



MASON INDUSTRIES, Inc.

MERCER RUBBER Co.

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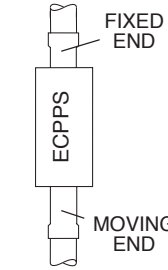
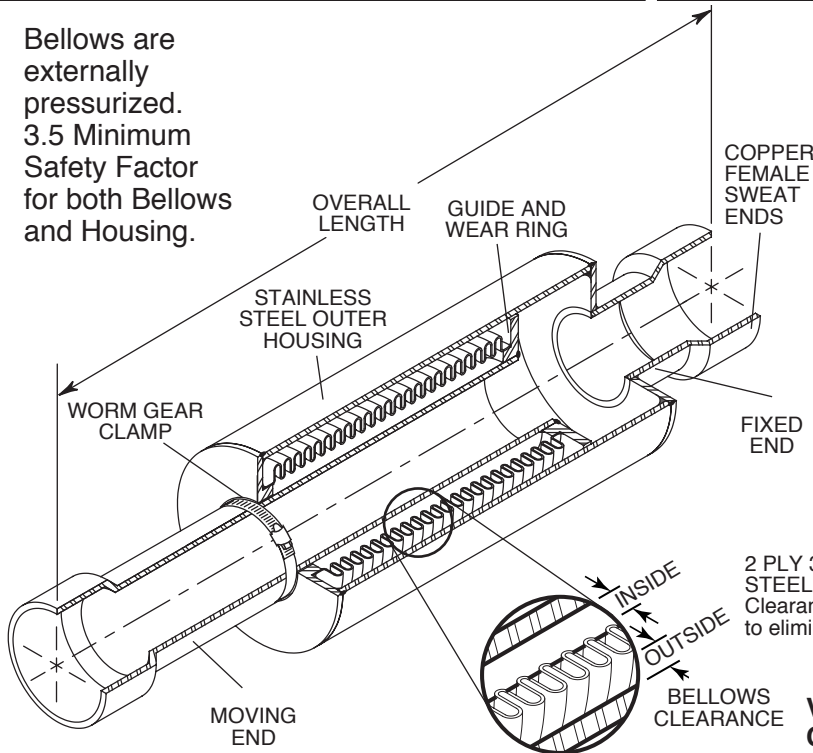


JOB NAME \_\_\_\_\_  
 CUSTOMER \_\_\_\_\_  
 CUSTOMER P.O. \_\_\_\_\_  
 MASON M. \_\_\_\_\_  
 DWG No. \_\_\_\_\_

**ECCPS**

2" (50mm) Movement  
**EXPANSION  
 COMPENSATOR with  
 COPPER SWEAT  
 ENDS**

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



**PIPE RISER INSTALLATION**

Install ECCPS with moving end down to prevent buildup of debris inside housing.

2 PLY 304 STAINLESS STEEL BELLWS  
 Clearance on both sides to eliminate wear

**INSTALLATION:**

1. Thoroughly clean male and female ends using steel wool and steel brushes.
2. Apply flux.
3. Heat joint for proper flow of silver solder. Silver solder flows around 430°F. Composition is silver and tin only. There should be no lead content.
4. Use caution with brazing rod or other high temperature techniques. Overheating will cause leaks.
5. Remove Worm Gear Clamp.

**PRESSURE REDUCTION TABLE**

Temperature (°F)	Temperature (°C)	Rated Pressure (psi) (kg/cm²)	
200	93	235	17
250	121	230	16
300	149	220	15
400	204	207	14
500	260	195	13
600	316	185	13
700	371	175	12
800	427	Not Recommended	

**Vacuum rating varies with size and application. Consult factory on all vacuum applications.**

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

Type & Size	Tubing Size (in) (mm)	Overall Length (in) (mm)		ME Moving End 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 <sup>††</sup> @ 200 psi (lbs) (kg)		Rated Pressure @70°F @21°C (psi) (kg/cm²)		Ship Wt. (lbs)(kg)				
ECCPS-3/4	3/4	20	111/2	292	31/8	79	15/8	40	2	51	0.17	4	0.11	3	23	4	320	145	200	14	2	1
ECCPS-1	1	25	111/2	292	31/8	79	15/8	40	2	51	0.22	6	0.13	3	44	8	520	236	200	14	2	1
ECCPS-11/4	11/4	32	12	305	31/2	89	13/4	44	23/4	70	0.20	5	0.22	6	50	9	630	286	200	14	3	2
ECCPS-11/2	11/2	40	12	305	31/2	89	13/4	44	23/4	70	0.17	4	0.20	5	98	18	750	340	200	14	4	2
ECCPS-2	2	50	121/4	311	33/4	95	13/4	44	31/2	89	0.16	4	0.13	3	168	30	1160	526	200	14	5	2
ECCPS-21/2	21/2	65	131/4	337	41/4	108	21/8	54	4	102	0.20	5	0.22	6	195	35	1810	821	200	14	6	3
ECCPS-3	3	80	131/4	337	41/4	108	21/8	54	41/4	108	0.21	5	0.28	7	316	57	2440	1107	200	14	7	3
ECCPS-4	4	100	141/2	368	43/8	111	21/2	64	6	152	0.14	4	0.30	8	350	63	3700	1678	200	14	25	11

Female end fits over copper tubing, e.g. 1 1/2" (40mm) fits over 1 1/2" (40mm) tubing.

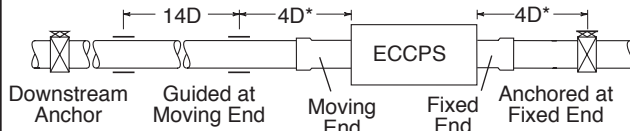
Lower Thrust Forces in proportion at lower pressures, i.e. 100 psi Force = 100/200 x published Thrust. Forces on Pipe Anchors must include Thrust Force and Spring Force. Spring Force is determined by multiplying the joint Spring Rate by its Thermal Movement. (in/mm)

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.

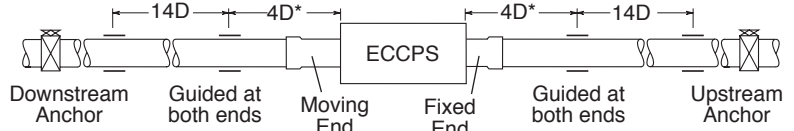
When using ECCPS products in stainless steel water or steam systems, dielectric unions must be used on each end to prevent leakage from galvanic action.

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

Guides and Anchor for ECCPS located near Anchor



Guides and Anchors for ECCPS located between Anchors



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

QTY	SIZE	TAG

QTY	SIZE	TAG