Ultra

Highest metal removal rate. Adaptive cooling ring 10-30°. Safety of processing with Pin-Lock.

Ultra metal removal rate.
Ultra-Gripping.
Ultra-Dampening.
Ultra-Safe due to Pin-Lock.
In addition peripheral cooling which adapts perfectly to every task.

Up to 33.000 rpm.
Runout ≤ 3 µm.
Cooling-Ring 10-30°.

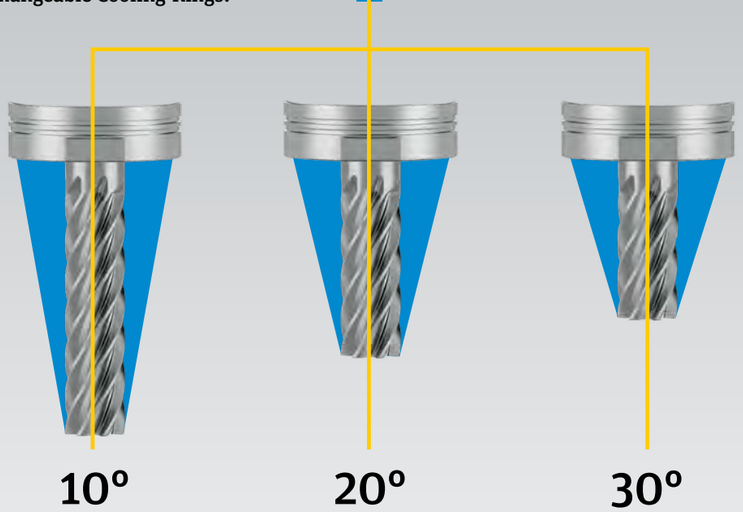
Albrecht Ultra – The basis for record-setting.

Adaptive Cooling



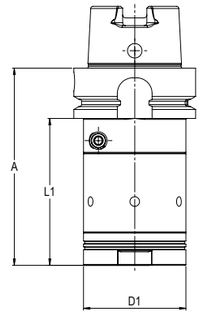
Delivery state: For cutting tools with internal coolant supply

Exchangeable Cooling-Rings:



HSK

Ultra Chuck, DIN 69893 (ISO 12164)
with fine balancing holes 6xM6
Easy exchange of tools by using a hex-key (see page 55). Maintenance-free. Sealed against coolant and particles. Slow collet taper angle. Collet with special coating (see page 55). System-Runout-Accuracy 3 µm at 2,5 x D. Clamping of tool shanks according to DIN 1835 A, B and DIN 6535 HB, HA. Delivery state for cutting tools with internal coolant supply. Changeable cooling ring for peripheral coolant (see page 55)



Application examples: Ultra in operation

Material	Tensile strength [N/mm²]	Milling-Ø [mm]	Speed [r.p.m.]	vf [mm/min]	ae [mm]	ap [mm]	MRR [cm³/min]
Titanium Ti 6-4		20	2.800	896	20	25	**448**
1.2892	1500	20	2.389	1.194	1	40	**48**
Aluminium 7075		25	30.000	13.500	25	40	**13.500**
Toolox 33	1080	20	2.800	1.758	2,5	35	**154**

Ultra Chuck 20

HKS63 A — 16 – 20 mm

A	Part.No.	Form	L1	D1	Balanced	kg
102	360 020A 663 0	A	76	53	20.000 G=2,5	1,5
HKS80 A						
108	360 020A 680 0	A	82	53	20.000 G=2,5	2,0
HKS100 A						
110	360 020A 610 0	A	81	53	20.000 G=2,5	2,9



Ultra Chuck 25

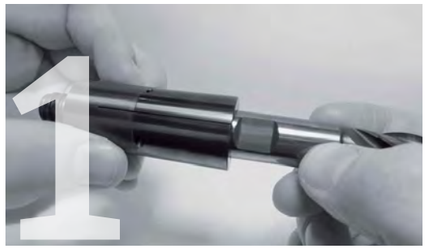
HKS63 A — 20 – 25 mm

A	Part.No.	Form	L1	D1	Balanced	kg
110	360 025A 663 0	A	84	53	20.000 G=2,5	1,4
HKS80 A						
116	360 025A 680 0	A	90	53	20.000 G=2,5	2,0
HKS100 A						
118	360 025A 610 0	A	89	53	20.000 G=2,5	2,9



Collets with Pin-Lock

Ultra collet with mechanical pull stop Pin-Lock
Easy mechanical pull stop solution in combination with side lock (Weldon) shanks corresponding to DIN 6535 HB and DIN 1835 B.
All positive features of Ultra are kept like runout accuracy and dampening. Special coating. Maintenance free. Collet is suppplied with 3 pins, pin punch, assembly tool. Balanced by design in combination with Weldon shank and pin.



Positioning tool
Remove the length setting screw, than position the Weldon-clamping surface on the side of the bore. Now insert the tool into the collet until the Weldon-clamping surface lies in the range of the bore.



Positioning pin
The locking-pin has to be inserted with the help of the pin punch into the bore of the collet up to the block.
Caution: The pin must not stick out of the collet.



Free from backlash
With the assembly tool the length stop screw has to be screwed, so that the cutting tool is free of backlash.
Caution: Mounting without axial pressure. The collet with the secured tool can now be placed into the Ultra-chuck.

Ultra Chuck Collets. Special coating. Maintenance free. Pin-Lock for Weldon shanks.
Delivered with length stop, 3 pins and assembly tool.
Clamping of tool shanks according to DIN 1835 A, B and DIN 6535 HB, HA.

Ultra 20

Internal Coolant



Coolant 2.0



D	Part.No.	Part.No.
16,0	166 2016 0L0 T	166 2016 0L0 P
20,0	166 2020 0L0 T	166 2020 0L0 P
25,0		

Ultra 25

Internal Coolant



Coolant 2.0



D	Part.No.	Part.No.
16,0		
20,0	166 2520 0L0 T	166 2520 0L0 P
25,0	166 2525 0L0 T	166 2525 0L0 P

Standard Key	Part.No.
With marking approx. 14 Nm	139 0000 906 0



Torque Key	Part.No.
corresponding ISO 6789 at 12 Nm	139 0012 900 0
corresponding ISO 6789 at 14 Nm	139 0014 900 0
Spare bit ¼”	139 0000 901 4



Cooling-Ring		
no. of holes and angle	**AF**	**Part.No.**
4 x 10°	50	161 2025 000 1
6 x 20°	50	161 2025 000 2
6 x 30°	50	161 2025 000 3
Set consisting of 4 x 10° / 6 x 20° / 6 x 30°		161 2025 S00 0

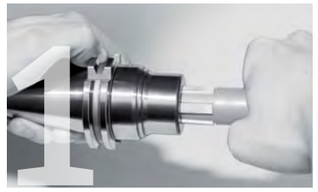


Spare part		Part.No.
Spare Pins for Pin-Lock		
DxL	**for**	**Part.No.**
Ø3x14 (3 pieces)	Ultra20 Ø16 und Ø20	139 3020 314 0
Ø4x20 (3 pieces)	Ultra25 Ø20	139 3025 420 0
Ø4x16 (3 pieces)	Ultra25 Ø25	139 3025 416 0



Handling APC and Ultra

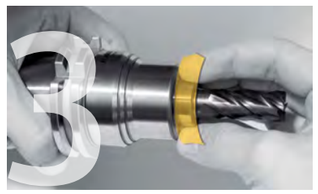
The Albrecht chuck is high precision toolholder with clamping gear. Its unique design provides a very high clamping force, run-out accuracy as well as a positive dampening feature for machining (milling, drilling, reaming, tapping, heavy-duty cutting, finish milling, HSC operations). The Chuck uses a special collet to clamp the cutting tool and is operated by a hex key on the periphery.



Cleaning, insert the Collet
Before each use, clean the inner cone chuck free cloth and chuck cone cleaner. Attention, do not work with compressed air during the cleaning process, as otherwise dissolved dirt particles can get into parts of the gearbox.



For maximum clamping forces, the bore, the tool shank, the cone of the clamping sleeve and the inner cone chuck must be degreased each time the tool is changed.



Insert the cleaned and undamaged tool shank into the clamping sleeve, observing the minimum clamping depth, see page 83. Screw the clamping sleeve with tool into the chuck manually until the clamping sleeve touches the cone.



Clamping
The chucking procedure starts by engaging the screw on the side of the chuck and rotating the hex key clockwise. Max. clamping torque see product-marking. Put in the hex key as far as possible. Hex tool surface is to be inspected about damages!



Match the two arrowheads when clamping.



Releasing
Open the Chuck by turning the hex key counter-clockwise.
Note: when opening the chuck you must overcome two resistance points. First, you will overcome the friction torque and then the collet is loosened. Then open until the tool can be taken out, respectively the collet can be unscrewed manually.



Length adjustment
A length stop screw is located in the collet and can be adjusted with a hex key. For operation from the back through the chuck with taper shank a bolt with a through hole is necessary (form AD). The range of the length adjustment is 11mm.

Technical Data Type	Clamping-Diameter, Ø mm / Ø zoll		Min. Clamping Depth	Max. Clamping Depth
14/20	2 - 5	1/8“ - 3/16“	17	66
	6	1/4“	22	40
	7 - 10	5/16“ - 3/8“	30	50
	11 - 15	7/16“ - 9/16“	38	50
20	16 - 20	5/8“ - 3/4“	38	48,5
25	12,7	1/2“	47	54,5
	16 - 32	5/8“ - 11/4“	47	60

Balancing grade
Each Albrecht Chuck is fine-balanced without collet and tool according to the laser marking. Higher balancing quality and rpm on request. The use of shanks with slots influences the balancing grade and run-out accuracy of the whole system.

Fine balancing with balancing-screws
Some of the APCs and all Ultra-Chucks are equipped with balancing threads and are thus capable of being balanced. By using fine balance screws, an even higher overall balancing quality can be achieved. The balancing screws must be tightened hand tight to the thread base according to the recommended weight and thread position of the balancing machine. Several screws can be screwed in one bore. An additional screw locking is not necessary. Make sure that the screws do not protrude beyond the interference contour.
The max. operating speed is not affected by the use of fine balance screws. Recommendation:
Albrecht M6 Balancing-set, Art. No.: 139 4006 000 0 (see page 82).

Maintenance
The Chuck is maintenance free over his lifetime. Clean chuck (especially the inner cone) and collet including thread after usage with a solvent base cleaner. According to contamination the cleaning cycles have to be adjusted. After cleaning, apply a thin coat of anticorrosive.

Repairs
In order to guarantee the precision of the tool, any chuck in need of repair has to be sent to the manufacturer or to an authorized national agent only. We recommend checking the chuck and the collet for run-out deviations and gripping torque periodic, especially after a tool break or crash.