

# recommended inspection procedures

The chart below lists recommended inspection procedures for Truarc *unplated* rings. For plated and Type H (PH 15-7 Mo) stainless steel rings, add .002" to the listed maximum thickness (dimension "t") shown in the data charts for each ring series. (For plated Series N5002 and 5102 rings, add .002" also to the thickness at the beveled edge (dimension "U").) Maximum ring thickness of plated and Type H stainless steel rings will be at least .0002" less than the listed minimum groove width (dimension "W") in the data charts.

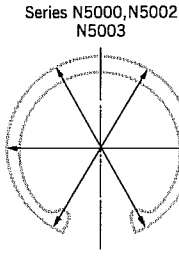


FIG. 1

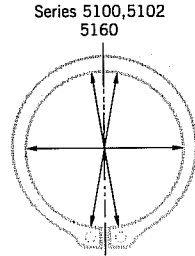


FIG. 2

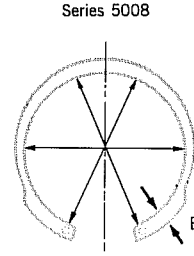


FIG. 3

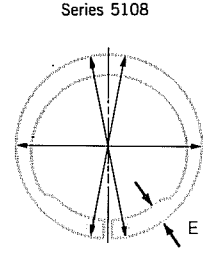


FIG. 4

## MEASURING FREE DIAMETER (Dimension "D")

RING SERIES	NOMENCLATURE
N5000	BASIC INTERNAL
N5002*	BEVELED INTERNAL
N5003	DOUBLE BEVELED INTERNAL
5008	INVERTED INTERNAL

- Measure ring thickness (dimension "t" in data charts) for adherence to specified tolerances.
  - Compress ring until it can be inserted into the required housing or bore diameter.
  - For N5000, N5002 and N5003: Release ring and measure free diameter (dimension "D") in three directions through center of ring as shown in Fig. 1 above. Ring is fully operative if:  

$$\text{Average Diameter} \geq \text{Maximum Groove Diameter (dimension "G")}$$
- For 5008: Release ring and measure I.D. in three directions through center of ring as shown in Fig. 3 above. Measure lug height (dimension "E"). Ring is fully operative if:  

$$\text{Average Diameter} + 2E \geq \text{Maximum Groove Diameter (dimension "G")}$$

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5100	BASIC EXTERNAL
5102*	BEVELED EXTERNAL
5108	INVERTED EXTERNAL
5160	HEAVY-DUTY EXTERNAL

- Measure ring thickness (dimension "t") for adherence to specified tolerances.
  - For 5100, 5102 and 5160: Expand ring until free diameter (dimension "D") is slightly larger (maximum 1%) than required shaft diameter.  
 For 5108: Expand ring until I.D. is slightly larger (maximum 1%) than required shaft diameter.
  - For Series 5100, 5102 and 5160: Release ring and measure free diameter (dimension "D") in three directions through center of ring as shown in Fig. 2 above. Ring is fully operative if:  

$$\text{Average Diameter} \leq \text{Minimum Groove Diameter (dimension "G")}$$
- For Series 5108: Release ring and measure O.D. in three directions through center of ring as shown in Fig. 4 above. Measure lug height (dimension "E"). Ring is fully operative if:  

$$\text{Average Diameter} - 2E \leq \text{Minimum Groove Diameter (dimension "G")}$$

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5560	MINIATURE HIGH-STRENGTH EXTERNAL
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- Measure ring thickness (dimension "t") for adherence to specified tolerances.
- Expand ring over a tapered mandrel having a maximum diameter equal to the maximum specified shaft diameter.
- Remove ring from mandrel and measure free diameter (dimension "D"). Ring is fully operative if:  

$$\text{Average Diameter} \leq \text{Minimum Groove Diameter (dimension "G")}$$

5103	CRESCENT EXTERNAL
5133	E-RING EXTERNAL
5144	REINFORCED E-RING EXTERNAL
5304, T5304	KLIPIRING EXTERNAL

- Measure ring thickness (dimension "t") for adherence to specified tolerances.
- Assemble ring on shaft having the specified groove diameter (dimension "G"). Ring should provide a minimum of 3 point contact (2 point contact for 5304 and T5304 rings) with groove bottom, and should grip shaft tightly enough to resist turning easily by hand.

RING SERIES	NOMENCLATURE
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5107	INTERLOCKING EXTERNAL
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- Measure ring thickness (dimension "t") for adherence to specified tolerances.
- Assemble two halves on shaft having specified groove diameter (dimension "G"). Prongs should engage and ring should grip shaft tightly enough to resist turning easily by hand.

N5001	BOWED INTERNAL
5101	BOWED EXTERNAL
5131	BOWED E-RING

- Measure ring thickness (dimension "t") for adherence to specified tolerances.
- Measure bow height (dimension "v") for adherence to minimum listed dimensions. Variations in maximum tolerance will not affect ring function.
- For N5001: Compress ring and check free diameter in same manner as outlined for Series N5000 and other internal rings.  
 For 5101: Expand ring and check free diameter in same manner as outlined for Series 5100 and other external rings.  
 For 5131: Assemble ring on shaft having specified groove diameter (dimension "G"). Ring should provide minimum of three-point contact with groove bottom and should grip shaft tightly enough to resist turning easily by hand.

5139	PRONG-LOCK EXTERNAL
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- Measure bow height (dimension "H") for adherence to minimum listed tolerances. Variations in maximum tolerance will not affect ring function.

5115	REINFORCED CIRCULAR SELF-LOCKING EXTERNAL
5005	CIRCULAR SELF-LOCKING INTERNAL
5105	CIRCULAR SELF-LOCKING EXTERNAL
5305	TRIANGULAR SELF-LOCKING EXTERNAL

- Assemble ring on shaft or into housing or bore. Prongs should grip tightly when axial pressure is applied from opposite direction.

5555	GRIPRING EXTERNAL
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- Measure ring thickness (dimension "t") for adherence to specified tolerances.
- Measure ring's free diameter (dimension "D") for adherence to specified tolerances.
- Assemble ring on shaft. Ring is fully operative if it grips shaft tightly.

5300	TRIANGULAR NUT
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- Use "Go and No Go" thread gauge to check thread size.

5590	PERMANENT-SHOULDER EXTERNAL
5900	PRECISION SUPPORT WASHER

- Measure ring thickness (dimension "t") for adherence to specified tolerances.