MASON INDUSTRIES, Inc.

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JOB NAME	ECWGN
CUSTOMER CUSTOMER P.O. MASON M. DWG No.	2" (50mm)Movement EXPANSION COMPENSATOR WELD END GROOVED NIPPLES
DITO 110.	GROOVED MIPPLES

GROOVED NIPPLES MAY BE WELDED IN PIPELINES AS AN ALTERNATE. MASON DOES NOT RECOMMEND WELDING.	OUTER CARBON STEEL SCHEDULE 40 SCHEDULE 40 CUT GROOVED NIPPLES	Bellows externa	lly
LIFTING RING AT CG sizes 3 & 4 only	OVERALL LENGTH HOUSING CUT GROOVED NIPPLES or as checked below MOVING GUIDE FLANGE FE MOVING British Standard Nipples FIXED END	pressur 3.5 Mini Safety F for both and Hou	imum ⁻ actor Bellows
2" (50mm) COMPRESSION 1/2" (13mm) EXTENSION MOVEMENT SCALE		lugs are often atta n trap for blow dov PRESSURE RE	
SOALL	2 PLY 304 STAINLESS STEEL BELLOWS Clearance on both sides to eliminate wear	(°F) (°C) 200 93 250 121	Rated Pressure (psi)(kg/cm²) 188 13.0 184 12.7
BEVELED WELD END (both sides) BEVELED WELD END MOVING END	LOCKING BOLTS Release after installation EC Size Bolt No & Size 1/2" - 2" 2 - 3/8" 21/2" - 3" 2 - 1/2" 4" 3 - 5/8"	300 149 400 204 500 260 600 316 700 371 800 427	176 12.1 166 11.4 156 10.8 148 10.2 140 9.7 Not Recomended

ı	ECWGN DIMEN	ISIONS AN	D PRESSU	RE RATINGS (I	British & Me	etric Units)	2" (50mm) COMPRE	SSION, 1/2"	(13mm) EX I	ENSION	
l	Type	Pipe	Overall	ME Moving End	FE Fixed End	Outer Housing		Bellows rance	Spring Rate	Thrust [†] @ 200 13.8	Rated Pressure	Ship
	& Size	Size (in) (mm)	Length (in) (mm)	Neutral Length (in) (mm)	Length (in) (mm)	O.D. (in) <i>(mm)</i>	Inside (in) (mm)	Outside (in) (mm)	$\left(\frac{lbs}{in}\right)\left(\frac{kg}{cm}\right)$	psi bar (lbs) (kg)	@70°F @21°C (psi) (kg/cm²)	
	ECWGN-3/4 ECWGN-1 ECWGN-11/4 ECWGN-11/2	3/4 20 1 25 11/4 32 11/2 40	121/2 318 121/2 318 13 330 13 330	33/4 95 4 102	15/8 41 15/8 41 17/8 48 17/8 48	27/8 73 31/2 89 4 102 41/2 114	0.10 <i>3</i> 0.13 <i>3</i> 0.15 <i>4</i> 0.17 <i>4</i>	0.43 11 0.55 14 0.47 12 0.46 12	89 16 95 17 103 18 106 19	350 159 500 227 800 363 1100 499	200 14 200 14 200 14 200 14	7 3 9 4 10 5 13 6
	ECWGN-2 ECWGN-21/2 ECWGN-3 ECWGN-4	2 50 21/2 65 3 80 4 100	131/2 343 141/4 362 143/4 375 143/4 375	43/8 111 41/2 114	21/4 57 21/4 57 21/2 64 21/2 64	51/4 133 61/4 159 65/8 168 85/8 219	0.17 <i>4</i> 0.24 <i>6</i> 0.32 <i>8</i> 0.33 <i>8</i>	0.52 <i>13</i> 0.53 <i>14</i> 0.37 <i>9</i> 0.81 <i>21</i>	110 20 126 23 140 25 150 27	1600 726 2400 1089 3500 1588 5200 2359	200 14 200 14 200 14 200 14	17 8 24 11 33 15 50 23

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 ECWGN 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 ECWGN located near Anchor Guides and Anchors for ECWGN located between Anchors ECWGN ECWGN Downstream Guided at Anchored at Downstream Upstream Guided at Guided at Moving Fixed Moving Moving End Fixed Fixed End Anchor Anchor both ends both ends Fnd End *Plus an additional 3" (76mm) for Sizes 3/4" to 21/2"

QTY	SIZE	TAG		QTY	SIZE		TAG
		DWN	СНКО	DA	ΓE	DWG No.	

Certification Form S-542 04/2009 DWN CHKD DATE DWG No.