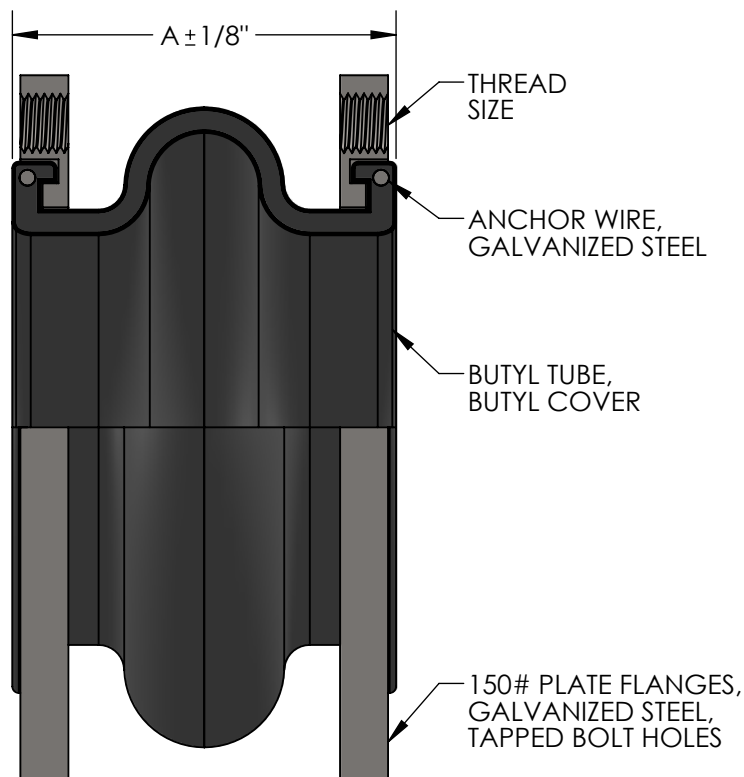


**MODEL MSOBB, STYLE "O" METRASPHERE  
BUTYL EXPANSION JOINT, TAPPED BOLT HOLES**



**MAXIMUM OPERATING CONDITIONS**

TEMPERATURE	PRESSURE (PSI)	
	1" - 12"	14" AND UP
170°	225	125
180°	200	115
190°	175	105
200°	150	95
210°	125	40
220°	100	35
230°	75	25

MAXIMUM WORKING TEMPERATURE 230°F

**NOTES:**

WWW.METRAFLEX.COM FOR INSTALLATION INSTRUCTIONS.  
JOINT MUST BE INSTALLED AT ITS NEUTRAL LENGTH.  
BOLTS MUST BE PROPERLY TORQUED.  
NOT SUITABLE FOR STEAM OR VACUUM APPLICATIONS.  
IF CONNECTING PIPE IS NOT ANCHORED AND GUIDED,  
CONTROL UNITS MUST BE USED.

TO BE FURNISHED WITH CONTROL UNITS:

YES  NO

QTY	PART NUMBER	PIPE SIZE		A	AXIAL COMP.	FORCE (LBS)	AXIAL EXT.	FORCE (LBS)	LATERAL OFFSET	FORCE (LBS)	ANGULAR	WEIGHT (LBS)	THREAD SIZE (UNC)
		INCH	MM										
	MSOBB0100	1"	25	3-3/4"	1/4"	N/A	3/32"	N/A	1/4"	N/A	15°	5	1/2"
	MSOBB0125	1-1/4"	32	3-3/4"	1/4"	N/A	3/32"	N/A	1/4"	N/A	15°	6	1/2"
	MSOBB0150	1-1/2"	38	3-3/4"	1/4"	N/A	3/32"	N/A	1/4"	N/A	15°	7	1/2"
	MSOBB0200	2"	50	4-1/8"	3/8"	55	1/4"	73	3/8"	55	15°	8	5/8"
	MSOBB0250	2-1/2"	65	4-1/2"	1/2"	102	1/4"	68	3/8"	97	15°	13	5/8"
	MSOBB0300	3"	80	5-1/8"	1/2"	136	1/4"	115	3/8"	108	15°	14	5/8"
	MSOBB0400	4"	100	5-3/8"	3/4"	145	3/8"	242	1/2"	275	15°	18	5/8"
	MSOBB0500	5"	125	6-3/4"	3/4"	172	3/8"	196	1/2"	308	15°	23	3/4"
	MSOBB0600	6"	150	7-1/8"	3/4"	293	3/8"	563	1/2"	484	15°	28	3/4"
	MSOBB0800	8"	200	8-1/8"	1"	372	1/2"	587	7/8"	688	15°	40	3/4"
	MSOBB1000	10"	250	9-3/8"	1"	398	1/2"	455	7/8"	781	15°	68	7/8"
	MSOBB1200	12"	300	10-1/4"	1"	390	1/2"	356	7/8"	842	15°	94	7/8"
	MSOBB1400	14"	350	10-1/2"	1"	N/A	5/8"	N/A	7/8"	N/A	15°	105	1"
	MSOBB1600	16"	400	10-1/2"	1"	N/A	5/8"	N/A	7/8"	N/A	15°	120	1"
	MSOBB1800	18"	450	10-1/2"	1"	N/A	5/8"	N/A	7/8"	N/A	15°	125	1-1/8"
	MSOBB2000	20"	500	10-1/2"	1"	N/A	5/8"	N/A	7/8"	N/A	15°	145	1-1/8"
	MSOBB2400	24"	600	10-1/2"	1"	N/A	5/8"	N/A	7/8"	N/A	15°	265	1-1/4"


**NSF 372 - LEAD FREE**

The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight. Material complies with state codes and standards, where applicable, requiring reduced lead content.

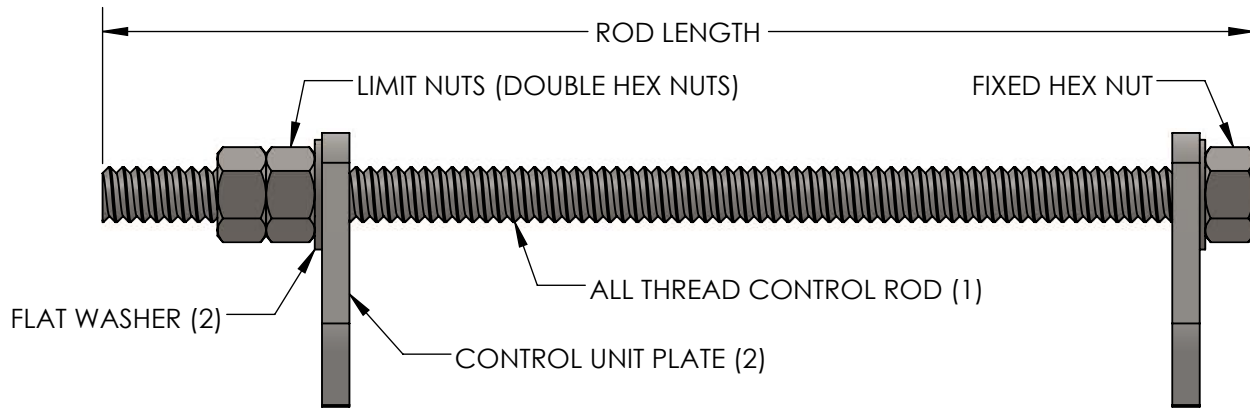
CUSTOMER: \_\_\_\_\_

PROJECT: \_\_\_\_\_

ENGINEER: \_\_\_\_\_

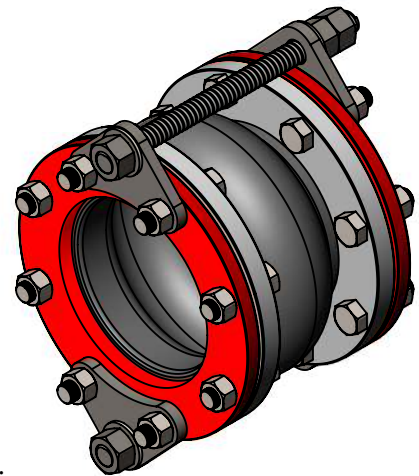
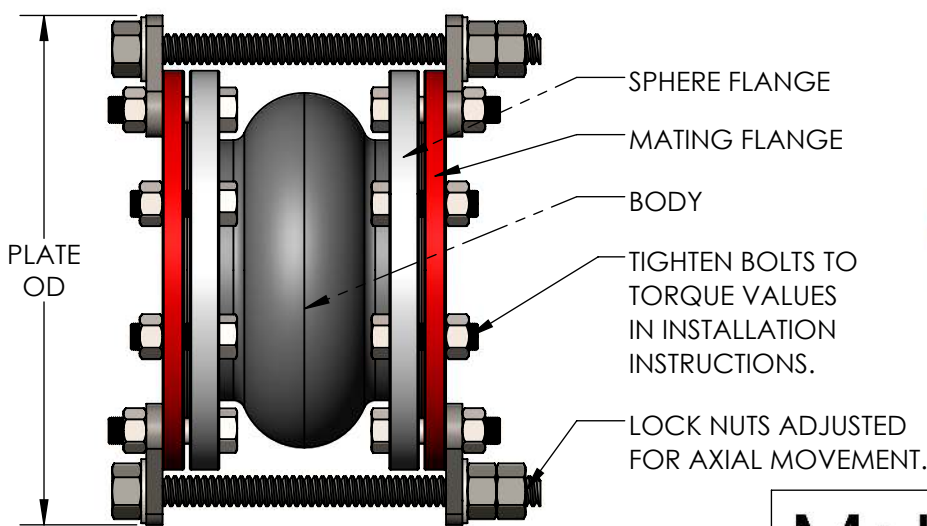
REV.	DATE
	
2323 W. HUBBARD ST. CHICAGO, IL 60612 TEL: 312-738-3800 FAX: 312-738-0415 WWW.METRAFLEX.COM	
<b>METRASPHERE MODEL MSOBB</b> BUTYL EXPANSION JOINT, TAPPED BOLT HOLES	
DRAWN BY: <b>DKISH</b>	DATE: <b>1/19/2017</b>
APPROVED: <b>JC</b>	DATE: <b>1/23/2017</b>
SCALE: <b>N/A</b>	DRAWING NUMBER: <b>MSOBB-1</b>

# CONTROL UNIT SELECTION CHART / DIMENSIONS FOR MODEL MSO ONLY



CONSULT FACTORY FOR NUMBER OF CONTROL UNITS REQUIRED

PIPE SIZE	ROD TYPE	ROD THICKNESS	ROD LENGTH	PLATE TYPE	PLATE THICKNESS	PLATE OD
1"	GUSRD058X120	5/8"	12"	GUSPLT01	3/8"	8-3/8"
1-1/4"	GUSRD058X120	5/8"	12"	GUSPLT01	3/8"	8-3/4"
1-1/2"	GUSRD058X120	5/8"	12"	GUSPLT01	3/8"	9-1/8"
2"	GUSRD058X120	5/8"	12"	GUSPLT0204	3/8"	10-1/8"
2-1/2"	GUSRD058X120	5/8"	12"	GUSPLT2503	3/8"	11-1/8"
3"	GUSRD058X120	5/8"	12"	GUSPLT2503	3/8"	11-5/8"
4"	GUSRD058X120	5/8"	12"	GUSPLT0204	3/8"	13-1/8"
5"	GUSRD058X120	5/8"	12"	GUSPLT0506	1/2"	14-1/8"
6"	GUSRD058X140	5/8"	14"	GUSPLT0506	1/2"	15-1/8"
8"	GUSRD100X170	1"	17"	GUSPLT0800	1/2"	19-1/8"
10"	GUSRD100X190	1"	19"	GUSPLT1012	3/4"	21-5/8"
12"	GUSRD100X190	1"	19"	GUSPLT1012	3/4"	24-5/8"
14"	GUSRD100X210	1"	21"	GUSPLT1400	3/4"	26-5/8"
16"	GUSRD125X215	1-1/4"	21-1/2"	GUSPLT1600	3/4"	30-1/8"
18"	GUSRD125X215	1-1/4"	21-1/2"	GUSPLT1800	3/4"	31-5/8"
20"	GUSRD125X215	1-1/4"	21-1/2"	GUSPLT2000	3/4"	34-1/8"
24"	GUSRD125X215	1-1/4"	21-1/2"	GUSPLT2400	1"	38-5/8"



CUSTOMER: \_\_\_\_\_

PROJECT: \_\_\_\_\_

ENGINEER: \_\_\_\_\_

**Metraflex**  
for pipes in motion

2323 W. HUBBARD ST.  
CHICAGO, IL 60612  
TEL: 312-738-3800  
FAX: 312-738-0415  
WWW.METRAFLEX.COM

## CONTROL UNITS FOR MSO

DRAWN BY: **DKISH**

DATE: **1/5/2017**

APPROVED: **JC**

DATE: **1/6/2017**

SCALE:  
N/A

DRAWING NUMBER:  
**CONTROLUNIT-MSO**