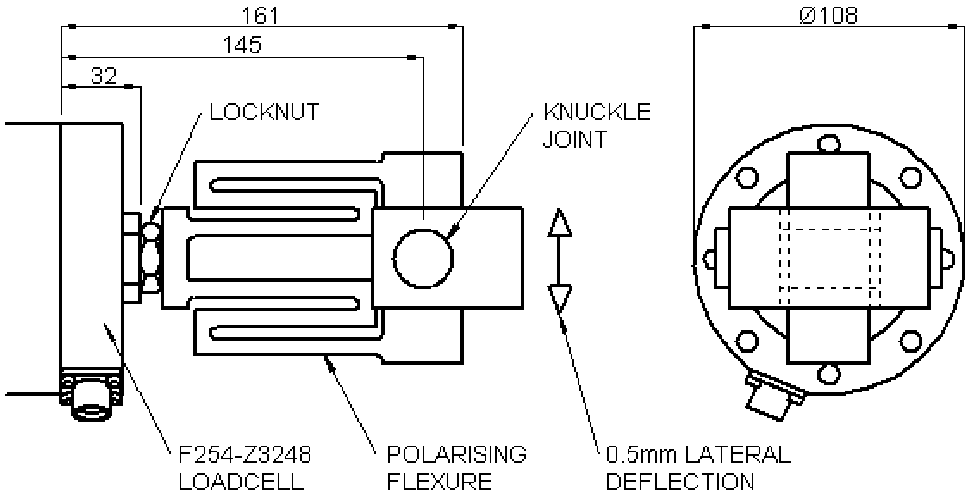
Weapons Bay Door Test Rig

Customer:
UK based aerospace company
Loadcell:
F254-Z3248 12kN
Generic Type:
Fatigue rated pancake loadcell
Special Features:
Extraneous force immunity

The customer required a means of measuring the force on an actuator closing a weapons bay door on a fighter aircraft. The installation required an axial force application to the loadcell via a lever system, which required a degree of transverse freedom to function correctly. The loadcell would be able to accommodate a defined internal movement of the input force centre whilst maintaining a solid load path between the actuator and door structure in its axial measurement sense.

The design used a standard design pancake loadcell, which incorporated a polarised flexure to allow a ±0.5mm deflection adjacent to the loading axis while still being able to transmit the load to the loadcell. The loadcell itself incorporated a moment insensitive bridge using 16 gauge sites to reduce the effect of the applied moment through the flexure.



NOVATECH MEASUREMENTS LTD
83 CASTLEHAM ROAD, ST LEONARDS ON SEA, EAST SUSSEX, TN38 9NT, ENGLAND
Tel: 01424 852744 email: info@novatechloadcells.co.uk Fax: 01424 853002
www.novatechloadcells.co.uk