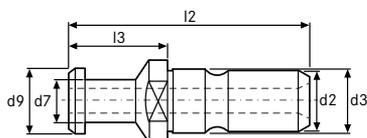




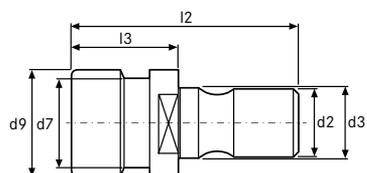
**tool chucks in accordance with ISO 7388-1**  
old standard DIN 69871-1 was replaced by ISO 7388-1 (dimensions are identical)

for the tool chucks in accordance with new type ISO 7388-1

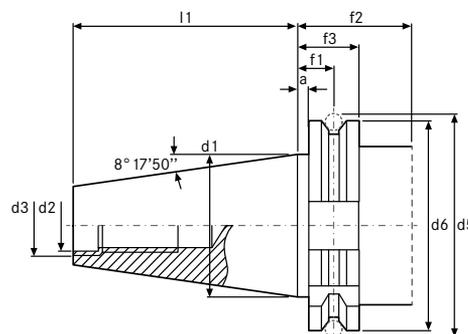
- type A** without through-bore
- type AD** with through-bore (for central coolant feed)
- type AF** with side coolant supply feed across the tool collar (old type designation was type B)
- type AD/AF** with through-bore and with side coolant feed through the tool collar. (old type specification was AD/B)



**pull stud 69872**



**pull stud ISO 7388/B**



**ISO 7388-1**

**pull stud 69872 and ISO 7388/B**

design	steep taper size	d <sub>2</sub>	d <sub>3</sub> g6	d <sub>7</sub>	d <sub>9</sub>	l <sub>2</sub>	l <sub>3</sub>
ISO 7388/B	40	M16	17	12,95	18,95	44,5	16,4
	50	M24	25	19,6	29,1	65,5	25,55
DIN 69872	30	M12	13	9	13	44	24
	40	M16	17	14	19	54	26
	50	M24	25	21	28	74	34

**steep taper ISO 7388-1**

steep taper size	a <sup>+0,1</sup>	b <sup>H12</sup>	d <sub>1</sub>	d <sub>2</sub>	d <sub>3</sub> <sup>H7</sup>	d <sub>5</sub> <sup>±0,05</sup>	d <sub>6,0,1</sub>	d <sub>8</sub> max.	f <sub>1</sub> <sup>±0,1</sup>	f <sub>2</sub> min.	f <sub>3</sub> <sup>-0,1</sup>	l <sub>1</sub> <sup>-0,3</sup>	l <sub>5</sub> <sup>-0,3</sup>	l <sub>6</sub> <sup>-0,4</sup>	l <sub>7</sub> <sup>-0,4</sup>
30	3,2	16,1	31,75	M12	13	59,3	50	45	11,1	35	19,1	47,8	15	16,4	19
40	3,2	16,1	44,45	M16	17	72,3	63,55	50	11,1	35	19,1	68,4	18,5	22,8	25
50	3,2	25,7	69,85	M24	25	107,35	97,5	80	11,1	35	19,1	101,75	30	35,5	37,7

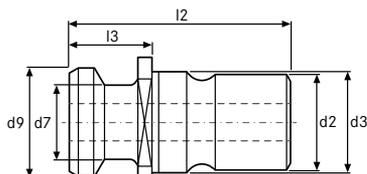
all dimensions in mm



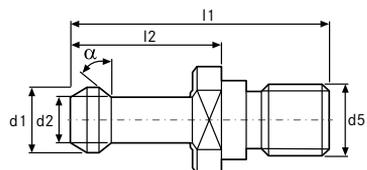
**tool chucks in accordance with ISO 7388-2**  
old standard JIS B 6339 MAS BT was replaced by ISO 7388-2

for the tool chucks in old type JIS B 6339 MAS BT NORM

- type A** without through-bore
- type AD** with through-bore (for central coolant feed)
- type B** with side coolant feed across the tool collar
- type AD/B** with through-bore and with side coolant feed through the tool collar



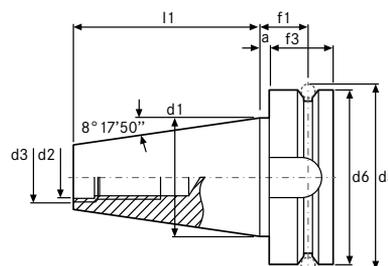
**ISO 7388/B**



**pull stud compliant with JIS standard MAS BT 30° and 45°**

for the tool chucks in accordance with new type ISO 7388-2

- type J** without through-bore
- type JD** with through-bore (for central coolant feed)
- type JF** with side coolant feed across the tool collar
- type JD/JF** with through-bore and with side coolant feed through the tool collar



**ISO 7388-2**

**pull stud 7388/B**

design	steep taper no.	d <sub>2</sub>	d <sub>3</sub> g6	d <sub>7</sub>	d <sub>9</sub>	l <sub>2</sub>	l <sub>3</sub>
ISO 7388/B	40	M16	17	12,95	18,95	44,5	16,4
	50	M24	25	19,6	29,1	65,5	25,55

## pull stud compliant with JIS standard

	$d_5$	$d_1$	$d_2$	$l_1$	$l_2$	angle $\alpha$
MAS BT I	M16	15	10	60	35	45°
MAS BT II	M16	15	10	60	35	30°
MAS BT I	M24	23	17	85	45	45°
MAS BT II	M24	23	17	85	45	30°

## steep taper ISO 7388-2

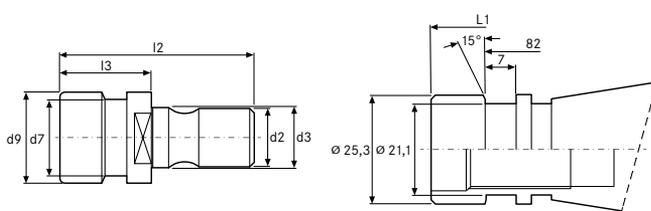
steep taper size	$a \pm 0.1$	$b^{H12}$	$d_1$	$d_2$	$d_3^{H7}$	$d_5 - 0.1$	$d_6 - 0.05$	$f_1 \pm 0.1$	$f_3$	$l_1 \pm 0.2$	$l_6 - 0.25$
40	2	16,1	44,45	M16	17	69,68	63	16,6	25	65,4	22,5
50	3	25,7	69,85	M24	25	110	100	23,2	35	101,8	35,3



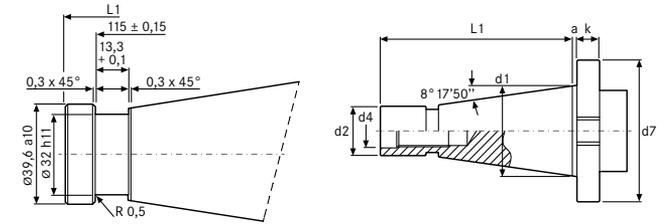
## standard for steep tapers in accordance with DIN 2080 and corresponding pull studs

### pull stud Ott-ring groove

on spindle nose DIN 2079  
only in conjunction with stones type C



### tool chuck compliant with DIN 2080



### Ott-ring groove pull stud

design	steep taper size	$d_2$	$d_3$ g6	$d_7$	$d_9$	$l_2$	$l_3$
Ott-ring groove	40	M16	17	21,1	25	53,1	25

### tool chuck DIN 2080

steep taper size	$a^{+0.2}$	$b^{H12}$	$d_1$	$d_2$ a 10	$d_7^{-0.1}$	$d_4$	$k^{+0.15}$	$l_1$	$l_1$ max.
30	1,6	16,1	31,75	17,4	50	M12	8	68,4	16,2
40	1,6	16,1	44,45	25,3	63	M16	10	93,4	22,5
50	3,2	25,7	69,85	39,6	97,5	M24	12	126,8	35,3

all dimensions in mm



## ATORN precision collet chucks maximum concentricity for optimum surface quality and maximum tool life

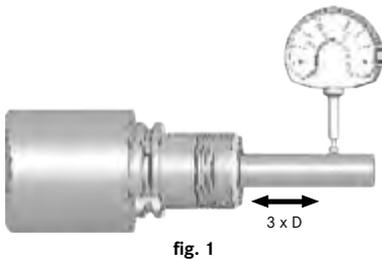


fig. 1

### total concentricity on ATORN precision collet chuck 3 µm (fig. 1)

- high-gloss polished surface
- precision collet chuck without clamp bridge
- collet chuck sits completely in the inner taper of the collet chuck (tolerance in µ range) (Figure 2)
- collet chuck and clamping nut with a 30° trapezoidal thread ① and two cylindrical guides form a single unit ②.

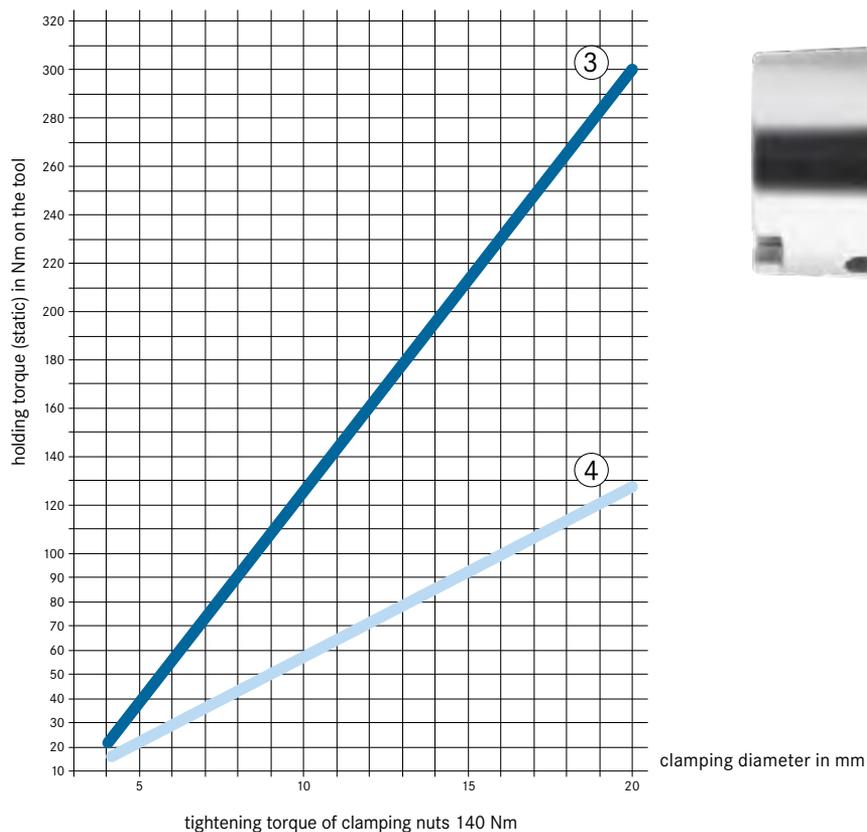


Fig. 2

with ATORN UP 2 µm or Fahrion 2 µm HP collet chuck

### all of these innovations have led to the following advantages compared with other systems:

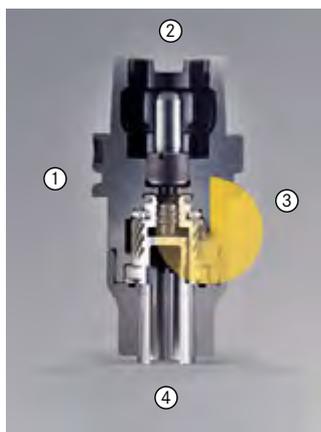
- more uniform engagement of all cutting edges
- longer tool life
- optimised surface
- fewer chatter marks
- minimised vibration
- higher cutting data
- system concentricity ≤ 3 µm



- ③ ATORN precision collet chuck 160 Nm Ø 12 mm
- ④ standard collet chuck ER32 69 Nm Ø 12 mm



## ALBRECHT precision chuck APC



### successes have reasons

- 1. the only chuck in the world with a 1:16 worm gear.**  
patent 1206990. this is the only way to ensure 100 % retention force on the milling cutter.
- 2. the highest rigidity** is ensured by this design and base. measurement portfolio of Sophia University, Tokyo.
- 3. worm gear unit with 3 tonnes of traction** and collet chuck with 1.25° flat taper angle guide the miller perfectly through trochoidal, dry and hard machining up to 110 °C.
- 4. optimal damping.**  
the clamping sleeve/taper connection dampens virtually all vibrations.



## ATORN hydro expansion chucks – advantages

our hydro expansion chucks or HPH (High Performance Holders) with axial and radial length adjustment are used on woodworking and metalworking machines with rotating tools. depending on the type of use, various versions are available, e. g.:

- **automatic tool change chucks in acc. with:** ISO 7388-1 (DIN 69871); DIN 69893-A, DIN 69893-F, DIN 69893-E and ISO 7388-2 (JIS B6339)

### Advantages of the ATORN hydro expansion clamping technology:

- Tool change in the shortest possible time
- High concentricity
- Vibration-damping tool clamping
- Increased tool service life
- Reduction of micro abrasions on the tool cutting edge
- Improvement in surface quality
- Reducing sleeves allow flexible use
- Low maintenance requirements through closed clamping system
- Easy operation
- High torque transmission
- Design corresponds to DIN 69882-7
- High positioning accuracy and repeatability
- Tool clamping with excellent concentricity (maximum 3 µm)
- Continual further development
- Products certified according to DIN EN ISO 9001:2008, manufactured in Germany



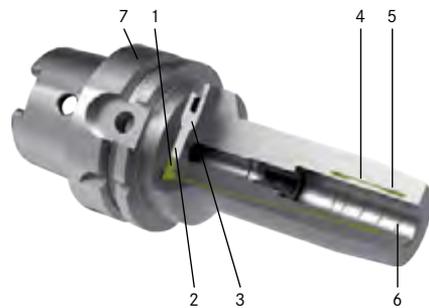
ATORN 3 degree hydro expansion chuck  
ultra-slim 3D-printed design



## ATORN hydro expansion clamping technology – elements and functional principle

### Elements of the hydro expansion clamping technology:

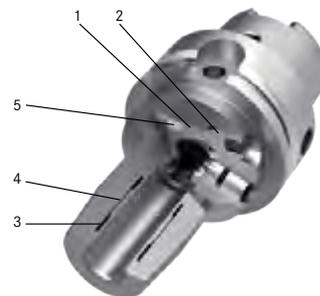
- ① Sealing element; leakage at the clamping bore is prevented by the sealing lip.
- ② Clamping piston; presses the hydraulic medium into the chamber system.
- ③ Clamping screw; tightening to operate the clamping piston can be done without a torque wrench.
- ④ Expansion sleeve; clamps the tool shaft centrally with even pressure.
- ⑤ Chamber system; is formed through the connection between expansion sleeve and basic body. Has a dampening effect on the tool through the hydraulic medium, which therefore reduces wear.
- ⑥ Groove; residual oil, grease or lubricant is forced into the groove by the high clamping pressure. The clamping surfaces remain largely dry, which ensures proper transfer of torque.
- ⑦ Basic body; ATORN hydro expansion chucks are available for all common machine interfaces (HSK-A, HSK-C, HSK-E, HSK-F, SK, BT and flange module).



### Functional principle

When clamping with hydro expansion technology, an even pressure is built up within a closed chamber system by means of a clamping screw and clamping piston. The integrated expansion sleeve transfers this pressure to the tool.

- ① The clamping screw is screwed in with a hexagon key until it stops.
- ② The clamping piston pushes the hydraulic medium into the
- ③ expansion chamber and causes an increase in pressure.
- ④ The thin-walled expansion sleeve curves evenly against the tool shaft. In this clamping process, the tool shaft is first centred and then clamped firmly over its full surface.
- ⑤ The sealing element ensures a perfect seal and a long service life.

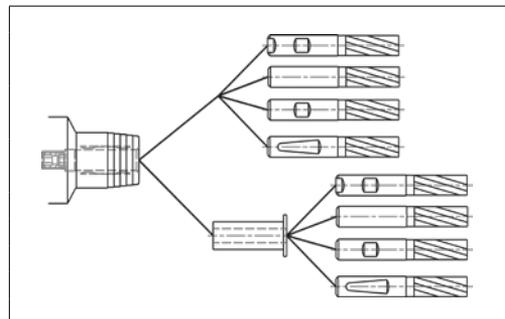




## ATORN hydro expansion chuck – technical data

**technical data:**

- material 1600-1800 N/mm<sup>2</sup> tensile strength
- hardness 52 + 2HRc
- balanced holder
- laser marked
- max. speed 40,000 rpm (observing limit speed, interface, precision balancing recommended!)
- operating temperature 20-50°C; higher temperatures on request, do not use above 80°C
- maximum coolant pressure 80 bar
- adjustment path 10 mm
- clamp shafts (tolerance h6) with and without reducing sleeves:
  - DIN 1835 Form A, B, C, D
  - DIN 6535 Form H, HB, HE



**permissible transferable torques with direct clamping**

clamping diameter in mm	6	8	10	12	14	16	18	20	25	32
minimum clamping depth in mm	27	27	31	36	36	39	39	41	47	51
transferable torque in Nm (min. dimension h6)	20	30	47	80	100	160	200	330	400	650
maximum transferable torque in Nm (max. dimension h6)	30	45	85	140	160	230	270	400	470	730

**reliably transferable torques for ATORN hydraulic expansion chuck, clamping diameter 32 mm with reducing sleeve**

clamping diameter in mm	6	8	10	12	14	16	18	20	25
transferable torque in Nm (min. dimension h6)	30	45	60	120	120	180	220	250	360
maximum transferable torque in Nm (max. dimension h6)	45	65	110	170	170	230	300	320	440

**reliably transferable torques for ATORN hydraulic expansion chuck, clamping diameter 20 mm with reducing sleeve**

clamping diameter in mm	3	4	5	6	8	10	12	14	16
transferable torque in Nm (min. dimension h6)	6	9	16	30	55	90	120	135	190
maximum transferable torque in Nm (max. dimension h6)	10	12	22	40	75	120	150	170	260

**reliably transferable torques for ATORN hydraulic expansion chuck, clamping diameter 12 mm with reducing sleeve**

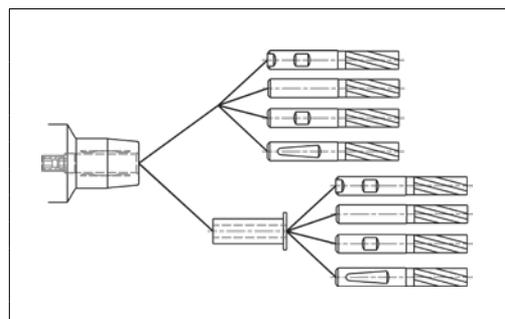
clamping diameter in mm	3	4	5	6	8
transferable torque in Nm (min. dimension h6)	3	4	7	12	18
maximum transferable torque in Nm (max. dimension h6)	4	8	12	20	26



## ATORN HPH – high-performance hydro-expansion chuck – technical data

**technical data:**

- material 1600-1800 N/mm<sup>2</sup> tensile strength
- hardness 52 + 2HRc
- balanced holder
- laser marking
- max. speed 40,000 rpm (observing limit speed, interface, precision balancing recommended!)
- operating temperature 20-120°C
- maximum coolant pressure 80 bar
- adjustment path 10 mm
- clamp shafts (tolerance h6) with and without reducing sleeves:
  - DIN 1835 Form A, B, C, D
  - DIN 6535 Form H, HB, HE



## permissible transferable torque with direct clamping HPH (high-performance holder) – high-performance hydro-expansion chuck holder

clamping diameter in mm	6	8	10	12	14	16	18	20	25	32
minimum clamping depth in mm	27	27	31	36	36	39	39	41	47	51
transferable torque in Nm (min. dimension h6)	30	50	100	150	210	280	360	550	650	800
maximum transferable torque in Nm (max. dimension h6)	40	65	135	190	280	380	450	650	750	890

## permissible transferable torque with direct clamping HPH 3° Multi

clamping diameter in mm	3	4	5	6	8	10	12	14	16	18	20
minimum clamping depth in mm	12	16	20	27	27	31	36	36	39	39	41
transferable torque in Nm (min. dimension h6)	3	6	10	20	35	65	110	120	160	200	260
maximum transferable torque in Nm (max. dimension h6)	6	10	14	35	55	90	150	160	200	260	340



## ATORN shrink technology – benefits

the shrink technology uses heat-induced expansion to clamp tools. an induction coil heats the shrink-fit chuck. the chuck expands and the cold tool shaft can be inserted. the shrink-fit chuck is cooled down again, tightens and forms a friction connection with the tool due to the oversize at the tool shaft.

### advantages:

- simple tool holder design
- high concentricity in tool clamping
- reliable force transmission
- slim construction
- profitability
- high torque transmission,
- long service life and temperature resistance through the use of high-strength heat-resistant steel
- distortion-free through optimum heat treatment
- optimally balanced
- comes with impact thread drill by default above clamping diameter of 6 mm
- design corresponds to DIN 69882-8
- high positioning accuracy and repeatability
- guaranteed maximum concentricity – a maximum of 3 µm
- laser marking for secure product traceability
- products certified according to DIN EN ISO 9001:2008 – made in Germany
- flexible shrink system through the use of ATORN shrink-fit extensions
- stop screw adjustable on both sides



## ATORN shrink-fit chuck – functional principle

ATORN shrink-fit chucks are used on woodworking and metalworking machines with rotating tools. Shrink-fit chucks use heat-induced expansion to clamp tools. The application areas for these chucks range from a wide variety of milling tasks to heavy-duty machining, woodwork and drilling. ATORN shrink-fit chucks are produced with an internal coolant feed as standard.

Selected product groups in the range also have flange cooling. Custom designs for the use of lateral coolant bores are always possible on request.

for automatic tool changing, ATORN shrink-fit chucks are available in the following versions: ISO 7388-1 (DIN 69871), DIN 69893-A, DIN 69893-E, DIN 69893-F and ISO 7388-2 (JIS B6339).

### functional principle:

- ① **warm the chuck:** the clamping point of the chuck is warmed precisely using state-of-the-art induction technology. An induction coil generates rapidly changing eddy currents which work directly on the shrink-fit chuck, and heat precisely the point on which the tool shaft sits. The bore diameter widens.
- ② **insert the tool shaft:** the cold tool shaft is put into the heated shrink-fit chuck.
- ③ **cooling:** the shrink-fit chuck is cooled, the clamping diameter returns to its initial level and clamps the tool shaft. a powerful device with water-cooled heat sinks allows rapid cooling within 30 seconds. this means neither the taper nor the data chips warm up. extensions or non-standard shrink-fit chucks can be cooled using adapters in the heat sinks.

### the result:

inductive heating means the tool change can be performed in seconds. shrink-fit chuck and tool shaft form a friction-locked connection. cemented carbide and even HSS tools can be clamped. the tool fits precisely in the tool chuck with the highest level of clamping force.

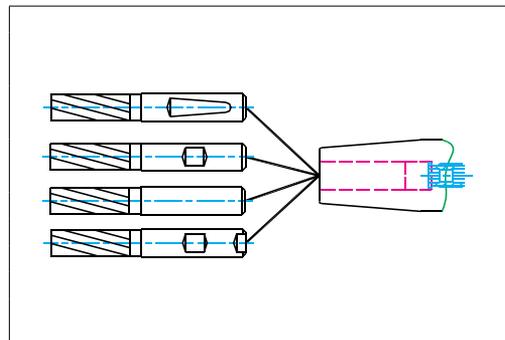




## ATORN shrink-fit chuck – technical data

### technical data:

- material 1600-1800 N/mm<sup>2</sup> tensile strength
- hardness 52 + 2HRc
- balanced holder by default
- laser marking
- max. speed 40,000 rpm (observing limit speed, interface, precision balancing recommended!)
- shrink temperature 100-420°C
- maximum shrink temperature 500°C
- maximum coolant pressure 80 bar
- adjustment travel 10 mm, can be adjusted on both sides
- can be clamped: cylinder shafts tolerance outside diameter h6
- shrinking in and out of cemented carbide and HSS tools when using the corresponding shrinking devices



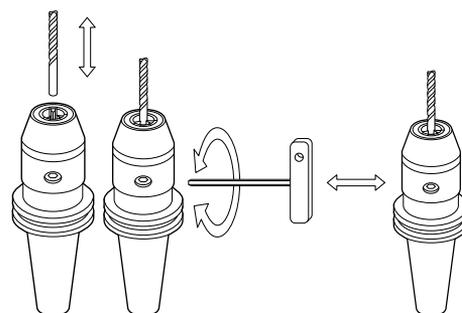
### permissible transferable torques with direct voltage

clamping diameter in mm	3	4	5	6	8	10	12	14	16	18	20	25	32
minimum clamping depth in mm	12	16	20	26	26	31	37	37	40	40	42	48	52
transferable torque in Nm	4	11	17	24	45	82	145	190	200	290	450	530	700



## ATORN drill chucks – components and functional principle

- Open the clamping jaws anti-clockwise to insert the respective cutter.
- The cutter must be pushed in all the way to the stop, so that the tool shaft is against the entire length of the clamping jaws. (Caution: Do not clamp conical shafts, as there is a risk of accident!)
- Turn the key clockwise to the specified tightening torque, to properly clamp the tool. Extensions or tightening aids must not be used, as too much tightening torque can break the bevel gear drive. Here, the pinion serves as a predetermined breaking point to avoid more significant damage to the drill chuck.
- Once it has been verified that the cutter is clamped correctly and centred, the drill chuck is ready for use.



### Secure clamping:

All ATORN drill chucks are clamped with a hexagonal cross handle key via a bevel gear drive at the side. The key is turned clockwise to clamp the drill chuck. The drill chuck is opened in the anti-clockwise direction (see markings on the pinion bore). Step-by-step instructions can be found in the respective operating instructions.

### Care and maintenance:

ATORN drill chucks are maintenance free. After use, the drill chucks should be wiped with a clean cloth. Before storing, the drill chucks should be oiled to prevent corrosion.

Caution: Do not use compressed air to clean drill chucks as fine chips can enter the clamping mechanism. The drill chucks must not be cleaned with solvents or cleaners containing solvents, as these can cause corrosion.





ATORN drill chuck and micro universal chuck – technical data



ATORN standard	drill chuck
clamping range	0.5-16 mm
maximum concentricity deviation	< 0.02 mm (*)
torque in relation to concentricity deviation	15 Nm
transferable torque	45 Nm (**)
maximum permissible tightening torque	20 Nm
transferable torque at maximum permissible tightening torque	90 Nm (**)
maximum permissible speed	35,000 rpm (***)

MICRO 03	MICRO 06
0.2-3.4 mm	0.2-6.4 mm
< 0.005 mm (*)	< 0.005 mm (*)
1.5 Nm	3 Nm
4.5 Nm (**)	9 Nm (**)
2 Nm	4 Nm
7 Nm (**)	12 Nm (**)
60,000 rpm (***)	60,000 rpm (***)

(\*) check of concentricity deviation as per test protocol „Precision“

(\*) check of concentricity deviation as per the test protocol „MICRO universal chuck“.

(\*\*) all CNC drill chucks are clamped by means of a hexagonal T-key on the side via a bevel gear. for the use of the drill chuck, a torque of 8 Nm or 15 Nm is sufficient on the hexagonal T-key. the higher holding torques achievable with the CNC drill chucks are additional security and therefore not necessary for normal use.

(\*\*) all MICRO universal chucks are clamped by means of a hexagonal T-key on the side via a bevel gear. for the use of MICRO universal chuck, a tightening torque of 1.5 Nm (MICRO 03) or 3 Nm (MICRO 06) is sufficient on the hexagonal T-key. the higher holding torques achievable with the MICRO universal chucks are additional security and are not necessary for normal use.

(\*\*\*) the CNC drill chucks are „unbalanced“ suitable for use up to 7000 rpm . for applications at speeds above 7000 rpm (up to max. 35,000 rpm), such as in aluminium or wood processing, the drill chucks must also be balanced as per the balancing classes, taking into account the speed and balancing quality.

(\*\*\*) the MICRO universal chucks are „unbalanced“ suitable for use up to 18,000 rpm . for applications at speeds of over 18,000 rpm to 60,000 rpm (such as in aluminium or wood processing), the MICRO universal chucks must also be balanced as per the balancing classes, taking into account the speed and balancing quality.



Chuck application overview

Chuck/tool chuck for cylindrical tool shanks	Shrink-fit chuck	Hydro expansion chuck	Precision chuck APC	Surface chuck (Weldon)	Collet chuck, Type ER
<b>Properties</b>	<ul style="list-style-type: none"> <li>Maximum concentricity</li> <li>Very slim interfering contour</li> <li>Good rigidity</li> <li>high clamping force</li> <li>Can be extended modularly</li> </ul>	<ul style="list-style-type: none"> <li>High attenuation at the highest concentricity</li> <li>easy to handle</li> <li>Flexible use due to reducing sleeves</li> </ul>	<ul style="list-style-type: none"> <li>Maximum clamping force and stability due to mechanical tension transmission</li> <li>High precision and balancing quality</li> <li>Flexible use due to clamping sleeves</li> </ul>	<ul style="list-style-type: none"> <li>Robust, affordable chuck for heavy machining in lower rotation speed and accuracy range</li> </ul>	<ul style="list-style-type: none"> <li>Very flexible chuck for a wide range of shaft dimensions and tolerances</li> <li>For different machining tasks</li> </ul>
<b>Primary application</b>	<ul style="list-style-type: none"> <li>Drilling</li> <li>Countersinking</li> <li>Milling</li> <li>Grinding</li> <li>Threads</li> <li>Universal and HSC applications</li> </ul>	<ul style="list-style-type: none"> <li>Medium machining</li> <li>Reaming</li> <li>Drilling</li> <li>Countersinking</li> <li>HSC application</li> </ul>	<ul style="list-style-type: none"> <li>Heavy HPC and fast, precise HSC milling</li> <li>Drilling</li> <li>Reaming</li> <li>Universally applicable</li> </ul>	<ul style="list-style-type: none"> <li>Rough machining</li> <li>Milling</li> <li>Drilling</li> <li>Threads</li> </ul>	<ul style="list-style-type: none"> <li>Medium machining</li> <li>Centring</li> <li>Chamfering</li> <li>Drilling</li> <li>Threads</li> <li>Intermediate shafts</li> </ul>
<b>Main property</b>	<ul style="list-style-type: none"> <li>Precise and universal</li> <li>slim</li> <li>high clamping force</li> </ul>	<ul style="list-style-type: none"> <li>easy to handle</li> </ul>	<ul style="list-style-type: none"> <li>maximum clamping force and rigidity</li> </ul>	<ul style="list-style-type: none"> <li>simple operation</li> <li>Safe voltage</li> </ul>	<ul style="list-style-type: none"> <li>high flexibility</li> </ul>
<b>Concentricity</b>	< 3 µm	< 3 µm	< 3 µm	< 10 µm	< 10 µm

<b>With 5xD</b>	< 5 µm	< 5 µm	< 8 µm	< 25 µm	< 25 µm
<b>Clamping force</b>	Very high	Very high	Extremely high	Very secure	Medium
<b>Rigidity</b>	Very high	high	Extremely high	Very high	low
<b>Attenuation</b>	low	Very high	high	low	high
<b>Interference contour</b>	small/micro	Medium	Medium	large	Large (mini = small)
<b>Handling</b>	good	Very good/very flexible	Very good/flexible	good	good
<b>Actuation</b>	Shrink fit machine	Hexagonal key	Hexagonal key/torque wrench	Hexagonal key	Hook wrenches





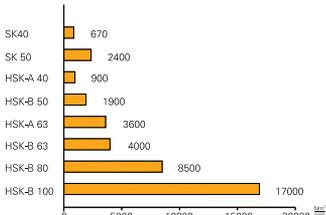
**Hollow shank taper tools**  
For automatic and manual tool exchange

**tool chuck HSK-32/40/50/63/80/100 types A to F**

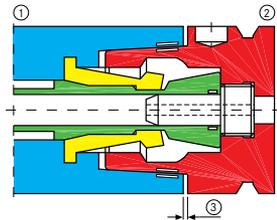
To prepare a quotation, we need your spindle size and possible tool chucks.

**Advantages vis-à-vis steep taper:**

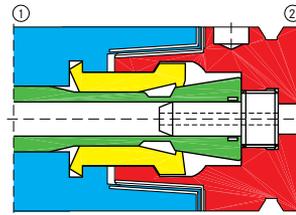
- **High rigidity:** considerably greater bending strength is achieved with the same tool sizes as a result of the support at the collar (flange).
- **Excellent change precision:** the flange attachment facilitates axial positioning precision in the µm range. The form-fit, tight taper tolerance prevents any radial run-out.



Radial nominal rigidity of various machine tool interfaces



Functional principle of the HSK interface  
Spindle, Tool, Free space



Connecting position with locating faces  
Spindle, Tool



Clamping situation with locating faces

- **Good torque transmission:** the hollow shank taper is held in the receiving spindle so that torque transmission is possible as a result of friction contact. 2 carrier blocks also engage in the slots at the shank end.
- **Ideal for high rotation speeds:** at high rotation speeds the spindle expands due to centrifugal force. This could cause the steep taper to slip in the spindle and jam. This is prevented by the flange. In addition, the clamping elements are pushed outwards by centrifugal force which increases the clamping force.
- **Integrated tool system:** the hollow shank taper was designed for both stationary and rotating tool chucks. This enables the tool holders to be used on milling machines and lathes and as modular tools.

**ORION® Surface chuck (Weldon) HSK-A (DIN 69893-1)**

HSK 63
HSK 100
Form A
IK
G 6,3 15000 rpm
DIN 69893

**Application:**

For clamping tools with straight shanks and clamping surfaces in line with DIN 1835 B.

**Execution:**

- All tapers and tolerances are precision-ground
- Cone tolerance AT3
- Strength HRC 57-60

- Core strength 1000-1200 N/mm<sup>2</sup>

- With Balluff chip hole
- All functional surfaces machined
- Concentricity of tool chuck, inner taper surface to the clamping diameter ≤0.005 mm

**Advantage:**

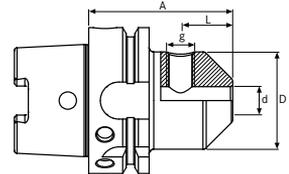
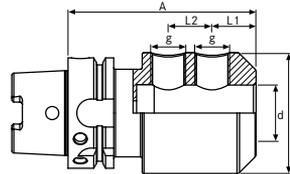
- Prevents rotation of tool while maintaining high concentricity



Ident. No. 200-226



Ident. No. 250-270



Tool holding device	d (mm)	A (mm)	L (mm)	L1 (mm)	L2 (mm)	D (mm)	g / G	23157... Ident. No.	
HSK 63	6	65	18	-	-	25	M6	200	●
HSK 63	6	100	18	-	-	25	M6	201	●
HSK 63	6	160	18	-	-	25	M6	202	●
HSK 63	8	65	18	-	-	28	M8	203	●
HSK 63	8	100	18	-	-	28	M8	204	●
HSK 63	8	160	18	-	-	28	M8	205	●
HSK 63	10	65	20	-	-	35	M10	206	●
HSK 63	10	100	20	-	-	35	M10	207	●
HSK 63	10	160	20	-	-	35	M10	208	●
HSK 63	12	80	22.5	-	-	42	M12	209	●
HSK 63	12	100	22.5	-	-	42	M12	210	●
HSK 63	12	160	22.5	-	-	42	M12	211	●
HSK 63	14	80	22.5	-	-	44	M12	212	●
HSK 63	14	100	22.5	-	-	44	M12	213	●
HSK 63	14	160	22.5	-	-	44	M12	214	●
HSK 63	16	80	24	-	-	48	M14	215	●
HSK 63	16	100	24	-	-	48	M14	216	●
HSK 63	16	160	24	-	-	48	M14	217	●
HSK 63	18	80	24	-	-	50	M14	218	●
HSK 63	18	100	24	-	-	50	M14	219	●
HSK 63	18	160	24	-	-	50	M14	220	●
HSK 63	20	80	25	-	-	52	M16	221	●
HSK 63	20	100	25	-	-	52	M16	222	●
HSK 63	20	160	25	-	-	52	M16	223	●
HSK 63	25	110	-	24	25	65	M18 x 2	224	●

Tool holding device	d (mm)	A (mm)	L (mm)	L1 (mm)	L2 (mm)	D (mm)	g / G	23157... Ident. No.	
HSK 63	32	110	-	24	28	72	M20 x 2	225	●
HSK 63	40	125	-	30	32	80	M20 x 2	226	●
HSK 100	6	80	18	-	-	25	-	250	●
HSK 100	6	160	18	-	-	25	-	251	●
HSK 100	8	80	18	-	-	28	-	252	●
HSK 100	8	160	18	-	-	28	-	253	●
HSK 100	10	80	20	-	-	35	-	254	●
HSK 100	10	160	20	-	-	35	-	255	●
HSK 100	12	100	22.5	-	-	42	-	256	●
HSK 100	12	160	22.5	-	-	42	-	257	●
HSK 100	14	100	22.5	-	-	44	-	258	●
HSK 100	14	160	22.5	-	-	44	-	259	●
HSK 100	16	100	24	-	-	48	-	260	●
HSK 100	16	160	24	-	-	48	-	261	●
HSK 100	18	100	24	-	-	50	-	262	●
HSK 100	18	160	24	-	-	50	-	263	●
HSK 100	20	100	25	-	-	52	-	264	●
HSK 100	20	160	25	-	-	52	-	265	●
HSK 100	25	100	-	24	25	65	-	266	●
HSK 100	25	160	-	24	25	65	-	267	●
HSK 100	32	120	-	24	28	72	-	268	●
HSK 100	32	160	-	24	28	72	-	269	●
HSK 100	40	120	-	30	32	80	-	270	●

Prod. Gr. 2AC

**ORION® Surface chuck (Weldon) with coolant bores (DIN 69893-1)**  
 KKB= resealable cooling duct holes

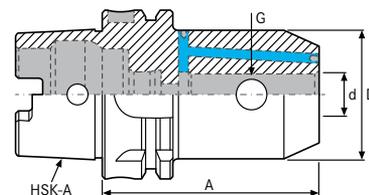
HSK 63	Form A	G 2,5 25000 rpm	DIN 69893
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**Application:**  
 for clamping tools with straight shanks and clamping surfaces in line with DIN 1835 B.

- Execution:**
- all tapers and tolerances are precision-ground
  - cone tolerance AT3
  - strength HRC 57-60

- core strength 1000-1200 N/mm<sup>2</sup>
- with Balluff chip hole
- all functional surfaces machined
- Concentricity of the tool chuck, internal taper to the clamping diameter ≤0.005 mm

- Advantage:**
- prevents rotation of tool while maintaining high concentricity



Tool holding device	d (mm)	A (mm)	D (mm)	g / G	23157... Ident. No.	
HSK 63	6	65	25	M6	501	●
HSK 63	6	100	25	M6	502	●
HSK 63	6	160	25	M6	503	●
HSK 63	8	65	28	M8	504	●
HSK 63	8	100	28	M8	505	●
HSK 63	8	160	28	M8	506	●
HSK 63	10	65	35	M10	507	●
HSK 63	10	100	35	M10	508	●
HSK 63	10	160	35	M10	509	●
HSK 63	12	80	42	M12	510	●
HSK 63	12	100	42	M12	511	●
HSK 63	12	160	42	M12	512	●
HSK 63	14	80	44	M12	513	●
HSK 63	14	100	44	M12	514	●
HSK 63	14	160	44	M12	515	●
HSK 63	16	80	48	M14	516	●
HSK 63	16	100	48	M14	517	●
HSK 63	16	160	48	M14	518	●
HSK 63	18	80	50	M14	519	●
HSK 63	18	100	50	M14	520	●
HSK 63	18	160	50	M14	521	●
HSK 63	20	80	52	M16	522	●
HSK 63	20	100	52	M16	523	●
HSK 63	20	160	52	M16	524	●
HSK 63	25	110	65	M18 x 2	525	●
HSK 63	25	160	65	M18 x 2	526	●
HSK 63	32	110	72	M20 x 2	527	●
HSK 63	32	160	72	M20 x 2	528	●
HSK 63	40	125	80	M20 x 2	529	●
HSK 63	40	160	80	M20 x 2	530	●

Prod. Gr. 295

# ORION® Combination shell end mill arbors (DIN 6358) (DIN 69893-1)

HSK 63
HSK 100
Form A
G 6,3 20000 rpm
DIN 69893

**Application:**  
For holding shell end mills and single angle milling cutters with longitudinal groove in line with DIN 842.

- Concentricity < 0.005 mm
- With hole for Balluff chip

**Execution:**  
▪ All functional surfaces machined

**Delivery:**  
With cutter retaining screw, key and driving ring.

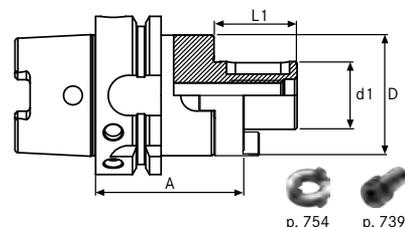
**Notes:**  
If desired with combined shell end mill arbors with ICS, the cutter retaining screws must be ordered separately with IC DIN 6367, ref. no. 23185130-180



Ident. No. 200-210, 212-214



Ident. No. 250-254



Tool holding device	d1 (mm)	L1 (mm)	A (mm)	D (mm)	Coolant supply	23160... Ident. No.		Tool holding device	d1 (mm)	L1 (mm)	A (mm)	D (mm)	Coolant supply	23160... Ident. No.	
HSK 63	16	27	60	32	No	200	●	HSK 63	32	38	100	58	No	210	●
HSK 63	16	27	100	32	No	201	●	HSK 63	32	38	160	58	No	211	●
HSK 63	16	27	160	32	No	202	●	HSK 63	40	41	70	70	No	212	●
HSK 63	22	31	60	40	No	203	●	HSK 63	40	41	100	70	No	213	●
HSK 63	22	31	100	40	No	204	●	HSK 63	40	41	160	70	No	214	●
HSK 63	22	31	160	40	No	205	●	HSK 100	16	27	65	32	No	250	●
HSK 63	27	33	60	48	No	206	●	HSK 100	22	31	65	40	No	251	●
HSK 63	27	33	100	48	No	207	●	HSK 100	27	33	65	48	No	252	●
HSK 63	27	33	160	48	No	208	●	HSK 100	32	38	70	58	No	253	●
HSK 63	32	38	65	58	No	209	●	HSK 100	40	41	70	70	No	254	●

Prod. Gr. 2AC

# ORION® Transverse drive shell end mill arbor (DIN 6357) (DIN 69893-1)

Increased collar diameter (face mill arbor)

HSK 63
HSK 100
Form A
IK
G 2,5 25000 rpm
DIN 69893

**Execution:**  
▪ Alloyed case-hardening steel, tensile strength in the core min. 950 N/mm<sup>2</sup>

- Internal coolant feed, cooling duct bore cannot be closed
- Case-hardened HRc 60 ± 2 (HV 700 ± 50), hardness depth 0.8 mm ± 0.2 mm

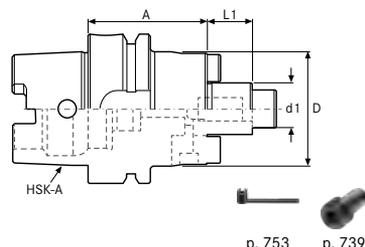
▪ Max. concentricity < 0.005 mm  
**Delivery:**  
Including Key blocks and cutter retaining screw



Ref. no. 23162060-074



Ref. no. 23162080-093



Tool holding device	d1 (mm)	L1 (mm)	A (mm)	D (mm)	Coolant supply	23162... Ident. No.		Tool holding device	d1 (mm)	L1 (mm)	A (mm)	D (mm)	Coolant supply	23162... Ident. No.	
HSK 63	16	17	50	38	Internal axial	060	●	HSK 63	40	27	100	88	Internal axial	073	●
HSK 63	16	17	100	38	Internal axial	061	●	HSK 63	40	27	160	88	Internal axial	074	○
HSK 63	16	17	160	38	Internal axial	062	○	HSK 100	16	17	50	38	Internal axial	080	●
HSK 63	22	19	50	48	Internal axial	063	●	HSK 100	16	17	100	38	Internal axial	081	●
HSK 63	22	19	100	48	Internal axial	064	●	HSK 100	16	17	160	38	Internal axial	082	○
HSK 63	22	19	160	48	Internal axial	065	○	HSK 100	22	19	50	48	Internal axial	083	●
HSK 63	27	21	60	58	Internal axial	066	●	HSK 100	22	19	100	48	Internal axial	084	●
HSK 63	27	21	100	58	Internal axial	067	●	HSK 100	22	19	160	48	Internal axial	085	○
HSK 63	27	21	160	58	Internal axial	068	○	HSK 100	27	21	50	58	Internal axial	086	●
HSK 63	32	24	60	78	Internal axial	069	●	HSK 100	27	21	100	58	Internal axial	087	●
HSK 63	32	24	100	78	Internal axial	070	●	HSK 100	27	21	160	58	Internal axial	088	○
HSK 63	32	24	160	78	Internal axial	071	○	HSK 100	32	24	50	78	Internal axial	089	●
HSK 63	40	27	60	88	Internal axial	072	●	HSK 100	32	24	100	78	Internal axial	090	●

Tool holding device	d1 (mm)	L1 (mm)	A (mm)	D (mm)	Coolant supply	23162... Ident. No.
HSK 100	32	24	160	78	Internal axial	091 ○
HSK 100	40	27	60	88	Internal axial	092 ●

Tool holding device	d1 (mm)	L1 (mm)	A (mm)	D (mm)	Coolant supply	23162... Ident. No.
HSK 100	40	27	100	88	Internal axial	093 ●

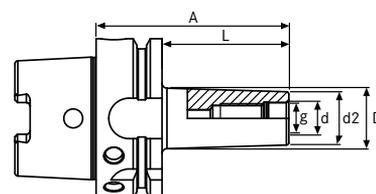
Prod. Gr. 2AC

## ORION® Tool chucks for screw-in mill cutters (DIN 69893-1)



Application:

For holding threaded screw-in milling cutters



Ident. No. 581-584, 586-598



p. 739 p. 739

Tool holding device	g	d (mm)	d2 (mm)	D (mm)	A (mm)	L (mm)	23161... Ident. No.
HSK 63	M6	6.5	10	13	51	25	581 ●
HSK 63	M8	8.5	13	15	51	25	582 ●
HSK 63	M8	8.5	13	23	76	50	583 ●
HSK 63	M8	8.5	13	23	101	75	584 ●
HSK 63	M10	10.5	18	20	51	25	585 ●
HSK 63	M10	10.5	18	23	76	50	586 ●
HSK 63	M10	10.5	18	32	126	100	587 ●
HSK 63	M10	10.5	18	36.5	176	150	588 ●
HSK 63	M12	12.5	21	24	51	25	589 ●
HSK 63	M12	12.5	21	24	76	50	590 ●
HSK 63	M12	12.5	21	31	101	75	591 ●
HSK 63	M12	12.5	21	33	126	100	592 ●
HSK 63	M12	12.5	21	40	176	150	593 ●
HSK 63	M16	17	29	29	51	25	594 ●
HSK 63	M16	17	29	34	76	50	595 ●
HSK 63	M16	17	29	34	101	75	596 ●
HSK 63	M16	17	29	36	126	100	597 ●
HSK 63	M16	17	29	42.5	176	150	598 ●

Prod. Gr. 2AC

## ATORN® CNC precision short drill chuck (DIN 69893-1)

With worm gear mechanism



Application:

For use on machining centres and CNC milling machines with tool change systems. For drilling, reaming, countersinking and also light milling and finishing tasks.

▪ Precision chuck with high concentricity, concentricity tolerance 0.03 mm

Advantage:

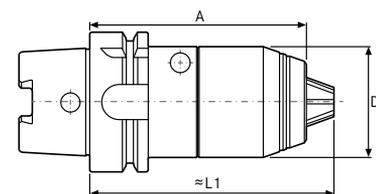
▪ Max. 10 Nm torque, corresponds to 70 Nm holding torque

Execution:

▪ With worm gear

Notes:

Higher rotation speeds on request.



p. 739 p. 739

Tool holding device	Min./max. clamping width	D (mm)	A (mm)	L1 (mm)	21329... Ident. No.
HSK 63	1-16 mm	50	98	110	120 ●

Prod. Gr. 208

# ATORN® CNC precision short drill chuck (DIN 69893-1)

With spur gear mechanism



**Application:**

For use on machining centres and CNC milling machines with tool change. For drilling, reaming, countersinking and also light milling and smoothing tasks.

**Execution:**

- Shank in accordance with DIN 69893, HST type A
- Integrated spur gear ensures high retaining torque

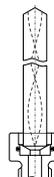
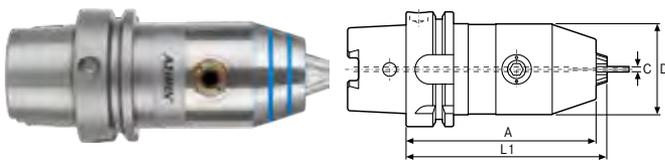
- glass bead blasted

**Advantage:**

- Wear parts hardened and polished for long service life
- Remains securely clamped even with sudden spindle stop

**Delivery:**

Including hexagon key



Sealing washer ATORN 16 (Ø 4.2 mm)

Sealing washer ATORN 16 (Ø 2.05 mm)



p. 739 p. 739

Tool holding device	Min./max. clamping width	D (mm)	A (mm)	L1 (mm)	21329... Ident. No.
HSK 63	0.5-16 mm	57	109	113	542

Prod. Gr. 208

# ORION® Collet type ER (DIN 69893-1)



**Application:**

For clamping tools with straight shanks in ER collet chucks in line with DIN 6499.

**Execution:**

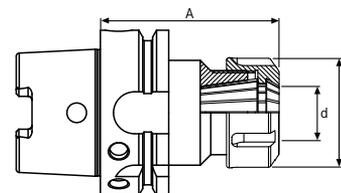
- With Balluff chip hole
- All functional surfaces machined

**Delivery:**

With clamping nut

**Notes:**

The previous standard DIN 69871-1 was replaced by ISO 7388-1. Requisite pull studs no. 23690 and collet chucks no. 23320



p. 750 p. 749 p. 742 p. 739 p. 739

Tool holding device	Spannzangen-Typ d	Min./max. clamping range	D (mm)	A (mm)	23296... Ident. No.
HSK 63	ER 16	0.5-10 mm	32	100	180
HSK 63	ER 16	0.5-10 mm	32	160	181
HSK 63	ER 25	2-16 mm	42	100	182
HSK 63	ER 25	2-16 mm	42	160	183
HSK 63	ER 32	2-20 mm	50	100	184
HSK 63	ER 32	2-20 mm	50	160	185
HSK 63	ER 40	3-26 mm	63	120	186
HSK 63	ER 40	3-26 mm	63	160	187
HSK 100	ER 25	2-16 mm	42	100	200
HSK 100	ER 25	2-16 mm	42	160	201
HSK 100	ER 32	2-20 mm	50	100	202
HSK 100	ER 32	2-20 mm	50	160	203
HSK 100	ER 40	3-26 mm	63	120	205
HSK 100	ER 40	3-26 mm	63	160	206

Prod. Gr. 2AC

**ORION® ER collet chuck with mini nut slim version (DIN 69893-1)**  
ISO 12164-1 (DIN 69893-1)



**Execution:**

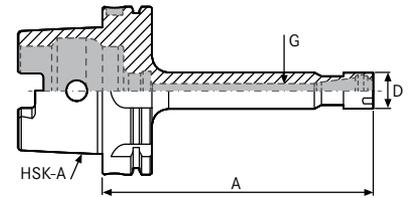
- ER mini nut finely balanced (G2.5 / 25,000 rpm)
- with Balluff chip hole
- all tapers and tolerances are precision-ground

**Delivery:**

Including high-speed ER mini nut

**Notes:**

clamping nut type ER Mini ref. no. 23303116-125



Tool holding device	Spannzangen-Typ d	Clamping nut type	Min./max. clamping range	D (mm)	A (mm)	23297... Ident. No.	
HSK 63	-	-	0.5-7 mm	16	100	051	●
HSK 63	-	-	0.5-7 mm	16	160	052	●
HSK 63	ER 16	ER 16 MINI	0.5-10 mm	22	100	053	●
HSK 63	ER 16	ER 16 MINI	0.5-10 mm	22	160	054	●
HSK 63	ER 25	ER 25 MINI	1-16 mm	35	100	055	●
HSK 63	ER 25	ER 25 MINI	1-16 mm	35	160	056	●

Prod. Gr. 295

**ATORN® Precision collet (DIN 69893-1)**



**Application:**

For clamping tools with straight shanks without loss of concentricity or clamping force up to shank tolerance h10, for economic machining of individual and series parts with extremely high-precision machining results. Ideal for HPC and HSC metal cutting.

**Execution:**

- 30° trapezoidal thread with polished, extra-long double guide with special easy glide coating for lower friction
- Clamping forces are evenly distributed across the entire cylindrical shell surface and perfect surfaces are achieved through the optimally absorbed radial forces
- Precise centring when tightening the clamping nut

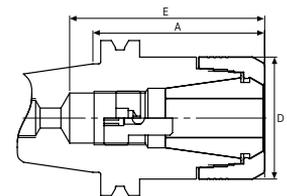
**Advantage:**

- Resistant to fluctuations in temperature and fully suitable for drying processes and hard milling up to 200 °C

- The strengthening of the chuck body over the diameter of the clamping nut creates enormous stability with the optimum interference contour
- Extremely low system concentricity of < 3 µm with the 2-µm ATORN collet chucks UP 23388 150-288
- Fahrión sealed collet chucks 2 µm HPD ref. no. 23323 617-658 to 80 bar for internal cooling (without sealing washer)
- Completely surrounded in the chuck cone for optimum stability and even distribution of the clamping forces
- Retention forces are doubled compared to conventional collets

**Delivery:**

Tool chuck including Clamping nut  
Please order spanner separately. Suitable torque wrench attachments 23360 960-966  
Torque wrench recommended, suitable collet chucks type ER no. 23323 617-658



Tool holding device	HSK 63									
Size	HPE 16	HPE 16	HPE 16	HPE 16	HPE 25	HPE 25	HPE 25	HPE 25	HPE 32	HPE 32
Collet type	ER 16 (426 E)	ER 25 (430 E)	ER 32 (470 E)	ER 32 (470 E)						
Min./max. clamping range	1-10 mm	1-10 mm	1-10 mm	1-10 mm	2-16 mm	2-16 mm	2-16 mm	2-16 mm	2-20 mm	2-20 mm
A (mm)	55	100	160	200	100	160	200	200	70	100
D (mm)	30	30	30	30	40	40	40	40	50	50
E (mm)	32	71	106	136	70	128	148	148	46	114
Max. tightening torque (Nm)	55	55	55	55	85	85	85	85	140	140
23761... Ident. No.	001	002	003	004	005	006	007	007	008	010
	●	●	○	○	●	●	○	○	●	○

Prod. Gr. 263

Compatible ER-type collet chucks no. 23323 617-658 and no. 23322 501-636 page 739

# ORION® Power chucks (DIN 69893-1)

<b>HSK 63</b>	G 6,3 20000 rpm	Form <b>A</b>	DIN 69893
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**Application:**

For clamping tools with straight shank, widely projecting cutting tools or extensions, and straight shanks in accordance with DIN1835A and B.

**Execution:**

- optimum concentricity thanks to one-piece basic body at  $2.5 \times D \leq 5 \mu\text{m}$
- maximum clamping force and stability due to clamping with roller clamp nut with needle roller bearing
- maintenance-free technology

- suitable for internal coolant supply through the tool up to 80 bar

**Advantage:**

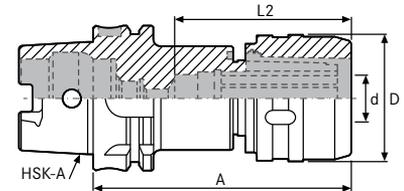
- for high cutting depths and in turn higher material removal rates
- ideal for high feed rates

**Delivery:**

tool chuck with key

**Notes:**

flexible use thanks to intermediate bushes, no. 23336



Tool holding device	d (mm)	Min./max. clamping range	A (mm)	L2 (mm)	23762... Ident. No.
HSK 63	20	3-20 mm	105	70	101 ●
HSK 63	32	3-32 mm	130	100	102 ●

Prod. Gr. 295

# ATORN® HPH high-performance hydraulic expansion chuck (DIN 69893-1)

Short, heavy-duty design

<b>HSK 63</b>	<b>HSK 100</b>	Form <b>A</b>	<b>IK</b>	G 2,5 25000 rpm	$\nabla 150,003$	DIN 69893
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**Application:**

For high precision, centric clamping of milling, drilling and reaming tools – particularly for milling and heavy-duty machining during rough machining.

**Execution:**

- axial longitudinal adjustment
- reducing sleeves for flexible applications
- coolant pressure up to 80 bar
- Heat-resistant up to 100°C

**Advantage:**

- sturdy version ideal for HPC+HSC metal cutting
- damping properties to increase duration of tools and service life of machine spindle
- Vibration-damping effect reduces micro-cracks and improves the workpiece surface
- All common shanks can be clamped ( $\varnothing$  tolerance h6)
- Very high torque transfer ( $\varnothing 20 = 650 \text{ Nm} / \varnothing 32 = 890 \text{ Nm}$ )

**Delivery:**

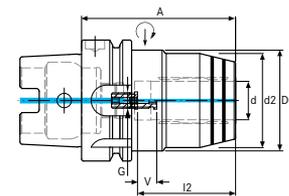
tool chuck with matching hexagon key



Ident. No. 012



Ident. No. 020-032



Tool holding device	d (mm)	A (mm)	d2 (mm)	D (mm)	l2 (mm)	G	max. V (mm)	23738... Ident. No.
HSK 63	12	80	42	52.5	46	M8 x 1	10	012 ●
HSK 63	20	80	49	52.5	51	M8 x 1	10	020 ●
HSK 100	32	100	70	75	61	M8 x 1	10	032 ○

Prod. Gr. 263

# ATORN® HYDRO expansion chucks (DIN 69893-1)

Short, heavy-duty design



**Application:**

For high precision, centric clamping of milling, drilling and reaming tools – particularly for milling and heavy-duty machining during rough machining.

**Execution:**

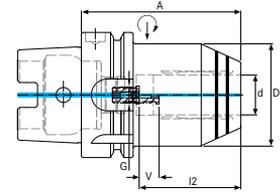
- axial longitudinal adjustment
- reducing sleeves for flexible applications
- coolant pressure up to 80 bar

**Advantage:**

- Damping properties to increase duration of tools and service life of machine spindle
- Very high torque transfer ( $\varnothing 20 = 400 \text{ Nm} / \varnothing 32 = 730 \text{ Nm}$ )
- Vibration-damping effect reduces micro-cracks and improves workpiece surface
- All common shanks can be clamped ( $\varnothing$  tolerance h6)

**Delivery:**

tool chuck with matching hexagon key



Tool holding device	d (mm)	A (mm)	D (mm)	l2 (mm)	G	max. V (mm)	23738... Ident. No.
HSK 63	20	80	52.5	51	M8 x 1	10	220 ●

Prod. Gr. 263

# ATORN® Hydro expansion chuck 3°, ultra-slim (DIN 69893-1)

3D-printed



**Application:**

Produced using an innovative process, the ultra-slim Hydro expansion chuck combines the advantages of an expansion chuck and a shrink-fit chuck in a single product.

**Execution:**

- Extremely high heat resistance (up to 120°C) ensures that the chuck retains its accuracy
- Outstanding absorption
- Standard tool changes as with expansion chucks without requiring additional devices
- Various applications when used with reducer bushings

- With Balluff chip hole

**No. 23733 303–23733 312:**

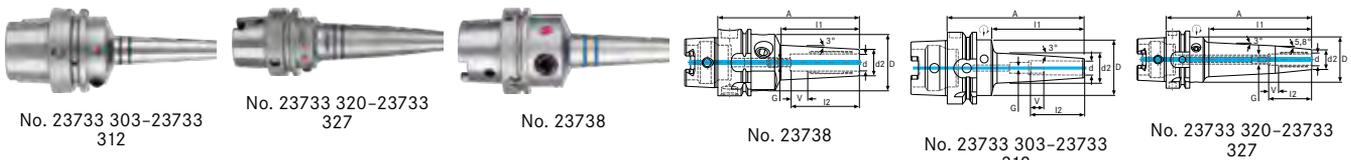
- Unusually high gripping forces
- Slimline design for a shrink-fit chuck, therefore suitable for narrow interfering contours

**No. 23733 320–23738 163:**

- Exceptionally high clamping forces
- Slimline design of a shrink-fit chuck, therefore suitable for narrow interfering contours

**Delivery:**

tool chuck with matching hexagon key



Tool holding device	d (mm)	A (mm)	d2 (mm)	D (mm)	l1 (mm)	l2 (mm)	G	max. V (mm)	23738... Ident. No.	23733... Ident. No.
HSK 40	3	85	9	34	48	28	M3	-	140	●
HSK 40	4	85	10	34	45	28	M3	-	141	●
HSK 40	5	85	11	34	45	28	M3	-	142	●
HSK 40	6	85	12	34	46	37	M5	-	143	●
HSK 40	8	85	14	34	46	37	M6	-	144	●
HSK 40	10	85	16	34	47	41	M5	-	145	●
HSK 40	12	85	18	34	47	46	M5	10	146	●
HSK 63	14	120	22	50	71	46	M10 x 1	10	160	●
HSK 63	16	120	24	50	71.5	49	M12 x 1	10	161	●
HSK 63	18	120	26	50	72	49	M12 x 1	10	162	●
HSK 63	20	120	28	50	72	51	M16 x 1	10	163	●
HSK 63	3	120	9	50	73	28	M3	-	-	303
HSK 63	4	120	10	50	73	28	M3	-	-	304
HSK 63	5	120	11	50	73	28	M3	-	-	305
HSK 63	6	120	12	50	73	37	M5	10	-	306
HSK 63	6	160	16	50	111	37	M5	10	-	320
HSK 63	6	200	16	50	152	37	M5	10	-	321
HSK 63	8	120	14	50	74	37	M6	10	-	308
HSK 63	8	160	18	50	111	37	M6	10	-	322
HSK 63	8	200	18	50	152	37	M6	10	-	323
HSK 63	10	120	16	50	74	41	M8 x 1	10	-	310

Tool holding device	d (mm)	A (mm)	d2 (mm)	D (mm)	l1 (mm)	l2 (mm)	G	max. V (mm)	23738... Ident. No.	23733... Ident. No.	
HSK 63	10	160	20	50	111	41	M8 x 1	10	-	-	324 ●
HSK 63	10	200	20	50	152	41	M8 x 1	10	-	-	325 ●
HSK 63	12	120	18	50	75	46	M10 x 1	10	-	-	312 ●
HSK 63	12	160	22	50	111	46	M10 x 1	10	-	-	326 ●
HSK 63	12	200	22	50	152	46	M10 x 1	10	-	-	327 ●

Prod. Gr. 263

## ATORN® HSK A-63 shrink-fit chuck, 4.5 degrees (DIN 69893-1)



### Application:

**Ident. No. 003-032:** For clamping milling tools and drill bits with straight shank, tolerance h6. Suitable for shrinking on inductive contact and hot air devices.

**Ident. No. 103-332:** For clamping cutters and drills with straight shank with h6 tolerance. Suitable for shrinking onto inductive contact and hot air devices.

### Execution:

- Heat-resistant and high-temperature tool steel 1,600-1,800 N/mm<sup>2</sup>
- hardness 52 + 2 HRC
- maximum coolant pressure 80 bar
- For shrinking and reverse shrinking of cemented carbide and HSS tools
- 4 additional drill holes for fine balancing
- Ident. No. 003-032:**



Ident. No. 003-032

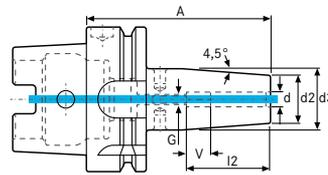


Ident. No. 103-332

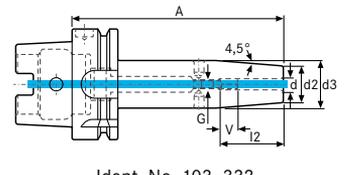
- adjustment travel 10 mm, can be adjusted on both sides
- hole for Balluff chip
- Ident. No. 103-332:**
- Adjustment travel 10 mm, can be adjusted on both sides
- Hole for Balluff chip

### Advantage:

- High positioning and repeat accuracy
- Ideal for high rotation speeds
- Slim design with minimal interference contour
- Very high torque transfer
- Ident. No. 003-032:** Ideally suited for HSC machining
- Ident. No. 103-332:** Ideal for HSC machining



Ident. No. 003-032



Ident. No. 103-332



Tool holding device	d (mm)	A (mm)	d2 (mm)	d3 (mm)	l2 (mm)	G	max. V (mm)	23419... Ident. No.	
HSK 63	3	80	10	15	22	M6	10	003	●
HSK 63	3	120	10	15	22	-	-	103	●
HSK 63	3	160	10	15	-	-	0	203	●
HSK 63	3	200	10	15	-	-	10	303	○
HSK 63	4	80	15	22	26	M6	10	004	●
HSK 63	4	120	15	22	26	-	-	104	●
HSK 63	4	160	15	22	-	-	0	204	●
HSK 63	4	200	15	22	-	-	10	304	○
HSK 63	5	80	15	22	30	M6	10	005	●
HSK 63	5	120	15	22	30	-	-	105	●
HSK 63	5	160	15	22	-	-	0	205	○
HSK 63	5	200	15	22	-	-	10	305	○
HSK 63	6	80	21	27	36	M5	10	006	●
HSK 63	6	120	21	27	36	M5	10	106	●
HSK 63	6	160	21	27	36	M5	10	206	●
HSK 63	6	200	21	27	36	M5	10	306	●
HSK 63	8	80	21	27	36	M6	10	008	●
HSK 63	8	120	21	27	36	M6	10	108	●
HSK 63	8	160	21	27	36	M6	10	208	●
HSK 63	8	200	21	27	36	M6	10	308	●
HSK 63	10	85	24	32	41	M8 x 1	10	010	●
HSK 63	10	120	24	32	41	M8 x 1	10	110	●
HSK 63	10	160	24	32	41	M8 x 1	10	210	●
HSK 63	10	200	24	32	41	M8 x 1	10	310	●
HSK 63	12	90	24	32	47	M10 x 1	10	012	●
HSK 63	12	120	24	32	47	M10 x 1	10	112	●
HSK 63	12	160	24	32	47	M10 x 1	10	212	●
HSK 63	12	200	24	32	47	M10 x 1	10	312	○
HSK 63	14	90	27	34	47	M10 x 1	10	014	●
HSK 63	14	120	27	34	47	M10 x 1	10	114	●
HSK 63	14	160	27	34	47	M10 x 1	10	214	●
HSK 63	14	200	27	34	47	M10 x 1	10	314	○
HSK 63	16	95	34	50	50	M12 x 1	10	016	●
HSK 63	16	120	27	34	50	M12 x 1	10	116	●
HSK 63	16	160	27	34	50	M12 x 1	10	216	●
HSK 63	16	200	27	34	50	M12 x 1	10	316	●
HSK 63	18	95	33	42	50	M12 x 1	10	018	●
HSK 63	18	120	33	42	50	M12 x 1	10	118	●
HSK 63	18	160	33	42	50	M12 x 1	10	218	○
HSK 63	18	200	33	42	50	M12 x 1	10	318	○
HSK 63	20	100	33	42	52	M16 x 1	10	020	●
HSK 63	20	120	33	42	52	M16 x 1	10	120	●
HSK 63	20	160	33	42	52	M16 x 1	10	220	○
HSK 63	20	200	33	42	52	M16 x 1	10	320	●
HSK 63	25	115	44	53	62	M16 x 1	10	025	●

Tool holding device	d (mm)	A (mm)	d2 (mm)	d3 (mm)	l2 (mm)	G	max. V (mm)	234 19... Ident. No.	
HSK 63	25	120	44	42	58	M16 x 1	10	125	○
HSK 63	25	160	44	53	62	M16 x 1	10	225	○
HSK 63	25	200	44	53	62	M16 x 1	10	325	●
HSK 63	32	120	44	53	62	M16 x 1	10	132	○
HSK 63	32	160	44	53	62	M16 x 1	10	232	○
HSK 63	32	200	44	53	62	M16 x 1	10	332	○

Prod. Gr. 287

## ATORN® Shrink-fit chuck, 4.5 degrees (with KKB) (DIN 69893-1)

With resealable coolant bores (=KKB)



### Application:

**Ident. No. 503-532:** For clamping milling tools and drill bits with straight shanks in h6 tolerance.

Suitable for shrinking onto inductive contact and hot air devices.

**Ident. No. 553-575:** For clamping cutters and drills with straight shanks in h6 tolerance.

Suitable for shrinking on inductive contact and hot air devices.

### Execution:

- Adjustment travel 10 mm, can be adjusted on both sides
- Hole for Balluff chip
- Resealable coolant bores
- Geometry significantly improves shock-absorption
- Ident. No. 503-532:**
  - Guaranteed maximum concentricity 0.003 mm
  - For shrinking cemented carbide and HSS tools in and out

- Hardness 52 + 2 HRC
- Maximum coolant pressure 80 bar
- 4 additional holes for fine balancing

### Ident. No. 553-575:

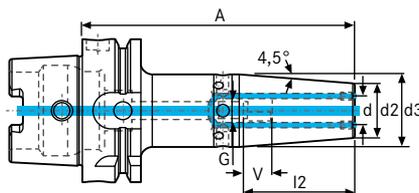
- guaranteed maximum concentricity 0.003 mm
- Shrink grip and shrink release of HM and HSS tools
- hardness 52 + 2 HRC
- maximum coolant pressure 80 bar
- 4 additional drill holes for fine balancing

### Advantage:

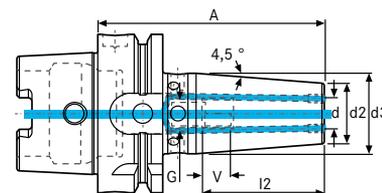
- High transmittable torques
- High chip removal rate, perfect for HSC machining
- Protects spindle and machine
- Ideal for high rotation speeds
- improved surface quality



Ident. No. 503-514, 518-520



Ident. No. 553-575



Ident. No. 503-532



Tool holding device	d (mm)	A (mm)	d2 (mm)	d3 (mm)	l2 (mm)	G	max. V (mm)	234 19... Ident. No.	
HSK 63	3	80	10	15	28	M6	16	503	●
HSK 63	3	120	10	20	12	-	-	553	●
HSK 63	4	80	15	22	28	M6	12	504	●
HSK 63	4	120	15	22	16	-	-	554	●
HSK 63	5	80	15	22	30	M6	10	505	●
HSK 63	5	120	15	22	20	-	-	555	●
HSK 63	6	80	21	27	36	M6	10	506	●
HSK 63	6	120	21	27	36	M5	10	556	●
HSK 63	8	80	21	27	36	M6	10	508	●
HSK 63	8	120	21	27	36	M6	10	557	●
HSK 63	10	85	24	32	41	M8 x 1	10	510	●
HSK 63	10	120	24	32	41	M8 x 1	10	560	●
HSK 63	12	90	24	32	47	M10 x 1	10	512	●
HSK 63	12	120	24	32	47	M10 x 1	10	562	●
HSK 63	14	90	27	34	47	M10 x 1	10	514	●
HSK 63	14	120	27	34	47	M10 x 1	10	564	●
HSK 63	16	95	27	34	50	M12 x 1	10	516	●
HSK 63	16	120	27	34	50	M12 x 1	10	566	●
HSK 63	18	95	33	42	50	M12 x 1	10	518	●
HSK 63	18	120	33	42	50	M12 x 1	10	568	●
HSK 63	20	100	33	42	52	M16 x 1	10	520	●
HSK 63	20	120	33	42	52	M16 x 1	10	570	●
HSK 63	25	115	44	53	58	M16 x 1	10	525	○
HSK 63	25	120	44	53	58	M16 x 1	10	575	○
HSK 63	32	120	44	53	62	M16 x 1	10	532	○

Prod. Gr. 287

# ATORN® Shrink-fit chuck, slimline, 3 degrees (DIN 69893-1)

With low interference contour for mould making



**Application:**

**Ident. No. 141-173:** For clamping milling tools and drill bits with h6 shaft tolerance.

Suitable for heavy-duty cutting and all high-power applications.

Suitable for inductive, contact and hot air shrinking devices.

**Execution:**

**Ident. No. 141-173:**

- Shrink grip and shrink release of HM and HSS tools
- hardness 52 + 2 HRC

- maximum coolant pressure 80 bar
- 4 additional drill holes for fine balancing
- hole for Balluff chip
- glass bead blasted

**Advantage:**

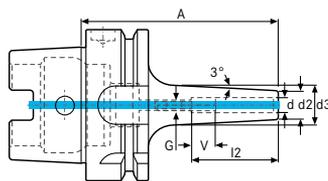
- Ident. No. 141-173:**
  - Slimline design, extremely low interference contour
  - High transmittable torques
  - High positioning and repeat accuracy
  - Ideal for high rotation speeds



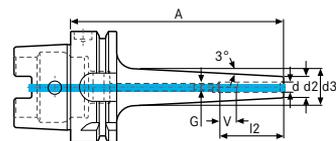
Ident. No. 103-120



Ident. No. 141-173



Ident. No. 103-120



Ident. No. 141-173



Tool holding device	d (mm)	A (mm)	d2 (mm)	d3 (mm)	l2 (mm)	G	max. V (mm)	23427... Ident. No.	
HSK 63	3	80	9	14	28	M6	16	103	●
HSK 63	3	120	9	16	-	-	-	141	●
HSK 63	3	160	9	19	-	-	-	142	●
HSK 63	3	200	9	19	-	-	-	143	●
HSK 63	4	80	10	15	28	M6	12	104	●
HSK 63	4	120	10	17	-	-	-	144	●
HSK 63	4	160	10	20	-	-	-	145	●
HSK 63	4	200	10	20	-	-	-	146	●
HSK 63	5	80	11	16	30	M6	10	105	●
HSK 63	5	120	11	18	-	-	-	147	●
HSK 63	5	160	11	21	-	-	-	148	●
HSK 63	5	200	11	21	-	-	-	149	●
HSK 63	6	80	12	17	36	M6	10	106	●
HSK 63	6	120	12	21	-	M5	10	150	●
HSK 63	6	160	12	24	-	M5	10	151	●
HSK 63	6	200	12	24	-	M5	10	152	●
HSK 63	8	80	14	19	36	M6	10	108	●
HSK 63	8	120	14	23	-	M6	10	153	●
HSK 63	8	160	14	26	-	M6	10	154	●
HSK 63	8	200	14	26	-	M6	10	155	●
HSK 63	10	85	16	21	41	M8 x 1	10	110	●
HSK 63	10	120	16	25	-	M10 x 1	10	156	●
HSK 63	10	160	16	28	-	M10 x 1	10	157	●
HSK 63	10	200	16	28	-	M10 x 1	10	158	●
HSK 63	12	90	18	24	47	M10 x 1	10	112	●
HSK 63	12	120	18	27	-	M10 x 1	10	159	●
HSK 63	12	160	18	30	-	M10 x 1	10	160	●
HSK 63	12	200	18	30	-	M10 x 1	10	161	●
HSK 63	14	90	20	26	47	M10 x 1	10	114	●
HSK 63	14	120	20	29	-	M10 x 1	10	162	●
HSK 63	14	160	20	32	-	M10 x 1	10	163	●
HSK 63	14	200	20	32	-	M10 x 1	10	164	●
HSK 63	16	95	22	28	50	M12 x 1	10	116	●
HSK 63	16	120	22	31	-	M10 x 1	10	165	●
HSK 63	16	160	22	34	-	M12 x 1	10	166	●
HSK 63	16	200	22	34	-	M12 x 1	10	167	●
HSK 63	18	95	24	30	50	M12 x 1	10	118	●
HSK 63	18	120	24	33	-	M12 x 1	10	168	●
HSK 63	18	160	24	36	-	M12 x 1	10	169	●
HSK 63	18	200	24	36	-	M12 x 1	10	170	●
HSK 63	20	100	26	33	52	M16 x 1	10	120	●
HSK 63	20	120	26	35	-	M12 x 1	10	171	●
HSK 63	20	160	26	38	-	M12 x 1	10	172	●
HSK 63	20	200	26	38	-	M12 x 1	10	173	●

Prod. Gr. 287

# ORION® Weldon surface chucks (ISO 7388-1)



**Application:**

For clamping tools with straight shanks and clamping surfaces in line with DIN 1835 B.

**Execution:**

- All tapers and tolerances are precision-ground
- Cone tolerance AT3
- Strength HRC 57-60

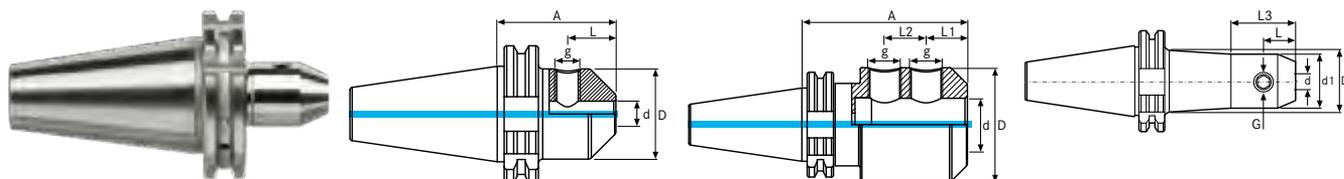
- Core strength 1000-1200 N/mm<sup>2</sup>
- With Balluff chip hole

**Advantage:**

- Prevents rotation of tool while maintaining high concentricity

**Notes:**

Required pull studs, no. 23690



Tool holding device	d (mm)	A (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D (mm)	d1 (mm)	g / G	23157... Ident. No.	
SK 40	6	50	18	-	-	-	25	-	M6	001	●
SK 40	6	100	18	-	-	40	35	25	M6	002	●
SK 40	6	160	18	-	-	80	35	25	M6	003	●
SK 40	8	50	18	-	-	-	28	-	M8	004	●
SK 40	8	100	18	-	-	40	38	28	M8	005	●
SK 40	8	160	18	-	-	80	38	28	M8	006	●
SK 40	10	50	20	-	-	-	35	-	M10	007	●
SK 40	10	100	20	-	-	40	40	35	M10	008	●
SK 40	10	160	20	-	-	80	40	35	M10	009	●
SK 40	12	50	22.5	-	-	-	42	-	M12	010	●
SK 40	12	100	22.5	-	-	-	42	-	M12	011	●
SK 40	12	160	22.5	-	-	-	42	-	M12	012	●
SK 40	14	50	22.5	-	-	-	44	-	M12	013	●
SK 40	14	100	22.5	-	-	-	44	-	M12	014	●
SK 40	14	160	22.5	-	-	-	44	-	M12	015	●
SK 40	16	63	24	-	-	-	48	-	M14	016	●
SK 40	16	100	24	-	-	-	48	-	M14	017	●
SK 40	16	160	24	-	-	-	48	-	M14	018	●
SK 40	18	63	24	-	-	-	50	-	M14	019	●
SK 40	18	100	24	-	-	-	50	-	M14	020	●
SK 40	18	160	24	-	-	-	50	-	M14	021	●
SK 40	20	63	25	-	-	-	52	-	M16	022	●
SK 40	20	100	25	-	-	-	52	-	M16	023	●
SK 40	20	160	25	-	-	-	52	-	M16	024	●
SK 40	25	100	-	24	25	-	65	-	M18 x 2	025	●
SK 40	25	160	-	24	25	-	65	-	M18 x 2	026	●
SK 40	32	100	-	24	28	-	72	-	M20 x 2	027	●
SK 40	32	160	-	24	28	-	72	-	M20 x 2	028	●
SK 40	40	115	-	30	32	-	80	-	M20 x 2	029	●
SK 40	40	160	-	30	32	-	80	-	M20 x 2	030	●
SK 50	6	63	18	-	-	-	25	-	M6	050	●
SK 50	6	100	18	-	-	40	35	25	M6	051	●
SK 50	6	160	18	-	-	80	35	25	M6	052	●
SK 50	8	63	18	-	-	-	28	-	M8	053	●
SK 50	8	100	18	-	-	80	38	28	M8	054	●
SK 50	8	160	18	-	-	-	38	28	M8	055	●
SK 50	10	63	20	-	-	-	35	-	M10	056	●
SK 50	10	100	20	-	-	40	42	35	M10	057	●
SK 50	10	160	20	-	-	80	42	35	M10	058	●
SK 50	12	63	22.5	-	-	-	42	-	M12	059	●
SK 50	12	100	22.5	-	-	40	48	42	M12	060	●
SK 50	12	160	22.5	-	-	80	48	42	M12	061	●
SK 50	14	63	22.5	-	-	-	44	-	M12	062	●
SK 50	14	100	22.5	-	-	40	50	44	M12	063	●
SK 50	14	160	22.5	-	-	80	50	44	M12	064	●
SK 50	16	63	24	-	-	-	48	-	M14	065	●
SK 50	16	100	24	-	-	40	54	48	M14	066	●
SK 50	16	160	24	-	-	80	54	48	M14	067	●
SK 50	18	63	24	-	-	-	50	-	M14	068	●
SK 50	18	100	24	-	-	40	56	50	M14	069	●
SK 50	18	160	24	-	-	80	56	50	M14	070	●
SK 50	20	63	25	-	-	-	52	-	M16	071	●
SK 50	20	100	25	-	-	40	59	52	M16	072	●
SK 50	20	160	25	-	-	80	59	52	M16	073	●
SK 50	25	80	-	24	25	-	65	-	M18 x 2	074	●
SK 50	25	100	-	24	25	-	65	-	M18 x 2	075	●
SK 50	32	100	-	24	28	-	72	-	M20 x 2	077	●
SK 50	32	160	-	24	28	-	72	-	M20 x 2	078	●
SK 50	25	160	-	24	25	-	65	-	M18 x 2	076	●
SK 50	40	120	-	30	32	-	80	-	M20 x 2	079	●
SK 50	40	160	-	30	32	-	80	-	M20 x 2	080	●

# Tool clamping \ Tool chucks ISO 7388-1 SK 40/50

Tool holding device	d (mm)	A (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D (mm)	d1 (mm)	g / G	23157... Ident. No.
SK 50	50	120	-	35	35	-	100	-	M24 x 2	081 ●

Prod. Gr. 2AC

## ORION® Surface chuck (Weldon) with coolant bores (ISO 7388-1) KKB= resealable cooling duct holes

SK 40	Form AD/AF	G 2,5 25000 rpm	ISO 7388-1
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### Application:

for clamping tools with straight shanks and clamping surfaces in line with DIN 1835 B.

### Execution:

- all tapers and tolerances are precision-ground
- cone tolerance AT3
- strength HRC 57-60
- core strength 1000-1200 N/mm<sup>2</sup>

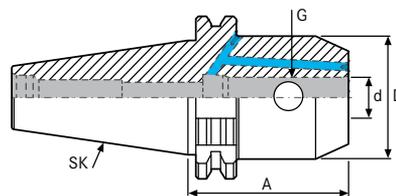
- with Balluff chip hole
- KKB= resealable coolant bores

### Advantage:

- prevents rotation of tool while maintaining high concentricity

### Notes:

requisite pull studs, no. 23690



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Tool holding device	d (mm)	A (mm)	L3 (mm)	D (mm)	d1 (mm)	g / G	23157... Ident. No.
SK 40	6	50	-	25	-	M6	301 ●
SK 40	6	100	40	35	25	M6	302 ●
SK 40	6	160	80	36	25	M6	303 ●
SK 40	8	50	-	28	-	M8	304 ●
SK 40	8	100	40	38	28	M8	305 ●
SK 40	8	160	80	38	28	M8	306 ●
SK 40	10	50	-	35	-	M10	307 ●
SK 40	10	100	40	40	35	M10	308 ●
SK 40	10	160	80	40	35	M10	309 ●
SK 40	12	50	-	42	-	M12	310 ●
SK 40	12	100	-	42	-	M12	311 ●
SK 40	12	160	-	42	-	M12	312 ●
SK 40	14	50	-	44	-	M12	313 ●
SK 40	14	100	-	44	-	M12	314 ●
SK 40	14	160	-	44	-	M12	315 ●
SK 40	16	63	-	48	-	M14	316 ●
SK 40	16	100	-	48	-	M14	317 ●
SK 40	16	160	-	48	-	M14	318 ●
SK 40	18	63	-	50	-	M14	319 ●
SK 40	18	100	-	50	-	M14	320 ●
SK 40	18	160	-	50	-	M14	321 ●
SK 40	20	63	-	52	-	M16	322 ●
SK 40	20	100	-	52	-	M16	323 ●
SK 40	20	160	-	52	-	M16	324 ●
SK 40	25	100	-	65	-	M18 x 2	325 ●
SK 40	25	160	-	65	-	M18 x 2	326 ●
SK 40	32	100	-	72	-	M20 x 2	327 ●
SK 40	32	160	-	72	-	M20 x 2	328 ●
SK 40	40	115	-	80	-	M20 x 2	329 ●
SK 40	40	160	-	80	-	M20 x 2	330 ●

Prod. Gr. 295

# ORION® Combination shell end mill arbours (DIN 6358) (ISO 7388-1)

SK 40	SK 50	Form AD	G 6,3 15000 rpm	ISO 7388-1
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**Application:**  
For holding shell end mills and single angle milling cutters with longitudinal groove in line with DIN 842.

- Execution:**
- all tapers and tolerances are precision-ground
  - concentricity < 0.005 mm
  - with hole for Balluff chip

**Delivery:**  
With cutter retaining screw, key and driving ring.

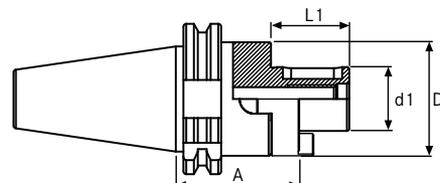
**Notes:**  
The previous standard DIN 69871-1 was replaced by ISO 7388-1. Required pull stud no. 23690  
If desired with combined shell end mill arbors with ICS, the cutter retaining screws must be ordered separately with IC DIN 6367, ref. no. 23185130-180



Ident. No. 001-015, 061



Ident. No. 050-060, 062-064



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Tool holding device	d1 (mm)	L1 (mm)	A (mm)	D (mm)	Form	23160... Ident. No.	
SK 40	16	27	55	32	AD	001	●
SK 40	16	27	100	32	AD	002	●
SK 40	16	27	160	32	AD	003	●
SK 40	22	31	55	40	AD	004	●
SK 40	22	31	100	40	AD	005	●
SK 40	22	31	160	40	AD	006	●
SK 40	27	33	55	48	AD	007	●
SK 40	27	33	100	48	AD	008	●
SK 40	27	33	160	48	AD	009	●
SK 40	32	38	60	58	AD	010	●
SK 40	32	38	100	58	AD	011	●
SK 40	32	38	160	58	AD	012	●
SK 40	40	41	60	70	AD	013	●
SK 40	40	41	100	70	AD	014	●
SK 40	40	41	160	70	AD	015	●
SK 50	16	27	55	32	AD	050	●
SK 50	16	27	100	32	AD	051	●
SK 50	16	27	160	32	AD	052	●
SK 50	22	31	55	40	AD	053	●
SK 50	22	31	100	40	AD	054	●
SK 50	22	31	160	40	AD	055	●
SK 50	27	33	55	48	AD	056	●
SK 50	27	33	100	48	AD	057	●
SK 50	27	33	160	48	AD	058	●
SK 50	32	38	55	58	AD	059	●
SK 50	32	38	100	58	AD	060	●
SK 50	32	38	160	58	AD	061	●
SK 50	40	41	55	70	AD	062	●
SK 50	40	41	100	70	AD	063	●
SK 50	40	41	160	70	AD	064	●

Prod. Gr. 2AC

# ORION® Transverse drive shell end mill arbor (DIN 6357) (DIN 69871-1) With enlarged collar diameter

SK 40	SK 50	Form AD	IK	G 2,5 25000 rpm	ISO 7388-1
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- Execution:**
- Alloyed case-hardening steel, tensile strength in the core min. 950 N/mm<sup>2</sup>

- Internal coolant feed, cooling duct bore cannot be closed
- Case-hardened HRC 60 ± 2 (HV 700 ± 50), hardness depth 0.8 mm ± 0.2 mm

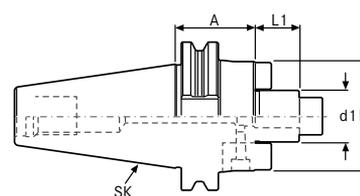
**Delivery:**  
Including Key blocks and cutter retaining screw



Ref. no. 23162001-019, SK40



Ref. no. 23162020-034



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Tool holding device	d1 (mm)	L1 (mm)	D (mm)	A (mm)	23162... Ident. No.		Tool holding device	d1 (mm)	L1 (mm)	D (mm)	A (mm)	23162... Ident. No.	
SK 40	16	17	38	35	001	●	SK 40	22	19	48	35	004	●
SK 40	16	17	38	100	002	●	SK 40	22	19	48	100	005	●
SK 40	16	17	38	160	003	○	SK 40	22	19	48	160	006	○

Source: Hahn+Kolb Werkzeuge GmbH  
Technical data subject to change.  
Availability subject to country specific rules and regulations.

# Tool clamping \ Tool chucks ISO 7388-1 SK 40/50

Tool holding device	d1 (mm)	L1 (mm)	D (mm)	A (mm)	23162... Ident. No.	
SK 40	27	21	58	40	007	●
SK 40	27	21	58	100	008	●
SK 40	27	21	58	160	009	○
SK 40	32	24	78	50	010	●
SK 40	32	24	78	100	011	●
SK 40	32	24	78	160	012	○
SK 40	40	27	88	50	013	●
SK 40	40	27	88	100	014	●
SK 40	40	27	88	160	015	○
SK 50	16	17	38	35	020	●
SK 50	16	17	38	100	021	●
SK 50	16	17	38	160	022	○

Tool holding device	d1 (mm)	L1 (mm)	D (mm)	A (mm)	23162... Ident. No.	
SK 50	22	19	48	35	023	●
SK 50	22	19	48	100	024	●
SK 50	22	19	48	160	025	○
SK 50	27	21	58	35	026	●
SK 50	27	21	58	100	027	●
SK 50	27	21	58	160	028	○
SK 50	32	24	78	50	029	●
SK 50	32	24	78	100	030	●
SK 50	32	24	78	160	031	○
SK 50	40	27	88	50	032	●
SK 50	40	27	88	100	033	●
SK 50	40	27	88	160	034	○

Prod. Gr. 2AC

## ORION® Tool chucks for screw-in milling cutters (ISO 7388-1)



### Application:

For holding threaded screw-in milling cutters

### Notes:

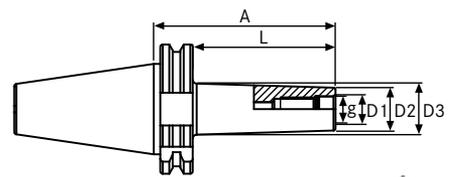
Required pull studs, no. 23690. The previous standard DIN 69871-1 was replaced by ISO 7388-1.



Ident. No. 501-521



Ident. No. 551-562



p. 734

Tool holding device	g	D1 (mm)	D2 (mm)	D3 (mm)	A (mm)	L (mm)	23161... Ident. No.	
SK 40	M6	6.5	10	13	44	25	501	●
SK 40	M6	6.5	10	20	69	50	502	●
SK 40	M6	6.5	10	23	94	75	503	●
SK 40	M8	8.5	13	15	44	25	504	●
SK 40	M8	8.5	13	23	69	50	505	●
SK 40	M8	8.5	13	23	94	75	506	●
SK 40	M8	8.5	13	25	119	100	507	●
SK 40	M10	10.5	18	20	44	25	508	●
SK 40	M10	10.5	18	23	69	50	509	●
SK 40	M10	10.5	18	28	94	75	510	●
SK 40	M10	10.5	18	32	119	100	511	●
SK 40	M12	12.5	21	24	44	25	512	●
SK 40	M12	12.5	21	24	69	50	513	●
SK 40	M12	12.5	21	31	94	75	514	●
SK 40	M12	12.5	21	33	119	100	515	●
SK 40	M12	12.5	21	36	144	125	516	●
SK 40	M16	17	29	29	44	25	517	●
SK 40	M16	17	29	34	69	50	518	●
SK 40	M16	17	29	34	94	75	519	●
SK 40	M16	17	29	36	119	100	520	●
SK 40	M16	17	29	40	144	125	521	●
SK 50	M8	8.5	13	23	69	50	551	●
SK 50	M8	8.5	13	25	119	100	552	●
SK 50	M8	8.5	13	30	169	150	553	●
SK 50	M10	10.5	18	23	69	50	554	●
SK 50	M10	10.5	18	32	119	100	555	●
SK 50	M10	10.5	18	37	169	150	556	●
SK 50	M12	12.5	21	24	69	50	557	●
SK 50	M12	12.5	21	33	119	100	558	●
SK 50	M12	12.5	21	40	169	150	559	●
SK 50	M16	17	29	34	69	50	560	●
SK 50	M16	17	29	43	119	100	561	●
SK 50	M16	17	29	43	169	150	562	●

Prod. Gr. 2AC

Compatible pull studs no. 23690 130-150 page 732

# ATORN® CNC precision short drill chuck (ISO 7388-1)

With spur gear mechanism



**Application:**

**Ident. No. 540:** For use on machining centres and CNC milling machines with tool change. For drilling, reaming, countersinking and also light milling and smoothing tasks.

**Ident. No. 550:** For use on machining centres and CNC machines with tool changer.

**Execution:**

- **Ident. No. 540:** Wear parts hardened and polished
- **Ident. No. 550:**
  - 100% concentricity check using different test pin diameters at various measuring points, based on DIN ISO 10888
  - Concentricity tolerance  $\leq 0.03$  mm over entire clamping range

- With worm gear mechanism
- Type A with steep taper, no internal coolant feed

**Advantage:**

- **Ident. No. 540:** Remains securely clamped even with sudden spindle stop
- **Ident. No. 550:** remains securely clamped even with sudden spindle stop

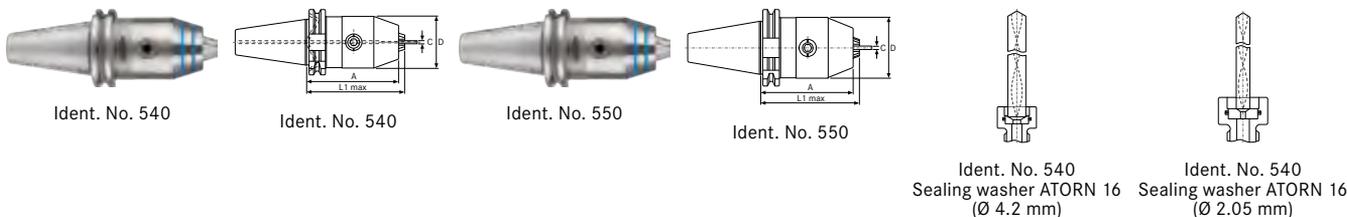
**Delivery:**

**Ident. No. 540:** with hexagon key

**Ident. No. 550:** With hexagon key

**Notes:**

The previous standard DIN 69871-1 was replaced by ISO 7388-1.



Tool holding device	Min./max. clamping width	A (mm)	Length, open (mm)	D (mm)	L1 (mm)	Coolant supply	Concentricity tolerance (mm)	21329... Ident. No.
SK 40	0.5-16 mm	90	103	57	103	Yes	0.020	540 ●
SK 40	0.5-16 mm	90	103	57	103	No	0.020	550 ●

Prod. Gr. 208  
Compatible pull studs no. 23690 130-150 page 732

# ORION® Short drill chuck (ISO 7388-1)

Self-clamping



**Application:**

For drilling and centring.

**Execution:**

- Precision design
- Clamping force increases automatically and proportionally to the torque

**Advantage:**

- Quick clamping via clamping sleeve, with two clamping surfaces for doubling the clamping force with a spanner

- In the event of a sudden spindle stop, the cutting tool cannot work loose

**Delivery:**  
With special key

**Notes:**  
The previous standard DIN 69871-1 was replaced by ISO 7388-1.



Tool holding device	Min./max. clamping width	A (mm)	D (mm)	Coolant supply	23050... Ident. No.
SK 40	1-13 mm	86	50	No	740 ●
SK 40	2.5-16 mm	110	57	No	745 ●
SK 50	3-16 mm	90	57	No	750 ●

Prod. Gr. 295  
Compatible pull studs without internal cooling no. 23692 130-150 page 732

# ORION® Collet type ER (ISO 7388-1)

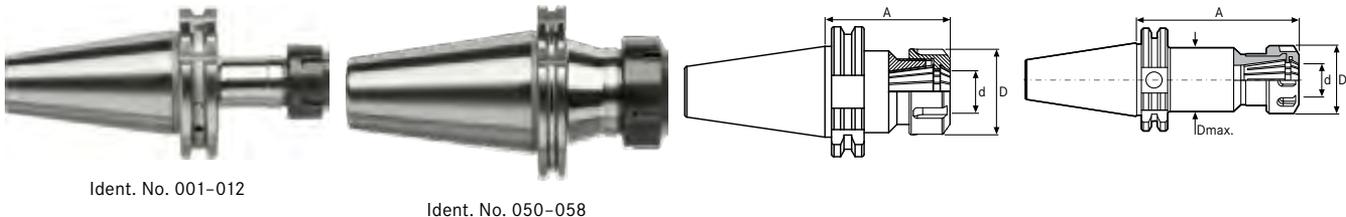


**Application:**  
For clamping tools with straight shanks in ER collet chucks in line with DIN 6499.

**Delivery:**  
With clamping nut

- Execution:**
- With Balluff chip hole
  - All tapers and tolerances are precision-ground

**Notes:**  
The previous standard DIN 69871-1 was replaced by ISO 7388-1. Requisite pull studs no. 23690 and collet chucks no. 23320



Tool holding device	Collet type	Min./max. clamping range	D (mm)	A (mm)	D max. (mm)	23296... Ident. No.	
SK 40	ER 16	0.5-10 mm	32	70	-	001	●
SK 40	ER 16	0.5-10 mm	32	100	28	002	●
SK 40	ER 16	0.5-10 mm	32	160	28	003	●
SK 40	ER 25	2-16 mm	42	70	-	004	●
SK 40	ER 25	2-16 mm	42	100	40	005	●
SK 40	ER 25	2-16 mm	42	160	40	006	●
SK 40	ER 32	2-20 mm	50	70	-	007	●
SK 40	ER 32	2-20 mm	50	100	45	008	●
SK 40	ER 32	2-20 mm	50	160	45	009	●
SK 40	ER 40	3-26 mm	63	70	-	010	●
SK 40	ER 40	3-26 mm	63	100	48	011	●
SK 40	ER 40	3-26 mm	63	160	48	012	●
SK 50	ER 25	2-16 mm	42	70	-	050	●
SK 50	ER 25	2-16 mm	42	100	40	051	●
SK 50	ER 25	2-16 mm	42	160	40	052	●
SK 50	ER 32	2-20 mm	50	70	-	053	●
SK 50	ER 32	2-20 mm	50	100	45	054	●
SK 50	ER 32	2-20 mm	50	160	45	055	●
SK 50	ER 40	3-26 mm	63	80	-	056	●
SK 50	ER 40	3-26 mm	63	100	60	057	●
SK 50	ER 40	3-26 mm	63	160	60	058	●

Prod. Gr. 2AC  
Compatible pull studs no. 23690 130-150 page 732  
Compatible ER-type collet chucks no. 23322 011-426 and no. 23322 501-636 page 740

## ORION® ER collet chuck ultra-short (ISO 7388-1)

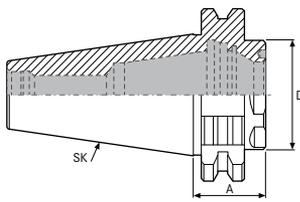


**Application:**  
for clamping tools with straight shanks in ER collet chucks in line with DIN 6499.

- all tapers and tolerances are precision-ground

**Execution:**  
▪ with Balluff chip hole

**Notes:**  
the previous standard DIN 69871-1 was replaced by ISO 7388-1. required pull stud no. 23690 and collet chucks no. 23320  
matching key ref. no. 52110050



Tool holding device	Collet type	Min./max. clamping range	D (mm)	A (mm)	23296... Ident. No.	
SK 40	ER 32	2-20 mm	40	24	060	●
SK 50	ER 32	2-20 mm	40	24	061	●

Prod. Gr. 295

# ORION® ER collet chuck, mini slim version (ISO 7388-1)



**Execution:**

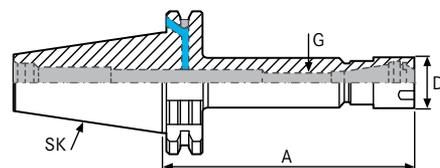
- with Balluff chip hole
- all tapers and tolerances are precision-ground
- all tapers and tolerances are precision-ground

**Delivery:**

including high-speed ER mini nut

**Notes:**

ER Mini clamping nut, ref. no. 23303116-125



Tool holding device	Collet type	Clamping nut type	Min./max. clamping range	D (mm)	A (mm)	G	23297... Ident. No.
SK 40	-	-	0.5-7 mm	16	50	M6 x 1	001 ●
SK 40	-	-	0.5-7 mm	16	100	M6 x 1	002 ●
SK 40	-	-	0.5-7 mm	16	160	M6 x 1	003 ●
SK 40	ER 16	ER 16 MINI	0.5-10 mm	22	70	M10 x 1	004 ●
SK 40	ER 16	ER 16 MINI	0.5-10 mm	22	100	M10 x 1	005 ●
SK 40	ER 16	ER 16 MINI	0.5-10 mm	22	160	M10 x 1	006 ●
SK 40	ER 25	ER 25 MINI	1-16 mm	35	70	M18 x 1	007 ●
SK 40	ER 25	ER 25 MINI	1-16 mm	35	100	M18 x 1	008 ●
SK 40	ER 25	ER 25 MINI	1-16 mm	35	160	M18 x 1	009 ●

Prod. Gr. 295

# FAHRION® CENTRO<sub>I</sub>P precision collet chuck (ISO 7388-1)

Clamping nut can be ordered separately, no. 23323 151-297



**Application:**

For clamping tools with straight shanks without loss of concentricity or clamping force up to shank tolerance h10, for economic machining of individual and series parts with extremely high-precision machining results.

**Execution:**

- Clamping forces are evenly distributed across the entire cylindrical shell surface and perfect surfaces are achieved through the optimally absorbed radial forces
- With Fahrion HP/HPD collet, ref. no. 23323, system concentricity of 3 µm
- 30° trapezoidal thread with polished and extra-long double guide
- Precise centring of the clamping nut
- The collet is completely surrounded in the chuck cone for optimum stability and even distribution of the clamping forces

- The HPD collets can be used for internal cooling, no. 23323 617-658

**Advantage:**

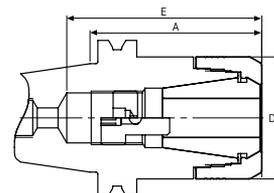
- Ideal for HPC and HSC metal cutting
- Resistant to temperature fluctuations
- With special easy glide coating for lower friction
- Very good damping properties

**Delivery:**

Without clamping nut, without stop screw

**Notes:**

The previous standard DIN 69871-1 was replaced by ISO 7388-1.



Tool holding device	Size	Collet type	Min./max. clamping range	D (mm)	A (mm)	E (mm)	Max. tightening torque (Nm)	23360... Ident. No.
SK 40	CP 16	ER 16 (426 E)	1-10 mm	30	70	55	55	016 ●
SK 40	CP 32	ER 32 (470 E)	2-20 mm	50	50	84	55	032 ○
SK 40	CP 25	ER 25 (430 E)	1-16 mm	40	70	114	85	125 ●
SK 40	CP 16	ER 16 (426 E)	1-10 mm	30	100	85	85	116 ●
SK 40	CP 32	ER 32 (470 E)	2-20 mm	50	70	99	140	132 ●
SK 40	CP 25	ER 25 (430 E)	2-16 mm	40	100	114	140	225 ○
SK 40	CP 32	ER 32 (470 E)	2-20 mm	50	100	114	140	232 ○
SK 40	CP 40	ER 40 (472 E)	3-26 mm	63	70	83	140	244 ○

Prod. Gr. 235

Compatible pull studs no. 23690 130-150 page 732

## ATORN® Precision collet (ISO 7388-1)



**Application:**

For clamping tools with straight shanks without loss of concentricity or clamping force up to shank tolerance h10, for economic machining of individual and series parts with extremely high-precision machining results. Ideal for HPC and HSC metal cutting.

**Execution:**

- 30° trapezoidal thread with polished, extra-long double guide with special easy glide coating for lower friction
- Clamping forces are evenly distributed across the entire cylindrical shell surface and perfect surfaces are achieved through the optimally absorbed radial forces
- Precise centring when tightening the clamping nut

**Advantage:**

- Resistant to fluctuations in temperature and fully suitable for drying processes and hard milling up to 200 °C

- The strengthening of the chuck body over the diameter of the clamping nut creates enormous stability with the optimum interference contour
- Extremely low system concentricity of < 3 µm with the 2-µm ATORN collet chucks UP 23388 150-288
- With Fahrion sealed collet chucks 2µm HPD ref. no. 23323 617-658 to 80 bar for internal cooling (without sealing washer!)
- Completely surrounded in the chuck cone for optimum stability and even distribution of the clamping forces
- Retention forces are doubled compared to conventional collets

**Delivery:**

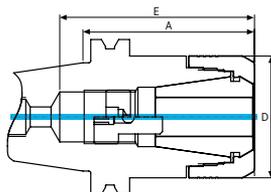
Tool chuck included Clamping nut

Please order spanner separately. Corresponding torque wrench attachments 23360 960-966

Torque wrench recommended, suitable collet chuck type ER no. 23323 617-658

**Notes:**

The previous standard DIN 69871-1 was replaced by ISO 7388-1.



Tool holding device	Size	Collet type	Min./max. clamping range	D (mm)	A (mm)	E (mm)	Max. tightening torque (Nm)	23361... Ident. No.
SK 40	HPE 16	ER 16 (426 E)	1-10 mm	30	70	110	55	001 ●
SK 40	HPE 16	ER 16 (426 E)	1-10 mm	30	100	140	55	002 ●
SK 40	HPE 16	ER 16 (426 E)	1-10 mm	30	160	200	55	003 ●
SK 40	HPE 16	ER 16 (426 E)	1-10 mm	30	200	240	55	004 ○
SK 40	HPE 25	ER 25 (430 E)	2-16 mm	40	70	110	85	005 ●
SK 40	HPE 25	ER 25 (430 E)	2-16 mm	40	100	113	85	006 ●
SK 40	HPE 25	ER 25 (430 E)	2-16 mm	40	160	165	85	007 ○
SK 40	HPE 25	ER 25 (430 E)	2-16 mm	40	200	-	85	008 ○
SK 40	HPE 32	ER 32 (470 E)	2-20 mm	50	70	111	140	009 ●
SK 40	HPE 32	ER 32 (470 E)	2-20 mm	50	100	114	140	010 ●
SK 40	HPE 32	ER 32 (470 E)	2-20 mm	50	160	135	140	011 ●

Prod. Gr. 263

Compatible pull studs no. 23690 130-150 page 732

## ORION® Power chucks (ISO 7388-1)



**Application:**

For clamping tools with straight shank, significantly protruding cutting tools or extensions as well as straight shanks in accordance with DIN1835A and B.

**Execution:**

- optimum concentricity thanks to one-piece basic body at 2.5 x D ≤ 5 µm
- maximum clamping force and stability due to clamping with roller clamp nut with needle roller bearing
- maintenance-free technology

- suitable for internal coolant supply through the tool up to 80 bar

**Advantage:**

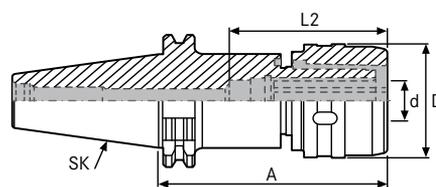
- for high cutting depths and in turn higher material removal rates
- ideal for high feed rates

**Delivery:**

tool chuck with key

**Notes:**

old standard DIN 69871-1 was replaced by ISO 7388-1. Flexible use through intermediate bushings no. 23336



Tool holding device	d (mm)	Min./max. clamping range	A (mm)	D (mm)	L2 (mm)	23362... Ident. No.
SK 40	20	3-20 mm	105	54	70	101 ●
SK 40	32	3-32 mm	105	72	100	102 ●
SK 50	20	3-20 mm	105	54	70	103 ●
SK 50	32	3-32 mm	105	72	100	104 ●

Prod. Gr. 295

# ATORN® HPH high-performance HYDRO expansion chuck (ISO 7388-1)

Short, heavy-duty design



**Application:**

For high-precision and centric clamping of milling, drilling and reaming tools – particularly with milling and heavy-duty machining during rough machining.

**Execution:**

- axial longitudinal adjustment
- reducing sleeves for flexible applications
- Very high concentricity (< 3 µm)
- coolant pressure up to 80 bar
- heat-resistant up to 100°C

**Advantage:**

- Sturdy version ideal for HPC+HSC metal cutting

- Damping properties to increase duration of tools and service life of machine spindle
- Vibration-damping effect reduces micro-cracks and improves the workpiece surface
- All common shanks can be clamped (Ø tolerance h6)
- Very high torque transfer (Ø 20 = 650 Nm/Ø 32 = 890 Nm)

**Delivery:**

Tool holder with matching hex key

**Notes:**

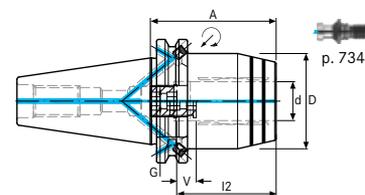
The previous standard DIN 69871-1 was replaced by ISO 7388-1.



Ident. No. 012-021



Ident. No. 032



Tool holding device	d (mm)	A (mm)	D (mm)	l2 (mm)	max. V (mm)	G	23338... Ident. No.
SK 40	12	50	42	46	10	M8 x 1	012 ●
SK 40	20	64.5	49	51	10	M16 x 1	020 ●
SK 50	20	64.5	49	51	10	M16 x 1	021 ○
SK 50	32	81	72	61	10	M16 x 1	032 ○

Prod. Gr. 263

# ATORN® HYDRO expansion chucks (ISO 7388-1)

Ultra-short design and short heavy-duty design



**Application:**

For high precision centric clamping of drilling, reaming and milling tools.

**Execution:**

- Concentricity tolerance < 0.003 mm
- With axial longitudinal adjustment
- Flexible thanks to use of reducing sleeves
- Coolant pressure up to 80 bar
- Heat-resistant up to 50°C

**Advantage:**

- Vibration-damping effect reduces micro-cracks and improves workpiece surfaces

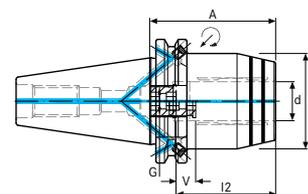
- Damping properties to increase service life of tool and machine spindle
- High torque transfer (Ø 20 = 400 Nm/Ø 32 = 730 Nm)
- All common shanks can be clamped (Ø tolerance h6)

**Delivery:**

Tool holder with matching hex key

**Notes:**

The previous standard DIN 69871-1 was replaced by ISO 7388-1.



Tool holding device	d (mm)	A (mm)	d3 (mm)	D (mm)	l2 (mm)	max. V (mm)	G	23338... Ident. No.
SK 50	32	81	63	72	61	10	M16 x 1	222 ○

Prod. Gr. 263

Compatible pull studs no. 23690 130-150 page 732

# ATORN® HPH hydro expansion chuck 3°, ultra-slim (ISO 7388-1)

3D-printed



**Application:**

Produced using an innovative process, the ultra-slim Hydro expansion chuck combines the advantages of an expansion chuck and a shrink-fit chuck in a single product.

**Execution:**

- Extremely high heat resistance (up to 120°C) ensures that the chuck retains its accuracy
- Outstanding absorption
- Standard tool changes as with expansion chucks without requiring additional devices
- variable thanks to the use of reducer bushings
- Balance quality at G2.5/25,000 rpm
- With Balluff chip hole

**No. 23333 603–23333 612, 23333 630–23338 103:**

- Unusually high gripping forces
- Slimline design for a shrink-fit chuck, therefore suitable for narrow interfering contours
- Max. concentricity < 0.003 mm

**No. 23333 620–23333 627:**

- Exceptionally high clamping forces
- Slimline design of a shrink-fit chuck, therefore suitable for narrow interfering contours
- max. concentricity < 0.003 mm

**Delivery:**

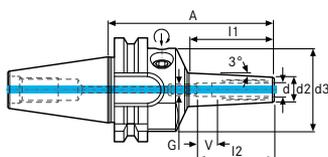
**No. 23333 603–23333 612, 23333 630–23338 103:** with hexagon key

**Notes:**

The previous standard DIN 69871-1 was replaced by ISO 7388-1.



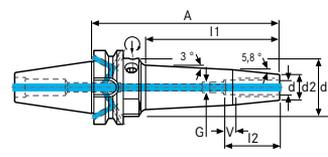
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No. 23333 603–23333 612, 23333 630–23338 103



No. 23333 620–23333 627



No. 23333 620–23333 627



p. 734

Tool holding device	d (mm)	A (mm)	d2 (mm)	D (mm)	l1 (mm)	l2 (mm)	max. V (mm)	G	23333... Ident. No.	23338... Ident. No.	
SK 30	3	85	10	40	45	28	16	M3	630	●	-
SK 30	4	85	12	40	45	28	12	M3	631	●	-
SK 30	5	85	13	40	45	28	8	M3	632	●	-
SK 30	6	85	14	40	46	37	10	M5	633	●	-
SK 30	8	85	16	40	46	37	10	M6	634	●	-
SK 30	10	85	18	40	47	41	10	M8 x 1	635	●	-
SK 30	12	85	20	40	47	46	10	M8 x 1	636	●	-
SK 40	3	120	9	49.5	79.5	28	-	-	603	●	-
SK 40	4	120	10	49.5	79.5	28	-	-	604	●	-
SK 40	5	120	11	49.5	80	28	-	-	605	●	-
SK 40	6	120	12	49.5	79.9	37	10	M5	606	●	-
SK 40	8	120	14	49.5	79.9	37	10	M6	608	●	-
SK 40	10	120	16	49.5	80.9	41	10	M8 x 1	610	●	-
SK 40	12	120	18	49.5	81.9	46	10	M10 x 1	612	●	-
SK 40	6	160	16	49.5	111	37	10	M5	620	●	-
SK 40	6	200	16	49.5	152	37	10	M5	621	●	-
SK 40	8	160	18	49.5	111	37	10	M6	622	●	-
SK 40	8	200	18	49.5	152	37	10	M6	623	●	-
SK 40	10	160	20	49.5	113	41	10	M8 x 1	624	●	-
SK 40	10	200	20	49.5	154	41	10	M8 x 1	625	●	-
SK 40	12	160	22	49.5	113	46	10	M10 x 1	626	●	-
SK 40	12	200	22	49.5	154	46	10	M10 x 1	627	●	-
SK 40	14	120	22	49.5	79	46	10	M10 x 1	-	-	100
SK 40	16	120	24	49.5	79	49	10	M12 x 1	-	-	101
SK 40	18	120	26	49.5	80	49	10	M12 x 1	-	-	102
SK 40	20	120	28	49.5	80	51	10	M16 x 1	-	-	103

Prod. Gr. 263

Compatible pull studs no. 23690 130-150 page 732

**ATORN® Shrink-fit chuck, SK40, 4.5 degrees (ISO 7388-1)**  
 DIN 69871 coolant supply AD/B



**Application:**

**Ident. No. 003-032:** For clamping milling tools and drill bits with straight shank, tolerance h6. Suitable for shrinking on inductive contact and hot air devices.

**Ident. No. 103-332:** For clamping cutters and drills with straight shanks in h6 tolerance. Suitable for shrinking onto inductive contact and hot air devices.

**Execution:**

- For shrinking and reverse shrinking of cemented carbide and HSS tools
- Hole for Balluff chip
- Ident. No. 003-032:**
  - Guarantees maximum concentricity < 0.003 mm
  - Heat-resistant and high-temperature tool steel 1,600-1,800 N/mm
  - Hardness 52 + 2 HRC
  - Maximum coolant pressure 80 bar
  - Adjustment travel 10 mm, can be adjusted on both sides

- 4 additional holes for fine balancing
- Ident. No. 103-332:**
  - Guarantees maximum concentricity < 0.003 mm
  - Heat-resistant and high-temperature tool steel 1600-1800 N/mm
  - hardness 52 + 2 HRC
  - maximum coolant pressure 80 bar
  - Adjustment travel 10 mm, can be adjusted on both sides
  - 4 additional drill holes for fine balancing

**Advantage:**

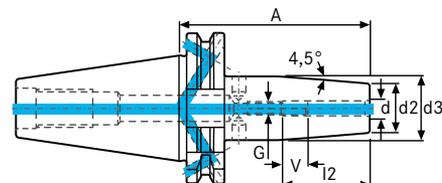
- High positioning and repeat accuracy
- Shrink-fit chuck ideal for high rotation speeds
- Slim design, low interference contour
- Very high torque transfer
- Extremely cost-effective

**Notes:**

The previous standard DIN 69871-1 was replaced by ISO 7388-1.



Ident. No. 003-032



Ident. No. 003-032



Tool holding device	d (mm)	A (mm)	d2 (mm)	D (mm)	min. L2 (mm)	G	23424... Ident. No.	
SK 40	3	80	10	17	22	M6	003	●
SK 40	4	80	15	22	26	M6	004	●
SK 40	5	80	15	22	30	M6	005	●
SK 40	6	80	21	27	36	M5	006	●
SK 40	8	80	21	27	36	M6	008	●
SK 40	10	80	24	32	41	M8 x 1	010	●
SK 40	12	80	24	32	47	M10 x 1	012	●
SK 40	14	80	27	34	47	M10 x 1	014	●
SK 40	16	80	27	34	50	M12 x 1	016	●
SK 40	18	80	33	42	50	M12 x 1	018	●
SK 40	20	80	33	42	52	M16 x 1	020	●
SK 40	25	100	44	53	58	M16 x 1	025	●
SK 40	32	100	44	53	62	M16 x 1	032	○
SK 40	3	120	10	20	-	-	103	○
SK 40	4	120	15	22	-	-	104	○
SK 40	5	120	15	22	-	-	105	○
SK 40	6	120	21	27	36	M5	106	●
SK 40	8	120	21	27	36	M6	108	●
SK 40	10	120	24	32	41	M8 x 1	110	●
SK 40	12	120	24	32	47	M10 x 1	112	●
SK 40	14	120	27	34	47	M10 x 1	114	●
SK 40	16	120	27	34	50	M12 x 1	116	●
SK 40	18	120	33	42	50	M12 x 1	118	●
SK 40	20	120	33	42	52	M16 x 1	120	●
SK 40	25	120	44	53	58	M16 x 1	125	●
SK 40	32	120	44	53	62	M16 x 1	132	○
SK 40	3	160	10	20	-	-	203	○
SK 40	4	160	15	22	-	-	204	○
SK 40	5	160	15	22	-	-	205	○
SK 40	6	160	21	27	36	M5	206	●
SK 40	8	160	21	27	36	M6	208	●
SK 40	10	160	24	32	41	M8 x 1	210	●
SK 40	12	160	24	32	47	M10 x 1	212	●
SK 40	14	160	27	34	47	M10 x 1	214	○
SK 40	16	160	27	34	50	M12 x 1	216	●
SK 40	18	160	33	42	50	M12 x 1	218	○
SK 40	20	160	33	42	52	M16 x 1	220	●
SK 40	25	160	44	53	58	M16 x 1	225	○
SK 40	32	160	44	53	62	M16 x 1	232	○
SK 40	3	200	10	20	-	-	303	○
SK 40	4	200	15	22	-	-	304	○
SK 40	5	200	15	22	-	-	305	○
SK 40	6	200	21	27	36	M5	306	○
SK 40	8	200	21	27	36	M6	308	●
SK 40	10	200	24	32	41	M8 x 1	310	●
SK 40	12	200	24	32	47	M10 x 1	312	●
SK 40	14	200	27	34	47	M10 x 1	314	○
SK 40	16	200	27	34	50	M12 x 1	316	○
SK 40	18	200	33	42	50	M12 x 1	318	○
SK 40	20	200	33	42	52	M16 x 1	320	○
SK 40	25	200	44	53	58	M16 x 1	325	○
SK 40	32	200	44	53	62	M16 x 1	332	○

Prod. Gr. 287  
 Compatible pull studs no. 23690 130-150 page 732

# ATORN® Shrink-fit chuck, slimline, 3 degrees (ISO 7388-1)

For mould making with minimum interference contour



**Application:**

**Ident. No. 003-020:** For clamping milling tools and drill bits with h6 shaft tolerance.

Suitable for inductive, contact and hot air shrinking devices.

**Ident. No. 041-073:** For clamping milling tools and drill bits with h6 shaft tolerance.

For inductive, contact and hot air shrinking devices.

**Execution:**

- Shrink grip and shrink release of HM and HSS tools
- maximum coolant pressure 80 bar

**Ident. No. 003-020:**

- Hardness 52 + 2 HRC

- 4 additional holes for fine balancing
- hole for Balluff chip
- glass bead blasted

**Ident. No. 041-073:**

- hardness 52 + 2 HRC
- 4 additional drill holes for fine balancing
- Hole for Balluff chip
- Glass bead blasted

**Advantage:**

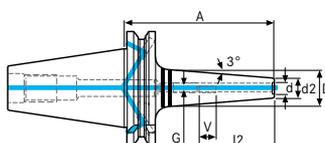
- Slimline design, extremely low interference contour
- High transmittable torques
- High positioning and repeat accuracy
- Ideal for high rotation speeds



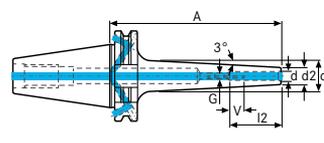
Ident. No. 003-005, 008-020



Ident. No. 041-073



Ident. No. 003-020



Ident. No. 041-073



Tool holding device	d (mm)	A (mm)	d2 (mm)	D (mm)	max. L2 (mm)	G	max. V (mm)	23427... Ident. No.	
SK 40	3	80	9	14	28	M6	16	003	●
SK 40	3	120	9	16	12	-	-	041	●
SK 40	3	160	9	19	12	-	-	042	●
SK 40	3	200	9	19	12	-	-	043	●
SK 40	4	80	10	15	28	M6	12	004	●
SK 40	4	120	10	17	16	-	-	044	●
SK 40	4	160	10	20	16	-	-	045	●
SK 40	4	200	10	20	16	-	-	046	●
SK 40	5	80	11	16	30	M6	10	005	●
SK 40	5	120	11	18	20	-	-	047	●
SK 40	5	160	11	21	20	-	-	048	●
SK 40	5	200	11	21	20	-	-	049	●
SK 40	6	80	12	17	36	M5	10	006	●
SK 40	6	120	12	22	36	M5	-	050	●
SK 40	6	160	12	24	36	M5	-	051	●
SK 40	6	200	12	24	36	M5	-	052	●
SK 40	8	80	14	19	36	M6	10	008	●
SK 40	8	120	14	24	36	M6	-	053	●
SK 40	8	160	14	26	36	M6	-	054	●
SK 40	8	200	14	26	36	M6	-	055	●
SK 40	10	80	16	21	41	M8 x 1	10	010	●
SK 40	10	120	16	26	41	M8 x 1	-	056	●
SK 40	10	160	16	28	41	M8 x 1	-	057	●
SK 40	10	200	16	28	41	M8 x 1	-	058	●
SK 40	12	80	18	23	47	M10 x 1	10	012	●
SK 40	12	120	18	28	47	M10 x 1	-	059	●
SK 40	12	160	18	30	47	M10 x 1	-	060	●
SK 40	12	200	18	30	47	M10 x 1	-	061	●
SK 40	14	80	20	26	47	M10 x 1	10	014	●
SK 40	14	120	20	30	47	M10 x 1	-	062	●
SK 40	14	160	20	32	47	M10 x 1	-	063	●
SK 40	14	200	20	32	47	M10 x 1	-	064	●
SK 40	16	80	22	28	50	M12 x 1	10	016	●
SK 40	16	120	22	32	50	M12 x 1	-	065	●
SK 40	16	160	22	34	50	M12 x 1	-	066	●
SK 40	16	200	22	34	50	M12 x 1	-	067	●
SK 40	18	80	24	30	50	M12 x 1	10	018	●
SK 40	18	120	24	34	50	M12 x 1	-	068	●
SK 40	18	160	24	-	50	M12 x 1	-	069	●
SK 40	18	200	24	-	50	M12 x 1	-	070	●
SK 40	20	80	26	32	52	M16 x 1	10	020	●
SK 40	20	120	26	-	52	M16 x 1	-	071	●
SK 40	20	160	26	-	52	M16 x 1	-	072	●
SK 40	20	200	26	-	52	M16 x 1	-	073	●

Prod. Gr. 287

Compatible pull studs no. 23690 130-150 page 732

# ATORN® Shrink-fit chuck, 4.5 degrees (with KKB) (ISO 7388-1)

With resealable coolant bores (=KKB)



**Application:**

**Ident. No. 503-532:** For clamping milling tools and drill bits with straight shanks in h6 tolerance.

Suitable for shrinking onto inductive contact and hot air devices.

**Ident. No. 553-582:** For clamping cutters and drills with straight shanks in h6 tolerance.

Suitable for shrinking on inductive contact and hot air devices.

**Execution:**

▪ Adjustment travel 10 mm, can be adjusted on both sides

▪ Hole for Balluff chip

**Ident. No. 503-532:**

- Guaranteed maximum concentricity 0.003 mm
- For shrinking cemented carbide and HSS tools in and out
- Hardness 52 + 2 HRC
- Maximum coolant pressure 80 bar

▪ 4 additional holes for fine balancing

**Ident. No. 553-582:**

- guaranteed maximum concentricity 0.003 mm
- shrink grip and shrink release of HM and HSS tools
- hardness 52 + 2 HRC
- maximum coolant pressure 80 bar
- 4 additional drill holes for fine balancing

**Advantage:**

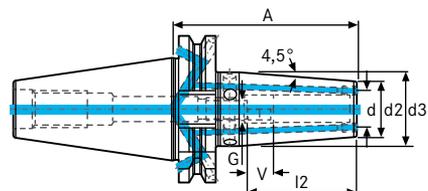
- High transmittable torques
- High positioning and repeat accuracy
- Ideal for high rotation speeds
- **Ident. No. 503-532:** Heat-resistant and high-temperature tool steel 1600-1800 N/mm<sup>2</sup>
- **Ident. No. 553-582:** Heat-resistant and high-temperature tool steel 1600-1800 N/mm<sup>2</sup>



Ident. No. 503-532



Ident. No. 553-582



Ident. No. 503-532



Tool holding device	d (mm)	A (mm)	d2 (mm)	D (mm)	max. L2 (mm)	G	max. V (mm)	23424... Ident. No.	
SK 40	3	80	10	17	28	M6	10	503	●
SK 40	4	80	15	22	28	M6	10	504	●
SK 40	5	80	15	22	30	M6	10	505	●
SK 40	6	80	21	27	36	M5	10	506	●
SK 40	8	80	21	27	36	M6	10	508	●
SK 40	10	80	24	32	41	M8 x 1	10	510	●
SK 40	12	80	24	32	47	M10 x 1	10	512	●
SK 40	14	80	27	34	47	M10 x 1	10	514	●
SK 40	16	80	27	34	50	M12 x 1	10	516	●
SK 40	18	80	33	42	50	M16 x 1	10	518	●
SK 40	20	80	33	42	52	M16 x 1	10	520	●
SK 40	25	100	44	53	58	M16 x 1	10	525	○
SK 40	32	100	44	53	62	M16 x 1	10	532	○
SK 40	3	120	9	16	-	-	-	553	●
SK 40	4	120	10	17	-	-	-	554	●
SK 40	5	120	11	18	-	-	-	555	●
SK 40	6	120	12	22	36	M5	10	556	●
SK 40	8	120	14	24	36	M6	10	558	●
SK 40	10	120	16	26	41	M8 x 1	10	560	●
SK 40	12	120	18	28	47	M10 x 1	10	562	●
SK 40	14	120	20	30	47	M10 x 1	10	564	●
SK 40	16	120	22	32	50	M12 x 1	10	566	●
SK 40	18	120	24	34	50	M12 x 1	10	568	●
SK 40	20	120	26	36	52	M16 x 1	10	570	●
SK 40	25	120	44	53	58	M16 x 1	10	575	○
SK 40	32	120	44	53	62	M16 x 1	10	582	○

Prod. Gr. 287  
Compatible pull studs no. 23690 130-150 page 732

# ORION® Weldon surface chucks (ISO 7388-2)



**Application:**

For clamping tools with straight shanks and clamping surfaces in line with DIN 1835 B.

**Execution:**

- All tapers and tolerances are precision-ground
- Cone tolerance AT3
- Strength HRC 57-60

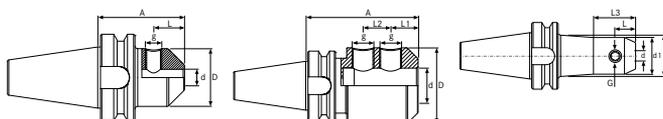
▪ Core strength 1000-1200 N/mm<sup>2</sup>

**Advantage:**

- Prevents rotation of tool while maintaining high concentricity

**Notes:**

Required pull studs, no. 23690. The previous standard JIS B 6339 MAS BT was replaced by ISO 7388-2.



Tool holding device	d (mm)	A (mm)	D (mm)	d1 (mm)	L (mm)	L1 (mm)	L2 (mm)	L3 (mm)	g / G	23157... Ident. No.	
BT 40	6	50	25	-	18	-	-	-	M6	100	●
BT 40	6	100	35	25	18	-	-	40	M6	101	●
BT 40	6	160	35	25	18	-	-	80	M6	102	●
BT 40	8	50	28	-	18	-	-	-	M8	103	●
BT 40	8	100	38	28	18	-	-	40	M8	104	●
BT 40	8	160	38	28	18	-	-	80	M8	105	●
BT 40	10	63	35	-	20	-	-	-	M10	106	●
BT 40	10	100	40	35	20	-	-	40	M10	107	●
BT 40	10	160	40	35	20	-	-	80	M10	108	●
BT 40	12	63	42	-	22.5	-	-	-	M12	109	●
BT 40	12	100	42	-	22.5	-	-	-	M12	110	●
BT 40	12	160	42	-	22.5	-	-	-	M12	111	●
BT 40	14	63	44	-	22.5	-	-	-	M12	112	●
BT 40	14	100	44	-	22.5	-	-	-	M12	113	●
BT 40	14	160	44	-	22.5	-	-	-	M12	114	●
BT 40	16	63	48	-	24	-	-	-	M14	115	●
BT 40	16	100	48	-	24	-	-	-	M14	116	●
BT 40	16	160	48	-	24	-	-	-	M14	117	●
BT 40	18	63	50	-	24	-	-	-	M14	118	●
BT 40	18	100	50	-	24	-	-	-	M14	119	●
BT 40	18	160	50	-	24	-	-	-	M14	120	●
BT 40	20	63	52	-	25	-	-	-	M16	121	●
BT 40	20	100	52	-	25	-	-	-	M16	122	●
BT 40	20	160	52	-	25	-	-	-	M16	123	●
BT 40	25	90	65	-	-	24	25	-	M18 x 2	124	●
BT 40	25	160	65	-	-	24	25	-	M18 x 2	125	●
BT 40	32	100	72	-	-	24	28	-	M20 x 2	126	●
BT 40	32	160	72	-	-	24	28	-	M20 x 2	127	●
BT 40	40	100	80	-	-	30	32	-	M20 x 2	128	●
BT 40	40	160	80	-	-	30	32	-	M20 x 2	129	●
BT 50	6	63	25	-	18	-	-	-	M6 x 1	150	●
BT 50	6	100	35	25	18	-	-	35	M6 x 1	151	●
BT 50	6	160	35	25	18	-	-	80	M6 x 1	152	●
BT 50	8	63	28	-	18	-	-	-	M8	153	●
BT 50	8	100	38	28	18	-	-	35	M8	154	●
BT 50	8	160	38	28	18	-	-	80	M8	155	●
BT 50	10	63	35	-	20	-	-	-	M10	156	●
BT 50	10	100	42	35	20	-	-	35	M10	157	●
BT 50	10	160	42	35	20	-	-	80	M10	158	●
BT 50	12	63	42	-	22.5	-	-	-	M12	159	●
BT 50	12	100	48	42	22.5	-	-	35	M12	160	●
BT 50	12	160	48	42	22.5	-	-	80	M12	161	●
BT 50	14	63	44	-	22.5	-	-	-	M12	162	●
BT 50	14	100	50	44	22.5	-	-	35	M12	163	●
BT 50	14	160	44	44	22.5	-	-	80	M12	164	●
BT 50	16	63	48	-	24	-	-	-	M14	165	●
BT 50	16	100	54	48	24	-	-	35	M14	166	●
BT 50	16	160	54	48	24	-	-	80	M14	167	●
BT 50	18	63	50	-	24	-	-	-	M14	168	●
BT 50	18	100	62	50	24	-	-	35	M14	169	●
BT 50	18	160	62	50	24	-	-	80	M14	170	●
BT 50	20	63	52	-	25	-	-	-	M16	171	●
BT 50	20	100	66	52	25	-	-	35	M16	172	●
BT 50	20	160	69	52	25	-	-	80	M16	173	●
BT 50	25	100	65	-	-	24	25	-	M18 x 2	174	●
BT 50	25	160	65	-	-	24	25	-	M18 x 2	175	●
BT 50	32	105	72	-	-	24	28	-	M20 x 2	176	●
BT 50	32	160	72	-	-	24	28	-	M20 x 2	177	●
BT 50	40	115	80	-	-	30	32	-	M20 x 2	178	●
BT 50	40	160	80	-	-	30	32	-	M20 x 2	179	●
BT 50	50	125	100	-	-	35	35	-	M24 x 2	180	●

Prod. Gr. 2AC  
Compatible pull studs no. 23690 240-250 page 733

## ORION® Surface chuck (Weldon) with coolant bores (ISO 7388-2)

KKB= resealable cooling duct holes



**Application:**  
for clamping tools with straight shank and clamping surface in accordance with DIN 1835 B.

**Execution:**  
▪ all tapers and tolerances are precision-ground

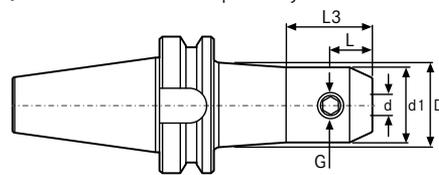
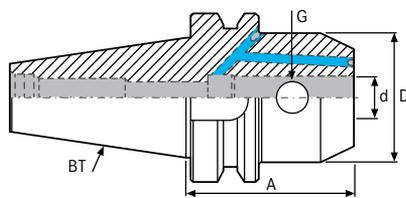
- cone tolerance AT3
- strength HRC 57-60
- core strength 1000-1200 N/mm<sup>2</sup>
- KKB= resealable cooling duct holes

**Advantage:**

- prevents rotation of tool while maintaining high concentricity

**Notes:**

required pull studs, no. 23690. the previous standard JIS B 6339 MAS BT was replaced by ISO 7388-2.



Note outer contour, see Table D, d1 and L3



p. 735

Tool holding device	d (mm)	A (mm)	D (mm)	d1 (mm)	L3 (mm)	g / G	23157... Ident. No.	
BT 40	6	50	25	-	-	M6	401	●
BT 40	6	100	35	25	40	M6	402	●
BT 40	6	160	36	25	80	M6	403	●
BT 40	8	50	28	-	-	M8	404	●
BT 40	8	100	38	28	40	M8	405	●
BT 40	8	160	39	28	80	M8	406	●
BT 40	10	63	35	-	-	M10	407	●
BT 40	10	100	40	35	40	M10	408	●
BT 40	10	160	40	35	80	M10	409	●
BT 40	12	63	42	-	-	M12	410	●
BT 40	12	100	42	-	-	M12	411	●
BT 40	12	160	42	-	-	M12	412	●
BT 40	14	63	44	-	-	M12	413	●
BT 40	14	100	44	-	-	M12	414	●
BT 40	14	160	44	-	-	M12	415	●
BT 40	16	63	48	-	-	M14	416	●
BT 40	16	100	48	-	-	M14	417	●
BT 40	16	160	48	-	-	M14	418	●

Tool holding device	d (mm)	A (mm)	D (mm)	d1 (mm)	L3 (mm)	g / G	23157... Ident. No.	
BT 40	18	63	50	-	-	M14	419	●
BT 40	18	100	50	-	-	M14	420	●
BT 40	18	160	50	-	-	M14	421	●
BT 40	20	63	52	-	-	M16	422	●
BT 40	20	100	52	-	-	M16	423	●
BT 40	20	160	52	-	-	M16	424	●
BT 40	25	90	65	-	-	M18 x 2	425	●
BT 40	25	160	65	-	-	M18 x 2	426	●
BT 40	32	100	72	-	-	M20 x 2	427	●
BT 40	32	160	72	-	-	M20 x 2	428	●
BT 40	40	105	80	-	-	M20 x 2	429	●
BT 40	40	160	80	-	-	M20 x 2	430	●

Prod. Gr. 295

## ORION® Combined shell end mill arbors (ISO 7388-2)

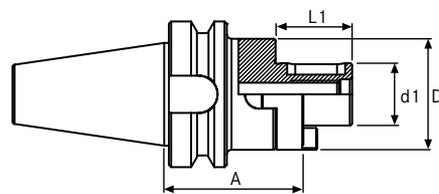


**Application:**  
For holding shell end mills and single angle milling cutters with longitudinal groove in line with DIN 842.

**Execution:**  
▪ All tapers and tolerances are precision-ground  
▪ Concentricity < 0.005 mm  
▪ requisite pull studs, no. 23690

**Delivery:**  
With cutter retaining screw, key, and driving ring

**Notes:**  
The previous standard JIS B 6339 MAS BT was replaced by ISO 7388-2.  
If desired with combined shell end mill arbors with ICS, the cutter retaining screws must be ordered separately with IC DIN 6367, ref. no. 23185130-180



p. 754 p. 735

Tool holding device	d1 (mm)	L1 (mm)	A (mm)	D (mm)	23160... Ident. No.	
BT 40	16	27	55	32	100	●
BT 40	16	27	100	32	101	●
BT 40	16	27	160	32	102	●
BT 40	22	31	55	40	103	●
BT 40	22	31	100	40	104	●
BT 40	22	31	160	40	105	●
BT 40	27	33	55	48	106	●
BT 40	27	33	100	48	107	●
BT 40	27	33	160	48	108	●
BT 40	32	38	60	58	109	●
BT 40	32	38	100	58	110	●
BT 40	32	38	160	58	111	●
BT 40	40	41	60	70	112	●
BT 40	40	41	100	70	113	●
BT 40	40	41	160	70	114	●

Prod. Gr. 2AC

Compatible pull studs no. 23690 240-250 page 733

Spacing collar for mill arbours no. 23135 010-345 and no. 23140 005-315 page 750

Source: Hahn+Kolb Werkzeuge GmbH  
Technical data subject to change.  
Availability subject to country specific rules and regulations.

**ORION®** Transverse drive shell end mill arbor DIN 6357  
With enlarged collar diameter



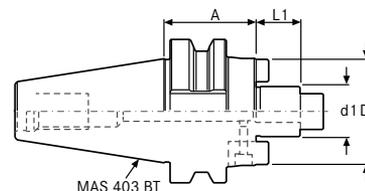
**Execution:**

- Alloyed case-hardening steel, tensile strength in the core min. 950 N/mm<sup>2</sup>
- Internal coolant feed, cooling duct bore cannot be closed

- Case-hardened HRC 60 ± 2 (HV 700 ± 50), hardness depth 0.8 mm ± 0.2 mm
- Max. concentricity < 0.005 mm

**Delivery:**

Including Key blocks and cutter retaining screw



p. 753 p. 734

Tool holding device	d1 (mm)	L1 (mm)	A (mm)	D (mm)	23162... Ident. No.	
BT 40	16	17	40	38	040	●
BT 40	16	17	100	38	041	●
BT 40	16	17	160	38	042	○
BT 40	22	19	40	48	043	●
BT 40	22	19	100	48	044	●
BT 40	22	19	160	48	045	○
BT 40	27	21	40	58	046	●
BT 40	27	21	100	58	047	●
BT 40	27	21	160	58	048	○
BT 40	32	24	50	78	049	●
BT 40	32	24	100	78	050	●
BT 40	32	24	160	78	051	○
BT 40	40	27	50	88	052	●
BT 40	40	27	100	88	053	●
BT 40	40	27	160	88	054	○

Prod. Gr. 2AC

**ATORN®** CNC precision short drill chuck (ISO 7388-2)  
With spur gear mechanism



**Application:**

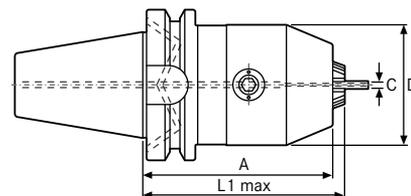
For use on machining centres and CNC machines with tool change systems. For drilling, reaming, countersinking and also light milling and finishing tasks.

**Advantage:**

- Remains securely clamped even with sudden spindle stop

**Delivery:**

Including hexagon key



p. 735

Tool holding device	Min./max. clamping width	A (mm)	D (mm)	L1 max. (mm)	21329... Ident. No.	
BT 40	0.5-16 mm	98	57	111	551	●

Prod. Gr. 208

# ORION® Collet type ER (ISO 7388-2)

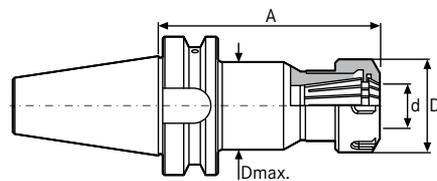
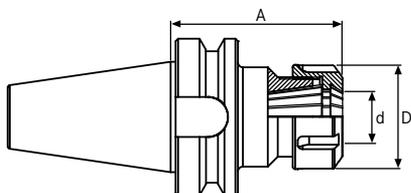


**Application:**  
For clamping tools with straight shanks in ER collet chucks in line with DIN 6499.

**Delivery:**  
With clamping nut

**Execution:**  
▪ All functional surfaces precision-ground

**Notes:**  
The previous standard JIS B 6339 MAS BT was replaced by ISO 7388-2. Requisite pull studs no. 23690 and collet chucks no. 23320



Tool holding device	Collet type	Spannweite min./max.. d	D (mm)	A (mm)	D max. (mm)	23296... Ident. No.	
BT 40	ER 16	0.5-10 mm	32	70	28	100	●
BT 40	ER 16	0.5-10 mm	32	100	28	101	●
BT 40	ER 16	0.5-10 mm	32	160	28	102	●
BT 40	ER 25	2-16 mm	42	70	-	103	●
BT 40	ER 25	2-16 mm	42	100	40	104	●
BT 40	ER 25	2-16 mm	42	160	40	105	●
BT 40	ER 32	2-20 mm	50	70	-	106	●
BT 40	ER 32	2-20 mm	50	100	48	107	●
BT 40	ER 32	2-20 mm	50	160	48	108	●
BT 40	ER 40	3-26 mm	63	70	-	109	●
BT 40	ER 40	3-26 mm	63	100	50	110	●
BT 40	ER 40	3-26 mm	63	160	50	111	●
BT 50	ER 25	2-16 mm	42	80	-	150	●
BT 50	ER 25	2-16 mm	42	100	40	151	●
BT 50	ER 25	2-16 mm	42	160	40	152	●
BT 50	ER 32	2-20 mm	50	80	-	153	●
BT 50	ER 32	2-20 mm	50	100	45	154	●
BT 50	ER 32	2-20 mm	50	160	45	155	●
BT 50	ER 40	3-26 mm	63	80	-	156	●
BT 50	ER 40	3-26 mm	63	100	60	157	●
BT 50	ER 40	3-26 mm	63	160	60	158	●

Prod. Gr. 2AC

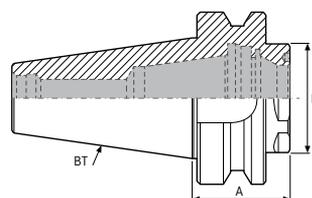
# ORION® ER collet chuck ultra-short (ISO 7388-2)



**Application:**  
for clamping tools with straight shanks in ER collet chucks in line with DIN 6499.

**Notes:**  
the previous standard JIS B 6339 MAS BT was replaced by ISO 7388-2 required pull stud no. 23690 and collet chucks no. 23320 matching key ref. no. 52110050

**Execution:**  
▪ all tapers and tolerances are precision-ground



Tool holding device	Collet type	Spannweite min./max.. d	D (mm)	A (mm)	23296... Ident. No.	
BT 40	ER 32	2-20 mm	40	32	170	●
BT 50	ER 32	2-20 mm	40	43	171	●

Prod. Gr. 295

**ORION® ER collet chuck, mini slim version (ISO 7388-2)**  
ISO 7388-2



**Execution:**

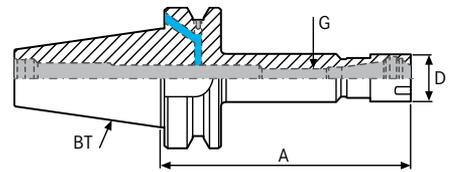
- ER mini nut finely balanced (G2.5 / 25,000 rpm)
- all tapers and tolerances are precision-ground

**Delivery:**

including high-speed ER mini nut

**Notes:**

ER mini type clamping nut ref. no. 23303116-125 former standard JIS B 6339 MAS BT has been replaced by ISO 7388-2.



Tool holding device	Collet type	Clamping nut type	Spannweite min./max.. d	D (mm)	A (mm)	G	23297... Ident. No.
BT 40	-	-	0.5-7 mm	16	70	M6 x 1	021 ●
BT 40	-	-	0.5-7 mm	16	100	M6 x 1	022 ●
BT 40	-	-	0.5-7 mm	16	160	M6 x 1	023 ●
BT 40	ER 16	ER 16 MINI	0.5-10 mm	22	70	M10 x 1	024 ●
BT 40	ER 16	ER 16 MINI	0.5-10 mm	22	100	M10 x 1	025 ●
BT 40	ER 16	ER 16 MINI	0.5-10 mm	22	120	M10 x 1	026 ●
BT 40	ER 16	ER 16 MINI	0.5-10 mm	22	160	M10 x 1	027 ●
BT 40	ER 20	ER 20 MINI	1-13 mm	28	120	M10 x 1	028 ●
BT 40	ER 20	ER 20 MINI	1-13 mm	28	160	M10 x 1	029 ●
BT 40	ER 25	ER 25 MINI	1-16 mm	35	70	M18 x 1	030 ●
BT 40	ER 25	ER 25 MINI	1-16 mm	35	100	M18 x 1	031 ●
BT 40	ER 25	ER 25 MINI	1-16 mm	35	120	M18 x 1	032 ●
BT 40	ER 25	ER 25 MINI	1-16 mm	35	160	M18 x 1	033 ●

Prod. Gr. 295

**ATORN® HPH high-performance HYDRO expansion chuck (ISO 7388-2)**  
Short, heavy-duty design



**Application:**

For high-precision and centric clamping of milling, drilling and reaming tools – particularly with milling and heavy-duty machining during rough machining.

**Execution:**

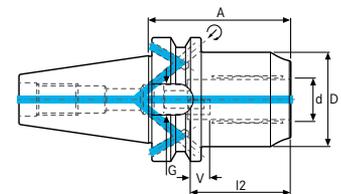
- With axial longitudinal adjustment
- Reducing sleeves for flexible applications
- Very high concentricity (< 3 µm)
- Coolant pressure up to 80 bar
- Heat-resistant up to 100°C

**Advantage:**

- Sturdy version ideal for HPC+HSC metal cutting
- Damping properties to increase tool duration and service life of machine spindle
- Vibration-damping effect reduces micro-cracks and improves the workpiece surface
- All common shanks can be clamped (Ø tolerance h6)
- Very high torque transfer (Ø 20 = 650 Nm)

**Notes:**

The previous standard DIN 69871-1 was replaced by ISO 7388-1.



Tool holding device	d (mm)	Projecting length (mm)	D (mm)	V (mm)	G	23733... Ident. No.
BT 40	20	72.5	49	10	M16 x 1	740 ●

Prod. Gr. 263

# ATORN® Hydro-expansion chuck, type JD/JF (ISO 7388-2)

Short, heavy-duty design

BT 40	BT 50	IK	Form JD/JF	G 2,5 25000 rpm	$\sqrt{R} \leq 0,003$	ISO 7388-2
-------	-------	----	------------	-----------------	-----------------------	------------

**Application:**  
For high precision centric clamping of drilling, reaming and milling tools.

**Execution:**

- Concentricity tolerance < 0.003 mm
- With axial longitudinal adjustment
- Reducing sleeves for flexible applications
- Coolant pressure up to 80 bar
- Heat-resistant up to 50°C

**Advantage:**

- Vibration-damping effect reduces micro-cracks and improves workpiece surfaces

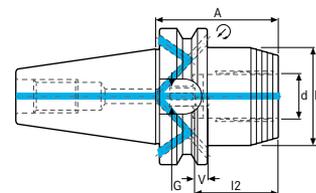
- Damping properties increase service life of tool and machine spindle
- High torque transfer ( $\varnothing 20 = 400 \text{ Nm} / \varnothing 32 = 730 \text{ Nm}$ )
- All common shanks can be clamped ( $\varnothing$  tolerance h6)

**Delivery:**

Tool holder with matching hex key

**Notes:**

The previous standard DIN 69871-1 was replaced by ISO 7388-1.



p. 735

Tool holding device	d (mm)	Projecting length (mm)	D (mm)	V (mm)	G	23333... Ident. No.
BT 40	20	72.5	49.5	10	M16 x 1	400
BT 50	32	90	72	10	M16 x 1	500

Prod. Gr. 263

# ATORN® Hydro expansion chuck 3°, ultra-slim (ISO 7388-2)

3D-printed

BT 30	BT 40	IK	Form JD	Form JD/JF	G 2,5 25000 rpm	$\sqrt{R} \leq 0,003$	ISO 7388-2
-------	-------	----	---------	------------	-----------------	-----------------------	------------

**Application:**  
Produced using an innovative process, the ultra-slim Hydro expansion chuck combines the advantages of an expansion chuck and a shrink-fit chuck in a single product.

**Execution:**

- Extremely high heat resistance (up to 120°C) ensures that the chuck retains its accuracy
- Slimline design for a shrink-fit chuck, therefore suitable for narrow interfering contours
- Outstanding absorption

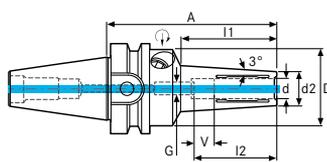
- Standard tool changes as with expansion chucks without requiring additional devices
- Various applications when used with reducer bushings
- Pre-balanced to G2.5/25,000 rpm
- No. 23333 703–23333 727, 23733 800–23733 803:**
  - Unusually high gripping forces
  - Max. concentricity < 0.003 mm
- No. 23333 730–23333 734:**
  - Unusually high clamping forces
  - max. concentricity < 0.003 mm

**Notes:**

The previous standard JIS B 6339 MAS BT was replaced by ISO 7388-2.



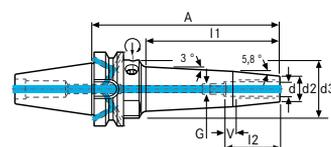
No. 23333 703–23333 712, 23333 730–23733 803



No. 23333 703–23333 712, 23333 730–23733 803



No. 23333 720–23333 727



No. 23333 720–23333 727



p. 735

Tool holding device	d (mm)	Projecting length (mm)	d2 (mm)	D (mm)	I2 (mm)	I3 (mm)	V (mm)	G	23333... Ident. No.	23733... Ident. No.
BT 30	3	85	10	-	28	45	16	M3	730	-
BT 30	4	85	12	-	28	45	12	M3	731	-
BT 30	5	85	13	-	28	45	8	M3	732	-
BT 30	6	85	14	-	37	46	10	M5	733	-
BT 30	8	85	16	-	37	46	10	M6	734	-
BT 40	3	120	9	49.5	28	70.5	16	M3	703	-
BT 40	4	120	10	49.5	28	70.5	12	M3	704	-
BT 40	5	120	11	49.5	28	71	8	M3	705	-
BT 40	6	120	12	49.5	37	71.9	10	M5	706	-
BT 40	8	120	14	49.5	37	72.4	10	M6	708	-
BT 40	10	120	16	49.5	41	72.9	10	M8 x 1	710	-
BT 40	12	120	18	49.5	46	73.4	10	M10 x 1	712	-
BT 40	6	160	-	49.5	-	-	10	M5	720	-
BT 40	6	200	-	49.5	-	-	10	M5	721	-
BT 40	8	160	-	49.5	-	-	10	M6	722	-
BT 40	8	200	-	49.5	-	-	10	M6	723	-
BT 40	10	160	-	49.5	-	-	10	M8 x 1	724	-
BT 40	10	200	-	49.5	-	-	10	M8 x 1	725	-

# Tool clamping \ Tool chucks ISO 7388-2 BT40/50

Tool holding device	d (mm)	Projecting length (mm)	d2 (mm)	D (mm)	l2 (mm)	l3 (mm)	V (mm)	G	23333... Ident. No.	23733... Ident. No.
BT 40	12	160	-	49.5	-	-	10	M10 x 1	726	-
BT 40	12	200	-	49.5	-	-	10	M10 x 1	727	-
BT 40	14	120	22	49.5	46	71	10	M10 x 1	-	800
BT 40	16	120	24	49.5	49	71	10	M12 x 1	-	801
BT 40	18	120	26	49.5	49	72	10	M12 x 1	-	802
BT 40	20	120	28	49.5	51	72	10	M16 x 1	-	803

Prod. Gr. 263

## ATORN® Shrink-fit chuck, slimline, 3 degrees (ISO 7388-2) For mould making with minimum interference contour



### Application:

**Ident. No. 303-320:** For clamping milling tools and drill bits with straight shanks in h6 tolerance.

Suitable for heavy-duty cutting and all high-power applications.

Suitable for inductive, contact and hot air shrinking devices.

**Ident. No. 341-373:** For clamping cutters and drills with straight shanks in h6 tolerance.

Suitable for heavy machining and all powerful applications.

Suitable for inductive, contact and hot air shrinking devices.

### Execution:

#### Ident. No. 303-320:

- Guaranteed maximum concentricity 0.003 mm
- For shrinking cemented carbide and HSS tools in and out
- Hardness 52 + 2 HRC

- Maximum coolant pressure 80 bar
- glass bead blasted
- Ident. No. 341-373:**
  - guaranteed maximum concentricity 0.003 mm
  - shrink grip and shrink release of HM and HSS tools
  - hardness 52 + 2 HRC
  - maximum coolant pressure 80 bar
  - Glass bead blasted

### Advantage:

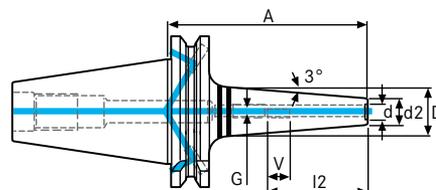
- Slimline design, extremely low interference contour
- High transmittable torques
- High positioning and repeat accuracy
- Ideal for high rotation speeds

### Notes:

The previous standard JIS B 6339 MAS BT was replaced by ISO 7388-2.



Ident. No. 303-320



Ident. No. 303-320



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Tool holding device	d (mm)	d2 (mm)	D (mm)	A (mm)	l2 (mm)	G	max. V (mm)	23427... Ident. No.
BT 40	3	9	15	90	28	M6	16	303
BT 40	3	9	16	120	-	-	-	341
BT 40	3	9	19	160	-	-	-	342
BT 40	3	9	19	200	-	-	-	343
BT 40	4	10	16	90	28	M6	12	304
BT 40	4	10	17	120	-	-	-	344
BT 40	4	10	20	160	-	-	-	345
BT 40	4	10	20	200	-	-	-	346
BT 40	5	11	17	90	30	M6	10	305
BT 40	5	11	18	120	-	-	-	347
BT 40	5	11	21	160	-	-	-	348
BT 40	5	11	21	200	-	-	-	349
BT 40	6	12	18	90	36	M5	10	306
BT 40	6	12	21	120	36	M5	10	350
BT 40	6	12	24	160	36	M5	10	351
BT 40	6	12	24	200	36	M5	10	352
BT 40	8	14	20	90	36	M6	10	308
BT 40	8	14	23	120	36	M6	10	353
BT 40	8	14	26	160	36	M6	10	354
BT 40	8	14	26	200	36	M6	10	355
BT 40	10	16	22	90	41	M8 x 1	10	310
BT 40	10	16	25	120	41	M8 x 1	10	356
BT 40	10	16	28	160	41	M8 x 1	10	357
BT 40	10	16	28	200	41	M8 x 1	10	358
BT 40	12	18	24	90	47	M10 x 1	10	312
BT 40	12	18	27	120	47	M10 x 1	10	359
BT 40	12	18	30	160	47	M10 x 1	10	360
BT 40	12	18	30	200	47	M10 x 1	10	361
BT 40	14	20	26	90	47	M10 x 1	10	314
BT 40	14	20	29	120	47	M10 x 1	10	362
BT 40	14	20	32	160	47	M10 x 1	10	363
BT 40	14	20	32	200	47	M10 x 1	10	364
BT 40	16	22	28	90	50	M12 x 1	10	316
BT 40	16	22	31	120	50	M12 x 1	10	365
BT 40	16	22	34	160	50	M12 x 1	10	366
BT 40	16	22	34	200	50	M12 x 1	10	367
BT 40	18	24	30	90	50	M12 x 1	10	318
BT 40	18	24	33	120	50	M12 x 1	10	368
BT 40	18	24	36	160	50	M12 x 1	10	369
BT 40	18	24	36	200	50	M12 x 1	10	370
BT 40	20	26	32	90	52	M16 x 1	10	320
BT 40	20	26	35	120	52	M16 x 1	10	371
BT 40	20	26	38	160	52	M16 x 1	10	372
BT 40	20	26	38	200	52	M16 x 1	10	373

Prod. Gr. 287

**diebold** Collet extension with internal cooling  
With cylindrical shank, ER-type collet chucks (mini)



**Application:**  
For clamping tools with straight shank.

**Execution:**

- With straight shank, type ER mini
- Particularly slim design for use in milling chucks as tool extension

- for deep machining operations where space is restricted
- Straight shank made of solid material
- Hollow-drilled for internal cooling

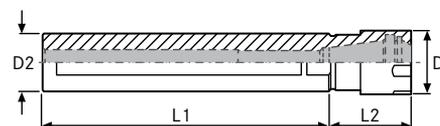
**Notes:**  
Mini ring profile key, no. 23308. Suitable collets, no. 23320.



Collet type	d1 (mm)	Min./max. clamping range	D (mm)	L (mm)	L2 (mm)	23304... Ident. No.
ER 16	10	0.5-10 mm	22	60	38	005 ●
ER 16	12	0.5-10 mm	22	80	38.5	010 ●
ER 20	16	1-13 mm	28	100	42.5	020 ●

Prod. Gr. 2AB

**ORION®** ER collet chuck Mini extensions  
with straight shank



Collet type	-	-	ER 16	ER 16	-	-	ER 16	ER 16
Min./max. clamping range	0.5-7 mm	0.5-7 mm	0.5-10 mm	0.5-10 mm	0.5-7 mm	0.5-7 mm	0.5-10 mm	0.5-10 mm
D2 (mm)	16	16	16	16	20	20	20	20
L1 (mm)	100	160	60	160	50	100	60	100
D (mm)	16	16	22	22	16	16	22	22
L2 (mm)	22	22	37	37	22	22	30	30
Clamping nut type	-	-	ER 16 MINI	ER 16 MINI	-	-	ER 16 MINI	ER 16 MINI
23297... Ident. No.	081 ●	082 ●	083 ●	084 ●	085 ●	086 ●	087 ●	088 ●

Collet type	ER 16	ER 16	ER 20	ER 25				
Min./max. clamping range	0.5-10 mm	0.5-10 mm	1-13 mm	1-13 mm	1-13 mm	1-13 mm	1-13 mm	1-16 mm
D2 (mm)	20	20	20	20	20	20	20	20
L1 (mm)	130	160	60	100	130	160	200	100
D (mm)	22	22	28	28	28	28	28	35
L2 (mm)	30	30	37	37	37	37	37	46
Clamping nut type	ER 16 MINI	ER 16 MINI	ER 20 MINI	ER 25 MINI				
23297... Ident. No.	089 ●	090 ●	091 ●	092 ●	093 ●	094 ●	095 ●	096 ●

Collet type	ER 25
Min./max. clamping range	1-16 mm
D2 (mm)	25
L1 (mm)	160
D (mm)	35
L2 (mm)	32
Clamping nut type	ER 25 MINI
23297... Ident. No.	097 ●

Prod. Gr. 295

**diebold** Collet extension with internal cooling  
With cylindrical shaft



**Application:**  
For clamping tools with straight shank

- Particularly slim design for use in milling chucks as tool extension for deep machining operations where space is restricted
- Spanner no. 23308 008 and collets 23320

**Execution:**  
▪ With straight shank, type ER standard



Collet type	ER 16	ER 20	ER 20	ER 25				
d1 (mm)	12	16	16	20	20	20	20	20
Min./max. clamping range	1-10 mm	1-13 mm	1-13 mm	1-16 mm				
Width across flats	25 mm	30 mm	30 mm	-				
D (mm)	28	28	28	28	28	34	34	42
L (mm)	80	60	100	50	100	60	100	50
L2 (mm)	36	36	36	30	30	36	36	46
<b>23304...</b>	<b>130</b>	<b>150</b>	<b>160</b>	<b>162</b>	<b>164</b>	<b>190</b>	<b>200</b>	<b>240</b>
Ident. No.	●	●	●	●	●	●	●	●
Collet type	ER 25	ER 25	ER 25					
d1 (mm)	20	25	25					
Min./max. clamping range	1-16 mm	1-16 mm	1-16 mm					
Width across flats	-	-	-					
D (mm)	42	42	42					
L (mm)	100	50	100					
L2 (mm)	46	46	46					
<b>23304...</b>	<b>250</b>	<b>260</b>	<b>270</b>					
Ident. No.	●	●	●					

Prod. Gr. 2AB

**ORION** ERICKSON short drill chuck system  
With cylindrical shaft



**Application:**  
For use on NC and CNC machining equipment.

- With adjustable longitudinal stop
- Collet no. 23326

**Execution:**  
▪ Min. tensile strength at core 800 N/mm  
▪ Hardened  
▪ Clamping of drill bits on drill heel possible

- Advantage:**
- With straight shank - extremely slim design
  - Very good accessibility in confined spaces



Collet type	DKS	DK 30	DK 30	DK 20	DK 20	DK 10	DK 10
d1 (mm)	8	12	12	20	20	25	25
Min./max. clamping width	1-4 mm	1-6.5 mm	1-6.5 mm	1-10 mm	1-10 mm	2.5-14.5 mm	2.5-14.5 mm
Width across flats	9 mm	13 mm	13 mm	19 mm	19 mm	24 mm	24 mm
D (mm)	10	14	14	21	21	27	27
L (mm)	100	76	140	76	140	76	140
L2 (mm)	32	36	36	44	44	49	49
Min. clamp in depth (mm)	20	38	43	41	41	55	55
Max. clamp in depth (mm)	42	99	105	107	178	107	120
<b>23325...</b>	<b>295</b>	<b>300</b>	<b>305</b>	<b>310</b>	<b>315</b>	<b>320</b>	<b>325</b>
Ident. No.	●	●	●	●	●	●	●

Prod. Gr. 218

Accessories for		23325 295	23325 300	23325 305	23325 310	23325 315	23325 320	23325 325
<b>23325...</b>	Spare clamping nut for ERICKSON system	Ident. No.	<b>410</b>	<b>420</b>	<b>420</b>	<b>430</b>	<b>430</b>	<b>440</b>
			●	●	●	●	○	○

Compatible ERICKSON-type collet chucks no. 23326 001-225 page 742

## ATORN® HYDRO expansion extension

Flexible adaption with cylindrical shaft



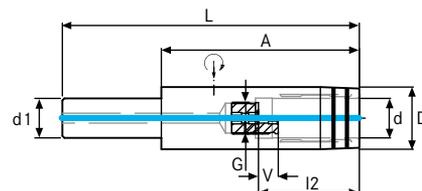
**Application:**  
Highly flexible extension for HYDRO expansion and collet. For high precision centric clamping of milling, drilling and reaming tools.

**Execution:**

- Fast tool change and also axial length adjustment
- Can be clamped with all standard shank diameters (h6)
- central coolant supply, ICS, up to 80 bar

**Advantage:**

- Outstanding damping properties
- Wide clamping range thanks to use of intermediate sleeves
- High torque transfer ( $\emptyset 12 = 80 \text{ Nm} / \emptyset 20 = 330 \text{ Nm}$ )
- Very good accessibility thanks to minimal interference contour
- flexible thanks to the use of intermediate bushes



d (mm)	d1 (mm)	D (mm)	L (mm)	A (mm)	I2 (mm)	max. V (mm)	23338... Ident. No.	
12	20	25	150	100	46	10	110	●
20	20	31.5	150	100	51	10	111	●
20	32	31.5	150	90	51	10	112	○
20	32	31.5	200	90	51	10	113	●

Prod. Gr. 263

## ATORN® Shrink-fit extensions with internal cooling

With cylindrical shaft



**Application:**  
For extending and reducing to smaller diameters.

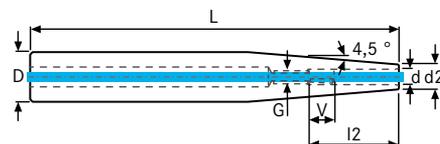
**Execution:**

- With 4.5° angle

- Clamping diameter for shaft tolerance h 6
- workpiece stop screw with 10 mm adjustment travel

**Notes:**

Other lengths upon request.



d (mm)	D (mm)	d2 (mm)	L (mm)	max. I2 (mm)	min. I2 (mm)	g	23431... Ident. No.	
3	12	8	150	-	-	-	603	○
3	16	10	150	-	-	-	607	○
3	20	10	150	-	-	-	612	○
3	25	-	150	-	-	-	633	○
4	12	8	150	-	-	-	604	○
4	16	10	150	-	-	-	608	○
4	20	10	150	-	-	-	613	○
4	25	-	150	-	-	-	634	○
5	12	10	150	-	-	-	605	○
5	16	10	150	-	-	-	609	○
5	20	10	150	-	-	-	614	○
5	25	-	150	-	-	-	635	○
6	12	10	150	36	26	M5	606	○
6	16	10	150	36	26	M5	610	○
6	20	10	150	36	26	M5	615	○
6	25	-	150	36	26	M5	636	○
6	32	20	150	36	26	M5	642	○
8	16	12	150	36	26	M6	611	○
8	20	12	150	36	26	M6	616	○
8	25	-	150	36	26	M6	637	○
8	32	20	150	36	26	M6	643	○
10	20	14	150	42	32	M8 x 1 mm	617	○
10	25	-	150	42	32	M8 x 1 mm	638	○
10	32	22	150	42	32	M8 x 1 mm	644	○
12	20	16	150	47	37	M10 x 1 mm	618	○
12	25	-	150	47	37	M10 x 1 mm	639	○
12	32	20	150	47	37	M10 x 1 mm	645	○
14	25	20	150	47	37	M10 x 1 mm	640	○
14	32	20	150	47	37	M10 x 1 mm	646	○
16	32	20	150	50	37	M10 x 1 mm	641	○
16	32	27	150	47	37	M10 x 1 mm	647	○
18	32	27	150	50	40	M10 x 1 mm	648	○
20	32	27	150	52	42	M10 x 1 mm	649	○

Prod. Gr. 287



**bitz** VIDAT extension for screw-in mill cutter (screw-on mill cutter)  
vibration-damped



**Execution:**

- the damping element of the extension is in close proximity to the tool interface because that is where the highest degree of bending occurs
- maximum permitted rotation speed 8000 rpm.
- max. concentricity <math>< 0.01\text{mm}</math>
- drilled for internal coolant supply (ICS) up to a maximum of 50 bar
- max. speed 8000 rpm in combination with HSK63-HSK100/ISO40 ISO50

**Advantage:**

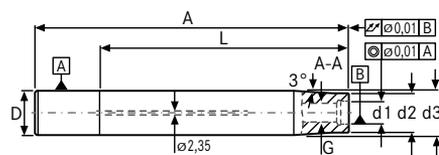
- reduction of vibrations in the clamping system
- vibration-damping effect minimises micro ruptures and improves the surface quality of the tool
- increase of tool service life
- slimline design, ideally suited to narrow interference contours



Ident. No. 700



Ident. No. 701-703



G	D (mm)	A (mm)	L (mm)	d1 (mm)	d2 (mm)	d3 (mm)	23431... Ident. No.	
M12	25	192	250	12.5	21	24.8	700	○
M12	25	242	300	12.5	21	24.8	701	○
M16	32	188	250	17	29	31.8	702	○
M16	32	238	300	17	29	31.8	703	○

Prod. Gr. 278

**ATORN**® pull stud for steep taper DIN 69872 shape A (DIN 69872)  
steep taper to DIN 69871 with bore for IK



**Application:**

for tools with steep taper in accordance with ISO 7388-1 (old standard was DIN 69871) and ISO 7388-2 (old standard was JIS B 6339 MAS-BT)

- Case-hardened HRC 58 ± 2
- Soft, bronzed and ground thread and bore hole
- Pull studs with o-ring = sealed

**Execution:**

- All pull studs made from material 16Mn Cr5

**Notes:**

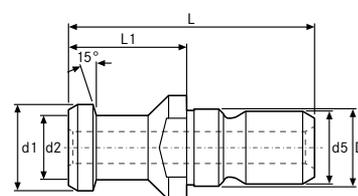
Further versions available on request (specification of machine types required)



No. 23690



No. 23692  
DIN 69872, without IC



Suitable for tool holding device	Form	d1 (mm)	d2 (mm)	D (mm)	d5	L (mm)	Coolant supply	$\alpha / A$ (Degree)	L1 (mm)	DIN	69872		69872	
											23690... Ident. No.		23692... Ident. No.	
SK 30	A	13	9	13	M12	44	Yes	15	24	130	●	-	-	-
SK 40	A	19	14	17	M16	54	Yes	15	26	140	●	-	-	-
SK 50	A	28	21	25	M24	74	Yes	15	34	150	●	-	-	-
SK 30	B	13	9	13	M12	44	No	15	24	-	-	130	●	●
SK 40	B	19	14	17	M16	54	No	15	26	-	-	140	●	●
SK 50	B	28	21	25	M24	74	No	15	34	-	-	150	●	●

Prod. Gr. 263

**ATORN® pull stud for steep taper ISO 7388-2 B (ISO 7388-2 B)**  
for steep taper to DIN 69871



**Application:**

for tools with steep taper in accordance with ISO 7388-1 (old standard was DIN 69871) and ISO 7388-2 (old standard was JIS B 6339 MAS-BT)

**Execution:**

- all pull studs made from material 16Mn Cr5

- Case-hardened HRC 58 ± 2
- Soft, bronzed and ground thread and bore hole
- Pull studs with o-ring = sealed

**Notes:**

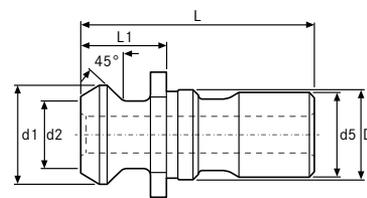
Further versions available on request (specification of machine types required)



No. 23690



No. 23692



Suitable for tool holding device		SK 40	SK 50	SK 40	SK 50
Form		B	B	B	B
d1 (mm)		18.95	29.1	18.95	29.1
d2 (mm)		12.95	19.6	12.95	19.6
D (mm)		17	25	17	25
d5		M16	M24	M16	M24
L (mm)		44.5	65.5	44.5	65.5
Coolant supply		Yes	Yes	No	No
L1 (mm)		16.25	25.55	16.25	25.55
	ISO				
23690...	7388-2 B	Ident. No. 240	250	-	-
23692...	7388-2 B	-	-	240	250

Prod. Gr. 263

**ATORN® pull stud for steep taper ISO 7388-2 B/MAS BT JIS B 6339, 45° (ISO 7388-2 B)**  
for steep taper to JIS B 6339 MAS BT



**Application:**

for tools with steep taper in accordance with ISO 7388-2 (old standard was JIS B 6339 MAS-BT)

**Execution:**

- Material 16MnCr5
- Case-hardened HRC 58 ± 2
- No. 23690:** Pull studs without O-ring are SK 30

**No. 23692:**

- pull stud without O-ring are SK 30
- Without hole

**Notes:**

**No. 23690:** The previous standard JIS B 6339 MAS BT was replaced by ISO 7388-2.

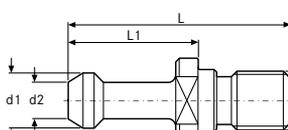
**No. 23692:** The previous standard 69871-1 was replaced by ISO 7388-1. The previous standard JIS B 6339 MAS BT was replaced by ISO 7388-2.



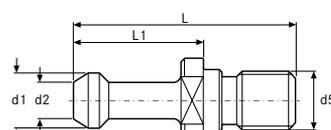
No. 23690



No. 23692  
Without internal cooling



No. 23690



No. 23692

Suitable for tool holding device	d1 (mm)	d2 (mm)	d5	L (mm)	Coolant supply	α/ A (Degree)	L1 (mm)	ISO	7388-2 B	7388-2 B
								23690... Ident. No.	23692... Ident. No.	
SK 30	11	7	M12	43	Yes	45	23	435	●	-
SK 40	15	10	M16	60	Yes	45	35	445	●	-
SK 50	23	17	M24	85	Yes	45	45	455	●	-
SK 30	11	7	M12	43	No	45	23	-	-	435
SK 40	15	10	M16	60	No	45	35	-	-	445
SK 50	23	17	M24	85	No	45	45	-	-	455

Prod. Gr. 263

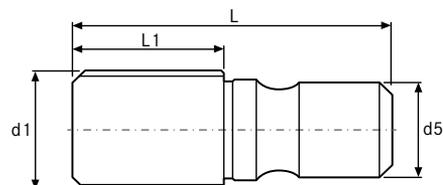
## ATORN® saw threaded bolt SK40 S20x2 for cover

**Application:**  
For attaching collets

**Execution:**  
▪ Case-hardened



Buttress thread



Suitable for tool holding device	d5	d1	L (mm)	Coolant supply	L1 (mm)	23690... Ident. No.
SK 40	M16	S20 x 2	53	No	25	011 ●

Prod. Gr. 263

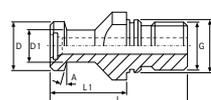
## ATORN® Pull stud DIN 69872 Big Mori Seiki



Ident. No. 001



Ident. No. 002



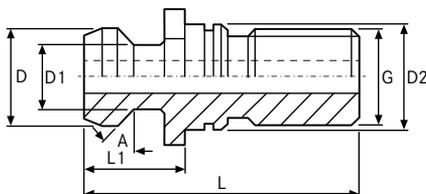
Ref. no. 23693001 Mori Seiki with IC hole Ø7mm with o-ring

Ref. no. 23693002 Big-Mori-Seiki Ø7mm hole for IC with o-ring, L1 29mm

Suitable for tool holding device	Version	d1 (mm)	d2 (mm)	D (mm)	d5	L (mm)	Coolant supply	α/ A (Degree)	L1 (mm)	23693... Ident. No.
SK 40	With O-ring	14	17	19	M16	54	Yes	15	26	001 ●
SK 40	With O-ring	14	17	19	M16	54	Yes	15	29	002 ●

Prod. Gr. 263

## ATORN® Pull stud CAT metric (Mazak)

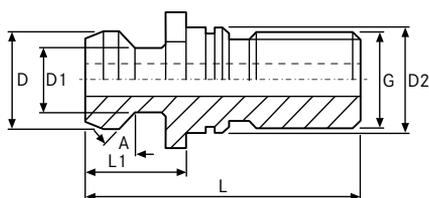


For Mazak4001 CAT metric SK40 with recess Ø6mm hole for internal cooling, with O-ring

Suitable for tool holding device	Version	d1 (mm)	d2 (mm)	D (mm)	d5	L (mm)	Coolant supply	α/ A (Degree)	L1 (mm)	23693... Ident. No.
SK 40	With O-ring	12.45	17	18.8	M16	41.26	Yes	45	16.25	010 ●

Prod. Gr. 263

## ATORN® Pull stud Haas Micron

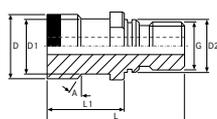


Ref. no. 23693020 for Haas-Micron 4001, hole Ø4mm for internal cooling, with O-ring  
 Ref. no. 23693021 for Haas-Micron 4002, without hole with O-ring

Suitable for tool holding device	Version	d1 (mm)	d2 (mm)	D (mm)	d5	Radius (mm)	L (mm)	Coolant supply	α/ A (Degree)	L1 (mm)	23693... Ident. No.	
SK 40	With O-ring	10	17	15	M16	3	57	Yes	45	32	020	●
SK 40	With O-ring	10	17	15	M16	3	57	No	45	32	021	●

Prod. Gr. 263

## ATORN® Pull stud OTT ring groove for tool shank DIN 69871 AD



Ident. No. 030  
 For OTT ring groove with hole Ø7mm, for internal cooling and O-ring

Ident. No. 031  
 OTT ring groove without hole, with O-ring for tool shank DIN 69871 AD

Ident. No. 032

Ref. no. 030

Ref. no. 031



Ref. no. 032 OTT ring groove with hole, Ø 11.5 mm, for internal cooling without O-ring

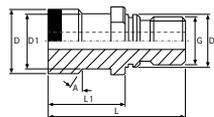
Suitable for tool holding device	Version	d1 (mm)	d2 (mm)	D (mm)	d5	L (mm)	Coolant supply	α/ A (Degree)	L1 (mm)	23693... Ident. No.	
SK 40	With O-ring	21.10	17	25	M16	53	Yes	15	25.10	030	●
SK 40	With O-ring	21.10	17	25	M16	53	No	15	25.10	031	●
SK 50	Without O-ring	32	25	39.60	M24	65.10	Yes	15	25.10	032	●

Prod. Gr. 263

**ATORN® Pull stud OTT groove with thread in the head**  
For tool shank DIN 69871 AD



Ident. No. 040  
OTT ring groove with thread M16 and hole Ø7mm in the head for internal cooling with O-ring for tool shaft DIN 69871 AD

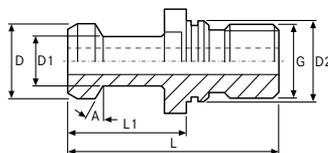


Ident. No. 041  
OTT ring groove with thread M24 and hole Ø11.5mm in the head, without O-ring for tool shaft DIN 69871 AD

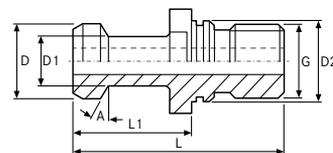
Suitable for tool holding device	Version	d1 (mm)	d2 (mm)	D (mm)	d5	L (mm)	Coolant supply	α/ A (Degree)	L1 (mm)	23693... Ident. No.
SK 40	With O-ring	21.10	17	25	M16	53	Yes	15	25.10	040 ●
SK 50	Without O-ring	32	25	39.60	M24	65.10	Yes	15	25.10	041 ●

Prod. Gr. 263

**ATORN® Pull stud MAS BT 60° JIS 6339**  
With and without hole



Ident. No. 050-052  
Ref. no. 050-060 with hole for internal cooling



Ident. No. 060-062  
Ref. no. 60-62 without internal cooling

Suitable for tool holding device	Version	d1 (mm)	d2 (mm)	D (mm)	d5	L (mm)	Coolant supply	α/ A (Degree)	L1 (mm)	23693... Ident. No.
SK 30	With O-ring	7	10	17	M12	43	Yes	60	23	050 ●
SK 40	With O-ring	10	17	23	M16	60	Yes	60	35	051 ●
SK 50	With O-ring	17	25	23	M24	85	Yes	60	45	052 ●
SK 30	Without O-ring	7	10	17	M12	43	No	60	23	060 ●
SK 40	Without O-ring	10	17	23	M16	60	No	60	35	061 ●
SK 50	Without O-ring	17	25	23	M24	85	No	60	45	062 ●

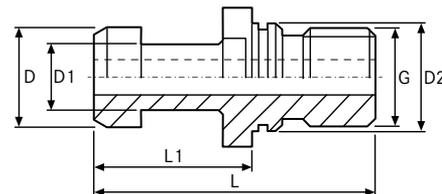
Prod. Gr. 263

**ATORN® Pull stud MAS BT 90° JIS 6339**



Suitable for tool holding device	Version	d1 (mm)	d2 (mm)	D (mm)	d5	L (mm)	Coolant supply	α/ A (Degree)	L1 (mm)	23693... Ident. No.
SK 40	With O-ring	10	17	15	M16	60	Yes	90	35	070 ●
SK 50	With O-ring	23	25	23	M24	85	Yes	90	45	071 ●
SK 50	Without O-ring	17	25	23	M24	85	No	90	45	072 ●

Prod. Gr. 263



## ATORN® Coolant transfer pipe for HST

**Application:**

For coolant transfer for HSK tool chucks.

**Execution:**

- Hardened, ground and polished with 2 O-rings
- Special O-ring up to 120 bar



Ident. No. 132

Ident. No. 140

Ident. No. 163-180

Ident. No. 150

Ident. No. 100

Ident. No. 125

Tool holding device	HSK 32	HSK 40	HSK 50	HSK 63	HSK 100	HSK 80	HSK 125
23715... Ident. No.	132	140	150	163	100	180	125

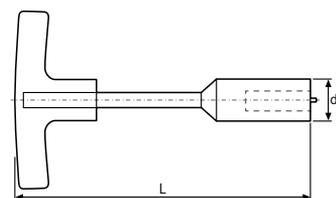
Prod. Gr. 263

## ATORN® Key for coolant transfer pipe HSK



**Application:**

For securing coolant transfer pipe



Tool holding device	HSK 32	HSK 40	HSK 50	HSK 63	HSK 80	HSK 100
23715... Ident. No.	232	240	250	263	280	300

Prod. Gr. 263

## ORION® Cone wiper

**Application:**

For cleaning tool chucks on machine spindles, tapered sleeves or taper gauges.

**Execution:**

- No. 23500 010-23500 060: MT taper shank
- No. 23500 100-23500 130: ST taper shank
- No. 23780: Hollow shank taper (HST) for taper and face



No. 23500



No. 23780

Suitable for tool holding device

	23500... Ident. No.	23780... Ident. No.
MT 1	010	-
MT 2	020	-
MT 3	030	-
MT 4	040	-
MT 5	050	-
MT 6	060	-
SK 30	100	-
SK 40	110	-
SK 50	120	-
SK 60	130	-
HSK 32/A-C	-	020

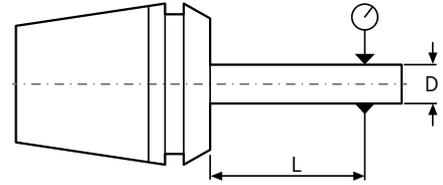
Suitable for tool holding device

	23500... Ident. No.	23780... Ident. No.
HSK 40/A-C	-	030
HSK 50/A-C	-	040
HSK 63/A-C	-	050
HSK 80/A-C	-	060
HSK 100/A-C	-	070

Prod. Gr. 206



## TYPE ER collet chucks - concentricity tolerances to DIN ISO 15488



D		L	Concentricity tolerance DIN ISO 15488 Class 2 standard model*
H7			
Nominal diameter			0,015
Above	Up to		
mm			0,020
1	1.6	6	
1.6	3	10	
3	6	16	
6	10	25	
10	18	40	
18	26	50	

### **FAHRION** PRAZISION Precision collet chuck sets type GERC HP DIN 6499/ISO 15488-B (ISO 15488) < 2 µm concentricity

#### Application:

For HSC machining with high-precision machining results.

#### Execution:

- With small concentricity and repetition 2 µm (for system tolerance 3 µm and with 3 x D maximum = 50 mm), clamp bridge h10
- For ATORN precision collets and Fahrion Centrop precision collets

- With FAHRION|Protect corrosion protection for longer service life
- Surface super-finished for enhanced retention force

#### Advantage:

- Greater concentricity extends service life of tool
- Collets do not need to be replaced as often or can be used for longer for specific applications

#### Delivery:

In a wooden case



< 2 µm concentricity

Collet type	426E GERC16-HP	429E GERC25-HP	469E GERC32-HP
Min./max. clamping range	3-10 mm	4-16 mm	4-20 mm
D (mm)	17	26	33
L (mm)	27.5	34	40
Coolant supply	External	External	External
Clamping bypass (mm)	-0.5	-0.5	-0.5
23323... Ident. No.	546	578	616

Prod. Gr. 235

**FAHRION®** Precision collet chuck type GERC HPD DIN 6499/ISO 15488-B (ISO 15488)  
 PRAZISION Seal for internal cooling and < 2 µm concentricity



**Application:**

For HSC machining with high-precision machining results.

**Execution:**

- HPD with seal for inner coolant supply (can be used up to 120 bar)
- With small concentricity and repetition 2 µm (for system tolerance 3 µm and with 3 x D maximum = 50 mm), clamp bridge h10

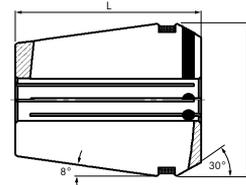
- For ATORN precision collets and Fahrion CentroP precision collets
- With FAHRION|Protect corrosion protection for longer service life
- Surface super-finished for enhanced retention force

**Advantage:**

- Greater concentricity extends service life of tool
- Collets do not need to be replaced as often or can be used for longer for specific applications



HPD sealed collet chuck, 2 µm concentricity for IC



Collet type	425E GERC16-HPD	429E GERC25-HPD	469E GERC32-HPD
Min./max. clamping range	1-10 mm	1-16 mm	2-20 mm
D (mm)	17	26	33
L (mm)	27.5	34	40
Coolant supply	Internal axial	Internal axial	Internal axial
Clamping bypass (mm)	-0.5	-0.5	-0.5
d (mm)	23323... Ident. No.	23323... Ident. No.	23323... Ident. No.
3	617 ●	-	-
4	618 ●	627 ●	642 ●
5	619 ●	628 ●	643 ○
6	620 ●	629 ●	644 ●
7	621 ○	630 ●	645 ●
8	622 ●	631 ●	646 ●
9	623 ○	632 ●	647 ●
10	624 ●	633 ●	648 ●
11	-	634 ●	649 ●
12	-	635 ●	650 ●
13	-	636 ●	651 ●
14	-	637 ●	652 ●
15	-	638 ●	653 ●
16	-	639 ●	654 ●
17	-	-	655 ●
18	-	-	656 ●
19	-	-	657 ●
20	-	-	658 ●

Prod. Gr. 235

**FAHRION®** precision collet chuck sets type GERC HPD DIN 6499/ISO 15488-B (ISO 15488)  
 PRAZISION Seal for ICS and < 2 µm concentricity



**Application:**

For HSC machining with high precision machining results

**Execution:**

- HPD with seal for inner coolant supply (can be used up to 120 bar)
- With small concentricity and repetition 2 µm (for system tolerance 3 µm and with 3 x D maximum = 50 mm), clamp bridge h10
- For ATORN precision collets and Fahrion CentroP precision collets

- With FAHRION|Protect corrosion protection for longer service life
- Surface super-finished for enhanced retention force

**Advantage:**

- Greater concentricity extends service life of tool
- Collets do not need to be replaced as often or can be used for longer for specific applications

**Delivery:**

In a wooden case



< 2 µm concentricity

Collet type	425E GERC16-HPD	429E GERC25-HPD	469E GERC32-HPD
Min./max. clamping range	3-10 mm	4-16 mm	4-20 mm
D (mm)	17	26	33
L (mm)	27.5	34	40
Coolant supply	Internal axial	Internal axial	Internal axial
Clamping bypass (mm)	-0.5	-0.5	-0.5
23323... Ident. No.	625 ○	640 ○	659 ●

Prod. Gr. 235

**ORION®** Collet chucks type ER DIN 6499/ISO 15488-B (ISO 15488)  
for milling chucks no. 23300, 23304, 23305

**Application:**  
For clamping tools with straight shanks.

- Suitable for all standard collet chucks of type ER

**Execution:**

- Fully hardened and polished
- Double-conical, slotted on both sides, with extracting groove

- Advantage:**
- Large and effective clamping lengths as well as high clamping forces are achieved thanks to double slots
  - Flexing movements of the milling cutters are ruled out



	Collet type	ER 11 (4008 E)		ER 16 (426 E)	
		Min./max. clamping range	1-7 mm	1-7 mm	1-10 mm
	D (mm)	11,5	11,5	17	17
	L (mm)	18	18	27,5	27,5
	Coolant supply	No	No	No	No
	Clamping bypass (mm)	-0,5	-1	-0,5	-1,0
d (mm)		23320... Ident. No.		23320... Ident. No.	
1		011	●	-	-
2		012	●	-	-
3		-	-	013	●
4		-	-	014	●
5		-	-	015	●
6		-	-	016	●
7		-	-	017	●
8		-	-	-	-
9		-	-	-	-
10		-	-	-	-

Prod. Gr. 295

**ORION®** Collet chucks type ER DIN 6499/ISO 15488-B (ISO 15488)  
for milling chucks no. 23300, 23304, 23305

**Application:**  
For clamping tools with straight shanks.

- Suitable for all standard collet chucks of type ER

**Execution:**

- Fully hardened and polished
- Double-conical, slotted on both sides, with extracting groove

- Advantage:**
- Large and effective clamping lengths as well as high clamping forces are achieved thanks to double slots
  - Flexing movements of the milling cutters are ruled out



Ident. No. 202-266

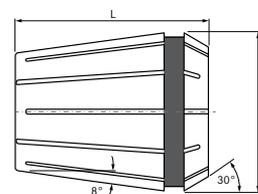


	Collet type	ER 20 (428 E)		ER 25 (430 E)		ER 32 (470 E)		ER 40 (472 E)	
		Min./max. clamping range	1-13 mm	1-16 mm	3-20 mm	3-26 mm			
	D (mm)	21	26	33	41				
	L (mm)	31,5	34	40	46				
	Coolant supply	No	No	No	No				
	Clamping bypass (mm)	-1,0	-1,0	-1,0	-1,0				
d (mm)		23320... Ident. No.		23320... Ident. No.		23320... Ident. No.		23320... Ident. No.	
2		202	●	252	●	-	-	-	-
3		203	●	253	●	303	●	-	-
4		204	●	254	●	304	●	404	●
5		205	●	255	●	305	●	405	●
6		206	●	256	●	306	●	406	●
7		207	●	257	●	307	●	407	●
8		208	●	258	●	308	●	408	●
9		209	●	259	●	309	●	409	●
10		210	●	260	●	310	●	410	●

Collet type	ER 20 (428 E)	ER 25 (430 E)	ER 32 (470 E)	ER 40 (472 E)
Min./max. clamping range	1-13 mm	1-16 mm	3-20 mm	3-26 mm
D (mm)	21	26	33	41
L (mm)	31.5	34	40	46
Coolant supply	No	No	No	No
Clamping bypass (mm)	-1.0	-1.0	-1.0	-1.0
d (mm)	23320... Ident. No.	23320... Ident. No.	23320... Ident. No.	23320... Ident. No.
11	211 ●	261 ●	311 ●	411 ●
12	212 ●	262 ●	312 ●	412 ●
13	213 ●	263 ●	313 ●	413 ●
14	-	264 ●	314 ●	414 ●
15	-	265 ●	315 ●	415 ●
16	-	266 ●	316 ●	416 ●
17	-	-	317 ●	417 ●
18	-	-	318 ●	418 ●
19	-	-	319 ●	419 ●
20	-	-	320 ●	420 ●
21	-	-	-	421 ●
22	-	-	-	422 ●
23	-	-	-	423 ●
24	-	-	-	424 ●
25	-	-	-	425 ●
26	-	-	-	426 ●

Prod. Gr. 295

**ORION® Collet chuck type ER/ESX, sealed acc. DIN 6499/ISO 15488-B**  
For internal cooling (can be used at up to 80 bar)



Collet type	ER 11 (4012 E)	ER 16 (425 E)	ER 20 (427 E)
Min./max. clamping range	3-7 mm	3-10 mm	3-13 mm
D (mm)	11.5	17	21
L (mm)	18	27.5	31.5
Clamping bypass (mm)	-1	-1	-1
Coolant supply	Yes	Yes	Yes
d (mm)	23320... Ident. No.	23320... Ident. No.	23320... Ident. No.
3	703 ●	713 ●	733 ●
4	704 ●	714 ●	734 ●
5	705 ●	715 ●	735 ●
6	706 ●	716 ●	736 ●
7	707 ●	717 ●	737 ●
8	-	718 ●	738 ●
9	-	719 ○	739 ○
10	-	720 ●	740 ●

Prod. Gr. 2AE

**ORION® Collet chuck set type ER DIN 6499/ISO 15488-B (ISO 15488)**  
for milling chucks no. 23300, 23305

**Application:**

For clamping tools with straight shanks.

**Execution:**

- For milling chucks no. 23300, 23305
- Double-conical, slotted on both sides, with extracting groove
- Fully hardened and polished
- Suitable for all standard collets of type ER

**Advantage:**

- Large and effective clamping lengths as well as high clamping forces are achieved thanks to double slots
- Flexing movements of the milling cutters are ruled out

**Delivery:**

In aluminium case



Ref. no. 23320332

## Tool clamping \ Collet chuck type ER

Collet type	ER 16 (426 E)	ER 20 (428 E)	ER 25 (430 E)	ER 32 (470 E)	ER 40 (472 E)
Min./max. clamping range	1-10 mm	2-13 mm	2-16 mm	3-20 mm	4-26 mm
D (mm)	17	21	26	33	41
L (mm)	27.5	31.5	34	40	46
Coolant supply	No	No	No	No	No
Number of pieces in assortment/set	10	12	15	18	23
23320... Ident. No.	116	220	275	332	430

Prod. Gr. 295

### ORION® Collet chucks for ERICKSON system For ERICKSON system

#### Application:

For clamping tools with straight shank.

- Multi-range collets for clamping the nominal diameter
- Concentricity 20 µm
- Clamp bridge -0.50 mm

#### Execution:

- For short chuck system ERICKSON sealing cone/sealing cone shank no. 23325



Ident. No. 001-012



Ident. No. 020-032



Ident. No. 101-119



Ident. No. 206

Type Collet type Min./max. clamping range	416E DK 30 1-6.5 mm		416E DKS 1-4 mm		417E DK 20 1-10 mm		418E DK 10 2.5-14.5 mm	
	23326... Ident. No.	●	23326... Ident. No.	●	23326... Ident. No.	●	23326... Ident. No.	●
d (mm) 1	001	●	020	●	101	●	-	-
1.25	-	-	021	●	-	-	-	-
1.5	002	●	022	●	102	●	-	-
1.75	-	-	023	●	-	-	-	-
2	003	●	024	●	103	●	-	-
2.25	-	-	025	●	-	-	-	-
2.5	004	●	026	●	104	●	201	●
3	005	●	028	●	105	●	202	●
3.25	-	-	029	●	-	-	-	-
3.5	006	●	030	●	106	●	203	●
4	007	●	032	●	107	●	204	●
4.5	008	●	-	-	108	●	205	●
5	009	●	-	-	109	●	206	●
5.5	010	●	-	-	110	●	207	●
6	011	●	-	-	111	●	208	●
6.5	012	●	-	-	112	●	209	●
7	-	-	-	-	113	●	210	●
7.5	-	-	-	-	114	●	211	○
8	-	-	-	-	115	●	212	●
8.5	-	-	-	-	116	●	213	●
9	-	-	-	-	117	●	214	●
9.5	-	-	-	-	118	●	215	○
10	-	-	-	-	119	●	216	●
10.5	-	-	-	-	-	-	217	●
11	-	-	-	-	-	-	218	●
11.5	-	-	-	-	-	-	219	○
12	-	-	-	-	-	-	220	●
12.5	-	-	-	-	-	-	221	○
13	-	-	-	-	-	-	222	●
13.5	-	-	-	-	-	-	223	○
14	-	-	-	-	-	-	224	●
14.5	-	-	-	-	-	-	225	●

Prod. Gr. 218

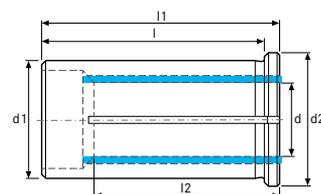
### ATORN® Reducing sleeve with KKB With cooling canal along the location hole

#### Application:

For reducing the clamping diameter. For drilling, reaming, milling and tool sharpening.

#### Execution:

- Slotted and polished
- Concentricity tolerance ≤ 3µm
- Concentricity tolerance ≤ 3µm



## Tool clamping \ Reducing sleeve and clamping sleeves

		Collar Ø d2 (mm)	16	25	36
		Insert depth l (mm)	40	50	60
		Length L1 (mm)	44	54	64
		Coolant supply	KKB	KKB	KKB
Clamping Ø d (mm)	Chuck clamping Ø d1 (mm)	Insertion depth l2 (mm)	23336... Ident. No.	23336... Ident. No.	23336... Ident. No.
3	12	29	601	●	-
4	12	29	602	●	-
5	12	29	603	●	-
6	12	36	604	●	-
8	12	37	605	●	-
3	20	28	-	611	●
4	20	28	-	612	●
5	20	28	-	613	●
6	20	36	-	614	●
8	20	37	-	615	●
10	20	40	-	616	●
12	20	45	-	617	●
14	20	45	-	618	●
16	20	48	-	619	●
6	32	36	-	-	620
8	32	36	-	-	621
10	32	40	-	-	622
12	32	45	-	-	623
14	32	46	-	-	624
16	32	48	-	-	625
18	32	49	-	-	626
20	32	50	-	-	627
25	32	56	-	-	628

Prod. Gr. 263





**SCHUNK** reducing sleeves  
Sealed for inner cooling



**Application:**  
For reducing the clamping diameter.

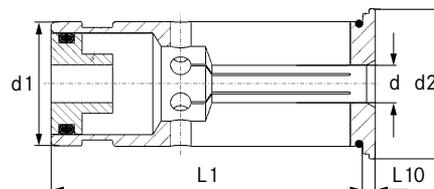
**Execution:**

- With adjustable longitudinal stop
- Sealed for internal coolant supply, for reducing the clamping diameter

- Concentricity tolerance with collets is 0.003 mm
- Suitable for all expansion chucks no. 23333, 23335 and 23350

**Advantage:**

- For clamping various shank diameters with a chuck



		Collar Ø d2 (mm)	16.5	24
		Insert depth l (mm)	45	50.5
		Concentricity tolerance (mm)	0.003	0.003
		Coolant supply	Yes	Yes
Clamping Ø d (mm)	Chuck clamping Ø d1 (mm)	Collar width b (mm)	23336... Ident. No.	23336... Ident. No.
3	12	2	403	-
4	12	2	404	-
5	12	2	405	-
6	12	2	406	-
8	12	2	408	-
3	20	2	-	503
4	20	2	-	504
5	20	2	-	505
6	20	2	-	506
8	20	2	-	508
10	20	2	-	510
12	20	2	-	512
14	20	2	-	514
16	20	2	-	516

Prod. Gr. 229

**ORION** ORION reducing sleeve, sealed for internal cooling  
Concentricity ≤0.005 mm

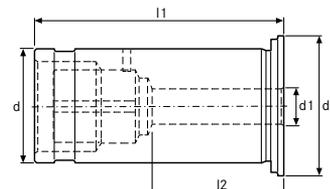


**Application:**  
For reducing the clamping diameter.

**Execution:**

- Sealed for internal coolant feed up to 80-bar pressure

- Suitable for all expansion chucks and power chucks
- Ground



		Collar Ø d2 (mm)	16.50	29	39
		Length L1 (mm)	48.00	52.50	63.50
		Concentricity tolerance (µm)	5	5	5
		Coolant supply	Yes	Yes	Yes
Clamping Ø d (mm)	Chuck clamping Ø d1 (mm)	Insertion depth l2 (mm)	23334... Ident. No.	23334... Ident. No.	23334... Ident. No.
3	12	14	200	-	-
4	12	15	201	-	-
5	12	18	202	-	-
6	12	25	203	-	-
8	12	26	204	-	-
3	20	14	-	205	-
4	20	15	-	206	-
5	20	18	-	207	-
6	20	25	-	208	-

		Collar Ø d2 (mm)	16.50	29	39
		Length L1 (mm)	48.00	52.50	63.50
		Concentricity tolerance (µm)	5	5	5
		Coolant supply	Yes	Yes	Yes
Clamping Ø d (mm)	Chuck clamping Ø d1 (mm)	Insertion depth l2 (mm)	23334... Ident. No.	23334... Ident. No.	23334... Ident. No.
7	20	25	-	209	-
8	20	30	-	210	-
9	20	30	-	211	-
10	20	33	-	212	-
11	20	33	-	213	-
12	20	34	-	214	-
13	20	34	-	215	-
14	20	35	-	216	-
15	20	40	-	217	-
16	20	40	-	218	-
6	32	25	-	-	219
8	32	25	-	-	220
10	32	33	-	-	221
12	32	34	-	-	222
14	32	34	-	-	223
16	32	40	-	-	224
18	32	40	-	-	225
20	32	40	-	-	226
25	32	42	-	-	227

Prod. Gr. 2AL

## ER-type clamping nuts

### Normal/mini version

#### Execution:

- For collets
- No. 23303 clamping nuts, individual and finely balanced
- No. 23308 ring profile key for clamping and loosening

#### Notes:

For ER 16 and 20 = normal version, please use our single head wrenches no. 52002 025 or 030



Ident. No. 016-018



Ident. No. 020-035  
ER25-ER40



Ident. No. 116-125

Clamping nut type	ER 16	ER 20	ER 25	ER 32	ER 40	ER 16 MINI	ER 20 MINI	ER 25 MINI
Min./max. clamping range	1-10 mm	1-13 mm	2-16 mm	2-20 mm	3-26 mm	1-10 mm	1-13 mm	2-16 mm
23303... Ident. No.	016	018	020	030	035	116	120	125

Prod. Gr. 206

## diebold ER-type clamping nuts

Plain bearing mounted for up to 60% higher torque

#### Execution:

- For collets
- No. 23303 clamping nuts, individual, finely balanced
- No. 23308 ring profile key for clamping and loosening



Ident. No. 025, 040



Ident. No. 032  
With plain bearings ER 25-ER 40

Clamping nut type	Min./max. clamping range	23303... Ident. No.
ER 25	1-16 mm	025
ER 32	2-20 mm	032
ER 40	3-26 mm	040

Prod. Gr. 206

**ORION® OZ-type clamping nuts**  
Ball bearing mounted for high torques

**Execution:**

- For milling chucks no. 23285 and 23295

**Notes:**

Suitable hook wrench ref. no. 52100060, -090, -100

Clamping nut type	Min./max. clamping range	Clamping nut Ø (mm)	23295... Ident. No.	
OZ	2-16 mm	43	916	●
OZ	2-25 mm	60	925	●
OZ	4-32 mm	72	932	●

Prod. Gr. 295



**AMF® Spanner for ER-type clamping nuts**

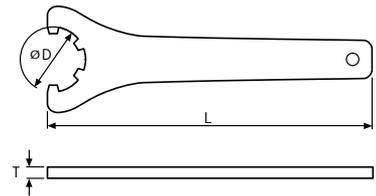
**Application:**

For tightening and loosening clamping nuts.

**Execution:**

Ident. No. 216:

- Hardened and galvanised special steel
- With hole for hanging



Suitable for clamping nut type	ER 16	ER 25	ER 32	ER 40
L (mm)	163	203	253	285
T (mm)	4	6	6	6
23308... Ident. No.	216 ●	008 ●	010 ●	020 ●

Prod. Gr. 206

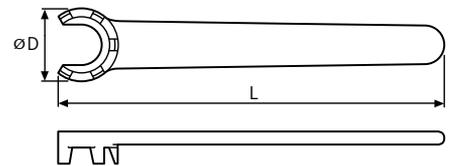
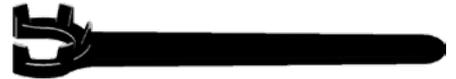
**AMF® Mini ring profile key**

**Application:**

For tightening and loosening clamping nuts.

**Execution:**

- Hardened special steel, with burnished finish



D (mm)	23	29	35
L (mm)	115	130	143
23308... Ident. No.	116 ●	120 ●	130 ●

Prod. Gr. 206

## AMF Spanner with 1/2" socket

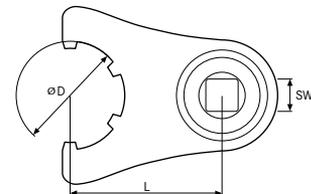
**Application:**  
For tightening and loosening clamping nuts.

- Execution:**
- For NC lathes
  - For controlled tightening of clamping nuts using a torque wrench
  - Drive: 1/2" square with ball-securing groove.
  - Hardened and galvanised special steel.

**Advantage:**

- Spindle damage can be avoided by controlled tightening when changing tools in the machine.

**Notes:**  
The setting value of the torque wrench is dependent on gauge size „S“.  
The operating instructions for your torque wrench contain the necessary information and calculation formulas.  
Suitable torque wrench: see no. 52246300



Suitable for clamping nut type	ER 16	ER 25	ER 32	ER 40
Drive	1/2 inch	1/2 inch	1/2 inch	1/2 inch
L (mm)	45	60	60	60
<b>23308...</b>	<b>316</b>	<b>325</b>	<b>332</b>	<b>340</b>
Ident. No.	●	●	●	●

Prod. Gr. 206

## AMF Hook wrenches With nose

- Execution:**
- Special steel
  - Rounded edges
  - With suspension hole
  - Surface annealed in burnished finish

**Advantage:**

- Excellent material strength with low-tension microstructure
- Better resistance to corrosion
- Comfortable to use



Suitable for nut type	Slotted nut DIN 1804 Bearing nut DIN 981	Slotted nut DIN 1804 Bearing nut DIN 981	Slotted nut DIN 1804 Bearing nut DIN 981
Suitable for min./max. nut male thread size	40-42 mm	58-62 mm	68-75 mm
Length (mm)	170	240	240
Thickness (mm)	5	7	7
<b>52100...</b>	<b>060</b>	<b>090</b>	<b>100</b>
Ident. No.	●	●	●

Prod. Gr. 532

## ATORN® Standard precision clamping nut

**Application:**  
For clamping the Atorn precision chuck.

**Execution:**

- Spare parts for the ATORN precision collet no. 23361 001-011 and 23761 001-011



Suitable for clamping nut type	HPE 16	HPE 25	HPE 32
Suitable for collet type	ER 16/426E	ER 25/430E	ER 32/470E
D (mm)	30	40	50
<b>23361...</b>	<b>101</b>	<b>102</b>	<b>103</b>
Ident. No.	●	○	●

Prod. Gr. 263

**FAHRION®** Torque wrench attachment  
PRAZISION  
 Accessories for no. 23360, 23361 and 23760 and 23761

**Application:**

For clamping all CENTRO P and ATORN precision collets with standard nuts in accordance with DIN 6499/ISO 15488 (ER/ESX).

**Advantage:**

- For fast and simple clamping without risk of injury
- Conventional clamping nuts can also be used for clamping

**Execution:**

- For torque attachment ref. no. 961-966, see torque wrench no. 52241 200.



Suitable for clamping nut type	Tip size	DRO 30		DRO 40		DRO 42		DRO 50		DRO 63	
		23360... Ident. No.		23360... Ident. No.		23360... Ident. No.		23360... Ident. No.		23360... Ident. No.	
HPC 16	14 x 18 mm	961	●	-	-	-	-	-	-	-	-
HPC 25	14 x 18 mm	-	-	962	●	-	-	-	-	-	-
ER 25	14 x 18 mm	-	-	-	-	964	○	-	-	-	-
HPC 32/ER 32	14 x 18 mm	-	-	-	-	-	-	966	●	-	-
HPC 40/ER 40	14 x 18 mm	-	-	-	-	-	-	-	-	973	○

Prod. Gr. 235

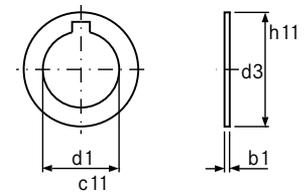
**ORION®** Mill arbour rings (DIN 2084-1)  
 For mill arbours

**Execution:**

- For mill arbours

- Type A, cut

- Steel strip hardened



d1 (mm)	d3 (mm)	b1 (mm)	Form	23135... Ident. No.	
16	25	0.03	A	010	●
16	25	0.04	A	045	●
16	25	0.05	A	080	●
16	25	0.1	A	115	●
16	25	0.2	A	150	●
16	25	0.3	A	185	●
16	25	0.5	A	220	●
16	25	0.6	A	255	●
16	25	1	A	290	●
22	33	0.03	A	015	●
22	33	0.04	A	050	●
22	33	0.05	A	085	●
22	33	0.1	A	120	●
22	33	0.2	A	155	●
22	33	0.3	A	190	●
22	33	0.5	A	225	●
22	33	0.6	A	260	●
22	33	1	A	295	●
27	39	0.03	A	020	●
27	39	0.04	A	055	●
27	39	0.05	A	090	●
27	39	0.1	A	125	●
27	39	0.2	A	160	●
27	39	0.3	A	195	●
27	39	0.5	A	230	●
27	39	0.6	A	265	●

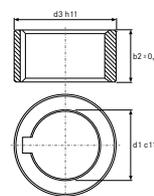
d1 (mm)	d3 (mm)	b1 (mm)	Form	23135... Ident. No.	
27	39	1	A	300	●
32	54	0.03	A	025	●
32	45	0.04	A	060	●
32	45	0.05	A	095	●
32	45	0.1	A	130	●
32	45	0.2	A	165	●
32	45	0.3	A	200	●
32	45	0.5	A	235	●
32	45	0.6	A	270	●
32	45	1	A	305	●
40	67	0.03	A	030	●
40	54	0.04	A	065	●
40	54	0.05	A	100	●
40	54	0.1	A	135	●
40	54	0.2	A	170	●
40	54	0.3	A	205	●
40	54	0.5	A	240	●
40	54	0.6	A	275	●
40	54	1	A	310	●
50	67	0.04	A	070	●
50	67	0.05	A	105	●
50	67	0.1	A	140	●
50	67	0.2	A	175	●
50	67	0.3	A	210	●
50	67	0.5	A	245	●
50	67	0.6	A	280	●
50	67	1	A	315	●

Prod. Gr. 206

**ORION®** Mill arbour rings (DIN 2084-1)  
For mill arbours

**Execution:**

- Hardened, Vickers hardness at least 590 HV 30 (54 HRC)
- Type B
- Case-hardening steel
- Lathed



d1 (mm)	d3 (mm)	b1 (mm)	Form	23 140... Ident. No.	
13	22	2	B	005	●
13	22	3	B	045	●
13	22	4	B	085	●
13	22	5	B	125	●
13	22	6	B	165	●
13	22	10	B	205	●
16	27	2	B	010	●
16	27	3	B	050	●
16	27	4	B	090	●
16	27	5	B	130	●
16	27	6	B	170	●
16	27	10	B	210	●
16	27	20	B	250	●
22	34	2	B	015	●
22	34	3	B	055	●
22	34	4	B	095	●
22	34	5	B	135	●
22	34	6	B	175	●
22	34	10	B	215	●
22	34	20	B	255	●
22	34	30	B	295	●
27	41	2	B	020	●
27	41	3	B	060	●
27	41	4	B	100	●
27	41	5	B	140	●
27	41	6	B	180	●
27	41	10	B	220	●

d1 (mm)	d3 (mm)	b1 (mm)	Form	23 140... Ident. No.	
27	41	20	B	260	●
27	41	30	B	300	●
32	47	2	B	025	●
32	47	3	B	065	●
32	47	4	B	105	●
32	47	5	B	145	●
32	47	6	B	185	●
32	47	10	B	225	●
32	47	20	B	265	●
32	47	30	B	305	●
40	55	2	B	030	●
40	55	3	B	070	●
40	55	4	B	110	●
40	55	5	B	150	●
40	55	6	B	190	●
40	55	10	B	230	●
40	55	20	B	270	●
40	55	30	B	310	●
50	69	2	B	035	●
50	69	3	B	075	●
50	69	4	B	115	●
50	69	5	B	155	●
50	69	6	B	195	●
50	69	10	B	235	●
50	69	20	B	275	●
50	69	30	B	315	●

Prod. Gr. 206



**Application:**  
for tightening and loosening cutter retaining screws.

**Execution:**

- Heat-treated and welded to at least 1200 N/mm

- For tightening cutter retaining screws in accordance with DIN 6367
- Hardened special steel with burnished finish.

**Notes:**

The size specification corresponds to the diameter of the shell end mill arbours.



Passend für den Fräserdorn-Ø. D1 (mm)	13	16	22	27	32	40	50
L (mm)	160	180	200	225	250	280	315
H (mm)	16	20	25	32	36	40	45
B1 (mm)	6.1	8.1	10.1	12.1	16.1	20.2	24.2
23 190... Ident. No.	013	016	022	027	032	040	050
	●	●	●	●	●	●	●

Prod. Gr. 206

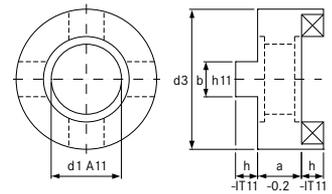
**Standard driving rings (DIN 6366)**

For combined shell end mill arbours

**Execution:**

- Hardened, at least 56 HRC
- Parallelism of surfaces a = 0.004 mm, polished
- Case-hardening steel with tensile strength at core of at least 800 N/mm after case hardening





d1 (mm)	d3 (mm)	a (mm)	h (mm)	b (mm)	23200... Ident. No.	
16	32	10	5	8	020	●
22	40	12	5.6	10	030	●
27	48	12	6.3	12	040	●
32	58	14	7	14	050	●
40	70	14	8	16	060	●

Prod. Gr. 206

## ORION® Carrier blocks (DIN 2079)

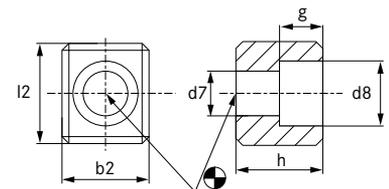
### Execution:

- Hardened, at least 56 HRC
- Surfaces polished

- Case-hardening steel with tensile strength at core of at least 800 N/mm after case hardening

### Notes:

Other versions and sizes on request.



Suitable for tool holding device	SK 30	SK 40	SK 50
b2 (mm)	15.9	15.9	25.4
l2 (mm)	16.5	19.5	26.5
h (mm)	16	16	25
Suitable screw ISO 4762	M6 x 16 mm	M6 x 16 mm	M12
23210... Ident. No.	010 ●	020 ●	030 ●

Prod. Gr. 206

## ATORN® chip booster (cleaning propeller) rapid cleaning of pallets and workpieces

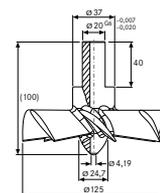
### Application:

as the chip booster can be mounted in the tool chuck, you can quickly remove chips and coolant from components, devices and pallets.

- mount in any conventional tool chuck, Ø 20 mm
- 7 turbine blades

### Advantage:

- safe and fast method for removing chips and coolant
- Rugged and durable
- quieter working environment
- automated cleaning of the machine tool working area.
- reduction in non-productive time = cost savings



Ø (mm)	Shank mount Ø (mm)	Shaft length (mm)	Length (mm)	Bore Ø (mm)	23550... Ident. No.	
125	20	40	100	4.19	030	●

Prod. Gr. 280

## ORION® Quick-change thread cutter chuck shank design with DIN 69871 A steep taper



**Application:**

For thread cutting and thread shaping on NC machines and machining centres.

**Execution:**

- The machine spindle direction of rotation must be changed for reverse motion

**Advantage:**

- Fast retooling thanks to quick-change chuck

- Low tool wear thanks to length compensation

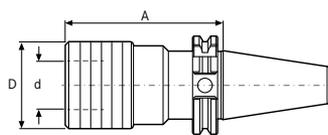
**Notes:**

**Ident. No. 610-640:** The previous standard DIN 69871-1 was replaced by ISO 7388-1.

**Ident. No. 650-660:** For requisite pull studs, see no. 23690. For requisite quick-change inserts, see no. 21560-21566.



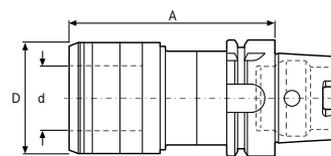
Ident. No. 610-640



Ident. No. 610-640



Ident. No. 650-660



Ident. No. 650-660



Used sizes	1	1	2	2	1	2
Tool holding device	SK 40	SK 50	SK 40	SK 50	HSK 63	HSK 63
Suitable for screw thread	M3-M12	M3-M12	M6-M20	M6-M20	M3-M12	M6-M20
Pressure length compensation (mm)	9	9	15	15	7.5	10
Tension length compensation (mm)	9	9	15	15	7.5	10
D (mm)	38	38	55	55	41	60
d (mm)	19	19	31	31	19	31
A (mm)	60	62	100	83	72	110
DIN	-	-	-	-	69893-1	69893-1
ISO	7388-1	7388-1	7388-1	7388-1	-	-
Form	A	A	A	A	A	A
<b>21545...</b>	Ident. No. <b>610</b>	<b>620</b>	<b>630</b>	<b>640</b>	<b>650</b>	<b>660</b>

Prod. Gr. 295

## ORION® Quick-change thread cutter chuck (DIN 69880-1)

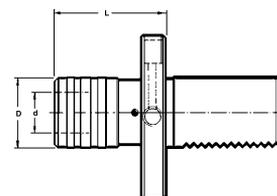
**Application:**

For thread cutting and thread shaping on NC machines.

**Execution:**

- For holding quick-change inserts, see no. 21566

- Elastic length compensation under compression and tension
- For quick-change inserts with adjustable safety coupling
- For reverse motion, the direction of rotation of the machine spindle needs to be changed.



p. 756

VDI mount Ø (mm)	For insert size	Suitable for min./max. thread	Outer Ø D (mm)	Ø d (mm)	Projection length L (mm)	Pressure length compensation (mm)	Tension length compensation (mm)	<b>22787...</b> Ident. No.
20	1	M3-M12	38	19	55	9	9	<b>121</b> ○
30	1	M3-M12	38	19	55	9	9	<b>131</b> ●
40	1	M3-M12	38	19	55	9	9	<b>141</b> ○
30	2	M6-M20	55	31	77	15	15	<b>231</b> ●
40	2	M6-M20	55	31	77	15	15	<b>241</b> ●

Prod. Gr. 295

# ORION® Quick-change inserts

Without safety coupling

**Execution:**

- **No. 21565:** Precise quick-change insert
- **No. 21566:** Precise quick-change insert with adjustable and almost wear-free ball safety coupling for protection against damage when tool becomes blunt or comes into contact with bottom of the hole.

**Advantage:**

- **No. 21565:** Increased tool service life

**Notes:**

**No. 21565:** Please enquire about any shank diameters, thread sizes, or brands not listed. The DIN no. or shank dimensions (diameter and square) must be indicated on the order form in addition to the thread size.

**No. 21566:** Shaft diameters or thread sizes and brands not listed available upon request. The DIN no. or shank dimensions (diameter and square) must be indicated on the order form in addition to the thread size.



No. 21565



No. 21566

		1		2		1		2	
		With safety coupling		No		Yes		Yes	
D1 (mm)		30		46		32		50	
l3 (mm)		7		11		25		34	
D (mm)		19		31		19		31	
d (mm)	Square shank on screw tap	21565... Ident. No.		21565... Ident. No.		21566... Ident. No.		21566... Ident. No.	
7	5.5	130	●	205	●	130	●	205	●
9	7	150	●	220	●	150	●	220	●
11	9	170	●	240	●	170	●	240	●
3.5	2.7	105	●	-	-	105	●	-	-
4.5	3.4	110	●	-	-	110	●	-	-
6	4.9	120	●	203	●	120	●	203	●
8	6.2	140	●	210	●	140	●	210	●
10	8	160	●	230	●	160	●	230	●
12	9	-	-	250	●	-	-	250	●
14	11	-	-	260	●	-	-	260	●
16	12	-	-	270	●	-	-	270	●
18	14.5	-	-	280	●	-	-	280	●

Prod. Gr. 295

# ATORN® Synchronous tapping chucks

For machine tools with synchronous control



**Application:**

For thread cutting on machine tools with synchronous spindles. With rigidly clamped screw taps, pitch errors cause high axial forces that can be compensated for by synchronous tapping chucks through minimal length compensation under pressure and tension.

**Execution:**

- Clamping screws to secure against rotation of the clamped screw tap
- thread-cutting quick-change chuck for synchronous spindles
- **Ident. No. 341-352:** pitch errors are compensated for with minimal length compensation of 1.0 mm under tension and 0.2 mm under pressure

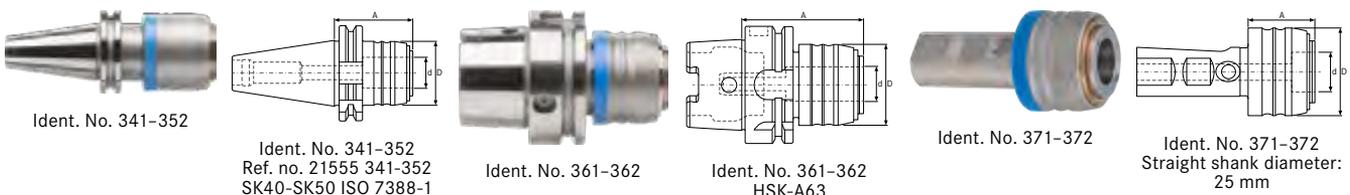
- **Ident. No. 361-372:** Pitch errors are compensated for with minimal length compensation of 1.0 mm under tension and 0.2 mm under pressure
- **Ident. No. 371-372:** straight shank similar to DIN 1835 B+E

**Advantage:**

- Secure clamping in quick-change inserts for ER collet chucks
- **Ident. No. 341-362:** Increased tool service life
- **Ident. No. 371-372:** increased tool service life

**Notes:**

accessories required:  
quick-change insert, 1- and 2-part, no. 21556316-525  
ER-type collet chuck for thread cutting, no. 23320600-691



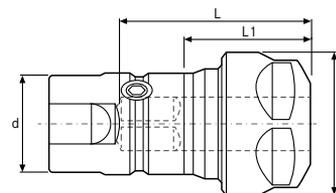
Adapter Ø (mm)	-	-	-	-	-	-	25	25	
Tool holding device	SK 40	SK 40	SK 50	SK 50	HSK 63	HSK 63	Cylinder shank	Cylinder shank	
ISO	7388-1	7388-1	7388-1	7388-1	-	-	-	-	
DIN	-	-	-	-	69893-1	69893-1	-	-	
Collet type	ER 16	ER 25							
Used sizes	1	2	1	2	1	2	1	2	
Suitable for thread	M3-M12	M6-M20	M3-M12	M6-M20	M3-M12	M6-M20	M3-M12	M6-M20	
A (mm)	53	90	53	74	64	97	34	56	
D (mm)	43	60	43	60	43	60	43	60	
d (mm)	20	32	20	32	20	32	20	32	
Form	AD	AD	AD	AD	A	A	-	-	
Pressure length compensation (mm)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Tension length compensation (mm)	1	1	1	1	1	1	1	1	
Coolant supply	Internal axial								
21555...	Ident. No.	341	342	351	352	361	362	371	372

Prod. Gr. 225

**ATORN® 1-part quick-change insert**  
Accessories for synchronous tapping chuck no. 21555

**Application:**  
for accommodating screw taps, see screw tap collet chucks, ER type, no. 23320600-691

**Notes:**  
Ref. no. 316, 516 with hexagon nut. Compatible collet chucks type ER for thread cutting, no. 21575



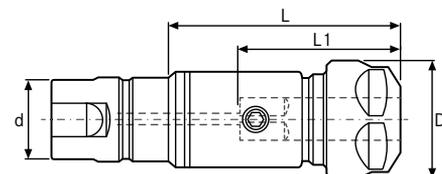
Used sizes	1	2	
Collet type	ER 16	ER 25	
Min./max. clamping range	2-10 mm	2-16 mm	
Suitable for thread	M3-M12	M6-M20	
L1 (mm)	37	52	
L (mm)	24	28	
D (mm)	28	42	
d (mm)	20	32	
21556...	Ident. No.	316	325

Prod. Gr. 225

**ATORN® 2-part quick-change insert**  
Accessories for synchronous tapping chuck no. 21555

**Application:**  
for accommodating screw taps, see screw tap collet chucks, ER type, no. 23320600-691

**Notes:**  
Ref. no. 516, 525 with hexagon nut. Compatible collet chucks type ER for thread cutting, no. 21575



Used sizes	Collet type	Min./max. clamping range	Suitable for thread	L1 (mm)	L (mm)	D (mm)	d (mm)	21556... Ident. No.
1	ER 16	2-10 mm	M3-M12	38	55	28	20	516

## Tool clamping \ Tapping chucks and accessories

Used sizes	Collet type	Min./max. clamping range	Suitable for thread	L1 (mm)	L (mm)	D (mm)	d (mm)	21556... Ident. No.
2	ER 25	2-16 mm	M6-M20	63	84	42	32	<b>525</b> ○

Prod. Gr. 225

### ATORN® Extensions for 2-part synchronous quick-change chuck. Accessories for 21556516-525

#### Application:

Extensions for 2-part synchronous quick-change chuck.

#### Notes:

the appropriate two-part quick-change insert 21556516 or 21556525 will be required to use extensions 21566616-725.



Extension



Example application

Used sizes	1	1	2	2
Collet type	ER 16	ER 16	ER 25	ER 25
Min. clamping range (mm)	2	2	2	2
Max. clamping range (mm)	10	10	16	16
D (mm)	23	23	35	35
L (mm)	25	50	50	100
<b>ATORN®</b> 21556... Ident. No.	<b>616</b> ○	<b>625</b> ●	<b>716</b> ○	<b>725</b> ○

Prod. Gr. 225

### ORION® Synchronous tapping chuck HSK according to DIN 69893-1 (DIN 69893-1) For collet chucks type ER according to DIN 6499 ISO 15488

<b>HSK 63</b>	<b>HSK 100</b>	<b>Form A</b>	<b>G 2,5 25000 rpm</b>
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#### Application:

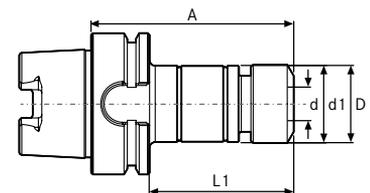
For thread cutting on machine tools with synchronous spindles. With rigidly clamped screw taps, pitch errors cause high axial forces that can be compensated for by synchronous tapping chucks through minimal length compensation under pressure and tension.

#### Execution:

- Length compensation in compression and tension 0.5 mm

#### Advantage:

- Pitch errors are compensated for under pressure
- Increased tool service life



p. 761

Tool holding device	DIN	Collet type	Min./max. clamping range	Suitable for thread	A (mm)	D (mm)	Collar Ø (mm)	Form	Pressure length compensation (mm)	Tension length compensation (mm)	21557... Ident. No.
HSK 63	69893-1	ER 16	1.0-10 mm	M3-M12	89	32	34	A	0.5	0.5	<b>021</b> ●
HSK 63	69893-1	ER 20	3.5-10 mm	M3-M16	90	35	34	A	0.5	0.5	<b>022</b> ●
HSK 63	69893-1	ER 25	3.5-16 mm	M3-M20	94	42	45	A	0.5	0.5	<b>023</b> ●
HSK 63	69893-1	ER 32	3.5-20 mm	M4-M27	105	50	45	A	0.5	0.5	<b>024</b> ●
HSK 63	69893-1	ER 40	6.0-26 mm	M6-M33	133.5	63	62	A	0.5	0.5	<b>025</b> ●
HSK 100	69893-1	ER 16	1.0-10 mm	M3-M12	96	32	34	A	0.5	0.5	<b>026</b> ●
HSK 100	69893-1	ER 20	3.5-10 mm	M3-M16	97	35	34	A	0.5	0.5	<b>027</b> ●
HSK 100	69893-1	ER 25	3.5-16 mm	M3-M20	101	42	45	A	0.5	0.5	<b>028</b> ●
HSK 100	69893-1	ER 32	3.5-20 mm	M4-M27	110	50	45	A	0.5	0.5	<b>029</b> ●
HSK 100	69893-1	ER 40	6.0-26 mm	M6-M33	133	63	62	A	0.5	0.5	<b>030</b> ●

Prod. Gr. 2AM

**ORION® Synchronous tapping chuck steep taper according to ISO 7388-1 (ISO 7388-1)**  
For collet chucks type ER according to DIN 6499 ISO 15488



**Application:**

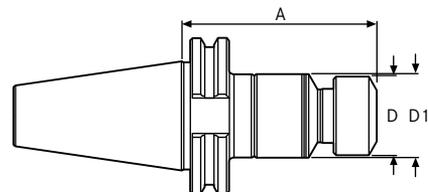
For thread cutting on machine tools with synchronous spindles. With rigidly clamped screw taps, pitch errors cause high axial forces that can be compensated for by synchronous tapping chucks through minimal length compensation under pressure and tension.

**Execution:**

- Length compensation in compression and tension 0.5 mm

**Advantage:**

- Pitch errors are compensated for under pressure
- Increased tool service life



Tool holding device	ISO	Collet type	Suitable for thread	A (mm)	D (mm)	Form	Pressure length compensation (mm)	Tension length compensation (mm)	Coolant supply	21557... Ident. No.	
SK 40	7388-1	ER 16	M3-M12	79	32	AD/AF	0.5	0.5	Internal axial	001	●
SK 40	7388-1	ER 20	M3-M16	80	35	AD/AF	0.5	0.5	Internal axial	002	●
SK 40	7388-1	ER 25	M3-M20	84	42	AD/AF	0.5	0.5	Internal axial	003	●
SK 40	7388-1	ER 32	M4-M27	95	50	AD/AF	0.5	0.5	Internal axial	004	●
SK 40	7388-1	ER 40	M6-M33	120	63	AD/AF	0.5	0.5	Internal axial	005	●
SK 50	7388-1	ER 16	M3-M12	79	32	AD/AF	0.5	0.5	Internal axial	006	●
SK 50	7388-1	ER 20	M3-M16	80	35	AD/AF	0.5	0.5	Internal axial	007	●
SK 50	7388-1	ER 25	M3-M20	84	42	AD/AF	0.5	0.5	Internal axial	008	●
SK 50	7388-1	ER 32	M4-M27	95	50	AD/AF	0.5	0.5	Internal axial	009	●
SK 50	7388-1	ER 40	M6-M33	105	63	AD/AF	0.5	0.5	Internal axial	010	●

Prod. Gr. 2AM

**ORION® Synchronous tapping chuck BT steep taper according to ISO 7388-2 (ISO 7388-2)**  
For collet chucks type ER according to DIN 6499 ISO 15488

**Application:**

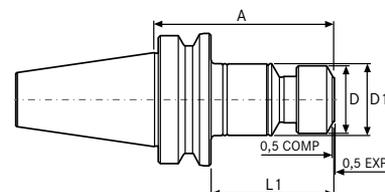
For thread cutting on machine tools with synchronous spindles. With rigidly clamped screw taps, pitch errors cause high axial forces that can be compensated for by synchronous tapping chucks through minimal length compensation under pressure and tension.

**Execution:**

- Length compensation in compression and tension 0.5 mm

**Advantage:**

- Pitch errors are compensated for under pressure
- Increased tool service life



Tool holding device	Collet type	ISO	Suitable for thread	Min./max. clamping range	Form	D (mm)	D1 (mm)	A (mm)	Coolant supply	Pressure length compensation (mm)	Tension length compensation (mm)	21557... Ident. No.	
BT 40	ER 16	7388-2	M3-M12	1.0-10 mm	JD/JF	32	34	79	Internal axial	0.5	0.5	011	●
BT 40	ER 20	7388-2	M3-M16	3.5-10 mm	JD/JF	35	34	85	Internal axial	0.5	0.5	012	●
BT 40	ER 25	7388-2	M3-M20	3.5-16 mm	JD/JF	42	45	89	Internal axial	0.5	0.5	013	●
BT 40	ER 32	7388-2	M4-M27	3.5-20 mm	JD/JF	50	45	110	Internal axial	0.5	0.5	014	●
BT 40	ER 40	7388-2	M6-M33	6.0-26 mm	JD/JF	63	62	115	Internal axial	0.5	0.5	015	●
BT 50	ER 16	7388-2	M3-M12	1.0-10 mm	JD/JF	32	34	95	Internal axial	0.5	0.5	016	●
BT 50	ER 20	7388-2	M3-M16	3.5-10 mm	JD/JF	35	34	100	Internal axial	0.5	0.5	017	●
BT 50	ER 25	7388-2	M3-M20	3.5-16 mm	JD/JF	42	45	110	Internal axial	0.5	0.5	018	●
BT 50	ER 32	7388-2	M4-M27	3.5-20 mm	JD/JF	50	45	120	Internal axial	0.5	0.5	019	●
BT 50	ER 40	7388-2	M6-M33	6.0-26 mm	JD/JF	63	62	120	Internal axial	0.5	0.5	020	●

Prod. Gr. 2AM

**ORION® Synchronous tapping chuck, straight shank similar to DIN 1835 B+E (DIN 1835)**  
For collet chucks type ER according to DIN 6499 ISO 15488



**Application:**

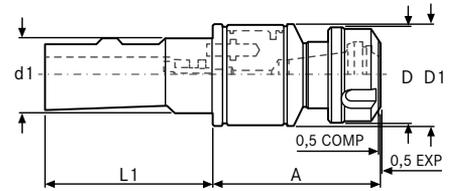
For thread cutting on machine tools with synchronous spindles. With rigidly clamped screw taps, pitch errors cause high axial forces that can be compensated for by synchronous tapping chucks through minimal length compensation under pressure and tension.

**Execution:**

- Length compensation in compression and tension 0.5 mm

**Advantage:**

- Pitch errors are compensated for under pressure
- Increased tool service life



d1 (mm)	DIN	Collet type	Min./max. clamping range	Suitable for thread	A (mm)	D (mm)	Collar Ø (mm)	L1 (mm)	Pressure length compensation (mm)	Tension length compensation (mm)	21557... Ident. No.	
20	1835	ER 16	1.0-10 mm	M3-M12	58	22	34	51	0.5	0.5	<b>031</b>	●
20	1835	-	1.0-10 mm	M3-M12	58	32	34	51	0.5	0.5	<b>032</b>	●
25	1835	ER 16	1.0-10 mm	M3-M12	60	22	34	56	0.5	0.5	<b>033</b>	●
25	1835	-	1.0-10 mm	M3-M12	60	32	34	56	0.5	0.5	<b>034</b>	●
25	1835	ER 20	3.5-10 mm	M3-M16	61	35	34	56	0.5	0.5	<b>035</b>	●
25	1835	ER 25	3.5-16 mm	M3-M20	65	42	45	56	0.5	0.5	<b>036</b>	●
25	1835	ER 32	3.5-20 mm	M4-M27	87	50	45	56	0.5	0.5	<b>037</b>	●
32	1835	ER 40	6.0-26 mm	M6-M33	108.5	63	62	61	0.5	0.5	<b>038</b>	○

Prod. Gr. 2AM

**ORION® Quick-change collet chucks type ER with length compensation under tensile load 0.5 mm**

**Similar to DIN 6499**

**Application:**

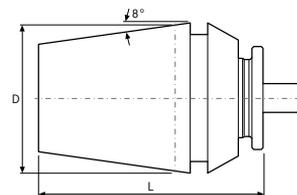
For thread cutting on machine tools with synchronous spindles.

**Advantage:**

- Square drive to prevent twisting on screw taps
- Increased tool service life with length compensation under tensile load +0.5 mm

**Execution:**

- Suitable for all standard ER collet chucks



		Collet type	ER 16	ER 20	ER 25	ER 32	ER 40
		D (mm)	16	20	25	32	40
		L (mm)	14	15.50	16.00	20.00	22.00
Shaft Ø (mm)	Inner square size (mm)	21566... Ident. No.					
3.50	2.70	<b>511</b> ●	<b>526</b> ●	<b>546</b> ●	<b>571</b> ●	<b>611</b> ●	●
4.00	3.00	<b>513</b> ●	<b>528</b> ●	<b>548</b> ●	<b>573</b> ●	<b>613</b> ●	●
6.00	4.90	<b>521</b> ●	<b>537</b> ●	<b>557</b> ●	<b>582</b> ●	<b>622</b> ●	●
4.50	3.40	-	<b>531</b> ●	-	<b>576</b> ●	<b>616</b> ●	●
7.00	5.50	-	<b>541</b> ●	-	<b>586</b> ●	<b>626</b> ●	●
4.5	3.40	-	-	<b>551</b> ●	-	-	-
8.00	6.20	-	-	-	<b>589</b> ●	<b>629</b> ●	●
9.00	7.00	-	-	<b>567</b> ●	<b>592</b> ●	<b>632</b> ●	●
10.00	8.00	-	-	<b>569</b> ●	<b>594</b> ●	<b>634</b> ●	●
11.00	9.00	-	-	-	<b>596</b> ●	-	-
12.00	9.00	-	-	-	<b>598</b> ●	-	-
13.00	9.00	-	-	-	-	<b>638</b> ●	●
14.00	11.00	-	-	-	-	<b>641</b> ●	●
16.00	12.00	-	-	-	-	<b>644</b> ●	●
18.00	14.50	-	-	-	-	<b>647</b> ●	●

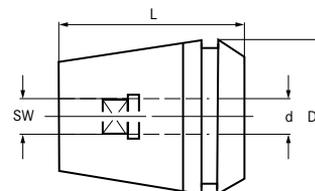
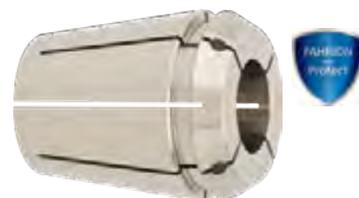
Prod. Gr. 220

**FAHRION® PRAZISION** GERC-GBD tap collets, similar to DIN 6499/ISO 15488-A, with square drive  
For internal cooling (can be used at up to 120 bar)



**Application:**  
For thread cutting with CENTRO P or with synchronous tapping chuck

- Execution:**
- with square drive for positive engagement of the screw tap
  - concentricity <math>< 10 \mu\text{m}</math>



Collet type		4031E GERC16-GBD	4282E GERC25-GBD	4537E GERC32-GBD
D (mm)		16.7	25.7	32.7
L (mm)		27.5	34	40
Coolant supply		Yes	Yes	Yes
d (mm)	SW (mm)	23323... Ident. No.	23323... Ident. No.	23323... Ident. No.
2.8	2.1	721	-	-
3.5	2.7	722	733	-
4.0	3.2	723	734	751
4.5	3.55	724	735	752
5.0	4.0	725	736	753
5.5	4.5	726	737	754
6.0	5.0	727	738	755
6.3	5.0	728	739	756
7.0	5.6	729	740	757
7.1	5.6	730	741	758
8.0	6.3	731	742	759
9.0	7.1	732	743	760
10.0	8.0	-	744	761
11.0	9.0	-	745	762
11.2	9.0	-	746	763
12.0	9.0	-	747	764
12.5	10.0	-	748	765
14.0	11.2	-	749	766
16.0	12.5	-	750	767
18.0	14.5	-	-	768
20.0	16.0	-	-	769

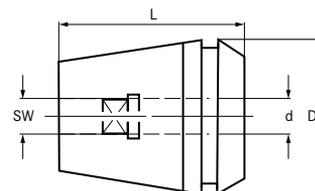
Prod. Gr. 235

**FAHRION® PRAZISION** GERC-GBDD tap collets, DIN ISO 15488-A, with square drive  
Seal for IC (internal cooling) and spray nozzle



**Application:**  
For thread cutting with Centro P precision collet chucks or with synchronous tapping chuck

- Execution:**
- with square drive for positive engagement of the screw tap
  - for internal cooling (can be used up to 120 bar)
  - concentricity <math>< 10 \mu\text{m}</math>



		Collet type		4031E GERC16-GBDD		4282E GERC25-GBDD		4537E GERC32-GBDD	
		D (mm)		16.7		25.7		32.7	
		L (mm)		27.5		34		40	
		Coolant supply		Inner cooling and spray nozzles		Inner cooling and spray nozzles		Inner cooling and spray nozzles	
d (mm)	SW (mm)	23323... Ident. No.		23323... Ident. No.		23323... Ident. No.		23323... Ident. No.	
3.5	2.7	770	●	-	-	-	-	-	-
4.5	3.55	771	○	775	○	784	○	-	-
6.0	5.0	772	○	776	○	785	○	-	-
7.0	5.6	773	○	777	○	786	○	-	-
8.0	6.3	774	○	778	○	787	○	-	-
9.0	7.1	-	-	779	○	788	○	-	-
10.0	8.0	-	-	780	○	789	○	-	-
11.0	9.0	-	-	781	○	790	○	-	-
12.0	9.0	-	-	782	○	791	○	-	-
14.0	11.2	-	-	783	○	792	○	-	-
16.0	12.5	-	-	-	-	793	○	-	-
18.0	14.5	-	-	-	-	794	○	-	-
20.0	16.0	-	-	-	-	795	○	-	-

Prod. Gr. 235

## ORION® Tap collet type ER DIN 6499 A with female square drive

### Application:

For clamping screw tapping tools.

### Execution:

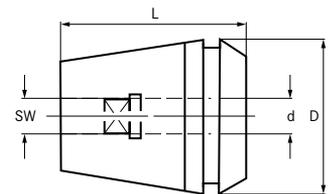
- Suitable for all standard ER collet chucks
- For machines with synchronous feed
- For use in collet chucks no. 22782 and no. 23300

### Advantage:

- Female square drive to prevent twisting on screw taps

### Notes:

Collets, type ER DIN 6499B for cylindrical shanks, see no. 23320



		Collet type		ER 16		ER 20		ER 25		ER 32		ER 40	
		D (mm)		16.8		20.80		25.80		32.80		40.8	
		d2 (mm)		16		20		25		32		40	
		L (mm)		27.5		31.50		34		40		46	
d (mm)	SW (mm)	23320... Ident. No.											
3.5	2.7	600	●	620	●	640	●	660	●	-	-	-	-
4.0	3.0	601	●	621	●	641	●	661	●	-	-	-	-
4.5	3.4	602	●	622	●	642	●	662	●	-	-	-	-
5.0	5.0	603	●	623	●	643	●	663	●	-	-	-	-
5.5	4.3	604	●	624	●	644	●	664	●	-	-	-	-
6.0	4.9	605	●	625	●	645	●	665	●	680	●	-	-
7.0	5.5	606	●	626	●	646	●	666	●	681	●	-	-
8.0	6.2	607	●	627	●	647	●	667	●	682	●	-	-
9.0	7.0	608	●	628	●	648	●	668	●	683	●	-	-
10.0	8.0	609	●	629	●	649	●	669	●	684	●	-	-
11.0	9.0	-	-	630	●	650	●	670	●	685	●	-	-
12.0	9.0	-	-	631	●	651	●	671	●	686	●	-	-
14.0	11.0	-	-	-	-	652	●	672	●	687	●	-	-
16.0	12.0	-	-	-	-	653	●	673	●	688	●	-	-
18.0	14.5	-	-	-	-	-	-	674	●	689	●	-	-
20.0	16.0	-	-	-	-	-	-	675	●	690	●	-	-
22.0	18.0	-	-	-	-	-	-	-	-	691	●	-	-

Prod. Gr. 2AE

## bitz Tapping chuck type DSPL With morse taper in line with DIN 228

### Application:

For cutting internal threads on reversible drills, lathes and milling machines. Can be used horizontally and vertically.

### Execution:

- With Morse taper shank and flat tangs to DIN 228 B
- With patented double chuck (clamps shank and square drive)
- Elastic length compensation under compression and tension

- Axial-parallel pendulum device and flexible length compensation for cutting exact gradients and flush threads
- With clockwise and anti-clockwise rotation

### Advantage:

- Adjustable safety slip coupling prevents tool breakage

### Delivery:

Including spanner

### Notes:

Left-hand thread available on request.



Size	DSPL 12	DSPL 12	DSPL 20	DSPL 20	DSPL 30
Suitable for thread	M3-M12	M3-M12	M8-M20	M8-M20	M14-M30
Min. clamping range Ø (mm)	2.5	2.5	6	6	11
Max. clamping range Ø (mm)	10	10	16	16	23
Axial length compensation (mm)	20	20	20	20	30
Morse taper size	MK 2	MK 3	MK 3	MK 4	MK 4
Projecting length (mm)	135	135	170	170	230
Compensation parallel to axis (mm)	1	1	1.5	1.5	2
21520...	Ident. No.	○	●	○	○

Prod. Gr. 2AH

Accessories for		21520 010	21520 020	21520 050	21520 060	21520 070
21528...	Square socket wrench	Ident. No. ○	Ident. No. ●	Ident. No. ●	Ident. No. ●	Ident. No. ●

## ATORN® Thread cutting machine

Vertical and horizontal thread cutting

### Application:

For the creation of threads and for other mechanical operations.  
Easy to use with a variety of possible adjustments

### Execution:

- electrically driven motor, 220V
- for vertical and horizontal thread cutting
- manual speed control by means of a potentiometer
- operation with standard quick-change inserts
- thread cutting performance: steel M2 - M14
- thread cutting performance: aluminium M2 - M16
- automatic tool lubrication and pneumatic version available on request
- supplied with basic tool adapter, articulated arm for vertical thread cutting, swivel adapter for horizontal thread cutting. (please order quick-change inserts separately)

- workspace height 565mm
- workspace radius 75mm to 885mm

### Advantage:

- price/performance ratio

### Delivery:

With basic tool holder. Articulated arm and swivel adapter for vertical and horizontal thread cutting.

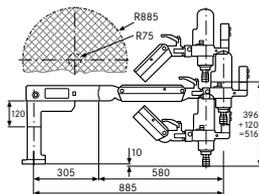
Please order quick-change inserts separately

### Notes:

recommended accessory ref. no. 21616002, fastening clip for fixing the table.  
quick change inserts, size 1/D=Ø19 mm, ref. no. 21566130 21566160 with safety coupling



Ident. No. 001



Ident. No. 002



p. 754

Min./max. rotation speed	300-600 U/min(rpm)	-
Max. torque (Nm)	34	-
Nominal voltage	220	-
Type	-	Fastening clip for table fixing
Min./max. rotation speed	300-600 U/min(rpm)	-
Max. torque (Nm)	34	-
Nominal voltage	220	-
Type	-	Fastening clip for table fixing
21616...	Ident. No.	○ ●

Prod. Gr. 225

## ORION® Reducing sleeves, morse taper (DIN 2185)

**Application:**

For mounting tools with Morse taper shanks.

- Fully hardened
- Male and female taper polished with pitch accuracy



Ident. No. 010-021, 032-065

**Execution:**

- Male and female taper in accordance with DIN 2185

**Advantage:**

- No clamping imprints
- Maximum concentricity

Mount, on machine side	MK 1	MK 2	MK 3	MK 3	MK 4	MK 4	MK 4	MK 5	MK 5	MK 5	MK 6	
Mount, on tool side	MK 0	MK 1	MK 1	MK 2	MK 1	MK 2	MK 3	MK 2	MK 3	MK 4	MK 5	
Length (mm)	80	92	99	112	124	124	140	156	156	171	218	
21102...	Ident. No.	010	021	031	032	041	042	043	052	053	054	065
		●	●	●	●	●	●	●	●	●	●	●

Prod. Gr. 207

## ORION® Morse taper extension sleeves (DIN 228-1) Long version

**Application:**

For extending drill bits and reamers.

- Male taper, polished

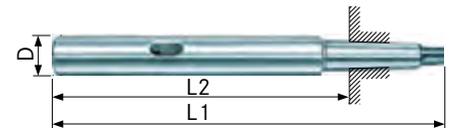


Ident. No. 120-260, 330-460

**Execution:**

- Male and female taper in accordance with DIN 2185

- Maximum concentricity



Mount, on machine side	Mount, on tool side	Projection length L 2 (mm)	Cylinder Ø D (mm)	Length L 1 (mm)	21107... Ident. No.	
MK 1	MK 1	138	20	200	120	●
MK 1	MK 1	188	20	250	125	●
MK 1	MK 1	238	20	300	130	●
MK 1	MK 1	288	20	350	135	○
MK 1	MK 1	338	20	400	140	●
MK 2	MK 2	125	25	200	220	●
MK 2	MK 2	175	25	250	225	●
MK 2	MK 2	225	25	300	230	●
MK 2	MK 2	275	25	350	235	●
MK 2	MK 2	325	25	400	240	●
MK 2	MK 2	375	25	450	245	○
MK 2	MK 2	425	25	500	250	●
MK 2	MK 2	525	25	600	260	○
MK 3	MK 3	156	32	250	325	●
MK 3	MK 3	206	32	300	330	●
MK 3	MK 3	256	32	350	335	○
MK 3	MK 3	306	32	400	340	●
MK 3	MK 3	356	32	450	345	●
MK 3	MK 3	406	32	500	350	●
MK 3	MK 3	506	32	600	360	●
MK 4	MK 4	182.5	40	300	430	●
MK 4	MK 4	232.5	40	350	435	●
MK 4	MK 4	282.5	40	400	440	○
MK 4	MK 4	332.5	40	450	445	○
MK 4	MK 4	382.5	40	500	450	●
MK 4	MK 4	482.5	40	600	460	●

Prod. Gr. 207

## ORION® Morse taper extension sleeves (DIN 228)

**Application:**

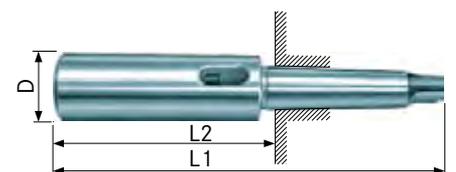
For mounting tools with Morse taper shanks.

**Execution:**

- Male and female taper, polished and hardened, similar to DIN 2187



Ident. No. 011-031, 033-055



Mount, on machine side	MK 1	MK 1	MK 2	MK 2	MK 2	MK 3	MK 3	MK 3	
Mount, on tool side	MK 1	MK 2	MK 1	MK 2	MK 3	MK 1	MK 2	MK 3	
Projection length L 2 (mm)	83	98	85	100	121	81	100	121	
Cylinder Ø D (mm)	20	30	20	30	36	20	30	36	
Length L 1 (mm)	145	160	160	175	196	175	194	215	
21115...	Ident. No.	011	012	021	022	023	031	032	033
		●	●	●	●	●	●	●	●

Mount, on machine side	MK 3	MK 4	MK 4	MK 4	MK 5	MK 5
Mount, on tool side	MK 4	MK 3	MK 4	MK 5	MK 4	MK 5
Projection length L 2 (mm)	146	122.5	147.5	182.5	150.5	182.5
Cylinder Ø D (mm)	48	36	48	63	48	63
Length L 1 (mm)	240	240	265	300	300	300
<b>2115...</b>	Ident. No.	<b>034</b>	<b>043</b>	<b>044</b>	<b>045</b>	<b>054</b>
		●	●	●	●	●

Prod. Gr. 207

## ORION® Tapered clamping sleeves (DIN 6329)

### Application:

For mounting twist drills and countersinks with straight shanks (h8) in line with DIN 6329.

### Execution:

- Hole and male taper, polished
- Fully hardened
- Not suitable for milling



Adapter, on machine side D	Shank Ø d (mm)	21150... Ident. No.	
MK 1	3	103	●
MK 1	3.5	106	●
MK 1	4	109	●
MK 1	4.5	112	●
MK 1	5	115	●
MK 1	5.5	118	●
MK 1	6	121	●
MK 1	6.5	124	●
MK 1	7	127	●
MK 1	8	133	●
MK 2	6	203	●
MK 2	7	209	○
MK 2	8	215	●
MK 2	8.5	218	●
MK 2	9	221	●
MK 2	9.5	224	○
MK 2	10	227	●
MK 2	10.5	230	●
MK 2	11	233	●
MK 2	12	239	●
MK 3	12	327	○
MK 3	12.5	330	●
MK 3	14	339	●
MK 3	16	351	●

Prod. Gr. 207

## ORION® Cone clamping sleeves (DIN 6328)

### Application:

For mounting screw taps and reamers with straight shanks and square drives.

### Execution:

- For tools with straight shank and square head in accordance with DIN 6328
- Hole and male taper, polished
- Fully hardened
- Not suitable for milling



Adapter, on machine side D	MK 1	MK 1	MK 1	MK 1	MK 2	MK 3	MK 3						
Shank Ø d (mm)	4.5	6	7	8	6	7	8	9	10	12	14	16	16
Square width (mm)	3.4	4.9	5.5	6.2	4.9	5.5	6.2	7	8	9	11	12	12
<b>21155...</b>	Ident. No.	<b>103</b>	<b>109</b>	<b>112</b>	<b>115</b>	<b>203</b>	<b>206</b>	<b>209</b>	<b>212</b>	<b>215</b>	<b>218</b>	<b>303</b>	<b>306</b>
		●	●	●	●	●	●	●	●	●	●	●	●

Prod. Gr. 207

**RÖHM** Drill chuck with tapered mount  
For clockwise and anti-clockwise rotation, with toothed ring and key



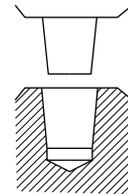
**Application:**  
**No. 21290:** For holding tools with straight shank.  
**No. 21291:** For holding tools with straight shank in pillar and bench drills.

**Execution:**  
 ▪ Body head with keyholes and jaws, hardened

- Toothed ring drill chuck with key, DIN ISO 10887
  - **No. 21291:** Industrial version
- Advantage:**
- High clamping force thanks to toothed ring
  - **No. 21290:** Very strong and resistant to wear
  - **No. 21291:** For day-to-day industrial applications



No. 21290 030, 21290 200-21291 020, 21291 040



Drill chuck cone in line with DIN ISO 239-B

p. 772

Min./max. clamping width		0.5-6.5 mm	1-16 mm	5-20 mm	0.5-6.5 mm	0.5-8 mm	0.8-10 mm	1.5-13 mm
Suitable for taper		B 12	B 18	B 22	B 10	B 10	B 12	B 12
Outer Ø (mm)		29.5	56.5	65	29.5	29.5	34.5	42.8
<b>21290...</b>	Ident. No.	<b>030</b>	<b>170</b>	<b>200</b>	-	-	-	-
<b>21291...</b>	Ident. No.	-	-	-	<b>010</b>	<b>020</b>	<b>030</b>	<b>040</b>

Prod. Gr. 201

Accessories for		21290 030	21290 170	21290 200	21291 010	21291 020	21291 030	21291 040
<b>21294...</b>	Spare key Spare key for drill chuck with toothed ring	<b>010</b>	<b>030</b>	<b>040</b>	<b>010</b>	<b>010</b>	<b>020</b>	<b>020</b>

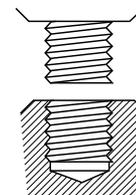
**RÖHM** Prima drill chuck  
With internal thread



**Application:**  
 For holding tools with straight shank.

- Execution:**
- Industrial version for hand-guided machines
  - Jaws hardened
  - Body head with keyholes
  - Toothed ring drill chuck with key, DIN ISO 10887

- High concentricity of up to 0.2 mm
  - Ref. no. 21292041 clockwise rotation
  - Ref. no. 21292251 clockwise/anti-clockwise rotation
- Advantage:**
- For day-to-day industrial applications
  - High clamping force thanks to toothed ring



Thread adapter

Min./max. clamping width		0.5-8 mm	0.8-10 mm
Connection thread		3/8 inch x 24 UNF 3B	1/2 inch - 20 UNF 3B
Outer Ø (mm)		29.5	34.5
Length closed (mm)		-	61
<b>21292...</b>	Ident. No.	<b>041</b>	<b>251</b>

Prod. Gr. 201

Accessories for		21292 041
<b>21294...</b>	Spare key Spare key for drill chuck with toothed ring	<b>010</b>

## ORION® Drill chuck with threaded mount

For clockwise rotation, with toothed ring and key



**Application:**  
For holding tools with straight shank.

**Execution:**

- Body head with keyholes
- Jaws hardened

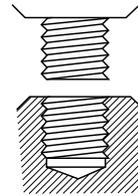
- With female thread
- Toothed ring drill chuck with key, DIN ISO 10887

**Advantage:**

- Very good value for money
- High clamping force thanks to toothed ring



Ident. No. 110-112



Thread adapter

Min./max. clamping width		0.8-10 mm	0.8-10 mm	1.5-13 mm
Connection thread		3/8 inch x 24 UNF 3B	1/2 inch - 20 UNF 3B	1/2 inch - 20 UNF 3B
Outer Ø (mm)		33.3	33.3	42.4
21293...	Ident. No.	110	112	130

Prod. Gr. 207

Accessories for		21293 110	21293 112	21293 130
21294...	Spare key Spare key for drill chuck with toothed ring	020	020	020
	Ident. No.	●	●	●

## ORION® Drill chuck with tapered mount

For clockwise and anti-clockwise rotation, with toothed ring and key



**Application:**  
For holding tools with straight shank.

**Execution:**

- Body head with keyholes
- Jaws hardened

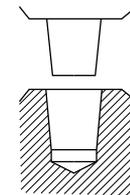
- Toothed ring drill chuck with key, DIN ISO 10887

**Advantage:**

- Very good value for money
- High clamping force thanks to toothed ring



Ident. No. 010-030, 042



Drill chuck cone in line with DIN ISO 239-B

Min./max. clamping width		0.8-10 mm	1-10 mm	1.5-13 mm	3-16 mm	3-16 mm
Suitable for taper		B 12	B 16	B 16	B 16	B 18
Outer Ø (mm)		33.5	42.4	42.4	50	50
21293...	Ident. No.	010	020	030	040	042

Prod. Gr. 207

Accessories for		21293 010	21293 020	21293 030	21293 040	21293 042
21294...	Spare key Spare key for drill chuck with toothed ring	020	020	020	030	030
	Ident. No.	●	●	●	●	●

← p. 772

**RÖHM** Extra RV drill chucks with retaining ring  
With radial locking, keyless, for clockwise and anti-clockwise rotation



**Application:**

For holding cordless screwdrivers, cordless drills and mains drills; suitable for percussion drilling with multiple edges for assembling and dismantling.

**Execution:**

- Clamping sleeve made from plastic
- With keyless radial locking mechanism

- Ref. no. 21308015 metal clamping sleeve

**Advantage:**

- No additional locking required when screwing and drilling, in particular when percussion drilling
- Very ergonomic and user-friendly, equipped with impact guard
- The plastic parts are marked to identify the material, allowing them to be recycled



Threaded mount

Min./max. clamping width	1-10 mm	1-10 mm	1.5-13 mm	1.5-13 mm
Connection thread	3/8 inch x 24 UNF 3B	1/2 inch - 20 UNF 3B	3/8 inch x 24 UNF 3B	1/2 inch - 20 UNF 3B
Outer Ø (mm)	42.7	42.7	42.7	42.7
Suitable for max. machine capacity (W)	550	550	1000	1000
<b>21308...</b>	Ident. No. <b>001</b>	Ident. No. <b>002</b>	Ident. No. <b>013</b>	Ident. No. <b>015</b>

Prod. Gr. 201

**RÖHM** Supra S drill chuck  
Keyless clamping



**Application:**

For clamping and releasing drill bits quickly without a key.

**Execution:**

- Automatic retightening during drilling proportionately to cutting force
- **No. 21300:** Heavy-duty industrial version with internal taper chuck in accordance with DIN 238
- **No. 21301:**
  - Industrial version for hand-guided machines
  - With internal taper chuck in accordance with DIN 238

- **No. 21301–21302:** All parts are replaceable

**No. 21302:**

- Lightweight design for hand-guided machines
- Holder with UNF-3 B female thread

**Advantage:**

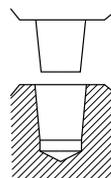
- No tools required for operation, therefore fast retooling
- For day-to-day industrial use
- **No. 21301–21302:** Very strong and resistant to wear



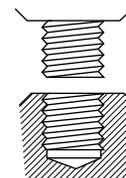
No. 21300 010–21301 085, 21301 100–21301 110



No. 21302 040–21302 090, 21302 110



No. 21300–21301  
Drill chuck cone in line with DIN ISO 239-B



No. 21302  
Thread adapter

p. 772

Min./max. clamping width	Suitable for taper	Connection thread	Outer Ø (mm)	21300... Ident. No.	21301... Ident. No.	21302... Ident. No.
0-4 mm	B 10	-	26	010	-	-
0-6.5 mm	B 10	-	32	020	-	-
0-6.5 mm	B 12	-	32	030	-	-
0-8 mm	B 10	-	35.8	040	-	-
0-8 mm	B 12	-	35	050	-	-
0-10 mm	B 12	-	40.2	070	-	-
0-10 mm	B 16	-	40.2	080	-	-
1-13 mm	B 16	-	46	090	-	-
3-16 mm	B 16	-	51	100	-	-
3-16 mm	B 18	-	51	110	-	-
1-13 mm	B 12	-	40.2	-	085	-
1-13 mm	B 16	-	40.2	-	090	-
3-16 mm	B 16	-	46	-	100	-
3-16 mm	B 18	-	46	-	110	-
0-8 mm	-	3/8 inch x 24 UNF 3B	32	-	-	040
0.5-10 mm	-	3/8 inch x 24 UNF 3B	35.8	-	-	070
0.5-10 mm	-	1/2 inch - 20 UNF 3B	35.8	-	-	080
1-13 mm	-	3/8 inch x 24 UNF 3B	40.2	-	-	085
1-13 mm	-	1/2 inch - 20 UNF 3B	40.2	-	-	090

Min./max. clamping width	Suitable for taper	Connection thread	Outer Ø (mm)	21300... Ident. No.	21301... Ident. No.	21302... Ident. No.
3-16 mm	-	1/2 inch - 20 UNF 3B	46	-	-	100 ●
3-16 mm	-	5/8 inch - 16 UNF	46	-	-	110 ○

Prod. Gr. 201

**ROHM** Supra SK drill chuck with threaded mount  
Suitable for impact drilling



**Application:**

Keyless quick clamping chuck for all makes of hammer drill.

**Execution:**

- Industrial version for hand-guided machines
- Automatic retightening during drilling proportionately to cutting force
- Chuck sealed to protect against drilling dust and contamination
- Sturdy design as functional components are made of metal

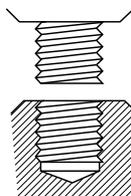
- Easy and quick insertion of drill bit by hand

**Advantage:**

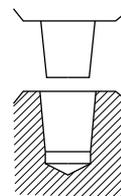
- Sealed to protect against dirt
- Securely clamped using clamping force retention

**Notes:**

**Ident. No. 010-030:** With taper chuck ref. no. 21303010-030  
**Ident. No. 110-130:** With mounting thread ref. no. 21303110-130



Thread adapter



Drill chuck cone in line with DIN ISO 239-B

p. 772

Min./max. clamping width	0.5-10 mm	1-13 mm	1-13 mm	0.5-10 mm	1-13 mm
Suitable for taper	B 12	B 12	B 16	-	-
Connection thread	-	-	-	3/8 inch x 24 UNF 3B	1/2 inch - 20 UNF 3B
Outer Ø (mm)	40	42.8	42.8	40	42.8
21303... Ident. No.	010 ●	020 ●	030 ●	110 ●	130 ●

Prod. Gr. 201

**ORION** Drill chuck with tapered mount  
Suitable for impact drilling



**Application:**

For clamping and releasing drill bits quickly without a key.

**Execution:**

- Self-clamping
- Industrial version for hand-guided machines

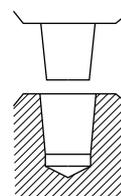
- With internal taper chuck in accordance with DIN 238

**Advantage:**

- No tools required for operation, therefore fast retooling
- Securely clamped using clamping force retention



Ident. No. 010-040



Drill chuck cone in line with DIN ISO 239-B

p. 772

Min./max. clamping width	0-8 mm	0-10 mm	0-10 mm	1-13 mm	1-13 mm	3-16 mm	3-16 mm
Suitable for taper	B 12	B 12	B 16	B 12	B 16	B 16	B 18
Outer Ø (mm)	32	36	42.5	40.2	40	46	46
21304... Ident. No.	010 ●	020 ●	022 ●	030 ●	032 ●	040 ●	042 ●

Prod. Gr. 207



**Application:**  
For clamping and releasing drill bits quickly without a key.

**Execution:**

- Lasting and automatic retightening
- Wear parts hardened

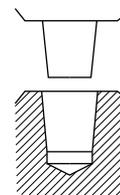
- Particularly suitable for high rotation speeds on drills and drilling equipment
- With internal taper chuck in accordance with DIN 238

**Advantage:**

- High concentricity < 0.05 mm



Ident. No. 020-060, 080-090



Drill chuck cone in line with DIN ISO 239-B

p. 772

Min./max. clamping width	0-6.5 mm	0-6.5 mm	0-10 mm	0-10 mm	1-13 mm	3-16 mm	3-16 mm
Suitable for taper	B 10	B 12	B 12	B 16	B 16	B 16	B 18
Outer Ø (mm)	35	35	43	43	50	55	55
Length closed (mm)	68.6	68.6	90.1	90.1	102.5	106.8	106.8
21305... Ident. No.	020	030	050	060	070	080	090

Prod. Gr. 201

## ALBRECHT Drill chuck

Precision Spannfutter Self-clamping for clockwise rotation



**Application:**  
For clamping and releasing drill bits quickly without a key.

**Execution:**

- For extended periods of use with maximum concentricity
- All wear parts are case-hardened, polished and replaceable
- Ident. No. 015-130, 160-163: With internal taper chuck in accordance with DIN ISO 239

- Ident. No. 131, 164:
  - With internal cone in accordance with DIN 238
  - With clamping force safety device to prevent accidental opening of the drill chuck in the event of the working spindle stopping abruptly

**Advantage:**

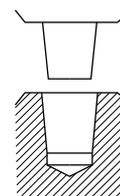
- 100% concentricity check using different test pin diameters at various measuring points, based on DIN ISO 10888



Ident. No. 131, 164



Ident. No. 015-130, 160-163



p. 772

Drill chuck cone in line with DIN ISO 239-B

Min./max. clamping width	0.2-1.5 mm	0.2-3 mm	0.5-6.5 mm	0.5-6.5 mm	0.5-10 mm	0.5-10 mm	1-13 mm	1-13 mm
Suitable for taper	B 6	B 10	B 10	B 12	B 12	B 16	B 16	B 16
Running direction	Clockwise rotation							
With clamping force retainer	No	Yes						
Length closed (mm)	37	48	68	68	92	92	103	103
Length, open (mm)	35	44	62	62	80	80	91	91
21311... Ident. No.	015	030	063	065	103	100	130	131

Min./max. clamping width	3-16 mm	3-16 mm	3-16 mm
Suitable for taper	B 18	B 16	B 18
Running direction	Clockwise rotation	Clockwise rotation	Clockwise rotation
With clamping force retainer	No	No	Yes
Length closed (mm)	109	109	109
Length, open (mm)	96	96	96
21311... Ident. No.	160	163	164

Prod. Gr. 209

<b>Accessories for</b>		<b>21311 063</b>	<b>21311 065</b>	<b>21311 100</b>	<b>21311 103</b>	<b>21311 130</b>	<b>21311 131</b>	<b>21311 160</b>
21312... Spare jaws for precision drill chuck	Ident. No.	065	065	100	100	130	130	160

Accessories for		21311 163	21311 164
21312...	Spare jaws for precision drill chuck	160	160
	Ident. No.	●	●

## ALBRECHT SBF-plus drill chuck

Präzisions Spannflutter  
Self-clamping



### Application:

For clamping and releasing drill bits quickly without a key.

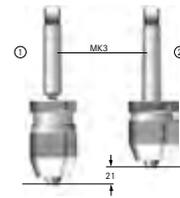
### Execution:

- Drill chuck SBF-plus, shortened version
- Precision design
- Ref. no. 21314160 has a straight shank  $\varnothing 16 \times 60$  mm

- Ref. no. 21314160 with diamond-coated clamping jaws for hardened tool shanks

### Advantage:

- Drill chuck and drive arbour form one unit, which means that optimal stability and a minimum concentricity tolerance can be achieved.
- Particularly advantageous on machines with a small working area thanks to it being 21 mm shorter than the two-part version.



Dimensions comparison  
① SBF and Morse taper arbor (two-piece)  
② SBF-plus (one-piece)

Min./max. clamping width	1-13 mm	1-13 mm	1-13 mm	1-13 mm	3-16 mm	3-16 mm	3-16 mm
Morse taper size	MK 2	MK 3	MK 4	-	MK 2	MK 3	MK 4
Adapter $\varnothing$ (mm)	-	-	-	16	-	-	-
Projection length A (mm)	85	85	87	79	89	89	90
Running direction	Clockwise rotation						
With clamping force retainer	No						
Length closed (mm)	97	97	99	91	103	103	104
21314...	Ident. No. 020	030	040	160	220	230	240
	●	●	●	●	●	●	●

Prod. Gr. 209

## ORION® Drill chuck

Self-clamping



### Application:

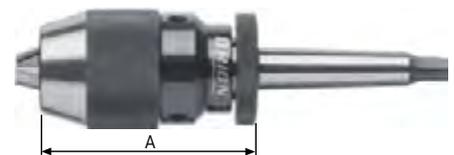
For clamping and releasing drill bits quickly without a key.

### Execution:

- Drill chuck and mounting taper form one unit

### Advantage:

- Very good value for money



Min./max. clamping width	1-13 mm	1-13 mm	1-13 mm	3-16 mm	3-16 mm	3-16 mm
Morse taper size	MK 2	MK 3	MK 4	MK 2	MK 3	MK 4
A (mm)	95.5	95.5	98	100.5	100.5	102
Outer $\varnothing$ (mm)	50.5	-	-	-	-	-
21316...	Ident. No. 020	030	040	220	230	240
	●	●	●	●	●	●

Prod. Gr. 295

# ATORN® CNC precision chuck, DIN 228-B

With internal cooling, side coolant connection



**Application:**  
For use on conventional lathes and CNC machines for drilling, reaming, countersinking.

- Execution:**
- Morse taper in accordance with DIN 228-B
  - Integrated spur gear ensures high retaining torque
  - glass bead blasted

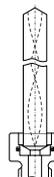
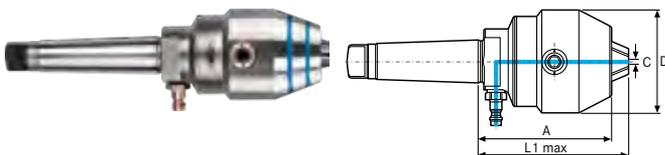
**Advantage:**

- Wear parts hardened and polished for long service life

- Remains securely clamped even with sudden spindle stop

**Delivery:**  
Drill chuck with sealing washer (Ø 5 mm) incorporated in the drill chuck head, for coolant drill Ø 8-16 mm with smooth shaft in accordance with DIN 6535, sealing washer type (Ø 2 mm) included in the scope of delivery, for coolant drill Ø 2.5-8 mm with smooth shaft in accordance with DIN 6535, type HA.

**Notes:**  
this precision drill chuck is designed for use on lathes in fixed tailstocks (drill chuck does not rotate)



Sealing washer ATORN 16 (Ø 4.2 mm)    Sealing washer ATORN 16 (Ø 2.05 mm)

MK	d1	D (mm)	A (mm)	L1 max. (mm)	21329... Ident. No.
MK 3	0.5-16 mm	57	104	110	500 ●
MK 4	0.5-16 mm	57	109	115	501 ●
MK 5	0.5-16 mm	57	111	117	502 ●

Prod. Gr. 208

# ORION® Morse taper arbours (DIN 238)

With morse taper for drill chucks

**Application:**  
For holding drill chucks.

- Execution:**
- Hardened and polished
  - Drill chuck holders with steep taper, see no. 23272



Ident. No. 101-162, 164-224

Drill chuck taper	Morse taper size	Min. taper external Ø (mm)	Max. taper external Ø (mm)	21269... Ident. No.
B 10	MK 1	9.4	10.095	101 ●
B 10	MK 2	9.4	10.095	102 ●
B 12	MK 1	11.1	12.06	121 ●
B 12	MK 2	11.1	12.06	122 ●
B 12	MK 3	11.1	12.06	123 ●
B 16	MK 1	14.5	15.733	161 ●
B 16	MK 2	14.5	15.733	162 ●
B 16	MK 3	14.5	15.733	163 ●
B 16	MK 4	14.5	15.733	164 ●

Drill chuck taper	Morse taper size	Min. taper external Ø (mm)	Max. taper external Ø (mm)	21269... Ident. No.
B 18	MK 1	16.2	17.78	181 ●
B 18	MK 2	16.2	17.78	182 ●
B 18	MK 3	16.2	17.78	183 ●
B 18	MK 4	16.2	17.78	184 ●
B 18	MK 5	16.2	17.78	185 ●
B 22	MK 2	19.8	21.793	222 ●
B 22	MK 3	19.8	21.793	223 ●
B 22	MK 4	19.8	21.793	224 ●

Prod. Gr. 207

# ORION® Ejector drifts for tapered tools with flat tangs (DIN 317)

**Application:**  
For driving out taper shanks in accordance with DIN 228 with flat tangs.

- Execution:**
- Made of special steel
  - Hardened
  - Tempered with burnished finish



Suitable for morse taper tools	MK 0	MK 1   MK 2	MK 3	MK 4	MK 5   MK 6
Length (mm)	90	140	190	225	265
21160... Ident. No.	005 ●	010 ●	030 ●	040 ●	050 ●

Prod. Gr. 207

**AMF** Ejector drifts with flat tangs  
Semi-automated

**Application:**

For driving out taper shanks in accordance with DIN 228 with flat tangs.

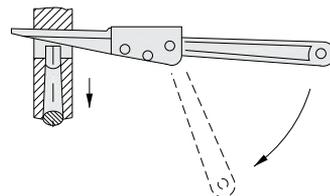
**Execution:**

- Made from hardened special steel

- With burnished finish
- With finger protection

**Advantage:**

- For one-handed operation without striking tool (protects spindle)



Suitable for morse taper tools		MK 1   MK 2   MK 3	MK 4   MK 5   MK 6
Length (mm)		330	380
21165...	Ident. No.	010	020
		•	•

Prod. Gr. 260



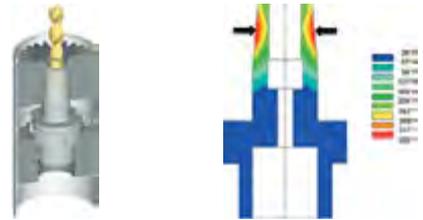
Thermal tool clamping

**diebold**

ThermoGrip®

ThermoGrip® is available for the following properties

- tools can be changed in a matter of seconds by induction or electrical heating with high energy density
- ThermoGrip® shrink-fit chucks are made of a heat-resistant special steel. A special quality procedure makes them particularly durable with a high dimensional stability
- The shrink process is reversible and can be repeated as often as necessary. Even after more than 5000 shrink operations, ThermoGrip® shrink-fit chucks retain concentricity, clamping force and elasticity
- You can shrink HSS and solid carbide shafts in ThermoGrip® chucks
- shrinking process of max. 10 s when using the ISG 3410 induction shrinking equipment
- Only the tool nose is warmed up. As a result of this local heat application, slowly heating the chuck body, the cooling time is <30 s



**diebold** ThermoGrip® inductive micro-shrink systems MS 502-P with parameter configuration, safe and effective overheating protection

**Application:**  
For shrinking carbide shanks.

- Execution:**
- For narrow, thin-walled and extremely short shrink-fit chucks
  - Also for screwing on standard chucks up to a diameter of 16 mm
  - Variable generator output
  - Chuck with standard geometry, diameter 3-16 mm

- Chuck with narrow geometry, diameter 3-20 mm
- a max. of 250 mm tool length can be shrunk

**Delivery:**  
Device including 1 pair of protective gloves and 1 support plate, and 4 ferrite discs for shrinking from Ø 3 – 16mm.



p. 774

Model	Nominal voltage (V/AC)	Max. current consumption (A)	Power rating (kW)	Width (mm)	Depth (mm)	Height (mm)	Weight without coolant (kg)	23400... Ident. No.
MS 502-P	220	16	3	220	350	520	15	121

Prod. Gr. 226

**diebold** ThermoGrip® Air cooler for MS 502

**Application:** For cooling tools that have been shrunk in.

Cooling type	Air-cooled
23403... Ident. No.	021

Prod. Gr. 226



**diebold** ThermoGrip® Tool chuck for MS 502-P With longitudinal stop and ejector pin

**Application:** 502 (incl. ejector pin).  
For holding shrink-fit chucks for shrinking device MS



Suitable for tool holding device	HSK 25	HSK 32/A-C	HSK 50/A-C	HSK 63/A-C	SK 30
23401... Ident. No.	005	010	020	025	060

Prod. Gr. 226

Source: Hahn+Kolb Werkzeuge GmbH  
Technical data subject to change.  
Availability subject to country specific rules and regulations.

# diebold ThermoGrip® inductive shrink systems HS 1100-P

**Application:**

For shrinking HSS and cemented carbide steel shanks in a diameter range of 3-32 mm and 6-32 mm (HSS).

**Execution:**

- Modular design enables attachment of HSK 32 to HSK100 and SK30/BT30 to SK50/BT50 tools.
- Integrated removal device for broken tools
- The horizontal longitudinal adjustment can be retrofitted at any time.
- All shrink-fit chucks from all manufacturers up to a length of 400 mm can be shrunk in.

- Ref. no. 23400222 (HS1100-P) with parameter configuration, safe and effective overheating protection
- with shrink parameters for standard, slimline (TSF) and reinforced mounts
- (Pyroquart) and TER pliers as well as manual adjustment of power control.
- a max. of 400 mm tool length can be shrunk

**Delivery:**

Device with inductive coil, 5 ferrite discs and 1 pair of protective gloves.



p. 774

Model	Nominal voltage (V/AC)	Max. current consumption (A)	Power rating (kW)	Width (mm)	Depth (mm)	Height (mm)	Weight without coolant (kg)	23400... Ident. No.
HS 1100-P	400	16	11	600	600	357	36	222

Prod. Gr. 226

## diebold ThermoGrip® Tool chuck for HS 1100-P

With longitudinal stop and ejector pin

**Application:**

For holding shrink-fit chucks for shrinking device

HS1100 (incl. ejector pin).



Suitable for tool holding device	HSK 32/A-C	HSK 40/A-C	HSK 50/A-C	HSK 63/A-C	HSK 80/A-C	HSK 100/A-C	SK 30   BT 30	SK 40   BT 40
23401... Ident. No.	105 ○	100 ○	110 ○	120 ○	130 ○	141 ○	142 ○	160 ○
Suitable for tool holding device	SK 50   BT 50	Universal clamp						
23401... Ident. No.	170 ○	180 ○						

Prod. Gr. 226

## diebold ThermoGrip® Tool chucks

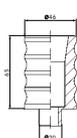
suitable for ISG 2202

**Application:**

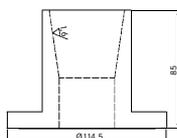
Compatible adapter for shrinking devices ISG 2400 TLK and 3400 TLK

**Notes:**

No tool chuck is required for HST 63/80/100.



Ident. No. 111



Ident. No. 112



Ident. No. 120



Ident. No. 121

Suitable for tool holding device	SK 30   SK 40	SK 50	HSK A25   HSK A32	HSK A40   HSK A50   HSK F63
<b>23403...</b>	Ident. No. <b>111</b>	<b>112</b>	<b>120</b>	<b>121</b>
	○	○	○	○

Prod. Gr. 226

## ORION® Length adjustment set

### Application:

Adjusting sleeve for safe and rapid clamping of tool to be shrink-fitted.

### Execution:

- The tool is set to the desired length using the scale and secured with a stud.



Adjusting the shrinking depth

### Advantage:

- For quick and safe length adjustment during shrinking
- Different sleeves allow adjustment to intermediate sizes
- No complicated handling of measuring equipment

### Delivery:

6 length adjustment sleeves, mounting block, hexagon key



Ready for shrinking

Min. clamping range (mm)	6
Max. clamping range (mm)	20
<b>23401...</b>	Ident. No. <b>080</b>
	●

Prod. Gr. 295

## diebold ThermoGrip® Shielding ring and ferrite discs in one piece

### Application:

For screening against magnetic fields.

### Advantage:

- Eliminates radiating and inductively-coupled electromagnetic interference.

Min. shield Ø (mm)	6	14	-	-
Max. shield Ø (mm)	12	20	25	32
<b>23405...</b>	Ident. No. <b>100</b>	<b>110</b>	<b>125</b>	<b>132</b>
	○	○	○	○

Prod. Gr. 226



## ATORN® Tool mounting device

1 system for all options

### Application:

For mounting and removing tools of all kinds and in up to eight different positions.

### Execution:

- Quick-change assembly system for all assembly systems without additional tools
- Effortless and tool-safe assembly of tools
- Can be swivelled and indexed to allow the optimal working position to be reached

- Exchangeable brass inserts to prevent wear on tool shanks

### Advantage:

- Accident-proof and convenient
- Minimal space usage
- Shortens tooling time

### Notes:

Tool chucks for tool mounting device ref. no. 23912130-550



Swivelling		4 x 90°	8 x 45°
23912...	Ident. No.	010	020
		●	●

Prod. Gr. 280

## ATORN® Tool chuck holder for tool mounting device no. 23910 010-020

1 system for all options

### Application:

For holding tool mounting device no. 23910 010-020.

### Notes:

The previous standard JIS B 6339 MAS BT was replaced by ISO 7388-2.



Ident. No. 130-150



Ident. No. 240-300, 463



Ident. No. 304-308



Ident. No. 530-550

ISO		7388-2	7388-2	7388-2	-	-	-	26623-1	26623-1
Standard shank design		MAN 69871-1   JIS B 6339 MAS BT	MAN 69871-1   JIS B 6339 MAS BT	MAN 69871-1   JIS B 6339 MAS BT	MAN 69880-1	MAN 69880-1	MAN 69880-1	-	-
Suitable for tool holding device		SK 40	SK 50	SK 30	VDI 50	VDI 40	VDI 30	Capto C4	Capto C5
23912...	Ident. No.	140	150	130	550	540	530	304	305
		●	●	●	○	●	●	○	○
ISO		26623-1	26623-1	-	-	-	-	-	-
Standard shank design		-	-	MAN 69893-1	MAN 69893-1	MAN 69893-1	MAN 69893-1	MAN 69893-1	-
Suitable for tool holding device		Capto C6	Capto C8	HSK A40	HSK A50	HSK A63	HSK A80	HSK A100	KM 63
23912...	Ident. No.	306	308	240	250	263	280	300	463
		●	●	●	●	●	●	●	○

Prod. Gr. 280

## ORION® 2D mechanical edge finder

For milling and jig boring machines

### Application:

The edge finder is used to accurately determine the edges of workpieces and bore centre points in relation to the working spindle during milling, for example.

### Execution:

- For use with speeds from 400 - 600 rpm
- Repeatability of approx. 0.01 mm
- Hard chrome-plated probe head

### Notes:

Spare part: Edge finder spring ref. no. 23921500



Sensor design	Single 2-D probe	Offset 2-D probe
Clamp in shank Ø (mm)	10	10
Probe head Ø (mm)	10	4/10
Repeat accuracy (mm)	0.01	0.01
<b>23921...</b>	Ident. No. <b>030</b>	<b>050</b>

Prod. Gr. 227

## ORION® 2D edge finder

With illuminated display and spring-loaded probe ball

### Application:

For precise alignment of workpiece reference surfaces or edges to determine the bore centre points centrally to the working spindle.

### Execution:

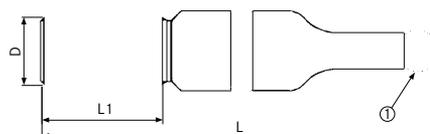
- **Ident. No. 005–010:** Functional components are hardened and ground
- **Ident. No. 011:**
  - Functional components are hardened and polished
  - With acoustic signal



Ident. No. 005



Ident. No. 010–011



① Spring ball Ø 10,000

Sensor design	2-D	2-D	2-D audible
Clamping shank Ø D (mm)	16	20	20
Probe head Ø (mm)	10	10	10
Clamping length L1 (mm)	35	45	45
Length L (mm)	99	94	119
Reading	Light indicator	Light indicator	Audible light indicator
Repeat accuracy (+/-) (mm)	0.01	0.01	0.01
<b>23923...</b>	Ident. No. <b>005</b>	<b>010</b>	<b>011</b>

Prod. Gr. 298

## ORION® 3D edge finder

With illuminated display and spring-loaded probe ball

### Application:

For precise alignment of workpiece reference surfaces or edges to determine the bore centre points centrally to the working spindle.

- **Ident. No. 025:** With acoustic signal

### Advantage:

- **Ident. No. 015–020:** 3D model also suitable for approaching the workpiece in the Z direction (vertically)
- **Ident. No. 025:** 3-D model also suitable for moving the workpiece in the Z direction (vertically)

### Execution:

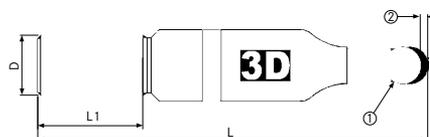
- Functional components are hardened and polished



Ident. No. 020–025



Ident. No. 015



① Spring ball Ø 10,000  
② Tracer path approx. 3 mm

Sensor design	Clamping shank Ø (mm)	Probe head Ø (mm)	Clamping length L1 (mm)	Length L (mm)	Reading	Repeat accuracy (+/-) (mm)	<b>23923...</b> Ident. No.
3-D	16	10	35	111	Light indicator	0.01	<b>015</b> ●
3-D	20	10	45	106	Light indicator	0.01	<b>020</b> ●
3-D audible	20	10	45	131	Audible light indicator	0.01	<b>025</b> ●

Prod. Gr. 298

# ATORN® 3D edge finder

With dial gauge

SK  
40

**Application:**

Suitable for defining and setting workpiece reference points in all 3 axes (X, Y and Z) on all milling machines and machining centres. The workpiece is measured in any direction with the measuring probe until both indicators are at ,0'.

**Execution:**

- Direct path measurement along Z axis, can be used vertically and horizontally, concentricity can be readjusted via 4 screws
- Nominal breaking point on the measuring probe prevents damage to the workpiece or dial gauge
- IP 67 degree of protection: temporary immersion in water possible and dust-proof according to DIN EN 60529

**Advantage:**

- Metallic housing with very good visibility of readings
- Can be used with all tool and eroding machines
- Easy reading off of actual value

**Delivery:**

Including short finder insert ref. no. 23924004

**Notes:**

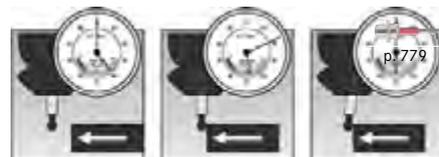
For the ATORN 3D edge finder 23924010-020, spare part ATORN bellows for ref. no. 23924 009



Ident. No. 010



Ident. No. 020



Tool holding device	Clamping shank Ø (mm)	Probe head Ø (mm)	Housing width (mm)	Meter Ø (mm)	Scale value (mm)	Sensor insert length (mm)	Repeat accuracy (+/-) (mm)	IP protection class	23924... Ident. No.
-	20	4	65	57	0.01	33	0.01	IP 67	010 ●
SK 40	-	4	65	57	0.01	33	0.01	IP 67	020 ●

Prod. Gr. 234

## ATORN® Probe insert

Replacement parts for 3D edge finder, ref. no. 23924 010-020

**Execution:**

- Nominal breaking point on measuring probe prevents damage to 3D edge finder
- Short version ref. no. 23924004
- Long version ref. no. 23924008



Ident. No. 004



Ident. No. 008

Probe head Ø (mm)	4	8
Sensor insert length (mm)	33	75
Repeat accuracy (+/-) (mm)	0.01	0.01
23924... Ident. No.	004 ●	008 ●

Prod. Gr. 234

## ORION® Zero adjustment device with dial gauge

**Application:**

The device is placed on the workpiece. Using the machine spindle, the cutting tool is moved up to the probe until the indicator is at zero for the first time. Now the reference dimension for the distance from the workpiece of 100 mm has been reached.

**Execution:**

- Height adjustment gauge to determine position of workpiece surface in the Z direction on milling machines and lathes, can also be used horizontally
- Non-magnetic



Scale value (mm)	0.01
Reference dimension (mm)	100
Repeat accuracy (+/-) (mm)	0.01
23931... Ident. No.	010 ●

Prod. Gr. 227

**TSCORN** Zero adjustment device, mechanical  
With dial gauge

**Application:**

For accurately determining the position of workpiece surfaces or workpiece lengths in the Z direction on lathes or milling machines. The device is placed on the workpiece. It is then moved carefully towards the device with the spindle stationary until the dial gauge shows '0'. The reference dimension of 50 mm is now reached. Allowance has been made for a safety spring travel of approx. 0.5 mm for going beyond the 50 mm.

workpiece surface in the Z direction on milling machines and lathes.

- Made of steel
- With dial gauge
- **Ident. No. 020:** No. 23932 020, magnetic: in order to also be able to mount the zero adjustment device on the side, a version with a built-in magnet is available for delivery.

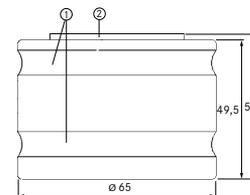


**Execution:**

- Zero point probe for improved guidance, for even more precise determination of the position of the

**Delivery:**

Zero adjustment device in a wooden case with serial number and test certificate



① = Gripping grooves  
② = Spring-mounted button

Version	Steel	Magnetic
Scale value (mm)	0.01	0.01
Reference dimension (mm)	50	50
Repeat accuracy (+/-) (mm)	0.01	0.01
<b>23932...</b>	Ident. No. <b>010</b>	<b>020</b>
	●	●

Prod. Gr. 227

**TSCORN** zero adjustment device mechanical micro  
For measuring micro-tools

**Application:**

for accurately determining the position of workpiece surfaces or workpiece lengths in the Z direction on lathes or milling machines. the device is placed on the workpiece.

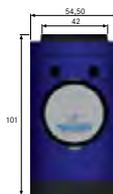
- thanks to safety spring travel, the zero adjustment device is unaffected by an overrun of a maximum of 2 mm.
- ref. no. 23932031: to make it possible to also mount the zero adjustment device on the side, a version with a built-in magnet is available for delivery.

**Execution:**

- For measuring micro-tools, possible to Ø 0.1 mm

**Delivery:**

zero adjustment device in a wooden case with serial number and factory certificate.



Version	Steel
Probe head Ø (mm)	42
Scale value (mm)	0.01
Gehäuse-Ø (mm)	54.5
Height (mm)	101
<b>23932...</b>	Ident. No. <b>030</b>
	●

Prod. Gr. 227

**ORION** Zero adjustment device, optical, 50 mm (magnetic)

**Application:**

For determining the position of workpiece surfaces or workpiece lengths in the Z direction on lathes or milling machines

as the LED lights up, the reference dimension of 50 mm has been reached. Allowance has been made for a safety spring travel of approx. 2 mm for going beyond the 50 mm. A magnetic version can be supplied for horizontal use.

**Execution:**

- The device is placed on the workpiece. The spindle is now moved carefully up to the device. As soon

**Delivery:**

Zero point adjustment device with test certificate





Version	Steel	Magnetic
Shaft Ø (mm)	39	39
Probe head Ø (mm)	19	19
Reference dimension (mm)	50	50
Repeat accuracy (+/-) (mm)	0.01	0.01
23933... Ident. No.	020 ●	030 ●

Prod. Gr. 227

## diebold Test arbours and check mandrels

Check mandrels hollow-drilled in stages

### Application:

For checking concentricity and alignment of machine spindles.

### Execution:

- Concentricity tolerance < 0.003 mm
- Material: Case-hardening steel, tensile strength at the core of at least 800 N/mm
- No. 23100:** Case-hardened, 670 ± 40 HV (56+4 HRC). Taper and shank polished.

- No. 23750:** Hollow shank taper in accordance with DIN 69893-1 type A, hollow-drilled with 4 grooves on the end of the taper for measurement in 0°, 90°, 180° and 270° positions.

### Delivery:

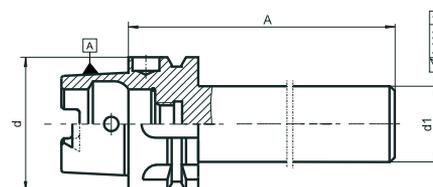
In wooden box with test report

### Notes:

**No. 23100:** \* With annular groove



No. 23750



No. 23750

Tool holding device	Standard shank design	Outer Ø (mm)	Projecting length (mm)	23100...		23750...	
				Ident. No.		Ident. No.	
SK 40	DIN 69871-1 A	40	320	510	●	-	-
SK 50	DIN 69871-1 A	40	320	530	●	-	-
SK 40	DIN 2080	40	320	801	○	-	-
HSK A40	DIN 69893-1 A	24	180	-	-	030	●
HSK A50	DIN 69893-1 A	32	236	-	-	040	○
HSK 63	DIN 69893-1 A	40	346	-	-	050	●
HSK A80	DIN 69893-1 A	40	346	-	-	060	●
HSK 100	DIN 69893-1 A	40	349	-	-	070	●

23100... = Prod. Gr. 2AB  
23750... = Prod. Gr. 290



**technical introduction – tool presetters**  
 success is a matter of adjustment – increase productivity with the right settings



**ATORN tool presetters save time and money, putting you an extra step ahead of the competition. your tools are set and measured while your machine is producing metal chips – so there's no downtime.**

**the right tool is what counts**

precisely measured tools, optimised machine operating times and a longer service life for tools increase the output of your production facility by at least 15 per cent. ATORN tool presetters pay for themselves quickly, easy to operate, gentle on your budget and big on performance.

**simple!**

- the ATORN concept: the user is the most important thing when it comes to working efficiently day in, day out
- state-of-the-art image processing makes tool presetting easy
- fast training thanks to an intuitive ATORN operating concept

**exactly!**

- image processing system with dynamic crosshair for contact-free and accurate tool measurement, regardless of the operator
- brand quality such as Bosch pneumatics, THK guides, Heidenhain glass scales provide accuracy and a long, maintenance-free service life
- tool chuck spindle SK 50 with high levels of repeatability and integrated calibration edges

**economical!**

- three-in-one: measure, adjust and check tools
- supplied as a complete package with support table, adapters and utensil storage, label printers
- „Made in Germany“ quality at an unbeatable price/performance ratio
- worldwide service

	scratching	scriber	laser	projector	ATORN
investment	✓	✓	—	■	✓
machine operating time	—	✓	—	✓	✓
repeatability	—	—	✓	■	✓
measurable parameters	—	—	■	—	✓
process reliability	—	—	✓	■	✓
cost of measurements	—	—	✓	■	✓
written measurement report	—	—	—	■	✓
tool inspection	—	—	—	—	✓
conclusion	uneconomical, high risk of tool damage	low purchasing cost, but unsuitable for measuring and setting tools	high purchasing costs as each machine requires a separate laser	outdated technology, a setting device with image processing is required for new purchases	higher profitability thanks to reliable manufacturing quality, longer machine operating times, optimised service life and less waste

✓ standard   ■ optional   — not available

**what are the benefits of setting tools correctly with ATORN presetters?**

- increase your production quality
- optimised machine running time
- efficient processes around the tool
- no waste
- increased tool life
- can be used directly in production





## ATORN tool presetters in detail

### simple and fast:

time-consuming fine tuning is a thing of the past. the dynamic crosshair moves to the tool cutting edge and measures automatically in the entire camera image.

### reliably accurate results:

with projector technology, the measurement results are dependent on the operator. different from EZset! the results are accurate, reproducible and reliable, regardless of the user.

### effective and economical:

three-in-one! rapid tool measurement, setting and testing – right next to your CNC machines.



- ① device tower with 3 guides in 3 variants
- ② one-handed operating handle
- ③ centre-turning measuring device (option)
- ④ membrane keyboard (360° brake, 4 x 90° indexing, vacuum (option))
- ⑤ under-table
- ⑥ image processing with CCD camera and integrated incident light power LEDs
- ⑦ tool chuck spindle SK 50
- ⑧ ImageController image processing in 4 variants
- ⑨ label printer
- ⑩ utensil storage
- ⑪ basic body with 2 guides in 3 variants

#### EZclick: ImageControllerbasic

operate the ICbasic image processor using the EZclick rotary/push button. use EZclick to activate the menus on the 7" monitor and select and confirm functions at the touch of a button. graphic symbols help you when using the tool presetter.



#### EZpush: ImageController1

the IC1 image processor is easy to operate using the EZpush 13.3" touchscreen monitor. you can quickly and conveniently select and confirm all the functions of the tool presetter via a graphic menu.



#### EZtouch: ImageController2

the IC2 image processor features an EZtouch 13.3" or 24" touchscreen monitor for convenient and intuitive operation. clear graphics on the function buttons enable standard measuring processes to be performed quickly and easily.



#### EZslide: ImageController3

modern, user-friendly and individually configurable IC3 image processor with EZslide 17" touchscreen operation: the innovative user interface can be adapted to the specific user using the touch and slide function.





overview: tool presetters

Function	Description	ICbasic	IC1	IC2	IC3
<b>operation/features</b>					
EZclick	Menu operation via a rotary/push button	✓	—	—	—
EZtouch	Menu operation via touchscreen	—	✓	✓	✓
EZslide	Window areas moved via touchscreen	—	—	—	✓
Monitor	TFT colour monitor	7.0 inch	13.3 inch	13.3 inch or 24 inch	17.0 inch
Operating system	Operating system of the measuring device control system	Linux	Windows 10	Windows 10	Windows 10
<b>Device design</b>					
Spindle	SK 50 tool holding spindle	✓	✓	✓	✓
Pneum. spindle functions	4 x 90° indexing, 360° spindle brake	■	✓	✓	✓
Under-table	Under-table in sturdy industrial design	■	✓	✓	✓
Label printer	Thermal label printer	■	✓	✓	✓
Adapter shelf	For storing adapters	■	✓	✓	✓
<b>Options</b>					
Vacuum spindle	Tool holding spindle, SK 50 vacuum	■	■	■	■
universal spindle for power-operated tool clamping	Power-operated universal tool holding spindle	—	■	■	■
Adapters	Standard selection, other adapters on request	■	■	■	■
Adapter shelf	Additional adapter shelves as required	■	■	■	■
EZprotection/ EZspindle-protection	Cover hoods for protecting against dust and dirt	■	■	■	■
EZmaintain	Conditioning unit for preparing compressed air for the device	■	■	■	■
EZturn	Rotation centre measurement with monochrome camera	—	—	■	■
Autofocus	Automatic focus of the tool cutting edge	—	■	■	■
<b>Software functions</b>					
Dynamic crosshair	Dynamic crosshair for automatic measurement	✓	✓	✓	✓
Cutting edge shape detection	Automatic cutting edge shape detection	✓	✓	✓	✓
Cutting edge inspection	Magnification of the cutting edge in incident light for quality control	12x	20x	20x 13.3 inch / 38x 24 inch	28x
Multi-cutter	Software function for concentricity and axial runout for multi-cutting edge tools	✓	✓	✓	✓
EZmax	Software function for determining and measuring the tool contour	✓	✓	✓	✓
Zero point monitoring	safety prompt for adapter zero points for preventing a machine crash	✓	✓	✓	✓
EZstart	Software function for quickly measuring standard tools	—	✓	✓	✓
Adapter management	Saving and managing adapter zero points	99	99	99	999
Tool management	Saving tool data	■	✓	✓	15000
Online help	Integrated help texts	✓	✓	✓	✓
EZnavigator	compass needle – simple camera positioning for measuring set values on the tool	■	✓	✓	✓
Graphics library	Graphic display of the tools	—	—	■	✓
Tooling sheets	Create and save tool lists	—	—	■	■
Projector function	Conversion to projector function with crosshair	■	Positionable	Positionable	Positionable
<b>Data output</b>					
Label printing	Output of thermal labels	■	✓	✓	✓
List print	Output of e.g. A4 reports	—	✓	✓	✓
USB	USB-2.0 interfaces, data output via USB	1 piece	4 pieces	4 pieces	4 pieces
LAN/network	Data output via network connection	—	—	■	■
COM/serial	data output via RS232 interface	✓	✓	✓	✓
control-specific to the CNC machine	output of measurement values and tool data suitable for machines from the IC2/IC3 tool management on the CNC machine	—	—	■	■
control-specific into the network	software for tool management and for transmitting measured values to the network via separate, customer PC	■	■	■	■

✓ standard   ■ optional   — not available

Source: Hahn+Kolb Werkzeuge GmbH  
 Technical data subject to change.  
 Availability subject to country specific rules and regulations.

## ATORN® ImageController Basic tool presetter

### Application:

The ATORN ImageController Basic presetter with great features for excellent value for money. Adjust your tools quickly, easily and to the nearest µm. Presetters are able to withstand the rigours of workshop use and can be set up directly next to CNC machines in machining and testing centres or in measurement rooms. All important basic functions for measuring your tools, such as length, diameter, flatness and concentricity come as standard. A dynamic crosshair pointer detects and measures tool cutters automatically within the entire camera image.

### Execution:

- High-precision spindle, SK 50
- 7 inch screen
- memory for 99 adapter tools
- automatic zero point monitoring
- automatic cutting edge shape detection
- quick menu operation via a rotary/push button
- compass needle – simple camera positioning for measuring set values on the tool
- dynamic crosshair for automatic measurement
- USB 2.0 interface, data output via USB

### Advantage:

- simple operation and fast familiarisation with minimum training
- Fast measurement, setting and testing of tools (length and diameter)
- fast and convenient printing of measurement results
- EZmax software function for easy creation of tool contour
- Various measurement programs are available, such as concentricity check on the tool shank, projector mode, etc.

### Notes:

price: plus shipping and packaging  
suitable cabinet workbench for ATORN basic presetter, ref. no. 50199251 light grey unit 7035, multiplex beech worktop length 1500 mm, worktop depth 750 mm, working height 840 mm with 5 drawers and partial extension, anthracite grey front 7016



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Type	Measuring range of Z axis (mm)	Measuring range of X axis (mm)	Repeat accuracy (+/-) (mm)	Concentricity tolerance (mm)	Compressed air supply (bar)	Max. screen slant (in)	23961... Ident. No.	
ATORN 350 with ICbasic	350	320	0.002	0.002	6	7	211	(o) <sup>+</sup>
ATORN 420 with ICbasic	420	420	0.002	0.002	6	7	212	(o) <sup>+</sup>
ATORN 600 with ICbasic	600	420	0.002	0.002	6	7	213	(o) <sup>+</sup>

Prod. Gr. 2AD

## ATORN® ATORN ImageController1 tool presetter

### Application:

The ATORN ImageController1 presetter with great features for excellent value for money. Adjust your tools quickly, easily and to the nearest µm. Presetters are able to withstand the rigours of workshop use and can be set up directly next to CNC machines in machining and testing centres or in measurement rooms. All important basic functions for measuring your tools, such as length, diameter, angle, radius, concentricity and axial runout come as standard. A dynamic crosshair pointer detects and measures tool cutters automatically within the entire camera image.

### Execution:

- High-precision spindle, SK 50
- under-table in sturdy industrial design
- 4 x 90° indexing, 360° spindle brake
- memory for 99 adapter tools and 3000 tools
- Simple operation using 13.3-inch vertical touch-screen monitor
- automatic cutting edge detection and zero point monitoring

- USB 2.0 interface, data output via USB. output of thermal labels
- compass needle – simple camera positioning for measuring set values on the tool
- dynamic crosshair for automatic measurement
- power-operated tool clamp (optional)

### Advantage:

- Fast measuring and adjusting of tools via EZstart (picture book)
- 20x magnification of the cutting edge in incident light for quality control
- EZnavigator compass needle – simple camera positioning for measuring set values on the tool
- magnification of the cutting edge in incident light for quality control, 12x
- USB 2.0 interface, data output via USB

### Notes:

price: plus shipping and packaging



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Type	Measuring range of Z axis (mm)	Measuring range of X axis (mm)	Repeat accuracy (+/-) (mm)	Concentricity tolerance (mm)	Compressed air supply (bar)	Max. screen slant (in)	23961... Ident. No.	
ATORN 350 with IC1	350	320	0.002	0.002	6	13.3	214	(o) <sup>+</sup>
ATORN 420 with IC1	420	420	0.002	0.002	6	13.3	215	(o) <sup>+</sup>
ATORN 600 with IC1	600	420	0.002	0.002	6	13.3	216	(o) <sup>+</sup>
ATORN 600/570 with IC1	600	570	0.002	0.002	6	13.3	217	(o) <sup>+</sup>

Prod. Gr. 2AD

# ATORN® ATORN ImageController2 tool presetter

**Application:**

ATORN ImageController2 presetter, professional entry-level model providing high quality equipment and unbeatable value for money. Adjust your tools very quickly, easily and with µm-accuracy. The sturdy presetter is able to withstand the rigours of workshop use and can be set up directly next to CNC machines in machining and testing centres or in measurement rooms. The ATORN Image-Controller2 provides the main functions for your application scenarios, such as measuring the length, diameter, radius, angle, contours, concentricity and axial runout of your standard tools. A dynamic crosshair pointer detects and measures tool cutters automatically within the entire camera image. The user is notified if the preset tolerance is exceeded and the current zero point is indicated before every measuring operation to avoid machine crashes, tool breakages and part rejects. The results are accurate, reproducible and reliable. In addition to the measurement functions, it facilitates management of complete tools and tooling sheets and machine-compatible transmission of this data.

**Execution:**

- High-precision SK 50 spindle with integrated calibration edge and spindle indexing
- under-table in sturdy industrial design
- 4 x 90° indexing, 360° spindle brake
- memory for 99 adapter tools and 3000 tools
- Convenient and intuitive operation using horizontal touchscreen monitor
- automatic cutting edge detection and zero point monitoring
- Menu operation via touchscreen and compass needle – simple camera positioning for measuring set values on the tool

- Ref. no. 23961218-221 for 13.3-inch model and ref. no. 232961240-243 for 24-inch model
- dynamic crosshair for automatic measurement
- 4 pc. USB 2.0 interface, data output via USB. measurement results can be transmitted to labels, lists or to the CNC machine itself
- rotation centre measurement with monochrome camera (optional)

**Advantage:**

- Fast µm-accurate measuring and setting of tools with EZstart (picture book)
- 20x cutting inspection magnification with a 13.3 in/38 x 24 in touch screen monitor
- Conversion to projector function with crosshair, positionable.
- integrated tool management system for storing e.g. set values and tolerances
- and creating tooling sheets for workpiece production
- >zidcode<, no network connection required for tool identification and data transmission thanks to simple transmission of data for complete tools using QR code.

**Delivery:**

Fast measuring and adjusting of tools via EZstart (picture book)

**Notes:**

price: plus shipping and packaging



Ident. No. 218-221



Ident. No. 240-243



Type	Measuring range of Z axis (mm)	Measuring range of X axis (mm)	Repeat accuracy (+/-) (mm)	Concentricity tolerance (mm)	Compressed air supply (bar)	Max. screen slant (in)	23961... Ident. No.	
ATORN 350 with IC2	350	320	0.002	0.002	6	13.3	218	(o)†
ATORN 420 with IC2	420	420	0.002	0.002	6	13.3	219	(o)†
ATORN 600 with IC2	600	420	0.002	0.002	6	13.3	220	(o)†
ATORN 600/570 with IC2	600	570	0.002	0.002	6	13.3	221	(o)†
ATORN 350 with IC2 24"	350	320	0.002	0.002	6	24	240	o
ATORN 420 with IC2 24"	420	420	0.002	0.002	6	24	241	o
ATORN 600 with IC2 24"	600	420	0.002	0.002	6	24	242	o
ATORN 600/570 with IC2 24"	600	570	0.002	0.002	6	24	243	o

Prod. Gr. 2AD

## ATORN® ATORN ImageController3 tool presetter

### Application:

The ATORN ImageController3 presetter for professional use with intuitive image processing technology. (Similar to using a smartphone). The clear structure of the sub-menus allows simple and customised use of the measuring device control system – simply swipe and select. The familiar technology is self-explanatory and therefore easy to learn. This saves time on training and also makes work more fun. The user interface is adapted to the respective user and makes it possible to define priorities for the respective user. The option to connect to the shared database enables central data to be accessed for effective tool management.

### Execution:

- high-precision SK 50 spindle with integrated calibration edge, 4 x 90° indexing and 360° spindle brake
- under-table in sturdy industrial design
- memory for 999 adapter tools and 15000 tools
- automatic zero point monitoring
- (Optional) autofocus: automatic focus of the tool cutting edge and cutting edge shape detection of the tool
- 17 inch touchscreen operation: (similar to using a smartphone), compass needle – simple camera positioning for measuring set values on the tool
- window area moved via touchscreen
- Fast and incredibly simple operation with user-specific display.

- dynamic crosshair for automatic measurement
- 4 pc. USB 2.0 interface, data output via USB. Measurement results can be transmitted to labels, lists or
- to the CNC machine itself (optional)

### Advantage:

- Simple and µm-accurate measurement and saving of multi-stage tools
- 28x magnification of the cutting edge in incident light for quality control
- rotation centre measurement with monochrome camera (optional)
- Conversion to projector function with crosshair, positionable.
- integrated tool management system for storing e.g. set values and tolerances
- and creating tooling sheets for workpiece production

### Notes:

price: plus shipping, packaging, training and commissioning.  
Optional: „ >zidcode<, no network connection required for tool identification and data transmission thanks to simple transmission of data for complete tools using QR code.”



Type	Measuring range of Z axis (mm)	Measuring range of X axis (mm)	Repeat accuracy (+/-) (mm)	Concentricity tolerance (mm)	Compressed air supply (bar)	Max. screen slant (in)	23961... Ident. No.	
ATORN 350 with IC3	350	320	0.002	0.002	6	17	222	(°)†
ATORN 420 with IC3	420	420	0.002	0.002	6	17	223	(°)†
ATORN 600 with IC3	600	420	0.002	0.002	6	17	224	(°)†
ATORN 600/570 with IC3	600	570	0.002	0.002	6	17	225	(°)†

Prod. Gr. 2AD

## ATORN® tool chuck adapter suitable for all ATORN ImageController Basic presetters up to IC3

### Execution:

- Ref. no. 23961090-23961096 HSK with eccentric clamp

- ref. no. 23961100-23961105 HSK without tool clamp



Ident. No. 080-085, 120-124  
ISO 7388-1 SK



Ident. No. 090-105  
DIN 69893 HSK



Ident. No. 113-116  
DIN 69880 VDI

## Tool clamping \ Tool presetters and accessories

ISO	DIN	Suitable for tool holding device	23961... Ident. No.	
7388-1	-	SK 15	080	○
7388-1	-	SK 20	081	○
7388-1	-	SK 25	082	○
7388-1	-	SK 30	083	○
7388-1	-	SK 40	084	○
7388-1	-	SK45	085	○
-	69893-1	HSK25 A/C/E/T-HSK32 B/D/F excenter clamping	090	○
-	69893-1	HSK32 A/C/E/T-HSK40 B/D/F excenter clamping	091	○
-	69893-1	HSK40 A/C/E/T-HSK50 B/D/F excenter clamping	092	○
-	69893-1	HSK50 A/C/E/T-HSK63 B/D/F excenter clamping	093	○
-	69893-1	HSK63 A/C/E/T-HSK80 B/D/F excenter clamping	094	○
-	69893-1	HSK80 A/C/E/T-HSK100 B/D/F excenter clamping	095	○
-	69893-1	HSK100 A/C/E/T-HSK125 B/D/F excenter clamping	096	○
-	69893-1	HSK32 A/C/E/T-HSK40 B/D/F without tool clamping	100	○
-	69893-1	HSK40 A/C/E/T-HSK50 B/D/F without tool clamping	101	○
-	69893-1	HSK50 A/C/E/T-HSK63 B/D/F without tool clamping	102	○
-	69893-1	HSK63 A/C/E/T-HSK80 B/D/F without tool clamping	103	○
-	69893-1	HSK80 A/C/E/T-HSK100 B/D/F without tool clamping	104	○
-	69893-1	HSK100 A/C/E/T-HSK125 B/D/F without tool clamping	105	○
-	69880-1	VDI 30	113	○
-	69880-1	VDI 40	114	○
-	69880-1	VDI 50	115	○
-	69880-1	VDI 60	116	○
26623-1	-	C3	120	○
26623-1	-	C4	121	○
26623-1	-	C5	122	○
26623-1	-	C6	123	○
26623-1	-	C8	124	○

Prod. Gr. 2AD

### **ATORN**® thermal label printer Accessories for ATORN tool presetter

**Application:** codes on adhesive paper or thermal labels.  
For printing measurement results or dot matrix

23961... | Ident. No. **228**  
(○)\*

Prod. Gr. 2AD



### **ATORN**® rotation centre measuring device for ImageController 1 + 2 + 3 accessories for ref. no. 23961212 – 23961243

23961... | Ident. No. **150**  
○

Prod. Gr. 2AD



### **ATORN**® Data output package for ImageController 2 + 3

23961... | Ident. No. **151**  
○

Prod. Gr. 2AD

## ATORN® Post processor for ImageController 2 + 3

23961... | Ident. No. 152  
 Prod. Gr. 2AD

## ATORN® Colour printer for lists and graphics for ImageController 2 + 3

23961...  
 Ident. No. 153  
 Prod. Gr. 2AD



## ATORN® "BLUE-TACK" cleaning agent

23961... | Ident. No. 161  
 Prod. Gr. 2AD

## ATORN® autofocus for ImageController 2+3

23961... | Ident. No. 162  
 Prod. Gr. 2AD



## EMV-TAG Data holder, vertical and horizontal Space-saving mounting

**Application:**  
 For labelling tools.

**Execution:**

- data holder, ideally suited to ATORN and Zoller tool presetters
- Data holder dimensions 92 x 38 mm
- The data holders can be affixed both horizontally and vertically.
- this allows tool carriers to be stored in a tool cabinet in a space-saving and visually clean way.

- Universal holder for (VDI) with two powerful magnets
- Assignment of tools using colour coding possible
- Tool data holder made of plastic

**Advantage:**

- Minimization of the set-up time
- Avoiding errors for pre-existing tool compilations
- No additional measurements necessary

**Notes:**

Other dimensions on request.



Material	Plastic											
Suitable for tool holding device	SK 30   HSK 50/A-C		SK 40/HSK 63		SK 50/HSK 100		HSK 40/A-C		HSK 80/A-C			
Colour	23698... Ident. No.											
Red	050	•	060	•	070	•	080	•	090	•	100	•
Blue	051	•	061	•	071	•	081	•	091	•	101	•
Green	052	•	062	•	072	•	082	•	092	•	102	•
Yellow	053	•	063	•	073	•	083	•	093	•	103	•
Brown	054	•	064	•	074	•	084	•	094	•	104	•
Grey	055	•	065	•	075	•	085	•	095	•	105	•

Prod. Gr. 206



**MULTIFIX spare parts for all sizes**  
When ordering, please state identification, part no. and MULTIFIX size

For MULTIFIX tool holder head	For MULTIFIX tool change holder	For MULTIFIX tool change holder J	For MULTIFIX cut-off tool holder
<p>1 = tension bowl (compl. with eccentric bolt 4) 2 = plunger spring 3 = ram 4 = eccentric bolt with oil dispenser 5 = clamping lever 6 = ring spring 7 = pointer 8 = centring disc 9 = protective cover 10 = central body</p>	<p>11 = square head bolt 12 = cylinder head screw 13 = adjusting cap 14 = height adjustment nut 15 = height adjustment screw 16 = socket wrench</p>	<p>17 = clamping screw</p>	<p>19 = clamping claw 20 = compression spring 21 = cylinder head screw</p>

**MULTIFIX quick-change steel tool holder**

**Application:**

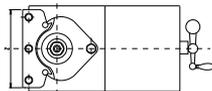
For holding change tool holders. The selection of the Multifix quick-change steel tool holder and change tool holder depends on the drive output, the tool carriage width and lathe chisel height.

**Execution:**

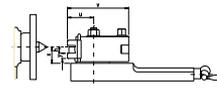
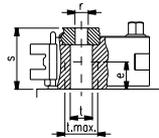
- The drill hole in the centring disc must be enlarged to the dimensions of the clamping screw.

**Advantage:**

- Precision manufacture owing to the high repeat accuracy (0.01 mm)
- Versatile production possibilities (40 tool positions possible)
- Quick and trouble-free height adjustment thanks to adjusting screw
- Extremely flexible due to the modular structure



Tool holder width  $z \geq$  tool skid width  $l$



Steel holder head size	Aa	A	B	C	D1
Changeover holder size	Aa   D 12	AD 16   AD 20	BD 25   BD 32	CD 32   CD 40   CD 45	D1 D40   D1 D50   D1 D63
Max. drive power of lathe (kW)	1.1	2.2	6.6	13.2	22
Z (mm)	80	100	150	180	200
y	6 mm	9 mm   10 mm	12 mm   13 mm	16.5 mm	20.5 mm
r (mm)	10	10	16	16	22
t (mm)	13	35	40	55	65
t (mm)	13	20	32	40	40
e (mm)	-	35	45	75	75
s (mm)	36	54	75	105	122
v	70 mm	100 mm	150 mm	202 mm	230 mm   234 mm   242 mm
b	30 mm	48 mm	71 mm	102 mm	112 mm   116 mm   124 mm
<b>22240...</b>	Ident. No. <b>050</b>	<b>060</b>	<b>070</b>	<b>080</b>	<b>090</b>
	●	●	●	●	○

Prod. Gr. 214

**MULTIFIX cutting-off tool holder A**

**Application:**  
for cutting-off blades

- Execution:**
- For matching cutting-off blades no. 17102 - 17106
  - For steel tool holder head no. 22240

	Steel holder head size	Ident. No.
<b>22247...</b>	Aa-A00	<b>005</b>
		○
<b>22247...</b>	AA-AO	<b>010</b>
		●
<b>22247...</b>	BA-A2a	<b>020</b>
		●
<b>22247...</b>	CA-A3a	<b>030</b>
		○

Prod. Gr. 214



Cutting-off tool holder A

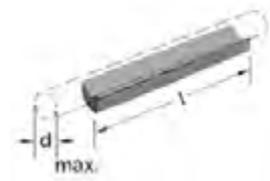
## MULTIFIX vee block P

**Application:**

Accessories for quick-change holder H. For clamping small boring bars

**Execution:**

▪ for steel tool holder head no. 22240



Vee block P

		Steel holder head size	Length l (mm)	Max. clamping Ø d (mm)	Ident. No.
22249...	AP 1485	A	85	14	Ident. No. 010
22249...	BP 20130	B	130	20	Ident. No. 020
22249...	CP 25160	C	160	25	Ident. No. 030
22249...	CP 32160	C	160	32	Ident. No. 040
22249...	D1 P 40180	D1	160	40	Ident. No. 050

Prod. Gr. 214

## MULTIFIX cutting tool holder D

**Application:**

for square turning tools

**Execution:**

▪ For steel tool holder head no. 22240



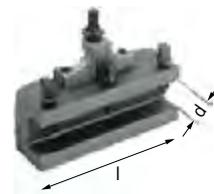
		Steel tool holder head size shape No. 22240	Length L (mm)	Clamping width d (mm)		
22241...	AaD 1250	Aa	50	12	Ident. No.	010 ●
22241...	AD 1675	A	75	16	Ident. No.	020 ●
22241...	AD 1690	A	90	16	Ident. No.	030 ●
22241...	AD 2075	A	75	20	Ident. No.	040 ●
22241...	AD 2090	A	90	20	Ident. No.	050 ●
22241...	BD 25120	B	120	25	Ident. No.	060 ●
22241...	BD 25140	B	140	25	Ident. No.	070 ●
22241...	BD 32120	B	120	32	Ident. No.	080 ●
22241...	BD 32140	B	140	32	Ident. No.	090 ●
22241...	CD 32150	C	150	32	Ident. No.	100 ●
22241...	CD 32170	C	170	32	Ident. No.	110 ●
22241...	CD 40150	C	150	40	Ident. No.	120 ●
22241...	CD 40170	C	170	40	Ident. No.	130 ●
22241...	CD 45170	C	170	45	Ident. No.	140 ○
22241...	D1 D 40180	D1	180	40	Ident. No.	150 ●
22241...	D1 D 50180	D1	180	50	Ident. No.	160 ●
22241...	D1 D 63180	D1	180	63	Ident. No.	170 ●

Prod. Gr. 214

## ORION® Quick-change holder D

**Application:**  
For holding tools.

**Execution:**  
▪ For steel tool holder head no. 22240



Steel tool holder head size shape No. 22240		B	B
Clamping width d (mm)		25	32
22251...	BD 25120	Ident. No. 060 ●	-
22251...	BD 25140	Ident. No. 070 ●	-
22251...	BD 32120	Ident. No. -	080 ●
22251...	BD 32140	Ident. No. -	090 ●

Prod. Gr. 264

## MULTIFIX boring bar holder J

**Application:**  
For holding tools with straight shank.

**Execution:**  
▪ No. 22243 010/020 side slot and no. 22243 030/040/050/070 upper slot.  
▪ For steel tool holder head no. 22240





Change holder J

		Steel tool holder head size shape No. 22240	Length l (mm)	Clamping Ø d (mm)		
22243...	AaJ 1550	Aa	50	15	Ident. No.	010
22243...	AJ 3080	A	80	30	Ident. No.	020
22243...	BJ 40120	B	120	40	Ident. No.	030
22243...	CJ 40160	C	160	40	Ident. No.	040
22243...	CJ 50160	C	160	50	Ident. No.	050
22243...	D1 J 63180	D1	180	63	Ident. No.	070

Prod. Gr. 214

## ORION® Quick-change holder J

### Application:

For holding tools.

Steel tool holder head size shape No. 22240		B
Clamping Ø (mm)		40
22253...	BJ 40120	Ident. No. 030

Prod. Gr. 264

### Execution:

- For steel tool holder head no. 22240



## MULTIFIX Morse taper sleeves

### Application:

Accessories for change holder for clamping Morse tapers.

Steel tool holder head size shape No. 22240		B
Clamping Ø (mm)		40
22253...	BJ 40120	Ident. No. 030

Prod. Gr. 264

### Execution:

- BK 230 only for holder BH 30130
- For steel tool holder head no. 22240



		Steel tool holder head size shape No. 22240	Morse taper size	Length L (mm)	Clamping Ø d (mm)		
22245...	AL 130	A	MK 1	82	30	Ident. No.	005
22245...	AL 230	A	MK 2	82	30	Ident. No.	010
22245...	BK 230	B	MK 2	130	30	Ident. No.	020
22245...	BL 340	B   C	MK 3	130	40	Ident. No.	030
22245...	BL 440	B   C	MK 4	130	40	Ident. No.	040
22245...	CL 350	C	MK 3	130	50	Ident. No.	050
22245...	CL 450	C	MK 4	130	50	Ident. No.	060
22245...	CL 550	C	MK 5	130	50	Ident. No.	065

Prod. Gr. 214

**MULTIFIX boring bar holder H**

**Application:**

For holding tools with straight shank.

**Execution:**

- For steel tool holder head no. 22240



Change holder H

		Steel tool holder head size shape No. 22240	Length l (mm)	Clamping Ø d (mm)		
22242...	AaH 1250	Aa	50	12	Ident. No.	010 ●
22242...	AH 2085	A	85	20	Ident. No.	020 ●
22242...	BH 37130	B	130	32	Ident. No.	030 ●
22242...	CH 40160	C	160	40	Ident. No.	040 ●
22242...	CH 50160	C	160	50	Ident. No.	050 ●
22242...	D1 H 63180	D1	180	63	Ident. No.	060 ●

Prod. Gr. 214

**ORION® Vee block P**



Vee block P

Steel tool holder head size shape No. 22240	Length l (mm)	Max. clamping Ø d (mm)	BP 20130
B	130	20	22259... Ident. No. 020 ●

Prod. Gr. 264



**tool holders for lathes**

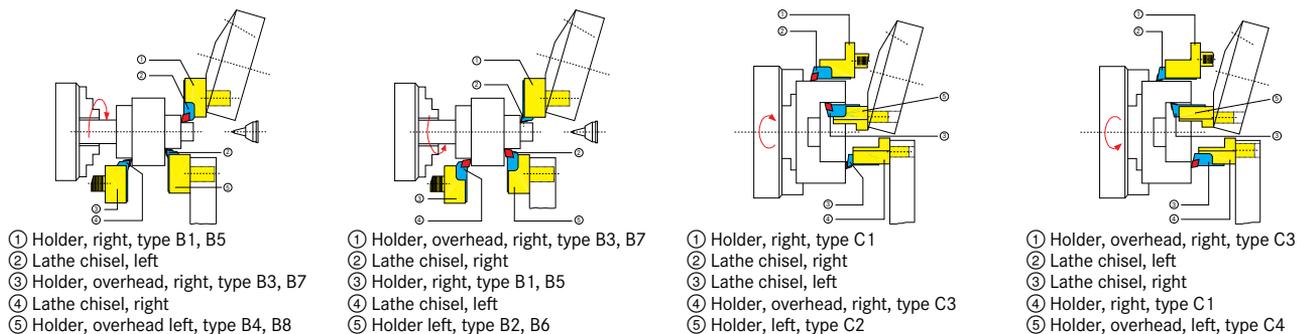
can be used on almost all lathes with tool chucks in line with DIN ISO 10889-1. Manufactured from quality steel (tensile strength 1000 N/mm<sup>2</sup>) and protected against corrosion by burnishing. all wear surfaces are hardened and sanded. Coolant supply is via adjustable jets or coolant tube. The lathe chisels are securely, precisely and gently clamped by a spring-loaded pressure plate.

**use of radial tool holders for left-hand spindle rotation (direction of arrow)**

**use of radial tool holders for right-hand spindle rotation (direction of arrow)**

**use of radial tool holders for left-hand spindle rotation (direction of arrow)**

**use of radial tool holders for right-hand spindle rotation (direction of arrow)**



**EWS** Radial tool holder, shape B3 right-hand, overhead  
For NC lathes

**Application:**

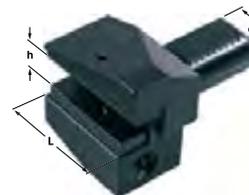
For mounting lathe tools for internal and external machining.

**Execution:**

- Holder, right-hand and overhead

VDI Aufnahme-Ø d1 (mm)	h1 (mm)	Form	l1 (mm)	EWS Tool Technologies 22702... Ident. No.	
20	16	B3 R overhead	55	020	○
30	16/20	B3 R overhead	70	035	●
40	20/25	B3 R overhead	85	045	●
50	25/32	B3 R overhead	100	055	○

Prod. Gr. 215



B 3 right, overhead

**EWS** drill holder for MK FORM F (DIN 69880-1)  
For NC lathes

**Application:**

For holding indexable insert drills with straight shanks and clamping surfaces.

**Execution:**

- For NC lathes
- For tools with Morse taper shank
- TYPE F



VDI adapter Ø d (mm)	30	30	40	40	40
Morse taper size d1	MK 2	MK 3	MK 2	MK 3	MK 4
EWS 22755... Ident. No.	030	035	042	044	048
	●	●	●	●	●

Prod. Gr. 215

**ATORN** Precision short drill chuck with worm gear mechanism (DIN 69880-1)  
For NC lathes



**Application:**

For clamping tools with straight shank.

- With worm gear

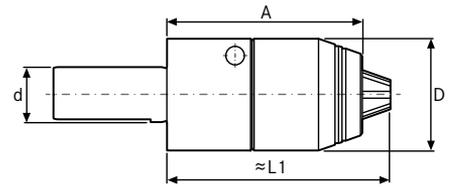
**Execution:**

- For NC lathes
- The tool is clamped using a hexagon key
- Hexagon T-handle wrench operation

**Advantage:**

- High concentricity
- Operates without play and with vibration damping
- It is possible to change the tool directly in the machine





VDI adapter Ø d	Min./max. clamping width	D (mm)	geöffnet L1 max (mm)	A (mm)	Coolant supply	21329... Ident. No.
30	1-16 mm	50	99	87	Internal axial	150 ●
40	1-16 mm	50	99	87	Internal axial	151 ●

Prod. Gr. 208

**EWS** reducing sleeves  
with groove

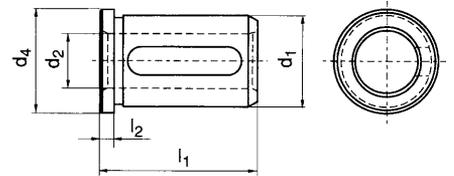


**Application:**  
For reducing the diameter of tools with a straight shank. Used in type E1 drill holders and type E2 boring bar holders.

▪ Small reducing diameter d3 with separate clamping screw

**Notes:**  
Reducing sleeves with further dimensions on request.

**Execution:**  
▪ Suitable for tools with cooling channel



d1 (mm)	d2 (mm)	d4 (mm)	l1 (mm)	l2 (mm)	Coolant supply	22772... Ident. No.
20	6	24	36	2	Yes	206 ●
20	8	24	36	2	Yes	208 ●
20	10	24	36	2	Yes	210 ●
20	12	24	36	2	Yes	212 ●
20	14	24	36	2	Yes	214 ●
20	16	24	36	2	Yes	216 ●
25	16	29	50	4	Yes	266 ●
25	20	29	50	4	Yes	270 ●
32	16	36	58	5	Yes	316 ●
32	20	36	58	5	Yes	320 ●
32	25	36	58	5	Yes	325 ●
40	16	44	58	5	Yes	416 ●
40	20	44	58	5	Yes	420 ●
40	25	44	58	5	Yes	425 ●
40	32	44	58	5	Yes	432 ●

Prod. Gr. 215

**EWS** reducing sleeves  
With radial threaded drill holes for tightening

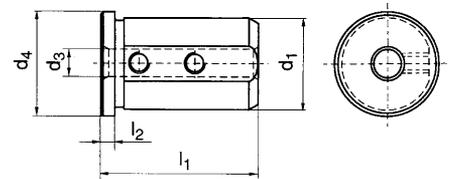


**Application:**  
For reducing the diameter of tools with a straight shank. Used in type E1 drill holders and type E2 boring bar holders.

▪ Small reducing diameter d3 with separate clamping screw

**Notes:**  
Reducing sleeves with further dimensions on request.

**Execution:**  
▪ Suitable for tools with cooling channel



d1 (mm)	d4 (mm)	l1 (mm)	d3 (mm)	l2 (mm)	Coolant supply	22772... Ident. No.
25	29	50	6	4	Yes	256 ●

d1 (mm)	d4 (mm)	l1 (mm)	d3 (mm)	l2 (mm)	Coolant supply	22772... Ident. No.	
25	29	50	8	4	Yes	258	●
25	29	50	10	4	Yes	260	●
25	29	50	12	4	Yes	262	●
32	36	58	6	5	Yes	306	●
32	36	58	8	5	Yes	308	●
32	36	58	10	5	Yes	310	●
32	36	58	12	5	Yes	312	●
40	44	58	8	5	Yes	408	●
40	44	58	10	5	Yes	410	●
40	44	58	12	5	Yes	412	●

Prod. Gr. 215

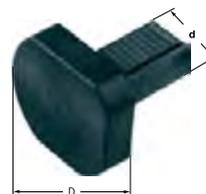
**EWS** Tool Technologies **Protective plugs**  
For NC lathes, form Z 2, plastic

**Application:**  
For protection against dirt and chippings.

- Made of plastic
- TYPE Z 2

**Execution:**  
▪ For insertion into the jaw guide of the lathe chuck.

**Notes:**  
Steel version on request.



VDI adapter Ø d (mm)		20	30	40	50	60
Outer Ø D (mm)		50	68	83	98	123
22766...	Ident. No.	020	030	040	050	060
		●	●	●	●	○

Prod. Gr. 215

**i** **Tool heads**  
For rotary tools with DIN 69880 shanks for use on CNC lathes (4 axes)

Examples:



Drilling and milling head adjustable through 0°-90°



Milling head DIN 6358 radial



Drilling and milling head radial offset



Drilling and milling head axial offset



Drilling and milling head radial



Drilling and milling head axial

**i** **Revolving interfaces**



DIN 5480 with twist angle lock



DIN 5482



DIN 1809



TOEM



INDEX

**SmartKD coolant nozzle, flexible composite material**

**Application:**

The innovative coolant nozzle SmartKD saves a great deal of time when setting up a lathe. Complicated adjustments of difficult copper pipes are a thing of the past Fig. 3. The interchangeable coolant pipe means that a suitable coolant nozzle will always be available. The SmartKD can be mounted in a flash. Simply insert the coolant nozzle into the coolant bore and tighten. The pipe is then aligned with the tool cutting edge.

- pipe length 50 mm, 70 mm or 100 mm, extremely flexible
- pressure 6 - 10 bar (dependent on length)

**Advantage:**

- Simple installation
- optimum cooling of tool cutting edge
- precise and strong coolant stream
- suitable for many CNC machines

**Notes:**

accessories ref. no. 21665212 sealing plug quantity 5 pieces



**Execution:**

- Stainless steel ball Ø 14, 15 and 16
- internal pipe diameter 4 mm



Smart KD in insert

Model	SmartKD1405	SmartKD1407	SmartKD1410	SmartKD1505	SmartKD1507	SmartKD1510	SmartKD1605	SmartKD1607
Length (mm)	50	70	100	50	70	100	50	70
Ø (mm)	14	14	14	15	15	15	16	16
21665... Ident. No.	200	201	202	203	204	205	206	207

Model	SmartKD1610
Length (mm)	100
Ø (mm)	16
21665... Ident. No.	208

Prod. Gr. 278

**MiniKD coolant nozzle, flexible composite material**

**Application:**

The MiniKD was specially developed for use in compact VDI holders, but also fits many other tool holders with external cooling. As in the case of the SmartKD, mounting is extremely simple. Simply insert in the coolant bore, tighten, and align. The MiniKD with an M5 or M6 thread is then simply screwed in and aligned.

- pipe length 50 mm or 70 mm
- special length 100 mm upon request (max. 6 bar)
- max. pressure 10 bar

**Advantage:**

- Simple installation
- optimum cooling of tool cutting edge
- precise and strong coolant stream
- suitable for many CNC machines
- reasonable price

**Notes:**

The MiniKD is also installed in the DriveKD and is very versatile in its uses.



**Execution:**

- Stainless steel ball Ø 10 mm, 11 mm or 12 mm or
- connecting thread M5 or M6 thread
- internal pipe diameter 4 mm

Model	MiniKD1005	MiniKD1007	MiniKD1010	MiniKD1105	MiniKD1205	MiniKD1207	MiniKD-M6	MiniKD-M5
Length (mm)	50	70	100	50	50	70	50	50
Ø (mm)	10	10	10	11	12	12	-	-
Connection thread	-	-	-	-	-	-	M6	M5
21665... Ident. No.	230	231	232	233	234	235	236	237

Prod. Gr. 278



## DriveKD coolant nozzle for rotary tools

### Double nipple, galvanised steel

#### Application:

Conventional coolant nozzles, often spray in all directions and do not discharge a direct coolant stream. This often results in inadequate cooling at the tool cutting edge. The DriveKD performs its task superbly.

#### Execution:

- threaded connectors M8x1, M10x1 and 1/8 thread
- internal pipe diameter 4 mm
- pipe length 50 mm or 70 mm

- max. pressure 10 bar (50 mm, 70 mm)
- special length of 100 mm available upon request (max. pressure up to 6 bar)

#### Advantage:

- quick, easy installation
- Precise and strong coolant stream onto the tool cutting edge, for a long service life.
- precisely adjust the coolant stream using the flexible pipe
- reasonable price
- Broad range of uses



Model	DriveKD1005	DriveKD1005	DriveKD1010	DriveKD0805	DriveKD0807	DriveKD0810	DriveKD1805	DriveKD1807
Length (mm)	50	70	100	50	70	100	50	70
Connection thread	M10 x 1	M10 x 1	M10 x 1	M8 x 1	M8 x 1	M8 x 1	G 1/8 inch	G 1/8 inch
21665... Ident. No.	250	251	252	253	254	255	256	257

Model	DriveKD1810
Length (mm)	100
Connection thread	G 1/8 inch
21665... Ident. No.	258

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## EdgeKD coolant nozzle for rotary tools

### Easy to swivel and lock

#### Application:

For use in tool holders where an elbow outlet is required for mounting. The EdgeKD means that there is no longer any need for the arduous mounting of inflexible coolant tubes. The EdgeKD is easy to swivel and lock.

Suitable for EWS, Heimatec and many other manufacturers.

#### Execution:

- threaded connectors M10x1 and 1/8" thread
- internal pipe diameter 4 mm
- pipe length 100 mm, replaceable

- max. pressure 6 bar

#### Advantage:

- quick, easy installation
- flexible coolant tube (SmartPipe)
- precise and strong coolant stream
- attractive price
- Broad range of uses

#### Delivery:

consists of one SmartPipe, union bolt, ring piece, hollow screw and two aluminium seals each



Model	EdgeKD10	EdgeKD18
Length (mm)	100	100
Connection thread	M10 x 1	G 1/8 inch
21665... Ident. No.	281	282

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## JetKD-A coolant nozzle

#### Application:

The JetKD is suitable for installation in both fixed and driven tool holders.

Machines with high-pressure pumps require special coolant nozzles that can handle the higher pressures. This is where the JetKD-A comes in!

#### Execution:

- screw-in thread M8x1, M10x1 or 1/8 BSP thread
- nozzle aperture 4 mm

- nozzle lengths 12 mm and 20 mm
- suitable for high pressures

#### Advantage:

- Simple installation
- nozzle can be locked in any position
- high level of stability
- minimal space requirements
- large adjustment range, can be swivelled up to 45° in every direction



Ident. No. 301-305

Model	JETKD0812-A	JETKD0820-A	JETKD1012-A	JETKD1020-A	JETKD1812-A	JETKD1820-A
Length (mm)	12	20	12	20	12	20
Connection thread	M8 x 1	M8 x 1	M10 x 1	M10 x 1	G 1/8 inch	G 1/8 inch
21665... Ident. No.	300	301	302	303	304	305

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**EasyKD coolant nozzle**

Made from 100% stainless steel, very robust

**Application:**

EasyKD fits in all tool holders with a 12 mm location hole.

For all cases where a flexible pipe is not required and a high level of stability is needed.

**Execution:**

- ball diameter 12 mm
- nozzle aperture 4 mm
- nozzle length 10 mm, 15 mm and 20 mm

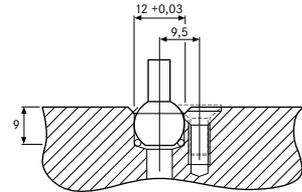
- high-pressure-proof

**Advantage:**

- Simple installation
- available in 3 lengths
- large swivel range
- minimal space requirements

**Notes:**

packing unit 10 pieces



Mounted in the 12 mm location hole on the tool holder. The ball is clamped with an M5 counter-sunk head screw to hold the coolant stream in position.

Model	EasyKD 12 10	EasyKD 12 15	EasyKD 12 20	-
Length (mm)	10	12	15	-
Ø (mm)	12	12	12	12
21665...	Ident. No. 320	Ident. No. 321	Ident. No. 322	-
21665...	O-ring for EasyKD	Ident. No. -	Ident. No. -	Ident. No. 323

Prod. Gr. 278

**RingKD coolant nozzle**

Very robust and virtually wear-free

**Application:**

The RingKD transports the drilling emulsion/cutting oil via a ring into a straight adjustable nozzle. It is suitable for many tool holders with an appropriate threaded connection.

The RingKD is ideal for use in narrow spaces and where precise adjustment of the stream is required.

**Execution:**

- nozzle aperture 4 mm
- stainless steel nozzle

- threaded connection, brass body
- high-pressure-proof
- self-sealing tapered thread

**Advantage:**

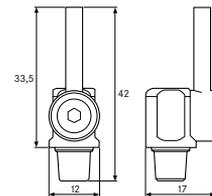
- Simple installation
- Broad range of uses
- swivel range >180°
- minimal space requirements
- extremely precise coolant stream



Ident. No. 341-343



Ident. No. 340



Model	RingKD08	RingKD10	RingKD18
Connection thread	M8 x 1	M10 x 1	G 1/8 inch
21665...	Ident. No. 340	Ident. No. 341	Ident. No. 343

Prod. Gr. 278

