

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



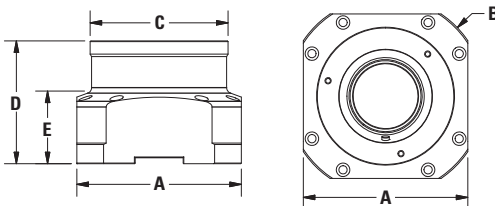
**NEW**



- 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.
- 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 24-40).

## Power-Block™ Grip Force Specifications

MODEL	MAX INPUT HYDRAULIC PRESSURE (psi.)	MAX AXIAL FORCE (lbs.)	MAX CLAMPING FORCE (lbs.)
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



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 39 for examples.

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

MODEL	CAPACITY		A (SQUARE)	B (OUTER DIA.)	C	D	E	PART NUMBER	PRICE*
	(ROUND)	(SQUARE)							
QG-42	1.66	1.16	6.06	6.89	4.92	4.72	3.18	43950	<b>\$2,595</b>
QG-52	2.00	1.37	6.06	6.89	4.13	4.72	3.56	43962	<b>2,595</b>
QG-65	2.66	1.78	6.85	8.27	5.75	5.12	3.00	43952	<b>2,785</b>
QG-80	3.28	2.03	7.34	8.46	6.30	5.12	3.00	43954	<b>3,140</b>
QG-100	4.03	2.78	9.02	10.63	8.46	5.51	3.38	43956	<b>4,320</b>

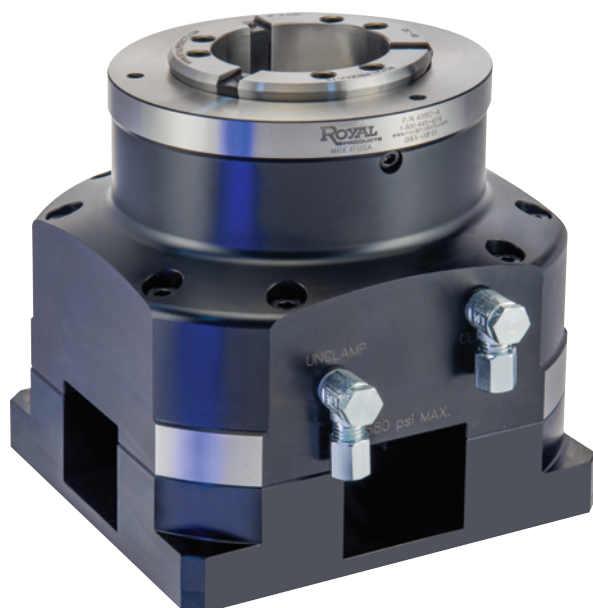
\*Collets and installation tool sold separately.



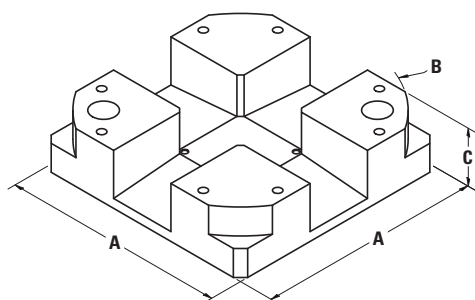
# ROYAL QUICK-GRIP™ POWER-BLOCK™ RISERS

## New Range of Risers Optimizes Power-Block™ Functionality

**NEW**



- ❑ These risers are designed specifically for Royal Power-Block™ Hydraulic 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.
- ❑ Manufactured from semi-hard 4140 steel for toughness, yet it is still easily machineable for customization.
- ❑ Thickness held within 0.0005" tolerance for accurate interchangeability.
- ❑ Tapped center hole enables easy installation of a depth stop.
- ❑ 20mm wide keyway on bottom surface provides secure engagement with machining center tables and rotary tables.
- ❑ Flexible mounting:
  - Milled flats allow for the use of hold-down clamps.
  - Bolt directly to the machine table.
  - Secure with T-nuts.
- ❑ 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>\$915</b>
QG-52	6.06	6.89	1.75	43970	<b>915</b>
QG-65	6.85	8.27	1.75	43972	<b>935</b>
QG-80	7.34	8.46	1.75	43974	<b>995</b>
QG-100	9.02	10.63	1.75	43976	<b>1,185</b>

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

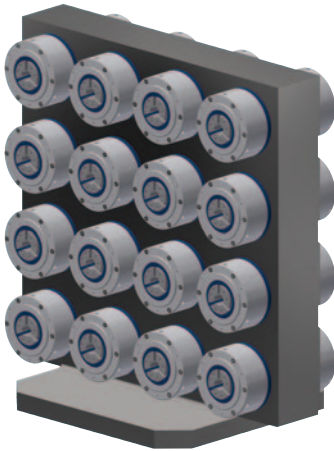
# ROYAL CUSTOM POWER-BLOCK™ WORKHOLDING



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™.

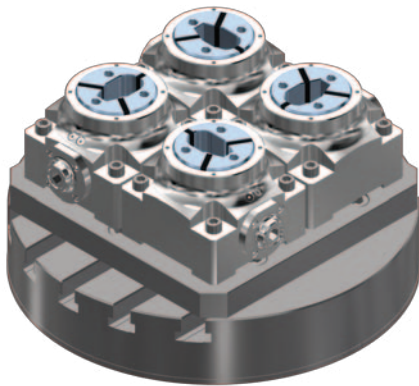


**Application:** Double-sided shaft-end machining on a horizontal machining center.

**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.

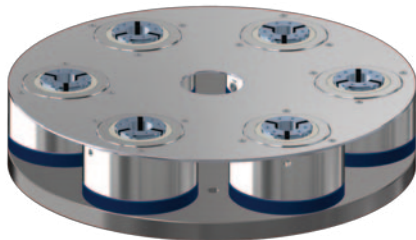


**Application:** "Tapered Oval" shaped part in a 5th-axis machining center.

**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.

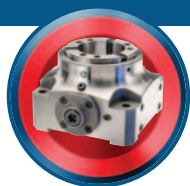


**Application:** Six-station rotary-transfer machine.

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

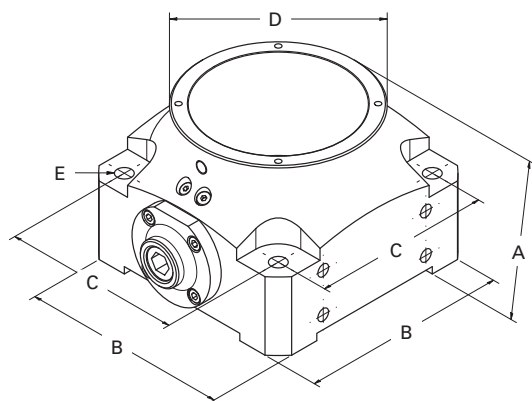
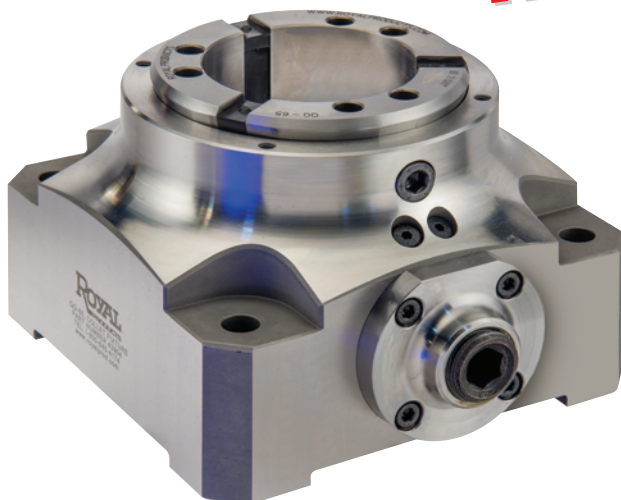
**Unique Features:**

- ❑ 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).



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

**NEW**



- Unit is actuated via a hybrid mechanical/hydraulic mechanism.
- Can be used in both stationary and rotary table applications.  
**Caution – not for use on lathes or grinders above 5 rpm!**
- Many of the same great features as our Quick-Grip™ CNC Collet Chucks, including ten-second collet changes and parallel-grip collets with a full 0.062" clamping range (0.080" for QG-100).
- Pullback design with an internally threaded back plate enables the use of a stop rod.
- Fixture face is precision ground and includes tapped holes, enabling the use of custom stops, locators, etc.
- Bottom and all four sides are ground for both vertical and horizontal mounting.
- **Ideal for high production 4th and 5th-axis applications.**
- For use with Royal Quick-Grip™ collets and installation tools (pages 24-40).



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

MODEL	CAPACITY		A	B	C	D	E	MAX TIGHTENING TORQUE (ft.-lbs.)	MAX CLAMPING FORCE (lbs.)	PART NUMBER	PRICE*
	ROUND	SQUARE									
QG-42	1.66"	1.16"	3.94	5.12	3.94	3.94	0.43	42	5,125	43900	<b>\$3,050</b>
QG-52	2.03"	1.41"	3.94	5.12	3.94	3.94	0.43	42	5,125	43902	<b>3,050</b>
QG-65	2.66"	1.78"	3.94	5.91	4.72	4.72	0.43	42	6,430	43904	<b>3,230</b>
QG-80	3.28"	2.03"	4.33	6.50	5.31	5.31	0.51	57	7,420	43908	<b>4,450</b>
QG-100	4.03"	2.78"	4.33	7.87	6.69	6.50	0.51	57	9,375	43912	<b>4,800</b>

\*Collets and installation tool sold separately