

**ALBRECHT**  
**überchuck™**



***Überchuck High Performance  
Milling Chucks***



### 100 Years of Innovation

For more than 100 years, the name Albrecht has been synonymous with innovation and quality. In 1908, the Joseph Albrecht Bohrfutterfabrik GmbH & Co. was founded in Stuttgart, Germany, as a manufacturer of precision drill chucks. In 1932, Albrecht developed the Classic Keyless Drill Chuck, a product that would become widely regarded by metalworking professionals as the most consistently accurate drill chuck available anywhere in the world.

As manufacturing technology advanced over the years, Albrecht’s engineers kept ahead of the curve — continuously developing new products specifically designed to maximize machine tool performance. Today, Albrecht’s most advanced product — **the Überchuck High Performance Milling Chuck, is revolutionizing CNC machining.** With unmatched accuracy, rigidity, and vibration-dampening capabilities, the Albrecht Überchuck plays a key role in helping manufacturers squeeze every last drop of performance out of their machine tools.

If you are serious about maximizing your company’s productivity and profits, take advantage of Albrecht’s exclusive risk-free performance guarantee and try an Überchuck Milling Chuck today. We guarantee you’ll be impressed.



Albrecht, Inc.  
200 Oser Avenue  
Hauppauge, NY 11788  
U.S.A.

Tel: 1-800-468-3008  
1-631-231-5656  
Fax: 1-800-354-9552  
1-631-231-5714  
e-mail: info@uberchuck.com  
www.uberchuck.com



UPC CODE NUMBER=662636+5-DIGIT CATALOG NUMBER

# ALBRECHT ÜBERCHUCK MILLING CHUCK

The World's Most

## Advanced Tool Holder

The Albrecht Überchuck Milling Chuck offers **the ultimate in accuracy, rigidity, and vibration-dampening technology.**

Maximize throughput, increase tool life, and push your machine tools to their peak performance levels with Albrecht Überchuck.



## One Tool Holder Does It All

**Heavy-Duty  
Roughing**

**Precision  
Finish Milling**

**High-Speed  
Cutting**

**Hard Milling**



**Mold Making**

**Tapping**

**Drilling**

**Reaming**

# HOW CAN THE ALBRECHT ÜBERCHUCK DO WHAT OTHER TOOL HOLDERS CAN'T?



## Ultra-Precision Accuracy

All Überchuck Milling Chucks are guaranteed to run within **0.00012" TIR or better at 2.5 x diameter.** High accuracy is important not only for part quality, but also because it ensures that cutting tools stay on centerline, distributing the chip load evenly and significantly extending tool life.

## Versatile

The Überchuck is available in multiple lengths and capacities to handle a wide range of applications. Interchangeable collets add to its flexibility.

## Outstanding Rigidity and Dampening

Carefully optimized expansion tolerances and unique vibration-dampening capabilities provide smoother part finishes and up to a 60% increase in cutting tool life.

## High-Speed Balanced

All Überchuck Milling Chucks are dynamically balanced to G2.5@20,000 rpm for high speed operation.



## Wide Gripping Range

- Model 14 1/8" – 9/16"
- Model 20 1/8" – 3/4"
- Model 32 3/4" – 1-1/4"

## Unique Collets

A proprietary surface coating enables easy loosening and fast collet changes. Collets are available in both inch and metric sizes and include a depth stop screw for precise length adjustment of the cutting tool.

## Thru-Coolant Ready

All Überchuck's are **high-pressure rated to 1400 psi.** Sealed collets are available for thru-tool coolant delivery.

## Fast, Easy Tool Changes

Changing or adjusting a cutting tool in the Überchuck takes just a few seconds with the simple turn of a hex key. There are no costly induction heaters or hydraulic presses to hassle with. For an even better solution, see below.

## Foolproof Tightening

Many Überchuck users purchase our specially designed torque wrench to ensure optimal and perfectly consistent tightening of the collet. The ergonomic handle, pre-set torque limiter, and full-power release mechanism takes all of the guesswork out of collet/tool changes. **Simplify operations and maximize performance** with the Albrecht Überchuck torque wrench.



**Big Benefit #1 Incredible Gripping Torque**

The Albrecht Überchuck is a revolutionary tool holder that utilizes a patented two-stage clamping mechanism to produce extremely high gripping torque on the cutting tool. Gripping torque is the rotational force that acts against cutting tool slippage.

**Here's How It Works:**

**Stage 1**

A hex key rotates the worm, which drives a precision gear. The mechanical advantage achieved by this worm/gear assembly is much greater than that of a direct-drive system.

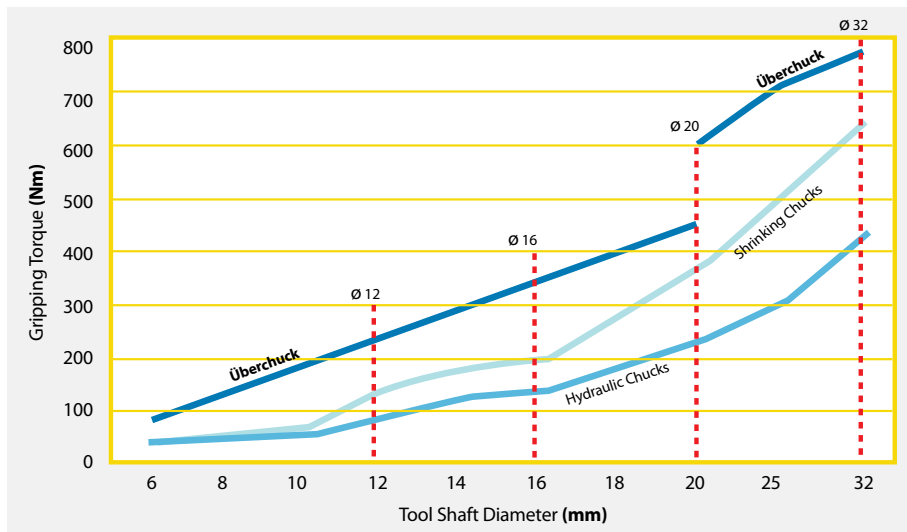
**Stage 2**

A specially coated slow-taper collet is threaded into the gear, so as the gear rotates the collet is pulled back into the body of the Überchuck. The angle between the collet and Überchuck body conforms to the Morse Taper standard, producing a near-perfect locking interface between the two components.

**The torque achieved through the combination of these two mechanisms is truly amazing** – significantly exceeding that of other commonly used systems. See graph below for test results.



**Überchuck Gripping Torque Comparison**



**Example**

Tool Diameter = 12 mm (1/2")

Gripping Torque Achieved:

Hydraulic ≈ 80 Nm

Heat Shrink ≈ 150 Nm

Überchuck ≈ 200+ Nm



## Results You Can See



The gripping torque of the Überchuck is so awesome, we designed and built a special display so potential customers would be able to experience its power firsthand. The display consists of a fixed CAT-40 spindle rigidly mounted to a structural steel frame, which is then bolted to a heavy steel base. The CAT-40 spindle holds a Model 32 Überchuck with a 1.25" diameter collet.

To simulate a typical cutting tool, we manufactured a hardened and ground shaft with a 1.25" O.D. and a one-inch hex on one end. This "cutting tool" is gripped in the Überchuck, and a four-foot long torque wrench with a 1" socket is used to engage the hex. The torque wrench is set to click at approximately 600 ft.-lbs.

To experience the Überchuck's gripping power, a person stands on the base and applies downward pressure to the end of the torque wrench. Because of the long length of the wrench, most people are able to push down with enough force to achieve the full 600 ft.-lbs. of torque. To everyone's amazement, the torque wrench clicks at this point, yet there is absolutely zero slippage of the "cutting tool" in the collet.

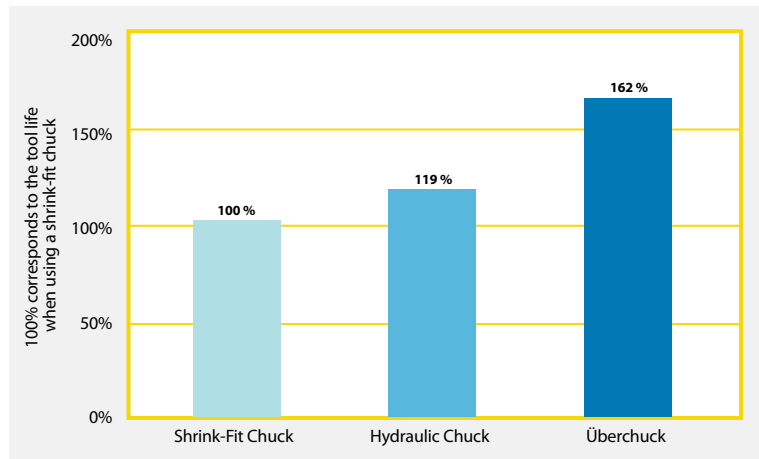
## Experience the Incredible Gripping Torque of the Albrecht Überchuck Yourself

### Big Benefit #2 Longer Tool Life

In independent testing, **cutting tool life increased by as much as 60%** when using the Überchuck (compared to shrink-fit and hydraulic chucks). The accuracy, rigidity, and vibration dampening capabilities of the Albrecht Überchuck enable the use of the latest, most aggressive cutting tools on the market.

Material	AISI L6
Process	Milling
Operation	Finishing
Cutting Material	HM (hard metal)
Coating	TiAlN
Endmill Diameter	12 mm (.472)
Number of Flutes	6

Width of Cut	1.2 mm (.047)
Depth of Cut	18 mm (.709)
Cutting Speed	97m/min (318 ft/min)
RPM	2584
Chip Load	.110 mm (.0043)
Feed Rate	1698 mm/min (66.9 in/min)
Tool Life	110 m (360 ft.)



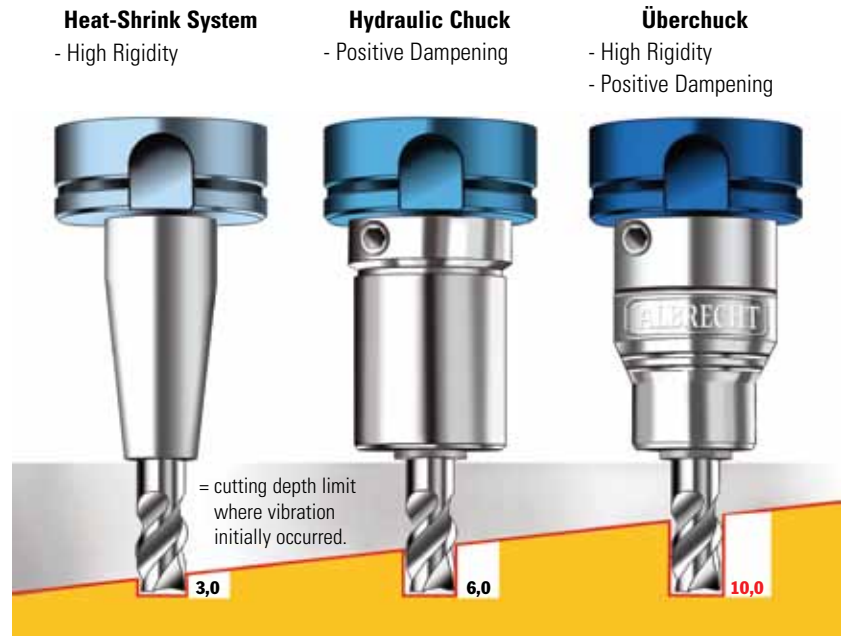
Data based on a study performed at University – FH-Offenburg, Germany, Professor Dr. Herbert Schonherr

**Many Customers Have Experienced Such a Significant Improvement in Cutting Tool Life That the Savings Have Paid for the Überchuck.**

**Big Benefit #3**      **Excellent Rigidity & Vibration Dampening**

The performance of a tool holder depends upon both its rigidity and its ability to dampen vibration. The illustration below represents the results of an independent test comparing the maximum depth of cut that various holders were able to achieve up to the point where chatter began to occur. As the results show, the extreme rigidity and vibration dampening ability of the Albrecht Überchuck allows for **much more aggressive cutting** and optimal machine tool performance.

Machine	Deckel Maho 64V
Taper	HSK 63
Material	Steel CK45
Tool Diameter	10mm, z=3
Parameters	n = 5412 rpm fz = 0.06mm vf = 974 mm/min ae = 100%



Data based on a study performed at University – Ulm, Germany, Professor Dr.-Ing. M. Kaufeld

**Big Benefit #4**      **Risk-Free Performance Guarantee**

**Risk-Free Performance Guarantee**

The Überchuck Milling Chuck carries Albrecht's exclusive risk-free performance guarantee. This guarantee enables you to try an Überchucks on the toughest applications in your shop for 30 days, and if you aren't completely delighted with its performance, we will take it back and arrange to have your distributor issue full credit.

Some conditions apply. Please contact Albrecht, Inc. for further details.



# ÜBERCHUCK MILLING CHUCKS – 0.0001” TIR



## CAT-40 Taper

MODEL	CAPACITY		TYPE	GAGE LENGTH A	D3	D2	D1	L1	L2	L3	L4	PART NUMBER <sup>2</sup>	PRICE <sup>2</sup>
	(inches)	(millimeters)											
APC-14	1/8 – 9/16	3 – 14	S	2.46	–	1.75	1.18	0.53	0.87	1.71	–	74330	\$360
APC-14	1/8 – 9/16	3 – 14	C	7.05	–	1.97	1.18	3.35	4.06	6.30	–	74312	528
APC-20	1/8 – 3/4	3 – 20	S	2.48	–	1.97	1.57	0.79	1.12	1.73	–	74702 <sup>1</sup>	360
APC-20	1/8 – 3/4	3 – 20	A	3.66	–	1.97	1.57	0.79	1.12	2.91	–	74703 <sup>1</sup>	417
APC-32	3/4 – 1 1/4	20 – 32	A	5.31	–	2.76	2.20	0.12	0.91	4.57	–	74317	598

## CAT-50 Taper

MODEL	CAPACITY		TYPE	GAGE LENGTH A	D3	D2	D1	L1	L2	L3	L4	PART NUMBER <sup>2</sup>	PRICE <sup>2</sup>
	(inches)	(millimeters)											
APC-14	1/8 – 9/16	3 – 14	S	3.07	2.76	1.97	1.18	0.43	1.12	1.69	2.32	74306	\$525
APC-14	1/8 – 9/16	3 – 14	C	6.46	2.76	1.97	1.18	3.35	4.06	5.08	5.71	74313	617
APC-20	1/8 – 3/4	3 – 20	A	3.07	2.76	1.97	1.57	0.79	1.12	1.69	2.32	74310	498
APC-32	3/4 – 1 1/4	20 – 32	A	4.33	–	2.76	2.20	0.12	0.91	3.58	–	74319	594

## BT-30 Taper

MODEL	CAPACITY		TYPE	GAGE LENGTH A	D3	D2	D1	L1	L2	L3	L4	PART NUMBER <sup>2</sup>	PRICE <sup>2</sup>
	(inches)	(millimeters)											
APC-14	1/8 – 9/16	3 – 14	S	3.23	–	1.97	1.18	0.43	1.12	2.36	–	74299	\$429
APC-20	1/8 – 3/4	3 – 20	A	3.23	–	1.97	1.57	0.79	1.12	2.36	–	74329	429

## BT-40 Taper

MODEL	CAPACITY		TYPE	GAGE LENGTH A	D3	D2	D1	L1	L2	L3	L4	PART NUMBER <sup>2</sup>	PRICE <sup>2</sup>
	(inches)	(millimeters)											
APC-14	1/8 – 9/16	3 – 14	S	2.78	–	1.97	1.18	0.43	1.12	1.71	–	74708	\$417
APC-20	1/8 – 3/4	3 – 20	A	3.23	–	1.97	1.57	0.79	1.12	2.17	–	74311	417

## HSK-63, Forms A & F

MODEL	CAPACITY		TYPE	FORM	GAGE LENGTH A	D3	D2	D1	L1	L2	L3	L4	PART NUMBER <sup>2</sup>	PRICE <sup>2</sup>
	(inches)	(millimeters)												
APC-20	1/8 – 3/4	3 – 20	A	Form A	3.62	–	1.97	1.57	0.79	1.12	2.60	–	74295	\$494
APC-20	1/8 – 3/4	3 – 20	A	Form F	3.62	–	1.97	1.57	0.79	1.12	2.60	–	74221	558
APC-32	3/4 – 1 1/4	20 – 32	A	Form A	5.51	–	2.76	2.20	0.12	0.91	4.49	–	74279	697

## COROMANT CAPTO<sup>3</sup> – C5 & C6

MODEL	CAPACITY		TYPE	FORM	GAGE LENGTH A	D3	D2	D1	L1	L2	L3	L4	PART NUMBER <sup>2</sup>	PRICE <sup>2</sup>
	(inches)	(millimeters)												
APC-20	1/8 – 3/4	3 – 20	A	Form C5	2.95	–	1.97	1.57	0.79	1.12	1.69	–	74218	\$709
APC-20	1/8 – 3/4	3 – 20	A	Form C6	3.15	–	1.97	1.57	0.79	1.12	2.28	–	74724	709
APC-32	3/4 – 1 1/4	20 – 32	A	Form C6	4.53	–	2.76	2.20	0.12	0.91	3.66	–	74726	827

## KM-63<sup>4</sup> Taper

MODEL	CAPACITY		TYPE	GAGE LENGTH A	D3	D2	D1	L1	L2	L3	L4	PART NUMBER <sup>2</sup>	PRICE <sup>2</sup>
	(inches)	(millimeters)											
APC-20	1/8 – 3/4	3 – 20	A	3.07	–	1.97	1.57	0.79	1.12	2.36	–	74220	\$898

<sup>1</sup>No safety zone. Contact Albrecht for info.

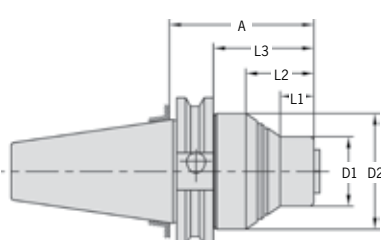
<sup>2</sup>Tightening tool not included – order separately.

<sup>3</sup>COROMANT CAPTO is a registered trademark of Sandvik AB Corporation.

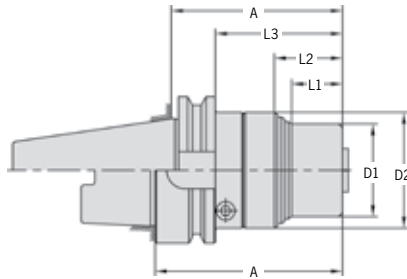
<sup>4</sup>KM is a registered trademark of Kennametal Corporation.



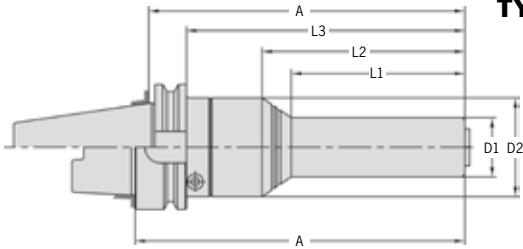
## ÜBERCHUCK DIMENSIONS



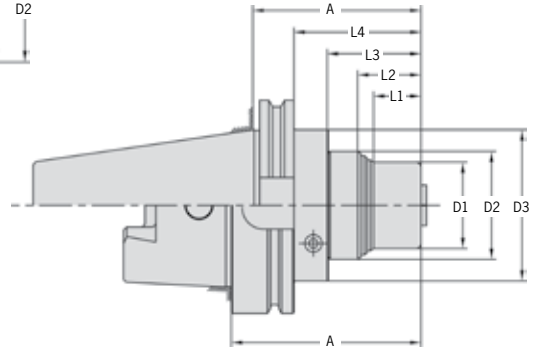
**TYPE S**



**TYPE A**



**TYPE C**



**CAT 50** Model 14-S&C  
Model 20-A

## ÜBERCHUCK TIGHTENING TOOLS

Albrecht now offers two types of Überchuck tightening tools: an economy model with visual confirmation markings, and a heavy-duty torque-limiting deluxe model. Both of these tools provide an easy way to operate the Überchuck.

- The economy model is manufactured with visual confirmation markings to alert the operator when the correct tightening torque has been achieved.
- The deluxe model functions as a heavy-duty torque wrench and is **pre-set to the optimum tightening torque**. Once this value is reached, the unit will not allow additional torque to be applied.
- Both models are equipped with oversized handles for user comfort.
- Both models enable full reverse torque to facilitate easy opening.



**Deluxe Model**



**Economy Model**

### Überchuck Tightening Tools

DESCRIPTION	PART NUMBER	PRICE
Economy Model	74402	<b>\$39</b>
Heavy-Duty Deluxe Model	74399	<b>277</b>

## ÜBERCHUCK TAPER WIPERS



- For maximum gripping torque, the contact surfaces between the collet and Überchuck should remain clean and dry.
- Taper wipers accomplish this task and are available for all three Überchuck models.

### Taper Wipers

MODEL	PART NUMBER	PRICE
APC-14	74300	<b>\$35</b>
APC-20	74302	<b>40</b>
APC-32	74301	<b>102</b>

# ÜBERCHUCK COLLETS



- All Überchuck collets create a locking tapered fit with the holder. Their 3° included angle is similar to that of the locking Morse Tapers found on live and dead centers.
- A special surface coating on the collet increases wear-resistance and reduces friction, resulting in higher gripping torque while enabling fast, easy tool changes.
- A **deep throat and long, ground gripping surface** produces superior accuracy and rigidity.
- Sealed collets are available for use with thru-coolant cutting tools\*.
- Überchuck sealed collets can be used with high pressure coolant systems up to 1400 psi.
- An internal stop screw allows for **precise presetting of the cutting tool length**.



## Model 14 Collets

DIAMETER	MAX THROAT DEPTH	STANDARD COLLETS		SEALED COLLETS*	
		PART NUMBER	PRICE	PART NUMBER	PRICE
1/8"	1.10	74303	\$99	74503	\$121
3/16"	1.10	74304	99	74504	121
1/4"	1.42	74316	99	74516	121
5/16"	1.42	74318	99	74518	106
3/8"	1.57	74320	99	74520	106
7/16"	1.77	74322	99	74522	106
1/2"	1.77	74324	99	74524	106
9/16"	1.77	74326	99	74526	106
3mm	1.10	74340	99	74540	121
4mm	1.10	74342	99	74542	121
5mm	1.10	74344	99	74544	121
6mm	1.42	74346	99	74546	121
8mm	1.42	74348	99	74548	106
9mm	1.57	74350	99	74550	106
10mm	1.57	74352	99	74552	106
12mm	1.77	74354	99	74554	106
14mm	1.77	74356	99	74556	106

## Model 20 Collets

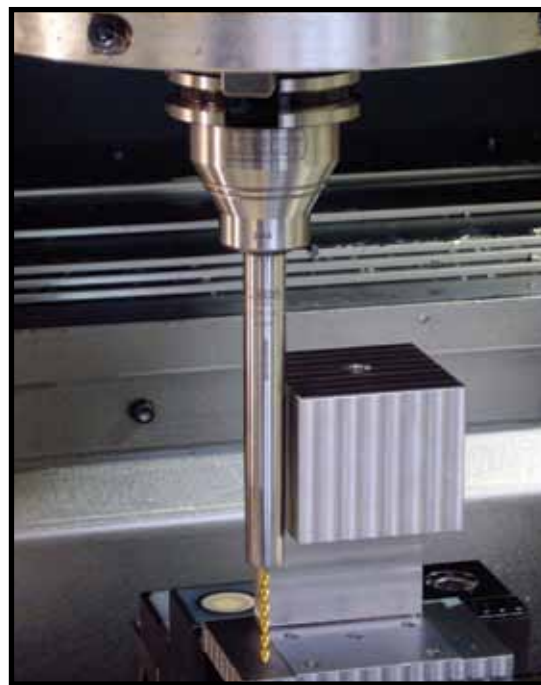
DIAMETER	MAX THROAT DEPTH	STANDARD COLLETS		SEALED COLLETS*	
		PART NUMBER	PRICE	PART NUMBER	PRICE
1/8"	1.10	74357	\$99	74557	\$121
3/16"	1.10	74358	99	74558	121
1/4"	1.42	74362	99	74562	121
5/16"	1.42	74364	99	74564	106
3/8"	1.57	74366	99	74566	106
7/16"	1.77	74368	99	74568	106
1/2"	1.77	74370	99	74570	106
9/16"	1.77	74372	99	74572	106
5/8"	1.89	74374	99	74574	106
11/16"	1.89	74376	99	74576	106
3/4"	1.97	74378	99	74578	106
3mm	1.10	74383	99	74583	121
4mm	1.10	74385	99	74585	121
5mm	1.10	74386	99	74586	121
6mm	1.42	74387	99	74587	121
8mm	1.42	74388	99	74588	106
10mm	1.57	74389	99	74589	106
12mm	1.77	74390	99	74590	106
14mm	1.77	74392	99	74592	106
16mm	1.89	74394	99	74594	106
18mm	1.89	74396	99	74596	106
20mm	1.97	74398	99	74598	106

## Model 32 Collets

DIAMETER	MAX THROAT DEPTH	STANDARD COLLETS		SEALED COLLETS*	
		PART NUMBER	PRICE	PART NUMBER	PRICE
3/4"	1.97	74380	\$179	74580	\$179
1"	2.20	74382	179	74582	179
1 1/4"	2.36	74384	179	74584	179
20mm	1.97	74332	179	74532	179
22mm	1.97	74334	179	74534	179
25mm	2.20	74336	179	74536	179
32mm	2.36	74338	179	74538	179

\*Slightly decreased gripping force with sealed collets on diameters above 5/8" (16mm). Contact factory for information.

# MICRO-CHUCK DIMENSIONS



Albrecht APC Milling Chuck with Micro-Chuck Extension

- Albrecht Micro-Chuck Extensions **provide access to hard-to-reach areas** that cannot be machined with standard tool holders.
- These precision extensions use highly accurate coated collets that are similar in design and performance to the Überchuck Milling Chuck collets.
- Model 74600 incorporates our model 15 keyless drill chuck with a capacity of 0.2–1.5 mm (0.008”–0.063”).
- Accuracy of the Albrecht Micro-Chuck is guaranteed to 0.0003” TIR at 2.5 x diameter for the collet models, and 0.0012” TIR for the drill chuck model.
- Although Albrecht Micro-Chuck Extensions perform best when used in conjunction with Albrecht Überchuck Milling Chucks, they can also be used with other types of tool holders such as ER collet chucks.
- Note that the models 74602 and 74604 have 9/16” diameter shanks which enables them to be used with both the APC-14 and the APC-20 Milling Chucks.



## Micro-Chuck Extensions

SHAFT DIAMETER	NOSE DIAMETER	OVERALL LENGTH	NOSE LENGTH	STYLE	CAPACITY		PART NUMBER	PRICE
					(inches)	(millimeters)		
9/16"	9/16"	4"	–	Collets	1/8 – 1/4	1–6	74602	<b>\$378</b>
9/16"	9/16"	6"	–	Collets	1/8 – 1/4	1–6	74604	<b>398</b>
3/4"	9/16"	4"	2"	Collets	1/8 – 1/4	1–6	74606	<b>398</b>
3/4"	1/2"	6"	2 5/8"	Collets	1/8 – 1/4	1–6	74608	<b>416</b>
5/8"	3/4"	6.3"	–	Drill Chuck	0.008–0.063	0.2–1.5	74600	<b>297</b>

## Micro-Chuck Collets

STANDARD COLLETS		SEALED COLLETS		
DIAMETER	PART NUMBER	PRICE	PART NUMBER	PRICE
1/8"	74610	<b>\$126</b>	74620	<b>\$126</b>
3/16"	74611	<b>126</b>	74621	<b>126</b>
1/4"	74612	<b>126</b>	74622	<b>126</b>
1 mm	74613	<b>145</b>	74623	<b>145</b>
2 mm	74614	<b>145</b>	74624	<b>145</b>
3 mm	74615	<b>145</b>	74625	<b>145</b>
4 mm	74616	<b>126</b>	74626	<b>126</b>
5 mm	74617	<b>126</b>	74627	<b>126</b>
6 mm	74618	<b>126</b>	74628	<b>126</b>

# KEY-LOCK CNC DRILL CHUCKS



- All Überchuck collets create a locking tapered fit with the holder. Their 3° included angle is similar to that of the locking Morse Tapers found on live and dead centers.
- A special surface coating on the collet increases wear-resistance and reduces friction, resulting in higher gripping torque while enabling fast, easy tool changes.
- A **deep throat and long, ground gripping surface** produces superior accuracy and rigidity.
- Sealed collets are available for use with thru-coolant cutting tools\*.
- Überchuck sealed collets can be used with high pressure coolant systems up to 1400 psi.
- An internal stop screw allows for **precise presetting of the cutting tool length**.



## Model 14 Collets

DIAMETER	MAX THROAT DEPTH	STANDARD COLLETS		SEALED COLLETS*	
		PART NUMBER	PRICE	PART NUMBER	PRICE
1/8"	1.10	74303	\$99	74503	\$121
3/16"	1.10	74304	99	74504	121
1/4"	1.42	74316	99	74516	121
5/16"	1.42	74318	99	74518	106
3/8"	1.57	74320	99	74520	106
7/16"	1.77	74322	99	74522	106
1/2"	1.77	74324	99	74524	106
9/16"	1.77	74326	99	74526	106
3mm	1.10	74340	99	74540	121
4mm	1.10	74342	99	74542	121
5mm	1.10	74344	99	74544	121
6mm	1.42	74346	99	74546	121
8mm	1.42	74348	99	74548	106
9mm	1.57	74350	99	74550	106
10mm	1.57	74352	99	74552	106
12mm	1.77	74354	99	74554	106
14mm	1.77	74356	99	74556	106

## Model 20 Collets

DIAMETER	MAX THROAT DEPTH	STANDARD COLLETS		SEALED COLLETS*	
		PART NUMBER	PRICE	PART NUMBER	PRICE
1/8"	1.10	74357	\$99	74557	\$121
3/16"	1.10	74358	99	74558	121
1/4"	1.42	74362	99	74562	121
5/16"	1.42	74364	99	74564	106
3/8"	1.57	74366	99	74566	106
7/16"	1.77	74368	99	74568	106
1/2"	1.77	74370	99	74570	106
9/16"	1.77	74372	99	74572	106
5/8"	1.89	74374	99	74574	106
11/16"	1.89	74376	99	74576	106
3/4"	1.97	74378	99	74578	106
3mm	1.10	74383	99	74583	121
4mm	1.10	74385	99	74585	121
5mm	1.10	74386	99	74586	121
6mm	1.42	74387	99	74587	121
8mm	1.42	74388	99	74588	106
10mm	1.57	74389	99	74589	106
12mm	1.77	74390	99	74590	106
14mm	1.77	74392	99	74592	106
16mm	1.89	74394	99	74594	106
18mm	1.89	74396	99	74596	106
20mm	1.97	74398	99	74598	106

## Model 32 Collets

DIAMETER	MAX THROAT DEPTH	STANDARD COLLETS		SEALED COLLETS*	
		PART NUMBER	PRICE	PART NUMBER	PRICE
3/4"	1.97	74380	\$179	74580	\$179
1"	2.20	74382	179	74582	179
1 1/4"	2.36	74384	179	74584	179
20mm	1.97	74332	179	74532	179
22mm	1.97	74334	179	74534	179
25mm	2.20	74336	179	74536	179
32mm	2.36	74338	179	74538	179

\*Slightly decreased gripping force with sealed collets on diameters above 5/8" (16mm). Contact factory for information.