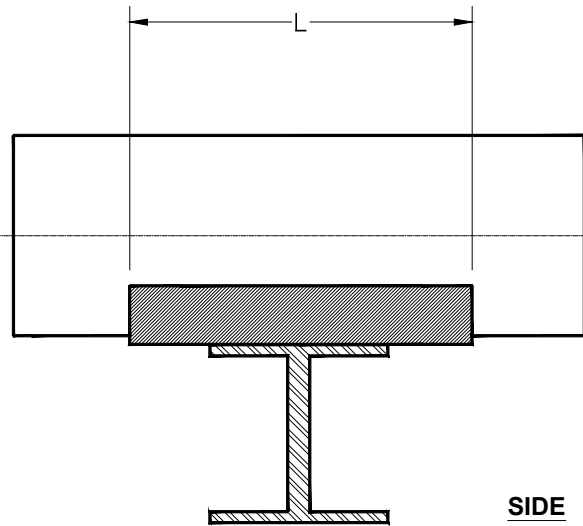
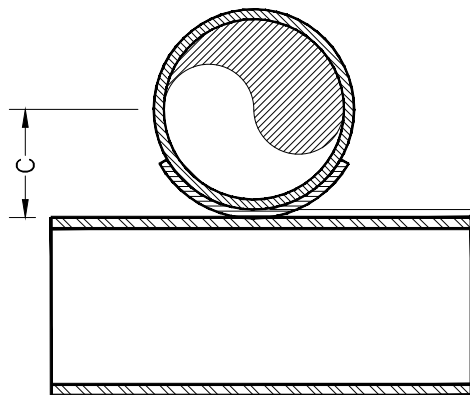


Information in this drawing is of a general nature. Detailed design information (part thickness, load ratings, etc.) are not part of this drawing. User should consult the manufacturer of the pipe support for detailed design information and proper selection of the pipe support for the application.



SIDE



ELEV

0.20 to 0.32" (5 to 8mm) up to 24"Ø
 0.32 to 0.42" (8 to 10.5mm) 26" to 60"Ø

Nominal Pipe Size	Nominal O.D.		C		L		Minimum L		Weight (lb/kg)	
SERIES 20FR20, 20FR20-C										
1" (DN25)	1.50"	38mm	1.03"	26mm	6"	152mm	4"	102mm	0.4	0.2
1.5" (DN40)	2.00"	51mm	1.28"	33mm	6"	152mm	4"	102mm	0.5	0.2
2" (DN50)	2.50"	64mm	1.56"	40mm	6"	152mm	4"	102mm	0.7	0.3
3" (DN80)	3.50"	89mm	2.03"	52mm	6"	152mm	4"	102mm	1.0	0.5
4" (DN100)	4.50"	114mm	2.53"	64mm	6"	152mm	4"	102mm	1.3	0.6
6" (DN150)	6.60"	168mm	3.58"	91mm	8"	203mm	4"	102mm	2.6	1.2
8" (DN200)	8.78"	223mm	4.67"	119mm	10"	254mm	4"	102mm	4.2	1.9
10" (DN250)	10.96"	278mm	5.76"	146mm	12"	305mm	4"	102mm	6.3	2.9
12" (DN300)	13.16"	334mm	6.86"	174mm	12"	305mm	4"	102mm	7.5	3.4
14" (DN350)	15.47"	393mm	8.02"	204mm	12"	305mm	4"	102mm	8.9	4.0
16" (DN400)	17.63"	448mm	9.10"	231mm	12"	305mm	4"	102mm	10.1	4.6
18" (DN450)	19.81"	503mm	10.19"	259mm	16"	406mm	6"	152mm	15.1	6.9
20" (DN500)										
24" (DN600)										
30" (DN750)										
36" (DN900)										
42" (DN1050)										
48" (DN1200)										
54" (DN1350)										
60" (DN1500)										

- NOTE 4. $C = 0.5 * \text{Nominal O.D.} + \text{Pad Thk}$ (0.25" nom. up to 24"Ø, 0.38" above 24"Ø).
- NOTE 3. Wear pad to be centered on structural support.
- NOTE 2. Wear pad to have minimum 120 degrees of contact (max. 180 degrees).
- NOTE 1. Wear pad to be of the same material as the pipe.

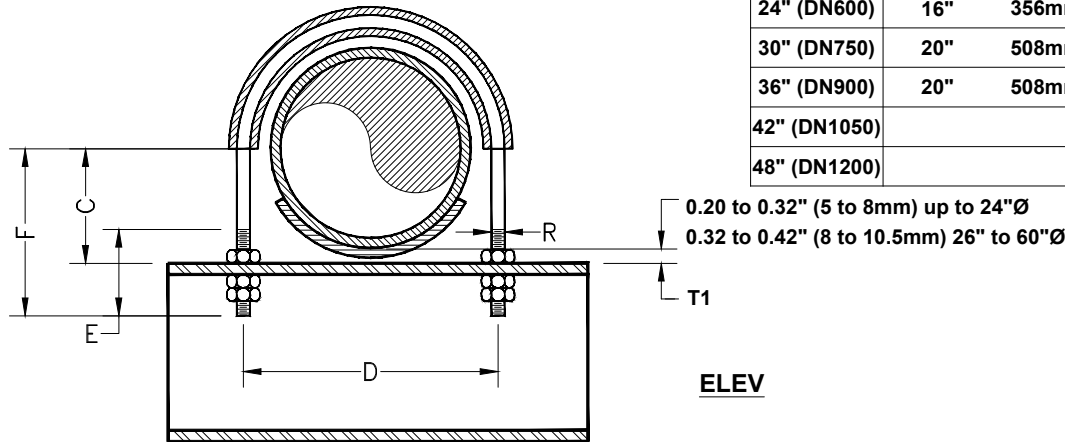
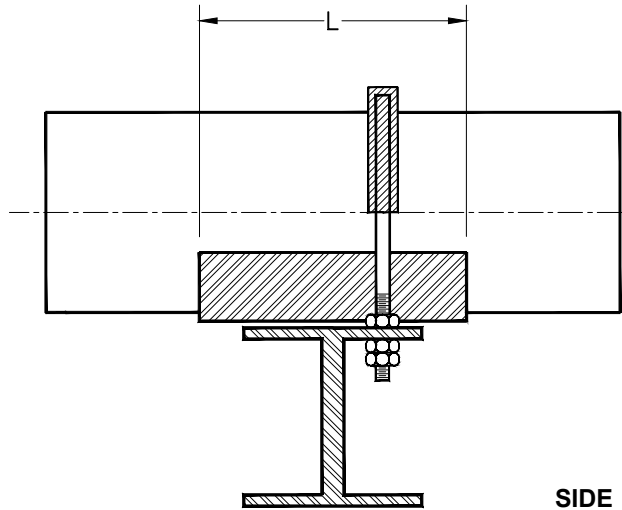
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FRP "WEAR" PAD
 FIG.210 - 20FR20

REV: 6

Information in this drawing is of a general nature. Detailed design information (part thickness, load ratings, etc.) are not part of this drawing. User should consult the manufacturer of the pipe support for detailed design information and proper selection of the pipe support for the application.



Nominal Pipe Size	L		R	D +/- 0.12"		E		F	
SERIES 20HV, 20FR-E, 20FR16, 20FR20, 20JF, 20JF16, 110FW, 20C, 20HV-D									
SERIES 20HV-C, 20FR-EC, 20FR16-C, 20FR20-C, 20JF-C, 20JF16-C, 20HV(FDA)									
1" (DN25)	6"	152mm	3/8"	3.25"	83mm	3.00"	76mm	2.75"	70mm
1.5" (DN40)	6"	152mm	3/8"	3.75"	95mm	3.00"	76mm	3.00"	76mm
2" (DN50)	6"	152mm	3/8"	4.25"	108mm	3.00"	76mm	3.25"	83mm
3" (DN80)	6"	152mm	1/2"	5.25"	133mm	3.50"	89mm	4.13"	105mm
4" (DN100)	6"	152mm	1/2"	6.25"	159mm	3.50"	89mm	4.63"	118mm
6" (DN150)	8"	203mm	5/8"	8.38"	213mm	4.00"	102mm	6.06"	154mm
8" (DN200)	10"	254mm	5/8"	10.38"	264mm	4.00"	102mm	7.13"	181mm
10" (DN250)	12"	305mm	3/4"	12.50"	317mm	4.50"	114mm	8.56"	217mm
12" (DN300)	12"	305mm	7/8"	14.75"	375mm	5.00"	127mm	10.00"	254mm
14" (DN350)	12"	305mm	7/8"	16.95"	430mm	5.00"	127mm	11.23"	285mm
16" (DN400)	12"	305mm	7/8"	19.11"	485mm	5.00"	127mm	12.31"	313mm
18" (DN450)	16"	356mm	1"	21.42"	544mm	5.50"	140mm	13.77"	350mm
20" (DN500)	16"	356mm	1"	23.38"	594mm	5.50"	140mm	14.75"	375mm
24" (DN600)	16"	356mm	1"	27.68"	703mm	5.50"	140mm	16.90"	429mm
30" (DN750)	20"	508mm	1"	33.78"	858mm	5.50"	140mm	19.72"	501mm
36" (DN900)	20"	508mm	1"	40.06"	1018mm	5.50"	140mm	22.86"	581mm
42" (DN1050)									
48" (DN1200)									

0.20 to 0.32" (5 to 8mm) up to 24"Ø
 0.32 to 0.42" (8 to 10.5mm) 26" to 60"Ø

- NOTE 11. An "extra-long" L dimension of 14" (356mm) may be used up to 16"Ø.
- NOTE 10. Minimum L dimensions per Fig.210 may also be used.
- NOTE 9. $F = C + 1/2in. + 3 * R$ (or use values in table).
- NOTE 8. $E = 4 * R + 1 1/2in.$
- NOTE 7. $C = 0.5 * Avg\ O.D. + T1$ (See Fig.210 for C dimensions).
- NOTE 6. $D = Pipe\ O.D. + 2 * T1 + R + 1/4in.$ (or use values in table).
- NOTE 5. T1 dimension is from T.O.S. to B.O.P.
- NOTE 4. The u-bolt shall not "anchor" the pipe.
- NOTE 3. Wear pad to be centered on structural support.
- NOTE 2. Wear pad to have minimum 120 degrees of contact (max. 180 degrees).
- NOTE 1. Saddle to be of the same material as the pipe.

Rev 12 Changes: Increased "D" dimension in sizes 1" thru 2" by 0.5", in sizes 3" & 4" by 3/8", in size 6" by 1/4" and in size 8" by 1/8". No other changes.

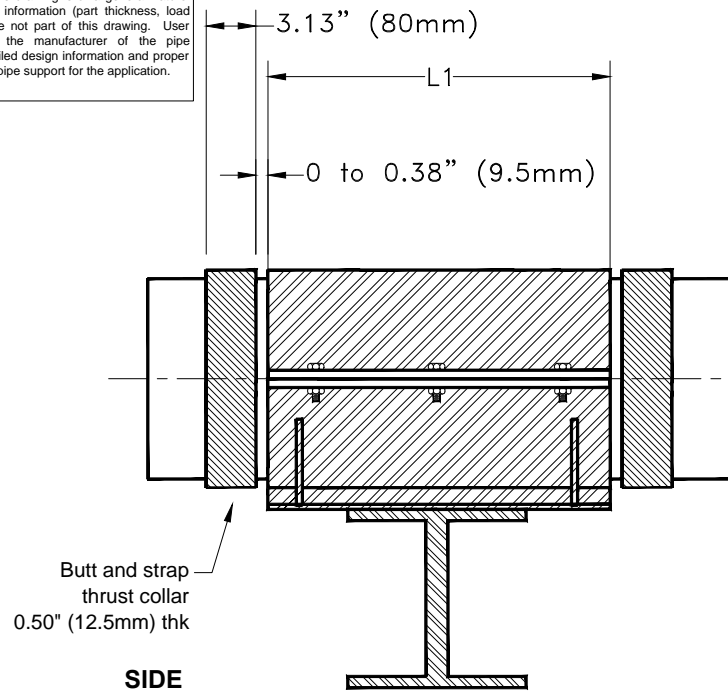
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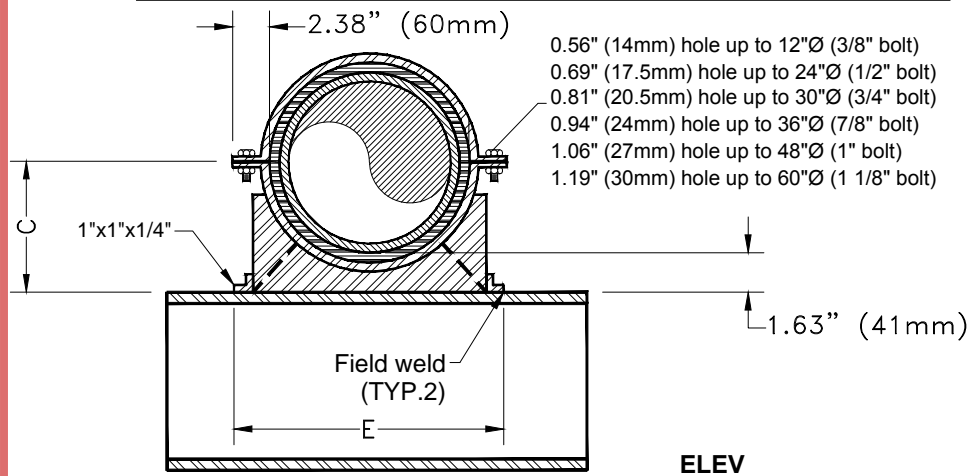
RUBBER COATED U-BOLT
 FIG.226 - GENERAL DETAIL

REV: 12

Information in this drawing is of a general nature. Detailed design information (part thickness, load ratings, etc.) are not part of this drawing. User should consult the manufacturer of the pipe support for detailed design information and proper selection of the pipe support for the application.



Nominal Pipe Size	Nominal O.D.		L1		C		E	
SERIES 20FR20, 20FR20-C								
6" (DN150)	6.60"	168mm	8"	203mm	4.93"	125mm	12.00"	305mm
8" (DN200)	8.78"	223mm	10"	254mm	6.02"	153mm	14.00"	356mm
10" (DN250)	10.96"	278mm	12"	305mm	7.11"	181mm	16.00"	406mm
12" (DN300)	13.16"	334mm	12"	305mm	8.21"	209mm	18.00"	458mm
14" (DN350)	15.47"	393mm	12"	305mm	9.36"	238mm	20.25"	514mm
16" (DN400)	17.63"	448mm	12"	305mm	10.44"	265mm	22.25"	565mm
18" (DN450)	19.81"	503mm	16"	406mm	11.53"	293mm	24.50"	622mm
20" (DN500)								
24" (DN600)								
30" (DN750)								
36" (DN900)								
42" (DN1050)								
48" (DN1200)								
54" (DN1350)								
60" (DN1500)								



- NOTE 5. Average O.D. is typically 0.03" to 0.10" larger than the nominal O.D.
 NOTE 4. C = 0.5 * Nominal O.D. + 1.63in.
 NOTE 3. Steel saddle includes 1/8in. thick neoprene liner.
 NOTE 2. 1.63in. (41mm) dimension is from T.O.S to B.O.P.
 NOTE 1. Thrust collar may need to be larger depending upon design conditions.

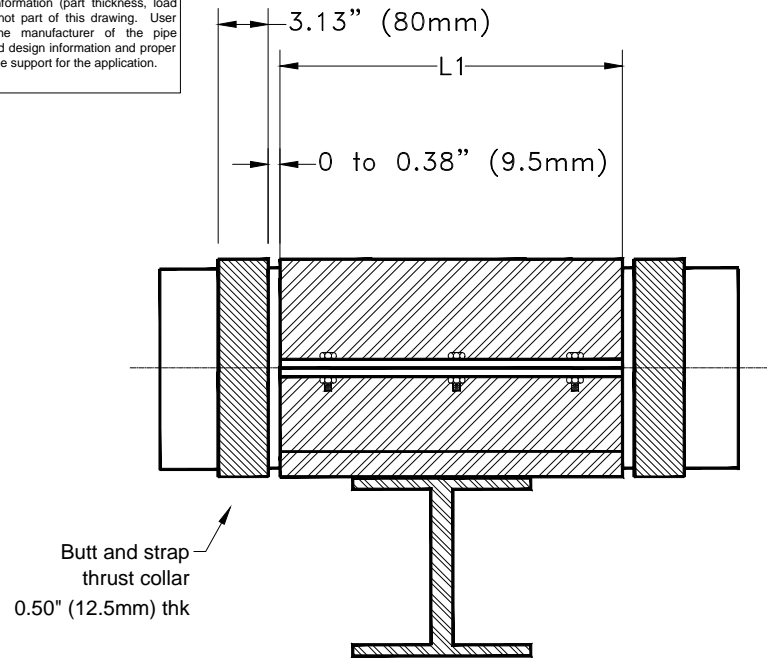
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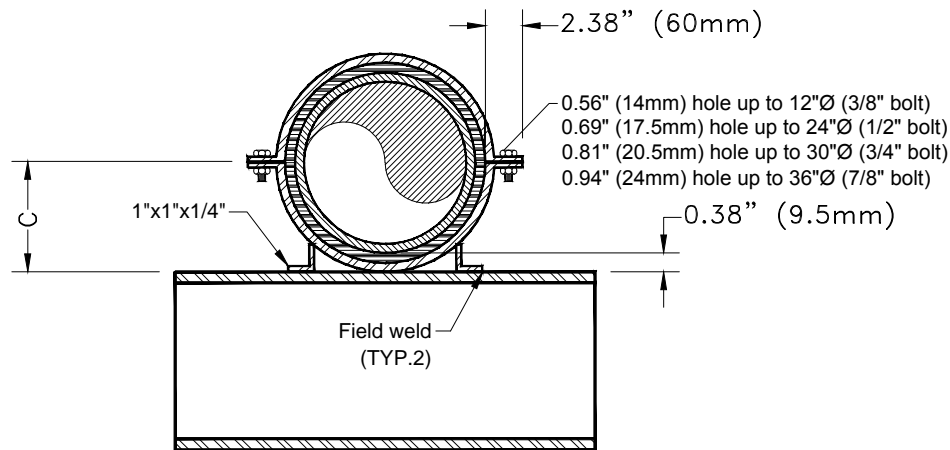
STEEL ANCHOR
 FIG.230 - 20FR20

REV: 2

Information in this drawing is of a general nature. Detailed design information (part thickness, load ratings, etc.) are not part of this drawing. User should consult the manufacturer of the pipe support for detailed design information and proper selection of the pipe support for the application.



SIDE



ELEV

- NOTE 5. Average O.D. is typically 0.03" to 0.10" larger than the nominal O.D.
 NOTE 4. $C = 0.5 * \text{Nominal O.D.} + 0.38\text{in.}$
 NOTE 3. Steel saddle includes 1/8in. thick neoprene liner.
 NOTE 2. 0.38in. (9.5mm) dimension is from T.O.S. to B.O.P.
 NOTE 1. Thrust collar may need to be larger depending upon design conditions.

Nominal Pipe Size	Nominal O.D.		L1		C	
SERIES 20FR20, 20FR20-C						
2" (DN50)	2.50"	64mm	6"	152mm	1.63"	41mm
3" (DN80)	3.50"	89mm	6"	152mm	2.13"	54mm
4" (DN100)	4.50"	114mm	6"	152mm	2.63"	67mm
6" (DN150)	6.60"	168mm	8"	203mm	3.68"	93mm
8" (DN200)	8.78"	223mm	10"	254mm	4.77"	121mm
10" (DN250)	10.96"	278mm	12"	305mm	5.86"	149mm
12" (DN300)	13.16"	334mm	12"	305mm	6.96"	177mm
14" (DN350)	15.47"	393mm	12"	305mm	8.10"	206mm
16" (DN400)	17.63"	448mm	12"	305mm	9.18"	233mm
18" (DN450)	19.81"	503mm	16"	406mm	10.27"	261mm
20" (DN500)						
24" (DN600)						
30" (DN750)						
36" (DN900)						
42" (DN1050)						
48" (DN1200)						
54" (DN1350)						
60" (DN1500)						

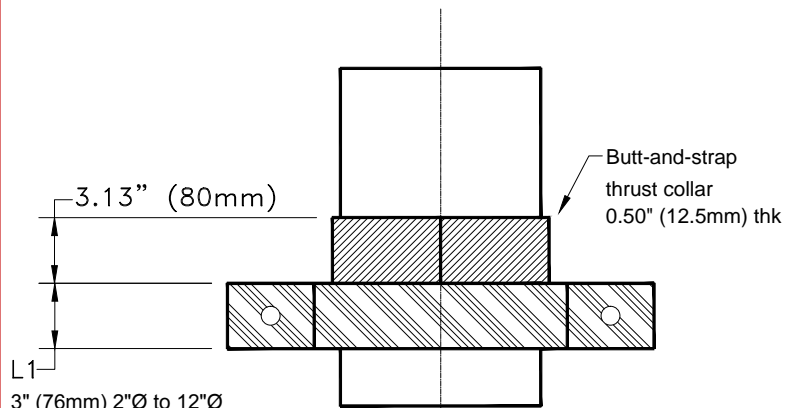
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SMALL STEEL ANCHOR
 FIG.232 - 20FR20

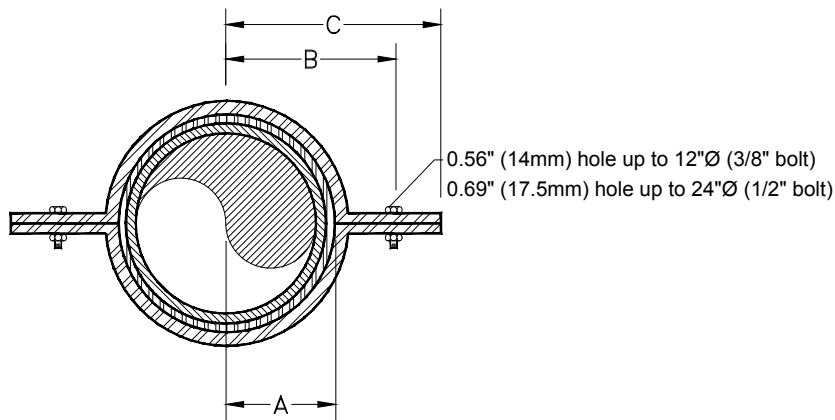
REV: 2

Information in this drawing is of a general nature. Detailed design information (part thickness, load ratings, etc.) are not part of this drawing. User should consult the manufacturer of the pipe support for detailed design information and proper selection of the pipe support for the application.



3" (76mm) 2"Ø to 12"Ø
 5" (127mm) 14"Ø to 16"Ø
 6" (152mm) 18"Ø to 30"Ø
 8" (203mm) 36"Ø to 42"Ø
 9" (229mm) 48"Ø to 60"Ø

ELEV



PLAN

NOTE 5. 'A' dimension is from pipe centerline to neoprene/steel interface.

NOTE 4. $A = 0.5 * \text{Nominal O.D.} + 0.13\text{in.}$

NOTE 3. $B = 0.5 * \text{Nominal O.D.} + 1.75\text{in.}; C = B + 1.25\text{in.}$

NOTE 2. Steel saddle includes 1/8in. thick neoprene liner.

NOTE 1. A separate bonded collar (two halves) may also be used.

Nominal Pipe Size	Nominal O.D.		A		B		C	
SERIES 20FR20, 20FR20-C								
2" (DN50)	2.50"	64mm	1.38"	35mm	3.00"	76mm	4.25"	108mm
3" (DN80)	3.50"	89mm	1.88"	48mm	3.50"	89mm	4.75"	121mm
4" (DN100)	4.50"	114mm	2.38"	60mm	4.00"	102mm	5.25"	133mm
6" (DN150)	6.60"	168mm	3.43"	87mm	5.05"	128mm	6.30"	160mm
8" (DN200)	8.78"	223mm	4.52"	115mm	6.14"	156mm	7.39"	188mm
10" (DN250)	10.96"	278mm	5.61"	142mm	7.23"	184mm	8.48"	215mm
12" (DN300)	13.16"	334mm	6.71"	170mm	8.33"	212mm	9.58"	243mm
14" (DN350)	15.47"	393mm	7.85"	199mm	9.48"	241mm	10.73"	273mm
16" (DN400)	17.63"	448mm	8.93"	227mm	10.55"	268mm	11.80"	300mm
18" (DN450)	19.81"	503mm	10.02"	254mm	11.64"	296mm	12.89"	327mm
20" (DN500)								
24" (DN600)								
30" (DN750)								
36" (DN900)								
42" (DN1050)								
48" (DN1200)								
54" (DN1350)								
60" (DN1500)								

0.56" (14mm) hole up to 12"Ø (3/8" bolt)
 0.69" (17.5mm) hole up to 24"Ø (1/2" bolt)

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STEEL RISER CLAMP
 FIG.240 - 20FR20

REV: 2

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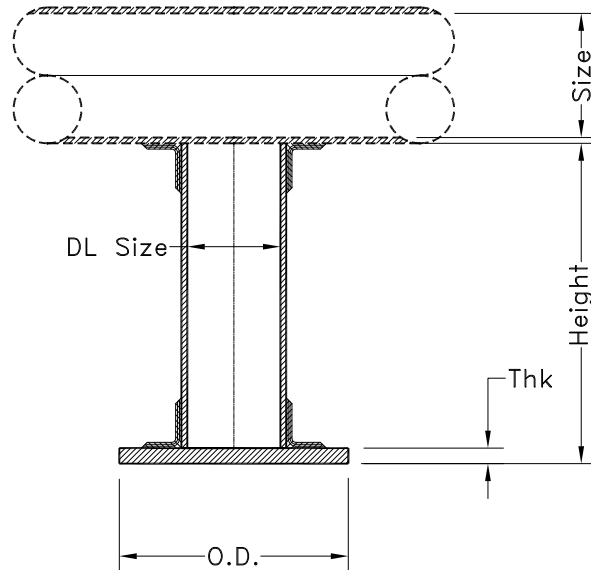


FIG.91 (shop fab'd to a tee or pipe)

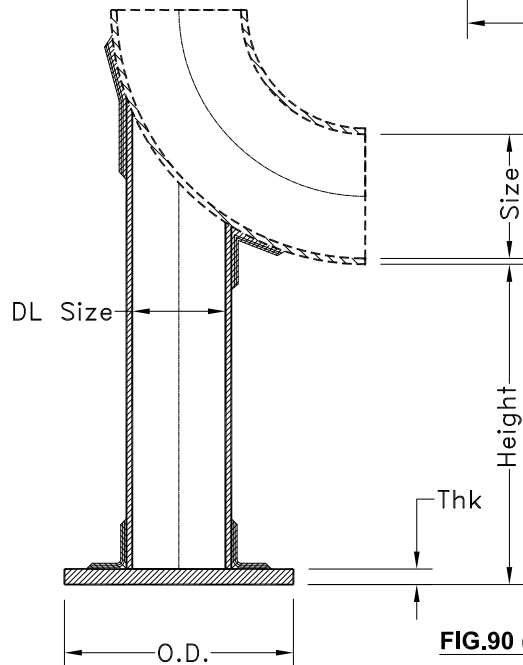


FIG.90 (shop fab'd to an elbow)

Nominal Pipe Size	DL Size	O.D.	Thk
2" (DN50)	2"	5" 127mm	1/2" 12.5mm
3" (DN80)	2"	5" 127mm	1/2" 12.5mm
4" (DN100)	3"	6" 152mm	1/2" 12.5mm
5" (DN125)	3"	6" 152mm	1/2" 12.5mm
6" (DN150)	4"	7" 178mm	1/2" 12.5mm
8" (DN200)	6"	9" 229mm	1/2" 12.5mm
10" (DN250)	6"	9" 229mm	1/2" 12.5mm
12" (DN300)	8"	12" 305mm	1/2" 12.5mm
14" (DN350)	10"	14" 356mm	1/2" 12.5mm
16" (DN400)	12"	16" 406mm	1/2" 12.5mm
18" (DN450)	14"	18" 457mm	1/2" 12.5mm
20" (DN500)	18"	22" 559mm	1/2" 12.5mm
24" (DN600)	18"	22" 559mm	1/2" 12.5mm
30" (DN750)	24"	28" 711mm	3/4" 19mm
36" (DN900)	24"	28" 711mm	3/4" 19mm
42" (DN1050)	36"	40" 1016mm	3/4" 19mm
48" (DN1200)	36"	40" 1016mm	3/4" 19mm
54" (DN1350)	48"	52" 1321mm	3/4" 19mm
60" (DN1500)	48"	52" 1321mm	3/4" 19mm

- NOTE 4. Fig.90 and Fig.91 are identical except Fig.91 is on a tee or pipe.
 NOTE 3. Maximum recommended length of dummy leg is 3'-0" (914mm).
 NOTE 2. Plate to be shipped loose and field installed. 6" of trim to be included.
 NOTE 1. Dummy leg to be of the same material as the pipe.

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FRP "DUMMY LEG"
 FIG.90 - GENERAL DETAIL

REV: 2