

No: _____

SUBMITTAL COVERSHEET
Nanuet UFSD –Phase 3 Projects

Architect:

KSQ Architects
215 W 40th Street, 15th Floor
New York, NY 10018

Owner:

Nanuet Union Free School District
101 Church Street
Nanuet, NY 10954

Construction Manager:

Jacobs
One Penn Plaza, 54th floor
New York, NY 10019

Contractor: Joe Lombardo Plumbing & Heating of Rockland Inc

Contract: Ron Lombardo

Address: 321 Spook Rock Road Suite 109A

845-357-6537
Telephone: _____

Suffern, New York 10901

Fax: 845-357-8529

School Name: Nanuet Union Free School District Phase 3 Bond Projects @ Barr Middle School & Nanuet High School

Type of Submittal:

Re-submittal: [] No [] Yes

[] Shop Drawings

[] Product Data

[] Schedule

[] Sample

[] _____

[] Test Report

[] Certificate

[] Color Sample

[] Warranty

[] _____

Submittal Description:

EXPANSION FITTINGS AND LOOPS FOR HVAC PIPING

Product Name: _____

Manufacturer: B&G

Subcontractor/ WALLACE EANNACE
Supplier: _____

References:

Spec. Section No.: 230516

Drawing No(s): _____

Paragraph: _____

Rm. or Detail No(s): _____

Architect's/ Engineer's Review Stamp

SAGE ENGINEERING ASSOCIATES, LLP

☒ Reviewed

☐ Furnish as Corrected

☐ Rejected

☐ Revise and Resubmit

☐ Submit Specified Item

This review is only for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the shop drawings during this review do not relieve the contractor from compliance with the requirements of the plans and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The Contractor is responsible for dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades and performing all Work in a safe and satisfactory manner.

SAGE LOG NO. M-5

Date: 9/21/2023

By: J. Venditte

Contractor Review Statement:

These documents have been checked for accuracy and coordinated with job conditions and Contract requirements by this office and have been found to comply with the provisions of the Contract Documents.

Ronald J. Lombardo

9-14-23

Name:

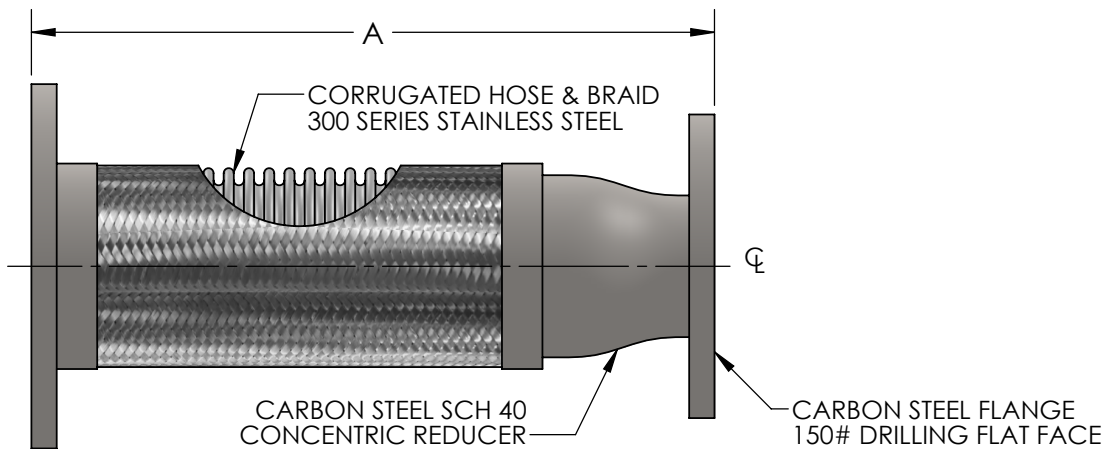
Date:

Company Name:

Joe Lombardo Plumbing & Heating of Rockland Inc.

Remarks:

MODEL RMF **REDUCING FLANGED FLEXIBLE PUMP CONNECTOR**



QTY	PART NUMBER	PIPE SIZE		A	PRESSURE RATING (PSI)*	WEIGHT (LBS)	PROJECT INFORMATION
		LARGER	SMALLER				
	RMF0215	2"	1-1/2"	12-1/4"	516	10	
	RMF2502	2-1/2"	2"	12-1/4"	387	15	
	RMF0315	3"	1-1/2"	12-1/4"	316	17	
	RMF0302		2"				
	RMF0325		2-1/2"				
	RMF0402	4"	2"	12-3/4"	232	22	
	RMF0425		2-1/2"				
	RMF0403		3"				
	RMF0525	5"	2-1/2"	15-3/4"	191	31	
	RMF0503		3"				
	RMF0504		4"				
	RMF0602	6"	2"	16-1/4"	165	36	
	RMF0625		2-1/2"				
	RMF0603		3"				
4	RMF0604		4"				P-3 & 4
	RMF0605		5"				
	RMF0804	8"	4"	17-1/2"	234	65	
	RMF0805		5"				
	RMF0806		6"				
	RMF1006	10"	6"	19-1/2"	230	97	
	RMF1008		8"				
	RMF1206		6"	21-1/2"	161	137	
	RMF1208	12"	8"				
	RMF1210		10"				

*FOR SAFE WORKING PRESSURE ABOVE 70°F, MULTIPLY THE PRESSURE SHOWN AT 70°F TIMES THE CORRECTION FACTOR OF THE REQUIRED TEMPERATURE.

TEMPERATURE (°F)	FACTOR
70	1.0
200	.91
300	.85
400	.78
500	.77
600	.76

MAX INTERMITTENT OFFSET FROM CENTERLINE 1/8"
MAX PERMANENT OFFSET FROM CENTERLINE 3/8"

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. Not suitable for potable water systems due to materials of construction.

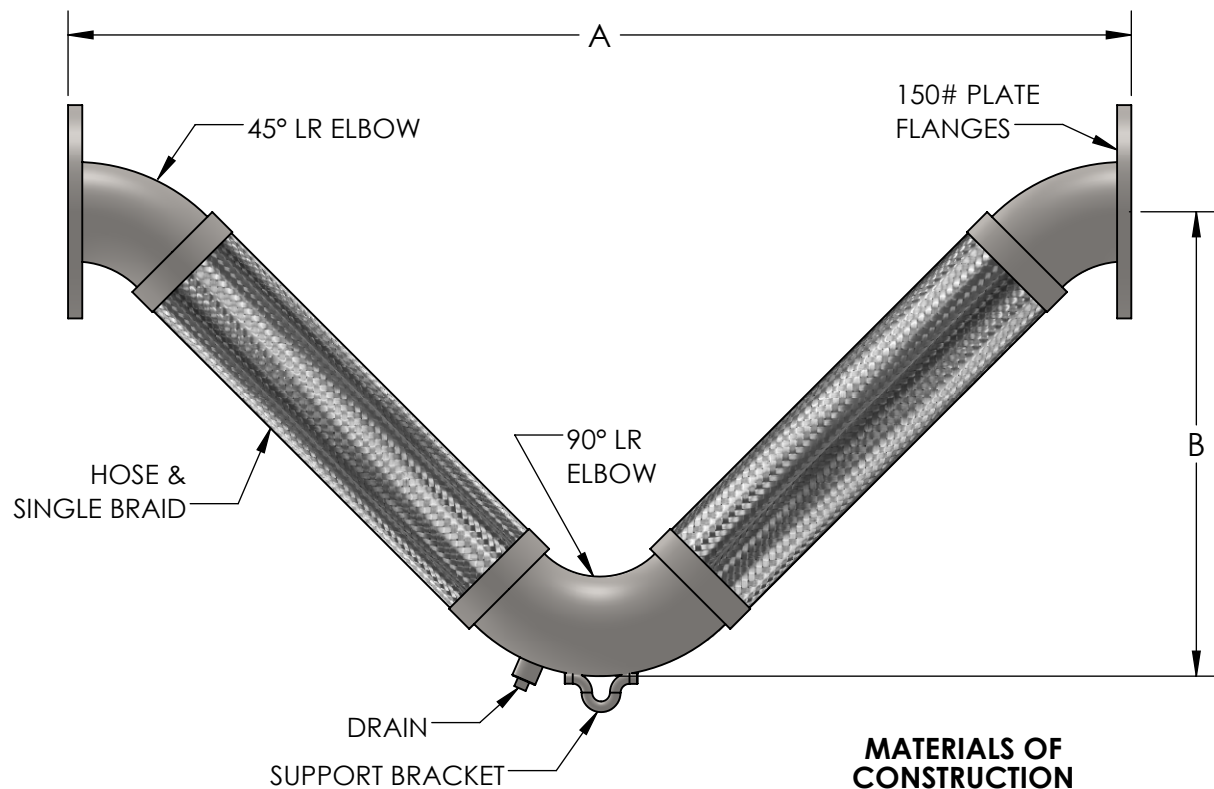
2	RMF1210 ADDED	6/25/2019
REV. 1	TEMP FACTOR UPDATED	DATE 12/28/2016
2323 W. HUBBARD ST. CHICAGO, IL 60612 TEL: 312-738-3800 FAX: 312-738-0415 WWW.METRAFLEX.COM		

CUSTOMER: _____

PROJECT: _____

ENGINEER: _____

MODEL RMF	
REDUCING FLANGED FLEXIBLE PUMP CONNECTOR	
DRAWN BY: DKISH	DATE: 1/10/2014
APPROVED: JC	DATE: 1/10/2014
SCALE: N/A	DRAWING NUMBER: RMF-2



MATERIALS OF CONSTRUCTION

END FITTINGS - CARBON STEEL - SCH 40/STD WT
 HOSE & BRAID - STAINLESS STEEL - 300 SERIES
 ELBOWS - CARBON STEEL - SCH 40/STD WT

NOTE: V-LOOPS 2" AND LARGER INSTALLED IN ANY ORIENTATION OTHER THAN HANGING DOWN MUST HAVE THE 180° RETURN SUPPORTED. (SEE INSTALLATION INSTRUCTIONS.)

CONTACT FACTORY FOR ADDITIONAL SIZES AND MOVEMENTS. ALL DIMENSIONS IN INCHES.

QTY	SIZE	MODEL	MOVEMENT	A	B	PSI @ 70° F	WT (LBS)	PROJECT INFO
	2" (50mm)	VLF80200	+/- 4"	31.75"	14.25"	516	16	
	2.5" (65mm)	VLF80250	+/- 4"	38"	16.875"	387	24	
	3" (80mm)	VLF80300	+/- 4"	41"	18.125"	316	30	
2	4" (100mm)	VLF80400	+/- 4"	47.375"	20.75"	232	46	
	5" (125mm)	VLF80500	+/- 4"	53.5"	23.125"	191	68	
	6" (150mm)	VLF80600	+/- 4"	60"	25.625"	165	95	
	8" (200mm)	VLF80800	+/- 4"	70.125"	29.125"	234	186	
	10" (250mm)	VLF81000	+/- 4"	82.5"	33.875"	230	287	
	12" (300mm)	VLF81200	+/- 4"	94.5"	38.375"	161	412	

NSF 372 - LEAD FREE

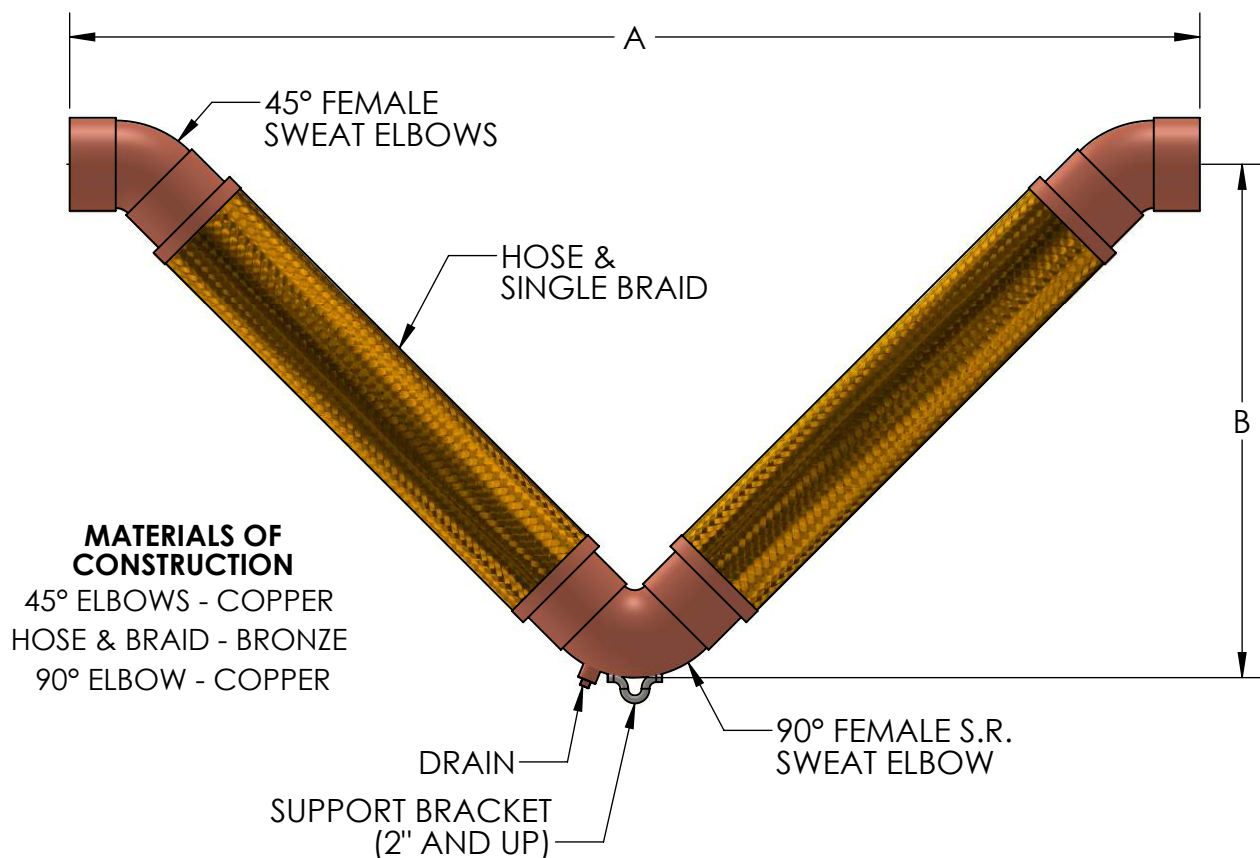
The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight. Material complies with state codes and standards, where applicable, requiring reduced lead content. Not suitable for potable water systems due to materials of construction.

CUSTOMER: _____

PROJECT: _____

ENGINEER: _____

REV.	DATE
	
2323 W. HUBBARD ST. CHICAGO, IL 60612 TEL: 312-738-3800 WWW.METRAFLEX.COM	
METRAFLEX V-LOOP FLANGED ENDS, +/- 4" MOVEMENT	
DRAWN BY: SMARTEN	DATE: 7/29/2015
APPROVED: DKISH	DATE: 8/3/2015
SCALE: NONE	DRAWING NUMBER: VLF8



NOTE: V-LOOPS 2" AND LARGER INSTALLED IN ANY ORIENTATION OTHER THAN HANGING DOWN MUST HAVE THE 180° RETURN SUPPORTED. (SEE INSTALLATION INSTRUCTIONS.)

CONTACT FACTORY FOR ADDITIONAL SIZES AND MOVEMENTS. ALL DIMENSIONS IN INCHES.

QTY	SIZE	MODEL	MOVEMENT	A	B	PSI @ 70° F	WT (LBS)	PROJECT INFO
	0.5" (15mm)	VLS80050	+/- 4"	19.25"	9"	706	4	
	0.75" (20mm)	VLS80075	+/- 4"	22.25"	10.25"	577	5	
	1" (25mm)	VLS80100	+/- 4"	25.75"	11.75"	470	6	
2	1.25" (32mm)	VLS80125	+/- 4"	28.75"	13.25"	361	8	
	1.5" (40mm)	VLS80150	+/- 4"	30.75"	14.125"	329	10	
	2" (50mm)	VLS80200	+/- 4"	34.125"	15.625"	317	14	
	2.5" (65mm)	VLS80250	+/- 4"	39.125"	17.75"	272	17	
	3" (80mm)	VLS80300	+/- 4"	41.625"	19"	201	20	
	4" (100mm)	VLS80400	+/- 4"	47"	21"	142	24	

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: _____

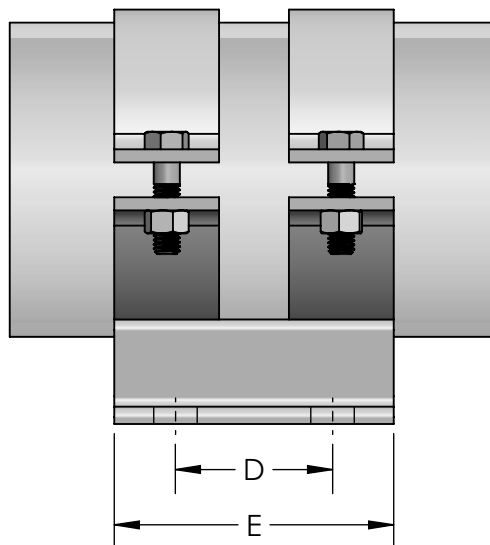
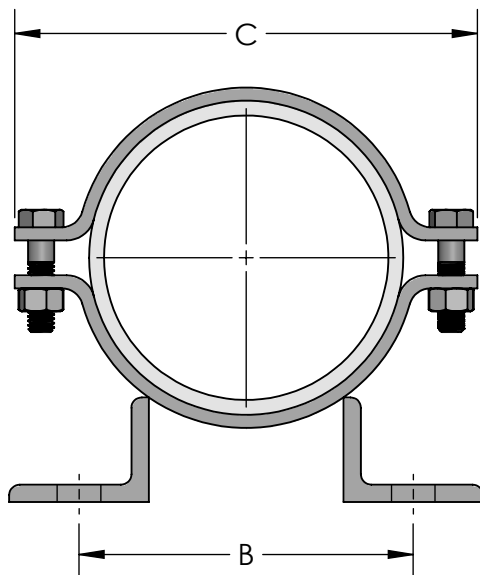
PROJECT: _____

ENGINEER: _____

REV.	1	B DIMENSIONS UPDATED	DATE 10/27/2015
		2323 W. HUBBARD ST. CHICAGO, IL 60612 TEL: 312-738-3800 WWW.METRAFIRE.COM	
METRAFLEX V-LOOP SWEAT ENDS, +/- 4" MOVEMENT			
DRAWN BY: SMARTEN		DATE: 7/30/2015	
APPROVED: DKISH		DATE: 8/3/2015	
SCALE: NONE		DRAWING NUMBER: VLS8	

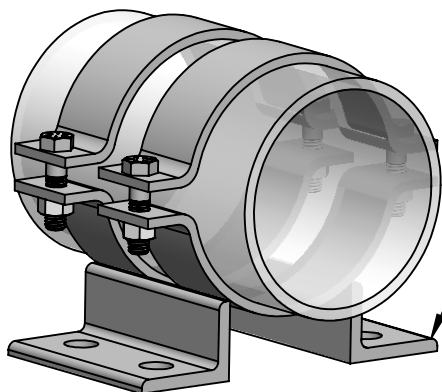
MODEL PA ANCHOR CLAMP

LIGHT WEIGHT ANCHOR FOR "NO THRUST" EXPANSION JOINTS



QTY	PART NUMBER	PIPE SIZE		A (in)	B (in)	C (in)	D (in)	E (in)	BOLT HOLE	WEIGHT (lbs)	NOTES
		NPS	MM								
	PA0075	0.75	20	2.125	3.375	2.75	2.75	4	0.625	3	
	PA0100	1	25	2.125	3.375	2.875	2.75	4	0.625	3	
4	PA0125	1.25	32	2.375	3.375	2.875	2.75	4	0.625	3	
	PA0150	1.5	40	2.5	3.375	3.875	2.75	4	0.625	4	
	PA0200	2	50	2.75	3.375	3.875	2.75	4	0.625	4	
	PA0250	2.5	65	3	3.375	4.875	2.75	4	0.625	4	
	PA0300	3	82	3.25	4.125	4.875	2.75	4	0.625	4	
4	PA0400	4	100	3.5	5.125	6.625	2.75	4	0.625	5	
	PA0500	5	130	4.5	5.875	8.375	4	6	0.75	7	
	PA0600	6	150	5	6.25	8.375	4	6	0.75	8	
	PA0800	8	200	6	6.75	10.875	4	6	0.75	9	
	PA1000	10	250	7	7.75	12.625	4	6	0.75	14	
	PA1200	12	300	8	8.125	14.75	4	6	0.75	16	

MATERIAL: CARBON STEEL
FINISH: ONE COAT OF PAINT



FEET CAN BE BOLTED OR
WELDED TO STRUCTURE

CUSTOMER: _____

PROJECT: _____

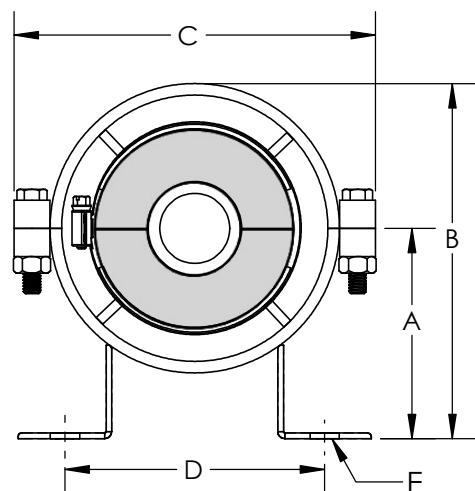
ENGINEER: _____

REV. 1	EDIT WELD ANNOTATIONS	DATE: 05/21/2019
Metraflex <i>for pipes in motion</i>		
2323 W. HUBBARD ST. CHICAGO, IL 60612 TEL: 312-738-3800 FAX: 312-738-0415 WWW.METRAFLEX.COM		
MODEL PA ANCHOR CLAMP		
DRAWN BY: DKISH	DATE: 12/2/2016	
APPROVED: EB	DATE: 12/2/2016	
SCALE: N/A	DRAWING NUMBER: PACLAMP-1	

Model PGPRE Insulated Spider Guide With 2" insulation.

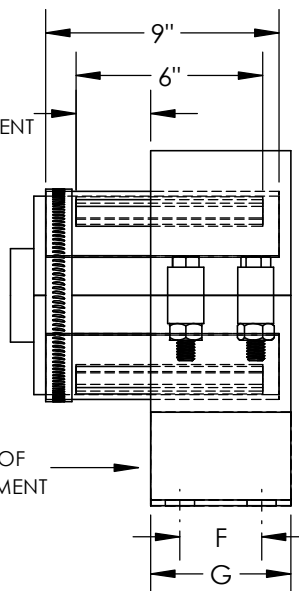
Material : ASTM A-134 carbon steel.

Insulation: Johns Manville T-1200 Calcium Silicate
with a 450 PSI compressive strength per
ASTM C656, Type II, Grade 5



SET TO HALF
OF THE MOVEMENT

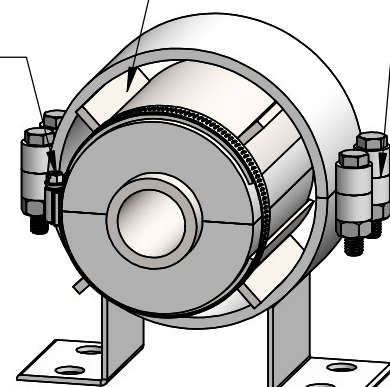
DIRECTION OF
PIPE MOVEMENT



SPIDER SPACERS CENTER
PIPE IN HOUSING

SPLIT HOUSING
FOR EASY
INSTALLATION

BAND
CLAMP



FEET CAN BE
BOLTED OR WELDED
TO STRUCTURE

PROVIDES LATERAL STABILITY TO THE PIPE TO PREVENT "BOWING".
GUIDES ARE NOT DESIGNED TO SUPPORT THE WEIGHT OF THE PIPE.

QTY: 4

NPS	Insul Thkns	Part No.	A	B	C	D	E	F	G	Weight
.5"	2"	PGPRE260050	5.25	9.25	10	6.375	0.625	1.75	3	13
.75"	2"	PGPRE260075	5.25	9.25	10	6.375	0.625	1.75	3	13
1"	2"	PGPRE260100	5.25	9.25	10	6.375	0.625	1.75	3	13
1.25"	2"	PGPRE260125	5.25	9.25	10	6.375	0.625	1.75	3	13
1.5"	2"	PGPRE270150	6.25	11.625	12.125	7.125	0.625	2.75	4	20
2"	2"	PGPRE270200	6.25	11.625	12.125	7.125	0.625	2.75	4	20
2.5"	2"	PGPRE270250	6.25	11.625	12.125	7.125	0.625	2.75	4	20
3"	2"	PGPRE270300	6.25	11.625	12.125	7.125	0.625	2.75	4	20
4"	2"	PGPRE280400	7	13.375	14.125	8.375	0.625	2.75	4	25
5"	2"	PGPRE280500	7	13.375	14.125	8.375	0.625	2.75	4	25
6"	2"	PGPRE290600	7.875	14.875	16.125	9.875	0.75	4	6	40
8"	2"	PGPRE300800	8.875	16.875	18.125	10.875	0.75	4	6	45
10"	2"	PGPRE311000	9.625	18.625	20.125	11.875	0.75	4	6	55
12"	2"	PGPRE321200	10.875	20.875	22.125	11.75	0.75	4	6	65
14"	2"	PGPRE331400	12.125	23.125	24.125	14.5	0.875	6	8	95
16"	2"	PGPRE341600	12.875	24.875	26.125	15.5	0.875	6	8	100
18"	2"	PGPRE381800	14.625	27.625	28.125	17.125	1.125	6	8	120

NSF 372 - LEAD FREE

The wetted surface of this product contacted by consumable water contain 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: _____

Metraflex
for pipes in motion

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

MODEL PGPRE WITH 2" INSULATION

DRAWN BY: BK

DATE: 9/30/21

APPROVED:

DATE:

SCALE:
N/A

DRAWING NUMBER: PGPRE

MODEL PGIV - 1.5" MAX INSULATION **STYLE IV SPIDER TYPE GUIDE**

GUIDE HARDWARE

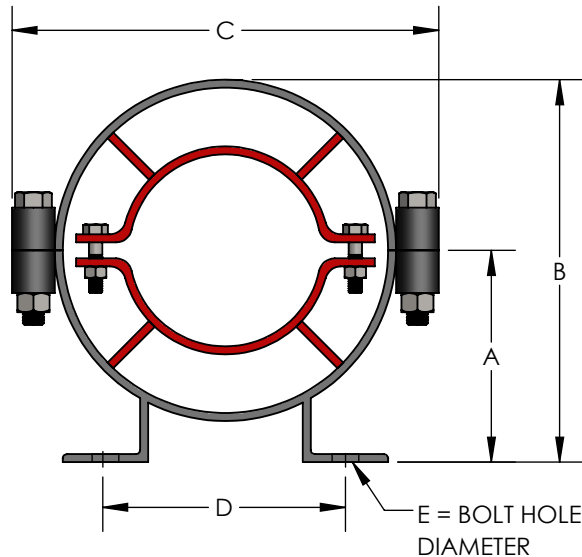
MATERIAL: CARBON STEEL

FINISH: ONE COAT OF PAINT

MODELS 23-28 HAVE 2 BOLTS

MODELS 29-36 HAVE 4 BOLTS

FOR COPPER TUBE CLAMPS USE MODEL PGIVC

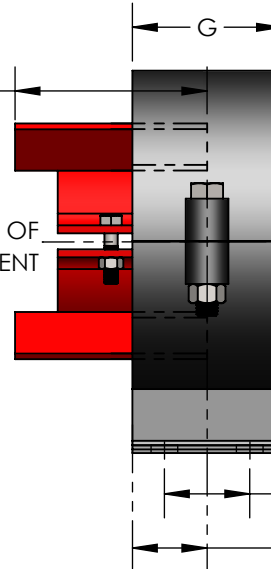


SPIDER SPACERS CENTER
PIPE IN HOUSING AND ARE
SIZED TO ALLOW INSULATION
TO BE PACKED AROUND PIPE

SPLIT HOUSING
FOR EASY INSTALLATION

DIRECTION OF
PIPE MOVEMENT

MVMT



FEET CAN BE
BOLTED OR
WELDED TO
STRUCTURE

*EXTENDED SPIDER GUIDES
ARE AVAILABLE. CONTACT
METRAFLEX FOR OPTIONS.

LEADING EDGE OF
SPIDER SET HALFWAY
INTO HOUSING

PROVIDES LATERAL STABILITY TO THE PIPE TO PREVENT "BOWING".
GUIDES ARE NOT DESIGNED TO SUPPORT THE WEIGHT OF THE PIPE.

QTY	SIZE	INS	MODEL	A	B	C	D	E	F	G	MVMT	WEIGHT
	1/2"	1-1/2"	PGIV230050	3-1/2"	5-7/8"	6-1/8"	4-1/8"	5/8"	1-3/4"	3"	4"	7 LBS
	3/4"	1-1/2"	PGIV240075	4"	6-3/4"	7-1/8"	4-3/8"	5/8"	1-3/4"	3"	4"	8 LBS
	1"	1-1/2"	PGIV240100	4"	6-3/4"	7-1/8"	4-3/8"	5/8"	1-3/4"	3"	4"	8 LBS
4	1-1/4"	1-1/2"	PGIV240125	4"	6-3/4"	7-1/8"	4-3/8"	5/8"	1-3/4"	3"	4"	8 LBS
	1-1/2"	1-1/2"	PGIV240150	4"	6-3/4"	7-1/8"	4-3/8"	5/8"	1-3/4"	3"	4"	8 LBS
	2"	1-1/2"	PGIV250200	4-3/8"	7-5/8"	8-1/8"	5-1/8"	5/8"	1-3/4"	3"	4"	9 LBS
	2-1/2"	1-1/2"	PGIV250250	4-3/8"	7-5/8"	8-1/8"	5-1/8"	5/8"	1-3/4"	3"	4"	9 LBS
	3"	1-1/2"	PGIV260300	5-1/4"	9-1/4"	10-1/8"	6-1/8"	5/8"	1-3/4"	3"	4"	11 LBS
	4"	1-1/2"	PGIV260400	5-1/4"	9-1/4"	10-1/8"	6-1/8"	5/8"	1-3/4"	3"	4"	11 LBS
	5"	1-1/2"	PGIV270500	6-1/4"	11-5/8"	12-1/8"	7"	5/8"	2-3/4"	4"	6"	17 LBS
	6"	1-1/2"	PGIV270600	6-1/4"	11-5/8"	12-1/8"	7"	5/8"	2-3/4"	4"	6"	17 LBS
	8"	1-1/2"	PGIV280800	7"	13-3/8"	14-1/8"	8-1/4"	5/8"	2-3/4"	4"	6"	20 LBS
	10"	1-1/2"	PGIV301000	8-7/8"	17"	18-1/8"	10-7/8"	3/4"	4"	6"	8"	48 LBS
	12"	1-1/2"	PGIV311200	9-3/4"	18-3/4"	20-1/8"	11-7/8"	3/4"	4"	6"	8"	54 LBS
	14"	1-1/2"	PGIV321400	10-7/8"	21"	22-1/8"	11-3/4"	3/4"	4"	6"	8"	61 LBS
	16"	1-1/2"	PGIV331600	12-1/8"	23-1/8"	24-1/8"	14-1/2"	7/8"	6"	8"	8"	89 LBS
	18"	1-1/2"	PGIV341800	13"	25"	26-1/8"	15-1/2"	7/8"	6"	8"	8"	102 LBS
	20"	1-1/2"	PGIV352000	14-3/4"	27-3/4"	28-1/8"	17-1/8"	1-1/8"	6"	8"	12"	110 LBS
	24"	1-1/2"	PGIV362400	16-1/2"	31-1/2"	32-1/8"	19-1/4"	1-1/8"	6"	8"	12"	150 LBS

REV. 1 INSTALL IMAGE UPDATED DATE 6/11/2020

Metraflex
for pipes in motion

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

MODEL PGIV

STYLE IV SPIDER TYPE GUIDE FOR 1-1/2" MAX INSULATION

DRAWN BY: **DKISH**

DATE: **4/3/2018**

APPROVED: **JC**

DATE: **4/3/2018**

SCALE:

N/A

DRAWING NUMBER:

PGIV-INS1.5-REV1

CUSTOMER: _____

PROJECT: _____

ENGINEER: _____