

## 4. Installation Instructions

### 4.1 Protective covers

Protective covers must only be removed immediately before installation.

### 4.2 Gaskets

Flared surfaces of identical plastic materials do not require gaskets. Gaskets may only be sensible for connections frequently undone or for connections to other materials such as metal, glass, enamel, etc.

### 4.3 Torques (Class 150 and 300)

Details for assembly and operating instructions can be found in our data sheet FB 03.4b assembly and operating instructions. Please see table on cover for additional installation guidelines.

### 4.4 Welding operations

Lined pipes and fittings may not be welded, as the high temperature will destroy the plastic.

### 4.5 Vent holes

Vent holes should at all times be kept open. Care should be taken not to clog them with paint or insulating material.

### 4.6 Bolt/Stud Lengths

Calculated to include two threads past the nut and rounded to the nearest 1/4" to insure commercial availability.

Nominal pipe size NPS	ANSI B16.5 Class 150			ANSI B16.5 Class 300				
	# bolts x size	Bolt Torque (ft-lbs)			# bolts x size	PTFE /PFA bolt torque	PP	PVDF
		PTFE/PFA	PP	PVDF				
1/2"	4 x 1/2"	10	X	X	4 x 1/2"	12	CF	CF
3/4"	4 x 1/2"	10	X	X	4 x 5/8"	12	CF	CF
1"	4 x 1/2"	10	30	35	4 x 5/8"	12	CF	CF
1 1/2"	4 x 1/2"	15	40	50	4 x 3/4"	16	CF	CF
2"	4 x 5/8"	25	45	50	8 x 5/8"	19	CF	CF
2 1/2"	4 x 5/8"	33	80	75	8 x 3/4"	29	CF	CF
3"	4 x 5/8"	40	80	75	8 x 3/4"	33	CF	CF
4"	8 x 5/8"	30	80	75	8 x 3/4"	47	CF	CF
6"	8 x 3/4"	60	120	120	12 x 3/4"	73	CF	CF
8"	8 x 3/4"	75	150	120	12 x 7/8"	76	CF	CF
10"	12 x 7/8"	70	140	140	16 x 1"	83	CF	CF
12"	12 x 7/8"	90	140	140	16 x 1 1/8"	87	CF	CF
14"	12 x 1"	152	CF	CF				
16"	16 x 1"	143	CF	CF				
18"	16 x 1 1/8"	210	CF	CF				
20"	20 x 1 1/8"	190	CF	CF				
24"	20 x 1 1/8"	221	CF	CF				

FxF - Fixed x Fixed  
FxF = Fixed x Rotatable  
RxR = Rotatable x Rotatable

Flange Size	Stud Length			Bolt Length		
	FxF	FxF	RxR	FxF	FxF	RxR
1"	3"	3 1/4"	3 1/4"	2 1/2"	2 3/4"	2 3/4"
1 1/2"	3 1/4"	3 1/2"	3 1/2"	2 3/4"	3"	3"
2"	4"	4"	4 1/4"	3 1/4"	3 1/4"	3 1/2"
2 1/2"	4"	N/A	N/A	3 1/2"	N/A	N/A
3"	4 1/4"	4 1/2"	4 1/2"	3 1/2"	3 3/4"	4"
4"	4 1/4"	4 1/2"	4 1/2"	3 1/2"	3 3/4"	4"
6"	5"	5"	5 1/4"	4 1/4"	4 1/4"	4 1/2"
8"	5"	5 1/4"	5 1/2"	4 1/4"	4 1/2"	4 3/4"
10"	5 1/2"	5 3/4"	6"	4 1/4"	4 3/4"	5 1/4"
12"	5 1/2"	5 3/4"	6 1/4"	4 3/4"	5"	4 1/2"

Flange Size	Stud Length			Bolt Length		
	FxF	FxF	RxR	FxF	FxF	RxR
1"	3 1/2"	3 3/4"	3 3/4"	3"	3 1/4"	3 1/4"
1 1/2"	4"	4 1/4"	4 1/2"	3 1/2"	3 3/4"	3 3/4"
2"	4"	4"	4 1/4"	3 1/4"	3 1/2"	3 3/4"
3"	4 3/4"	5 1/4"	5 1/4"	4 1/4"	4 3/4"	4 3/4"
4"	5"	5 1/2"	5 1/2"	4 1/2"	5"	5"
6"	5 1/2"	5 3/4"	6"	4 3/4"	5 1/4"	5 1/4"
8"	6 1/4"	7"	7"	5 1/4"	5 3/4"	6 1/4"
10"	7"	7 1/4"	7 3/4"	6"	6 1/4"	6 3/4"
12"	7 3/4"	8"	8 1/4"	6 1/2"	6 3/4"	7"