

Donut Load Cell Engineering Checklist

DLC-ENG-01 / 2026-10-27

Project / RFQ reference: _____ Reviewer / date: _____

1. Define the force

- ☐ Record working force, preload and credible peak separately, in lbf or kN.
- ☐ State compression direction, cycle rate, transient duration and required measurement resolution.
- ☐ Identify whether the reading represents one clamp point, one fastener or the complete machine.

2. Measure the installation

- ☐ Record actual center bore ID, OD, sensor height and complete washer stack in inches and mm.
- ☐ Include finished ID tolerance, shaft or fastener size, cable exit and connector clearance.
- ☐ Identify the intended loading and support annuli from the specific sensor drawing.

3. Review contact and mounting

- ☐ Check flat, parallel support and the specified washer material, hardness and contact diameters.
- ☐ Keep non-loading surfaces clear; a washer or fixture must not bridge the intended elastic gap.
- ☐ Control side contact, bending and installation torque; agree thread engagement and locating features.

4. Match the electrical chain

- ☐ Provide excitation, rated mV/V, input/output resistance and instrument input span.
- ☐ Record connector model, pin numbering view, polarity, shielding and cable length.
- ☐ Specify output type, required sample rate/bandwidth, zero/span procedure and shunt data if used.

5. Agree acceptance and procurement

- ☐ Specify force points, ascending/descending sequence, repeats and required uncertainty or traceability.
- ☐ Request the serial number, drawing revision, calibration record and applicable material/sealing evidence.
- ☐ Include original model/options, quantity, destination/postal code and required delivery date.

Review aid only. The approved sensor drawing governs installation and acceptance.

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