



MASON INDUSTRIES, Inc.

MERCER RUBBER Co.

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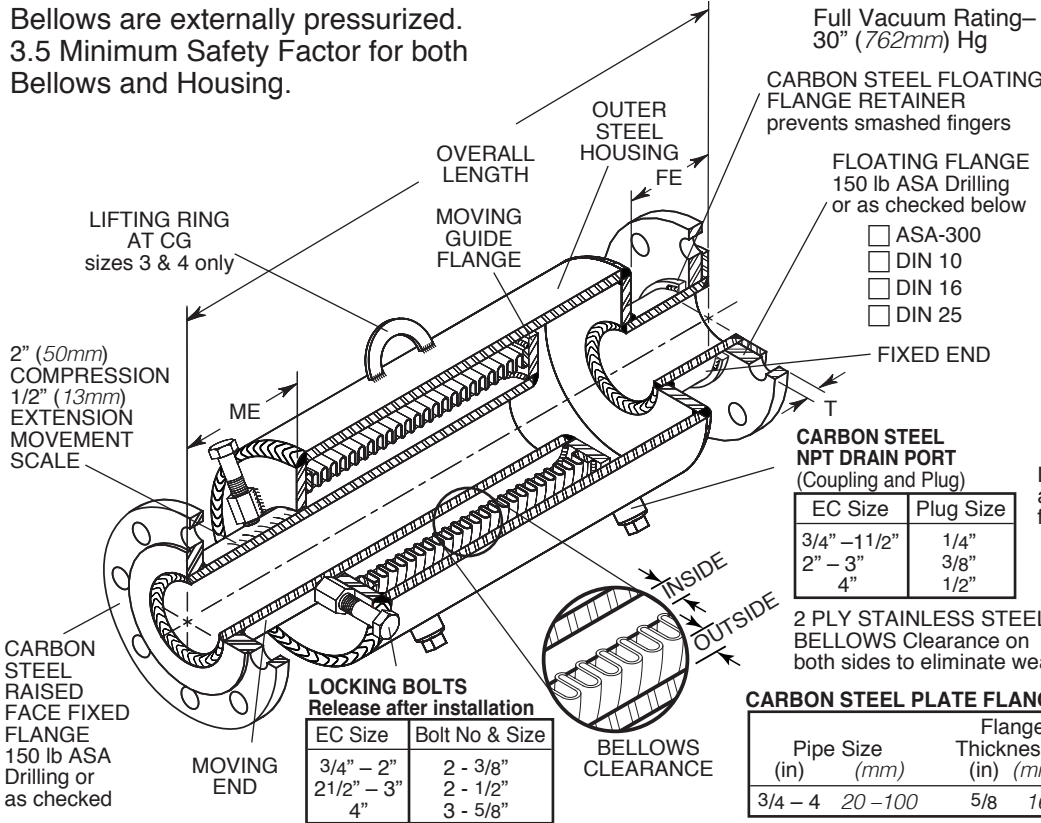


JOB NAME _____
 CUSTOMER _____
 CUSTOMER P.O. _____
 MASON M. _____
 DWG No. _____

ECFFL

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

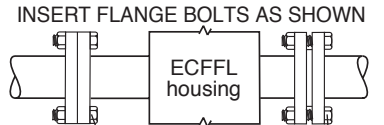
Bellows are externally pressurized.
 3.5 Minimum Safety Factor for both
 Bellows and Housing.



Full Vacuum Rating-
 30" (762mm) Hg

**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



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

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		FE		Outer Housing O.D. (in) (mm)	Nominal Bellows Clearance		Spring Rate		Thrust @ 200 psi (13.8 bar)		Rated Pressure @ 70°F (21°C)	Ship Wt. (lbs) (kg)
			(in) (mm)	Neutral Length (in) (mm)	Length (in) (mm)	Length (in) (mm)		Inside (in) (mm)	Outside (in) (mm)	(lbs) (kg)	(kg) (cm)	(lbs) (kg)	(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 5 1	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 5 1	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				

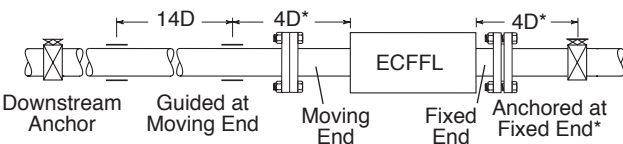
Lower Thrust Forces in proportion at lower pressures, i.e. 100 psi Force = 100/200 x published Thrust. Forces on Pipe Anchors must include Thrust Force and Spring Force. Spring Force is determined by multiplying the joint Spring Rate by its Thermal Movement. (in/mm)

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.

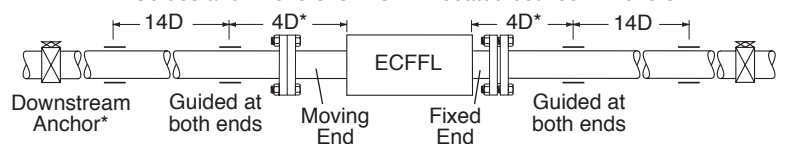
When using ECFFL products in copper or brass water or steam systems, dielectric flanges must be used on each end to prevent leakage from galvanic action.

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