



# ROYAL LOW-PROFILE ACCU-LENGTH™ CNC COLLET CHUCKS

## High RPM

All Royal CNC collet chucks are balanced by design for high-speed operation, and can often be run at higher speeds than conventional 3-jaw chucks because they are less prone to the negative effects of centrifugal force.

## Spindle Bearing Protection

An oversized flange acts as a coolant slinger to protect lathe spindle bearings from contaminants.

## Bolt & Go™

Our exclusive Bolt & Go™ mounting feature is standard on all Royal Low-Profile Collet Chuck models. Bolt & Go™ enables chucks to be mounted very quickly and ensures maximum accuracy and rigidity. See page 7 for additional information.

## Completely Sealed

Lubricated for life, these chucks incorporate multiple O-ring seals to keep contaminants out and prevent chip pack-up on bore-thru applications.

## Easy Installation

All Royal Low-Profile Collet Chucks include a collet wrench, lubricator, mounting hardware, mounting wrenches, and a custom-machined drawtube connector for **hassle-free installation**. S-type models also include the master collet. S-type collet pads can be ordered separately through your local tooling supplier.

## Dead-Length Operation

Royal Accu-Length™ CNC Collet Chucks incorporate **dead-length operation to eliminate part pullback**. With this design, a tapered sleeve pushes forward over the collet to compress it, resulting in precise z-axis positioning.

## Outstanding Rigidity

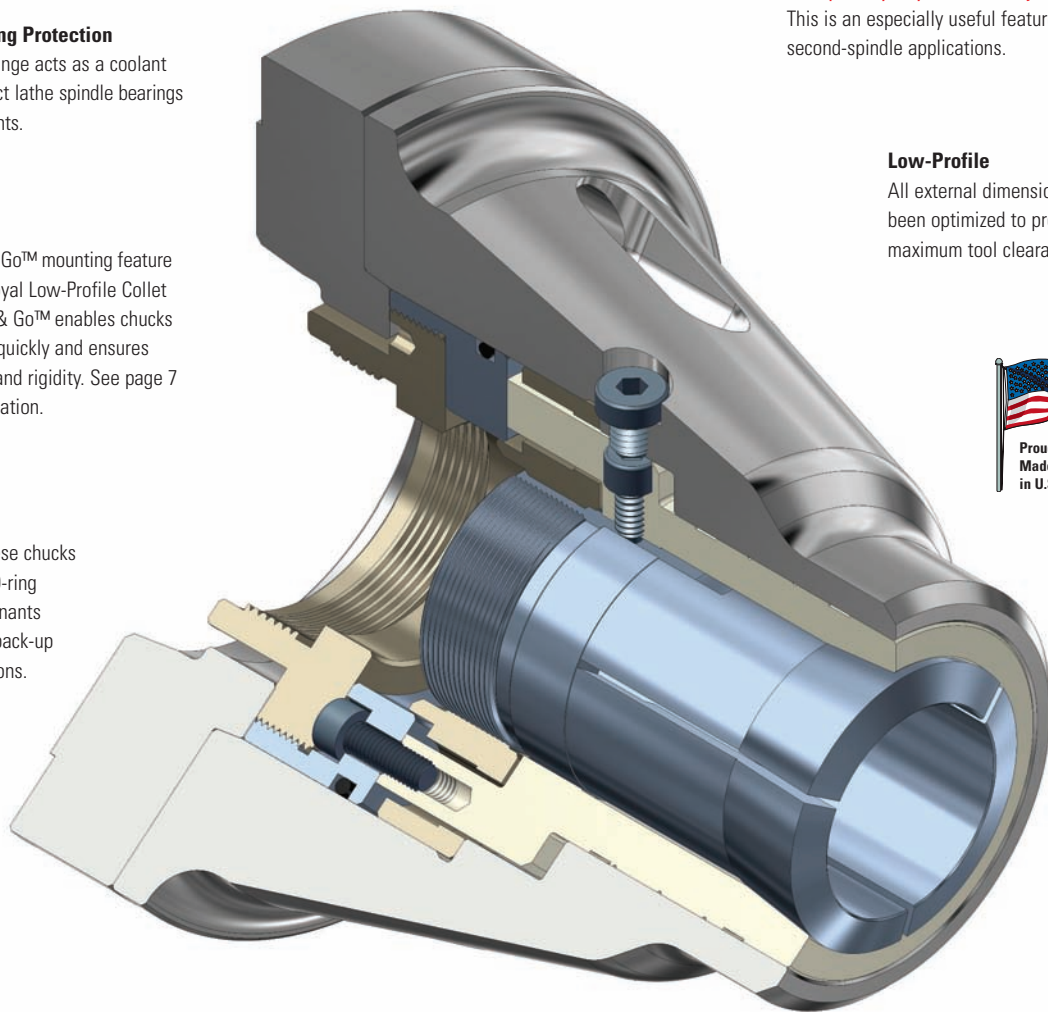
All Royal Accu-Length™ Collet Chucks have been optimized for maximum rigidity, and all components are hardened for strength and durability.

## Fine Adjustability

Royal Accu-Length™ master collets contain **multiple keyways for fine adjustability**. This is an especially useful feature for second-spindle applications.

## Low-Profile

All external dimensions have been optimized to provide maximum tool clearance.



## Specials

If you have a special application that goes beyond the scope of our standard line, we will be happy to design and build a custom system to meet your needs. Please contact a Royal applications engineer to discuss your requirements.

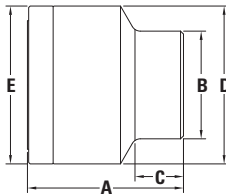
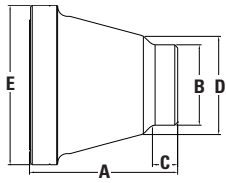
## Wide Range

Royal manufactures a wide range of Accu-Length™ Collet Chucks to fit all popular spindle noses and collet styles. Gripping capacities range from 1/64" to 3" diameter.

## High Accuracy

All Royal Accu-Length™ CNC Collet Chucks are guaranteed to run within 0.0002" TIR.

# ROYAL LOW-PROFILE ACCU-LENGTH™ CNC COLLET CHUCKS



## Royal Low-Profile Accu-Length™ CNC Collet Chucks

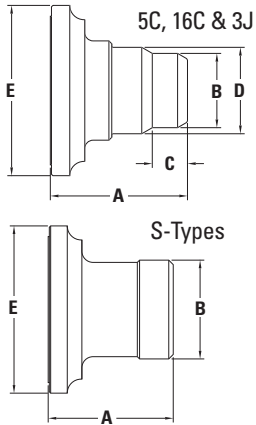
SPINDLE TYPE	COLLET TYPE	CAPACITY	A OVERALL LENGTH	B NOSE DIAMETER	C NOSE LENGTH	D BODY DIAMETER	E FLANGE DIAMETER	CHUCK WEIGHT (lbs.)	MAX DRAWBAR FORCE (lbs.)	MAX CLAMPING FORCE (lbs.)	MAX RPM	PART NUMBER	PRICE <sup>2</sup>
A2-5	5C	1 <sup>1</sup> / <sub>16</sub> "	5.75	2.43	1.00	4.00	6.45	21	4,000	13,600	6,000	42330	\$4,000
A2-6	5C	1 <sup>1</sup> / <sub>16</sub> "	5.75	2.43	1.00	4.00	7.45	21	4,000	13,600	6,000	42332	4,180
110mm	5C	1 <sup>1</sup> / <sub>16</sub> "	5.55	2.43	1.00	4.00	6.45	21	4,000	13,600	6,000	42334	4,180
140mm	5C	1 <sup>1</sup> / <sub>16</sub> "	4.45	2.43	1.00	4.00	6.45	13	4,000	13,600	6,000	42336	4,180
A2-5	16C	1 <sup>5</sup> / <sub>16</sub> "	6.50	3.25	1.03	3.80	6.45	25	5,400	18,300	6,000	42338	4,380
A2-6	16C	1 <sup>5</sup> / <sub>16</sub> "	6.25	3.25	1.03	3.80	7.45	25	5,400	18,300	6,000	42340	4,530
A2-8	16C	1 <sup>5</sup> / <sub>8</sub> "	7.25	3.25	1.03	3.67	9.45	51	5,400	18,300	4,500	42342	4,670
110mm	16C	1 <sup>5</sup> / <sub>16</sub> "	6.30	3.25	1.03	3.80	6.45	25	5,400	18,300	6,000	42337	4,530
A2-5	3J	1 <sup>3</sup> / <sub>4</sub> "	6.23	3.25	1.03	3.97	6.45	24	5,400	26,300	6,000	42344	4,530
A2-5 UC <sup>1</sup>	3J	1 <sup>3</sup> / <sub>4</sub> "	5.47	3.25	1.03	4.06	5.20	16	5,400	26,300	6,000	42345	4,530
A2-6	3J	1 <sup>3</sup> / <sub>4</sub> "	6.25	3.25	1.03	3.97	7.45	26	5,400	26,300	6,000	42346	4,670
A2-8	3J	1 <sup>3</sup> / <sub>4</sub> "	7.00	3.25	1.03	3.97	9.45	49	5,400	26,300	4,500	42348	4,830
110mm UC <sup>1</sup>	3J	1 <sup>3</sup> / <sub>4</sub> "	5.42	3.25	1.03	4.06	5.20	17	5,400	26,300	6,000	42351	4,530
A2-5	S-20 Master <sup>2</sup>	2"	6.38	4.81	1.80	6.45	6.45	35	6,000	29,300	6,000	42360	5,030
A2-6	S-20 Master <sup>2</sup>	2"	6.63	4.81	1.80	6.45	7.45	37	6,000	29,300	6,000	42362	5,400
A2-5	S-26 Master <sup>2</sup>	2 <sup>5</sup> / <sub>16</sub> "	6.63	5.50	1.63	7.45	7.45	48	8,000	39,100	6,000	42363	5,490
A2-6	S-26 Master <sup>2</sup>	2 <sup>5</sup> / <sub>16</sub> "	6.63	5.50	1.63	7.45	7.45	47	8,000	39,100	6,000	42364	5,540
A2-6	S-30 Master <sup>2</sup>	3"	6.62	6.00	1.56	8.45	8.45	61	10,000	48,800	6,000	42368	6,040
A2-8	S-30 Master <sup>2</sup>	3"	6.87	6.00	1.56	8.45	9.45	62	10,000	48,800	4,500	42370	6,040

<sup>1</sup> Ultra-compact design.

<sup>2</sup> Master Collet included with all S-type chuck models.



# ROYAL LOW-PROFILE PULLBACK CNC COLLET CHUCKS



## Royal Low-Profile Pullback CNC Collet Chucks

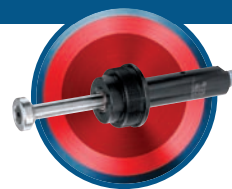
SPINDLE TYPE	COLLET TYPE	CAPACITY	THREADED NOSE <sup>1</sup>	A OVERALL LENGTH	B NOSE DIAMETER	C NOSE LENGTH	D BODY DIAMETER	E FLANGE DIAMETER	CHUCK WEIGHT (lbs.)	MAX DRAWBAR FORCE (lbs.)	MAX CLAMPING FORCE (lbs.)	MAX RPM	PART NUMBER	PRICE <sup>2</sup>
A2-5	5C	1 <sup>1</sup> / <sub>16</sub> "	N	5.00	2.63	1.05	3.14	6.45	12	4,490	15,750	6,000	42053	\$1,150
A2-5	5C	1 <sup>1</sup> / <sub>16</sub> "	Y <sup>1</sup>	5.00	2.187-10	1.22	3.14	6.45	11	4,490 <sup>1</sup>	15,750	6,000 <sup>1</sup>	42054	1,290
A2-6	5C	1 <sup>1</sup> / <sub>16</sub> "	N	5.00	2.63	1.05	3.14	7.45	17	4,490	15,750	6,000	42055	1,360
A2-6	5C	1 <sup>1</sup> / <sub>16</sub> "	Y <sup>1</sup>	5.00	2.187-10	1.22	3.14	7.45	15	4,490 <sup>1</sup>	15,750	6,000 <sup>1</sup>	42080	1,480
A2-6	5C	1 <sup>1</sup> / <sub>16</sub> "	N	6.00	2.63	1.05	3.14	7.45	19	4,490	15,750	6,000	42057	1,510
A2-6	5C	1 <sup>1</sup> / <sub>16</sub> "	Y <sup>1</sup>	6.00	2.187-10	1.22	3.14	7.45	18	4,490 <sup>1</sup>	15,750	6,000 <sup>1</sup>	42058	1,630
A2-8	5C	1 <sup>1</sup> / <sub>16</sub> "	N	6.00	2.63	1.05	3.14	9.45	30	4,490	15,750	4,500	42059	1,670
A2-5	16C	1 <sup>5</sup> / <sub>16</sub> "	N	6.00	3.00	1.85	3.31	6.45	13	5,390	19,800	6,000	42067	1,440
A2-6	16C	1 <sup>5</sup> / <sub>16</sub> "	N	6.00	3.25	1.54	3.78	7.45	20	5,390	19,800	6,000	42069	1,510
A2-8	16C	1 <sup>5</sup> / <sub>16</sub> "	N	6.00	3.25	1.54	3.78	9.45	30	5,390	19,800	4,500	42071	1,660
A2-5	3J	1 <sup>3</sup> / <sub>4</sub> "	N	6.00	3.08	1.16	3.33	6.45	13	5,390	26,340	6,000	42061	1,480
A2-6	3J	1 <sup>3</sup> / <sub>4</sub> "	N	6.00	3.25	1.05	3.87	7.45	20	5,390	26,340	6,000	42063	1,600
A2-8	3J	1 <sup>3</sup> / <sub>4</sub> "	N	6.00	3.25	1.05	3.87	9.45	31	5,390	26,340	4,500	42065	1,880
A2-5	S-20 Master <sup>2</sup>	2"	N	5.63	4.40	-	-	6.45	18	9,500	21,300	6,000	45108	3,350
A2-6	S-20 Master <sup>2</sup>	2"	N	5.57	4.40	-	-	7.45	22	9,500	21,300	6,000	45110	3,560
A2-6	S-26 Master <sup>2</sup>	2 <sup>5</sup> / <sub>16</sub> "	N	6.25	5.75	-	-	7.45	26	11,500	25,700	6,000	45112	3,820
A2-8	S-26 Master <sup>2</sup>	2 <sup>5</sup> / <sub>16</sub> "	N	6.25	5.75	-	-	9.45	43	11,500	25,700	4,500	45114	3,980
A2-6	S-30 Master <sup>2</sup>	3"	N	6.50	5.75	-	-	7.45	28	13,500	30,200	6,000	45115	4,370
A2-8	S-30 Master <sup>2</sup>	3"	N	6.53	5.75	-	-	9.45	42	13,500	30,200	4,500	45116	4,130

<sup>1</sup> Threaded-nose collet chucks are for use with 5C step collets that close on the head, not the 10-degree angle. Never exceed the manufacturer's rpm and drawbar force limits for any threaded accessories.

<sup>2</sup> Master Collet included with all S-type chuck models.

Now standard with 3 or 4 key locations (depending upon collet style) for finer radial adjustment.

# ROYAL LOW-PROFILE COLLET CHUCK ACCESSORIES



## Ejectors



- ❑ Ejectors are used in sub-spindle applications to push finished workpieces into the part catcher upon completion.
- ❑ Pusher head (shown) can be adjusted or modified as applications require (head not included with 5C, 16C, or 3J models).
- ❑ A hardened plunger rod and a bronze bearing work together to provide **smooth, consistent operation**.
- ❑ Spring is encased inside of body for protection.

### Royal Ejectors for Low-Profile Collet Chucks

FITS CHUCK MODEL	PART NUMBER	PRICE
5C Accu-Length™	45145	<b>\$315</b>
16C Accu-Length™	45146	<b>348</b>
3J Accu-Length™	45147	<b>348</b>
S-20 Accu-Length™	45148	<b>694</b>
S-26 Accu-Length™	45149	<b>706</b>
S-30 Accu-Length™	45150	<b>755</b>

For an alternative solution to an ejector, check out the Royal Grippex Coolant-Actuated Bar Puller. The Grippex, when fitted with special robot gripper jaws, can be used to pull finished parts from a sub-spindle, eliminating the need for an ejector and **freeing up the spindle bore to swallow longer parts**.

## Collet Stops



- ❑ A collet stop is used for **accurate z-axis positioning** of short workpieces within a collet.
- ❑ Stop rod length is easily adjusted.
- ❑ Assembly screws directly into rear of collet.

### Royal Collet Stops for Low-Profile Collet Chucks

FITS CHUCK MODEL	PART NUMBER	PRICE
5C Accu-Length™ and Pullback	20030	<b>\$17</b>
16C Accu-Length™ and Pullback	45151	<b>162</b>
3J Accu-Length™ and Pullback	45152	<b>162</b>
S-20 Accu-Length™	45153	<b>162</b>
S-26 Accu-Length™	45154	<b>170</b>
S-30 Accu-Length™	45155	<b>190</b>

## Heavy-Duty Collet Wrenches



- ❑ Heavy-duty one-piece head – pins won't shear off.
- ❑ Comfortable knurled handle offers superior grip and makes collet installation a breeze.
- ❑ Cross-drilled hole in handle allows a screwdriver to be used as a lever for hard-to-remove collets.
- ❑ Available for all popular collet models.

### Royal Heavy-Duty Collet Wrenches

COLLET STYLE	NUMBER OF COLLET SLOTS	PART NUMBER	PRICE
5C	3	45187	<b>\$124</b>
16C/3J	3	45188	<b>124</b>
16C/3J	4	45189	<b>124</b>
S-20 Master	3	45190	<b>172</b>
S-26 Master	4	45191	<b>172</b>
S-30 Master	4	45192	<b>172</b>