

Selector Guide: Standard Truarc Ring Series

DESIGN FEATURES

RING TYPES FOR AXIAL ASSEMBLY

Series N5000, 5100: Tapered section assures constant circularity and groove pressure. Secure against heavy thrust loads and high rotational speeds.

Series 5008, 5108: Lugs inverted to abut groove bottom. Rings form high circular shoulder, concentric with bore or shaft. Good for parts having large corner radii or chamfers.

Series 5160: Heavy-duty ring resists high thrust, impact loads. Eliminates spacer washers in bearing assemblies.

Series 5560: New miniature, high-strength ring. Forms tamper-proof shoulder on small diameter shafts subject to heavy thrust loads.

Series 5590: Permanent-shoulder ring for small diameter shafts. When compressed into groove, notches deform to close gaps, reducing both I.D. and O.D.

Series 5900: Precision Support Washer for use with Series 5100 and 5108 rings used to secure bearings with large corner break-outs.

RING TYPES FOR RADIAL ASSEMBLY

Series 5103: Forms narrow, uniformly concentric shoulder. Excellent for assemblies where clearance is limited.

Series 5133: Provides large shoulder on small diameter shafts. Installed in deep groove for added thrust capacity.

Series 5144: Reinforced to provide five times greater gripping strength, 50% higher rpm limits than conventional E-rings. Secure against rotation.

Series 5107: Two-part ring balanced to withstand high rpm's, heavy thrust loads, relative rotation between parts.

Series 5304: New high-strength ring for large bearing surface. Can be installed quickly with pliers or mallet, removed with ordinary screw driver.

Series T5304: Thinner model of 5304. Can be seated in same width grooves as E-rings, has more gripping power. Good for cast or molded grooves.

RING TYPES FOR TAKING UP END-PLAY

Series N5001, 5101: Bowed cylindrically to accommodate large tolerances, provide resilient end-play take-up.

Series N5002, 5102: Rings beveled 15° on groove-engaging edge for use in groove with similar bevel. Wedge action provides rigid end-play take-up. **Series N5003** is beveled on both sides of outer edge to assure proper seating against beveled groove wall.

Series 5131: Provides large shoulder on small

diameter shafts. Bowed for resilient end-play take-up.

Series 5139: Bowed ring designed for use as shoulder against rotating parts. Prongs lock against shaft, prevent ring from being forced from groove.

SELF-LOCKING TYPE RINGS

(No groove required)

Series 5115: Push-on type fastener for ungrooved shafts and studs. Has arched rim for extra strength, long prongs for wide shaft tolerances.





























Series 5105, 5005: Flat rim, shorter prongs, smaller O.D. than 5115. For flat contact surface, better clearance.

Series 5135: Radially-assembled. Cuts indentations in shaft during installation for increased resistance to axial displacement. (See Page 1.)

Series 5555: Axially-assembled. Exerts frictional hold against displacement from either axial direction. Adjustable, reusable.

Series 5305: Dished body, three heavy prongs lock on shaft under spring tension. Withstands heavy thrust loads.

























Series 5300: Free-spinning nut. Dished body flattens under torque, eliminating need for separate lock washers.

 INTERNAL	BASIC N5000 For housings and bores	 EXTERNAL	BOWED 5101* For shafts and pins	 EXTERNAL	BOWED E-RING 5131 For shafts and pins	 EXTERNAL	KLIPRING* 5304 For shafts and pins
	Size Range 250—10.0 in. 6.4—254.0 mm.		Size Range .188—1.750 in. 4.8—44.4 mm.		Size Range .110—1.375 in. 2.8—34.9 mm.		Size Range .156—2.00 in. 4.0—50.8 mm.
 INTERNAL	BOWED N5001* For housings and bores	 EXTERNAL	BEVELED 5102 For shafts and pins	 EXTERNAL	E-RING 5133 For shafts and pins	 EXTERNAL	KLIPRING* T5304 For shafts and pins
	Size Range .250—1.750 in. 6.4—44.4 mm.		Size Range 1.0—10.0 in. 25.4—254.0 mm.		Size Range .040—1.375 in. 1.0—34.9 mm.		Size Range .156—1.00 in. 4.0—25.4 mm.
 INTERNAL	BEVELED N5002 For housings and bores	 EXTERNAL	CRESCENT® 5103 For shafts and pins	 EXTERNAL	RADIAL GRIPRING® 5135 for shafts and pins	 EXTERNAL	TRIANGULAR 5305* For shafts and pins
	Size Range 1.0—10.0 in. 25.4—254.0 mm.		Size Range .125—2.0 in. 3.2—50.8 mm.		Size Range .094—375 in. 2.4—9.5 mm.		Size Range .062—438 in. •
 INTERNAL	DOUBLE-BEVELED N5003 For housings and bores	 EXTERNAL	CIRCULAR 5105 For shafts and pins	 EXTERNAL	PRONG-LOCK® 5139* For shafts and pins	 EXTERNAL	GRIPRING® 5555 For shafts and pins
	Size Range 1.56—2.81 in. 39.7—71.4 mm.		Size Range .094—1.0 in. •		Size Range .092—438 in. •		Size Range .079—.750 in. 2.0—19.0 mm.
 INTERNAL	CIRCULAR 5005 For housings and bores	 EXTERNAL	INTERLOCKING 5107* For shafts and pins	 EXTERNAL	REINFORCED E-RING 5144 For shafts and pins	 EXTERNAL	HIGH-STRENGTH 5560* For shafts and pins
	Size Range .312—2.0 in. •		Size Range .469—3.375 in. 11.9—85.7 mm.		Size Range .094—.562 in. 2.4—14.3 mm.		Size Range 101—328 in. •
 INTERNAL	INVERTED 5008 For housings and bores	 EXTERNAL	INVERTED 5108 For shafts and pins	 EXTERNAL	HEAVY-DUTY 5160 For shafts and pins	 EXTERNAL	PERMANENT SHOULDER 5590* For shafts and pins
	Size Range .750—4.0 in. 19.0—101.6 mm.		Size Range .500—4.0 in. 12.7—101.6 mm.		Size Range .394—2.0 in. 10.0—50.8 mm.		Size Range .250—.750 6.4—19.0 mm.
 EXTERNAL	BASIC 5100 For shafts and pins	 EXTERNAL	REINFORCED 5115 For shafts and pins	 EXTERNAL	TRIANGULAR NUT 5300* For threaded parts	 EXTERNAL	PRECISION SUPPORT WASHER 5900* For shafts and pins
	Size Range .125—10.0 in. 3.2—254.0 mm.		Size Range .094—1.0 in. •		Size Range 6.32 and 8.32 10.24 and 10.32 1/4-20 and 1/4-28		Size Range .157—3.937 in. 4—100 mm.

* Available on special order only

Selector Guide: Special Rings

The Truarc retaining rings illustrated below were developed by Walides Truarc Inc. for special customer requirements. Most have been manufactured and used successfully in actual product applications; others are conceptual solutions to design problems. Truarc special rings are available for general use *only* in the sizes indicated. Availability of these and other special rings is subject to prior inquiry and quotation.

 <p>N5400-98</p>	<p>RINGS FOR AXIAL ASSEMBLY, Internal</p>	 <p>5790-47</p>	<p>RINGS FOR AXIAL ASSEMBLY, External</p>
 <p>5400-106</p>	<p>N5400-98: Piston pin retainer designed to be seated in extra deep grooves. Increased ring thickness provides for heavy duty service.</p> <p>5400-106: Internal ring without lugs. Provides larger clearance diameter in housing while remaining firmly seated in groove. Ring may be assembled and disassembled with screwdriver.</p>	 <p>5700-64</p>	<p>5790-47: Protruding "ears" provide high shoulder to create large abutting surface. Ring is used as safety device on threaded shaft, preventing nut from backing off.</p> <p>5700-64: Small available clearance eliminates use of holes in lugs. Used in automotive distributor assembly. Ring is removed by prying out inner gap edges.</p>
 <p>5400D-106</p>	<p>5400D-106: Variation of 5400-106. Acts as a precision detent spring. Notches facilitate assembly and disassembly.</p>	 <p>5700-92</p>	<p>5700-92: Ring applies lateral pressure against electrical component board. Assures that circuit remains intact if board cracks.</p>
 <p>N5400-44</p>	<p>N5400-44: Variation of Series N5000. Rod is pushed through ring prongs to couple rod to bore.</p>	 <p>S5160-75</p>	<p>S5160-75: Variation of Series 5160. Reduced lug and maximum section fit within small clearance diameter in automotive disc brake.</p>
 <p>S5304-66</p>	<p>RINGS FOR RADIAL ASSEMBLY</p>	 <p>5733-12</p>	<p>RINGS FOR RADIAL ASSEMBLY</p>
 <p>5503-50</p>	<p>S5304-66: Ring provides positive drive for detent in thrust runner of electric motor. Flats added to prevent rotation.</p> <p>5503-50: Variation of Series 5103. Extended center prong used for key stop in lock cylinder.</p>	 <p>S5304-25</p>	<p>5733-12: Double sided E-ring used to couple welded studs on core and treadle bars of car radio.</p> <p>S5304-25: Variation of Series 5304. Flat in neck portion sits against flat on grooved shaft. Used to prevent rotation in telephone dial assembly.</p>
 <p>5503D-50</p>	<p>5503D-50: Designed for use with square shaft or shaft having two parallel slots.</p>	 <p>5703-100</p>	<p>5703-100: Special notched ring, made of 301 stainless steel, couples spout of swivel faucet to body.</p>
 <p>5177-18,25</p>	<p>5177-18,25: Variation of Series 5107. Heavy-duty two-part ring designed to provide uninterrupted shoulder on small-diameter shafts. Withstands high thrust and impact loads. U.S. Pat. No. 3,162,084.</p>	 <p>5703-37</p>	<p>5703-37: Variation of Series 5103. Ring forms friction coupling, securing stem in housing of furniture caster.</p>
 <p>N5402-125</p>	<p>RINGS FOR TAKING-UP END-PLAY</p>	 <p>5415-147</p>	<p>SELF-LOCKING RINGS</p>
 <p>N5402-500</p>	<p>N5402-125: Variation of Series N5002. Enlarged lug aids in bevel orientation during assembly.</p> <p>N5402-500: Variation of Series N5002. Scallops make ring more flexible, ease compression.</p>	 <p>5505-125</p>	<p>5415-147: Special internal ring with pressure prongs for retaining ball bushing in windshield wiper motor.</p> <p>5505-125: Special external ring is shaped spherically to conform to ball contour of retained part.</p>
 <p>5531-50</p>	<p>5531-50: Variation of Series 5131. Tab in center sits in groove's slot, preventing ring rotation.</p>	 <p>5405-50</p>	<p>5405-50: Variation of Series 5005 internal ring, without hole. Used in assemblies with light loads where abutting part has a diameter smaller than hole in standard ring.</p>
 <p>5739-62</p>	<p>5739-62: Variation of Series 5139. Used to retain automotive brake hose to bracket. Extended legs prevent ring from being turned for disassembly. Saw-tooth rim digs into bracket to assure tamper-proof design.</p>	 <p>5715-43</p>	<p>5715-43: Variation of Series 5115 external ring. Serves as a thrust-washer for bicycle pedal bearing assembly. Ring permits balls to run freely on its outer rim.</p>