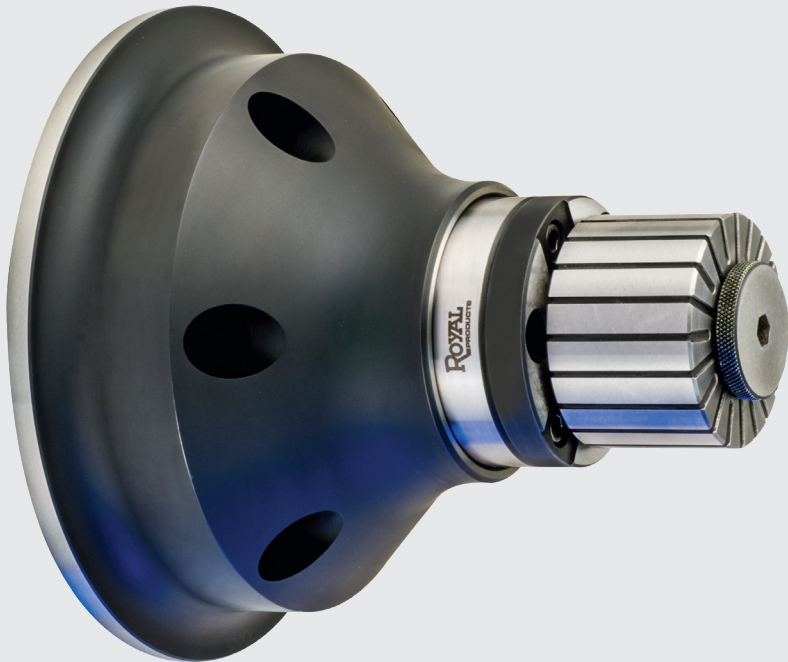


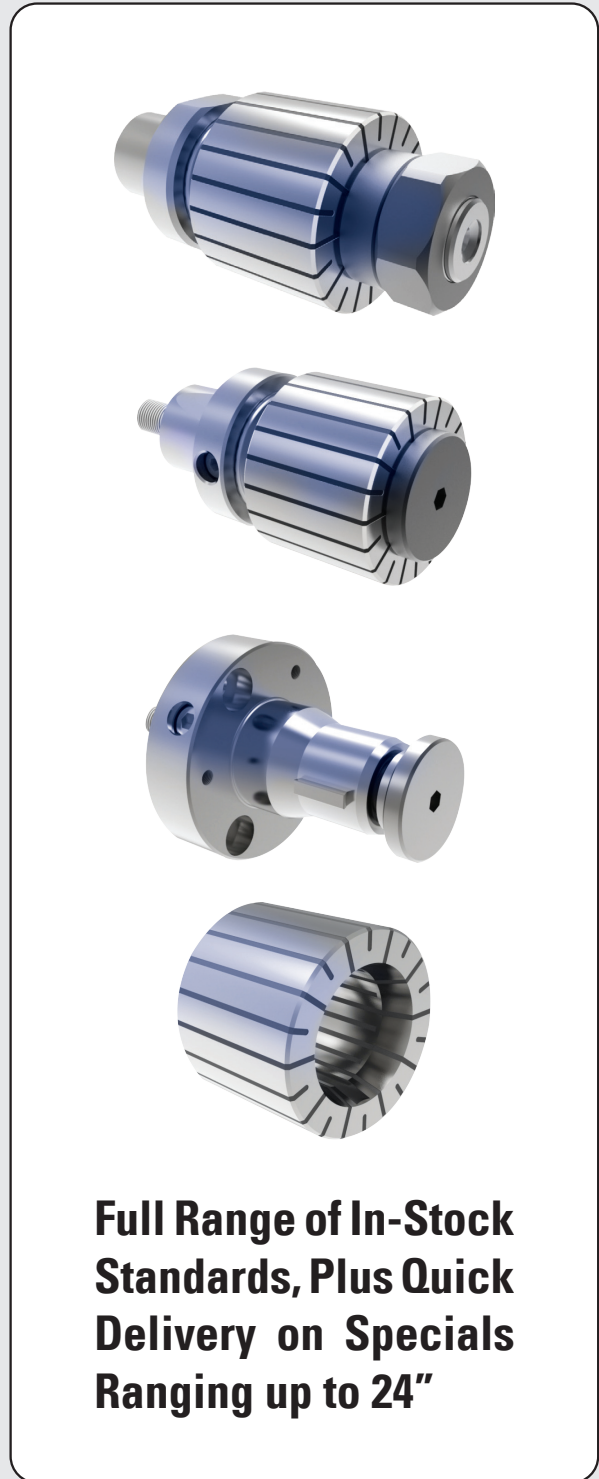


## ROYAL I.D. WORKHOLDING SYSTEMS



### I.D. GRIPPING IS OFTEN OVERLOOKED AS A WORKHOLDING OPTION, YET IN MANY SITUATIONS IT IS THE BEST CHOICE:

- ✓ Allows for full access to the entire length of the workpiece so **all external surfaces can be turned in a single operation**, guaranteeing perfect concentricity.
- ✓ On sub-spindle machines, I.D. gripping on the second spindle eliminates the risk of surface damage that can be caused by second-op O.D. gripping on a previously-turned diameter.
- ✓ For many parts, the engagement-length of an I.D. bore can be greater than what is available for O.D. gripping, resulting in **superior rigidity and torque transmission**.
- ✓ I.D. systems tend to be more streamlined than O.D. systems, enabling better part access – especially important for use on machines with live tooling.



**Full Range of In-Stock Standards, Plus Quick Delivery on Specials Ranging up to 24"**

# Royal I.D. Workholding Systems

## Specials Available

In addition to our off-the-shelf standard line, specials are available in custom configurations ranging up to 24" diameter.

## Bolt & Go™

Our exclusive Bolt & Go™ mounting feature is standard on all Royal I.D. Gripping Systems. Bolt & Go™ enables quick mounting and ensures maximum accuracy and rigidity.

## Same-Day Shipping

Royal stocks the components for same-day shipping on all models ranging from 0.5" – 3.25" diameter.

## Easy Installation

Royal I.D. Workholding Systems include all mounting hardware, wrenches, and custom-machined drawtube connectors to ensure hassle-free installation.

## Positive Release

Unique double-angle design ensures positive release when part is unclamped – especially important for automated loading/unloading.

## Outstanding Grip Force

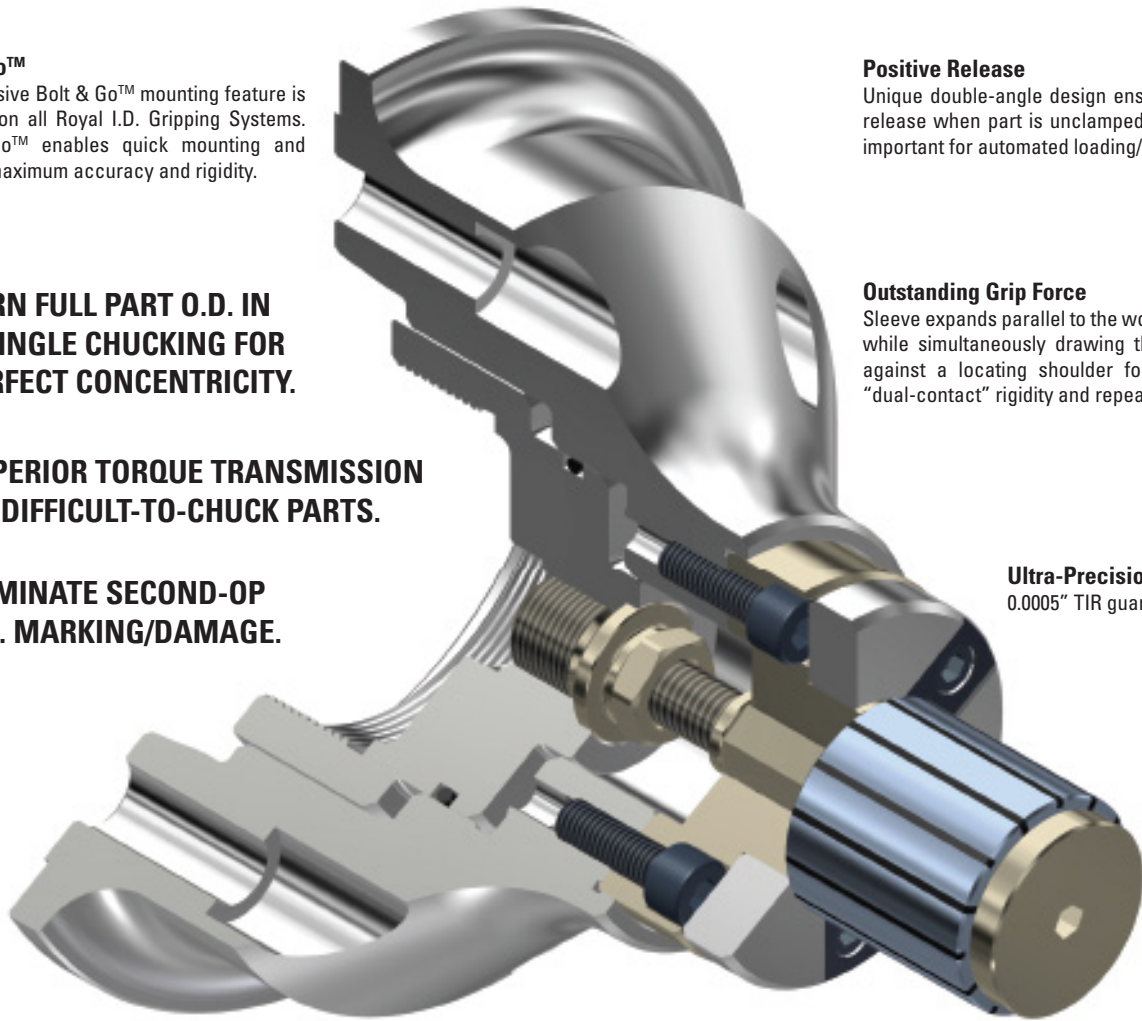
Sleeve expands parallel to the workpiece bore while simultaneously drawing the part back against a locating shoulder for unmatched "dual-contact" rigidity and repeatability.

**Ultra-Precision Accuracy**  
0.0005" TIR guaranteed.

✓ **TURN FULL PART O.D. IN A SINGLE CHUCKING FOR PERFECT CONCENTRICITY.**

✓ **SUPERIOR TORQUE TRANSMISSION ON DIFFICULT-TO-CHUCK PARTS.**

✓ **ELIMINATE SECOND-OP O.D. MARKING/DAMAGE.**



## Low Profile

Streamlined design for optimum tool clearance. Great for live tooling applications.

## Wide Expansion Range

Sleeves have a broad .032" expansion range, enabling many bore sizes to be covered with a single sleeve.

## Sealed Construction

All Royal expanding sleeves are fully sealed for complete protection against coolant and chip penetration.

Contact Your Select Royal Products Distributor: