



*Dedicated to Quality & Excellence*

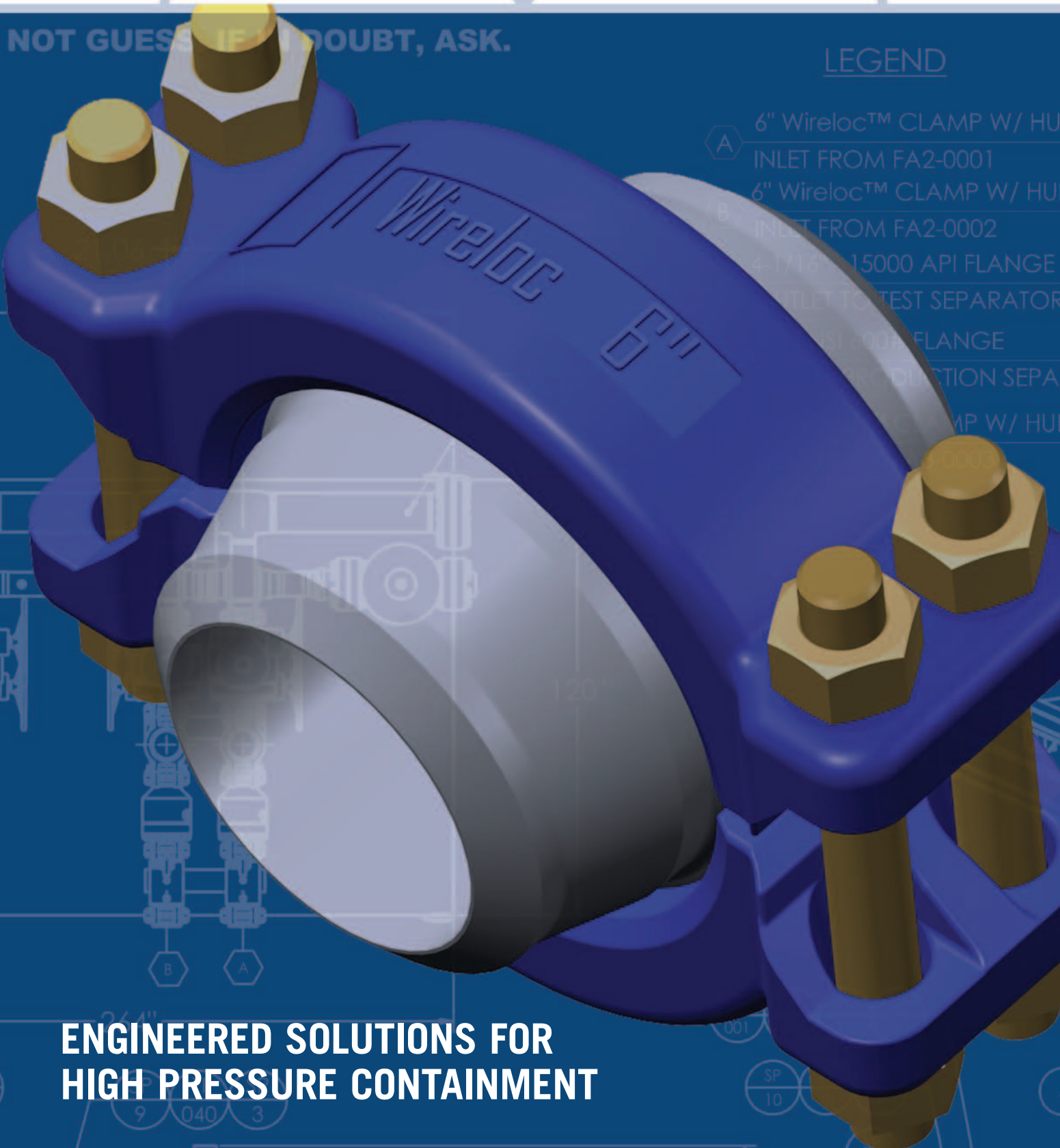
# Wireloc™

DIMENSIONAL DATA

DO NOT GUESS IF IN DOUBT, ASK.

## LEGEND

- A 6" Wireloc™ CLAMP W/ HUB INLET FROM FA2-0001
- B 6" Wireloc™ CLAMP W/ HUB INLET FROM FA2-0002
- 4-1/16" 15000 API FLANGE INLET TO TEST SEPARATOR
- 4" 15000 API FLANGE INLET TO PRODUCTION SEPARATOR
- 6" Wireloc™ CLAMP W/ HUB



**ENGINEERED SOLUTIONS FOR HIGH PRESSURE CONTAINMENT**

# ENGINEERED **SOLUTIONS**

# ENERGY

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# Wireloc™ THE NEXT GENERATION

**Wireloc™** Clamp Series – Design based on ASME VIII Div. 1 & 2 Code Rules and suitable for Pressure Vessel, Pig Launchers, Heat Exchangers, Separators, Sand Scrubbers, Closures and a multitude of Process Piping applications.

**ADVANTAGES** Wireloc™ Clamp Connectors are completely interchangeable with Grayloc® type equivalent manufacturers, and offer over 80% Weight Savings as well as significant Space savings compared to standard ASME B16.5 flanges. Wireloc™ is offered in sizes thru 60" (1,524mm) in comparison to ASME B16.47 and MSS-SP44 Standards, and manufactured in a multitude of materials.

**SIZE RANGE** ½" (12mm) thru 60" (1,524mm). Larger sizes are available on request.

**PRESSURE & TEMPERATURE** ASME 600lbs thru 4,500lbs, API 5,000psi thru 20,000psi, and -452°F (-269°C) / +1600°F (871°C).

**MATERIALS** SA105, SA350-LF2, A694-F52-F70, AISI 4130, SA182-F316 (L,H), SA-182-F321 (L,H), SA182-F347 (L,H), A182-F51, A182-F55, Safurex, Alloy 625, Alloy 825, Titanium and Hastaloy.

**GASKET** The Wireloc™ Clamp Type Pipe Connector uses an all metal Seal Ring with over 50 years of service history. Seal materials are selected based on vs; application and service conditions. The pressure energized bore Seals are elastic by design, and therefore, Reusable.



#### WEIGHT

8" 2500# Wireloc™ Clamp Assembly (Sch. 160)

**Total Weight: 228LBS (104KG)**

8" ASME 2500lbs Flange Assembly (Sch. 160)

**Total Weight: 1359LBS (618KG)**

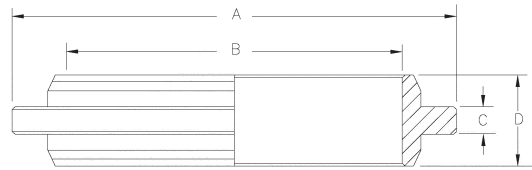
Wireloc™ CLAMP SERIES 83% LESS

(actual scale, weights accurate to +/-2%)

**DESIGN & ENGINEERING SUPPORT** LTS Energy provides both ASME analytical calculation methods in accordance with Section VIII Division 1 and 2 methods, as well as ANSYS FEA analysis supporting dynamic load, combination loads and thermal load applications. LTS Energy specializes in High Pressure and High Temperature solutions and offers integrated design analysis for skid and piping systems using in-house CEASAR II software.

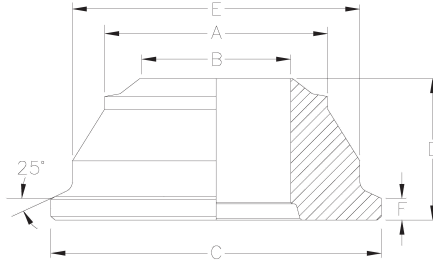
**DESIGN VERIFICATION** Building on our extensive HP/HT experience, LTS Energy offers Project specific Prototype Testing, as well as Third Party design review through DNV, Lloyds, ABS and Bureau Veritas, as required.

**Wireloc™** Seal Rings are available in a variety of materials matching design and processes conditions. Seals are supplied coated typically with PTFE, MoS2 or Silver in order to provide lubrication during assembly.



## SEAL RING

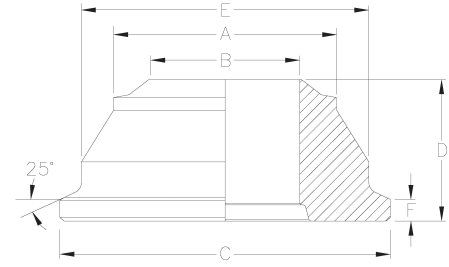
Seal Ring Size	Outside Diameter (A)		Inside Diameter (B)		Rib Thickness (C)		Overall Thickness (D)		Seal Ring Weight	
	ins	(mm)	ins	(mm)	ins	(mm)	ins	(mm)	lbs	(kg)
4	1.000	25.4	0.500	12.7	0.125	3.2	0.375	9.5	0.03	0.01
5	1.094	27.8	0.625	15.9	0.125	3.2	0.375	9.5	0.03	0.01
7	1.375	34.9	0.906	23.0	0.125	3.2	0.375	9.5	0.04	0.02
11	1.734	44.5	1.125	28.6	0.125	3.2	0.375	9.5	0.06	0.03
12	2.000	50.8	1.250	31.8	0.125	3.2	0.375	9.5	0.10	0.25
13	2.375	60.3	1.500	38.1	0.125	3.2	0.375	9.5	0.11	0.05
14	2.625	66.7	1.609	40.9	0.250	6.4	0.563	14.3	0.28	0.13
16	2.688	68.3	1.868	47.4	0.250	6.4	0.625	15.9	0.28	0.13
20	3.250	82.6	2.063	52.4	0.250	6.4	0.750	19.1	0.45	0.20
23	3.500	88.9	2.375	60.3	0.250	6.4	0.750	19.1	0.48	0.22
25	4.000	101.6	2.672	67.9	0.250	6.4	0.750	19.1	0.62	0.28
27	4.250	108.0	3.063	77.8	0.250	6.4	0.750	19.1	0.62	0.28
31	4.500	114.3	3.250	82.6	0.250	6.4	0.750	19.1	0.69	0.31
34	5.000	127.0	3.688	93.7	0.250	6.4	0.750	19.1	0.80	0.36
40	5.500	149.7	4.063	103.2	0.250	6.4	1.000	25.4	1.13	0.51
42	6.375	162.0	4.188	103.4	0.250	6.4	1.000	25.4	1.68	0.76
44	5.875	149.2	4.500	114.3	0.250	6.4	1.000	25.4	1.20	0.56
44G	5.875	149.2	4.500	114.3	0.250	6.4	1.000	25.4	1.20	0.56
46	6.250	158.8	4.750	120.7	0.250	6.4	1.000	25.4	1.34	0.61
50	6.500	165.1	5.000	127.0	0.250	6.4	1.000	25.4	1.30	0.59
52	6.625	168.3	5.313	135.0	0.250	6.4	1.000	25.4	1.33	0.60
54	6.812	173.0	5.500	139.7	0.250	6.4	1.000	25.4	1.57	0.71
56	7.500	190.5	5.750	146.1	0.250	6.4	1.000	25.4	1.82	0.83
56G	7.500	190.5	5.750	146.1	0.250	6.4	1.000	25.4	1.82	0.83
62	7.875	200.0	6.065	154.1	0.375	9.5	1.375	34.9	3.13	1.42
63	8.500	215.9	6.375	161.9	0.375	9.5	1.375	34.9	3.50	1.59
64	8.625	219.0	6.500	165.1	0.375	9.5	1.375	34.9	3.80	1.72
67	8.750	222.2	6.875	174.6	0.375	9.5	1.375	34.9	3.61	1.64
72	9.500	241.3	7.250	184.2	0.375	9.5	1.375	34.9	4.40	2.00
76	10.000	254.0	7.750	196.9	0.375	9.5	1.375	34.9	4.67	2.12
82	10.125	257.2	8.250	210.0	0.375	9.5	1.375	34.9	4.26	1.93
84	11.125	282.6	8.500	215.9	0.375	9.5	1.375	34.9	5.79	2.63
87	11.375	288.9	8.875	225.4	0.375	9.5	1.375	34.9	5.77	2.62
91	11.500	292.1	9.125	231.8	0.375	9.5	1.375	34.9	5.66	2.57
92	11.625	295.3	9.250	235.0	0.375	9.5	1.375	34.9	5.78	2.62
94	11.750	298.5	9.500	241.3	0.375	9.5	1.375	34.9	5.61	2.54
97	12.000	304.8	9.875	250.8	0.375	9.5	1.375	34.9	5.55	2.52
102	12.250	311.2	10.250	260.4	0.375	9.5	1.375	34.9	5.48	2.49
106	12.750	323.9	10.750	273.1	0.375	9.5	1.375	34.9	5.72	2.59
112	14.125	358.8	11.250	285.8	0.625	15.9	1.625	41.3	12.33	5.59
116	14.125	359.3	11.750	298.5	0.375	9.5	1.375	34.9	7.21	3.27
120	13.875	352.4	12.000	304.8	0.375	9.5	1.375	34.9	6.04	2.74
122	14.125	359.3	12.250	311.2	0.375	9.5	1.375	34.9	6.16	2.79
124	14.625	371.5	12.500	317.5	0.375	9.5	1.375	34.9	7.10	3.22
130	15.000	381.0	13.000	330.2	0.500	12.7	1.500	38.1	8.47	3.84
134	15.500	393.7	13.500	342.9	0.500	12.7	1.500	38.1	8.78	3.98
137	16.500	419.1	13.875	352.4	0.625	15.9	1.625	41.3	13.70	6.21
140	16.500	419.1	14.000	355.6	0.500	12.7	1.500	38.1	10.98	4.89
144	17.000	431.8	14.500	368.3	0.500	12.7	1.500	38.1	11.35	5.15
152	17.750	450.9	15.250	387.4	0.500	12.7	1.500	38.1	11.89	5.39
160	18.500	469.9	16.000	406.4	0.500	12.7	1.500	38.1	12.44	5.64
170	19.438	493.7	17.000	431.8	0.500	12.7	1.750	44.5	13.84	6.28
180	20.500	520.7	18.000	457.2	0.500	12.7	1.750	44.5	14.61	6.63
185	21.250	539.8	18.625	473.1	0.500	12.7	1.750	44.5	16.37	7.43
192	22.000	558.8	19.250	489.0	0.500	12.7	1.750	44.5	17.16	7.78
200	22.750	577.9	20.000	508.0	0.500	12.7	1.750	44.5	17.80	8.07
210	24.000	609.6	21.000	533.4	0.500	12.7	2.000	50.8	21.36	9.69
220	25.000	635.0	22.000	558.8	0.500	12.7	2.000	50.8	22.32	10.12
225	25.750	654.0	22.625	574.7	0.500	12.7	2.000	50.8	24.19	10.97
232	26.375	669.9	23.250	590.6	0.500	12.7	2.000	50.8	24.29	11.02
240	27.500	698.5	24.000	609.6	0.500	12.7	2.000	50.8	27.42	12.44
244	27.750	704.9	24.500	622.3	0.500	12.7	2.000	50.8	26.34	11.95
254	28.875	733.4	25.500	647.7	0.500	12.7	2.000	50.8	28.20	12.79
264	30.000	762.0	26.500	673.1	0.500	12.7	2.000	50.8	30.12	13.66
274	31.125	790.6	27.500	698.5	0.500	12.7	2.000	50.8	32.31	14.66
284	32.250	819.2	28.500	723.9	0.500	12.7	2.000	50.8	34.36	15.59
292	32.250	819.2	29.250	743.0	0.500	12.7	2.000	50.8	29.30	13.29



**Wireloc™** Hubs are manufactured from equivalent material to the connecting pipe, and therefore, available in a host of materials. Hub/Ring sizes are selected based on Pipe ID and size options may vary from those as shown below.

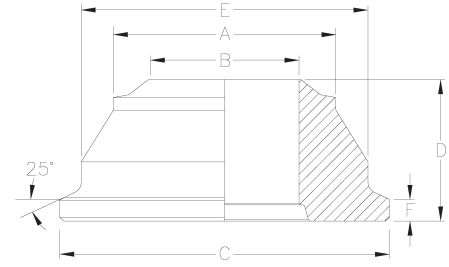
## BUTT WELD HUB

NPS OD ins	(DN) (A) (mm)	Pipe Schedule WT	Wireloc Size Hub/Ring	Pipe ID		Hub OD		Hub Length		Hub Back Face Diameter		Shoulder Thickness		Weight			
				(B) ins	(mm)	(C) ins	(mm)	(D) ins	(mm)	(E) ins	(mm)	(F) ins	(mm)	lbs	(kg)		
<b>STANDARD CLAMP SERIES</b>																	
½" 0.840	(DN 15) 21.3	Std 40 40S	<b>1wl5</b>	0.622	15.8	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.6	0.3		
		XS 80 80S	<b>1wl5</b>	0.546	13.9	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.6	0.3		
		160	<b>1wl4</b>	0.466	11.8	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.6	0.3		
		XXS	<b>1wl4</b>	0.252	6.4	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.7	0.3		
¾" 1.050	(DN 20) 26.7	Std 40 40S	<b>1wl7</b>	0.824	20.9	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.5	0.2		
		XS 80 80S	<b>1wl7</b>	0.742	18.8	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.6	0.3		
		160	<b>1wl5</b>	0.614	15.6	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.7	0.3		
		XXS	<b>1wl4</b>	0.434	11	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.7	0.3		
1" 1.315	(DN 25) 33.4	Std 40 40S	<b>1wl11</b>	1.049	26.6	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.5	0.2		
		XS 80 80S	<b>1wl11</b>	0.957	24.3	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.5	0.2		
		160	<b>1wl7</b>	0.815	20.7	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.6	0.3		
		XXS	<b>1wl5</b>	0.599	15.2	2.000	50.8	1.750	44.5	1.500	38.1	0.313	8	0.7	0.3		
1-½" 1.900	(DN 40) 48.3	Std 40 40S	<b>1-½wl14</b>	1.610	40.9	3.125	79.4	2.375	60.3	2.375	60.3	0.437	11.1	1.6	0.7		
		XS 80 80S	<b>1-½wl13</b>	1.500	38.1	3.125	79.4	2.375	60.3	2.375	60.3	0.500	12.7	1.9	0.8		
		160	<b>1-½wl13</b>	1.338	34	3.125	79.4	2.375	60.3	2.375	60.3	0.500	12.7	2	0.9		
		XXS	<b>1-½wl11</b>	1.100	27.9	3.125	79.4	2.375	60.3	2.375	60.3	0.500	12.7	2.4	1.1		
2" 2.375	(DN 50) 60.3	Std 40 40S	<b>2wl20</b>	2.067	52.5	3.625	92.1	2.750	69.9	2.875	73	0.437	11.1	2.2	1		
		XS 80 80S	<b>2wl20</b>	1.939	49.3	3.625	92.1	2.750	69.9	2.875	73	0.437	11.1	2.5	1.1		
		160	<b>2wl16</b>	1.689	42.9	3.625	92.1	2.750	69.9	2.875	73	0.437	11.1	3	1.4		
		XXS	<b>2wl14</b>	1.503	38.2	3.625	92.1	2.750	69.9	2.875	73	0.437	11.1	3.4	1.5		
2½" 2.875	(DN 63) 73	Std 40 40S	<b>3wl27</b>	2.469	62.7	5.000	127	3.250	82.6	4.000	101.6	0.500	12.7	4.6	2.1		
		XS 80 80S	<b>3wl27</b>	2.323	59	5.000	127	3.250	82.6	4.000	101.6	0.500	12.7	5.1	2.3		
		160	<b>3wl25</b>	2.125	54	5.000	127	3.250	82.6	4.000	101.6	0.500	12.7	6.2	2.8		
		XXS	<b>3wl23</b>	1.771	50	5.000	127	3.250	82.6	4.000	101.6	0.500	12.7	7.3	3.3		
3" 3.500	(DN 75) 88.9	Std 40 40S	<b>3wl27</b>	3.068	77.9	5.000	127	3.250	82.6	4.000	101.6	0.500	12.7	4.7	2.1		
		XS 80 80S	<b>3wl27</b>	2.900	73.7	5.000	127	3.250	82.6	4.000	101.6	0.500	12.7	5.2	2.3		
		160	<b>3wl25</b>	2.624	66.6	5.000	127	3.250	82.6	4.000	101.6	0.500	12.7	6.3	2.8		
		XXS	<b>3wl23</b>	2.300	58.4	5.000	127	3.250	82.6	4.000	101.6	0.500	12.7	7.4	3.3		
4" 4.500	(DN 100) 114.3	Std 40 40S	<b>4wl40</b>	4.026	102.3	6.000	152.4	3.625	92.1	5.000	127	0.500	12.7	6.7	3.1		
		XS 80 80S	<b>4wl40</b>	3.826	97.2	6.000	152.4	3.625	92.1	5.000	127	0.500	12.7	7.7	3.5		
		160	<b>4wl34</b>	3.438	87.3	6.000	152.4	3.625	92.1	5.000	127	0.500	12.7	10	4.5		
		XXS	<b>4wl31</b>	3.152	80.1	6.000	152.4	3.625	92.1	5.000	127	0.500	12.7	11.5	5.2		
5" 5.563	(DN 125) 141.3	Std 40 40S	<b>5wl52</b>	5.047	128.2	7.500	190.5	4.375	111.1	6.500	165.1	0.625	15.9	13.3	6		
		XS 80 80S	<b>5wl52</b>	4.813	122.3	7.500	190.5	4.375	111.1	6.500	165.1	0.625	15.9	14.8	6.7		
		160	<b>5wl46</b>	4.313	109.6	7.500	190.5	4.375	111.1	6.500	165.1	0.625	15.9	19.2	8.7		
		XXS	<b>5wl40</b>	4.063	103.2	7.500	190.5	4.375	111.1	6.500	165.1	0.625	15.9	21.9	9.9		
		1.000	<b>5wl34R</b>	3.563	90.5	7.500	190.5	4.500	114.3	6.500	165.1	0.750	19.1	27	12.3		
		1.250	<b>5wl27R</b>	3.063	77.8	7.500	190.5	4.500	114.3	6.500	165.1	0.750	19.1	30	13.6		
6" 6.625	(DN 150) 168.3	Std 40 40S	<b>6wl62</b>	6.065	154.1	9.250	235	4.625	117.5	7.750	196.9	0.750	19.1	20.4	9.2		
		XS 80 80S	<b>6wl56</b>	5.761	146.3	9.250	235	4.625	117.5	7.750	196.9	0.812	20.6	24.9	11.3		
		120	<b>6wl54</b>	5.501	139.7	9.250	235	4.625	117.5	7.750	196.9	0.812	20.6	27.7	12.6		
		160	<b>6wl52</b>	5.189	131.8	9.250	235	4.625	117.5	7.750	196.9	0.812	20.6	30.7	13.9		
		XXS	<b>6wl52</b>	4.897	124.4	9.250	235	4.625	117.5	7.750	196.9	0.812	20.6	32.7	14.8		
		1.000	<b>6wl46</b>	4.625	117.5	9.250	235	4.625	117.5	7.750	196.9	0.812	20.6	35	15.9		
		1.125	<b>6wl44</b>	4.375	111.1	9.250	235	4.625	117.5	7.750	196.9	0.812	20.6	37	16.8		
		1.250	<b>6wl42R</b>	4.125	104.8	9.250	235	4.750	120.7	7.750	196.9	0.937	23.8	40	18.2		
		1.375	<b>6wl40R</b>	3.875	98.4	9.250	235	4.750	120.7	7.750	196.9	0.937	23.8	43	19.5		
		1.500	<b>6wl34R</b>	3.625	92.1	9.250	235	4.750	120.7	7.750	196.9	0.937	23.8	45	20.5		
		8" 8.625	(DN 200) 219.1	Std 40 40S	<b>8wl82</b>	7.981	202.7	11.500	292.1	5.375	136.5	10.000	254	0.750	19.1	33	15
				XS 80 80S	<b>8wl76</b>	7.625	193.7	11.500	292.1	5.375	136.5	10.000	254	0.750	19.1	40.3	18.3
100	<b>8wl76</b>			7.439	189	11.500	292.1	5.375	136.5	10.000	254	0.750	19.1	42.4	19.2		
120	<b>8wl72</b>			7.189	182.6	11.500	292.1	5.375	136.5	10.000	254	0.750	19.1	47.8	21.7		
140	<b>8wl72</b>			7.001	177.8	11.500	292.1	5.375	136.5	10.000	254	0.750	19.1	49.9	22.6		
XXS	<b>8wl67</b>			6.875	174.6	11.500	292.1	5.375	136.5	10.000	254	0.750	19.1	52.9	24		
160	<b>8wl67</b>			6.183	173.1	11.500	292.1	5.375	136.5	10.000	254	0.750	19.1	53.6	24.3		
1.125	<b>8wl64</b>			6.350	161.3	11.500	292.1	5.375	136.5	10.000	254	0.750	19.1	61	27.7		
1.250	<b>8wl62</b>			6.125	155.6	11.500	292.1	5.375	136.5	10.000	254	0.750	19.1	65	29.5		
1.500	<b>8wl56R</b>			5.625	142.9	11.500	292.1	5.500	136.5	10.000	254	0.938	23.8	74	33.6		
1.750	<b>8wl52R</b>			5.125	130.2	11.500	292.1	5.500	136.5	10.000	254	0.938	23.8	77	35		



## BUTT WELD HUB

HEAVY DUTY CLAMP SERIES															
NPS	(DN)	Pipe Schedule	Wireloc Size	Pipe ID		Hub OD		Hub Length		Hub Back Face Diameter		Shoulder Thickness		Weight	
OD	(A)	WT	Hub/Ring	(B)		(C)		(D)		(E)		(F)		lbs	(kg)
ins	(mm)			ins	(mm)	ins	(mm)	ins	(mm)	ins	(mm)	ins	(mm)		
2" 2.375	(DN 50) 60.325	Std 40 40S	H2wl20	2.067	52.5	4.750	120.7	3.250	82.6	3.750	95.3	0.625	15.9	6.2	28
		XS 80 80S	H2wl20	1.939	49.3	4.750	120.7	3.250	82.6	3.750	95.3	0.625	15.9	6.5	2.9
		160	H2wl16	1.689	42.9	4.750	120.7	3.250	82.6	3.750	95.3	0.625	15.9	7.1	3.2
		XXS	H2wl14	1.503	38.2	4.750	120.7	3.250	82.6	3.750	95.3	0.625	15.9	7.5	3.4
3" 3.500	(DN 75) 88.9	Std 40 40S	H3wl27	3.068	77.9	5.500	139.7	3.500	88.9	4.500	114.3	0.625	15.9	7.3	3.3
		XS 80 80S	H3wl27	2.900	73.7	5.500	139.7	3.500	88.9	4.500	114.3	0.625	15.9	8	3.6
		160	H3wl25	2.624	66.6	5.500	139.7	3.500	88.9	4.500	114.3	0.625	15.9	9.2	4.2
		XXS	H3wl23	2.300	58.4	5.500	139.7	3.500	88.9	4.500	114.3	0.625	15.9	10.3	4.7
		0.750	H3wl20	2.000	50.8	5.500	139.7	3.500	88.9	4.500	114.3	0.625	15.9	11	5.0
		0.875	H3wl6R	1.750	44.5	5.500	139.7	3.625	88.9	4.500	114.3	0.750	19.1	12	5.5
4" 4.500	(DN 100) 114.3	Std 40 40S	H4wl40	4.026	102.3	6.750	171.5	4.000	101.6	5.750	146.1	0.625	15.9	11.9	5.4
		XS 80 80S	H4wl40	3.826	97.2	6.750	171.5	4.000	101.6	5.750	146.1	0.625	15.9	13	5.9
		160	H4wl34	3.438	87.3	6.750	171.5	4.000	101.6	5.750	146.1	0.625	15.9	15.5	7
		XXS	H4wl31	3.152	80.1	6.750	171.5	4.000	101.6	5.750	146.1	0.625	15.9	17.2	7.8
		0.750	H4wl27	3.000	76.2	6.750	171.5	4.000	101.6	5.750	146.1	0.625	15.9	18	8.9
		1.000	H4wl25R	2.500	63.5	6.750	171.5	4.000	101.6	5.750	146.1	0.750	19.1	21	9.5
8" 8.625	(DN 125) 219.1	Std 40 40S	H8wl82	7.981	202.7	11.500	292.1	5.000	127	9.500	241.3	1.000	25.4	31.6	14.3
		XS 80 80S	H8wl76	7.625	193.7	11.500	292.1	5.000	127	9.500	241.3	1.000	25.4	38.3	17.4
		100	H8wl76	7.439	189	11.500	292.1	5.000	127	9.500	241.3	1.000	25.4	40.3	18.3
		120	H8wl72	7.189	182.6	11.500	292.1	5.000	127	9.500	241.3	1.000	25.4	45.4	20.6
		140	H8wl72	7.001	177.8	11.500	292.1	5.000	127	9.500	241.3	1.000	25.4	47.2	21.4
		XXS	H8wl67	6.875	174.6	11.500	292.1	5.000	127	9.500	241.3	1.000	25.4	50.1	22.7
		160	H8wl67	6.813	173.1	11.500	292.1	5.000	127	9.500	241.3	1.000	25.4	50.7	23
10" 10.750	(DN 250) 273.1	Std 40 40S	H10wl02	10.020	254.5	13.625	346.1	6.000	152.4	11.625	295.3	1.250	31.8	49.9	22.6
		XS 60 80S	H10wl97	9.750	247.7	13.625	346.1	6.000	152.4	11.625	295.3	1.250	31.8	57.5	26.1
		80	H10wl97	9.564	242.9	13.625	346.1	6.000	152.4	11.625	295.3	1.250	31.8	60.7	27.6
		100	H01wl94	9.314	236.6	13.625	346.1	6.000	152.4	11.625	295.3	1.250	31.8	67.6	30.7
		120	H10wl94	9.064	230.2	13.625	346.1	6.000	152.4	11.625	295.3	1.250	31.8	71.4	32.4
		XXS 140	H10wl87	8.750	222.3	13.625	346.1	6.000	152.4	11.625	295.3	1.250	31.8	80.5	36.5
		160	H10wl84	8.500	215.9	13.625	346.1	6.000	152.4	11.625	295.3	1.250	31.8	86.2	39.1
		1.375	H10wl82	8.000	203.2	13.625	346.1	6.000	152.4	11.625	295.3	1.250	31.8	97	44.1
		1.500	H10wl76	7.750	196.9	13.625	346.1	6.000	152.4	11.625	295.3	1.250	31.8	102	46.4
		1.750	H10wl72	7.250	184.2	13.625	346.1	6.000	152.4	11.625	295.3	1.250	31.8	112	50.9
2.000	H10wl67R	6.750	171.5	13.625	346.1	6.188	157.2	11.625	295.3	1.438	36.5	124	56.4		
12" 12.750	(DN 300) 323.9	Std 40S	H12wl120	12.000	304.8	16.000	406.4	6.625	168.3	14.000	355.6	1.375	34.9	77.1	35
		40	H12wl120	11.938	303.2	16.000	406.4	6.625	168.3	14.000	355.6	1.375	34.9	78.8	35.8
		XS 80S	H12wl116	11.750	298.5	16.000	406.4	6.625	168.3	14.000	355.6	1.375	34.9	85.4	38.7
		80	H12wl116	11.376	289	16.000	406.4	6.625	168.3	14.000	355.6	1.375	34.9	94.4	42.8
		100	H12wl112	11.064	281	16.000	406.4	6.625	168.3	14.000	355.6	1.375	34.9	104	47.3
		XXS 120	H12wl106	10.750	273.1	16.000	406.4	6.625	168.3	14.000	355.6	1.375	34.9	113	51.2
		140	H12wl106	10.500	266.7	16.000	406.4	6.625	168.3	14.000	355.6	1.375	34.9	118	53.7
		160	H12wl102	10.126	257.2	16.000	406.4	6.625	168.3	14.000	355.6	1.375	34.9	129	58.7
		1.500	H12wl97	9.750	247.7	16.000	406.4	6.625	168.3	14.000	355.6	1.375	34.9	140	63.6
		1.750	H12wl94	9.250	235	16.000	406.4	6.625	168.3	14.000	355.6	1.375	34.9	144	65.5
		2.000	H12wl87R	8.750	222.3	16.000	406.4	6.813	173.1	14.000	355.6	1.563	39.7	171	77.7

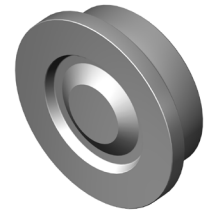
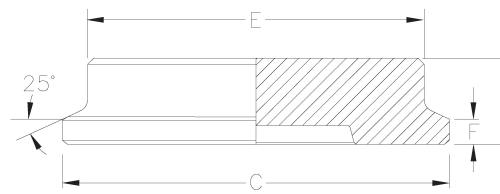


## BUTT WELD HUB

HEAVY DUTY CLAMP SERIES															
NPS	(DN)	Pipe Schedule	Wireloc Size	Pipe ID		Hub OD		Hub Length		Hub Back Face Diameter		Shoulder Thickness		Weight	
OD	(A)	WT	Hub/Ring	(B)		(C)		(D)		(E)		(F)		lbs	(kg)
ins	(mm)			ins	(mm)	ins	(mm)	ins	(mm)	ins	(mm)	ins	(mm)		
14"	(DN 350)	40	H14wl134	13.124	333.3	18.500	469.9	7.250	184.2	16.500	419.1	1.187	30.1	125	56.6
14.000	355.6	XS	H14wl130	13.000	330.2	18.500	469.9	7.250	184.2	16.500	419.1	1.187	30.1	133	60.4
		80	H14wl124	12.500	317.5	18.500	469.9	7.250	184.2	16.500	419.1	1.250	31.8	153	69.4
		100	H14wl124	12.124	307.9	18.500	469.9	7.250	184.2	16.500	419.1	1.250	31.8	164	74.3
		120	H14wl120	11.814	300.1	18.500	469.9	7.250	184.2	16.500	419.1	1.250	31.8	177	80.4
		140	H14wl116	11.500	292.1	18.500	469.9	7.250	184.2	16.500	419.1	1.250	31.8	187	84.9
		160	H14wl112	11.188	284.2	18.500	469.9	7.250	184.2	16.500	419.1	1.125	28.6	197	89.4
		1.750	H14wl106	10.500	266.7	18.500	469.9	7.250	184.2	16.500	419.1	1.250	31.8	221	100.5
		2.000	H14wl102R	10.000	254	18.500	469.9	7.438	188.9	16.500	419.1	1.438	46.5	242	110
16"	(DN 400)	XS 40	H16wl152	15.000	381	21.000	533.4	7.875	200	19.000	482.6	1.688	42.9	195	88.4
16.000	406.4	60	H16wl152	14.688	373.1	21.000	533.4	7.875	200	19.000	482.6	1.688	42.9	206	93.6
		80	H16wl144	14.314	363.6	21.000	533.4	7.875	200	19.000	482.6	1.688	42.9	229	103.9
		100	H16wl140	13.938	354	21.000	533.4	7.875	200	19.000	482.6	1.688	42.9	248	112.3
		120	H16wl137	13.564	344.5	21.000	533.4	7.875	200	19.000	482.6	1.625	41.3	261	118.2
		140	H16wl134	13.124	333.3	21.000	533.4	7.875	200	19.000	482.6	1.688	42.9	279	126.8
		160	H16wl130	12.812	325.4	21.000	533.4	7.875	200	19.000	482.6	1.688	42.9	294	133.3
		1.750	H16wl124	12.500	317.5	21.000	533.4	7.875	200	19.000	482.6	1.750	44.6	308	140
		2.000	H16wl120R	12.000	304.8	21.000	533.4	8.063	204.8	19.000	482.6	1.938	49.2	334	151.8
		2.250	H16wl106R	11.500	292.1	21.000	533.4	8.063	204.8	19.000	482.6	1.938	49.2	355	161.4
18"	(DN 450)	40	H18wl170	16.876	428.7	22.000	558.8	7.875	200	20.000	508	1.688	42.9	176	79.8
18.000	457.2	60	H18wl170	16.500	419.1	22.000	558.8	7.875	200	20.000	508	1.688	42.9	192	86.9
		80	H18wl160	16.126	409.6	22.000	558.8	7.875	200	20.000	508	1.688	42.9	220	99.7
		100	H18wl160	15.688	398.5	22.000	558.8	7.875	200	20.000	508	1.688	42.9	238	108
		120	H18wl152	15.250	387.4	22.000	558.8	7.875	200	20.000	508	1.688	42.9	263	119.2
		140	H18wl152	14.876	377.9	22.000	558.8	7.875	200	20.000	508	1.688	42.9	276	125.4
		160	H18wl144	14.438	366.7	22.000	558.8	7.875	200	20.000	508	1.688	42.9	299	135.7
20"	(DN 500)	40	H20wl192	18.814	477.9	25.000	635	8.750	222.3	23.000	584.2	1.625	41.3	263	119.2
20.000	508.0	60	H20wl185	18.376	466.8	25.000	635	8.750	222.3	23.000	584.2	1.625	41.3	295	133.9
		80	H20wl180	17.938	455.6	25.000	635	8.750	222.3	23.000	584.2	1.625	41.3	328	148.6
		100	H20wl180	17.438	442.9	25.000	635	8.750	222.3	23.000	584.2	1.625	41.3	352	159.6
		120	H20wl170	17.000	431.8	25.000	635	8.750	222.3	23.000	584.2	1.625	41.3	387	175.3
		140	H20wl170	16.500	419.1	25.000	635	8.750	222.3	23.000	584.2	1.625	41.3	409	185.4
		160	H20wl160	16.064	408	25.000	635	8.750	222.3	23.000	584.2	1.625	41.3	440	199.7
22"	(DN 550)	40	H22wl210	20.750	527.1	26.000	660.4	8.750	152.4	24.000	609.6	1.250	31.8	220	99.7
22.000	558.8	60	H22wl210	20.250	514.4	26.000	660.4	8.750	152.4	24.000	609.6	1.250	31.8	247	112
		80	H22wl200	19.750	501.7	26.000	660.4	8.750	152.4	24.000	609.6	1.250	31.8	295	133.9
		100	H22wl192	19.250	489	26.000	660.4	8.750	152.4	24.000	609.6	1.250	31.8	333	151.2
		120	H22wl192	18.750	476.3	26.000	660.4	8.750	152.4	24.000	609.6	1.250	31.8	359	162.8
		140	H22wl185	18.250	463.6	26.000	660.4	8.750	152.4	24.000	609.6	1.250	31.8	392	177.7
		160	H22wl180	17.750	450.9	26.000	660.4	8.750	152.4	24.000	609.6	1.250	31.8	425	192.7
24"	(DN 600)	40	H24wl225	22.625	574.7	29.500	749.3	9.000	228.6	27.500	698.5	1.250	31.8	360	163.4
24.000	609.6	60	H24wl220	22.064	560.4	29.500	749.3	9.000	228.6	27.500	698.5	1.250	31.8	410	185.8
		80	H24wl220	21.564	547.7	29.500	749.3	9.000	228.6	27.500	698.5	1.250	31.8	442	200.3
		100	H24wl210	20.938	531.8	29.500	749.3	9.000	228.6	27.500	698.5	1.250	31.8	497	225.4
		120	H24wl210	20.376	517.6	29.500	749.3	9.000	228.6	27.500	698.5	1.250	31.8	527	239.2
		140	H24wl200	19.876	504.9	29.500	749.3	9.000	228.6	27.500	698.5	1.250	31.8	573	259.9
		160	H24wl200	19.314	490.6	29.500	749.3	9.000	228.6	27.500	698.5	1.250	31.8	600	272.2
26"	(DN 650)	Std	H26wl254	25.250	641.4	31.250	793.8	10.000	254	29.250	743	1.625	41.3	361	163.7
26.000	660.4	XS	H26wl254	25.000	635	31.250	793.8	10.000	254	29.250	743	1.625	41.3	382	173.3
28"	(DN 700)														
30"	(DN 750)														
32"	(DN 800)														
34"	(DN 850)														
36"	(DN 900)														

**Contact Engineering Department for Additional Assistance**

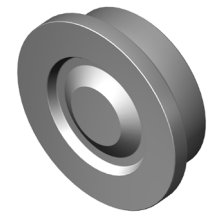
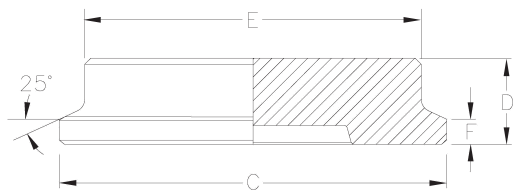
**Wireloc™** Blinds are supplied matching the equivalent BW Hub sizes and material. Blinds are available with various pressure tappings to facilitate hydrotest and process conditions.



## BLIND HUB

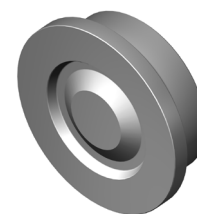
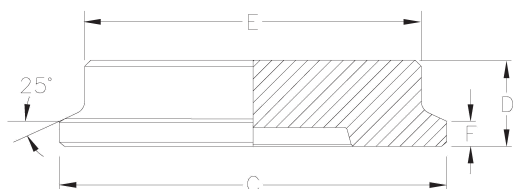
NPS OD ins	(DN) (A) (mm)	Pipe Schedule WT	Wireloc Size Hub/Ring	Pipe ID		Hub OD		Blind Thickness		Hub Back Face Diameter		Shoulder Thickness		Weight			
				(B) ins	(mm)	(C) ins	(mm)	(D) ins	(mm)	(E) ins	(mm)	(F) ins	(mm)	lbs	(kg)		
<b>STANDARD CLAMP SERIES</b>																	
½" 0.840	(DN 15) 21.3	Std 40 40S	<b>1wl5</b>	0.622	15.8	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
			<b>1wl5</b>	0.546	13.9	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
		XS 80 80S	<b>1wl4</b>	0.466	11.8	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
			<b>1wl4</b>	0.252	6.4	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
¾" 1.050	(DN 20) 26.7	Std 40 40S	<b>1wl7</b>	0.824	20.9	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
			<b>1wl7</b>	0.742	18.8	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
		XS 80 80S	<b>1wl5</b>	0.614	15.6	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
			<b>1wl4</b>	0.434	11	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
1" 1.315	(DN 25) 33.4	Std 40 40S	<b>1wl11</b>	1.049	26.6	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
			<b>1wl11</b>	0.957	24.3	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
		XS 80 80S	<b>1wl7</b>	0.815	20.7	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
			<b>1wl5</b>	0.599	15.2	2.000	50.8	1.313	33.4	1.500	38.1	0.313	8.0	0.8	0.4		
1-½" 1.900	(DN 40) 48.3	Std 40 40S	<b>1-½wl14</b>	1.610	40.9	3.125	79.4	1.625	41.3	2.375	60.3	0.437	11.1	2.4	1.7		
			<b>1-½wl13</b>	1.500	38.1	3.125	79.4	1.625	41.3	2.375	60.3	0.500	12.7	2.5	1.7		
		XS 80 80S	<b>1-½wl13</b>	1.338	34	3.125	79.4	1.625	41.3	2.375	60.3	0.500	12.7	2.5	1.7		
			<b>1-½wl11</b>	1.100	27.9	3.125	79.4	1.625	41.3	2.375	60.3	0.500	12.7	2.5	1.7		
2" 2.375	(DN 50) 60.3	Std 40 40S	<b>2wl20</b>	2.067	52.5	3.625	92.1	1.750	44.5	2.875	73	0.437	11.1	3.7	1.7		
			<b>2wl20</b>	1.939	49.3	3.625	92.1	1.750	44.5	2.875	73	0.437	11.1	3.7	1.7		
		XS 80 80S	<b>2wl16</b>	1.689	42.9	3.625	92.1	1.750	44.5	2.875	73	0.437	11.1	3.7	1.7		
			<b>2wl14</b>	1.503	38.2	3.625	92.1	1.750	44.5	2.875	73	0.437	11.1	3.7	1.7		
2-½" 2.875	(DN 63) 73.0	Std 40 40S	<b>3wl27</b>	2.469	62.7	5.000	127	1.875	47.6	4.000	101.6	0.500	12.7	7.7	3.5		
			<b>3wl27</b>	2.323	59	5.000	127	1.875	47.6	4.000	101.6	0.500	12.7	7.7	3.5		
		XS 80 80S	<b>3wl25</b>	2.125	54	5.000	127	1.875	47.6	4.000	101.6	0.500	12.7	7.7	3.5		
			<b>3wl23</b>	1.771	50	5.000	127	1.875	47.6	4.000	101.6	0.500	12.7	7.7	3.5		
3" 3.500	(DN 75) 88.9	Std 40 40S	<b>3wl27</b>	3.068	77.9	5.000	127	1.875	47.6	4.000	101.6	0.500	12.7	7.7	3.5		
			<b>3wl27</b>	2.900	73.7	5.000	127	1.875	47.6	4.000	101.6	0.500	12.7	7.7	3.5		
		XS 80 80S	<b>3wl25</b>	2.624	66.6	5.000	127	1.875	47.6	4.000	101.6	0.500	12.7	7.7	3.5		
			<b>3wl23</b>	2.300	58.4	5.000	127	1.875	47.6	4.000	101.6	0.500	12.7	7.7	3.5		
4" 4.500	(DN 100) 114.3	Std 40 40S	<b>4wl40</b>	4.026	102.3	6.000	152.4	2.125	54	5.000	127	0.500	12.7	13	5.9		
			<b>4wl40</b>	3.826	97.2	6.000	152.4	2.125	54	5.000	127	0.500	12.7	13	5.9		
		XS 80 80S	<b>4wl34</b>	3.438	87.3	6.000	152.4	2.125	54	5.000	127	0.500	12.7	13	5.9		
			<b>4wl31</b>	3.152	80.1	6.000	152.4	2.125	54	5.000	127	0.500	12.7	13	5.9		
5" 5.563	(DN 125) 141.3	Std 40 40S	<b>5wl52</b>	5.047	128.2	7.500	190.5	2.750	69.9	6.500	165.1	0.625	15.9	27.8	12.6		
			<b>5wl52</b>	4.813	122.3	7.500	190.5	2.750	69.9	6.500	165.1	0.625	15.9	27.8	12.6		
		XS 80 80S	<b>5wl46</b>	4.313	109.6	7.500	190.5	2.750	69.9	6.500	165.1	0.625	15.9	27.8	12.6		
			<b>5wl40</b>	4.063	103.2	7.500	190.5	2.750	69.9	6.500	165.1	0.625	15.9	27.8	12.6		
		1.000	<b>5wl34R</b>	3.563	90.5	7.500	190.5	2.750	73	6.500	165.1	0.750	19.1	28	12.7		
			<b>5wl27R</b>	3.063	77.8	7.500	190.5	2.750	73	6.500	165.1	0.750	19.1	28	12.7		
6" 6.625	(DN 150) 168.3	Std 40 40S	<b>6wl62</b>	6.065	154.1	9.250	235	2.875	73	7.750	196.9	0.750	19.1	42.6	19.3		
			<b>6wl56</b>	5.761	146.3	9.250	235	2.875	73	7.750	196.9	0.812	20.6	43	19.5		
		XS 80 80S	<b>6wl54</b>	5.501	139.7	9.250	235	2.875	73	7.750	196.9	0.812	20.6	43	19.5		
			<b>6wl52</b>	5.189	131.8	9.250	235	2.875	73	7.750	196.9	0.812	20.6	43	19.5		
		1.000	<b>6wl52</b>	4.897	124.4	9.250	235	2.875	73	7.750	196.9	0.812	20.6	43	19.5		
			<b>6wl46</b>	4.625	117.5	9.250	235	2.875	73	7.750	196.9	0.812	20.6	43	19.5		
		1.125	<b>6wl44</b>	4.375	111.1	9.250	235	2.875	73	7.750	196.9	0.812	20.6	43	19.5		
			<b>6wl42R</b>	4.125	104.8	9.250	235	3.000	76.2	7.750	196.9	0.937	23.8	43	19.5		
		1.250	<b>6wl40R</b>	3.875	98.4	9.250	235	3.000	76.2	7.750	196.9	0.937	23.8	44	20		
			<b>6wl34R</b>	3.625	92.1	9.250	235	3.000	76.2	7.750	196.9	0.937	23.8	44	20		
		8" 8.625	(DN 200) 219.1	Std 40 40S	<b>8wl82</b>	7.981	202.7	11.500	292.1	3.188	81	10.000	254	0.750	19.1	76.2	34.6
					<b>8wl76</b>	7.625	193.7	11.500	292.1	3.188	81	10.000	254	0.750	19.1	76.2	34.6
XS 80 80S	<b>8wl76</b>			7.439	189	11.500	292.1	3.188	81	10.000	254	0.750	19.1	76.2	34.6		
	<b>8wl72</b>			7.189	182.6	11.500	292.1	3.188	81	10.000	254	0.750	19.1	76.2	34.6		
1.000	<b>8wl72</b>			7.001	177.8	11.500	292.1	3.188	81	10.000	254	0.750	19.1	76.2	34.6		
	<b>8wl67</b>			6.875	174.6	11.500	292.1	3.188	81	10.000	254	0.750	19.1	76.2	34.6		
1.125	<b>8wl67</b>			6.183	173.1	11.500	292.1	3.188	81	10.000	254	0.750	19.1	76.2	34.6		
	<b>8wl64</b>			6.350	161.3	11.500	292.1	3.188	81	10.000	254	0.750	19.1	76.2	34.6		
1.250	<b>8wl62</b>			6.125	155.6	11.500	292.1	3.188	81	10.000	254	0.750	19.1	76.2	34.6		
	<b>8wl56R</b>			5.625	142.9	11.500	292.1	3.313	84.2	10.000	254	0.938	23.8	77	35		
1.500	<b>8wl52R</b>			5.125	130.2	11.500	292.1	3.313	84.2	10.000	254	0.938	23.8	77	35		





## BLIND HUB

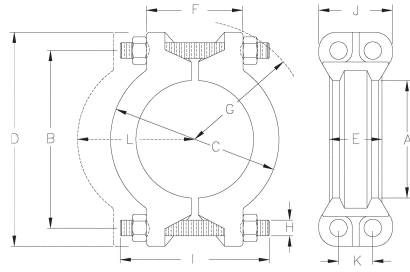
HEAVY DUTY CLAMP SERIES															
NPS	(DN)	Pipe Schedule	Wireloc Size	Pipe ID		Hub OD		Blind Thickness		Hub Back Face Diameter		Shoulder Thickness		Weight	
OD	(A)	WT	Hub/Ring	(B)		(C)		(D)		(E)		(F)		lbs	(kg)
ins	(mm)			ins	(mm)	ins	(mm)	ins	(mm)	ins	(mm)	ins	(mm)		
2" 2.375	(DN 50) 60.325	Std 40 40S	H2wl20	2.067	52.5	4.750	120.7	1.875	47.6	3.750	95.3	0.625	15.9	7	3.2
		XS 80 80S	H2wl20	1.939	49.3	4.750	120.7	1.875	47.6	3.750	95.3	0.625	15.9	7	3.2
		160	H2wl16	1.689	42.9	4.750	120.7	1.875	47.6	3.750	95.3	0.625	15.9	7	3.2
		XXS	H2wl14	1.503	38.2	4.750	120.7	1.875	47.6	3.750	95.3	0.625	15.9	7	3.2
3" 3.500	(DN 75) 88.9	Std 40 40S	H3wl27	3.068	77.9	5.500	139.7	2.125	54	4.500	114.3	0.625	15.9	11	5
		XS 80 80S	H3wl27	2.900	73.7	5.500	139.7	2.125	54	4.500	114.3	0.625	15.9	11	5
		160	H3wl25	2.624	66.6	5.500	139.7	2.125	54	4.500	114.3	0.625	15.9	11	5
		XXS	H3wl23	2.300	58.4	5.500	139.7	2.125	54	4.500	114.3	0.625	15.9	11	5
		0.750	H3wl20	2.000	50.8	5.500	139.7	2.125	54	4.500	114.3	0.625	15.9	11	5
		0.875	H3wl6R	1.750	44.5	5.500	139.7	2.250	57.2	4.500	114.3	0.750	19.1	11	5
4" 4.500	(DN 100) 114.3	Std 40 40S	H4wl40	4.026	102.3	6.750	171.5	2.750	69.6	5.750	146.1	0.625	15.9	21.9	10
		XS 80 80S	H4wl40	3.826	97.2	6.750	171.5	2.750	69.6	5.750	146.1	0.625	15.9	21.9	10
		160	H4wl34	3.438	87.3	6.750	171.5	2.750	69.6	5.750	146.1	0.625	15.9	21.9	10
		XXS	H4wl31	3.152	80.1	6.750	171.5	2.750	69.6	5.750	146.1	0.625	15.9	21.9	10
		0.750	H4wl27	3.000	76.2	6.750	171.5	2.750	69.6	5.750	146.1	0.625	15.9	21.9	10
		1.000	H4wl25R	2.500	63.5	6.750	171.5	2.875	73	5.750	146.1	0.750	19.1	21.9	10
8" 8.625	(DN 200) 219.1	Std 40 40S	H8wl82	7.981	202.7	11.500	292.1	3.188	81	9.500	241.3	1.000	25.4	73.3	33.2
		XS 80 80S	H8wl76	7.625	193.7	11.500	292.1	3.188	81	9.500	241.3	1.000	25.4	73.3	33.2
		100	H8wl76	7.439	189	11.500	292.1	3.188	81	9.500	241.3	1.000	25.4	73.3	33.2
		120	H8wl72	7.189	182.6	11.500	292.1	3.188	81	9.500	241.3	1.000	25.4	73.3	33.2
		140	H8wl72	7.001	177.8	11.500	292.1	3.188	81	9.500	241.3	1.000	25.4	73.3	33.2
		XXS	H8wl67	6.875	174.6	11.500	292.1	3.188	81	9.500	241.3	1.000	25.4	73.3	33.2
		160	H8wl67	6.813	173.1	11.500	292.1	3.188	81	9.500	241.3	1.000	25.4	73.3	33.2
10" 10.750	(DN 250) 273.1	Std 40 40S	H10wl02	10.020	254.5	13.625	346.1	3.500	88.9	11.625	295.3	1.250	31.8	119.2	54.1
		XS 60 80S	H10wl97	9.750	247.7	13.625	346.1	3.500	88.9	11.625	295.3	1.250	31.8	119.2	54.1
		80	H10wl97	9.564	242.9	13.625	346.1	3.500	88.9	11.625	295.3	1.250	31.8	119.2	54.1
		100	H01wl94	9.314	236.6	13.625	346.1	3.500	88.9	11.625	295.3	1.250	31.8	119.2	54.1
		120	H10wl94	9.064	230.2	13.625	346.1	3.500	88.9	11.625	295.3	1.250	31.8	119.2	54.1
		XXS 140	H10wl87	8.750	222.3	13.625	346.1	3.500	88.9	11.625	295.3	1.250	31.8	119.2	54.1
		160	H10wl84	8.500	215.9	13.625	346.1	3.500	88.9	11.625	295.3	1.250	31.8	119.2	54.1
		1.375	H10wl82	8.000	203.2	13.625	346.1	3.500	88.9	11.625	295.3	1.250	31.8	120	54.5
		1.500	H10wl76	7.750	196.9	13.625	346.1	3.500	88.9	11.625	295.3	1.250	31.8	120	54.5
		1.750	H10wl72	7.250	184.2	13.625	346.1	3.500	88.9	11.625	295.3	1.250	31.8	121	55
2.000	H10wl67R	6.750	171.5	13.625	346.1	3.688	93.7	11.625	295.3	1.438	36.5	122	55.5		
12" 12.750	(DN 300) 323.9	Std 40S	H12wl120	12.000	304.8	16.000	406.4	4.000	101.6	14.000	355.6	1.375	34.9	192.6	87.4
		40	H12wl120	11.938	303.2	16.000	406.4	4.000	101.6	14.000	355.6	1.375	34.9	192.6	87.4
		XS 80S	H12wl116	11.750	298.5	16.000	406.4	4.000	101.6	14.000	355.6	1.375	34.9	192.6	87.4
		80	H12wl116	11.376	289	16.000	406.4	4.000	101.6	14.000	355.6	1.375	34.9	192.6	87.4
		100	H12wl112	11.064	281	16.000	406.4	4.000	101.6	14.000	355.6	1.250	31.8	190.9	86.6
		XXS 120	H12wl106	10.750	273.1	16.000	406.4	4.000	101.6	14.000	355.6	1.375	34.9	192.6	87.4
		140	H12wl106	10.500	266.7	16.000	406.4	4.000	101.6	14.000	355.6	1.375	34.9	192.6	87.4
		160	H12wl102	10.126	257.2	16.000	406.4	4.000	101.6	14.000	355.6	1.375	34.9	192.6	87.4
		1.500	H12wl97	9.750	247.7	16.000	406.4	4.000	101.6	14.000	355.6	1.375	34.9	193	87.7
		1.750	H12wl94	9.250	235	16.000	406.4	4.000	101.6	14.000	355.6	1.375	34.9	193	87.7
		2.000	H12wl87R	8.750	222.3	16.000	406.4	4.118	106.4	14.000	355.6	1.563	39.7	195	87.6



## BLIND HUB

HEAVY DUTY CLAMP SERIES															
NPS	(DN)	Pipe Schedule	Wireloc Size	Pipe ID		Hub OD		Blind Thickness		Hub Back Face Diameter		Shoulder Thickness		Weight	
OD	(A)	WT	Hub/Ring	(B)		(C)		(D)		(E)		(F)		lbs	(kg)
ins	(mm)			ins	(mm)	ins	(mm)	ins	(mm)	ins	(mm)	ins	(mm)		
14"	(DN 350)	40	H14wl134	13.124	333.3	18.500	469.9	4.500	114.3	16.500	419.1	1.187	30.1	290.8	131.9
14.000	355.6	XS	H14wl130	13.000	330.2	18.500	469.9	4.500	114.3	16.500	419.1	1.187	30.1	290.8	131.9
		80	H14wl124	12.500	317.5	18.500	469.9	4.500	114.3	16.500	419.1	1.250	31.8	291.8	132.3
		100	H14wl124	12.124	307.9	18.500	469.9	4.500	114.3	16.500	419.1	1.250	31.8	291.8	132.3
		120	H14wl120	11.814	300.1	18.500	469.9	4.500	114.3	16.500	419.1	1.250	31.8	291.8	132.3
		140	H14wl116	11.500	292.1	18.500	469.9	4.500	114.3	16.500	419.1	1.250	31.8	291.8	132.3
		160	H14wl112	11.188	284.2	18.500	469.9	4.500	114.3	16.500	419.1	1.125	28.6	289.8	131.5
		1.750	H14wl106	10.500	266.7	18.500	469.9	4.500	114.3	16.500	419.1	1.250	31.8	289.8	131.5
		2.000	H14wl102R	10.000	254	18.500	469.9	4.688	119.1	16.500	419.1	1.438	46.5	292	132.7
16"	(DN 400)	XS 40	H16wl152	15.000	381	21.000	533.4	5.000	127	19.000	482.6	1.688	42.9	431.2	195.6
16.000	406.4	60	H16wl152	14.688	373.1	21.000	533.4	5.000	127	19.000	482.6	1.688	42.9	431.2	195.6
		80	H16wl144	14.314	363.6	21.000	533.4	5.000	127	19.000	482.6	1.688	42.9	431.2	195.6
		100	H16wl140	13.938	354	21.000	533.4	5.000	127	19.000	482.6	1.688	42.9	431.2	195.6
		120	H16wl137	13.564	344.5	21.000	533.4	5.000	127	19.000	482.6	1.625	41.3	430.1	195.1
		140	H16wl134	13.124	333.3	21.000	533.4	5.000	127	19.000	482.6	1.688	42.9	431.2	195.6
		160	H16wl130	12.812	325.4	21.000	533.4	5.000	127	19.000	482.6	1.688	42.9	431.2	195.6
		1.750	H16wl124	12.500	317.5	21.000	533.4	5.000	127	19.000	482.6	1.750	44.6	431.2	195.6
		2.000	H16wl120R	12.000	304.8	21.000	533.4	5.188	131.8	19.000	482.6	1.938	49.2	435	197.7
		2.250	H16wl106R	11.500	292.1	21.000	533.4	5.188	131.8	19.000	482.6	1.938	49.2	435	197.7
18"	(DN 450)	40	H18wl170	16.876	428.7	22.000	558.8	5.000	127	20.000	508	1.688	42.9	476.1	215.9
18.000	457.2	60	H18wl170	16.500	419.1	22.000	558.8	5.000	127	20.000	508	1.688	42.9	476.1	215.9
		80	H18wl160	16.126	409.6	22.000	558.8	5.000	127	20.000	508	1.688	42.9	476.1	215.9
		100	H18wl160	15.688	398.5	22.000	558.8	5.000	127	20.000	508	1.688	42.9	476.1	215.9
		120	H18wl152	15.250	387.4	22.000	558.8	5.000	127	20.000	508	1.688	42.9	476.1	215.9
		140	H18wl152	14.876	377.9	22.000	558.8	5.000	127	20.000	508	1.688	42.9	476.1	215.9
		160	H18wl144	14.438	366.7	22.000	558.8	5.000	127	20.000	508	1.688	42.9	476.1	215.9
20"	(DN 500)	40	H20wl192	18.814	477.9	25.000	635	5.500	139.7	23.000	584.2	1.625	41.3	681.4	309.1
20.000	508.0	60	H20wl185	18.376	466.8	25.000	635	5.500	139.7	23.000	584.2	1.625	41.3	681.4	309.1
		80	H20wl180	17.938	455.6	25.000	635	5.500	139.7	23.000	584.2	1.625	41.3	681.4	309.1
		100	H20wl180	17.438	442.9	25.000	635	5.500	139.7	23.000	584.2	1.625	41.3	681.4	309.1
		120	H20wl170	17.000	431.8	25.000	635	5.500	139.7	23.000	584.2	1.625	41.3	681.4	309.1
		140	H20wl170	16.500	419.1	25.000	635	5.500	139.7	23.000	584.2	1.625	41.3	681.4	309.1
		160	H20wl160	16.064	408	25.000	635	5.500	139.7	23.000	584.2	1.625	41.3	681.4	309.1
22"	(DN 550)	40	H22wl210	20.750	527.1	26.000	660.4	5.500	139.7	24.000	609.6	1.250	31.8	732	332
22.000	558.8	60	H22wl210	20.250	514.4	26.000	660.4	5.500	139.7	24.000	609.6	1.250	31.8	732	332
		80	H22wl200	19.750	501.7	26.000	660.4	5.500	139.7	24.000	609.6	1.250	31.8	732	332
		100	H22wl192	19.250	489	26.000	660.4	5.500	139.7	24.000	609.6	1.250	31.8	732	332
		120	H22wl192	18.750	476.3	26.000	660.4	5.500	139.7	24.000	609.6	1.250	31.8	732	332
		140	H22wl185	18.250	463.6	26.000	660.4	5.500	139.7	24.000	609.6	1.250	31.8	732	332
		160	H22wl180	17.750	450.9	26.000	660.4	5.500	139.7	24.000	609.6	1.250	31.8	732	332
24"	(DN 600)	40	H24wl225	22.625	574.7	29.500	749.3	6.000	152.4	27.500	698.5	1.250	31.8	1040.2	471.9
24.000	609.6	60	H24wl220	22.064	560.4	29.500	749.3	6.000	152.4	27.500	698.5	1.250	31.8	1040.2	471.9
		80	H24wl220	21.564	547.7	29.500	749.3	6.000	152.4	27.500	698.5	1.250	31.8	1040.2	471.9
		100	H24wl210	20.938	531.8	29.500	749.3	6.000	152.4	27.500	698.5	1.250	31.8	1040.2	471.9
		120	H24wl210	20.376	517.6	29.500	749.3	6.000	152.4	27.500	698.5	1.250	31.8	1040.2	471.9
		140	H24wl200	19.876	504.9	29.500	749.3	6.000	152.4	27.500	698.5	1.250	31.8	1040.2	471.9
		160	H24wl200	19.314	490.6	29.500	749.3	6.000	152.4	27.500	698.5	1.250	31.8	1040.2	471.9
26"	(DN 650)	Std	H26wl254	25.250	641.4	31.250	793.8	6.500	165.1	29.250	743	1.625	41.3	1279.8	580.5
26.000	660.4	XS	H26wl254	25.000	635	31.250	793.8	6.500	165.1	29.250	743	1.625	41.3	1279.8	580.5
28"	(DN 700)														
30"	(DN 750)														
32"	(DN 800)														
34"	(DN 850)														
36"	(DN 900)														

**Contact Engineering Department for Additional Assistance**



**Wireloc™** Clamps up to 36" sizes are offered in a two segmented design as standard. Several Clamp materials are available meeting operating conditions from 452°F (-269°C) to 1600°F (871°C) applications. Bolts are supplied spherical faced nuts.

## CLAMP SET

Clamp Size	(A) ins	(B) ins	(C) ins	(D) ins	(E) ins	(F) ins	(G) ins	(H) ins	(I) ins	(J) ins	(K) ins	(L) ins	Weight lbs (kg)
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### STANDARD CLAMP SERIES

<b>1"</b> (mm)	1.69 42.9	3.25 82.6	2.81 71.5	4.25 108.0	1.38 34.9	2.19 55.6	2.63 66.7	0.500 12.7	3.50 88.9	2.25 57.2	1.25 31.8	1.91 48.5	4	1.9
<b>1-1/2"</b> (mm)	2.69 68.2	5.00 127.0	4.50 114	6.50 165.1	2.00 50.8	3.25 82.6	4.00 102	0.625 15.9	5.00 127.0	3.13 79.4	1.63 41.3	3.02 76.7	10	4.5
<b>2"</b> (mm)	3.20 81.3	5.75 146.1	5.50 140	7.50 190.5	2.00 50.8	3.52 89.4	4.50 114	0.750 19.1	5.25 133.4	3.38 85.7	1.81 46.1	3.59 91.3	13	6
<b>2-1/2-3"</b> (mm)	4.38 111	7.50 190.5	6.88 175	9.25 235.0	2.38 60.3	4.60 116.8	5.25 133	0.750 19.1	6.50 165.1	3.38 85.7	1.81 46.1	4.63 117.6	24	11
<b>4"</b> (mm)	5.38 137	8.50 215.9	8.25 210	10.50 266.7	2.38 60.3	5.40 137.2	6.00 152	0.875 22.2	7.50 190.5	400 102	2.06 52.4	5.39 136.9	29	13
<b>5"</b> (mm)	6.88 175	10.25 260.4	9.88 251	12.38 314.3	3.13 79.4	6.13 155.6	7.25 184	1.000 25.4	8.25 209.6	4.50 114	2.31 58.8	6.38 162.2	41	19
<b>6"</b> (mm)	8.38 213	12.63 320.7	12.00 305	15.25 387.4	3.75 95.3	6.88 174.6	8.75 222	1.125 28.6	10.63 269.9	5.25 133	2.44 61.9	7.96 202.2	71	32
<b>8"</b> (mm)	10.63 270	15.25 387.4	14.50 368	18.50 469.9	3.75 95.3	7.88 200.0	9.88 251	1.250 31.8	12.00 304.8	5.75 146	2.88 73.0	9.39 238.4	110	50

### HEAVY DUTY CLAMP SERIES

<b>H2"</b> (mm)	4.13 105.8	7.25 184.2	6.88 175	9.00 228.6	2.88 73.2	4.88 123.8	5.63 143.0	0.875 22.2	7.50 190.5	3.75 95.3	2.00 50.8	4.56 115.9	24	11
<b>H3"</b> (mm)	4.88 123.8	8.00 203.2	7.75 197	10.00 254.0	3.00 76.2	5.43 137.9	6.13 155.7	0.875 22.2	7.50 190.5	4.00 101.6	2.06 52.4	5.07 128.9	33	15
<b>H4"</b> (mm)	6.13 155.6	9.56 242.9	9.00 229	11.75 298.5	3.00 76.2	5.75 146.1	7.00 177.8	1.000 25.4	8.25 209.6	4.38 111.1	2.31 58.8	5.86 148.8	40	18
<b>H8"</b> (mm)	10.1 257.2	16.00 406.4	14.75 375	18.63 473.1	4.50 114.3	7.75 196.9	10.75 273.1	1.375 34.9	12.00 304.8	5.88 149.2	3.13 79.4	9.84 249.9	138	63
<b>H10"</b> (mm)	12.3 311.2	18.25 463.6	17.63 448	22.50 571.5	5.50 139.7	10.50 266.7	12.75 323.9	1.625 41.3	15.63 396.9	7.25 184.2	3.63 92.1	11.36 288.5	243	110
<b>H12"</b> (mm)	14.6 371.5	21.00 533.4	20.38 518	25.00 635.0	5.75 146.1	11.25 285.8	14.25 362	1.750 44.5	17.00 431.8	7.50 190.5	3.75 95.3	13.01 330.4	320	145
<b>H14"</b> (mm)	17.1 435.0	24.75 628.7	23.00 584	29.25 743.0	6.13 155.6	11.25 285.8	16.25 412.8	1.875 47.6	17.25 438.2	8.25 209.6	4.25 108	14.59 370.5	430	195
<b>H16"</b> (mm)	19.7 500.1	29.25 743.0	27.19 691	34.25 870.0	7.63 193.7	13.50 342.9	19.13 485.9	2.250 57.2	22.00 558.8	9.63 244.5	5.00 127	16.93 430	684	310
<b>H18"</b> (mm)	20.7 525.5	29.25 743.0	27.69 703	34.25 870.0	7.63 193.7	14.00 355.6	19.63 498.6	2.250 57.2	22.00 558.8	9.63 244.5	5.00 127	17.27 438.7	651	295
<b>H20"</b> (mm)	23.7 601.7	32.00 812.8	30.38 772	37.63 955.7	7.50 190.5	18.00 457.2	21.50 546.1	2.250 57.2	26.00 660.4	10.00 254.0	5.00 127	18.83 478.2	860	390
<b>H22"</b> (mm)	24.7 627.1	32.00 812.8	32.25 819	37.63 955.7	7.50 190.5	18.00 457.2	21.50 546.1	2.250 57.2	26.00 660.4	10.00 254.0	5.00 127	19.85 504.2	816	370
<b>H24"</b> (mm)	28.2 716.0	36.00 914.4	36.13 918	40.50 1028.7	7.00 177.8	19.40 492.8	23.75 603.3	2.250 57.2	27.00 685.8	10.50 266.7	5.00 127	22.08 560.9	1047	475
<b>H26"</b> (mm)	29.9 760.4	38.75 984.3	37.85 961	46.50 1181.1	8.00 203.2	19.60 497.8	27.00 685.8	2.500 63.5	28.00 711.2	10.50 266.7	5.50 139.7	23.08 586.3	1155	524
<b>H28"</b>														
<b>H30"</b>														
<b>H32"</b>														
<b>H34"</b>														
<b>H36"</b>														

Contact Engineering Department for Additional Assistance

# Wireloc™ Interchangeability with other brands

## CROSS TABLE REFERENCE

Wireloc™ Clamp Size	Grayloc® Clamp Size	Techlok® Clamp Size	G-Range® Clamp Size	G-Con® Clamp Size	Securamax® Clamp Size
<b>STANDARD CLAMP SERIES</b>					
1"	1GR	1IN	G1"	C-01	1"
1.½"	1.½GR	1.½IN	G1.½"	C-1.5	1.½"
2"	2GR	2IN	G2"	C-02	2"
3"	3GR	3IN	G3"	C-03	3"
4"	4GR	4IN	G4"	C-04	4"
5"	5GR, E	5IN	G5"	C-05	5", E
6"	6GR, F, XF	6IN	G6", GX6"	C-06	6", F
8"	8GR, X8	8IN	G8", GX8"	C-X8	8"
<b>LIGHT DUTY CLAMP SERIES</b>					
L14"	X14GR	L14IN	GZ14"	–	–
L16"	X16GR	L16IN	GZ16"	C-X16	–
L18"	X18GR	L18IN	GZ18"	C-X18	–
L20"	X20GR	L20IN	GZ20"	–	–
L24"	X24GR	L24IN	–	C-X24	–
<b>HEAVY DUTY CLAMP SERIES</b>					
H2"	B	H2IN	GB	C-B	B
H3"	C	H3IN	GC	C-C	C
H4"	D	H4IN	GD	C-D	D
H8"	G, X8	H8IN	GG	–	–
H10"	10H, X10H	H10IN	G10", GX10"	C-X10H	10"
H12"	12M, X12M	H12IN	G12", GX12"	C-X12M	12"
H14"	P, 5P, R	H14IN	GP	C-P	14"
H16"	S	H16IN	GS	C-S	16"
H18"	T	H18IN	–	–	–
H20"	U	H20IN	GU	C-U	–
H22"	V, 3V, 5V	H22IN	–	C-5V	–
H24"	W, 3W	H24IN	–	C-5V, C-3Y	–
H26"	Y, 3Y	H26IN	–	C-3Y	–
H28"	–	–	–	–	–
H30"	30GR	–	–	–	–
H32"	32GR	–	–	–	–
H34"	34GR	–	–	–	–
H36"	36GR	–	–	–	–

**Wireloc™** Clamp Connectors are completely interchangeable with equivalent brands of equal size as listed above. Pressure ratings may vary between manufacturers based on materials of construction and design verification methods. Please contact LTS Energy Engineering for size verification.

### Recognition;

- Grayloc® is a registered Trade Mark of Oceaneering, Inc.
- G-Con® is a registered Trade Mark of Oceaneering, Inc.
- Techlok® is a registered Trade Mark of Vector International, Ltd.
- G-Range® is a Trade Mark of Destec Engineering, Ltd.
- Securamax® is a registered Trade Mark of Securamax, Inc.

# LTS ENERGY PRODUCT LINES

## **FLOW CONTROL PRODUCTS EXCEEDING 20KSI SERVICE**

High Pressure Pig Launchers & Receivers  
ClampTec™ Closures  
Wireloc™ Clamp Connectors  
FlangeTec™ Compact Flanges (NORSOK & ASME series)  
High Pressure Flow Lines  
High Pressure Manifolds  
Specialty Adapters and Blast Spools

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## **ANSI B16.34 & API 6D BALL VALVES**

½" - 42" NPS, Full, Reduced & Exact Port

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## **API 6D GATE VALVES**

½" - 42" NPS, Full, Reduced & Exact Port

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## **API 6A GATE VALVES THRU 20KSI**

1.13/16" – 16.3/4" NB, Full, Reduced & Exact Port

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## **API 6A BALL VALVES THRU 20KSI**

1.13/16" – 16.3/4" NB, Full, Reduced & Exact Port

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## **API 6A CHOKES & CONTROL VALVES THRU 20KSI**

1.13/16" – 5.1/8" NB, various Trim

# LTS ENERGY SERVICES

## ENGINEERING SERVICES

LTS Energy offers a wide range of Engineering Services for all aspects of High Pressure piping design, and equipment supply. This includes Conceptual Designs, FEED studies, Proof Testing as well as undertaking Research and Development Programs.

## CONCEPTUAL DESIGN AND R&D STUDIES

LTS Energy offers 3D Solid Modeling capabilities for a variety of High Pressure piping, valves and flowline components, fully meeting ASME, API and ANSI design codes. In addition, LTS Energy can undertake R&D Studies including Finite Element Analysis and Prototype testing in accordance to specific customer needs and applicable code requirements.

## FLOWLINE ARRANGEMENTS WITH EXTERNAL LOADING CALCULATIONS

LTS Energy designs and builds High Pressure flowlines, offered in either “Fabricated” or “Building Block” style. In addition, LTS Energy provides assistance in material selection and equipment sizing. Each flowline can be tested and painted prior to shipping, or supplied in component form to be shipped anywhere in the world.

External loading and design calculations are available as well as full design reports supplied for Third Party review.

## BASIC DESIGN AND FEED STUDIES

LTS Energy offers comprehensive design and product knowledge which allows for quick and accurate FEED studies performed at the earliest stage of any project. These include skid template and component sizing, bill of materials list, cost and delivery estimates, and recommend manufacturers.



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**HIGH PRESSURE** CONTAINMENT

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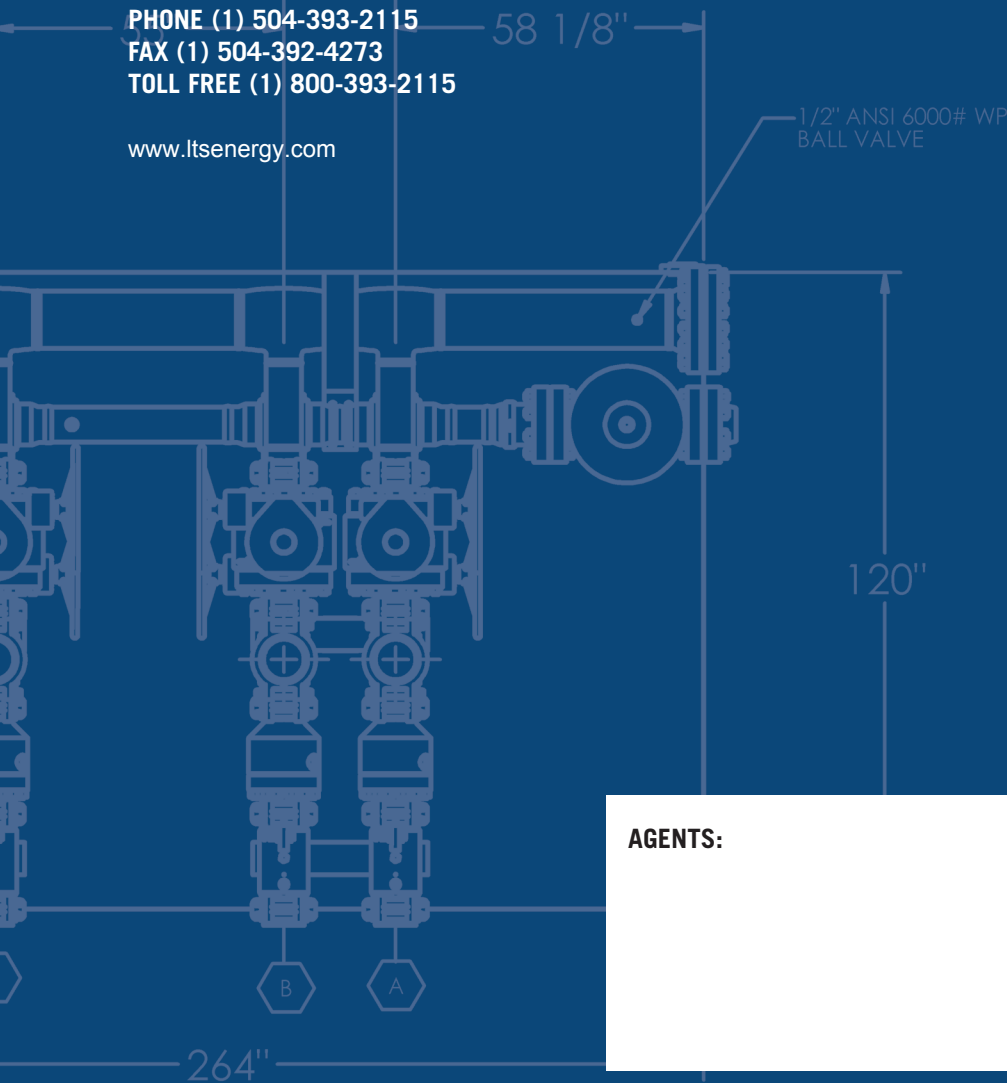
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## LEGEND

- A 6" Wireloc™ CLAMP W/ HUB  
INLET FROM FA2-0001
- B 6" Wireloc™ CLAMP W/ HUB  
INLET FROM FA2-0002
- C 4-1/16" - 15000 API FLANGE  
OUTLET TO TEST SEPARATOR
- D 10" ANSI 600# FLANGE  
TO H.P. PRODUCTION SEPARA
- E 6" Wireloc™ CLAMP W/ HUB  
INLET FROM FA3-0003



**AGENTS:**

5

SP  
2