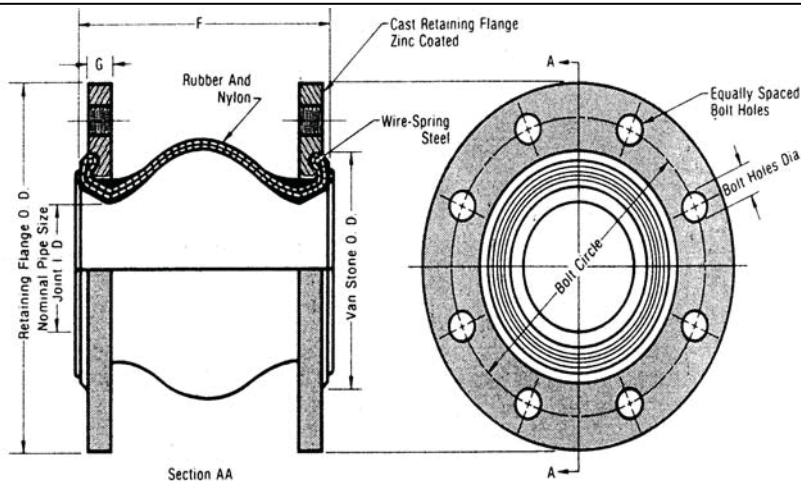


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**\*Maximum Operating Conditions**

Temperature (°F)	Maximum Pressure PSI
	12" & Smaller
170°	UP TO 225
180°	UP TO 220
190°	UP TO 175
210°	UP TO 150
200°	UP TO 125
220°	UP TO 100
230°	UP TO 75

Contact factory for other elastomers. Not for steam applications.

Data	Item Number	301NN0600	301NN0800	301NN1000	301NN1200	301NN1400
Number Required						
EFP Style Number		301NN0600	301NN0800	301NN1000	301NN1200	301NN1400
<b>NOMINAL</b>						
Pipe Size-Joint I.D.		6.00"	8.00"	10.00"	12.00"	14.00"
F-Length of Joint		6.00"	6.00"	8.00"	8.00"	8.00"
A-Flange Width		0.87"	0.87"	0.95"	0.95"	1.02"
<b>Bolting</b>						
Flange/Ring O.D.		11.00"	13.50"	16.00"	19.00"	21.00"
Bolt Circle		9.50"	11.75"	14.25"	17.00"	18.75"
Number & Hole Size		8 - 0.88"	8 - 1.00"	12 - 1.00"	12 - 1.00"	12 - 1.13"
<b>Movements</b>						
Axial Compression		0.750"	0.750"	1.000"	1.000"	1.000"
Axial Extension		0.500"	0.500"	0.625"	0.625"	0.625"
Lateral Deflection		0.500"	0.500"	0.750"	0.750"	0.750"
Angular Movement		9°	7°	7°	6°	5°
<b>Physical</b>						
Pressure Rating <sup>(1)</sup>		225 PSI	225 PSI	225 PSI	225 PSI	150 PSI
Vacuum Rating <sup>(1)</sup>		26 In/Hg	26 In/Hg	26 In/Hg	26 In/Hg	26 In/Hg
Temperature Rating		230 °F	230 °F	230 °F	230 °F	230 °F
FSA Pressure Series		C	C	C	C	C
FSA Material Class		Standard	Standard	Standard	Standard	Standard
<b>Approx. Weights</b>						
Expansion Joint		26.8 LBS	40.6 LBS	56.6 LBS	83.0 LBS	101.0 LBS
Control Unit Set(2 rods)		-	-	-	-	-
Packing Crates		-	-	-	-	-
Total Approx. Wght Ea.		26.8 LBS	40.6 LBS	56.6 LBS	83.0 LBS	101.0 LBS
<b>Materials</b>						
Tube Elastomer		NEOPRENE	NEOPRENE	NEOPRENE	NEOPRENE	NEOPRENE
Cover Elastomer <sup>®</sup>		NEOPRENE	NEOPRENE	NEOPRENE	NEOPRENE	NEOPRENE
Body Fabric		NYLON	NYLON	NYLON	NYLON	NYLON
Body Reinforcing		FABRIC	FABRIC	FABRIC	FABRIC	FABRIC
Control Units		-	-	-	-	-

WARNING: Control units must be used to protect this part from excessive movement if piping is not properly anchored. Expansion joints may operate in pipelines or equipment carrying fluids and/or gases at elevated temperature and pressures. Normal precautions should be taken to make sure these parts are installed correctly and inspected regularly. Precautions should be taken to protect personnel in the event of leakage or splash.



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St. Michael, MN 55376 - USA  
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FAX: 763-201-2134

SCALE: NONE

PRINT CERTIFICATION: Certified correct as of 10/21/16 by

R. Vance, (Pres.) Subscribed & sworn to before me, on this 21st day of October, 2016

By: \_\_\_\_\_ (Notary Public)

DWG NO: <b>9</b>	PROP/INQ/ORD. NO:	REMARKS:
FORM NO: <b>SINGLE SPHERE</b>	CUSTOMER NAME:	(1)PRESSURE RATING IS BASED ON 170° F. MOVEMENTS ARE NON-CONCURRENT.
APPVD BY: RV CHECKED BY: RV	PROJECT NAME:	<b>SEE ATTACHED FOR CONTROL ROD REQUIREMENTS</b>
PROD. DESC:	CONTRACTOR:	<b>HAVE CONTROL UNITS BEEN SPECIFIED/ORDERED FOR THIS INSTALLATION: NO</b>
THE ABOVE EXPANSION JOINTS AND RELATED HARDWARE, MEET OR EXCEED THE PHYSICAL, MECHANICAL OR MATERIAL SPECIFICATIONS OF THE RUBBER EXPANSION JOINT DIV., FLUID SEALING ASSOCIATION. FOR ADDITIONAL INFORMATION, SEE THE ASSOCIATION, "TECHNICAL HANDBOOK, FIFTH EDITION", CHAPTER II, PARAGRAPH A.1. AND TABLES II, III, AND IV.		

## Table 6: Control Units/Unanchored

Control Units must be installed when pressures (test • design • surge • operating) exceed rating below:

Pipe Size	Series 301 P.S.I.G.	Series 302 P.S.I.G.
1" thru 4"	180	135
5" thru 10"	135	135
12" thru 14"	90	90
16" thru 24"	45	45
30"	35	35

Table 7:		Maximum Surge or Test Pressure of the System			
Nominal Pipe Size Expansion Joint I.D. Inch /(mm)		Number of Control Rods Recommended			
		2	4	6	8
1	(25)	949	•	•	•
1.25	(32)	830	•	•	•
1.5	(40)	510	•	•	•
2	(50)	661	•	•	•
2.5	(65)	529	•	•	•
3	(75)	441	•	•	•
4	(100)	311	622	•	•
5	(125)	235	470	•	•
6	(150)	186	371	•	•
8	(200)	163	326	•	•
10	(250)	163	325	488	•
12	(300)	160	320	481	•
14	(350)	112	223	335	•
16	(400)	113	227	340	453
18	(450)	94	187	281	375
20	(500)	79	158	236	315
24	(600)	74	147	221	294
30	(750)	70	141	211	281

Note:

Pressures listed above do not relate to the actual design pressure of the expansion joint products, but are the maximum surge or pressure for a specific control rod nominal pipe size.