



MASON INDUSTRIES, Inc.

MERCER RUBBER Co.

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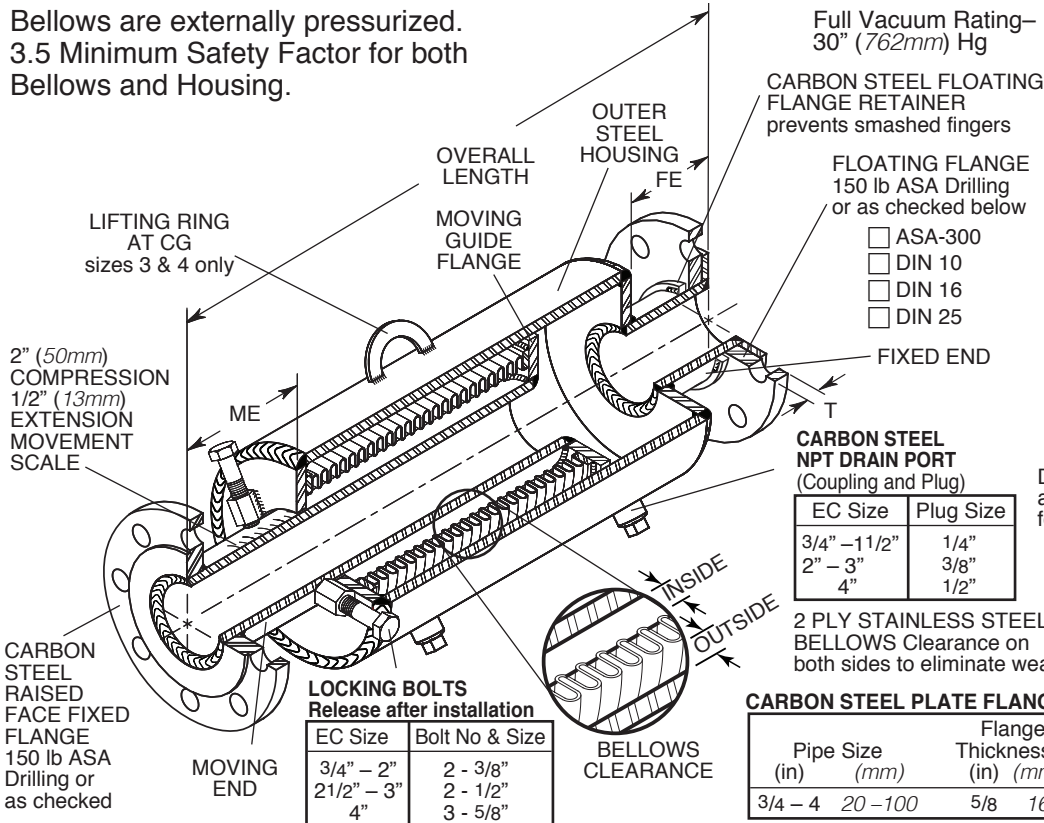


JOB NAME \_\_\_\_\_  
 CUSTOMER \_\_\_\_\_  
 CUSTOMER P.O. \_\_\_\_\_  
 MASON M. \_\_\_\_\_  
 DWG No. \_\_\_\_\_

**ECFFL**

2" (50mm) Movement  
**EXPANSION  
 COMPENSATOR**  
 with **CARBON STEEL  
 FIXED & FLOATING  
 FLANGES**

Bellows are externally pressurized.  
 3.5 Minimum Safety Factor for both  
 Bellows and Housing.



**FLANGE BOLT and NUT REQUIREMENT (by Others)**

ECFFL Size	Quantity	Size & Length
3/4	8	1/2 x 21/2
1	8	1/2 x 21/2
1 1/4	8	1/2 x 21/2
1 1/2	8	1/2 x 23/4
2 & 2 1/2	8	5/8 x 3
3	8	5/8 x 3 1/4
4	16	5/8 x 3 1/4

INSERT FLANGE BOLTS AS SHOWN



HEAD AT FIXED FLANGE- INSIDE HEAD AT FLOATING FLANGE- PIPE SIDE  
 Drain Plugs are often removed to allow attachment of drain hose or steam trap for blow down or drainage.

**PRESSURE REDUCTION TABLE**

Temperature (°F) (°C)	Rated Pressure (psi) (kg/cm²)
200 93	188 13.0
250 121	184 12.7
300 149	176 12.1
400 204	166 11.4
500 260	156 10.8
600 316	148 10.2
700 371	140 9.7
800 427	Not Recommended

**CARBON STEEL NPT DRAIN PORT (Coupling and Plug)**

EC Size	Plug Size
3/4" - 1 1/2"	1/4"
2" - 3"	3/8"
4"	1/2"

**CARBON STEEL PLATE FLANGE**

Pipe Size (in) (mm)	Flange Thickness T (in) (mm)
3/4 - 4 20 - 100	5/8 16

**ECFFL DIMENSIONS AND PRESSURE RATINGS (American & Metric Units) 2" (50mm) COMPRESSION, 1/2" (13mm) EXTENSION**

Type & Size	Pipe Size (in) (mm)	Overall Length (in) (mm)		ME Neutral Length (in) (mm)		FE Fixed End Length (in) (mm)		Outer Housing O.D. (in) (mm)		Nominal Bellows Clearance (in) (mm)		Spring Rate (lbs/in) (kg/cm)		Thrust @ 200 psi (13.8 bar) (lbs) (kg)		Rated Pressure @ 70°F (21°C) (psi) (kg/cm²)	Ship Wt. (lbs) (kg)				
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	Inside	Outside	(lbs)	(kg)	(lbs)	(kg)						
ECFFL-3/4	3/4 20	12 1/2	318	3 1/2	89	13 3/4	44	27 3/8	73	0.10	3	0.43	11	89	16	350	159	200	14	11	5
ECFFL-1	1 25	12 1/2	318	3 1/2	89	13 3/4	44	31 1/2	89	0.13	3	0.55	14	95	17	500	227	200	14	14	6
ECFFL-1 1/4	1 1/4 32	13	330	3 3/4	95	2	51	4	102	0.15	4	0.47	12	103	18	800	363	200	14	15	7
ECFFL-1 1/2	1 1/2 40	13	330	3 3/4	95	2	51	4 1/2	114	0.17	4	0.46	12	106	19	1100	499	200	14	19	9
ECFFL-2	2 50	13 1/2	343	4 1/8	105	2 1/8	54	5 1/4	133	0.17	4	0.52	13	110	20	1600	726	200	14	24	11
ECFFL-2 1/2	2 1/2 65	14 1/4	362	4 1/4	108	2 1/4	57	6 1/4	159	0.24	6	0.53	14	126	23	2400	1089	200	14	35	16
ECFFL-3	3 80	14 3/4	375	4 1/2	115	2 1/2	64	6 5/8	168	0.32	8	0.37	9	140	25	3500	1588	200	14	47	21
ECFFL-4	4 100	14 3/4	375	4 1/2	115	2 1/2	64	8 5/8	219	0.33	8	0.81	21	150	27	5200	2359	200	14	70	32

Lower Thrust Forces in proportion at lower pressures, i.e. 100 psi Force = 100/200 x published Thrust. Forces on Pipe Anchors must include Thrust Force and Spring Force. Spring Force is determined by multiplying the joint Spring Rate by its Thermal Movement. (in/mm)

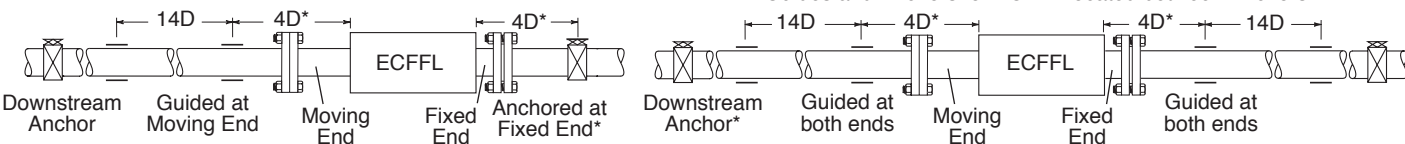
EC's installed in piping systems must be anchored on both sides of the joint. EC's installed in unanchored piping must have control rods.

When using ECFFL products in copper or brass water or steam systems, dielectric flanges must be used on each end to prevent leakage from galvanic action.

**GUIDE SPACING - Referencing Pipe Diameter "D"**

Guides and Anchor for ECFFL located near Anchor

Guides and Anchors for ECFFL located between Anchors



\*Plus an additional 3" (76mm) for Sizes 3/4" to 2 1/2"

QTY	SIZE	TAG

QTY	SIZE	TAG