



# **CUTTING TOOLS**

From standard solutions to hi-tech innovations

- I Tool clamping technology
- I Solid Carbide End Milling
- I 12 Oil Hole Cutters
- I Diamond and CBN solid carbide cutters
- I High performance HSS solid carbide drill bits
- I Precision reamers

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# **CUTTING TOOLS**

NEWS

# Are you in need of specific advice?

Make an appointment with one of our representatives in your region!





Tool clamping technology



TENDO Hydraulic Expansion Toolholders + other machine accessories



Solid Carbide End Milling



12 Oil Hole Cutters



High performance cutters and drills



**Precision reamers** 

■ Tool clamping technology	6-9
Lathe Chucks	
Chuck jaws	6
Toolholders	
Tool grinding systems	7
<pre></pre>	7
TENDO Hydraulic Expansion Toolholders	8-9
■ Monoblock milling cutters	10-15
■ 12 Oil Hole Cutters	16-17
■ Diamond and CBN solid carbide cutters	20
■ High performance HSS solid carbide drill bits	21
■ Precision reamers	22-23
■ Who are we?	24-25

# Tool clamping technology



From standard solutions to hi-tech innovations

#### **Lathe Chucks**

#### I Lathe Chucks

As a result of continual development and innovation at SCHUNK, their lathe chucks meet the requirements of state-of-the-art machining and highly demanding machining tasks in internationally known top quality.















#### Full grip jaws, steel

#### I Chuck jaws

Full grip jaws made of steel are used for machining sensitive workpieces. The large bearing surface ensures that clamping forces are evenly distributed over the workpiece area, thereby reducing deformation of the workpiece.

#### Advantages - Your benefits

Reduced deformation of the workpiece High clamping forces can be transmitted due to the large clamping surface



#### Straight top jaws, steel

#### I Chuck jaws

Soft top jaws suitable for case hardening made of steel 15MnCr5, versatile in use. They can be flexibly turned to the desired clamping diameter. Take advantage of our wide variety of different dimensions for your individual clamping solution.

#### Advantages - Your benefits

#### **Ground serration**

The high accuracy of fit protects the base jaws against wear, and makes them more durable.

#### Individually modifiable

Weight reduction and/or inclined clamping surface (for small workpiece diameters) according to your specifications. Made of blanks or standard jaws, thereby costeffective and available at short notice. Please send your request to cms@de.schunk. com or use the easyJaw online configurator.



## Tool clamping technology



From standard solutions to hi-tech innovations

#### **Porte-outils**

#### I Mandrins expansibles hydrauliques

- Comprehensive product portfolio ranging from micro and finest machining to heavy duty and large volume cutting
- For milling, reaming, drilling and thread-cutting
- · Low-vibration for perfect surfaces













Each specific application has different requirements. Particularly when it comes to precision, there can be no compromise. This is where SCHUNK technologies come into play. The innovative and highly precise toolholding systems cover a unique range. Discover SCHUNK's vast range of products. We focus on your particular case of application and will always find the optimum toolholding system for your task.

#### I Tool grinding systems

In tool production and in the context of sharpening, a few thousandths of millimeters determine the quality of the finished blades. SCHUNK precision toolholders are responsible for the most important process leading to optimum results.

he SCHUNK systems offer the perfect solution for any application, even for automated production. The decisive advantage for the user: cost reduction while increasing process reliability and quality.



















#### **Accessories for Clamping Techniques**

Manual Clamping Systems





### **Mandrins**





#### **TENDO Hydraulic Expansion Toolholders**

#### I TENDO Slim 4ax

The SCHUNK TENDO Slim 4ax is a toolholder for axial machining and radial fine machining. It is the only one in its class to meet all requirements: Heat-shrinking contour according to DIN 69882-8, easy handling, short set-up times, long tool life, high flexibility as well as Plug & Work while it can even be used with minimal quantity lubrication.









#### I i TENDO<sup>2</sup>

With our new iTENDO² we have taken the idea of intelligent toolholders to the next level. It is available in three different packages to make switching to this technology even easier. One common element in all of them is the iTENDO² toolholder, which, due to its closest-to-the-part acceleration sensor, provides precise stability values that can be used to optimize the machining processes. As a tool to increase your process transparency, the basic version of the toolholder can send the captured data directly to the tablet supplied. With the variant «easy connect», the measured values can be transferred to other systems via an analog interface. In the variant «pro», which will be available in the future, it will also be possible to send the data directly to the machine control system.

All variants are upward compatible, i.e. you can use the tablet PC variant to start testing the technology. Once you are convinced of the benefits of an intelligent toolholder, it is easy to switch to the more extensive packages for monitoring and optimizing your processes automatically.



#### **Tool Monitoring**

With the iTENDO<sup>2</sup>, minimal vibrations can be detected in tools as small as Ø 3 mm in diameter, which can indicate tool breakage due to wear or a feed rate that is too high. This helps to avoid or minimize machine downtimes.



#### **Monitoring Quality**

When countersinking, the iTENDO<sup>2</sup> monitors compliance with the surface quality. In this application, monitoring of the countersinking process is used for quality and process control as well as for documenting features that are critical to functionality.



#### **Optimizing Processes**

The optimum process settings can be determined by comparing the recorded vibration data. This allows the parameters to be set in the best possible way and the cutting process to be made even more precise and efficient, as can be seen in the example of thread milling.







For aluminum and non-ferrous alloys

Ref	M412	M412G	SA3	SA4	SA1	SA2	SA5	SA6	SA7	SA9	SA64
Page	37	37	38	38	40	40	42	42	44	45	45
Vue										NEW	NEW
MAT.	K30 F	K30 F									
1000 1000 1000 1000 1000 1000 1000 100	•	•	•	•			•	•	•	•	•
					•	•					
Norm	•	•	•	•	•	•	•	•	•	•	•
2	1	1	2	2	2	2	3	2	3	3	3
(Møx	e8	js12									
R				•		•	•				
(Xe)	25°	25°	25°	35°	35°	35°	35°	35°	35°	hélice variable	hélice variable
POLYGLASS			•	•	•	•	•	•	•		
cylindric	•	•	•	•	•	•	•	•	•	•	•
D	•		•	•	•	•	•	•	•	•	•
	•	•	•		•			•	•	•	•

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# **Monoblock milling cutters**

SUPERNOVA

Ref	S060	S07	S08	S09	S09L	S10	STC-N	STC-R	S12
Page	48	50	52	54	56	58	60	60	62
Vue					NEW				NEW
MAT.	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U
	•	•	•	•	•	•	•	•	•
Norm	•	•	•	•	•	•	•	•	•
	6	4	4	4	4	4	4	4	4
Ø	•	•	•	•	•	•	•	•	•
(h6)	•	•	•	•	•	•	•	•	•
R			•			•		•	•
C	•	•					•		
	44° 45° 46°	35° 38°	35° 38°	35° 38°	35° 38°	35° 38°	44° 45°	44° 45°	35° 38°
cylindric	•	•	•	•	•	•	•	•	•
SUPERMOVA	•	•	•	•	•	•	•	•	•
D-4	•	•	•	•	•	•	•	•	ALN
Coupe									

SUPERNOVA

Ref	ST4 X70	ST4L X70	<b>S</b> 66	S220	S221	S320	S321	SH10 X70	S26	MS40	MS64	STI
Page	64	65	66	67	68	69	70	71	72	73	74	75
Vue												
MAT.	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U	K5000-U
	•		•	•	•	•	•			•	•	•
		•						•	•			
(X)	55°	55°	45°	30°		30°				45°	45°	55°
(Vx-)					30°		30°	30°	30°			
	4	4	6-8	2	2	2	2	2	2	4	3-5	4
(A)	h10	h10	h10	h10	h10	h10	h10	h10	h10	h10	js12	h10
					•		•	•	•			
			•							•		
	•	•		•		•					•	
Cylindric	•	•		•	•	•	•	•	•	•	•	•
D-4							•				•	
X70		•	-			_	-		-	_	-	
SUPERIOR												
Norma AMAYA	•	•			•	•						
Coupe												
			ALN								HR	STI



Ref	M33	МЗЗА	M40	M40A	M41	M41A	M46	M46A	M43	M43A	M50A	M56A	M60A	M64A	M70A	M76A
Page	93	93	94	94	95	95	96	96	97	97	98	99	100	101	102	103
Vue																
MAT	K30 F															
			•	•	•	•					•		•	•		
	•	•					•	•	•	•		•			•	•
(Xe)			30°	30°			30°	30°			30°	30°	45°	45°	45°	45°
(X)	30°	30°			30°	30°			30°	30°						
Z	3	3	4	4	4	4	4	4	4	4	3-5	3-4	6-10	3-5	6-8	6-10
(Ax)	h10	js12	js12	h10	js12	h10	h10									
	•	•				•			•	•						
				•			•	•			•	•	•	•	•	
cylindric	•	•		•		•		•		•	•			•	•	•
ATX		•		•		•		•		•	•	•	•	•	•	•
Norm	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
Coupe														HR		

## **12 Oil Hole Cutters**

For dynamic machining

**588X2**: Fraisage dynamique - Géometrie TROCOSAUR 2D

Ø mm	Queue mm	LU mm	LD mm	LT mm	z	R
6	6	14	18	57	4	0,30
8	8	18	26	63	4	0,30
10	10	22	30	72	4	0,30
12	12	26	34	83	4	0,30
16	16	34	44	92	4	0,30
20	20	42	52	104	4	0,30



#### **588X3**: Fraisage dynamique - Géometrie TROCOSAUR 3D avec brises copeaux

Ø mm	Queue mm	LU mm	LT mm	z	R
6	6	20	57	4	0,30
8	8	26	63	4	0,30
10	10	32	72	4	0,30
12	12	38	83	4	0,30
16	16	50	92	4	0,30
20	20	62	104	4	0,30



#### **STX-R** : Fraises 4 dents décalées à **double goujure**

Ø mm	d mm	l mm	L mm	R
6	6	13	57	0,30
8	8	19	63	0,30
10	10	22	72	0,30
12	12	26	83	0,30
16	16	32	92	0,50
20	20	38	104	0,50





## **12 Oil Hole Cutters**

For dynamic machining

**SA84X2**: Fraise ébauche alu

Dlc matières collantes HC matières abrasives

Ø mm	Queue mm	LU mm	LD mm	LT mm	z	R
6	6	14	18	57	4	0,50
8	8	18	22	63	4	0,50
10	10	22	26	72	4	0,50
12	12	26	34	83	4	0,50
16	16	34	44	92	4	1
20	20	42	52	104	4	1



**SA55X2 :** Fraise alu 4z polyglass Dlc matières collantes

HC matières abrasives

Ø mm	Queue mm	LU mm	LD mm	LT mm	z	R
6	6	14	18	57	4	0,30
8	8	18	26	63	4	0,30
10	10	22	30	72	4	0,30
12	12	26	34	83	4	0,30
16	16	34	44	92	4	0,30
20	20	42	52	104	4	0,30



**S64-X**: Fraises 4 dents décalées avec **profil ébauche** 

Ø mm	d mm	l mm	L mm	Ch.	z
6	6	13	57	0,20	4
8	8	19	63	0,20	4
10	10	22	72	0,20	4
12	12	26	83	0,30	4
16	16	32	92	0,30	4
20	20	38	104	0,40	4







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# **Solid Carbide End Mills**

Karnasch<sup>®</sup>

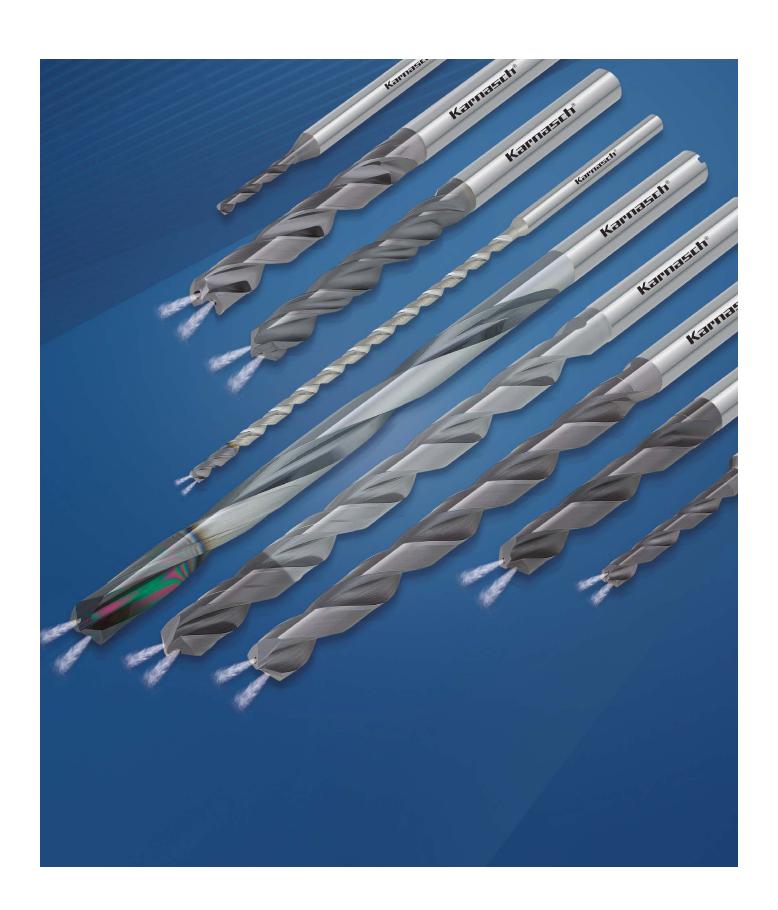
Diamond and CBN



# **Solid Carbide End Mills**



HSS - High Performance



# **Precision reamers**





# EXTROM: THE LEADER IN ABRASIVE, ROBOTIC AND INDUSTRIAL SOLUTIONS IN BELGIUM

SANDING, DEBURRING, SATIN-FINISHING, BUFFING, PERSONAL PROTECTION EQUIPMENT (PPE), INDUSTRIAL MACHINES, ROBOTS, ETC. EXTROM: THE PROFESSIONAL REFERENCE IN THE INDUSTRIAL SECTOR











#### I WHO ARE WE?

#### Our expertise

At Extrom, we create, transform and adapt abrasive and industrial solutions for professionals and the general public. For several decades, we have been specialists in our field of activity and provide our expertise to our customers to supply them with the tool, product, machine or even robotisation process that will enable them to accomplish their projects in a top-quality professional manner.

Whether sanding, countersinking, grinding, buffing, satin-finishing, deburring, brushing, cleaning, providing personal protection equipment, automated industrial machines, robotisation, etc., we have a vast array of areas of expertise allowing us to serve all sectors of industry from the aeronautics to medical sectors, including the construction, automobile and rail sectors!

#### Our teams of professionals

Extrom has a team of approximately 30 people spread over two sites who strive each day to guide their customers, thanks to professional and adapted advice, in tune with the trends and advances the industrial sector.

To enable our teams to meet the precise expectations of our customers and to develop in a constantly changing sector, we regularly offer training in all the technical and specialised aspects of our business. The abrasive and super abrasive solutions market, the latest machines to be produced... all of these notions no longer hold any secrets for us!

As the operating modes of each machine are very specific and since our customers need to have complete control over their use, we endeavour to know all the ins and outs of these machines so that we can best pass on our expertise. This is why we also test our machines on all types of materials before offering them for sale.



# SPECIALIST & MAKER OF ABRASIVE & INDUSTRIAL SOLUTIONS



Founded following the merger between the Centre Des Abrasifs in Liège and D'Hulster in Lichtervelde, Extrom is today present on two production sites in order to provide broader coverage of Belgium and to be easily accessible from any point of the country.

In Wandre, we specialise in manufacturing abrasive wheels and deburring wheels. We are proud to have received ISO 9001 certification, which guarantees our products' reliability for our customers.

In Lichtervelde, we are experts in manufacturing customised sanding belts, a process that is continually developing thanks to automation and invention of innovative materials.









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