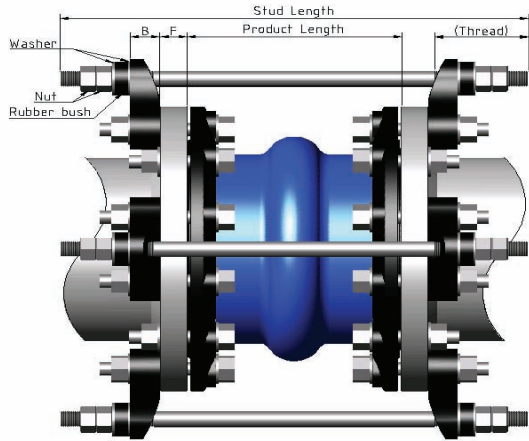




FCD BACK PLATE TYPE CONTROL UNIT



NO.	PART	MATERIAL
1	BACK PLATE	FCD
2	NUT & WASHER	MILD STEEL
3	CONTROL ROD	MILD STEEL
4	RUBBER BUSH	SYNTHETIC RUBBER

Control unit is recommended to use for protection of connectors as following conditions;

- In case that it is hard to support reaction force (thrust) by pressure during the test operation or normal operation.
- In case that lateral movement is anticipated more than the designed movement.
- In case that the connectors are anticipated to compressed when installation.

When control units are required to assist with the installation of joint, refer to the below table.

Remark: *** Control Unit can't control the compression movement.

Back Plate Thickness, Min.Rod & Bolt length Calculation

Back Plate	TZB-A1	TZB-A2	TZB-B1	TZB-B2	TZB-C	TZB-D1	TZB-D2	TZB-E1	TZB-E2	TZB-F1	TZB-F2	TZB-G1	TZB-G2	TZB-H	TZB-I
Thickness (mm)	38	28	30	19	24	16	10	18	10	15	10	15	8	17	63

$$\text{Min. Rod Length} = \text{OAL} + 2 \times \text{Flange thickness} + 2 \times \text{Back Plate thickness} + 6 \times \text{Nut high} + 4 \times \text{Washer thickness} + 2 \times \text{Bush high}$$

$$\text{Min. Thread Length} = \text{Back Plate thickness} + 3 \times \text{Nut high} + 2 \times \text{Washer thickness} + \text{Bush high}$$

$$\text{Minimum Bolt Length} = 2 \times \text{Flange thickness} + \text{Back Plate thickness} + \text{Rubber Packing thickness} + 2 \times \text{Nut high}$$

Flanges Standard And FCD Back Plate Type Selection

SIZE	FLANGE STANDARD	ANSI 150 LB	ANSI 300 LB	JIS 10K	JIS 16K	JIS 20K	PN 10	PN 16	PN 25	ANSI B16.47 SR.A	ANSI B16.47 SR.B
100A	Back Plate	TZB-H	TZB-G2	TZB-H	TZB-G2	TZB-G2	TZB-H	TZB-H	TZB-G2	N/A	N/A
	Q'Ty-Stud Size	2-M16	2-M16	2-M16	2-M16	2-M16	2-M16	2-M16	2-M16	N/A	N/A
125A	Back Plate	TZB-G2	TZB-G2	TZB-G2	TZB-G2	TZB-G2	TZB-H	TZB-H	TZB-G2	N/A	N/A
	Q'Ty-Stud Size	2-M16	2-M16	2-M16	2-M16	2-M16	2-M16	2-M16	2-M16	N/A	N/A
150A	Back Plate	TZB-F1	TZB-G2	TZB-F1	TZB-G2	TZB-G2	TZB-F1	TZB-F1	TZB-F2	N/A	N/A
	Q'Ty-Stud Size	2-M16	2-M20	2-M16	2-M16	2-M20	2-M16	2-M16	2-M20	N/A	N/A
200A	Back Plate	TZB-F1	TZB-G1	TZB-G2	TZB-G2	TZB-G1	TZB-F1	TZB-G2	TZB-G1	N/A	N/A
	Q'Ty-Stud Size	2-M16	3-M20	2-M16	3-M20	3-M20	2-M16	3-M20	4-M20	N/A	N/A
250A	Back Plate	TZB-F2	TZB-E2	TZB-F2	TZB-E2	TZB-E2	TZB-G1	TZB-E2	TZB-E2	N/A	N/A
	Q'Ty-Stud Size	2-M20	3-M24	2-M20	3-M24	3-M24	2-M20	3-M24	4-M24	N/A	N/A
300A	Back Plate	TZB-F2	TZB-E2	TZB-G1	TZB-E2	TZB-E2	TZB-F2	TZB-D2	TZB-E1	N/A	N/A
	Q'Ty-Stud Size	3-M20	4-M24	3-M20	4-M24	4-M24	3-M20	4-M24	4-M27	N/A	N/A
350A	Back Plate	TZB-D2	TZB-E1	TZB-G1	TZB-C	TZB-C	TZB-G1	TZB-E2	N/A	N/A	N/A
	Q'Ty-Stud Size	3-M24	4-M27	4-M20	4-M24	4-M27	4-M20	4-M24	N/A	N/A	N/A
400A	Back Plate	TZB-D1	TZB-C	TZB-E2	TZB-B1	TZB-B2	TZB-E2	TZB-D1	N/A	N/A	N/A
	Q'Ty-Stud Size	3-M24	5-M30	4-M24	4-M30	5-M30	4-M24	4-M30	N/A	N/A	N/A
450A	Back Plate	TZB-D2	TZB-C	TZB-E1	TZB-C	TZB-C	TZB-E1	TZB-E1	N/A	N/A	N/A
	Q'Ty-Stud Size	4-M27	6-M30	4-M27	5-M27	6-M30	4-M27	5-M27	N/A	N/A	N/A
500A	Back Plate	TZB-E1	TZB-C	TZB-E1	TZB-B2	TZB-B2	TZB-E1	TZB-C	N/A	N/A	N/A
	Q'Ty-Stud Size	4-M27	6-M27	4-M27	5-M30	6-M33	4-M27	5-M30	N/A	N/A	N/A
550A	Back Plate	N/A	N/A	TZB-B1	TZB-A1	TZB-A2	N/A	N/A	N/A	TZB-B1	N/A
	Q'Ty-Stud Size	N/A	N/A	5-M30	5-M30	6-M30	N/A	N/A	N/A	5-M30	N/A
600A	Back Plate	TZB-B1	TZB-A2	TZB-C	TZB-A1	TZB-A2	TZB-D1	TZB-B2	N/A	N/A	N/A
	Q'Ty-Stud Size	5-M30	8-M33	6-M30	8-M30	8-M33	6-M30	8-M30	N/A	N/A	N/A
650A	Back Plate	N/A	N/A	TZB-B1	N/A	N/A	N/A	N/A	N/A	TZB-B1	TZB-I
	Q'Ty-Stud Size	N/A	N/A	6-M30	N/A	N/A	N/A	N/A	N/A	6-M30	6-M30
700A	Back Plate	N/A	N/A	TZB-B2	N/A	N/A	TZB-D1	TZB-B2	N/A	TZB-C	TZB-I
	Q'Ty-Stud Size	N/A	N/A	8-M30	N/A	N/A	8-M30	10-M33	N/A	8-M30	8-M30
750A	Back Plate	N/A	N/A	TZB-B2	N/A	N/A	N/A	N/A	N/A	TZB-B2	TZB-I
	Q'Ty-Stud Size	N/A	N/A	8-M30	N/A	N/A	N/A	N/A	N/A	8-M30	8-M30
800A	Back Plate	N/A	N/A	TZB-B2	N/A	N/A	TZB-B2	TZB-A1	N/A	TZB-A1	TZB-I
	Q'Ty-Stud Size	N/A	N/A	8-M33	N/A	N/A	8-M33	12-M33	N/A	8-M33	8-M33
850A	Back Plate	N/A	N/A	TZB-B2	N/A	N/A	N/A	N/A	N/A	TZB-A1	TZB-I
	Q'Ty-Stud Size	N/A	N/A	8-M33	N/A	N/A	N/A	N/A	N/A	8-M33	8-M33
900A	Back Plate	N/A	N/A	TZB-B2	N/A	N/A	TZB-B2	TZB-A2	N/A	TZB-A1	TZB-I
	Q'Ty-Stud Size	N/A	N/A	8-M36	N/A	N/A	8-M36	14-M33	N/A	8-M36	8-M36
1000A	Back Plate	N/A	N/A	TZB-B2	N/A	N/A	TZB-B2	TZB-A1	N/A	TZB-A1	TZB-I
	Q'Ty-Stud Size	N/A	N/A	10-M36	N/A	N/A	10-M36	14-M36	N/A	10-M36	10-M36