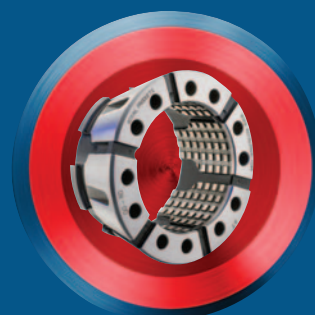
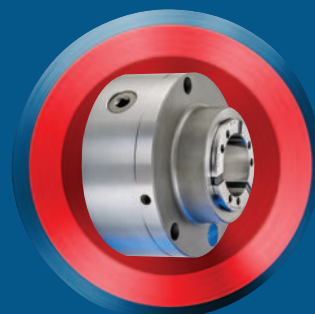
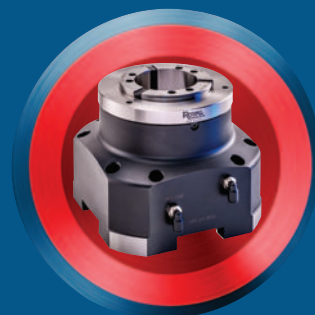




# QUICK-GRIP™ WORKHOLDING

- TEN-SECOND COLLET CHANGES
- 0.0002" TIR OR BETTER
- PARALLEL GRIP COLLETS WITH A WIDE RANGE
- MOST COMPACT CHUCKS IN THE INDUSTRY
- IN-STOCK FOR SAME-DAY SHIPPING





# ROYAL QUICK-GRIP™ CNC COLLET CHUCKS

## The Most Advanced Collet Chucks Available for Today's CNC Lathes



- ✓ Ten-Second Collet Changes Slash Setup Times.
- ✓ Industry-Leading Gripping Range – 0.062" (0.080" for QG-100).
- ✓ Ultra-Precision Accuracy – 0.0002" TIR Guaranteed.
- ✓ Extreme Grip Force = Most Aggressive Chip Removal Rates and Fastest Cycle Times.
- ✓ Maximum Rigidity Produces Superior Part Finishes.
- ✓ Best Tool Clearance – Critical For Live Tooling.
- ✓ Exclusive Royal Risk-Free Performance Guarantee.
- ✓ In-Stock for Same-Day Shipping.



## Four Unique Models For All Applications



### Combo Chuck

- Easily swap from O.D. to I.D. and 5C workholding.
- Accu-Length™ operation makes it perfect for sub-spindles.
- See pages 20-24 for more info.



### Accu-Length™

- Fixed-position collet maintains precise z-axis part positioning – critical for secondary operations.
- Usually the best choice for main spindles, and always required for sub-spindles to ensure proper part transfer.



### Pull-to-a-Stop

- Pullback design, however z-axis part positioning can be controlled with an included internal stop.
- Stop is easily removed for bar work.
- Often used in robot-load applications where workpiece confirmation is required.



### Pullback

- Most economical choice, but limited primarily to first operation, main-spindle applications.
- No ability to control z-axis part position.

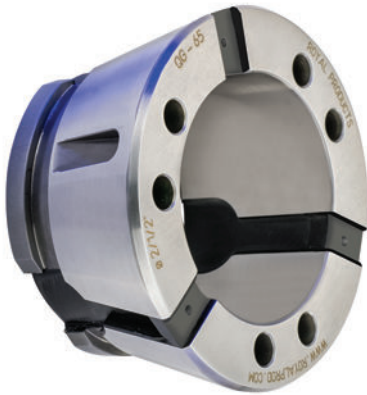
**NOTE** – In order to provide our customers with the best possible service, Royal maintains a huge inventory of Quick-Grip™ CNC Collet Chucks, plus more than 500 unique drawtube connector models – enabling same-day shipping on virtually all collet chuck orders.

# ROYAL QUICK-GRIP™ CNC COLLET CHUCKS



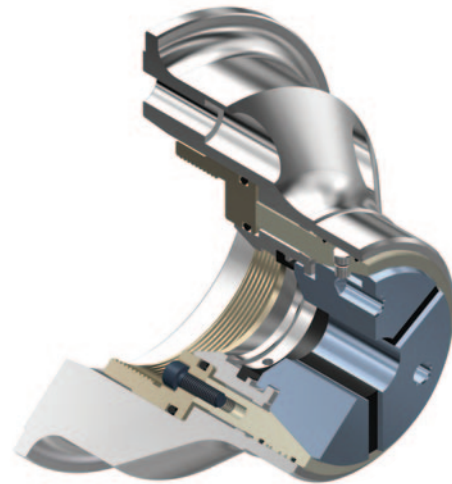
## Big Benefit #1 Ten-Second Collet Changes

With the Royal Quick-Grip™ CNC Collet Chuck, collet changes take just seconds. Here's how it works:



1. The unique collets are constructed of hardened steel segments securely joined together by vulcanized rubber. Each collet contains an annular hook and groove configuration on the rear section of its outer diameter.

2. The installation tool incorporates steel pins that align with reamed holes on the collet face. When these pins engage the face holes and the trigger on the tool is actuated, the collet becomes temporarily compressed.



3. In its compressed state, the collet can then be inserted into the collet chuck, where the hooks on the rear of the collet segments become axially aligned with a retaining groove in the chuck.

4. Releasing the installation tool allows the collet to spring open, seating the hooks in the groove and drawing the matching I.D./O.D. tapers into full, positive contact. The collet is now installed.

**REDUCED SETUP TIME = GREATER THROUGHPUT AND HIGHER PROFITS!**





# ROYAL QUICK-GRIP™ CNC COLLET CHUCKS

## Big Benefit #2

## Ultra-Precision Accuracy – 0.0002" or Better



While many users purchase the Royal Quick-Grip™ CNC Collet Chuck for its lightning-fast collet changes and wide gripping range, another major benefit of this system is its extreme accuracy.

With CNC collet chucks, there are several factors which affect overall system accuracy. These include:

- Accuracy and tolerance of chuck mount (taper angle, gage line diameter, squareness of mounting flange, etc.)
- Tolerance and fit between chuck components (body to mounting adapter, closing sleeve to chuck bore, etc.)
- Accuracy and tolerance of collets (O.D. collet angle, bore sizing, concentricity of I.D. to O.D., etc.)

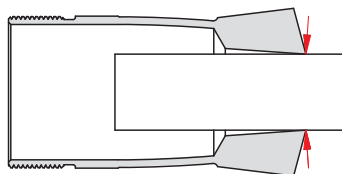
The manufacturing processes for Royal CNC collet chucks and collets have all been fully optimized to achieve the absolute tightest tolerances and highest accuracies. While we guarantee our chucks at 0.0002" TIR between the A-mount taper and collet chuck closing sleeve, they often run at 0.00005" or better! Round-bore collet accuracy is also guaranteed to be within 0.0002" TIR.

This means that out of the box, with absolutely no indicating in, you can expect to achieve a **Quick-Grip™ total system accuracy of 0.0004" TIR or better.** We know of no other collet chuck manufacturer that can consistently produce such an exact level of precision.

**How much time do you waste boring jaws? The Royal Quick-Grip™ pays for itself in no time.**

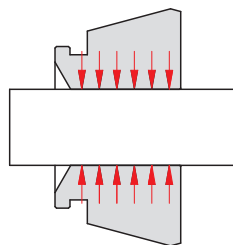
## Big Benefit #3

## Industry-Leading Gripping Range – 0.062"/0.080"



### Spring-Type Collet

With a spring-type collet, unless the bore is exactly sized to the workpiece diameter there will be reduced contact, resulting in compromised accuracy and grip force.



### Quick-Grip Collet

With a Quick-Grip™ collet, the segments always remain parallel to the workpiece, helping to maintain optimum accuracy and grip force.

Royal Quick-Grip™ Collets have a **much wider collapse range than conventional spring collets.** A spring-type collet can only be compressed by up to 0.005" before there is a sharp drop off in both grip force and accuracy due to the changing angle of the gripping surface.

However, with the unique design of the Royal Quick-Grip™ collet, each collet segment is bonded to the adjacent segments with vulcanized rubber. This ensures that **the collet segments always remain parallel to the workpiece** as the collet is compressed, giving the Quick-Grip™ collet a full collapse range of .062" (nominal diameter +/- .031). For the QG-100, this range is even greater – 0.080"!

### Advantages of this system include:

- The ability to compensate for oversized and undersized bar stock.
- Superior accuracy and grip force – by remaining parallel to the workpiece, each collet segment **makes contact over its entire length.** With old-technology spring collets, over-collapsing results in just a narrow ring of contact near the collet face.
- The wide range of the Royal Quick-Grip™ collet provides the ability to clear larger diameters in order to grip on smaller diameters. This "over the shoulder" feature offers second-op advantages over traditional spring collets.



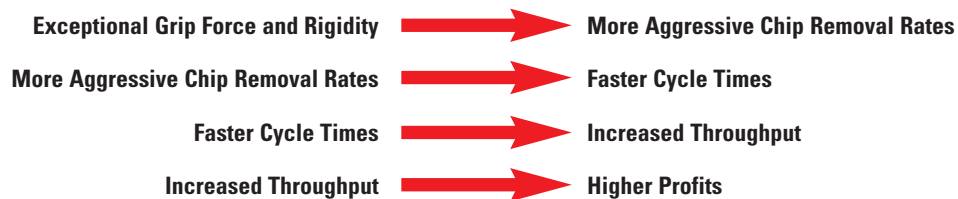
## Big Benefit #4

## Slash Cycle Times and Boost Throughput

### Royal Quick-Grip™ Offers Unmatched Grip Force and Rigidity

The parallel-grip functionality of Royal Quick-Grip™ Collets provides extremely high grip force by maintaining workpiece contact over the entire length of each collet segment (see image on previous page). Additionally, the design and construction of all Royal Quick-Grip™ CNC Collet Chucks has been optimized for rock-solid rigidity.

This combination of tremendous grip force and outstanding rigidity results in something that every manufacturer strives for – the ability to **drastically increase speeds, feeds and depth of cut**, without sacrificing part accuracy or surface finish.



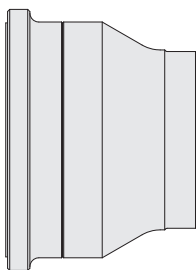
Many Royal Quick-Grip™ users have told us that they have made back their investment in just a few short weeks thanks to such a significant increase in throughput over their previous three-jaw chucks and older-style collet chucks.

## Big Benefit #5

## Most Compact Collet Chucks in the Industry

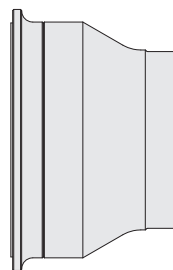
Royal Accu-Length™ CNC Collet Chucks have been optimized for tool clearance and rigidity. Short lengths **maximize the usable space inside the machining envelope**, while extremely compact nose diameters reduce tool interference and enable machining to take place closer to the spindle.

**Compact**  
(Standard Length/Compact Nose Diameter)



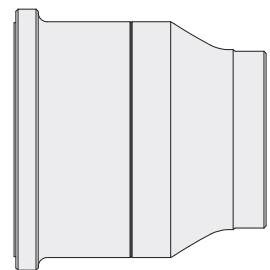
The traditional length ensures that these chucks can accommodate most machine drawtubes, while a greatly reduced nose diameter offers the **best tool clearance in the industry**.

**Ultra-Compact**  
(Compact Length/Compact Nose Diameter)



These are the smallest collet chucks available. Often mounted on sub-spindles, Royal's Ultra-Compact CNC Collet Chucks make a great choice when maximum z-axis capacity is the primary requirement.

**Extended-Length**  
(Longer Length/Compact Nose Diameter)



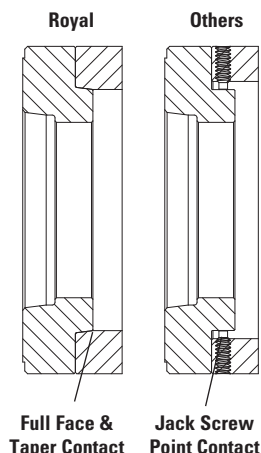
Royal stocks a few chuck models in extended-length versions to accommodate a handful of machines with limited z-axis travel. As a rule, it is usually best to choose the shortest chuck model possible for your machine.



## ROYAL QUICK-GRIP™ CNC COLLET CHUCKS

### Big Benefit #6

### Exclusive Royal Bolt & Go™ Mounting Advantage



All Royal CNC Collet Chucks mount quickly, easily, and accurately due to our exclusive Bolt & Go™ mounting interface.

Many Royal chuck models mount directly to the lathe spindle without the need for an adapter plate. However, for models that do use a plate, a precision-ground tapered fit between the plate's male pilot and chuck body's female recess **ensures a consistent, near-perfect fit without the need for any adjustment**. This precision fit also enhances overall system rigidity by providing both face and taper contact.

Other chuck manufacturers use a less precise approach. Instead of providing a near-perfect tapered interface between the chuck body and plate, they rely on a loose fit between a male cylindrical pilot on the plate and an oversized bore within the chuck body. Because there is clearance between these two components, jack screws located around the circumference must be used to radially true-up the chuck on the plate. This process of using the jack screws and an indicator to dial out the runout each time a chuck is mounted wastes valuable production time. The rigidity of this design is also significantly less due to the limited point-contact provided by the screws against the pilot as compared to the full-contact tapered fit of the Royal Bolt & Go™ interface.

**Knock 30 Minutes Off Your Setup Time with Royal Bolt & Go™**

### Big Benefit #7

### Risk-Free Performance Guarantee

- ✓ Smarter Design
- ✓ Better Quality
- ✓ Outstanding Support

**Risk-Free  
PERFORMANCE  
Guarantee**

- ✓ Same-Day Shipping
- ✓ No Hassles
- ✓ Risk-Free Guarantee

In addition to providing superior quality, service, support, and deliveries, Royal CNC Collet Chucks also carry an industry exclusive risk-free performance guarantee. This no-risk guarantee allows our customers to run a collet chuck on the toughest jobs in their shop for 45-days, and if they are not 100% satisfied with its performance, we will take it back and arrange for a full refund through their distributor.

When you buy a CNC collet chuck from Royal Products, you can have **complete confidence** that we will not let you down. For over 80 years, Royal has been recognized as one of the most reliable and trusted suppliers in the metalworking industry. We are here for you today, and we'll be here for you tomorrow.

# ROYAL QUICK-GRIP™ CNC COLLET CHUCKS



## Big Benefit #8

## Precision-Made in USA

## ISO 9001:2015 Certified

- Every Royal CNC collet chuck is completely manufactured in our modern factory on state-of-the-art automated CNC equipment.
- All chucks, sleeves, adapter plates, collets, etc., come off of our gantry-loaded multi-tasking machines complete – eliminating the accuracy and quality issues often associated with multiple setups/operations.
- All grinding takes place on precision Swiss-made CNC grinders that enable multiple features to be ground in a single setup, resulting in near-perfect tolerances and **ensuring absolute consistency from part to part.**
- Royal Products is an ISO9001:2015 registered company dedicated to continuous improvement. Every process is documented and followed down to the smallest detail for consistent quality – every time.



## Big Benefit #9

## Outstanding Support



Royal maintains a fleet of fully-equipped mobile showrooms designed to bring solutions to our customers' doorsteps. To schedule a visit to your company, please visit [royalproducts.com](http://royalproducts.com).

- Royal's knowledgeable team of applications engineers makes it very easy for you to do business with us. When you call Royal, the person you speak with will be a workholding expert, and if we can't offer you the best solution for your application, we'll do our best to recommend a company that can – even if it's a competitor!
- Royal CNC Collet Chucks are sold through a **select network of the country's top industrial and machine tool distributors.** We also have strong relationships with all of the major machine tool builders and importers to make sure that our products seamlessly interface with their machines.
- With over forty factory-trained account managers strategically located throughout North America, our highly-qualified field support team is always ready and willing to serve you.

## Big Benefit #10

## We Make it Easy

- All Royal CNC collet chucks include everything needed for installation, (even the hex keys). We strive to give our customers **"the mint on the pillow"** treatment.
- Through the past thirty years of gathering machine tool specifications and working closely with all of the major machine tool builders, Royal Products has developed a huge database of drawtube specifications, virtually eliminating the need for a customer to ever measure a machine.
- **We now stock over 500 of the most common drawtube connector models,** and non-stock connectors are made very quickly from semi-finished blanks.
- All Royal CNC collet chucks come packaged in specially designed heavy-gage boxes with form-fitting foam inserts to provide complete protection of all contents.





# HOW TO CHOOSE THE RIGHT QUICK-GRIP™ CNC COLLET CHUCK

## Chuck Style

Royal offers four Quick-Grip™ Collet Chuck styles to suit virtually all CNC lathes and applications. If you're unsure which style is the best choice for your needs, the guidelines below should be helpful.



### Combo Chuck

- ❑ Best choice for when you have a mix of both I.D. and O.D. work.
- ❑ Features Accu-Length™ operation.
- ❑ **Perfect for sub spindles!**
- ❑ See pages 20-24 for more info.



### Accu-Length™

- ❑ Fixed position collet maintains precise z-axis part positioning – critical for secondary operations.
- ❑ Usually the best choice for main spindles, and always required for sub-spindles to ensure proper part transfer.



### Pull-to-a-Stop

- ❑ Pullback design, however z-axis part positioning can be controlled with an internal included stop.
- ❑ Stop is easily removed for bar work.
- ❑ Often used in robot-load applications where workpiece confirmation is required.



### Pullback

- ❑ Most economical choice, but limited primarily to first operation, main-spindle applications.
- ❑ No ability to control z-axis part position.

## Capacity

It is typical practice to size a collet chuck according to the I.D. bore of the CNC lathe's drawtube. When the drawtube thru capacity falls between chuck models, it is usually best to choose a chuck with a slightly larger capacity than the drawtube bore to ensure you don't limit the jobs your machine can handle.

For machines with second spindles, sometimes the capacity of the second spindle is less than that of the main spindle. In cases like this, most customers choose the same chuck model for both spindles so they can standardize on collets.

CHUCK MODEL	MAX BAR CAPACITY
QG-32	1.28"
QG-42	1.68"
QG-52	2.03"
QG-65	2.66"
QG-80	3.28"
QG-100	4.03"

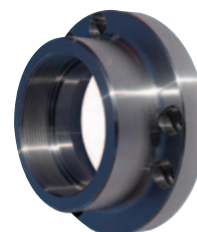
## Spindle Mount

All CNC lathes have industry-standard spindle mounting specifications. Simply match the spindle mount of your machine (found in your owner's manual) to the spindle mount of the collet chuck.

## Drawtube Connector

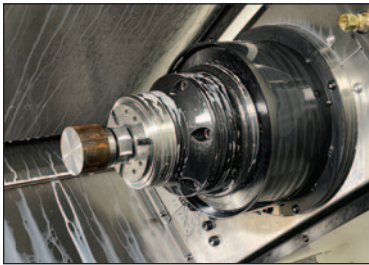
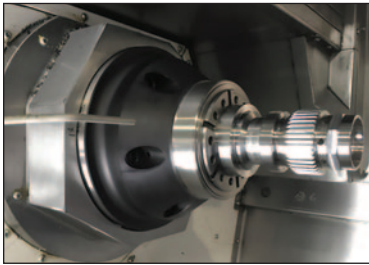
In our never-ending quest to provide our customers with the best possible service, **every Royal CNC Collet Chuck includes a custom-machined drawtube connector to ensure seamless, hassle-free installation.**

Royal stocks over 500 unique drawtube connector models, enabling same-day shipping on virtually all collet chuck orders.





# ROYAL STANDARD QUICK-GRIP™ ACCU-LENGTH™ CNC COLLET CHUCKS



- ✓ Great for both main and sub-spindles.
- ✓ 10-second collet changes.
- ✓ **Widest collet gripping range – 0.062" (0.080" for QG-100).**
- ✓ Extremely accurate – 0.0002" TIR.
- ✓ Parallel workpiece gripping.
- ✓ Exclusive Bolt & Go™ mounting feature – no need to tap/indicate for accuracy.
- ✓ Compact and ultra-compact models to suit all machines and applications.
- ✓ Nose diameter optimized for superior tool clearance.
- ✓ In-stock for same-day shipping.





# ROYAL STANDARD QUICK-GRIP™ ACCU-LENGTH™ CNC COLLET CHUCKS

## Bolt & Go™

Our exclusive Bolt & Go™ mounting feature is standard on all Royal Quick-Grip™ Collet Chuck models. **Bolt & Go™ enables chucks to be mounted very quickly and ensures maximum accuracy and rigidity.** See page 34 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.

## High RPM

All Royal Quick-Grip™ 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 affected by centrifugal force.



## Extremely Fast Collet Changes

Changing collets on a Royal Quick-Grip™ CNC Collet Chuck takes just a few seconds. A unique hook and groove design for securing collets is used instead of traditional threads.

## Wide Gripping Range

Royal Quick-Grip™ Collets have a 0.062" gripping range (+/- 0.031"), enabling them to accommodate undersized and oversized bar stock. This range is even larger for the QG-100 – 0.080"

## High Accuracy

Royal Quick-Grip™ CNC Collet Chucks are very accurate – runout on the closing angle is **guaranteed to be within 0.0002" TIR.**

## Low-Profile

Royal Quick-Grip™ CNC Collet Chucks have smaller nose diameters than other quick-change collet chucks for superior tool clearance.

## Collet Compatibility

Royal Quick-Grip™ Collet Chucks can sometimes utilize other brands of quick-change collets. Call Royal to verify.

## Heavy-Duty Construction

All chuck components, except for the drawtube connector, are hardened to Rc 61-63 for high rigidity and durability.

## Easy Installation

Royal Quick-Grip™ Collet Chucks include all mounting hardware, mounting wrenches, and a custom-machined drawtube connector to ensure hassle-free installation.

## 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.

## Dead-Length Operation

Royal Quick-Grip™ Accu-Length™ CNC Collet Chucks incorporate dead length operation to eliminate part pullback. With this design, the collet is held stationary in the chuck body and a tapered sleeve pushes forward to compress it, resulting in precise z-axis workpiece positioning.

## Coolant Slinger

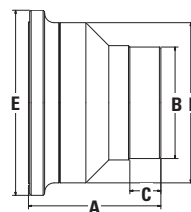
All bodies incorporate an oversized flange to protect the machine tool spindle bearings from coolant penetration.

## Shortest Length

Royal Quick-Grip™ CNC Collet Chucks are among **the shortest chucks available**, providing maximum work envelope utilization. This is especially important for smaller machines with limited z-axis travel.

Note – Collets and installation tool sold separately

# ROYAL STANDARD QUICK-GRIP™ ACCU-LENGTH™ CNC COLLET CHUCKS



## Royal Quick-Grip™ Accu-Length™ CNC Collet Chucks

SPINDLE TYPE	COLLET TYPE	MAX CAPACITY		CHUCK STYLE	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	PRICE¹
		BAR	SLUG³												
A2-4	QG-32	1.28	1.80	UC	4.40	3.59	0.75	5.63	6.35	18	5,620	15,740	7,000	46192	\$5,080
A2-5	QG-32	1.28	1.80	UC	4.53	3.59	0.75	5.63	6.35	17	5,620	15,740	7,000	46193	5,080
A2-6	QG-32	1.28	1.80	UC	4.53	3.59	0.75	5.63	7.25	20	5,620	15,740	7,000	46194	5,080
110 MM	QG-32	1.28	1.80	UC	4.18	3.59	0.75	5.63	5.63	16	5,620	15,740	7,000	46195	5,080
140 MM	QG-32	1.28	1.80	UC	4.18	3.59	0.75	5.63	6.35	16	5,620	15,740	7,000	46196	5,080
A2-5	QG-42	1.66	2.62	C	4.60	4.07	0.75	5.70	6.45	19	7,865	17,980	6,000	46100	5,080
A2-5	QG-42	1.66	2.62	UC	4.00	4.07	0.75	5.70	6.45	15	7,865	17,980	6,000	46105	5,080
A2-6	QG-42	1.66	2.62	UC	4.45	4.07	0.75	6.20	7.25	21	7,865	17,980	6,000	46110	5,080
110 MM	QG-42	1.66	2.62	UC	3.95	4.07	0.75	5.70	5.70	16	7,865	17,980	6,000	46112	5,080
140 MM	QG-42	1.66	2.62	UC	3.95	4.07	0.75	5.70	5.70	15	7,865	17,980	6,000	46115	5,080
A2-5	QG-52	2.03	2.57	C	4.80	4.37	0.75	6.10	6.85	24	7,865	17,980	6,000	46116	5,080
A2-5	QG-52	2.03	2.57	UC	4.20	4.37	0.75	6.10	6.10	18	7,865	17,980	6,000	46117	5,080
A2-6	QG-52	2.03	2.57	UC	4.60	4.37	0.75	6.20	7.25	23	7,865	17,980	6,000	46118	5,080
110 MM	QG-52	2.03	2.57	UC	4.20	4.37	0.75	6.10	6.10	17	7,865	17,980	6,000	46121	5,080
115 MM	QG-52	2.03	2.57	UC	4.20	4.37	0.75	6.10	6.10	19	7,865	17,980	6,000	46122	5,080
140 MM	QG-52	2.03	2.57	UC	4.20	4.37	0.75	6.10	6.10	19	7,865	17,980	6,000	46119	5,080
A2-5	QG-65	2.66	3.40	C	4.80	4.96	0.87	6.55	7.25	27	10,115	23,600	6,000	46120	5,730
A2-5	QG-65	2.66	3.40	UC	4.50	4.96	0.87	6.55	6.55	24	10,115	23,600	6,000	46125	5,730
A2-6	QG-65	2.66	3.40	C	5.33	4.96	0.87	6.55	7.25	31	10,115	23,600	6,000	46130	5,730
A2-6	QG-65	2.66	3.40	UC	4.65	4.96	0.87	6.55	7.25	24	10,115	23,600	6,000	46135	5,730
A2-6	QG-65	2.66	3.40	EL²	7.00	4.96	0.87	6.55	7.25	45	10,115	23,600	6,000	46140	5,730
A2-8	QG-65	2.66	3.40	C	5.50	4.96	0.87	8.00	9.45	45	10,115	23,600	6,000	46145	6,450
110 MM	QG-65	2.66	3.40	UC	4.45	4.96	0.87	6.55	6.55	25	10,115	23,600	6,000	46150	6,260
140 MM	QG-65	2.66	3.40	UC	4.80	4.96	0.87	6.55	7.45	29	10,115	23,600	6,000	46155	6,260
A2-5	QG-80	3.28	4.00	C	4.95	5.68	0.87	7.45	7.45	33	11,240	25,850	5,000	46160	6,650
A2-6	QG-80	3.28	4.00	C	4.95	5.68	0.87	7.45	7.45	35	11,240	25,850	5,000	46165	6,650
A2-6	QG-80	3.28	4.00	EL²	7.00	5.68	0.87	7.45	7.45	58	11,240	25,850	5,000	46166	6,650
A2-8	QG-80	3.28	4.00	C	5.20	5.68	0.87	8.00	9.45	43	11,240	25,850	5,000	46170	6,650
140 MM	QG-80	3.28	4.00	C	4.75	5.68	0.87	7.45	7.45	34	11,240	25,850	5,000	46175	6,650
A2-6	QG-100	4.03	5.15	C	6.18	7.07	0.87	9.40	9.40	76	14,610	33,720	5,000	46180	9,640
A2-8	QG-100	4.03	5.15	C	6.43	7.07	0.87	9.40	10.75	89	14,610	33,720	5,000	46185	9,760
A2-11	QG-100	4.03	5.15	C	6.68	7.07	0.87	9.40	12.50	93	14,610	33,720	5,000	46190	11,410

¹ Includes drawtube connector. Collets and installation tool sold separately.

² Extended-length – for use on machines where z-axis turret travel is limited.

³ Slug capacity requires counterboring of collets. See page 66 details.

C=Compact, UC=Ultra-Compact, EL=Extended-Length





# ROYAL QUICK-GRIP™ **PULL-TO-A-STOP** CNC COLLET CHUCKS

## Bolt & Go™

Our exclusive Bolt & Go™ mounting feature is standard on all Royal Quick-Grip™ Collet Chuck models. **Bolt & Go™ enables chucks to be mounted very quickly and ensures maximum accuracy and rigidity.** See page 34 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.

## High RPM

All Royal Quick-Grip™ 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 affected by centrifugal force.



## Coolant Slinger

All bodies incorporate an oversized flange to protect the machine tool spindle bearings from coolant penetration.

## Shortest Length

Royal Quick-Grip™ CNC Collet Chucks are among **the shortest chucks available**, providing maximum work envelope utilization. This is especially important for smaller machines with limited z-axis travel.

Note – Collets and installation tool sold separately

## Extremely Fast Collet Changes

Changing collets on a Royal Quick-Grip™ CNC Collet Chuck takes just a few seconds. A unique hook and groove design for securing collets is used instead of traditional threads.

## Wide Gripping Range

Royal Quick-Grip™ Collets have a 0.062" gripping range (+/- 0.031"), enabling them to accommodate undersized and oversized bar stock. This range is even larger for the QG-100 – 0.080".

## High Accuracy

Royal Quick-Grip™ CNC Collet Chucks are very accurate – runout on the closing angle is **guaranteed to be within 0.0002" TIR.**

## Low-Profile

Royal Quick-Grip™ CNC Collet Chucks have smaller nose diameters than other quick-change collet chucks for superior tool clearance.

## Collet Compatibility

Royal Quick-Grip™ Collet Chucks can sometimes utilize other brands of quick-change collets. Call Royal to verify.

## Heavy-Duty Construction

All chuck components, except for the drawtube connector, are hardened to Rc 61-63 for high rigidity and durability.

## Easy Installation

Royal Quick-Grip™ Collet Chucks include all mounting hardware, mounting wrenches, and a custom-machined drawtube connector to ensure hassle-free installation.

## 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.

## Two-Chucks In One

The Royal Quick-Grip™ Pull-to-a-Stop CNC Collet Chuck includes a removable stop for precise, consistent workpiece positioning. The pullback action of the collet draws the workpiece securely against the stop, eliminating any chance of z-axis part movement and enabling very aggressive cutting.

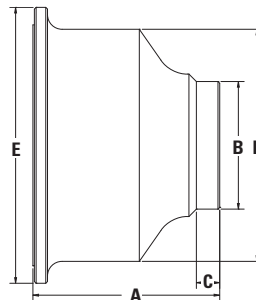
When thru-hole capacity is required for bar feeding applications, simply remove the stop and the chuck will function as a normal pullback-style collet chuck.



# ROYAL QUICK-GRIP™ **PULL-TO-A-STOP** CNC COLLET CHUCKS



Chuck includes removable standard stop.



- ✓ Same great features as our Accu-Length™ Quick-Grip™ models, except that the collet is not fixed – it moves axially upon opening and closing.
- ✓ Adjustable stop guarantees precise, consistent z-axis part positioning and enables very aggressive cutting.
- ✓ Ideal for high-volume, robot-load applications in which the part needs to **locate against a shoulder and air-sensing / position confirmation is required.**
- ✓ Also a great choice for any CNC lathe equipped with a servo-driven bar feeder – simply remove the included stop for full thru-capacity.
- ✓ In-stock for same-day shipping.



## Royal Quick-Grip™ **Pull-to-a-Stop** CNC Collet Chucks

SPINDLE TYPE	COLLET TYPE	MAX 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>1</sup>
		BAR	SLUG <sup>3</sup>											
A2-5	QG-42	1.66	2.62	5.10	3.54	0.62	6.00	6.70	21	7,865	17,980	6,000	46010	\$5,430
A2-6	QG-42	1.66	2.62	5.50	3.54	0.62	6.25	7.45	25	7,865	17,980	6,000	46012	5,430
A2-5	QG-52	2.03	2.57	5.25	3.63	0.62	6.19	6.95	21	7,865	17,980	6,000	46028	5,430
A2-6	QG-52	2.03	2.57	5.65	3.63	0.67	6.19	7.25	22	7,865	17,980	6,000	46030	5,430
A2-5	QG-65	2.66	3.40	5.50	4.37	0.80	6.70	7.62	28	10,115	23,600	6,000	46014	6,190
A2-6	QG-65	2.66	3.40	6.00	4.37	0.80	6.70	7.62	29	10,115	23,600	6,000	46016	6,190
A2-6	QG-65	2.66	3.40	7.00 <sup>2</sup>	4.37	0.80	6.70	7.62	35	10,115	23,600	6,000	46017	6,190
A2-8	QG-65	2.66	3.40	6.40	4.37	0.80	7.95	9.45	45	10,115	23,600	6,000	46018	6,190
A2-6	QG-80	3.28	4.00	6.00	4.96	0.80	8.00	8.75	44	11,240	25,850	5,000	46020	6,790
A2-8	QG-80	3.28	4.00	6.40	4.96	0.80	8.00	9.45	47	11,240	25,850	5,000	46022	6,790
A2-6	QG-100	4.03	5.15	7.08	6.30	0.80	9.40	9.40	88	14,610	33,720	5,000	46023	8,420
A2-8	QG-100	4.03	5.15	7.33	6.30	0.80	9.40	10.75	95	14,610	33,720	5,000	46024	8,420
A2-11	QG-100	4.03	5.15	7.58	6.30	0.80	9.40	12.50	102	14,610	33,720	5,000	46026	9,140

<sup>1</sup> Includes drawtube connector. Collets and installation tool sold separately.

<sup>2</sup> Extended-length – for use on machines where z-axis turret travel is limited.

<sup>3</sup> Slug capacity requires counterboring of collets. See page 66 details.



# ROYAL QUICK-GRIP™ **PULLBACK** CNC COLLET CHUCKS

## **Bolt & Go™**

Our exclusive Bolt & Go™ mounting feature is standard on all Royal Quick-Grip™ Collet Chuck models. Bolt & Go™ enables chucks to be mounted very quickly and ensures maximum accuracy and rigidity. See page 34 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.

## **High RPM**

All Royal Quick-Grip™ 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 affected by centrifugal force.

## **Coolant Slinger**

All bodies incorporate an oversized flange to protect the machine tool spindle bearings from coolant penetration.

## **Shortest Length**

Royal Quick-Grip™ CNC Collet Chucks are among the shortest chucks available, providing maximum work envelope utilization. This is especially important for smaller machines with limited z-axis travel.

## **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.

## **Extremely Fast Collet Changes**

Changing collets on a Royal Quick-Grip™ CNC Collet Chuck takes just a few seconds. A unique hook and groove design for securing collets is used instead of traditional threads.

## **Wide Gripping Range**

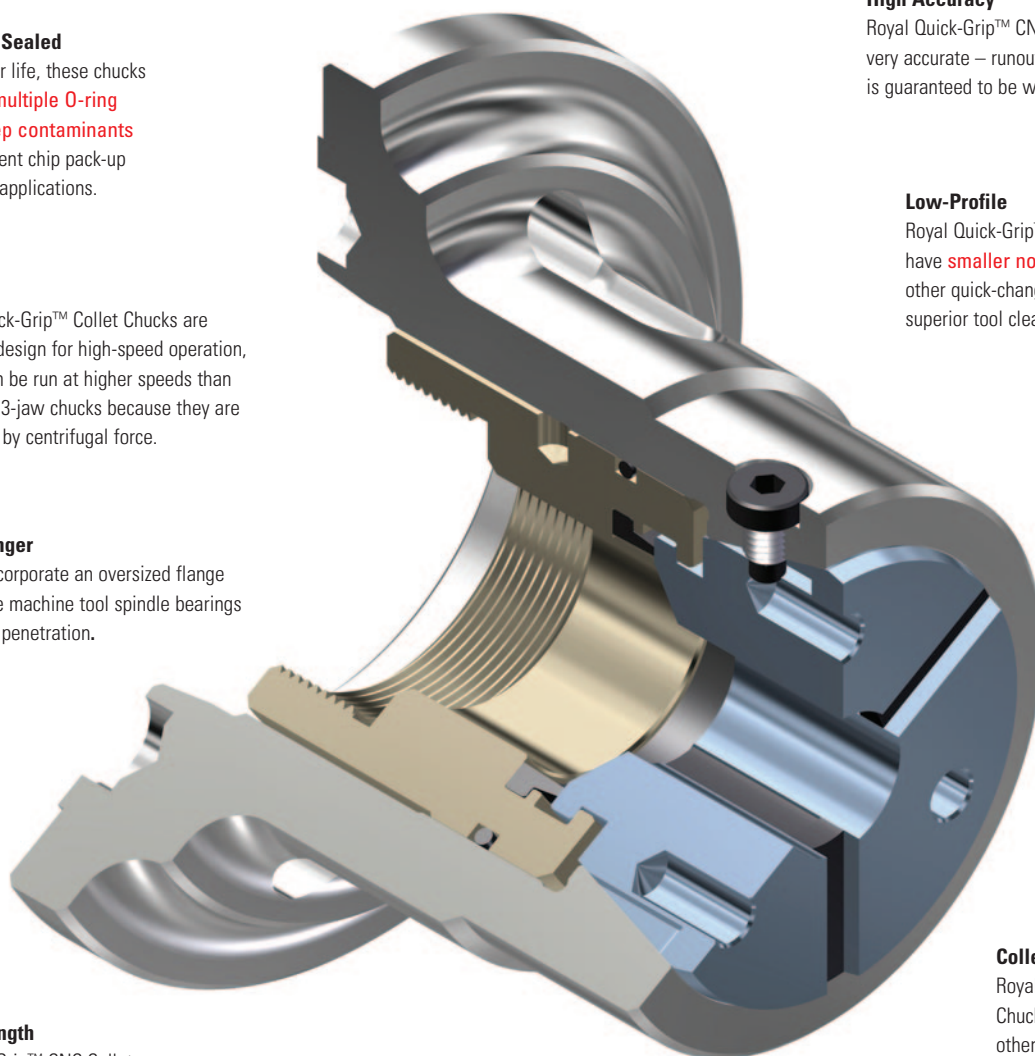
Royal Quick-Grip™ Collets have a 0.062" gripping range (+/- 0.031"), enabling them to accommodate undersized and oversized bar stock. This range is even larger for the QG-100 – 0.080".

## **High Accuracy**

Royal Quick-Grip™ CNC Collet Chucks are very accurate – runout on the closing angle is guaranteed to be within 0.0002" TIR.

## **Low-Profile**

Royal Quick-Grip™ CNC Collet Chucks have **smaller nose diameters** than other quick-change collet chucks for superior tool clearance.



## **Collet Compatibility**

Royal Quick-Grip™ Collet Chucks can sometimes utilize other brands of quick-change collets. Call Royal to verify.

## **Heavy-Duty Construction**

All chuck components, including the drawtube connector, are **hardened to Rc 61-63 for high rigidity and durability.**

## **Easy Installation**

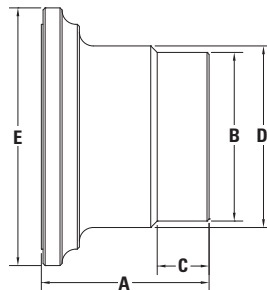
Royal Quick-Grip™ Collet Chucks include all mounting hardware, mounting wrenches, and a custom-machined drawtube connector to ensure hassle-free installation.

Note – Collets and installation tool sold separately

# ROYAL QUICK-GRIP™ **PULLBACK** CNC COLLET CHUCKS



- ✓ Traditional pullback design – collet is pulled into chuck to close, pushed out to open.
- ✓ No collet stop capability, therefore this chuck style is **typically used only on jobs where holding precise axial position is not critical.**
- ✓ Includes many of the same features of our QG Accu-Length™ models, including:
  - 10-second collet changes
  - 0.0002" TIR accuracy on closing angle
  - Wide 0.062" collet range (0.080" for QG-100)
  - Compact dimensions for superior clearance
- ✓ In-stock for same-day shipping.



## Royal Quick-Grip™ **Pullback** CNC Collet Chucks

SPINDLE TYPE	COLLET TYPE	MAX 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>1</sup>
		BAR	SLUG <sup>2</sup>											
A2-5	QG-42	1.66	2.62	4.45	4.11	3.50	5.25	6.45	11	7,865	17,980	6,000	44020	<b>\$3,545</b>
A2-6	QG-42	1.66	2.62	4.35	4.11	1.50	4.38	7.45	13	7,865	17,980	6,000	44022	<b>3,545</b>
A2-5	QG-65	2.66	3.40	4.30	4.88	1.50	6.45	6.45	19	10,115	23,600	6,000	44028	<b>3,790</b>
A2-6	QG-65	2.66	3.40	4.85	4.88	1.50	5.25	7.45	17	10,115	23,600	6,000	44030	<b>3,790</b>
A2-8	QG-65	2.66	3.40	5.00	4.88	1.50	5.72	9.45	25	10,115	23,600	6,000	44032	<b>4,635</b>
A2-6	QG-80	3.28	4.00	4.85	5.47	1.25	5.68	7.45	25	11,240	25,850	5,000	44034	<b>4,740</b>
A2-8	QG-80	3.28	4.00	5.00	5.47	1.25	5.72	9.45	25	11,240	25,850	5,000	44036	<b>4,750</b>

<sup>1</sup> Includes drawtube connector. Collets and installation tool sold separately.

<sup>2</sup> Slug capacity requires counterboring of collets. See page 66 details.



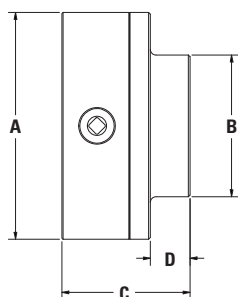
**Check out the Royal Quick-Grip™ CNC Collet Chuck Video at [www.colletchucks.com](http://www.colletchucks.com)**



## ROYAL KEY-OPERATED QUICK-GRIP™ COLLET CHUCK FOR MANUAL LATHES



- Now you can **enjoy the same great features of the Royal Quick-Grip™ CNC Collet Chuck on your manual engine lathes**, including ten-second collet changes and parallel-grip collets with a full 0.062" clamping range.
- No hydraulic actuator needed – chuck is operated with a traditional square-drive chuck key (included) via a side-access screw.
- In addition to manual lathe applications, this chuck can also be utilized on indexers, rotary tables, etc.
- By eliminating the drawtube and offering a full 2-5/8" thru capacity (compared to 1-1/16" of a 5C collet closer), users can **make much better use of their lathe's spindle capacity**.
- Very accurate – 0.0005" TIR guaranteed!
- Balanced to 4,000 rpm.
- Superior gripping force – up to 16,860 lbs.
- Order backplate separately. Other backplate styles available as custom order.
- For use with Royal QG-65 collets and installation tools (pages 52-70).
- Note – this product is **specifically designed for use on manual equipment not equipped with a hydraulic actuator**. For CNC lathes, better performance will be achieved through the use of Royal CNC Collet Chucks.



### Royal Key-Operated Quick-Grip™ Collet Chuck for Manual Lathes\*

MODEL	CAPACITY	A	B	C	D	MAX TIGHTENING TORQUE (ft.-lbs.)	MAX CLAMPING FORCE (lbs.)	PART NUMBER	PRICE
QG-65	2.66	7.87	4.92	4.45	1.38	118	16,860	43920	<b>\$6,895</b>

\*Order backplate, collets, and installation tool separately.

### Backplates for Key-Operated QG Collet Chuck

MODEL	PLATE DIAMETER	PLATE THICKNESS	PART NUMBER	PRICE
A2-5	7.87	1.10	43930	<b>\$1,340</b>
A2-6	7.87	1.18	43932	<b>1,470</b>
D1-5	7.87	1.60	43934	<b>1,695</b>
D1-6	7.87	1.85	43936	<b>2,060</b>

- Hardened and precision ground.
- Backplates accept Royal Quick-Grip™ stops featured on page 69.



# ROYAL QUICK-GRIP™ POWER-BLOCK™ COLLET FIXTURES

## Hydraulic or Pneumatic Actuation



### Extremely Fast Collet Changes

Changing collets on a Royal Quick-Grip™ Power-Block™ takes just a few seconds. A unique hook and groove design for securing collets is used instead of traditional threads.

### Tool Clearance Optimized

Slim nose diameter offers **better tool clearance compared to vises and other prismatic workholding devices.**

### Extreme Grip Force

The gripping segments of Royal Quick-Grip™ collets always remain parallel to the workpiece over their full length, ensuring grip force is evenly distributed. This is a **significant advantage for thin-walled parts that are susceptible to crushing.**

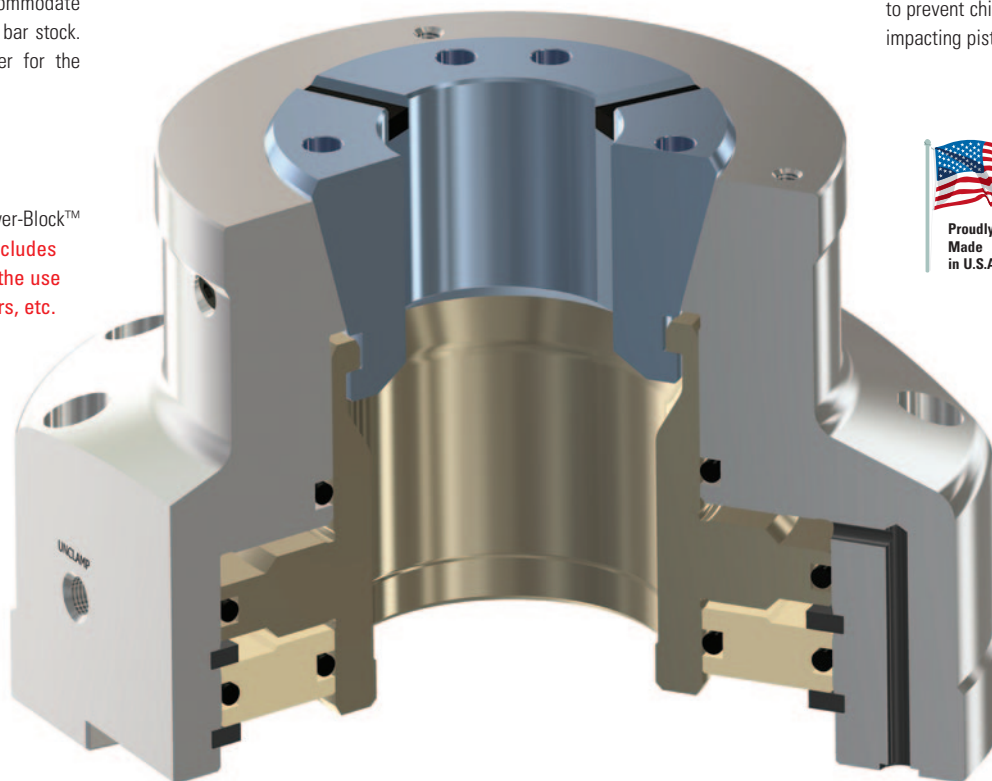
### Wide Gripping Range

Royal Quick-Grip™ Collets have a 0.062" gripping range (+/- 0.031"), enabling them to accommodate undersized and oversized bar stock. This range is even larger for the QG-100 – 0.080".

### Flexible

The face of the Royal Power-Block™ is precision-ground and **includes tapped holes, enabling the use of custom stops, locators, etc.**

## Great for 5th-Axis Applications!



### Completely Sealed

Lubricated for life, these fixtures incorporate multiple O-ring seals to prevent chips and coolant from impacting piston movement.

### Heavy-Duty Construction

Body and piston are hardened to Rc 61-63 for maximum rigidity and durability.

### Low Maintenance

Oversized evacuation slots on all four sides enable chips to be easily flushed clear on bore-thru applications.

### Dual-Port Actuation

All units are equipped with ports on both the side and bottom surface of the fixture, offering **actuation flexibility for both fixed and rotary table applications.**

### Precision Mounting

Internal bore and external O.D. are both precision-ground, offering flexibility while **ensuring accurate, repeatable mounting to plates, tombstones, etc.**

### Custom Collet Profiles

One of the greatest advantages of this workholding system is in Royal's ability to supply custom collet profiles for odd-shaped second-op gripping. See examples on page 68.



Note – Collets and installation tool sold separately

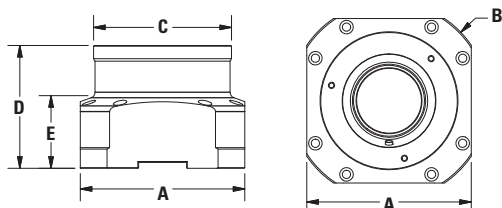


# ROYAL QUICK-GRIP™ POWER-BLOCK™ COLLET FIXTURES

Hydraulic or Pneumatic Actuation



When paired with a custom-profile Quick-Grip™ collet, the Royal Power-Block™ can help you optimize your workholding for parts that aren't well-suited to traditional vises or prismatic fixtures. See page 68 for examples.



- Royal Power-Block™ Collet Fixtures bring the full functionality of our Quick-Grip™ CNC Collet Chucks to your vertical and horizontal machining centers.
- These fixtures incorporate many of the same great features as our Quick-Grip™ CNC Collet Chucks, including ten-second collet changes and the use of parallel-grip collets with a full 0.062" clamping range (0.080" for QG-100).
- **A great alternative to traditional vises and fixtures** – especially for long, thin parts, or those with asymmetrical external features.
- Units are designed to be actuated via hydraulic pressure, and may also be actuated pneumatically for lighter-duty applications (contact Royal for details).
- Engineered for use in both stationary and rotary-table applications. **Caution – not for use on lathes or grinders above 60 rpm!**
- Heavy-duty all steel construction with a large double-acting piston for high clamping force.
- Configured with both side and bottom ports for plumbing flexibility.
- Multiple units can be plumbed in series for single-source actuation.
- Mounting face is precision-ground for perpendicularity to centerline.
- **Ideal for high-production vertical and horizontal milling applications.**
- For use with Royal Quick-Grip™ collets and installation tools (pages 52-70).

## Power-Block™ Grip Force Specifications\*

MODEL	MAX INPUT HYDRAULIC PRESSURE (psi.)	MAX AXIAL FORCE (lbs.)	MAX CLAMPING FORCE (lbs.)
QG-32	1450	5,620	15,735
QG-42	580	7,865	17,980
QG-52	580	7,865	17,980
QG-65	580	10,115	23,600
QG-80	580	11,240	25,850
QG-100	580	14,610	33,720

\*Contact Royal for pneumatic actuation specifications.

## Royal Quick-Grip™ Power-Block™ Collet Fixtures

MODEL	CAPACITY		A (SQUARE)	B (OUTER DIA.)	C	D	E	FIXTURE WEIGHT (lbs.)	PART NUMBER	PRICE*
	(ROUND)	(SQUARE)								
QG-32	1.29	0.91	3.15	4.17	2.95	3.74	2.09	6	43958	\$3,235
QG-42	1.66	1.16	6.06	6.89	4.13	4.72	3.56	25	43960	3,860
QG-52	2.00	1.37	6.06	6.89	4.13	4.72	3.56	25	43962	3,860
QG-65	2.66	1.78	6.85	8.27	4.92	5.12	3.36	33	43964	4,160
QG-80	3.28	2.03	7.34	8.46	6.30	5.12	3.00	38	43954	4,675
QG-100	4.03	2.78	9.02	10.63	8.46	5.51	3.38	66	43956	6,425

\*Collets and installation tool sold separately.

# ROYAL POWER-BLOCK™ QG-32 FIXTURE



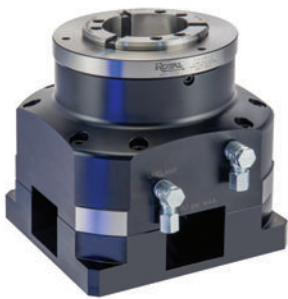
## High Density Workholding for Machining Centers

- Royal Power-Block™ Collet Fixtures bring the full functionality of our Quick-Grip™ CNC Collet Chucks to your vertical and horizontal machining centers — **Now available in compact QG-32 sizing.**
- Actuated by either air or hydraulics.
- Booster cylinder available for extra clamping force.
- Compact footprint enables close ganging for multi-part applications in condensed spaces.



DESCRIPTION	PART NUMBER	PRICE*
QG-32 Hydraulic Power-Block™ Collet Fixture	43958	<b>\$3,235</b>
Booster Cylinder for QG-32 Hydraulic Power-Block™	43980	<b>3,195</b>
Baseplate for QG-32 Hydraulic Power-Block™	43978	<b>1,495</b>

# ROYAL QUICK-GRIP™ POWER-BLOCK™ RISERS

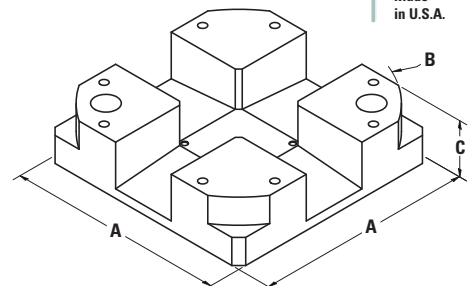


- These risers are designed specifically for Royal Power-Block™ Collet Fixtures and have multiple uses, including:
  - Raising the fixture height for **improved 5th-axis accessibility.**
  - Enhancing chip evacuation for thru-hole machining applications.
- Surface ground within 0.0002" parallelism.
- 20mm wide keyway on bottom surface provides secure engagement with machining center tables and rotary tables.
- Risers also available for Royal Key-Operated Power-Block™ Fixtures. Please contact one of our applications engineers for information.
- In stock for same-day shipping.

## Royal Power-Block™ Risers

FITS HYDRAULIC POWER-BLOCK™ MODEL	A	B	C	PART NUMBER	PRICE*
QG-42	6.06	6.89	1.75	43970	<b>\$1,620</b>
QG-52	6.06	6.89	1.75	43970	<b>1,620</b>
QG-65	6.85	8.27	1.75	43972	<b>1,660</b>
QG-80	7.34	8.46	1.75	43974	<b>1,765</b>
QG-100	9.02	10.63	1.75	43976	<b>2,085</b>

\*Riser only. Order Power-Block™ and collets separately.





## ROYAL QG **COMBO** POWER-BLOCK™ KEY-OPERATED COLLET FIXTURES

### Three Great Workholding Options in One Fixture!

**NEW**



**Quick-Grip™ Collet Setup**



**I.D. Gripping Setup**



**5C Collet Setup**

### Get More Out of Your Vertical, Horizontal, and 5-Axis Machining

- These multi-function fixtures enable you to **use Royal QG collets, Royal I.D. mandrels/sleeves, and 5C collets in your 3, 4, and 5-axis applications.**
- Manually actuated with a hex key (included).
- Many of the same great features as our QG Combo CNC Collet Chucks, including ten-second collet changes and parallel-grip collets with a full 0.062" clamping range.
- Can be used in both stationary and rotary table applications. Caution – not for use on lathes or grinders above 5 rpm!
- Pullback design with an internally threaded backplate enables the use of a stop rod.
- Unit is supplied configured to accept Royal QG collets. For I.D. and 5C workholding, additional components are required (order separately).

### How It Works



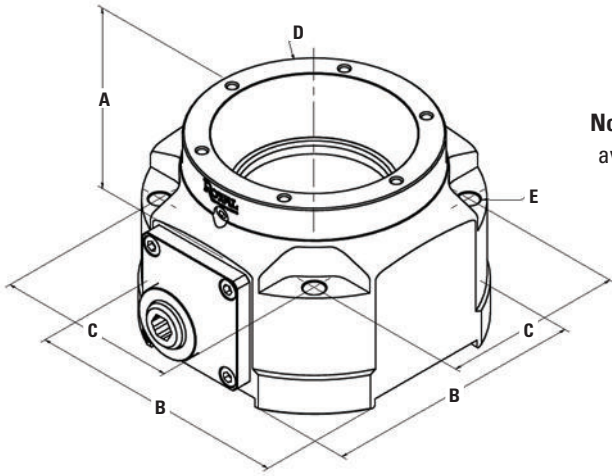
- Royal QG Power-Block™ Combo Fixtures directly accept Royal QG collets.
- For I.D. and 5C applications, a hardened and ground adapter (sold separately) is inserted and bolted to the fixture and engages with the piston via a bayonet arrangement.
- This adapter has a ground 75mm I.D. recess to accept Royal I.D. mandrels (see pages 84-85) or our 5C collet nose.



**Odd-Shaped Parts? No problem!**  
Royal can supply custom collets for any configuration.



# ROYAL QG COMBO POWER-BLOCK™ KEY-OPERATED COLLET FIXTURES



**Note** Dimensions for I.D. and 5C setups  
available online at [royalproducts.com](http://royalproducts.com)



## Royal QG Combo Power-Block™ Key-Operated Collet Fixtures

MODEL	A	B	C	D	E	MAX TIGHTENING TORQUE (ft.-lbs.)	MAX CLAMPING FORCE (lbs.)	PART NUMBER	PRICE**
QG-52	4.13	5.38	3.71	4.13	0.43	42	5,125	43985	<b>\$4,405</b>
QG-65	4.13	5.88	4.07	4.92	0.43	42	6,430	43986	<b>4,660</b>
QG-80	4.25	6.50	4.60	5.51	0.51	57	7,420	43987	<b>6,425</b>

### Combo Power-Block™ Adapter

Required for I.D. and/or 5C Gripping

FITS MODEL	PART NUMBER	PRICE
QG-52	43991	<b>\$2,350</b>
QG-65	43992	<b>2,625</b>
QG-80	43993	<b>3,170</b>

### Expanding Rod Adapters

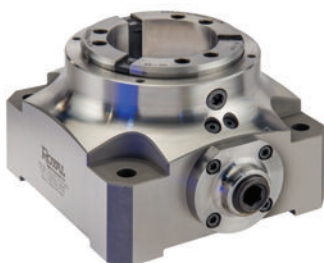
Required for I.D. Gripping

FITS MANDREL MODEL	PART NUMBER	PRICE
A	65140	<b>\$415</b>
B & C	65141	<b>415</b>
D	65142	<b>415</b>
E	65143	<b>415</b>

### 5C Collet Nose

PART NUMBER	PRICE
65138	<b>\$1,235</b>

## FIRST-GENERATION KEY-OPERATED POWER-BLOCKS™



- ❑ These first-generation models utilize Royal QG Collets only – no I.D. or 5C functionality.
- ❑ Available while supplies last – visit [royalproducts.com](http://royalproducts.com) for pricing and availability.

MODEL	PART NUMBER
QG-42	43900
QG-52	43902
QG-65	43904
QG-80	43906
QG-100	43912

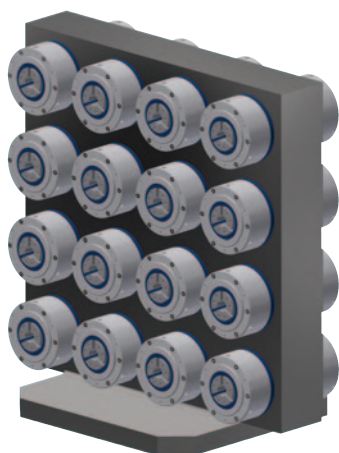


## ROYAL CUSTOM POWER-BLOCK™ WORKHOLDING

The Royal Power-Block™ offers unique production-enhancing opportunities for:

- ✓ 5th-Axis Applications
- ✓ Horizontal Machining Centers
- ✓ Multi-Station Rotary-Transfer Applications

Here is a sampling of how some of our customers have greatly improved productivity with Royal Power-Blocks™.



**Application:** Double-sided shaft-end machining on a horizontal machining center.

**Capacity:** 16 parts at one time.

**Unique Features:**

- ❑ 32 custom Small-Body Accu-Length™ Collet Fixtures mounted to a custom internally ported T-column.
- ❑ Gripping force supplied by internal die springs in each fixture.
- ❑ Pneumatically unclamped via a single intake port.
- ❑ This arrangement allows for all parts to be loaded and clamped off-line, so when the column travels into the machining center no air or hydraulic lines need to remain attached.

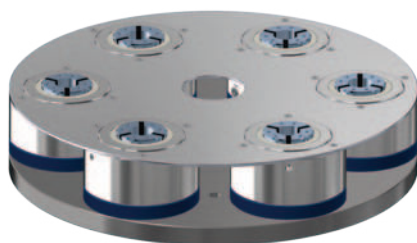


**Application:** "Tapered Oval" shaped part in a 5th-axis machining center.

**Capacity:** Four parts at one time.

**Unique Features:**

- ❑ Four standard Key-Operated Power-Blocks™ mounted to the machine tool rotary table via a custom adapter plate.
- ❑ Four hardened and ground collets custom-machined according to the exact part profile.
- ❑ Customer experienced an increase in throughput of 236% over the multi-station vise that was previously being used.



**Application:** Six-station rotary-transfer machine.

**Capacity:** Five parts in process at one time. Sixth station used for load/unload.

**Unique Features:**

- ❑ Six custom Small-Body Accu-Length™ Hydraulic Power-Block™ Fixtures mounted to a custom plate.
- ❑ Six custom counter-bored collets for precise z-axis positioning.
- ❑ Custom chip-shield.
- ❑ Clamp/unclamp provided via a centrally located indexing hydraulic manifold (not shown).