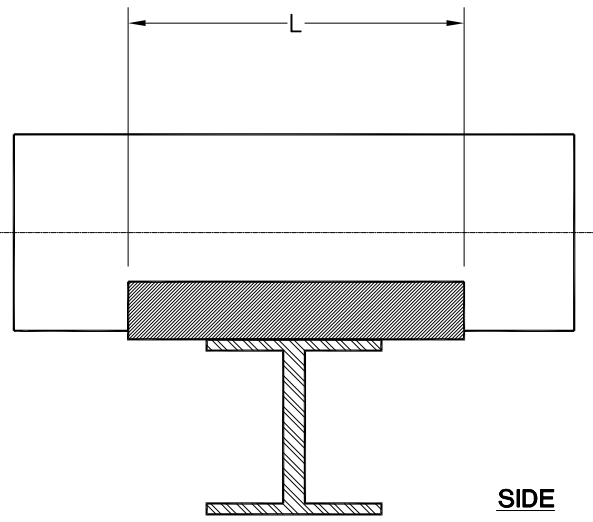
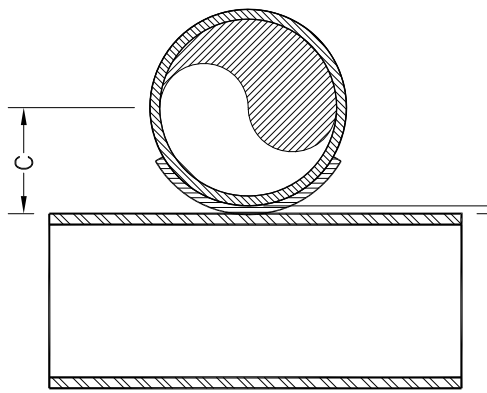


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**SIDE**



**ELEV**

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

Nominal Pipe Size	Nominal O.D.	C	L	Minimum L	Weight (lb/kg)
SERIES 20HV-D					
1"	1.50"	38mm	0.91"	23mm	6" 152mm
1.5"	2.00"	51mm	1.16"	29mm	6" 152mm
2"	2.40"	61mm	1.36"	35mm	6" 152mm
3"	3.40"	86mm	1.86"	47mm	6" 152mm
4"	4.40"	112mm	2.36"	60mm	6" 152mm
6"	6.40"	163mm	3.36"	85mm	8" 203mm
8"	8.40"	213mm	4.36"	111mm	10" 254mm
10"	10.40"	264mm	5.36"	136mm	12" 305mm
12"	12.42"	315mm	6.37"	162mm	12" 305mm
14"	14.73"	374mm	7.63"	194mm	12" 305mm
16"	16.79"	426mm	8.66"	220mm	12" 305mm
18"	18.85"	479mm	9.69"	246mm	16" 406mm
20"	20.91"	531mm	10.72"	272mm	16" 406mm
24"	25.03"	636mm	12.78"	324mm	16" 406mm
30"					
36"					
42"					
48"					
54"					
60"					

- NOTE 5.  $C = 0.5 * \text{Nominal O.D.} + T1$ .
- NOTE 4. T1 dimension is from T.O.S. to B.O.P.
- 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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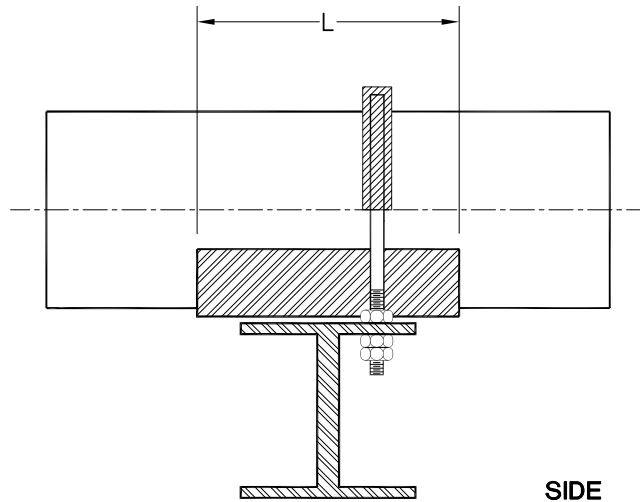
[www.fiberbond.com](http://www.fiberbond.com)

<b>SCALE:</b> NONE	<b>BATCH:</b>	
<b>DRAWN:</b> KGS	D102904	
<b>CH'KD:</b> KGS	D102904	
		<b>DRAWING:</b> FIG210-20HV-D
		<b>FILENAME:</b> FIG210-20HV-D
<b>SUPPORT TYPE:</b> FRP WEAR PAD		
<b>SUPPORT GROUP:</b> ONEWAY SUPPORT		
<b>FIGURE NUMBER:</b> FIGURE 210 - 20HV-D		

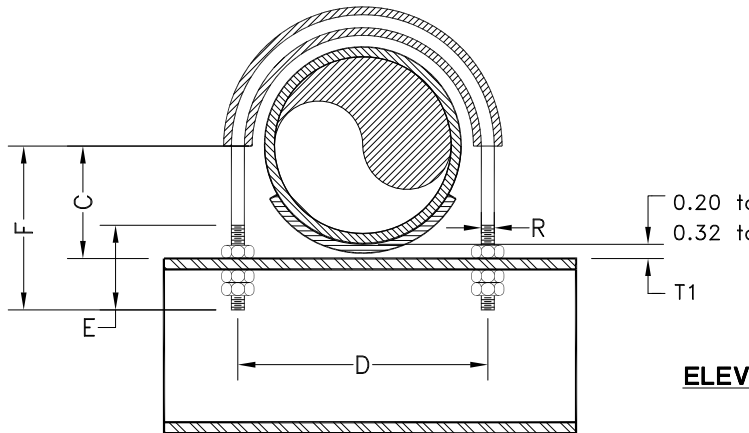
<b>REV</b>	2
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**SIDE**



**ELEV**

Nominal Pipe Size	L		R	D +/- 0.12"		E		F	
SERIES 20HV, 20FR-E, 20FR16, 20FR20, 20JF, 110FW, 20C, 20HV-D									
SERIES 20HV-C, 20FR-EC, 20FR16-C, 20FR20-C, 20JF-C, 20HV(FDA)									
1"	6"	152mm	3/8"	2.75"	70mm	3.00"	76mm	2.75"	70mm
1.5"	6"	152mm	3/8"	3.25"	83mm	3.00"	76mm	3.00"	76mm
2"	6"	152mm	3/8"	3.75"	95mm	3.00"	76mm	3.25"	83mm
3"	6"	152mm	1/2"	4.88"	124mm	3.50"	89mm	4.13"	105mm
4"	6"	152mm	1/2"	5.88"	149mm	3.50"	89mm	4.63"	118mm
6"	8"	203mm	5/8"	8.13"	206mm	4.00"	102mm	6.06"	154mm
8"	10"	254mm	5/8"	10.25"	260mm	4.00"	102mm	7.13"	181mm
10"	12"	305mm	3/4"	12.50"	317mm	4.50"	114mm	8.56"	217mm
12"	12"	305mm	7/8"	14.75"	375mm	5.00"	127mm	10.00"	254mm
14"	12"	305mm	7/8"	16.95"	430mm	5.00"	127mm	11.23"	285mm
16"	12"	305mm	7/8"	19.11"	485mm	5.00"	127mm	12.31"	313mm
18"	16"	356mm	1"	21.42"	544mm	5.50"	140mm	13.77"	350mm
20"	16"	356mm	1"	23.38"	594mm	5.50"	140mm	14.75"	375mm
24"	16"	356mm	1"	27.68"	703mm	5.50"	140mm	16.90"	429mm
30"	20"	508mm	1"	33.78"	858mm	5.50"	140mm	19.72"	501mm
36"	20"	508mm	1"	40.06"	1018mm	5.50"	140mm	22.86"	581mm
42"									
48"									

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

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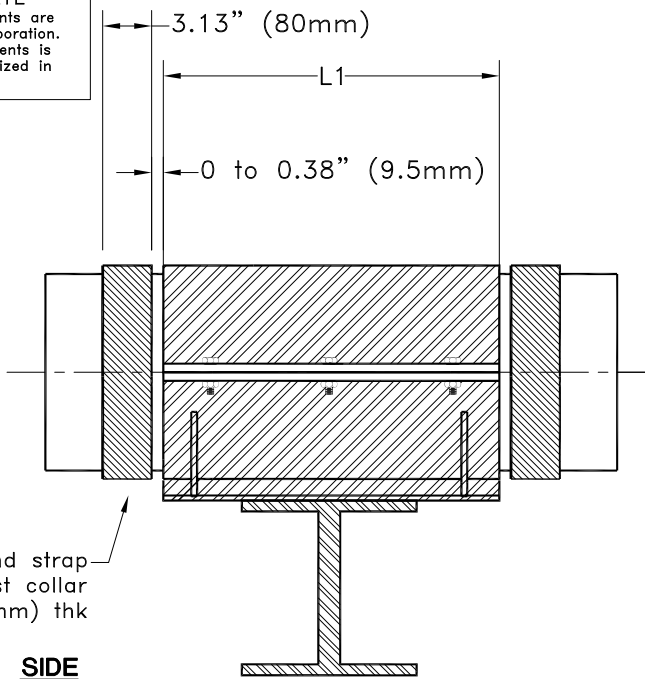
Baton Rouge, LA, U.S.A.

www.fiberbond.com

<b>SCALE:</b>	NONE	<b>BATCH:</b>	
<b>DRAWN:</b>	KGS	<b>D072098</b>	
<b>CH'KD:</b>	KGS	<b>D072098</b>	
		<b>DRAWING:</b>	FIGURE 226
		<b>FILENAME:</b>	FIG226
<b>SUPPORT TYPE:</b>	FRP WEAR PAD W/ RUBBER COATED U-BOLT		
<b>SUPPORT GROUP:</b>	GUIDE		
<b>FIGURE NUMBER:</b>	FIGURE 226		
		<b>REV</b>	<b>10</b>

- 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.

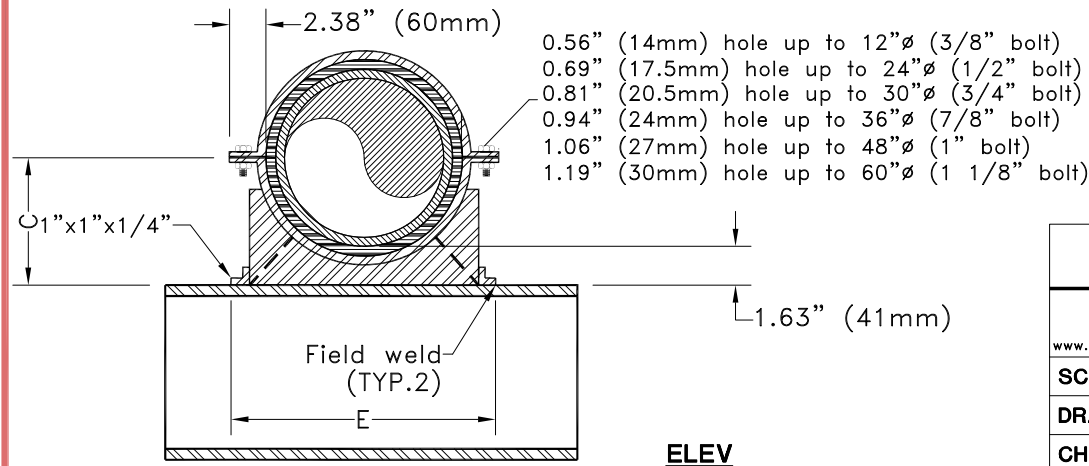
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Butt and strap thrust collar  
 0.50" (12.5mm) thk

**SIDE**

Nominal Pipe Size	Nominal O.D.		L1		C		E	
SERIES 20HV-D								
6"	6.40"	163mm	8"	203mm	4.83"	123mm	12.00"	305mm
8"	8.40"	213mm	10"	254mm	5.83"	148mm	14.00"	356mm
10"	10.40"	264mm	12"	305mm	6.83"	173mm	16.00"	406mm
12"	12.42"	315mm	12"	305mm	7.84"	199mm	18.00"	458mm
14"	14.73"	374mm	12"	305mm	9.00"	229mm	20.25"	514mm
16"	16.79"	426mm	12"	305mm	10.02"	254mm	22.25"	565mm
18"	18.85"	479mm	16"	406mm	11.05"	281mm	24.50"	622mm
20"	20.91"	531mm	16"	406mm	12.08"	307mm	26.50"	673mm
24"	25.03"	636mm	16"	406mm	14.14"	359mm	30.75"	781mm
30"								
36"								
42"								
48"								
54"								
60"								



**ELEV**

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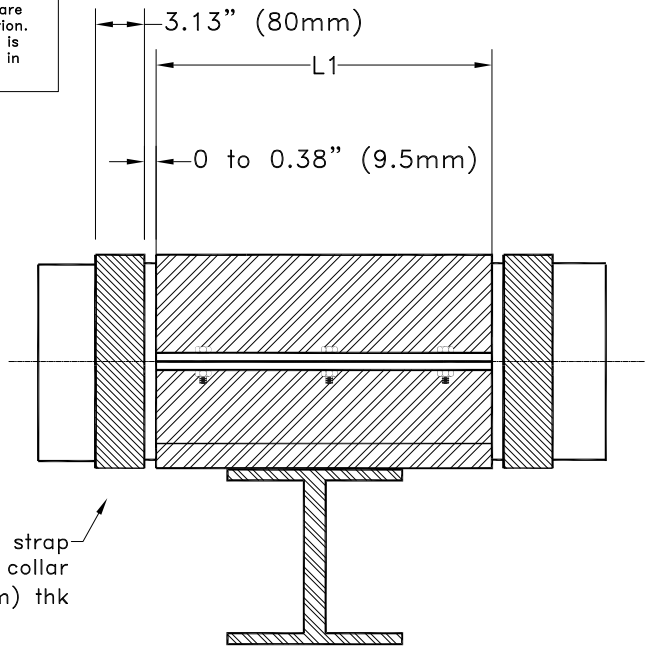
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<b>SCALE:</b>	NONE	<b>BATCH:</b>	
<b>DRAWN:</b>	KGS	<b>D102904</b>	
<b>CH'KD:</b>	KGS	<b>D102904</b>	
		<b>DRAWING:</b>	FIG230 - 20HV-D
		<b>FILENAME:</b>	FIG230 - 20HV-D
<b>SUPPORT TYPE:</b>	STEEL ANCHOR W/ FRP THRUST COLLARS		
<b>SUPPORT GROUP:</b>	ANCHOR		
<b>FIGURE NUMBER:</b>	FIGURE 230 - 20HV-D		

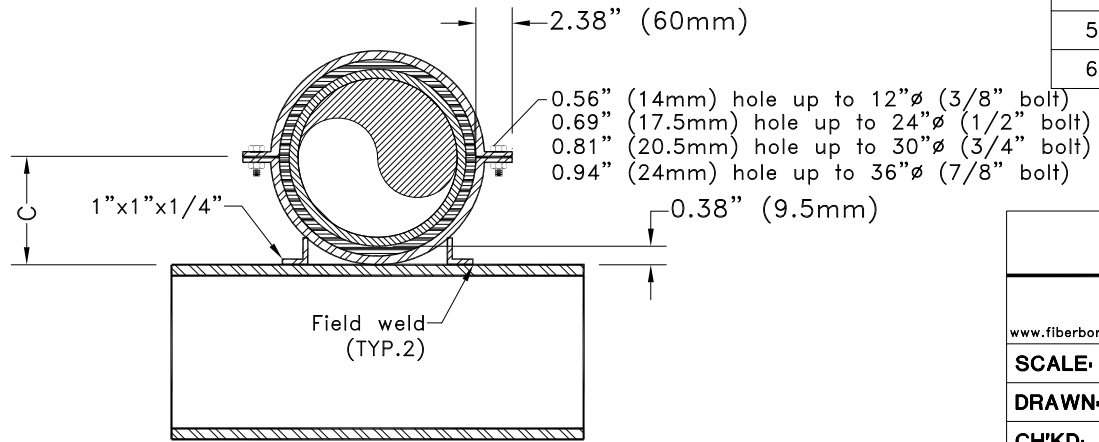
<b>REV</b>	<b>1</b>
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- NOTE 5. Average O.D. is typically 0.03" to 0.10" larger than the nominal O.D.  
 NOTE 4. C = 0.5 \* Nominal O.D. + 1.63in.  
 NOTE 3. Steel saddle includes 1/8in. thick neoprene liner.  
 NOTE 2. 1.63in. (41mm) dimension is from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

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**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 \* Nominal O.D. + 0.38in.
- 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 20HV-D						
2"	2.40"	61mm	6"	152mm	1.58"	40mm
3"	3.40"	86mm	6"	152mm	2.08"	53mm
4"	4.40"	112mm	6"	152mm	2.58"	65mm
6"	6.40"	163mm	8"	203mm	3.58"	91mm
8"	8.40"	213mm	10"	254mm	4.58"	116mm
10"	10.40"	264mm	12"	305mm	5.58"	142mm
12"	12.42"	315mm	12"	305mm	6.59"	167mm
14"	14.73"	374mm	12"	305mm	7.74"	197mm
16"	16.79"	426mm	12"	305mm	8.77"	223mm
18"	18.85"	479mm	16"	406mm	9.80"	249mm
20"	20.91"	531mm	16"	406mm	10.83"	275mm
24"	25.03"	636mm	16"	406mm	12.89"	327mm
30"						
36"						
42"						
48"						
54"						
60"						

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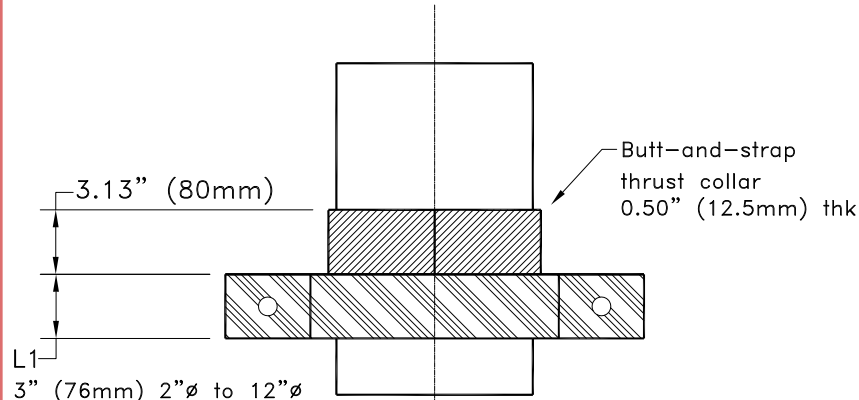
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<b>SCALE:</b>	NONE	<b>BATCH:</b>	
<b>DRAWN:</b>	KGS	<b>D102404</b>	
<b>CH'KD:</b>	KGS	<b>D102404</b>	
		<b>DRAWING:</b>	FIG232 - 20HV-D
		<b>FILENAME:</b>	FIG232 - 20HV-D
<b>SUPPORT TYPE:</b>	SMALL STEEL SHOE W/ THRUST COLLARS		
<b>SUPPORT GROUP:</b>	ANCHOR		
<b>FIGURE NUMBER:</b>	FIGURE 232 - 20HV-D		

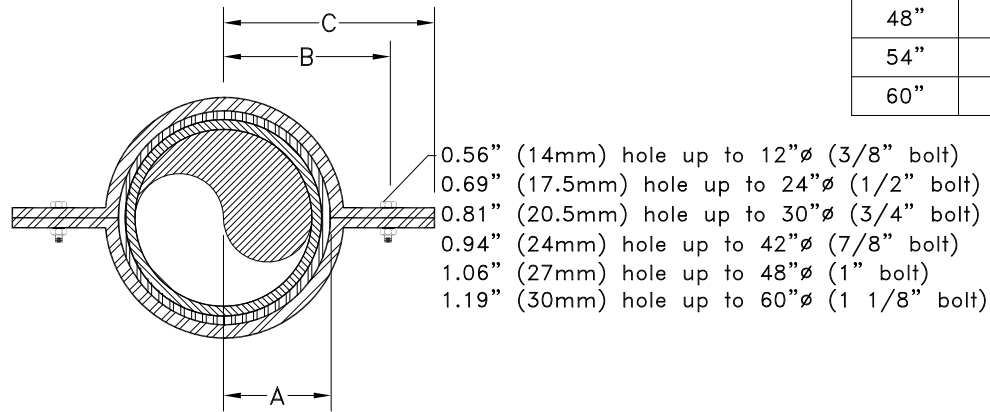
<b>REV</b>	<b>1</b>
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**ELEV**



**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 20HV-D								
2"	2.40"	61mm	1.38"	35mm	2.95"	75mm	4.20"	107mm
3"	3.40"	86mm	1.88"	48mm	3.45"	88mm	4.70"	119mm
4"	4.40"	112mm	2.38"	60mm	3.95"	100mm	5.20"	132mm
6"	6.40"	163mm	3.44"	88mm	4.95"	126mm	6.20"	157mm
8"	8.40"	213mm	4.50"	114mm	5.95"	151mm	7.20"	183mm
10"	10.40"	264mm	5.57"	141mm	6.95"	176mm	8.20"	208mm
12"	12.42"	315mm	6.63"	168mm	7.96"	202mm	9.21"	234mm
14"	14.73"	374mm	7.69"	195mm	9.11"	231mm	10.26"	261mm
16"	16.79"	426mm	8.75"	222mm	10.14"	257mm	11.39"	289mm
18"	18.85"	479mm	9.82"	249mm	11.17"	284mm	12.42"	315mm
20"	20.91"	531mm	10.57"	268mm	12.20"	310mm	13.45"	342mm
24"	25.03"	636mm	13.00"	330mm	14.26"	362mm	15.51"	394mm
30"								
36"								
42"								
48"								
54"								
60"								

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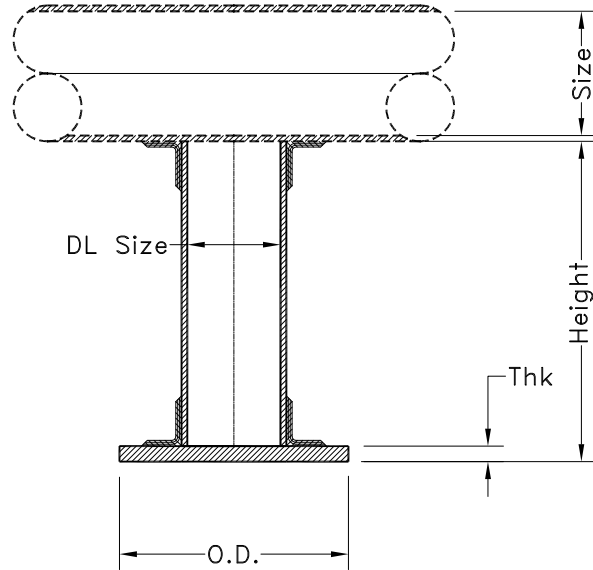
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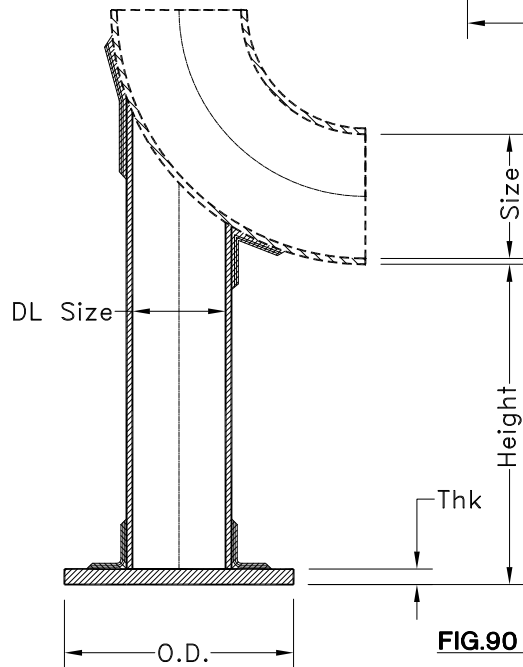
<b>SCALE:</b>	NONE	<b>BATCH:</b>	
<b>DRAWN:</b>	KGS	<b>D061095</b>	
<b>CH'KD:</b>	KGS	<b>C061195</b>	
		<b>DRAWING:</b>	FIG240-20HV-D
		<b>FILENAME:</b>	FIG240-20HV-D
<b>SUPPORT TYPE:</b>	RISER CLAMP W/ THRUST COLLARS		
<b>SUPPORT GROUP:</b>	VERTICAL RISER		
<b>FIGURE NUMBER:</b>	FIGURE 240-20HV-D		
		<b>REV</b>	0

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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"	2"	5"	127mm	1/2"	12.5mm
3"	2"	5"	127mm	1/2"	12.5mm
4"	3"	6"	152mm	1/2"	12.5mm
6"	4"	7"	178mm	1/2"	12.5mm
8"	6"	9"	229mm	1/2"	12.5mm
10"	6"	9"	229mm	1/2"	12.5mm
12"	8"	12"	305mm	1/2"	12.5mm
14"	10"	14"	356mm	1/2"	12.5mm
16"	12"	16"	406mm	1/2"	12.5mm
18"	14"	18"	457mm	1/2"	12.5mm
20"	18"	22"	559mm	1/2"	12.5mm
24"	18"	22"	559mm	1/2"	12.5mm
30"	24"	28"	711mm	3/4"	19mm
36"	24"	28"	711mm	3/4"	19mm
42"	36"	40"	1016mm	3/4"	19mm
48"	36"	40"	1016mm	3/4"	19mm
54"					
60"	48"	52"	1321mm	3/4"	19mm

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<b>SCALE:</b>	NONE	<b>BATCH:</b>	
<b>DRAWN:</b>	KGS	<b>D102904</b>	
<b>CH'KD:</b>	KGS	<b>D102904</b>	
		<b>DRAWING:</b>	FIGURE 90
		<b>FILENAME:</b>	FIG90

**SUPPORT TYPE:** FRP "DUMMY LEG"

**SUPPORT GROUP:** DUMMY LEG

**FIGURE NUMBER:** FIGURE 90 - ALL SERIES

**REV**  
**1**

- 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.