



## Standard Program Clamping MICRO Universal Chucks

Now NEW:

**Program expansion  
for clamping ranges  
from 0.2 to 6.4 mm!**

**WTE**  
MAPAL GROUP

# THE ART OF TOOLING



[www.tool-traders-partner.com](http://www.tool-traders-partner.com)

The tool specialists for the retail market.

**WTE Präzisionstechnik GmbH** in Kempten and Ehrenfriedersdorf, Germany is a member of the "tool-traders-partner" network and uses the advantage of this strong association for the good of the customer and the quality of their products. More information is found on the last page of this catalogue or on the Internet at [www.tool-traders-partner.com](http://www.tool-traders-partner.com)



The art of combining perfect products and services for your success - all under one roof!

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# MICRO Universal Chuck 340



The machining of micro components has seen increasing growth in sectors such as the watch industry, medical technology or industries related to the automotive branch. The demand for high performance and specially suited clamping fixtures has become more significant in recent years.

WTE Präzisionstechnik GmbH recognised this need early and developed a high performance chuck for drilling and milling, which meets the high requirements of micro machining in all respects. High speed ranges, low interfering contour, central coolant supply or high bending stiffness with very high holding forces,

as well as outstanding run-out accuracy, are only a few of the features that describe this new generation of clamping fixtures from WTE. The MICRO Universal Chuck 340 is small, but has colossal capabilities which are unique worldwide.

#### Advantages of the MICRO Universal Chuck 340:

- Continuous clamping ranges from 0.2 to 3.4 mm
- Run-out deviation max. 0.005 mm
- Max. speed up to 60,000 rpm<sup>-1</sup>
- Low interfering contour
- Simple radial activation of the chuck for tool clamping

The smallest all-rounder!  
Drilling & milling in microformat  
with only one clamping fixture!

# MICRO Universal Chuck 640

**NEW!**

The youngest member in the family of micro chucks is the MICRO Universal Chuck 640 from WTE. Again demands from the machining industry were taken as the occasion for this new development, resulting in a universal chuck for micro tools, with which tool shanks up to 6.4 mm diameter can be continuously and reliably clamped.

Here too terms such as high speed ranges, low interfering contour, central coolant supply and high bending stiffness with unusually high holding forces and outstanding run-out accuracy have a fixed presence in the description of this

expanded clamping fixture program of WTE Präzisionstechnik GmbH.















#### **Additional advantages of the MICRO Universal Chuck 640:**

- Continuously expandable clamping range for tool shanks from 0.2 to 6.4 mm
- High reliability and low vulnerability to failures of the mechanical components

## The clamping alternative for shanks with diameters from 0.2 to 6.4 mm!

# Symbol explanation

## General symbol explanations:

	Explanation of the corresponding standard		Interior cooling
	Central coolant supply short taper		Without interior cooling
	Central coolant supply short taper or coolant supply via collar		Run-out deviation with HSK shanks
	Hollow shank taper Form A		Run-out deviation with SK/ISO shanks
	Hollow shank taper Form C for manual tool change		Shank tolerance
	Hollow shank taper Form E		Balance quality
	Hollow shank taper Form F		Bore for data carrier/Balluf chip

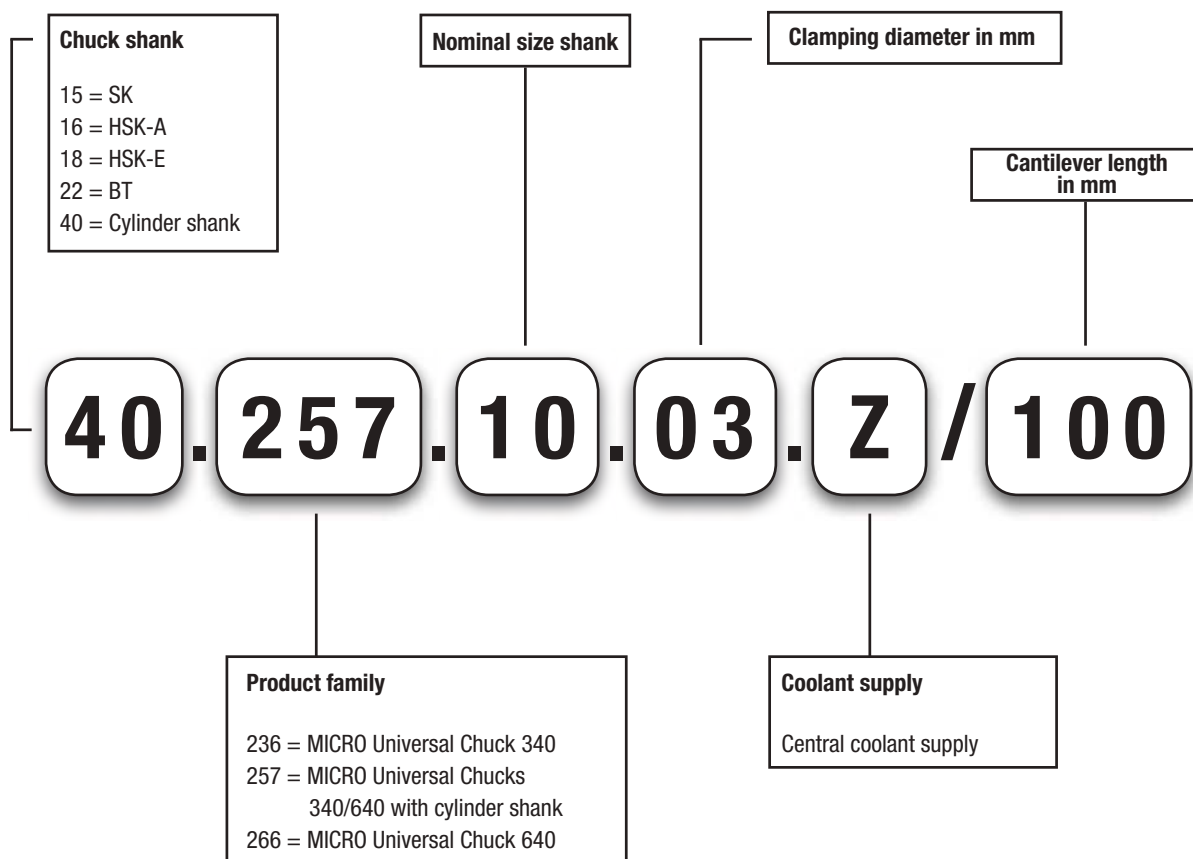
## General notes on the catalogue:

Technical specifications are subject to change .

Please find the corresponding prices and surcharges in our current valid price list.

Our General Terms and Conditions apply.

# Technical specification



## Explanation of dimensions:

- d<sub>1</sub> = Clamping range
- d<sub>2</sub> = Shank diameter
- D = Head diameter
- L = Cantilever length
- L<sub>1max</sub> = Cantilever length (with extended jaws)
- l = Shank length
- SW = Width across flats

## MICRO Universal Chuck 340

DIN 69871-AD | ISO 7388-2 (JIS6339)



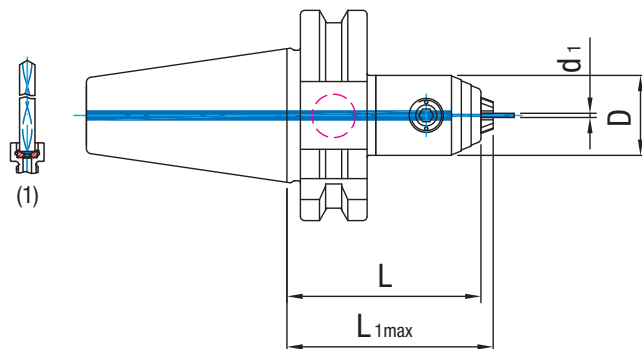
SK 30



SK 30



BT 30



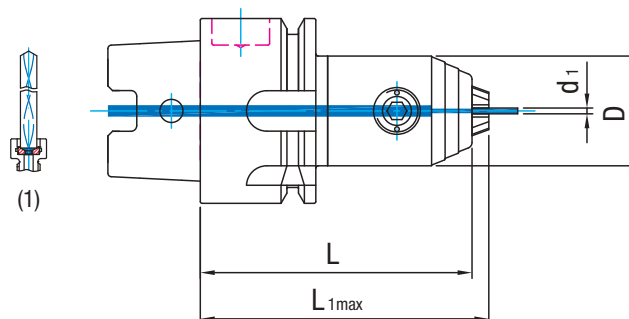
Nominal size shank	WTE Standard	Clamping range $d_1$	Dimensions			Weight kg	Order designation	Order no.	In stock
			D	L	$L_{1max}$				
SK 30	WTE 03	0.2-3.4	19	45	48	0.41	15.236.30.03.Z	30439744	●
BT 30	WTE 03	0.2-3.4	19	48	51	0.47	22.236.30.03.Z	30439751	●

(1) WTE 03 sealing disk (diameter 0.5 mm) included in scope of supply, for inner coolant drills diameter 0.7-3.4 mm with smooth shank acc. to DIN 6535 Form HA.



## MICRO Universal Chuck 340

DIN 69893-A

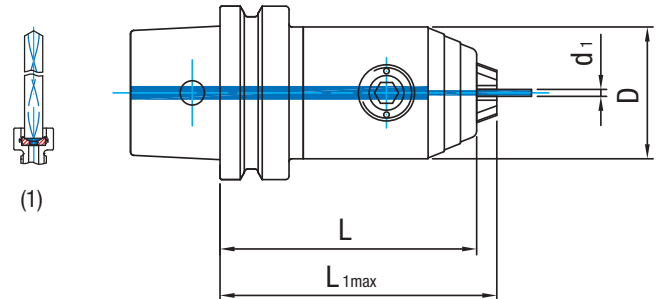


Nominal size HSK-A	WTE Standard	Clamping range $d_1$	Dimensions			Weight kg	Order designation	Order no.	In stock
			D	L	$L_{1max}$				
32	WTE 03	0.2-3.4	19	46	49	0.16	16.236.32.03.Z	30439728	●
40	WTE 03	0.2-3.4	19	46	49	0.24	16.236.40.03.Z	30439736	●
50	WTE 03	0.2-3.4	19	52	55	0.43	16.236.50.03.Z	30439739	●

(1) WTE 03 sealing disk (diameter 0.5 mm) included in scope of supply, for inner coolant drills diameter 0.7-3.4 mm with smooth shank acc. to DIN 6535 Form HA.

## MICRO Universal Chuck 340

DIN 69893-E

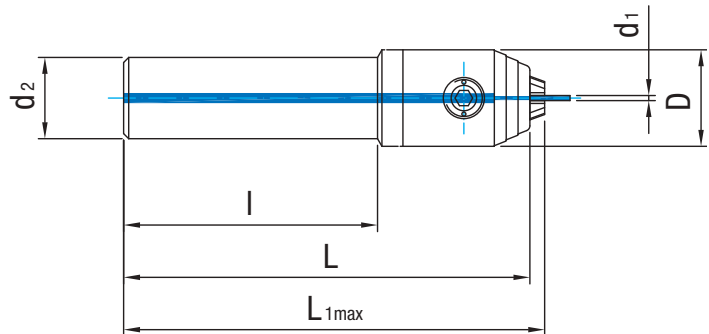
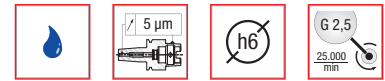


Nominal size HSK-E	WTE Standard	Clamping range $d_1$	Dimensions			Weight kg	Order designation	Order no.	In stock
			D	L	$L_{1max}$				
25	WTE 03	0.2-3.4	19	37	40	0.1	18.236.25.03.Z	30439663	●
32	WTE 03	0.2-3.4	19	46	49	0.17	18.236.32.03.Z	30439686	●
40	WTE 03	0.2-3.4	19	46	49	0.25	18.236.40.03.Z	30439722	●

(1) WTE 03 sealing disk (diameter 0.5 mm) included in scope of supply, for inner coolant drills diameter 0.7-3.4 mm with smooth shank acc. to DIN 6535 Form HA.

## MICRO Universal Chuck 340

with cylinder shank, diameter 10 / 16 / 20 mm, for WTE standard 03



Nominal size shank	WTE Standard	Clamping range $d_1$	Dimensions					Weight kg	Order designation	Order no.	In stock
			D	$d_2$	L	$L_{1max}$	I				
10	WTE 03	0.2-3.4	19	10	70	73	40	0.08	40.257.10.03.Z	30500299	●
10	WTE 03	0.2-3.4	19	10	100	103	70	0.09	40.257.10.03.Z/100	30500301	●
10	WTE 03	0.2-3.4	19	10	160	163	130	0.13	40.257.10.03.Z/160	30500302	●
16	WTE 03	0.2-3.4	19	16	80	83	50	0.13	40.257.16.03.Z	30439821	●
16	WTE 03	0.2-3.4	19	16	100	103	70	0.16	40.257.16.03.Z/100	30439832	●
16	WTE 03	0.2-3.4	19	16	160	163	130	0.26	40.257.16.03.Z/160	30439837	●
20	WTE 03	0.2-3.4	19	20	80	83	52	0.17	40.257.20.03.Z	30439755	●
20	WTE 03	0.2-3.4	19	20	100	103	72	0.21	40.257.20.03.Z/100	30439758	●
20	WTE 03	0.2-3.4	19	20	160	163	132	0.36	40.257.20.03.Z/160	30439763	●

All dimensions in mm.

Custom designs available on request.

○ Delivery time on request applies to these products.

● These products are available in stock.

## MICRO Universal Chuck 640

DIN 69871-AD | ISO 7388-2 (JIS6339)



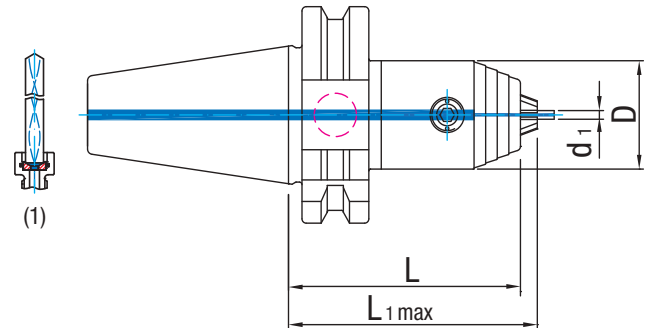
SK 30



SK 30



BT 30

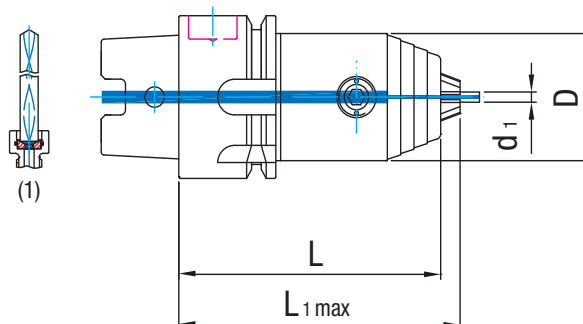


Nominal size shank	WTE Standard	Clamping range $d_1$	Dimensions			Weight kg	Order designation	Order no.	In stock
			D	L	$L_1$ max				
SK 30	WTE 06	0.2-6.4	25	55	59	0.8	15.266.30.06.Z	30564796	●
BT 30	WTE 06	0.2-6.4	25	58	62	0.9	22.266.30.06.Z	30564869	●

(1) WTE 06 sealing disk (diameter 0.5 mm) included in scope of supply, for inner coolant drills diameter 0.7-6.4 mm with smooth shank acc. to DIN 6535 Form HA.

## MICRO Universal Chuck 640

DIN 69893-A



Nominal size HSK-A	WTE Standard	Clamping range $d_1$	Dimensions			Weight kg	Order designation	Order no.	In stock
			D	L	$L_1$ max				
32	WTE 06	0.2-6.4	25	54	58	0.3	16.266.32.06.Z	30564811	●
40	WTE 06	0.2-6.4	25	54	58	0.4	16.266.40.06.Z	30564819	●
50	WTE 06	0.2-6.4	25	61	65	0.4	16.266.50.06.Z	30564823	●

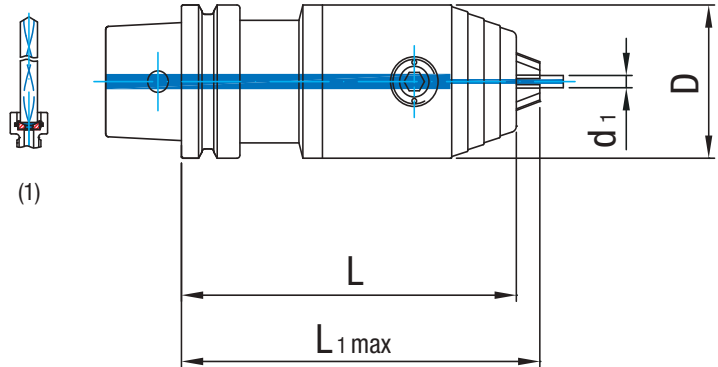
(1) WTE 06 sealing disk (diameter 0.5 mm) included in scope of supply, for inner coolant drills diameter 0.7-6.4 mm with smooth shank acc. to DIN 6535 Form HA.

## MICRO Universal Chuck 640

DIN 69893-E

DIN  
69893

Form  
E

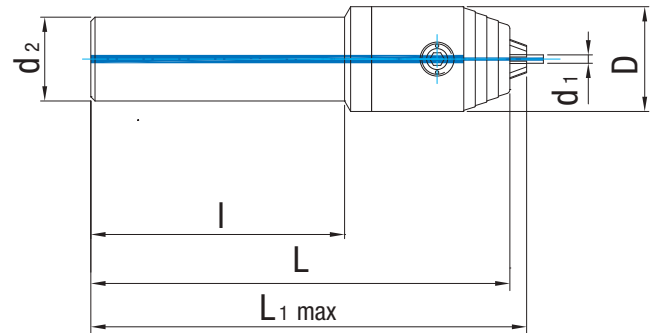
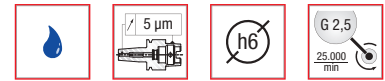


Nominal size HSK-E	WTE Standard	Clamping range $d_1$	Dimensions			Weight kg	Order designation	Order no.	In stock
			D	L	$L_1$ max				
25	WTE 06	0.2-6.4	25	57	61	0.3	18.266.25.06.Z	30564833	●
32	WTE 06	0.2-6.4	25	54	58	0.3	18.266.32.06.Z	30564839	●
40	WTE 06	0.2-6.4	25	54	58	0.4	18.266.40.06.Z	30564844	●

(1) WTE 06 sealing disk (diameter 0.5 mm) included in scope of supply, for inner coolant drills diameter 0.7-6.4 mm with smooth shank acc. to DIN 6535 Form HA.

## MICRO Universal Chuck 640

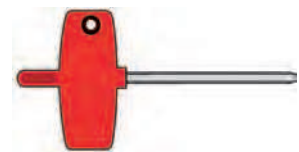
with cylinder shank, diameter 16 / 20 mm, for WTE standard 06



Nominal size shank	WTE Standard	Clamping range $d_1$	Dimensions					Weight kg	Order designation	Order no.	In stock
			D	$d_2$	L	$L_1$ max	l				
16	WTE 06	0.2-6.4	25	16	100	104	60	0.3	40.257.16.06.Z	30564901	●
16	WTE 06	0.2-6.4	25	16	150	154	110	0.5	40.257.16.06.Z/150	30564903	●
16	WTE 06	0.2-6.4	25	16	200	204	160	0.7	40.257.16.06.Z/200	30564905	●
20	WTE 06	0.2-6.4	25	20	100	104	60	0.4	40.257.20.06.Z	30564907	●
20	WTE 06	0.2-6.4	25	20	150	154	110	0.6	40.257.20.06.Z/150	30565004	●
20	WTE 06	0.2-6.4	25	20	200	204	160	0.8	40.257.20.06.Z/200	30565008	●

## Hexagonal T-key

for pinion activation



SW	l	Weight kg	WTE standard	Order designation	Order no.	In stock
2	60	0.01	WTE 03	89.206.08	30435838	●
2.5	60	0.01	WTE 06	89.106.10	10098110	●

All dimensions in mm.

Custom designs available on request.

○ Delivery time on request applies to these products.

● These products are available in stock.

## Technical Specifications MICRO Universal Chuck



WTE standard	WTE 03	WTE 06
Clamping range	0.2–3.4 mm	0.2-6.4 mm
Run-out deviation, maximum	< 0.005 mm (*)	< 0.005 mm (*)
Tightening torque in reference to run-out deviation	1.5 Nm	3 Nm
Transmittable torque	4.5 Nm (**)	9 Nm (**)
Maximum permissible tightening torque	2 Nm	4 Nm
Transmittable torque with maximum permissible tightening torque	7 Nm (**)	12 Nm (**)
Maximum permissible speed	60,000 min <sup>-1</sup> (***)	60,000 min <sup>-1</sup> (***)

(\*) Check the run-out deviation according to the test protocol "MICRO Universal Chuck".

(\*\*) All MICRO Universal Chucks are tightened using a hexagon T-key on the side via a taper drive. For the use of the MICRO Universal Chuck a tightening torque of 1.5 Nm (WTE 03) or 3 Nm (WTE 06) is sufficient on the hexagon T-key. The high holding torques achieved with the MICRO Universal Chuck are intended to be for additional safety and are not necessary for normal use.

(\*\*\*) The MICRO Universal Chucks are suitable for use up to 25,000 rpm. For application with speeds over 25,000 rpm to 60,000 rpm (e.g. in aluminium or wood machining), the MICRO Universal Chuck must additionally be balanced acc. to the balance classes— taking into consideration the speed and balance quality.

## Safe Clamping Maintenance and Service

Clamping with the MICRO Universal Chuck is done using the hexagon T-key via a bevel gear drive. Here the key is turned clockwise to clamp the tool. Opening the chuck is done counter-clockwise (see mark on the pinion bore). WTE MICRO Universal Chucks are maintenance-free.

After use the chuck should be cleaned with a clean cloth. The chuck should be oiled before storage for corrosion protection.

### Caution:

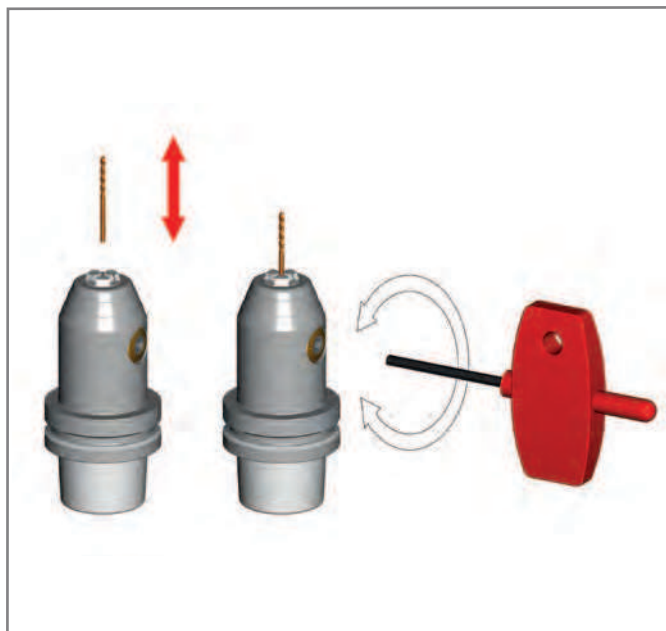
**Never use compressed air to clean the chuck, as fine shavings can get into the clamping mechanism.**

**Do not clean the chuck with solvent or solvent-containing cleaners, as these cause corrosion..**





## Components & Functional Principle MICRO Universal Chuck



1. Open the chuck counter-clockwise to insert the respective cutting tool.
2. The cutting tool must be inserted to the stop so that the tool shank always lies in the entire length of the chuck.

**Caution:**

**Do not clamp a conical shank, because of risk of injury!**

3. Turn the key with the indicated tightening torque (see table) clockwise, to clamp the tool properly.

Extensions or tightening aids must not be used, as the bevel gear drive can be damaged due to too high tightening torque.

4. After successively checking the correct clamping and the centred alignment of the cutting tool, the drill chuck is ready for operation.

# WTE News

## **Minimum quantity lubrication (MMS) from clamping technology specialists in Ehrenfriedersdorf**

Within a stable and functioning MMS process the associated chuck takes on an important role.

As specialist for precision clamping technologies, WTE offers a very diverse MMS program.

WTE has clamping products for the 1 or 2 channel system as short, long design in the product area hydraulic expansion chucks, HPH - High Performance Holder and shrink chucks. In the area of hydraulic expansion chucks, the MMS variants are also available in axially or radially adjustable designs. All product variants are offered both for automatic and manual tool change. In addition WTE also offers their customers the option to obtain assembly parts or accessory parts for MMS chucks in the expected high quality and sturdy construction.



## **HPH – High Performance Holder: Short and heavy design**

In the area of HPH – High Performance Holder there is now also the variant "short and heavy". Available in conventional shank types and sizes, this chuck from WTE is attractive due to its compact design, high torque transmission and an especially high temperature resistance especially with dry applications in the milling sector. In contrast to shrink chucks only a hexagon key is required for reliable tool clamping. With this additional cost intensive devices are omitted.

More information  
is available on the Internet at  
[www.wte-tools.de](http://www.wte-tools.de)

# WTE Gallery



## CNC Precision Drill Chucks

WTE Precision Drill chucks are attractive due to the professional uniformity of mechanical function and simple handling in innovative technology concepts.

The main focus here is on parameters, such as secure clamping regardless of direction of rotation, short clamping and changeover times, special short design and high speeds.

The modular design of the WTE Precision Drill Chucks guarantee the production of drill chucks in any base body shape.

## Shrink Chucks

WTE shrink chucks offer the possibility for clamping tools for almost all machining.

Precise accuracy of fit combined with the highest clamping force and very high torque transmission and outstanding values in the radial stiffness are the characteristics of all WTE shrink chucks.

They guarantee the best run-out accuracy under 0.003 mm and thus offer the highest dimensional accuracy on the workpiece.

WTE shrink chucks are standard balanced at  $G = 2.5$  (25,000 rpm) and are asked for in numerous areas of application due to the use of shrink extensions.



Are you curious?  
Then call us!  
Phone +49 (0) 831 57012-0

# WTE Gallery

## Hydraulic Expansion Chucks

High run-out accuracy and outstanding vibrational damping are the main characteristics of the WTE hydraulic expansion chucks. The use of WTE hydraulic expansion chucks guarantee optimum workpiece surfaces, higher service life of the tools used and an optimisation of production processes with respect to economics. WTE hydraulic expansion chucks are available both with axial and radial length adjustment and are manufactured in the standard range in the most common shank shapes. In addition, the use of reducing sleeves or special hydraulic expansion chucks give additional flexibility to these tools.



## HPH – High Performance Holder

The technological advanced development of conventional expansion technology is presented to you by our HPH - High Performance Holder. The maximum holding forces combined with outstanding damping properties, high temperature resistance and high bending stiffness with expected high run-out accuracy guarantee especially high surface quality in practical use.

Other outstanding properties are sturdy construction, insensitivity to dirt and high cost effectiveness in regards to the shortening of machining times due to significantly higher machining speeds.

More information  
is available on the Internet at  
[www.wte-tools.de](http://www.wte-tools.de)

# Our partner offer

**BECK**  
MAPAL GROUP


## Micro Reamers from BECK: Forward looking technologies for practical use in micro machining!

BECK developed a micro reamer program from solid carbide, HSS and special coatings for the highly-precise machining of small bores. Reamers made of solid carbide are offered from 0.60 mm and reamers of HSS from 0.98 mm. BECK offers a PcBN high performance reamer especially for hard machining. With this program it is possible to machine almost all materials.

Even reamers having a diameter of 3.00 mm are available with interior cooling.

## Micro Drills and Mills from MILLER: Reliable high performance tools for machining micro components!

Miller offers a broad program of solid carbide tools for the micro machining sector. The product range of solid carbide drills starts with a diameter of 0.50 mm and offers interior cooling starting with a diameter of 2.90 mm

The universally applicable, suitable for micro machining, OptiMill® mills, with two or three teeth in the diameter range of 1.00 to 3.00 mm, are enhanced by a special diamond-coated MICRO router series for efficient cost effective machining of CFK materials.

**MILLER**  
MAPAL GROUP


Are you curious?  
Then call us!  
Phone +49 (0) 831 57012-0



# tool-traders-partner: Triple the partnership

**BECK**  
MAPAL GROUP

## Tops in reaming and counter boring

Over 100 years of expertise and experience make BECK a reliable specialist in the fine machining of bores. The comprehensive standard program includes reaming and countersinking tools with maximum quality and precision. Cutting materials are offered made of HSS, VHM and Cermet but also of PKD and PcBN. BECK products are characterised by their strong performance and cost-effectiveness as decisive arguments for purchasing.

**MILLER**  
MAPAL GROUP

## Innovative Drilling and Milling

One of the largest and most modern factories for VHM tools in Europe produces drills and mills that have no match. Because MILLER is the declared specialist when it comes to high precision standard solutions for drilling and milling. The diverse product program consists of solid carbide tools for almost every application. Know-how, quality and commercial orientation are the characteristics that best describe the company and their products.

**WTE**  
MAPAL GROUP

## Reliable Clamping Technology

The specialist for innovative tool fixtures is called WTE. The comprehensive product program of precision drill chucks, hydraulic expansion chucks, shrink chucks, HPH universal chucks and micro chucks meet every demand for highly precise and modern machining requirements.

Precision and quality paired with high competence describes the WTE as reliable clamping partner for the retail market.

Innovation, Precision, Variety!  
Three specialists deliver the perfect tools  
for your success in retail trade.

# Three good reasons for more success

## "Made in Germany" – Top Performance and Top Products

We are convinced that the high demands of precision-dependent industries are only met with products that are developed and manufactured in Germany. Ultra-modern production methods, production systems and infrastructure, as well as qualified and engaged employees provide very high performance standards. Through this our products achieve the highest quality characteristics in the  $\mu$ -area, combined with an attractive price-performance ratio. All companies from the "tool-traders-partner" have embodied quality management systems and are certified to DIN EN ISO 9001:2008.



## Technical competence is available globally

All companies from "tool-traders-partner" are leaders in technology and their trademarks enjoy high international recognition and top image. Through our practice-oriented tool specialists we have available an information pool made up of decades of experience and concentrated special knowledge. We stand for continuity, professional competence and innovation. Commercially this means: In touch with the latest trends with the newest tool technology and know-how.



## Optimum customer service

Our comprehensive warehousing program, efficient logistics and high flexibility ensures the retail market a very high availability of the products. Within our strategic orientation on the retail market we offer a total package of services such as sales consultation, technical application support, training opportunities and marketing support. Through this we make continual development of your competence possible and guarantee unique service for you and your customers.



More information is available  
on our web site at  
[www.tool-traders-partner.com](http://www.tool-traders-partner.com)



## WTE Präzisionstechnik GmbH:

The specialist for high-precision chucks

- ▶ Hydraulic Expansion Chucks
- ▶ HPH - High Performance Holder
- ▶ Shrink Chucks
- ▶ CNC Precision Drill Chucks
- ▶ NC standard drill chuck
- ▶ MICRO Universal Chucks

Within our shrink chuck product line we can deliver every standard shank, each custom length or custom contour. For more questions, please contact our sales team. Telephone 0049 (0)831 570120.



# WTE

MAPAL GROUP

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