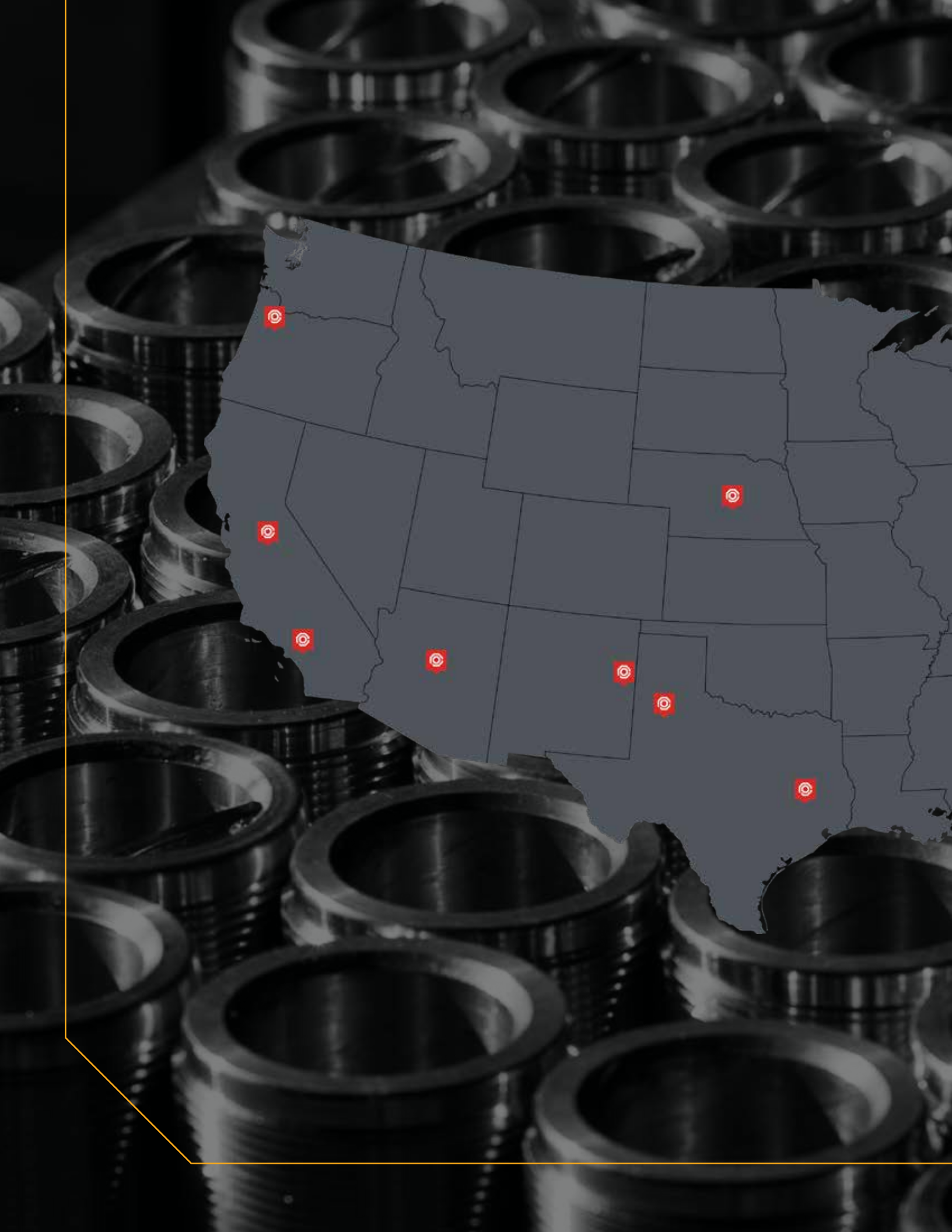




# Technical Product Guide





# Pump & Waterworks Products

We fabricate pump and waterworks products that service our customers' needs from the bottom of the well to the point of use.

Headquartered in California, with a national presence, Custom Pipe & Fabrication is uniquely positioned to create precise solutions that offer stability for our network of suppliers, distributors, OEMs and contractors while safeguarding the future of our water industry infrastructure.



# Pump Overview

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## Column Pipe + Inner Column

### Threaded Column Pipe

- + Turbine column pipe and submersible drop pipe
- + Size: 2.50" - 14"
- + Material: A53 Grade B, 316SS, 304SS, and galvanized pipe
- + Oil lube and water lube

### Inner Column

- + Enclosing Tubes: A53 Grade B, 316SS, 304SS, galvanized, and 416SS
- + All OEM specifications
- + Water lube, Oil lube, and water flush
- + Shafting: C-1045, 416SS, 316SS, and 17-4
- + Bearings: Alloy 844 and Vesconite
- + Shaft Couplings: 1215, 1141, 416SS, 316SS, and 304SS

### Pump Fabrication

- + Flange column: 4" - 36"
- + Fabricated discharge heads
- + Fabricated pump cans/barrels
- + Sole plates, motor stands, etc. (can be manufactured)
- + Material: A53 grade B, 316SS, and 304SS
- + In-house coating, epoxy and 3M™ Scotchkote™

### Water Well Casing

- + Sizes: 4" - 36"
- + Casing: beveled, and threaded
- + Slotted casing
- + Johnson well screen, industrial, municipal, and agricultural
- + Material: A53 grade B, 316SS, 304SS, and galvanized

## Pump Parts

- + Bowl bushings
- + Wear rings
- + Sand collars
- + Tube adapters
- + Impeller collets
- + Collet knockers
- + Bowl bushings
- + Stuffing box bushings
- + Tension bearings
- + Tension Assemblies
- + Head nuts
- + Column reducing bushings
- + Line shaft bearings
- + Column couplings
- + Shaft and shaft couplings
- + Custom coatings
- + Casing alignment clamps

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## Vertical Turbine Pumps

Vertical turbine pumps are available in multiple configurations to fit different application needs including:

- + Open or enclosed line shaft
- + Various materials of construction
- + Threaded or flanged column assembly
- + Above or below ground discharge
- + Packed or mechanically sealed

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## Submersible Turbine Pumps

Submersible turbine pumps are available in different materials of construction. Our one-stop-shop can supply accessories like submersible discharge head, drop pipe, cable wire and submersible motor so you can get your job done on time.

### Material Options

Shafting: **416SS, 316SS, or 17-4pH**

Impellers: **Bronze or Stainless Steel**

Bushings: **Bronze, Rubber, Vesconite, or Marine**

Spiders: **Lead-free Bronze or Stainless Steel**

Threaded or Flanged Column Pipe: **Steel or Fiberglass**



# Threading Specifications

Manufacturer	Tube and Thread Bearing OD						Shaft Pitch and Coupling Length												
	1 ¼	1 ½	2	2 ½	3	3 ½	¾	7/8	1	1 1/16	1 ¼	1 7/16	1 ½	1 13/16	1 ¾	1 15/16	2	2 3/16	2 7/16
American-Marsh	12RH 12LH 1.373	12RH 12LH 1.623	12RH 12LH 2.062	12RH 12LH 2.494	12RH 12LH 3.062	12RH 12LH 3.495	16 2 3/8	12 2 3/4	12 2 1/2		12 3 3/8	12 3 3/8	12 4 3/8		12 4 3/8		12 5 1/2	8 7	
American Turbine	12LH 1.395	12LH 1.610	12LH 2.049	12LH 2.437	12LH 3.016	12LH 3.500	16 2 3/8	14 2 1/2	10 3 1/2	10 3 3/4		10 3 1/2	10 4	10	10 5	10	10 5 1/2	8 5 1/2	8 5 1/2
Berkeley	12LH 1.408	12LH 1.640	12LH 2.090	12LH 2.457	12LH 3.033		16 2 3/8	10 2 3/2	10 3 1/2		8 3 3/4	8 4 3/4		8 5 1/2		8 5 1/2	8 5 1/2	8 6	
Byron Jackson	12LH 1.420	12LH 1.625	10LH 2.090	8LH 2.531	8LH 3.109	8LH 3.562	10 2	10 2 1/2	8 2 3/4		8 3 3/4	8 4 3/4		8 5 1/2		8 5 1/2	8 5 1/2	8 6	
	12RH 1.633	12RH 2.098	10RH 2.545	8RH 3.115	8RH 3.573														
Fairbanks	14LH 1.38	14LH 1.62	12LH 2.078	12LH 2.522	12LH 3.108	12LH 3.522	16 2 3/8	14 2 1/2	12 3 1/2	10 3 3/4	12 4	10 3 1/2	10 4 1/2		10 5		10 5 1/2	10 6	
Floway	12LH 1.395	12LH 1.610	12LH 2.049	12LH 2.437	12LH 3.016	12LH 3.500	16 2 1/2	14 2 1/2	10 3 1/2	10 3 3/4	12 4	10 3 1/2	10 4	10	10 5	10	10 5 1/2	8 5 1/2	8 5 1/2
Flowserve		12LH 1.600	12LH 2.080	12LH 2.524	12RH 3.125	12RH 3.5751						14 2 3/4	12 3 1/2		12 4	10 4		10 5	10
		12RH 1.575	12RH 2.075	12.575		2LH 3.576													
Hydroflo	14LH 1.475	14LH 1.633	14 2.057	12LH 2.524 10RH 2.619	10LH 3.130	10LH 3.560	16 2 3/8	12 3	12 3	12 3 1/2		10 3 1/2	10 4		10 5		10 5 1/2	10 6	
Jacuzzi	12RH 1.373	12RH 1.623	12RH 2.062	12RH 2.494	12RH 3.062	12RH 3.495	16 2 3/8	12 2 3/4	12 2 1/2		12 3 3/8	12 3 3/8	12 3 3/8	12 4 3/8	12 4 3/8		12 5 1/2	8 7	
Johnston	14LH 1.475	14LH 1.633	14LH 2.057	12LH 2.534 10LH 2.619 (OLD)	10LH 3.130	10LH 3.560	16 2 3/8	12 3	12 3	12 3 3/4	10 3 1/2	10 3 1/2	10 4		10 5		10 5 1/2	10 6	
Layne & Bowler	16RH 1.406	12RH 1.675	10RH 2.090	10RH 2.500	10RH 3.062	10RH 3.562	16 2 3/8	10 3	10 3 1/2		10 3 1/2	10 4 1/2		10 5 1/2		8 5 1/2	8 6		
Layne of Memphis		12RH 1.685	10RH 2.096	10RH 2.518	10RH 3.118	10RH 3.623	16 3	12 3	12 3	8 4		8 4	8 5		8 6		8 6	8 7	
		12RH 1.685	10RH 2.096	10RH 2.518	10RH 3.118	10RH 3.623													
Peerless	12RH 1.403	14RH 1.654	12RH 2.090	10RH 2.482	10RH 3.050	10RH 3.554	16 2 3/8	14 2 3/4	14 2 1/2	10 3 1/2		10 3 1/2	10 4		10 5		10 5 1/2	8 6	
Robbco		14LH 1.403	14LH 1.654	10LH 2.482	10LH 3.050	10LH 3.554		12 3	12 3		10 3 1/2	10 4		10 5		10 5 1/2	10 6		
Xylem/Goulds	14H 1.480	14LH 1.638	14LH 2.062	10LH 2.625	10LH 3.136	10LH 3.562	16 2 3/8	12 3	12 3		10 3 1/2	10 4		10 5		10 5 1/2	10 6		
WD Worthington	12LH 1.401	12LH 1.623	12LH 2.125	12LH 2.494	12LH 3.119	12LH 3.562	12 2 3/8	12 3		8 3 1/2	12	8 4	10 4 1/2	8	10 5 1/2	8	10 5 1/2	8 6	
Western Land Roller		12LH 1.600	12LH 2.080	12LH 2.524	12LH 3.125			14 2 3/4		12 3 1/2		12 4	12 4		10 5		10		







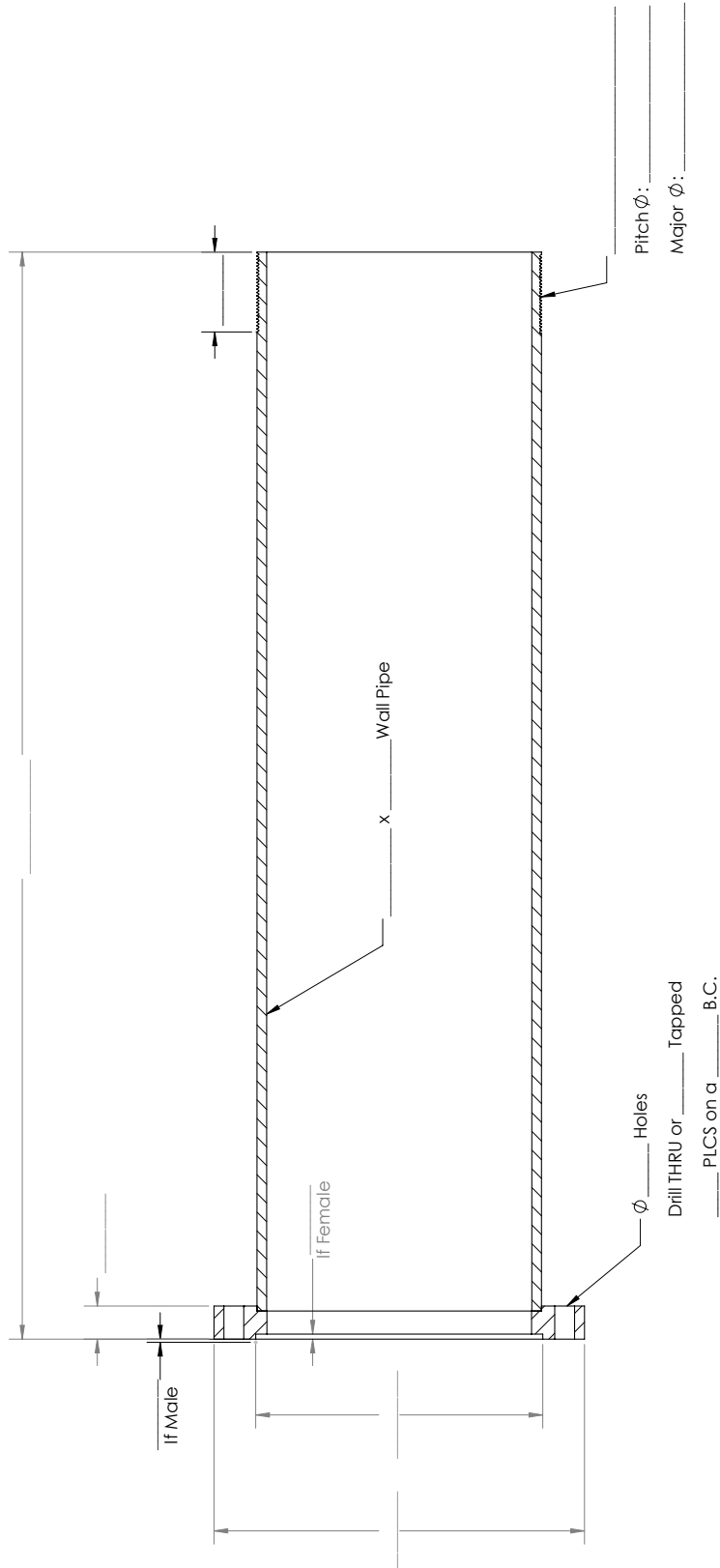
# Pipe Weight Chart

Size	PE lbs / ft	5'		10'		20'		CPLG.
		TBE	T&C	TBE	T&C	TBE	T&C	
4" .237W	10.80	54	59	108	113	216	221	5
5" .258W	14.63	74	83	148	157	296	305	9
6" .250W	17.04	85	93	170	181	340	351	11
6" .280W	18.99	95	106	190	201	380	391	11
6" .423W	28.60	143	154	286	297	572	583	11
8" .219W	19.68	98	116	196	214	392	410	18
8" .250W	22.38	112	130	224	242	448	466	18
8" .277W	24.72	124	142	248	266	496	514	18
8" .322W	28.58	143	161	286	304	572	590	18
8" .500W	43.43	217	235	434	452	868	886	18
10" .250W	28.06	140	173	280	313	560	593	33
10" .279W	31.23	156	189	312	345	624	657	33
10" .365W	40.52	203	236	406	439	812	845	33
10" .500W	54.79	274	307	548	581	1096	1129	33
12" .330W	43.81	219	231	438	480	876	918	42
12" .375W	49.61	248	290	496	538	992	1034	42
14" .375W	54.52	273	328	546	601	1092	1147	55

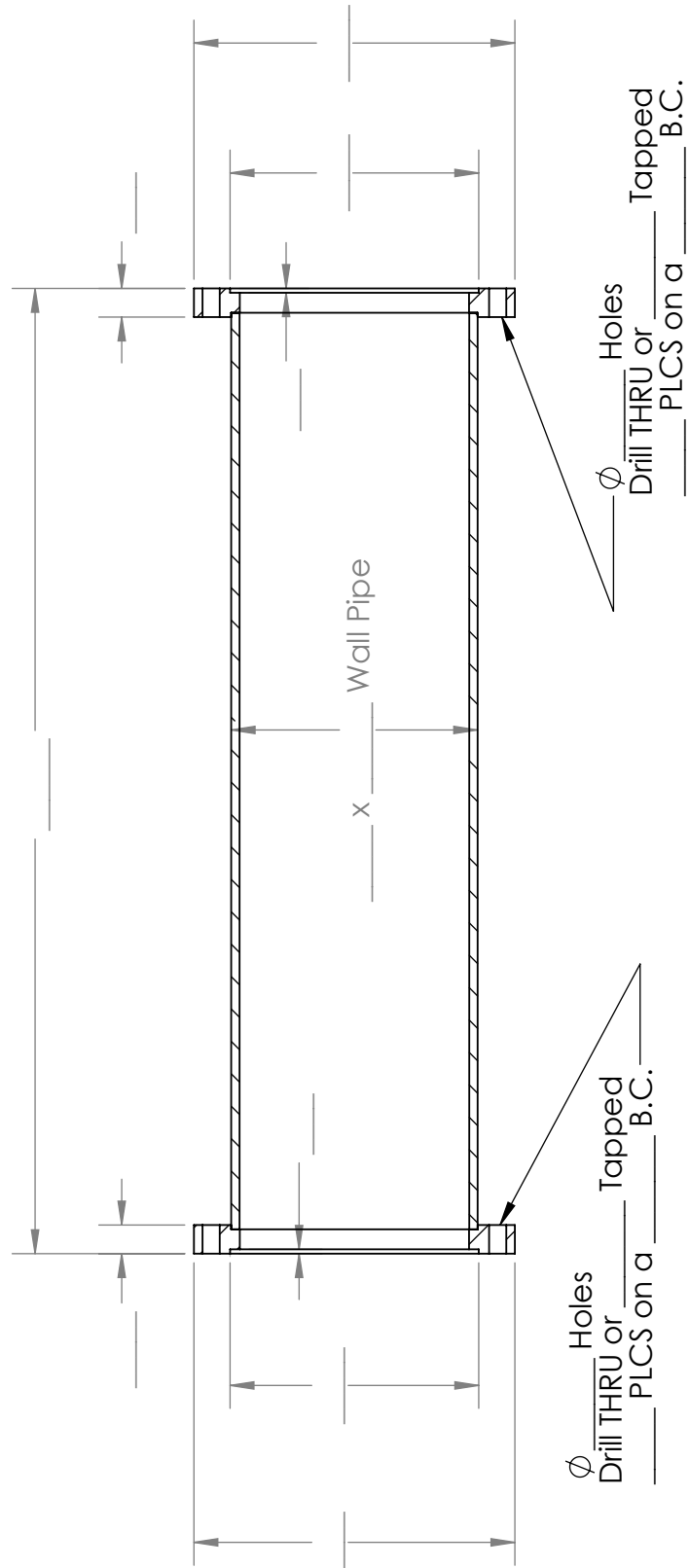
Tube & Shaft Weight Chart (Nominal Weights)		
Size	10'	20'
1" x 1 ½"	67	134
1 ⅜" x 2"	95	178
1 ¼" x 2"	99	198
1 ⅞" x 2 ½"	142	283
1 ½" x 2 ½"	146	285
1 ⅜" x 2 ½"	162	322
1 ⅜" x 3"	189	376
1 ⅝" x 3"	222	444
2 ⅜" x 3 ½"	275	595
2 ⅞" x 3 ½"	356	700

Shaft Weight Chart			
Size	10' T&C	20' T&C	CPLG.
¾"	16	32	0.5
1"	27	54	0.5
1 ⅜"	39	78	1.5
1 ¼"	44	88	1.75
1 ⅞"	57	114	2
1 ½"	62	124	2
1 ⅜" x 1 ½"	78	156	2.25
1 ⅝" x 1 ½"	104	208	4
2 ⅜" x 1 ½"	133	266	5
2 ⅞" x 1 ½"	165	330	6

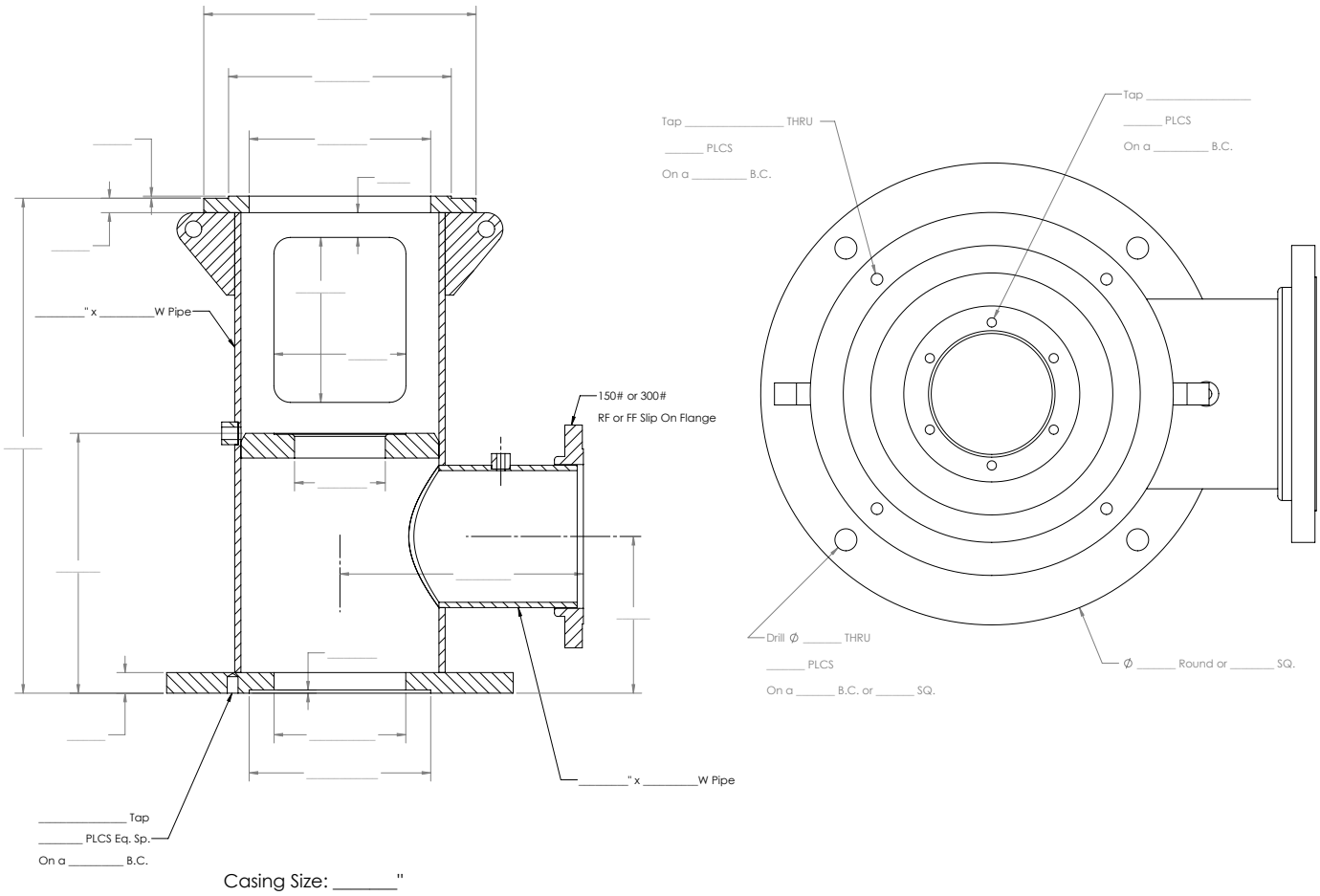
# Column Pipe FXT



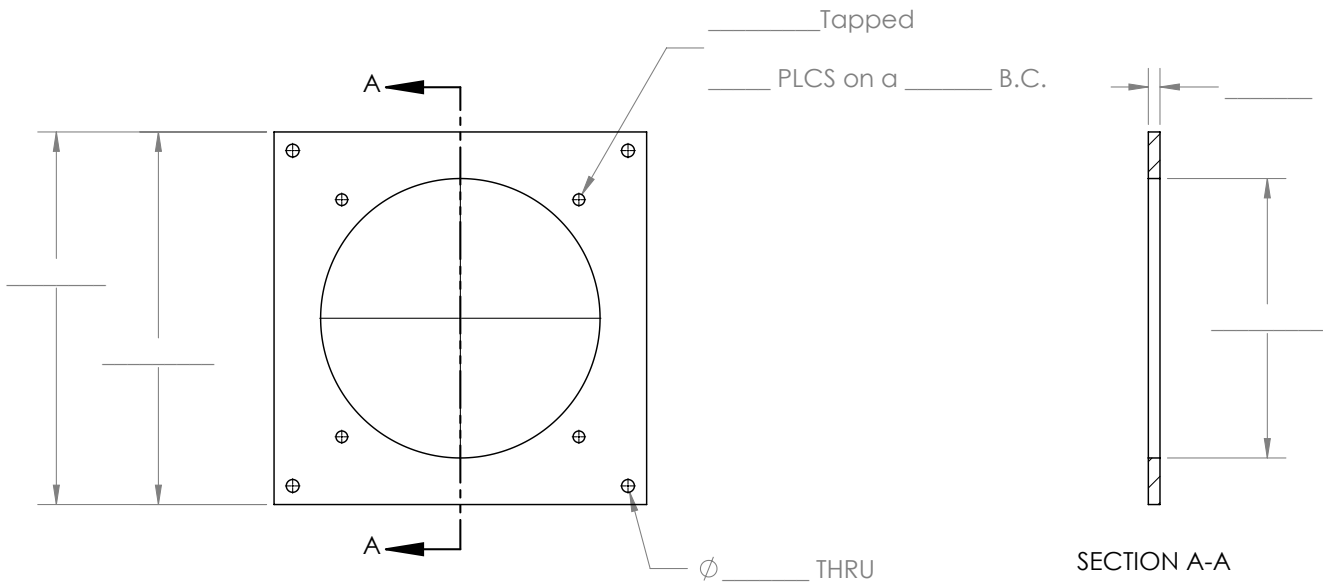
# Column Pipe Female-Male



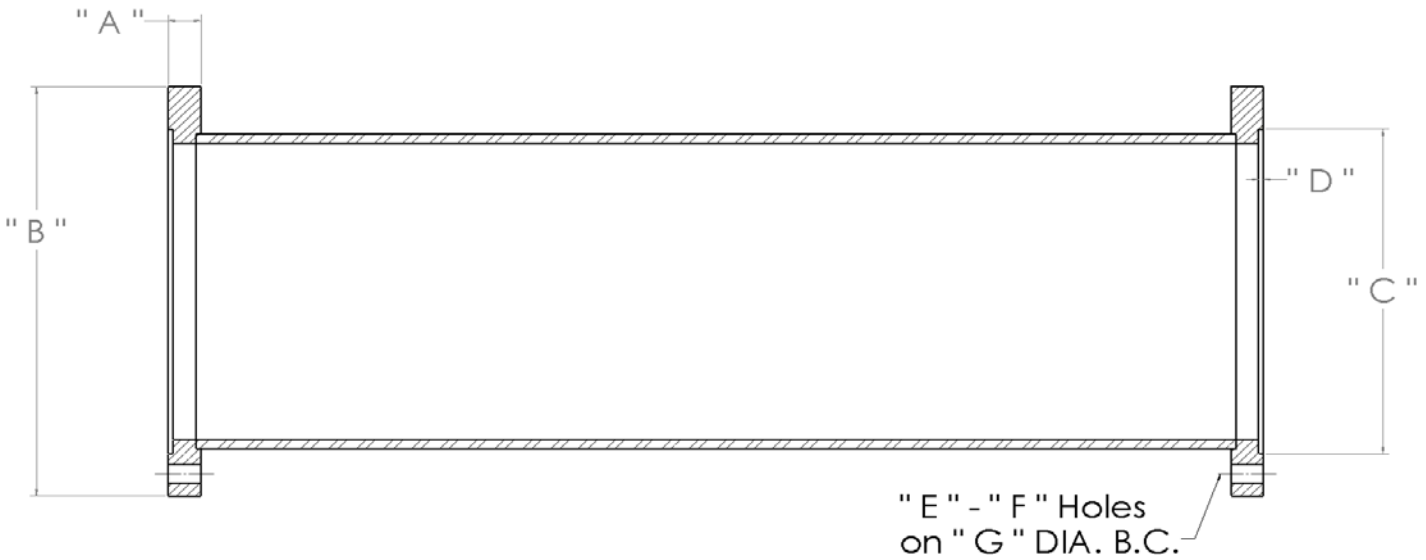
# Pump Head



# Sole Plate



# Column Pipe Dimension Chart



Pipe Size	A	B	C	D	E	F	G	Bolts Size & Length
3	3/4"	5 5/8"	3.310 / 3.315	0.240 / 0.245	6	9/16"	4 3/4"	1/2" - N.C. x 2 3/4"
4	3/4"	7 1/2"	4.312 / 4.315	0.240 / 0.245	8	3/4"	6 1/4"	5/8" - N.C. x 2 3/4"
5	7/8"	8 1/4"	5.375 / 5.378	0.365 / 0.370	8	3/4"	7 1/8"	5/8" - N.C. x 3"
6	1"	10"	6.435 / 6.443	0.365 / 0.370	8	7/8"	8 5/8"	3/4" - N.C. x 3 1/2"
8	1"	12"	8.435 / 8.443	0.365 / 0.370	8	7/8"	10 5/8"	3/4" - N.C. x 3 1/2"
10	1 1/8"	14 5/8"	10.561 / 10.569	0.365 / 0.370	12	1"	13"	7/8" - N.C. x 3 3/4"
12	1 1/4"	16 5/8"	12.537 / 12.545	0.365 / 0.370	12	1"	15"	7/8" - N.C. x 4"
14	1 3/8"	18 1/2"	13.787 / 13.795	0.365 / 0.370	12	1"	16 3/4"	7/8" - N.C. x 4"
16	1 3/8"	21 1/2"	15.787 / 15.795	0.365 / 0.370	12	1 1/4"	18 3/4"	1 1/8" - N.C. x 4 1/2"
18	1 5/8"	23"	17.787 / 17.790	0.19	12	1 1/4"	21"	1 1/8" - N.C. x 5"
20	1 5/8"	25"	19.787 / 19.790	0.19	16	1 1/4"	23"	1 1/8" - N.C. x 5"







# Waterworks Overview

## Fabricated Ductile Iron Pipe Spools

### Pipe

- + Ductile iron
- + Class 53
- + Diameters: 3" - 64"
- + ANSI A21.51

### Flanges

- + Tapped for studs
- + 250# drill pattern
- + MJ adapter bells
- + Filler flanges
- + Wedge spacers
- + Domestic

**Tapping through 6" NPT for caps, plugs, and blind flanges**

CC taps 3/4" through 2"

## Ductile Iron Fittings

- Grooved couplings & fittings (AWWA C606)
- P401 Lined fittings
- PL90 Lined fittings
- Victaulic® distributor

## Steel Fabrication

- Stainless
- Carbon
- Galvanized
- Threaded & grooved nipples
- Pipe supports
- Vent piping

### Linings

- + Cement
- + Protecto 401™
- + Coal tar epoxy
- + Unlined
- + Special, upon request
- + Fusion epoxy lining & coating
- + PL 90
- + TN431

### Connections

- + Flanged (ANSI B16.1)
- + 6"(6) Bolt hole pattern hydrant flanged
- + Grooved rigid or flex (AWWA C606)
- + Mechanical joint
- + Restraint joint
- + Plain end

### Coatings

- + TN37
- + TN140
- + TN46H-413
- + TN90-97
- + 5 Part
- + Exterior system
- + Manufacturer applied zinc arch spray with bituminous top
- + Others by request

### Touch Up Kits

- + Protecto 401™
- + Cement
- + Fusion bonded epoxy repair kits

### Waterstops

- + Continuously welded
- + Ductile iron
- + Thrust rings

### Anchor Couplings

### Outlets

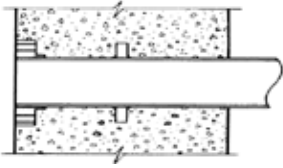
- + Tangential
- + Welded
- + Flange

# Waterworks Pipe Chart

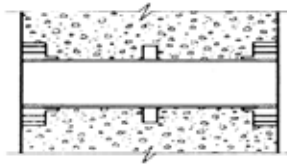
## FLANGE / PIPE DIMENSTIONS

NOM. PIPE SIZE	FLANGE OD	FLANGE THICKNESS	BOLT CIRCLE	PIPE OD	PIPE THICKNESS	BOLT HOLE DIAMETER	BOLT SIZE	NUMBER OF BOLTS
3"	7.5	0.75	6	3.96	0.31	0.75	0.625 X 2.5	4
4"	9	0.94	7.5	4.8	0.32	0.75	0.625 X 3	8
6"	11	1	9.5	6.9	0.34	0.875	0.75 X 3.5	8
8"	13.5	1.12	11.75	9.05	0.36	0.875	0.75 X 3.5	8
10"	16	1.19	14.25	11.1	0.38	1	0.875 X 4	12
12"	19	1.25	17	13.2	0.4	1	0.875 X 4	12
14"	21	1.38	18.75	15.3	0.42	1.125	1 X 4.5	12
16"	23.5	1.44	21.25	17.4	0.43	1.125	1 X 4.5	16
18"	25	1.56	22.75	19.5	0.44	1.25	1.125 X 5	16
20"	27.5	1.69	25	21.6	0.45	1.25	1.125 X 5	20
24"	32	1.88	29.5	25.8	0.47	1.375	1.25 X 5.5	20
30"	38.75	2.12	36	32	0.51	1.375	1.25 X 6.5	28
36"	46	2.38	42.75	38.3	0.58	1.625	1.5 X 7	32

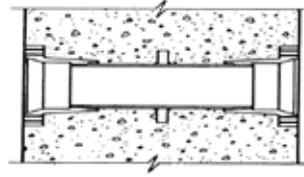




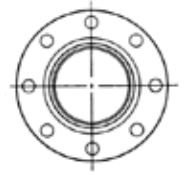
FLG X PLN



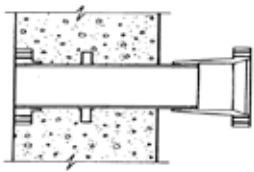
FLG X FLG



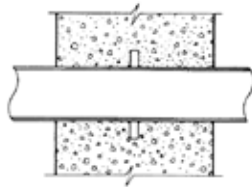
MJ X MJ



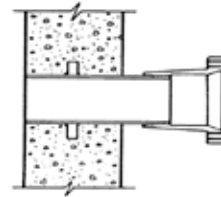
125# DUCTILE  
IRON FLANGE



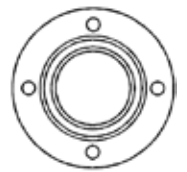
FLG X MJ



PLN X PLN



MJ X PLN



MJ ADAPTER BELL

## FABRICATION SPECIFICATIONS—NOTES

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**FLANGED** PER AWWA C115 / A21.15 FLANGES SHALL HAVE A TAPER PIPE THREAD IN ACCORDANCE WITH ANSI B1-20.1 / 250 PSI WORKING

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**PIPE** PER AWWA C115 / CLASS 53 DUCTILE IRON

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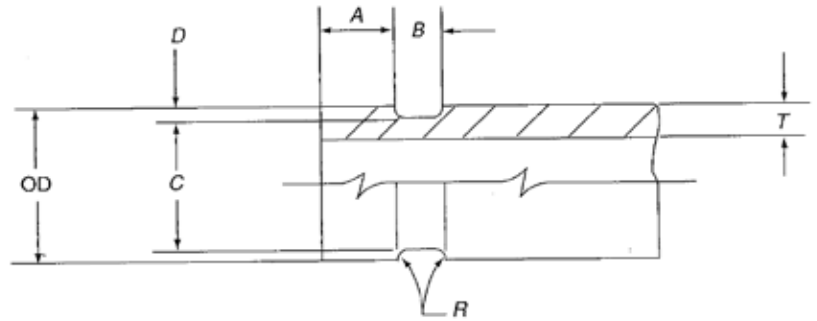
**THREADED MECHANICAL JOINT ADAPTERS** PRODUCED FROM DIMENSIONS PROVIDED BY ANSI / AWWA C111 / A21.11 AND ARE THREADED IN ACCORDANCE WITH AWWA C115 / A21.15

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**WALL RING** FILLET WELDED 360 DEGREES AROUND PIPE AND RING.

# Cut Grooving Dimensions for Flexible Joints

DUCTILE IRON PRESSURE PIPE  
AWWA C606-22



NOTE: Grooving dimensions are the same for any one pipe outside diameter, regardless of pipe class and pressure

Nominal Pipe Size	Pipe OD	Gasket Seat +0.016 -0.047 (A**)	Groove Width +0.031 -0.016 (B)	Groove Diameter (C†)	Radius (R)	(T‡)	Groove Depth (D)	
							Minimum	Maximum
4	4.80 ±0.06	0.750	0.375	4.563 +0 -0.020	0.120	0.32	0.096	0.151
6	6.90 ±0.06	0.750	0.375	6.656 +0 -0.020	0.120	0.34	0.100	0.154
8	9.05 ±0.06	0.875	0.500	8.781 +0 -0.025	0.145	0.36	0.104	0.177
10	11.10 ±0.06	0.938	0.500	10.813 +0 -0.025	0.145	0.38	0.114	0.186
12	13.20 ±0.06	0.938	0.500	12.906 +0 -0.030	0.145	0.40	0.117	0.192
14	15.30 +0.05 -0.08	0.938	0.625	14.969 +0 -0.030	0.165	0.42	0.126	0.206
16	17.40 +0.05 -0.08	1.188	0.625	17.063 +0 -0.030	0.165	0.43	0.128	0.208
18	19.50 +0.05 -0.08	1.188	0.625	19.125 +0 -0.030	0.185	0.44	0.148	0.228
20	21.60 +0.05 -0.08	1.188	0.625	21.219 +0 -0.030	0.185	0.45	0.150	0.230
24	25.80 +0.05 -0.08	1.188	0.625	25.406 +0 -0.030	0.185	0.47	0.157	0.237
30	32.00 +0.08 -0.06	1.375	0.750	31.550 +0 -0.035	0.215	0.51	0.195	0.282
36	38.30 +0.08 -0.06	1.375	0.750	37.850 +0 -0.035	0.215	0.58	0.195	0.282

Dimensions are in inches where applicable. To convert inches to millimeters, multiply by 25.4.

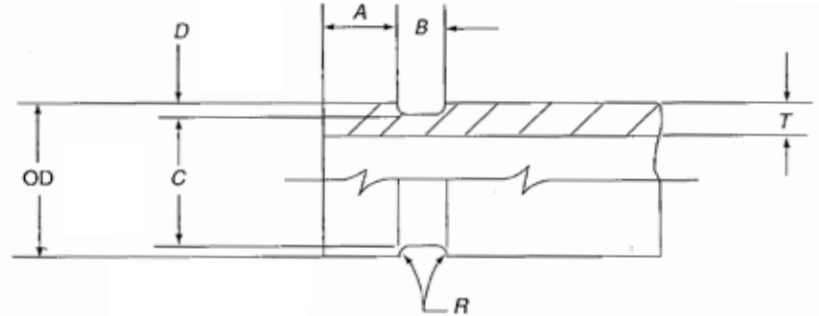
\* A is the gasket seating surface (see Sec. 4.3.4).

† C diameters are average values.

‡ T is the minimum standard wall thickness (Class 53 for 4 in. [100 mm] through 36 in. [900 mm]) that should be grooved; tolerances referenced in ANSI/AWWA C151/A21.51 shall apply.

# Cut Grooving Dimensions for Rigid Joints

DUCTILE IRON PRESSURE PIPE  
AWWA C606-22



NOTE: Grooving dimensions are the same for any one pipe outside diameter, regardless of pipe class and pressure

Nominal Pipe Size	Pipe OD	Gasket Seat +0.016 -0.047 (A**)	Groove Width +0.031 -0.016 (B)	Groove Diameter (C†)	Radius (R)	(T‡)	Groove Depth (D)	
							Minimum	Maximum
4	4.80 ±0.06	0.840	0.375	4.563 <sup>+0</sup> / <sub>-0.020</sub>	0.120	0.32	0.096	0.151
6	6.90 ±0.06	0.840	0.375	6.656 <sup>+0</sup> / <sub>-0.020</sub>	0.120	0.34	0.100	0.154
8	9.05 ±0.06	0.950	0.500	8.781 <sup>+0</sup> / <sub>-0.025</sub>	0.145	0.36	0.104	0.177
10	11.10 ±0.06	1.015	0.500	10.813 <sup>+0</sup> / <sub>-0.025</sub>	0.145	0.38	0.114	0.186
12	13.20 ±0.06	1.015	0.500	12.906 <sup>+0</sup> / <sub>-0.030</sub>	0.145	0.40	0.117	0.192
14	15.30 <sup>+0.05</sup> / <sub>-0.08</sub>	1.015	0.625	14.969 <sup>+0</sup> / <sub>-0.030</sub>	0.165	0.42	0.126	0.206
16	17.40 <sup>+0.05</sup> / <sub>-0.08</sub>	1.340	0.625	17.063 <sup>+0</sup> / <sub>-0.030</sub>	0.165	0.43	0.128	0.208
18	19.50 <sup>+0.05</sup> / <sub>-0.08</sub>	1.340	0.625	19.125 <sup>+0</sup> / <sub>-0.030</sub>	0.185	0.44	0.148	0.228
20	21.60 <sup>+0.05</sup> / <sub>-0.08</sub>	1.340	0.625	21.219 <sup>+0</sup> / <sub>-0.030</sub>	0.185	0.45	0.150	0.230
24	25.80 <sup>+0.05</sup> / <sub>-0.08</sub>	1.340	0.625	25.406 <sup>+0</sup> / <sub>-0.030</sub>	0.185	0.47	0.157	0.237
30	32.00 <sup>+0.08</sup> / <sub>-0.06</sub>	1.625	0.750	31.550 <sup>+0</sup> / <sub>-0.035</sub>	0.215	0.51	0.195	0.282
36	38.30 <sup>+0.08</sup> / <sub>-0.06</sub>	1.625	0.750	37.850 <sup>+0</sup> / <sub>-0.035</sub>	0.215	0.58	0.195	0.282

Dimensions are in inches where applicable. To convert inches to millimeters, multiply by 25.4.

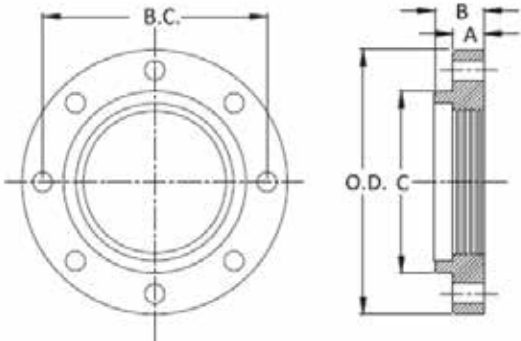
\* A is the gasket seating surface (see Sec. 4.3.4).

† C diameters are average values.

‡ T is the nominal wall thickness corresponding to the minimum standard pipe classes (special thickness class 53 for 4 in. [100 mm] through 36 in. [900 mm]) that should be grooved; tolerances referenced in ANSI/AWWA C151/A21.51 shall apply.



# High Hub DI 125 LB. Threaded Flanges

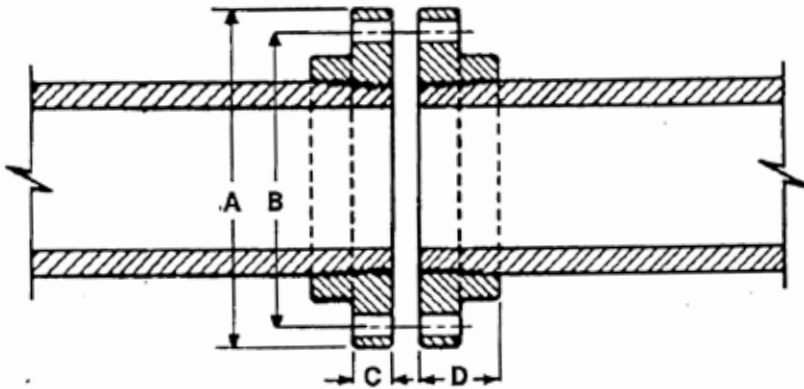


FOR DUCTILE IRON PIPE  
ANSI/AWWA C115/121.15

Nom Pipe Size	Pipe OD	Flange THK (A)	Total THK (B)	Thread Length	Flange OD (O.D.)	Hub Dia (C)	Bolt Circle (B.C.)	Bolt Hole Dia	Bolt Size (Dia x Length)	# Bolt Holes	WT (Lbs.)
2	2.50	0.62	1.25	1.00	6.00	3.06	4.75	3/4	5/8 x 2 1/4	4	4
3	3.96	0.75	1.69	1.25	7.50	4.25	6.00	3/4	5/8 x 2 1/2	4	7
4	4.80	0.94	1.81	1.37	9.00	5.32	7.50	3/4	5/8 x 3	8	12
6	6.90	1.00	2.00	1.53	11.00	7.56	9.50	7/8	3/4 x 3 1/2	8	17
8	9.05	1.12	2.25	1.75	13.50	9.69	11.75	7/8	3/4 x 3 1/2	8	26
10	11.10	1.19	2.44	1.88	16.00	12.00	14.25	1	7/8 x 4	12	37
12	13.20	1.25	2.56	2.12	19.00	14.06	17.00	1	7/8 x 4	12	55
14	15.30	1.38	2.62	2.12	21.00	16.25	18.75	1 1/8	1 x 4 1/2	12	70
16	17.40	1.44	2.75	2.12	23.50	18.44	21.25	1 1/8	1 x 4 1/2	16	80
18	19.50	1.56	3.00	2.25	25.00	20.53	22.75	1 1/4	1 1/8 x 5	16	85
20	21.60	1.69	3.25	2.44	27.50	22.673	25.00	1 1/4	1 1/8 x 5	20	106
24	25.80	1.88	3.50	2.75	32.00	26.82	29.50	1 3/8	1 1/4 x 5 1/2	20	147
30	32.00	2.12	3.75	3.37	38.75	32.75	36.00	1 3/8	1 1/4 x 6 1/2	28	224
36	38.30	3.38	5.00	4.00	46.00	39.12	42.75	1 5/8	1 1/2 x 7	32	337
42	44.50	2.62	5.12	4.50	53.00	46.00	49.50	1 5/8	1 1/2 x 7 1/2	36	495
48	50.80	2.75	5.50	4.75	59.50	52.25	56.00	1 5/8	1 1/2 x 8	44	622
54	57.56	3.00	6.45	5.12	66.25	58.75	62.75	2	1 3/4 x 8 1/2	44	711
60	61.61	3.12	6.75	5.00	73.00	63.00	69.25	2	1 3/4 x 9	52	1084
64	65.67	3.38	7.06	5.25	80.00	67.18	76.00	2	1 3/4 x 9	52	1575

- Dimensions are in inches where applicable; To convert inches to millimeters, multiply by 25.4.
- Ductile Iron ASTM A536
- Machined, Drilled, and Faced in accordance with ANSI/AWWA C110/21.10, ASME B16.1 Class 125 and ASME B16.42 Class 150
- Rated for maximum working pressure 250 psi
- Threaded in accordance with ASME B1.20.1 adapted to ductile iron pipe O.D.

# Threaded X-Heavy Flanges for Ductile Iron Flanged Pipe



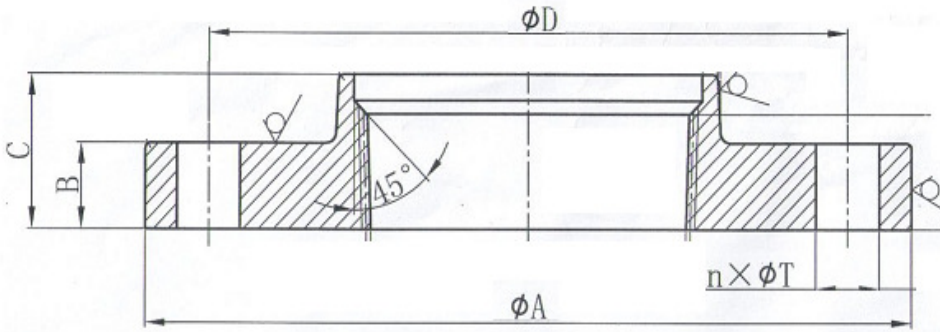
FOR DUCTILE IRON PIPE  
ANSI/AWWA C115/121.15

Nominal Pipe Size	Flange OD (A)	Bolt Circle (B)	Bolt Hole Diameter	Flange Thickness (C)	Length Thru Hub (D)	Number of Holes	Weight (lbs.)
3	8.25	6.62	0.875	1.06	1.56	8	12
4	10.00	7.88	0.875	1.19	1.69	8	20
6	12.50	10.62	0.875	1.38	1.94	12	32
8	15.00	13.00	1.00	1.56	2.18	12	51
10	17.50	15.25	1.125	1.87	2.44	16	77
12	20.50	17.75	1.25	1.93	2.56	16	103
14	23.00	20.25	1.25	2.12	2.68	20	148
16	25.50	22.50	1.375	2.19	2.87	20	171
18	28.00	24.75	1.375	2.31	3.00	24	255
20	30.50	27.00	1.375	2.44	3.31	24	270
24	36.00	32.00	1.625	2.75	3.75	24	310

- Dimensions are in inches where applicable; To convert inches to millimeters, multiply by 25.4.
- Sizes 3"-24" Ductile Iron (C115/A21.15)
- Machined, Drilled, and Faced in accordance with ANSI B16.1 – Class 250
- Bolt holes in accordance with ANSI A21.10
- Flanges have 0.06" raised face
- Threaded in accordance with ANSI B2.1



# 6-Hole Ductile Iron Threaded Flange Specifications



6" Ductile Iron Threaded Flanges  
with 6 Holes for Ductile Iron Pipe  
ANSI / AWWA C115/A21.15

Ref: DPF066H

UV Item Number	Nom Pipe Size	Flange Outer Diameter (A)	Bolt Circle (D)	B. Hole Diameter (T)	No. of Holes (n)	Flange Thickness (B)	Length Through Hub (C)	Weight (lbs)
DPF066H	6"	11.00	9.50	0.88	6	1.00	2.00	25

- Dimensions are in inches where applicable; To convert inches to millimeters, multiply by 25.4.
- Ductile Iron ASTM A536 (65-45-12)
- Machined, Drilled & Faced in accordance ANSI B16.1 - Class 125 (only change is No of Bolt Holes 6 instead of 8)
- Rated for a maximum working pressure 250 psi
- Coating : Bare
- Threaded in accordance with ANSI /ASME B 1.20.1

# Ductile Spools Minimum Lengths

Diameter	125# FLG x 125# FLG	125# FLG x 250# FLG	250# FLG x 250# FLG	125# FLG x MJ	250# FLG x MJ	MJ x MJ	FLG x G	G x G
3"	4"	3 1 <sup>1</sup> / <sub>16</sub> "	3 5 <sup>8</sup> / <sub>16</sub> "	6 1 <sup>4</sup> / <sub>16</sub> "	6 3 <sup>16</sup> / <sub>16</sub> "	8 3 <sup>4</sup> / <sub>16</sub> "	4"	3 1 <sup>2</sup> / <sub>2</sub> "
4"	4"	3 7 <sup>8</sup> / <sub>16</sub> "	3 7 <sup>8</sup> / <sub>16</sub> "	6 7 <sup>16</sup> / <sub>16</sub> "	6 7 <sup>16</sup> / <sub>16</sub> "	9"	4"	3 1 <sup>2</sup> / <sub>2</sub> "
6"	4"	4 3 <sup>8</sup> / <sub>16</sub> "	4 3 <sup>8</sup> / <sub>16</sub> "	6 7 <sup>8</sup> / <sub>16</sub> "	6 7 <sup>8</sup> / <sub>16</sub> "	9 3 <sup>8</sup> / <sub>16</sub> "	4 1 <sup>4</sup> / <sub>16</sub> "	3 1 <sup>2</sup> / <sub>2</sub> "
8"	5"	4 15 <sup>16</sup> / <sub>16</sub> "	4 7 <sup>8</sup> / <sub>16</sub> "	7 1 <sup>2</sup> / <sub>2</sub> "	7 7 <sup>16</sup> / <sub>16</sub> "	10"	4 3 <sup>4</sup> / <sub>16</sub> "	3 3 <sup>4</sup> / <sub>4</sub> "
10"	5 3 <sup>8</sup> / <sub>16</sub> "	4 7 <sup>8</sup> / <sub>16</sub> "	5 3 <sup>8</sup> / <sub>16</sub> "	7 3 <sup>4</sup> / <sub>16</sub> "	7 7 <sup>16</sup> / <sub>16</sub> "	10 1 <sup>4</sup> / <sub>16</sub> "	5"	3 3 <sup>4</sup> / <sub>4</sub> "
12"	5 5 <sup>8</sup> / <sub>16</sub> "	5 1 <sup>16</sup> / <sub>16</sub> "	5 5 <sup>8</sup> / <sub>16</sub> "	8 1 <sup>8</sup> / <sub>16</sub> "	8 3 <sup>16</sup> / <sub>16</sub> "	10 3 <sup>4</sup> / <sub>16</sub> "	5 1 <sup>4</sup> / <sub>16</sub> "	3 3 <sup>4</sup> / <sub>4</sub> "
14"	5 3 <sup>4</sup> / <sub>16</sub> "	5 13 <sup>16</sup> / <sub>16</sub> "	5 7 <sup>8</sup> / <sub>16</sub> "	9 5 <sup>8</sup> / <sub>16</sub> "	9 11 <sup>16</sup> / <sub>16</sub> "	13 1 <sup>2</sup> / <sub>2</sub> "	5 1 <sup>2</sup> / <sub>2</sub> "	3 3 <sup>4</sup> / <sub>4</sub> "
16"	5 3 <sup>4</sup> / <sub>16</sub> "	6"	6 1 <sup>4</sup> / <sub>16</sub> "	9 7 <sup>8</sup> / <sub>16</sub> "	10 1 <sup>8</sup> / <sub>16</sub> "	14"	6"	4 1 <sup>2</sup> / <sub>2</sub> "
18"	6"	6 3 <sup>8</sup> / <sub>16</sub> "	6 1 <sup>2</sup> / <sub>2</sub> "	10 3 <sup>8</sup> / <sub>16</sub> "	10 1 <sup>2</sup> / <sub>2</sub> "	14 1 <sup>2</sup> / <sub>2</sub> "	6 3 <sup>4</sup> / <sub>16</sub> "	4 1 <sup>2</sup> / <sub>2</sub> "
20"	6 1 <sup>2</sup> / <sub>2</sub> "	6 13 <sup>16</sup> / <sub>16</sub> "	7 1 <sup>8</sup> / <sub>16</sub> "	10 3 <sup>4</sup> / <sub>16</sub> "	11 1 <sup>16</sup> / <sub>16</sub> "	15"	6 1 <sup>2</sup> / <sub>2</sub> "	4 1 <sup>2</sup> / <sub>2</sub> "
24"	7"	7 1 <sup>2</sup> / <sub>2</sub> "	8"	11 1 <sup>4</sup> / <sub>16</sub> "	11 3 <sup>4</sup> / <sub>16</sub> "	15 1 <sup>2</sup> / <sub>2</sub> "	7"	4 1 <sup>2</sup> / <sub>2</sub> "
30"	8 1 <sup>2</sup> / <sub>2</sub> "	9"	9 7 <sup>16</sup> / <sub>16</sub> "	13 5 <sup>8</sup> / <sub>16</sub> "	14 1 <sup>8</sup> / <sub>16</sub> "	18 3 <sup>4</sup> / <sub>16</sub> "	7 3 <sup>4</sup> / <sub>16</sub> "	5"
36"	9 1 <sup>2</sup> / <sub>2</sub> "	10 1 <sup>8</sup> / <sub>16</sub> "	10 5 <sup>16</sup> / <sub>16</sub> "	15"	15 1 <sup>8</sup> / <sub>16</sub> "	20"	8 1 <sup>2</sup> / <sub>2</sub> "	5"

\*Note: Lengths void if piece requires a wall collar or thrust ring.



# ANSI / AWWA Standards

Custom Pipe & Fabrication meets or exceeds the latest revision of the following ANSI/AWWA standards:

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**C104/A21.4** Cement-Mortar Lining for Ductile-Iron Pipe and Fittings

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**C115/A21.15** Flanged Ductile-Iron Pipe With Ductile-Iron or Gray-Iron Threaded Flanges

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**C116/A21.16** Protective Fusion-Bonded Epoxy Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings

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**C200** Steel Water Pipe, 6 In. (150 mm) and Larger

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**C207** Steel Pipe Flanges for Waterworks Service Sizes 4 In. Through 144 In. (100 mm Through 3,600 mm)

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**C210** Liquid-Epoxy Coating Systems for the Interior and Exterior of Steel Water Pipelines

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**C213** Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines

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**C606** Grooved and Shouldered Joints





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