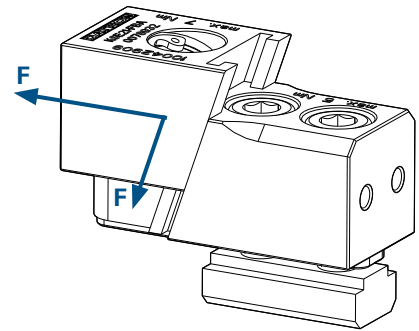


# DATRON Wedge Clamping Elements KSE

## KSE 21-FBA

### Features:

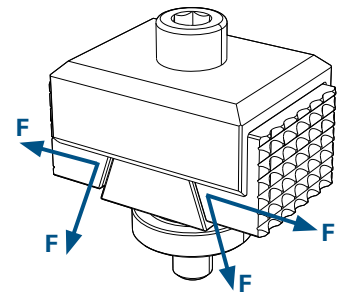
- Easy handling
- Fixed stop or lateral stop possible
- Built-in, integrated pull-down device
- Hardened version
- Flexible clamping inserts, which can be screwed on
- High clamping forces 4 kN



## KSE 21-G8

### Features:

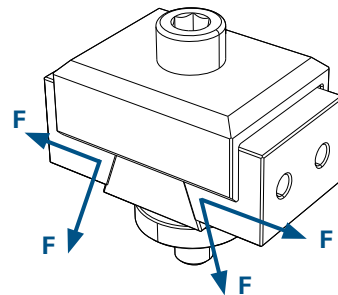
- Easy handling
- Double-clamping possible
- Built-in, integrated pull-down device
- Hardened version, corrugated
- Integrated return spring
- Higher torque transfer thanks to form fit
- High clamping forces 4 kN



## KSE 21-8

### Features:

- Easy handling
- Double-clamping possible
- Built-in, integrated pull-down device
- Hardened version, smooth
- Integrated return spring
- Flexible clamping inserts, which can be screwed on
- High clamping forces 4 kN



Technical Data	KSE 21-8, smooth	KSE 21-G8, corrugated	KSE 21-FBA
Jaw width	21 mm	21 mm	21 mm
Clamping force	15,000 N for 25 Nm	15,000 N for 25 Nm	4 kN for 7 Nm
Clamping screw	M6	M6	M6
L min-max (mm)	40 - 44.5	35 - 39.5	49.1 - 51.9
Total height (mm)	29.5 - 33.5	29.5 - 33.5	20 - 28
Infeed stroke (mm)	0 - 4	0 - 4	0 - 8

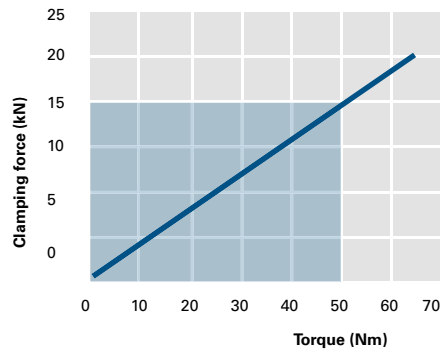
Art. No.	Article Description	Quantity
0078930	KSE 21-8, smooth	1
0078931	KSE 21-G8, corrugated	1
0078932	KSE 21-FBA, smooth	1

# DATRON Compact Centric Clamp KZS

The encapsulated DATRON compact centric clamp is completely protected from dirt. Thanks to its specially developed slide geometry with a guide length of 150 mm, the KZS is the first fully encapsulated centric clamp. Malfunctions due to dirt and stuck chips are now a thing of the past.

## Advantages:

- Easy handling
- Flexible
- Fast conversion
- High clamping force
- Integrated DATRON zero-point clamping system
- Inexpensive aluminium clamping jaws
- Hardened basic body
- Corrosion-resistant
- 100% encapsulated



Clamping force	(max.) 20 kN
Torque	65 Nm

## Features:

- **100% encapsulation**  
With the closed slide geometry, you won't waste time cleaning.
- **5-axis machining**  
Produce with optimised short tools. With the KZS, you get close to the work piece and not to the clamp.
- **Produce raw and finished parts**  
With a precision of 0.02 mm, you can produce raw and finished parts in the same clamp.
- Contour clamping possible thanks to milling out the aluminium jaws.
- Clamp large, small or round parts. With the modular changing jaw system, you can easily adapt the KZS to your specific requirements.
- With the integrated DATRON zero-point clamping system for even faster setup.

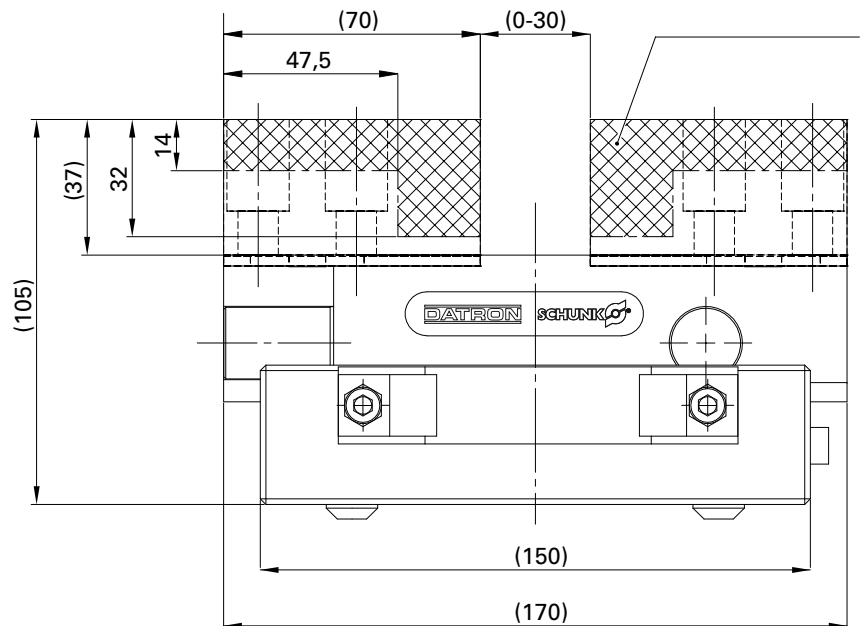




# DATRON Compact Centric Clamp KZS

## Function of the KZS compact centric clamp

Despite its compact design length of 170 mm, the KZS will convince you with its very large clamping range of 0 - 160 mm. The work pieces can be centrally clamped with a precision of 0.02 mm with a clamping force of max. 20 kN by operating a clamping screw.



max. Clamping range	Single clamping
Clamping depth (max. 14 mm)	0 - 160 mm
Clamping depth (max. 32 mm)	0 - 75 mm

Technical Data	DATRON compact centric clamp KZS
Jaw width	100 mm
Clamping force (total)	20 kN at 65 Nm torque
Weight	9 kg
Basic body length	150 mm
Basic body width	140 mm
Height (with top jaws)	105 mm

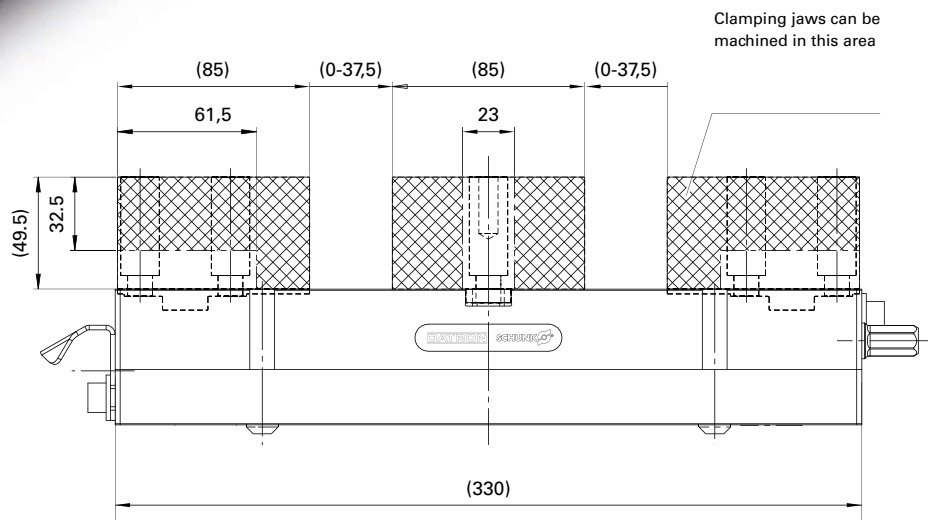
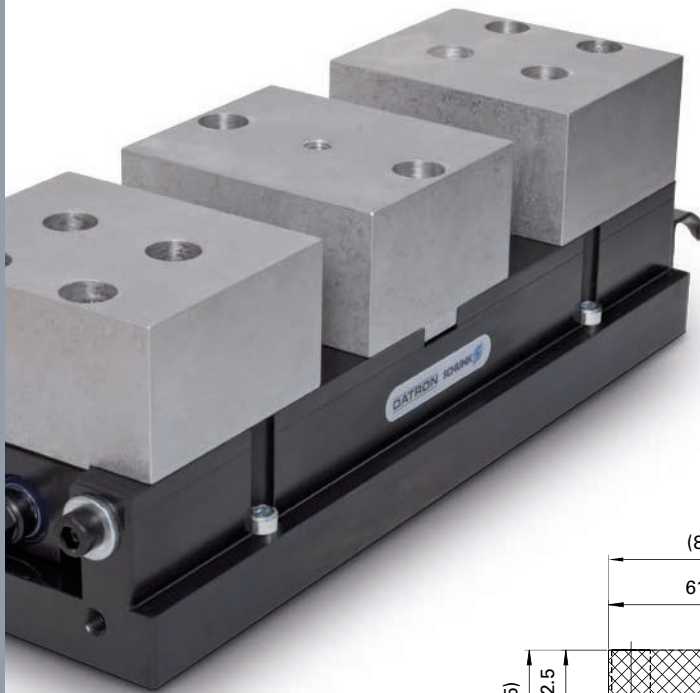
Art. No.	Article Description	Quantity
0A01088D	DATRON Compact centric clamp	1
0078936C	Spare aluminium clamping jaw	1

# DATRON Multifunctional Clamp MFS

The multifunctional clamp can be used for single or double clamping for small and large work pieces. By individually working in the clamping contour in the aluminium clamping jaws, quick, work piece-optimised clamping is achieved. Fast, precise positioning and clamping on the machine is possible thanks to the integrated DATRON zero-point clamping system.

### Features:

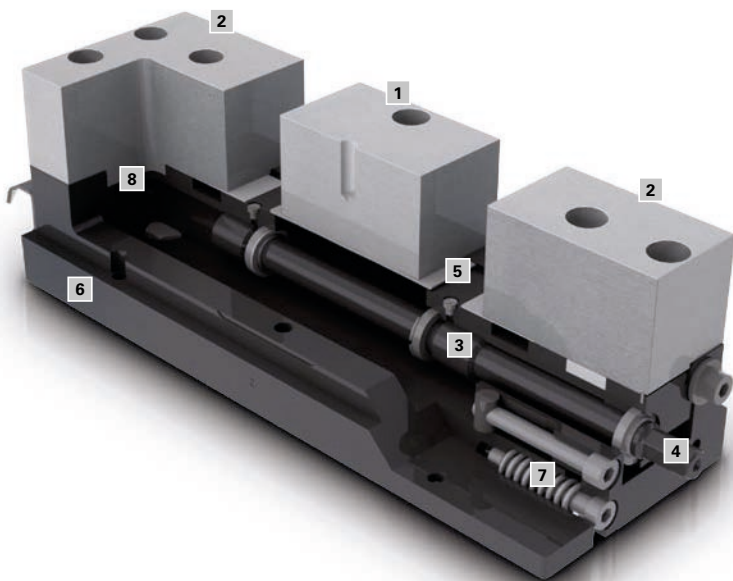
- **Tensile clamping force:**  
This way, the basic body isn't bent.
- Extensive clamping jaw range.
- **Third-hand function:**  
When clamping the second work piece, the first one is already held securely in its position.
- Can be disassembled quickly and easily for cleaning.
- Contour clamping possible thanks to milling out the aluminium jaws.
- Can be used as double clamp or single clamp.



max. Clamping range	Single clamping	Double clamping
Clamping depth (max. 32,5 mm)	0 - 310 mm	0 - 145 mm
Clamping depth (max. 49 mm)	0 - 207 mm	0 - 103 mm

## Setup and function of the multifunctional clamp MFS

The first movable clamping jaw is positioned at the work piece in the first clamping situation by turning the spindle clockwise with the hand crank, and is held securely by the preclamping of the third-hand function. By continuing to turn the crank, the second movable clamping jaw is positioned at the work piece in the second clamping station and fixed in place. The force is built up mechanically via the spindle. For single clamping, the rear jaw is clamped and the middle jaw is removed.



- 1 Middle jaw**
  - Fixed position
  - Easy setup for large jaw width
- 2 Movable clamping jaw**
  - Standardised take-up position
  - Extensive range of jaws
- 3 Quick dismantling**
  - Few components
  - Entire spindle unit can be removed
- 4 Clamping lever**
- 5 Precise slide guidance**
  - Thanks to long inner-lying guide
- 6 Low basic body**
  - Better utilisation of the Z axis
- 7 Spring-return clamping (third-hand function)**
  - Holds the first work piece while the second work piece is being clamped in
- 8 Low basic body**
  - For clamping the movable jaw for single clamping

Technical data	DATRON multifunctional clamp MFS
Jaw width	100 mm
Clamping force (per jaw)	20 kN
Weight	16 kg
Basic body length	330 mm
Basic body width	118 mm
Height (with jaws)	109,5 mm

Art. No.	Article Description	Quantity
0A01088C	Multifunctional clamp MFS	1
0078936B	Aluminium middle jaw, fixed	1
0078936A	Aluminium side jaw, movable	1

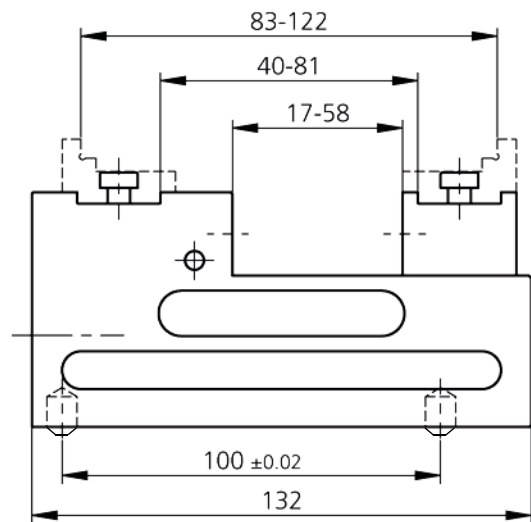
# DATRON Single-Acting Clamping Vise KSO

The KSO is a specially developed single-acting clamping vise for small parts. Its basic principle incorporates an encapsulated spindle drive. The jaws are moved to the desired clamping position quickly and easily via the spindle drive. The appropriate tightening torque ensures that workpieces are held securely for both O.D. and I.D. clamping.

Due to the long jaw guidances, lifting of the jaws under clamping force is reduced. Full encapsulation of the spindle renders time-consuming maintenance or cleaning work a thing of the past. With its integrated pallet interface, the KSO is an optimum clamping vise for storage solutions.

### Features:

- Aluminium clamping jaws quick-change system
- Simple handling
- Compact design
- Blank and finished part clamping system

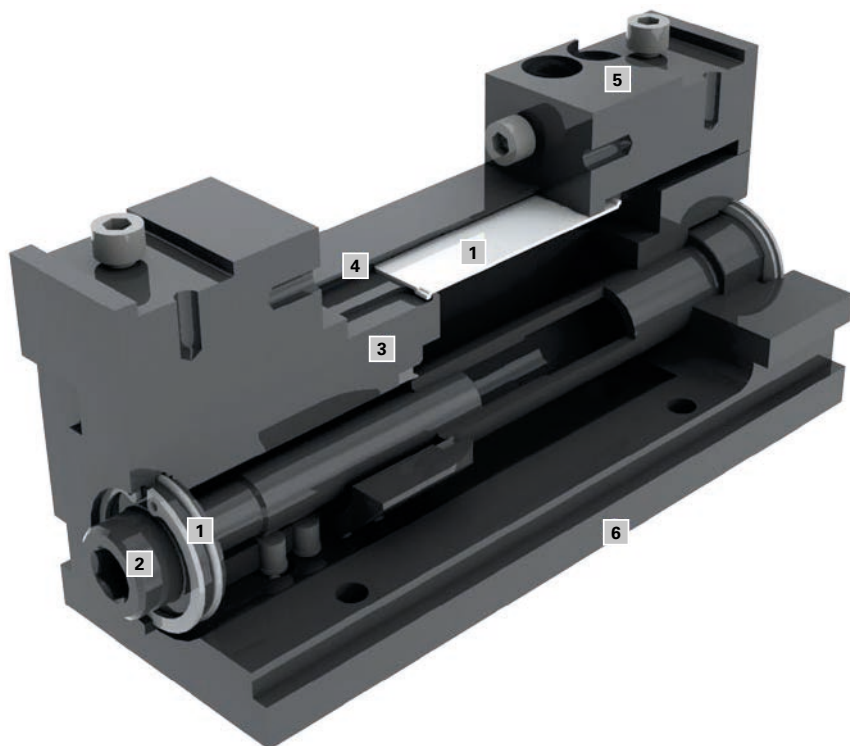


max. Clamping range	Single clamping
Clamping depth (max. 10 mm)	0 - 80 mm

# DATRON Single-Acting Clamping Vise KSO

## Setup and function of the single-acting clamping vise KSO

The movable clamping jaw is pressed onto the workpiece by hand - cranking the spindle to the right, allowing the workpiece to be clamped and set. Due to the encapsulated spindle, falling chips represent no problem for the bench vice.



- 1 100% multiple encapsulation**
  - Protection against dirt
  - Insensitive to chips - ensures high functional reliability
- 2 Clamping range adjustment**
  - Without disassembly of jaws
- 3 Long jaw guiding**
  - Precise, only very slight lifting of workpiece
- 4 Workpiece supports**
  - Tried and tested workpiece supports can be used
- 5 Modular system**
  - Modular jaw changing system ensures wide range of application
- 6 Compact design**
  - Ideal for pallets for workpiece storage automation

Technical data	DATRON Single-Acting Clamping Vise KSO
Jaw width	40 mm
max. clamping force	12 kN (KSO 40)
Weight	1.7 kg
Basic body length	150 mm
Basic body width	120 mm
Height (with jaws)	80 mm

Art. No.	Article Description	Quantity
0A01088E	Single-acting clamping vise KSO	1
0078936E	Aluminium jaw, 40 x 45	1
0078936F	Aluminium jaw, 40 x 30	1

Cutter Diameter	RPM	Cutting Speed	Cutting Depth	Number of Flutes	Feed XY	Feed Z	Feed per flute
D1 (mm)	rpm (1/min)	vc (m/min)	ap (mm)	z	vf (m/min)	vf (m/min)	D1 (mm)
1	57000	179.1	0.8	1	0.8	0.1	0.014
1.2	56000	211.1	1	1	0.8	0.15	0.014
1.5	54000	254.5	1.2	1	2	0.25	0.037
2	48000	301.6	1.8	1	2.5	0.4	0.052
2.4	45000	339.3	2	1	2.5	0.5	0.056
3	40000	377.0	2	1	3.5	0.7	0.088
6	36000	678.6	2.5	1	4	1	0.111
8	34000	854.5	3	1	4.2	1.2	0.124
10	32000	1005.3	3	1	4.5	1.4	0.141
12	30000	1131.0	3	2	4.5	1.6	0.075
16	26000	1306.9	2.5	2	4.5	1.8	0.087
20	24000	1508.0	2.5	2	4	2	0.083
20*	36000	2261.9	1	2	4.5	2	0.063

Table 2: Guide values for machining aluminium

\* Valid for DATRON Face milling tool Art.No. 0078920

**The guide values in table 2 are subject to the following criteria:**

- Roughing, in full cut ( $a_e = D1$ )
- depending on radial working engagement, for smaller values  $a_e < D1$ , the cutting depth, cutting speed and feed can be increased.
- established cutting speeds  $vc = 500..1500$  m/min
- For small tools, the maximum speed of the spindle is often the limit. The tooth feed must remain constant, i. e. the feed will decrease.
- The feed depends on the tool length. Long tools only allow low feeds due to the low rigidity.
- The tooth feed should lie between  $fz = 0.01$  (for  $D1 = 1$  mm) and  $fz = 0.15$  (for  $D1 = 20$  mm) and greatly depends on the tool diameter.
- Two-bladed tools only allow approx. 25% - 75% of the tooth feed of single-bladed tools. The smaller the tool, the greater the difference.
- See also the equations for cutting speed and feed.
- The spindle power and the available torque limit the potential chip volume per unit time. See also the equation for the chip volume per unit time and the cutting capacity.

## General rules for selecting technology for milling

The guide values in table 2 can vary depending on:

- Tool
- Machining situation
- Setup
- Material
- Machine
- Spindle

The guide values in table 2 are understood to be starting values for optimisations. Usually, these guide values work without problems. It always makes sense to start the optimisations "from the bottom" so as not to overload the spindle or machine.

In general, technology selection consists of the following steps:

1. Machining definition (tool, axial and radial feed)
2. Selection of the permissible cutting speed (see Tab. 8.1 Cutting speeds), depending on the tool, workpiece and machining situation (engagement)
3. Selection of the speed depending on the tool diameter (see Tab. 3 Cutting speed formula)
4. Selection of the suitable tooth feed (loadability of the blade, chip space, wear, forces)
5. Calculation of the feed from the speed, number of teeth and tooth feed (see Tab. 3 Feed speed formula)

These steps are iterative and depend on each other and must be observed as a whole for optimisations.

Material	Cutting Speed
Titanium Alloys	50 ... 150 m/min
Steel, general	100 ... 400 m/min
Plastic, Thermoplasts	150 ... 500 m/min
Brass, Bronze, Copper	200 ... 1000 m/min
Aluminium Alloys	500 ... 2500 m/min
Fibre Composites	500 ... 5000 m/min

Table 1: Cutting Speed

Formula	Parameter
<p>Cutting Speed</p> $V_c = \frac{\pi * d * n}{1000}$	<p><math>V_c</math> = Cutting Speed (mm/min)  <math>d</math> = Tool Diameter (mm)  <math>n</math> = Speed (rpm)</p>
<p>Feed Speed</p> $V_f = f_z * n * z$	<p><math>V_f</math> = Feed Speed (mm/min)  <math>f_z</math> = Tooth Feed (mm)  <math>n</math> = Speed (rpm)  <math>z</math> = Tooth Number (-)</p>
<p>Cutting capacity</p> $P_c = \frac{Q}{V_{sp}}$	<p><math>P_c</math> = Cutting capacity (kW)  <math>Q</math> = chip volume per unit time (cm<sup>3</sup>/min)  <math>V_{sp}</math> = spec. chip-cutting volume (cm<sup>3</sup>/min/kW)</p>
<p>Chip volume per unit time</p> $Q = a_e * a_p * v_f$	<p><math>Q</math> = chip volume per unit time (cm<sup>3</sup>/min)  <math>a_e</math> = radial working engagement (mm)  <math>a_p</math> = cutting depth (mm)  <math>v_f</math> = Feed Speed (mm/min)</p>

Table 3: Formulas for calculating the milling parameters

### Machining of plastics

When machining plastics, such as duroplasts and thermoplasts, generally select lower speeds and higher feeds as compared to aluminium.

### Engraving with engraving tools

Select the following values for engraving aluminium or brass with a graver:

Speed approx. 30 000 rpm

Feed approx. 0.7 m/min



# DATRON Data Sheet

For your custom milling tools which are not included in the standard range. Here you can enter all technical data including price and article number, so as to have this data easily available next time.

<b>Art. No.</b>	<b>D1</b> <small>(mm)</small>	<b>D2</b> <small>(mm)</small>	<b>D3</b> <small>(mm)</small>	<b>L1</b> <small>(mm)</small>	<b>L2</b> <small>(mm)</small>	<b>L3</b> <small>(mm)</small>	<b>R</b> <small>(mm)</small>	<b>CT</b>	<b>€</b>

Company Stamp

**FAX**  
**Tool Order**  
**+49 (0) 61 51 - 14 19 - 39**

Contact Person

Customer Number

\_\_\_\_\_

\_\_\_\_\_

Invoice Address

Address for Shipment

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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Article Number	Article Description	Unit Price	Quantity	Price
<b>Amount:</b>				
<b>Value Added Tax:</b>				
<b>Total Amount:</b>				

\_\_\_\_\_

Date, Signature

**Terms of Payment and Delivery for Tool Deliveries**

Prices are ex works, excluding VAT, packing, freight, and insurance. Minimum value of order: 150.00 EURO. Packing and freight charges for deliveries abroad will be calculated on the actual expenses on the day of delivery. Fees for foreign payments have to be borne by the customer. DATRON offers and deliveries are subject to the "General Terms of Payment and Delivery". Payments are to be made within 14 days on receipt of invoice net.

# Efficient Machining with Small Tools!

DATRON's high-speed micro-tooling technology has significantly impacted the following industries:

## Electronic Industry

- Frontpanels & Housings
- Panels & Nameplates
- Test Adapter
- 3D Rapid Prototyping
- Test Control Units
- Soldering Frames
- PCB Depanelling



## Aerospace Industry

- Sheet Metal Machining in Aluminium
- Aluminium Extrusions
- Micro Drilling



## Forms and Molds

- 3D Aluminium Molds
- 3D Rapid Prototyping
- Graphite Electrodes
- Steel Molds



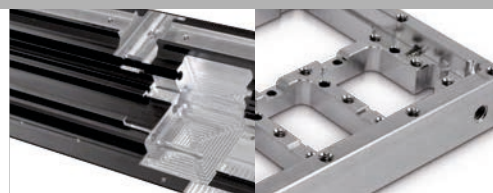
## Printing Industry

- 3D Engraving
- Die Making
- Hot Stamping
- Combination Dies



## Automotive Supply Industry

- Aluminium Extrusions
- Mold Making
- Intricate CNC Machining



# DATRON CNC Milling Machines

DATRON's CNC milling machines and DATRON's quality tools are perfectly matched to each other. The combination of machine, tools and accessories ensures highest quality, precision and process reliability for your production.

**Powerful and highly accurate**

DATRON M10 Pro



**Productive and versatile**

DATRON M8Cube



**Compact and cost-effective**

DATRON M7  
DATRON M75



**Large-sized and efficient**

DATRON **MLCube**



**5-axis, precise, compact**

DATRON **M7**  
DATRON **M75**



# DATRON Dental Milling Tools

If you use Zirconium Oxide, Cobalt-Chrome, Titan, Nanocomposite, PMMA or Wax, DATRON offers the optimum milling tools for the dental materials you intend to machine. Thanks to the coatings, specially adapted to the material, the highest surface quality and long tool life are guaranteed.

**For detailed information and further dental milling tools simply request our special dental milling tools catalogue or order online! [www.datronshop.de](http://www.datronshop.de)**







**Place your Order now:**



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**by E-Mail:: [werkzeug@datron.de](mailto:werkzeug@datron.de)**



**by Fax: +49 (0)6151-1419-39**



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