

Installation Instructions

1. The primary advantage of the Interface Flange Load Cell is that the hub of the load cell is mounted using several smaller screws instead of one large central thread. It is easier to preload multiple smaller screws than a single central thread. In certain applications it may not be possible to properly preload a central thread due to the torque limits of the load cell.
2. Interface Flange Series Load Cells must be mounted on a suitable surface that is flat and rigid enough so as not to deform appreciably under load. The mounting surface should have a minimum hardness of Rc 30-33. The mounting surface should be perpendicular to the load axis within 1 degree.
3. Interface load cells respond to forces in the axis perpendicular to the mounting surface. Load cell response to a non-axial force is proportional to that force times the cosine of the angle it makes with the loading axis.
4. A spacer plate may be used between the flexure and the mounting surface to accommodate the socket head cap screw flange mounting screws. The spacer plate must meet the hardness and flatness requirements stated in Note 2 and the surfaces should be parallel within .002 (.05 mm).
5. When installing the load cells, Class 12.9 (or minimum 177 ksi tensile strength) screws should be used.

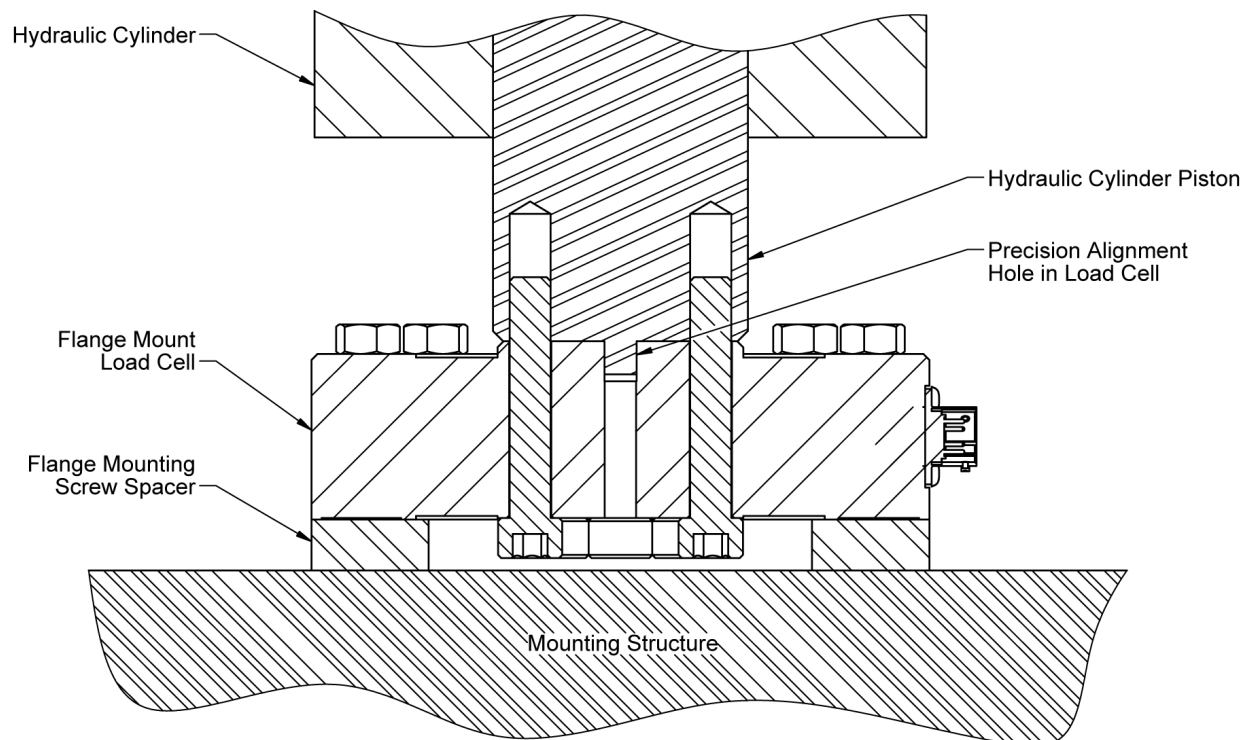


Table 1 - Flexure Mounting Screws

Model Number	Capacity		Mounting Hole		Mounting Screw Size			Mounting Screw Torque	
	US (lbf)	Metric (kN)	Diameter *	Bolt Circle *	Fractional	Metric	Length *	(lb-ft)	(Nm)
1228	30K	50, 100, 140	.41 (10.4)	5.13 (130.3)	3/8	M10	2.75 (70)	55	77
1238	55K	250	.50 (12.7)	6.50 (165.1)	7/16	M12	3.50 (90)	100	135
1248	110K	500	.66 (16.8)	9.00 (228.6)	5/8	M16	4.50 (120)	250	330
1258	220K	1000	.83 (21.0)	9.50 (241.3)	3/4	M20	7.00 (160)	500	650
1268	330K	1500	.97 (24.6)	12.68 (322.1)	7/8	M24	8.00 (200)	700	1100
1288	Consult Factory		1.06 (26.9)	16.50 (419.1)	1.00	M24	9.00 (230)	1100	1100
1298	Consult Factory		1.32 (33.5)	20.50 (520.7)	1.25	M30	12.00 (280)	2000	2250

Flexure Mounting Screw Length = Flexure Height + Flange Mounting SHCS head height +0.10(2.5mm) head clearance + 1.5 thread diameters & rounded up to the next standard length.

Table 2 - Flange Mounting Screws

Model Number	Capacity		Mounting Hole		Flange Screw Size			Flange Screw Torque	
	US (lbf)	Metric (kN)	Diameter *	Bolt Circle *	Fractional	Metric	Length *	(lb-ft)	(Nm)
1228	30K	50, 100, 140	.41 (10.4)	1.77 (45.0)	3/8	M10	2.25 (60)	55	77
1238	55K	250	.65 (16.5)	2.80 (71.0)	5/8	M16	3.50 (90)	250	330
1248	110K	500	.65 (16.5)	2.80 (71.0)	5/8	M16	4.50 (110)	250	330
1258	220K	1000	.97 (24.6)	4.13 (105.0)	3/4	M24	5.50 (140)	500	1100
1268	330K	1500	.97 (24.6)	5.91 (150.0)	7/8	M24	7.00 (180)	700	1100
1288	540K	2400	1.37 (34.8)	8.46 (215.0)	1.25	M33	9.00 (210)	2000	3115
1298	742K	3300	1.72 (43.7)	10.63 (270.0)	N/A	M42	N/A (260)	N/A	6270

Table 3 - Flexure Mounting Ring Diameters

Model Number	Hub Diameter	Inner Mounting Ring			Outer Mounting Ring		Mounting Surface Flatness *
	"A" *	"B" *	"C" *	"D" *	"E" *		
1228-50kN	2.41 (61.2)	4.01 (101.9)	4.52 (114.8)	5.86 (148.8)	6.06 (153.9)	0.0002 (.005)	
1228	2.65 (67.3)	4.25 (108.0)	4.52 (114.8)	5.86 (148.8)	6.06 (153.9)	0.0002 (.005)	
1238	3.76 (95.5)	5.47 (138.9)	5.75 (146.1)	7.80 (198.1)	8.00 (203.2)	0.0002 (.005)	
1248	4.81 (122.2)	6.78 (172.2)	7.40 (188.0)	10.60 (269.2)	11.00 (279.4)	0.0002 (.005)	
1258	5.68 (144.3)	7.60 (193.0)	8.51 (216.2)	11.40 (289.6)	12.00 (304.8)	0.0004 (.010)	
1268	7.73 (196.3)	9.87 (250.7)	10.95 (278.1)	14.76 (374.9)	15.50 (393.7)	0.0004 (.010)	
1288	10.55 (267.9)	13.20 (335.2)	14.46 (367.3)	19.63 (498.6)	20.50 (520.7)	0.001 (.02)	
1298	13.79 (350.3)	16.21 (411.7)	18.10 (459.7)	24.70 (627.4)	26.00 (660.4)	0.001 (.02)	

* = inch (mm)

