

# The T-271 Spherical Bearing Bore Target

*A specialized target for difficult-to-align spherical bearings on hinge lines*

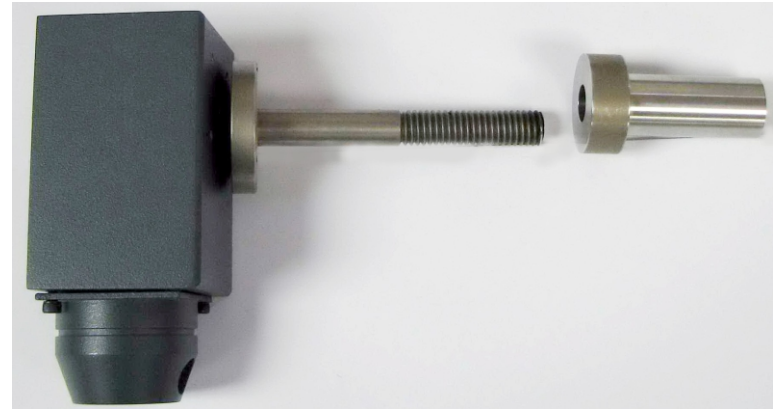
## Target Features

T-271 2-Axis Spherical-Bearing Bore Target is specially designed to work in spherical bearings that are typically used on hinge lines in aircraft applications. The target uses an optical design to "project" the PSD measuring plane into the axial center of the bearing, which we call a "virtual" target.

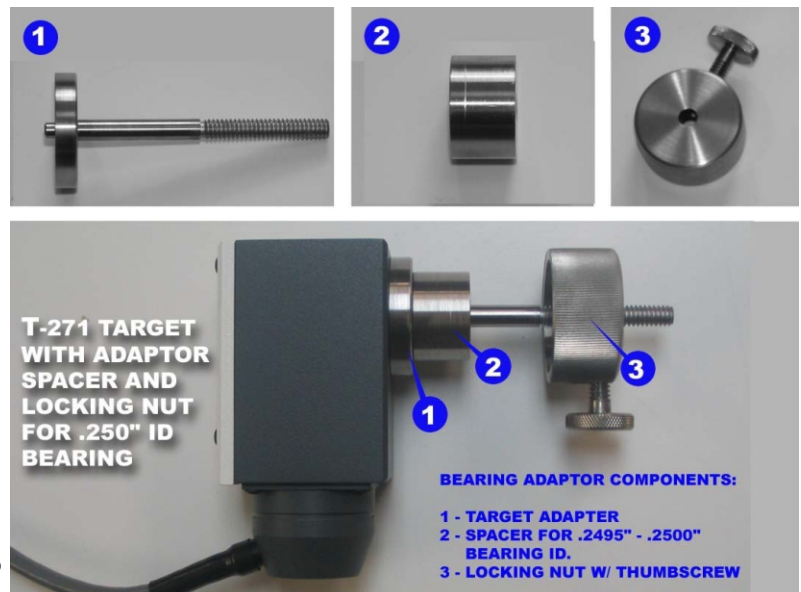
With the PSD's virtual measuring plane on the axial (and radial) center of the bearing, the target does not need to be perfectly square to the incoming laser beam, and therefore it will display the true centering alignment values. This saves a lot of money on special jigs and fixtures to hold the bearing square to the centerline.

The T-271 requires a customized adapter to fit into the ID of the bearing and also set the virtual PSD plane in the bearing's axial center. It also uses customized bushings for larger ID spherical bearings. Target features include:

- 10x10 mm PSD (Position Sensing Detector) with an optical design to project the PSD measuring plane into the axial center of a spherical bearing.
- Measuring resolution of .0001 in. (0.001 mm) when used with the R-1307 Readouts
- Comes with a .2495 in. (6.337 mm) adapter for a .250 in. (6.35 mm) spherical bearing.
- PSD concentric to bearing adaptor to <.0005 in. (0.013 mm).
- Accommodates spherical bearing IDs down to 0.25 in. (6.35 mm).
- Small and compact, with a removable cable for easy storage.
- Can be used with the R-1307BC, R-1307C, R-1307B-2.4ZB or R-1307-2.4ZB target readouts. Use the A-910-2.4ZB Radio Receiver for a PC with the R-1307-2.4ZB for wireless data downloads into our Bore8 software.



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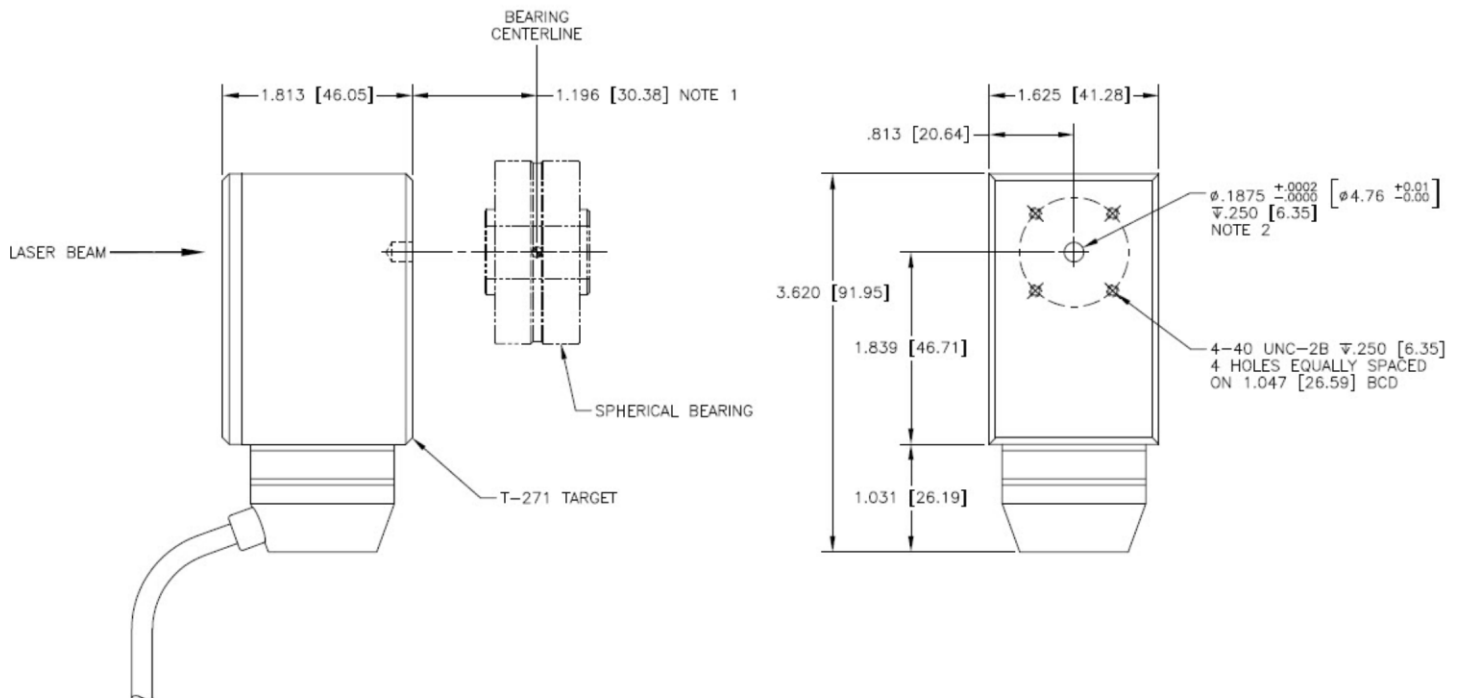


*.2495 in. Spherical Bearing Adapter for T-271 Target*

# Specifications

## T-271 2-Axis Spherical Bearing Bore Target

<b>Size:</b>	1.81 x 1.63 x 3.60 in. (46.1 x 41.3 x 292.0 mm), not including the bearing adaptor
<b>Sensor:</b>	10 x 10 mm PSD
<b>Resolution:</b>	.0001 in. (0.001 mm) when used with the R-1307 Readouts
<b>PSD Concentricity to OD:</b>	<.0005 in. (0.013 mm)
<b>PSD Linearity:</b>	For $\pm 0.5$ mm, error is < 1%; $\pm 1.5$ mm error is < 2%; $\pm 3$ mm error is < 5%
<b>PSD Measuring Range:</b>	$\pm .100$ in. (2.5 mm) in both axes
<b>Material:</b>	Aluminum with stainless steel bore adaptors
<b>Cable:</b>	Removable 10 ft. (3 M) cable with Lemo connector
<b>Weight:</b>	14 oz. (0.40 kg) without adaptor. Adaptor weights vary depending on size but are approximately 12 oz (0.34 kg)
<b>Adaptors:</b>	Comes with .2495 in. (6.337 mm) bearing adaptor for .250 in. (6.35 mm) spherical bearing. Optional bushing adaptors can be used for larger spherical bearing IDs.



### NOTES:

- 1 TARGET ADAPTER TO POSITION THE RADIAL CENTERLINE OF THE SPHERICAL BEARING 1.237 [31.42] FROM REAR OF TARGET HOUSING WITHIN .005 [0.13].
- 2 AXIAL CENTERLINE OF SPHERICAL BEARING TO BE CONCENTRIC TO .1875 [4.76] DIAMETER HOLE WITHIN .0005 [0.013].