



MASON INDUSTRIES, Inc.

MERCER RUBBER Co.

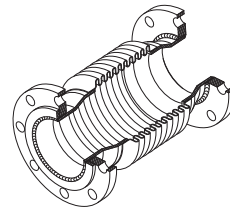
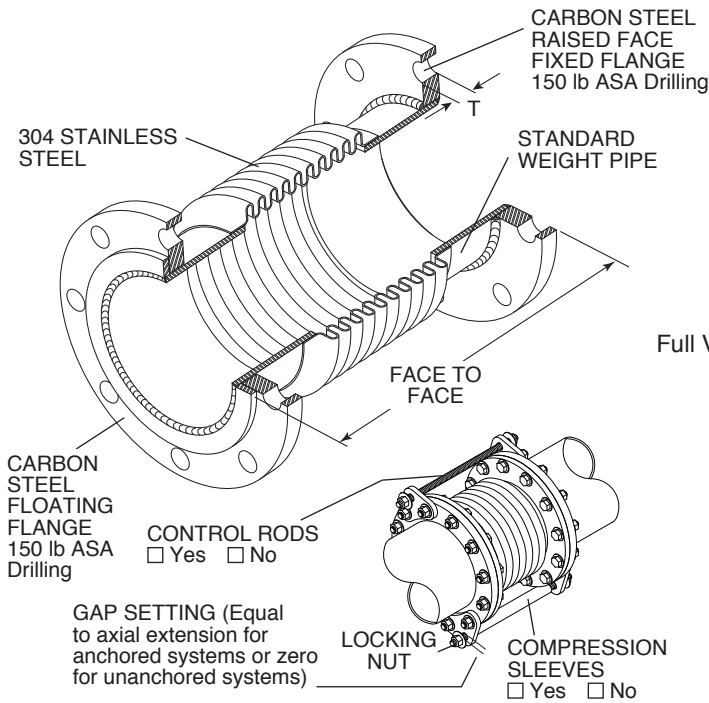
350 Rabro Drive, Hauppauge, NY 11788
 Mason- 631/348-0282 • Info@Mason-Ind.com
 Mercer- 631/582-1524 • Info@Mercer-Rubber.com
 FAX 631/348-0279



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

EFL50

50 psi FULL VACUUM
 BELLOWS
 EXPANSION
 JOINT with FIXED
 and FLOATING
 FLANGES



Our 4" designs use 5" stainless bellows between reducers for greater stability.

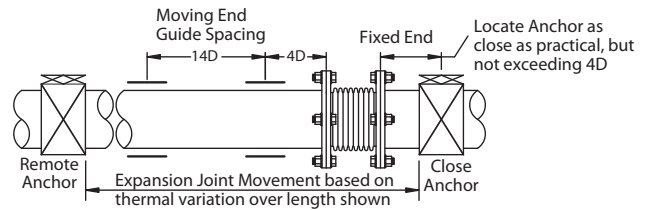
EFL50 RATED PRESSURES @ ELEVATED TEMPERATURES

Temperature (°F)	Temperature (°C)	Rated Pressure (psi)	Rated Pressure (kg/cm²)
200	93	46	3.2
300	149	43	3.0
400	204	39	2.7
500	260	38	2.7
800	427	37	2.6
1000	538	30	2.1
1500	816	13	0.9

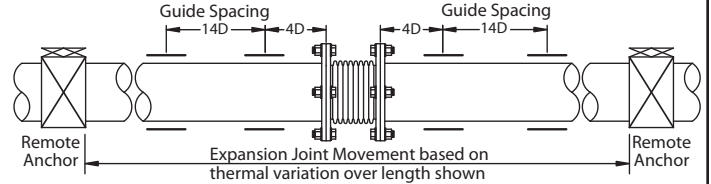
Full Vacuum Rating- 30" (762mm) Hg

GUIDE SPACING - Referencing Pipe Diameter "D"

Guides and Anchors for Joint located near Anchor



Guides and Anchors for Joint located between Remote Anchors



FLANGE BOLTS and NUTS REQUIREMENT

EFL50 Size	Quantity per End	Size & Length
4	16	5/8 x 3 1/4
5 & 6	16	3/4 x 3 1/2
8	16	3/4 x 4
10 & 12	24	7/8 x 4 1/4
14	24	1 x 4 1/2
16	32	1 x 4 1/2

CARBON STEEL PLATE FLANGES

Pipe Size (in)	Pipe Size (mm)	Flange Thickness T (in)	Flange Thickness T (mm)
4	100	5/8	16
5 thru 6	125 thru 150	3/4	19
8 thru 16	200 thru 406	1	25

EFL50 DIMENSIONS AND PRESSURE RATINGS (American & Metric Units) 2" (50mm) COMBINED AXIAL MOVEMENT, 1/4" (6mm) LATERAL DEFLECTION

Type & Size	Pipe Size		Face to Face		Axial Spring Rate		Lateral Spring Rate		Thrust ¹ @		Rated Pressure		Ship Wt.	
	(in)	(mm)	(in)	(mm)	(lbs/in)	(kg/cm)	(lbs/in)	(kg/cm)	50 psi (lbs)	3 kg/cm² (kg)	@70°F (psi)	@21°C (kg/cm²)	(lbs)	(kg)
EFL50-4	4	100	21	533	640	115	850	152	1400	635	50	3	33	15
EFL50-5	5	125	14 1/4	362	640	115	850	152	1400	635	50	3	35	16
EFL50-6	6	150	15 1/4	387	890	159	1400	250	1900	862	50	3	43	20
EFL50-8	8	200	15 1/2	394	1130	202	3700	661	3200	1451	50	3	78	35
EFL50-10	10	250	15 3/4	400	1250	223	6400	1143	4800	2177	50	3	100	45
EFL50-12	12	300	17 3/4	451	1360	243	7790	1391	6600	2994	50	3	140	64
EFL50-14	14	350	18 1/2	470	1410	252	9450	1688	8800	3992	50	3	181	82
EFL50-16	16	400	19	483	1810	323	18160	3243	11300	5126	50	3	226	103

EFL may be used for 2" Expansion or 2" Compression from neutral length or any combined 2" from neutral. i.e. (+ 1 1/2, - 1/2) (+ 1, - 1) (+ 1/4, - 13/4) etc. Total movement should never exceed 2".

¹Lower Thrust Forces in proportion at lower pressures, i.e. 20 psi Force = 20/50 x published Thrust. Anchors must resist Thrust Force plus Spring Force. Spring Force is determined by multiplying the joint Spring Rate by its Thermal Movement (in/mm).

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

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

QTY	SIZE	TAG

QTY	SIZE	TAG



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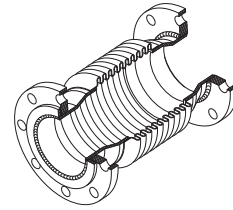
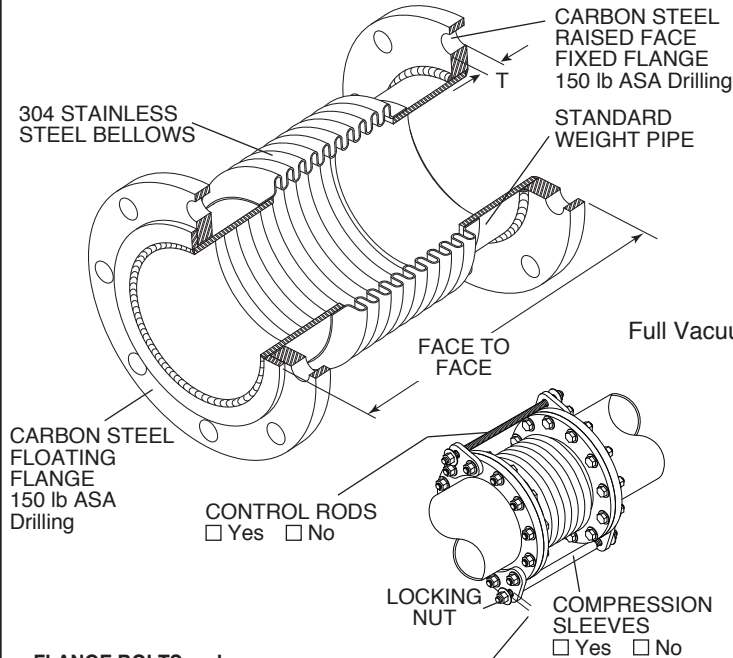
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 DWG No. _____

EFL250

250 psi FULL VACUUM BELLOWS EXPANSION JOINT with FIXED and FLOATING FLANGES 150 lb ASA



Our 2" - 4" designs use 5" stainless bellows between reducers for greater stability.

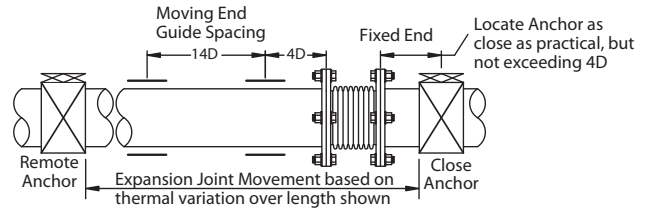
Full Vacuum Rating- 30" (762mm) Hg

EFL250 RATED PRESSURES @ ELEVATED TEMPERATURES

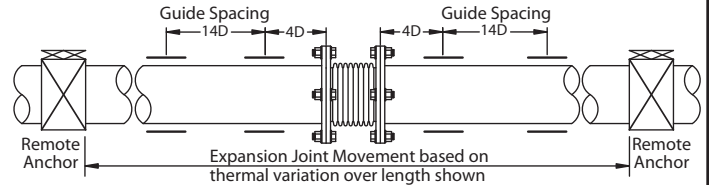
Temperature (°F)	Temperature (°C)	Rated Pressure (psi)(kg/cm ²)	
200	93	227	15.9
250	121	220	15.4
300	149	212	14.9
400	204	195	13.7
500	260	192	13.4
600	316	190	13.3
700	371	185	13.0
800	427	Not Recommended	

GUIDE SPACING - Referencing Pipe Diameter "D"

Guides and Anchors for Joint located near Anchor



Guides and Anchors for Joint located between Remote Anchors



FLANGE BOLTS and NUTS REQUIREMENT

EFL250 Size	Quantity per End	Size & Length
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
5 & 6	16	3/4 x 3 1/2
8	16	3/4 x 4
10 & 12	24	7/8 x 4 1/4
14	24	1 x 4 1/2
16	32	1 x 4 1/2

GAP SETTING (Equal to axial extension for anchored systems or zero for unanchored systems)

CARBON STEEL PLATE FLANGES

Pipe Size (in)	Pipe Size (mm)	Flange Thickness T (in)	Flange Thickness T (mm)
2 thru 4	20 thru 100	5/8	16
5 thru 6	125 thru 150	3/4	19
8 thru 16	200 thru 406	1	25

EFL250 DIMENSIONS AND PRESSURE RATINGS (American & Metric Units) 2" (50mm) COMBINED AXIAL MOVEMENT, 1/4" (6mm) LATERAL DEFLECTION

Type & Size	Pipe Size (in)	Pipe Size (mm)	Face to Face (in)	Face to Face (mm)	Axial Spring Rate (lbs/in)	Axial Spring Rate (kg/cm)	Lateral Spring Rate (lbs/in)	Lateral Spring Rate (kg/cm)	Thrust ¹ @ 250 psi (lbs)	Thrust ¹ @ 17 kg/cm ² (kg)	Rated Pressure @ 70°F (psi)	Rated Pressure @ 21°C (kg/cm ²)	Ship Wt. (lbs)	Ship Wt. (kg)
EFL250-2	2	50	21	533	1500	268	2040	364	7070	3207	250	17	30	14
EFL250-2 1/2	2 1/2	65	21	533	1500	268	2040	364	7070	3207	250	17	34	16
EFL250-3	3	80	21	533	1500	268	2040	364	7070	3207	250	17	36	17
EFL250-4	4	100	21	533	1500	268	2040	364	7070	3207	250	17	37	17
EFL250-5	5	125	14 1/4	362	1500	268	2040	364	7070	3207	250	17	38	18
EFL250-6	6	150	16 1/2	419	1960	350	2450	438	9620	4364	250	17	49	23
EFL250-8	8	200	17 1/4	438	2040	364	3980	711	15910	7217	250	17	84	39
EFL250-10	10	250	18	457	2500	446	7790	1391	23760	10777	250	17	116	53
EFL250-12	12	300	19	483	3530	630	14300	2554	33190	15055	250	17	155	71
EFL250-14	14	350	20	508	3700	660	17600	3143	44180	20040	250	17	203	92
EFL250-16	16	400	20 1/2	521	4660	832	30650	5473	56750	25741	250	17	249	113

EFL may be used for 2" Expansion or 2" Compression from neutral length or any combined 2" from neutral. i.e. (+ 1 1/2, - 1/2) (+ 1, - 1) (+ 1/4, - 1 3/4) etc. Total movement should never exceed 2".

¹Lower Thrust Forces in proportion at lower pressures, i.e. 100 psi Force = 100/250 x published Thrust. Anchors must resist Thrust Force plus Spring Force. Spring Force is determined by multiplying the joint Spring Rate by its Thermal Movement (in/mm).

EFL's installed in piping systems must be anchored on both sides of the joint. EFL's installed in unanchored piping must have control rods. When using EFL products in copper or brass water or steam systems, dielectric flanges must be used on each end to prevent leakage from galvanic action.

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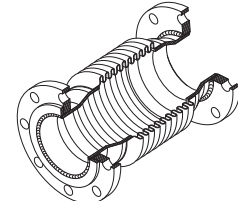
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EFL250-300

250 psi FULL VACUUM BELLOWS EXPANSION JOINT with FIXED and FLOATING FLANGES 300 lb ASA

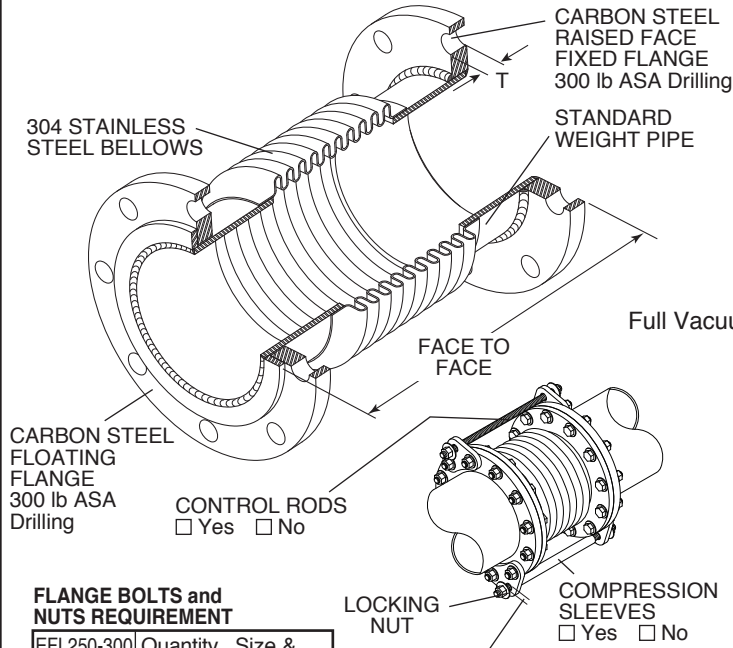
EFL250-300 RATED PRESSURES @ ELEVATED TEMPERATURES

Temperature (°F)	Temperature (°C)	Rated Pressure (psi)(kg/cm ²)	
200	93	227	15.9
250	121	220	15.4
300	149	212	14.9
400	204	195	13.7
500	260	192	13.4
600	316	190	13.3
700	371	185	13.0
800	427	Not Recommended	



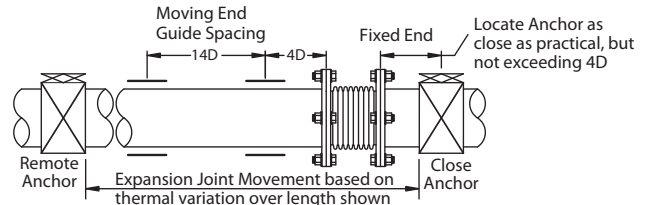
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Full Vacuum Rating – 30" (762mm) Hg

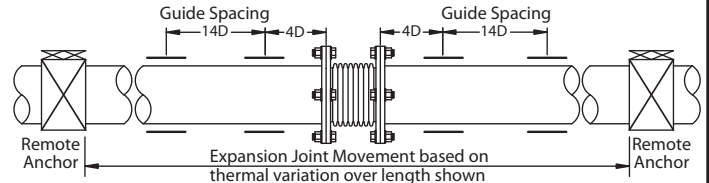


GUIDE SPACING – Referencing Pipe Diameter "D"

Guides and Anchors for Joint located near Anchor



Guides and Anchors for Joint located between Remote Anchors



FLANGE BOLTS and NUTS REQUIREMENT

EFL250-300 Size	Quantity per End	Size & Length
2	16	5/8 x 31/2
2 1/2	16	3/4 x 4
3	16	3/4 x 4
4	16	3/4 x 4
5	16	3/4 x 4
6	24	3/4 x 4 1/2
8	24	7/8 x 4 3/4
10	32	1 x 5
12	32	1 1/8 x 5 1/2
14	40	1 1/8 x 5 1/2
16	40	1 1/4 x 6

GAP SETTING (Equal to axial extension for anchored systems or zero for unanchored systems)

CARBON STEEL PLATE FLANGES

Pipe Size (in)	Pipe Size (mm)	Flange Thickness T (in)	Flange Thickness T (mm)
2 thru 4	20 thru 100	3/4	19
5 thru 6	125 thru 150	1	25
8 thru 16	200 thru 406	1 1/4	32

EFL250-300 DIMENSIONS AND PRESSURE RATINGS (American & Metric Units) 2" (50mm) COMBINED AXIAL MOVEMENT, 1/4" (6mm) LATERAL DEFLECTION

EFL250-300 Size	Pipe Size		Face to Face		Axial Spring Rate		Lateral Spring Rate		Thrust ¹ @ 250 psi		Rated Pressure @ 70°F @ 21°C		Ship Wt.	
	(in)	(mm)	(in)	(mm)	(lbs/in)	(kg/cm)	(lbs/in)	(kg/cm)	(lbs)	(kg)	(psi)	(kg/cm ²)	(lbs)	(kg)
2	2	50	21	533	1500	268	2040	364	7070	3207	250	17	30	14
2 1/2	2 1/2	65	21	533	1500	268	2040	364	7070	3207	250	17	34	16
3	3	80	21	533	1500	268	2040	364	7070	3207	250	17	36	17
4	4	100	21	533	1500	268	2040	364	7070	3207	250	17	37	17
5	5	125	14 1/4	362	1500	268	2040	364	7070	3207	250	17	38	18
6	6	150	16 1/2	419	1960	350	2450	438	9620	4364	250	17	49	23
8	8	200	17 1/4	438	2040	364	3980	711	15910	7217	250	17	84	39
10	10	250	18	457	2500	446	7790	1391	23760	10777	250	17	116	53
12	12	300	19	483	3530	630	14300	2554	33190	15055	250	17	155	71
14	14	350	20	508	3700	660	17600	3143	44180	20040	250	17	203	92
16	16	400	20 1/2	521	4660	832	30650	5473	56750	25741	250	17	249	113

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