

**TREATING IRONS, UNIONS, SWIVELS & CIRCULATING HEADS INDEX**

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CEMENTING AND CIRCULATING HOSES

General Description

Introduction

PARVEEN'S Cementing & Circulating Hoses are manufactured in various sizes (from 1" to 4") and in various configurations to meet virtually all needs of Oil Industry. These can handle a wide variety of fluids at cold working pressure up to 20,000 PSI. These hoses are made in steel to meet ASTM/AISI standards, are rugged, fold up easily and quickly for transportation. These are specially heat treated to get the desired hardness to suit various applications. Even sizes beyond 4" can be supplied to meet customer requirement.

Service Applications

These hoses are recommended for service in Low Pressure Lines, High & Extra High pressure Lines, Discharge Lines, Water Lines, Well Testing Lines, Cementing & Circulating Lines, Temporary Flow Lines and Extra Pressure Abrasive Applications.

Swivel Joint Connections

PARVEEN'S hoses features PARVEEN'S Swivel Joints which provide flexibility, maximize flow characteristics and absorb shock vibrations.

Wing Unions

PARVEEN'S wing unions end connections provided in the cementing hoses ensure pressure tight and fast make up and quick break-out without threading, welding or special connections.

Sour Gas Service

PARVEEN'S cementing hoses are available in various sizes and configurations for sour gas service as per NACE standards MR-01-75 and API standard RP-14E up to cold working pressure of 15000 PSI.

Method of Construction

These hoses can be manufactured either threaded or integral or welded constructions or with NPS end connections.

Standard Lengths of Hoses

Following standard lengths are available. These lengths are fully extended lengths of the unfolded hoses:

Threaded Hose - 12 feet

NPS Hose - 12 feet

Welded Hose - 12 feet

Integral Hose - 12 feet

Other lengths can also be provided on request. PARVEEN'S hoses are also available in half section configuration. In this case, stated length will be half of the length of comparable full length section. The loop can be divided into various sections depending upon the number of unions in the loop. The loop is generally in 4 & 2 sections.

Swivel Joint Styles

PARVEEN'S Swivel Joints can be manufactured equivalent to style 10, 20, 30, 40, 50, 60, 70 & 80. Normally the most used style in various applications in style 50 and style 10 but PARVEEN'S can cater for any style to meet customer requirements.

Pressure Ratings

Hoses with following ratings are available as given in table below.

Interchangeability

PARVEEN'S hammer unions or end connections are interchangeable with the unions and connections of all the major manufacturers of these products in the world.



CEMENTING AND CIRCULATING HOSES

CEMENTING & CIRCULATING HOSES SWIVEL JOINTS	COLOUR CODE	SERVICE	CONSTRUCTIONS DETAILS				NOMINAL SIZE (INCHES)						CWP (PSI)	UNION FIGURE	
			THREADED	NPS	INTEGRAL	WELDED	1"	1 1/2"	2"	2 1/2"	3"	4"			
SHORT SWEEP SWIVEL JOINT (1", 1 1/2", 2", 2 1/2", 3", 4")	OLIVE GREEN	SOUR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	100 PSI TO 6000PSI	FIG-602
	YELLOW/SILVER	STD	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	100 PSI TO 6000PSI	FIG-602
	BLACK	STD	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10000 PSI	FIG-1002
	OLIVE GREEN	SOUR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10000 PSI	FIG-1502
	BROWN	STD	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6000 PSI TO 7500 PSI	FIG-602 OR FIG-1002
LONG SWEEP SWIVEL JOINT (1", 1 1/2", 2", 2 1/2", 3", 4")	OLIVE GREEN	SOUR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	6000 PSI TO 7500 PSI	FIG-602 OR FIG-1002
	BLACK	STD	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	10000 PSI	FIG-1002 OR FIG-1502
	OLIVE GREEN	SOUR	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	15000 PSI	FIG-2202 OR FIG-1502
	RED	STD	-	-	✓	✓	✓	✓	✓	✓	✓	✓	✓	15000 PSI	FIG-1502
	LIGHT BLUE	STD	-	-	✓	-	-	✓	-	✓	-	-	-	20000 PSI	FIG-2002

CEMENTING & CIRCULATING HOSES

Parveen's typical steel Cementing & Circulating Hoses are shown below with its model numbers. These hoses have either Threaded ends or NPS or Integral or Welded ends.

Model Number indicates:

- i. Type of Sweep i.e. Long Sweep or Short Sweep (i.e. LS or SS)
- ii. Style of Swivel Joints used (i.e. Style 10, Style 50 or Style 10 & Style 50 both & numbers of swivel joints i.e.1 or 2)
- iii. Numbers of Unions used (i.e. 1, 2 or 4 etc.
- iv. Type of end connection i.e. Threaded (T), NPS (N), Integral (I) or Welded (W)

Example: Model Number PLSCCH-50-2-4U-1 indicates.

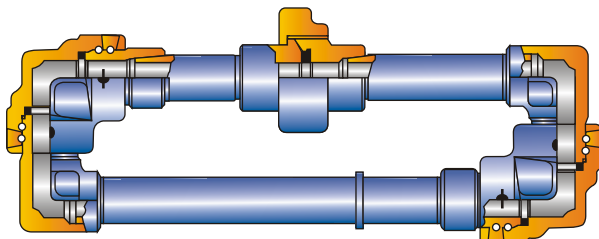
- i. **PLSCCH** : Parveen Long Sweep Cementing & Circulating Hose.
- ii. **50-2** : Style 50 Swivel Joint, 2 Numbers.
- iii. **4U** : 4 Numbers of Union
- iv. **I** : Integral Union End Connection

I. THREADED ENDS USING API LINE PIPE THREADS

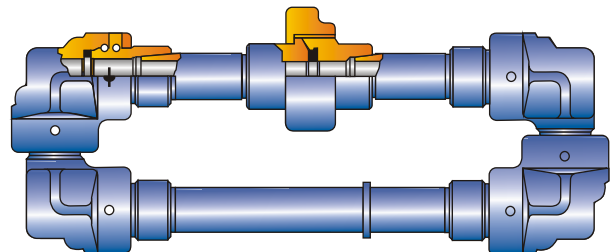
UNION (THREADED)	1 NO.	1 NO.	2 NOS.	2 NOS.	4 NOS.	4 NOS.
S. JOINT (THREADED)	STYLE-50 (2 NOS.)	STYLE-10 (2 NOS.)	STYLE-50 (2 NOS.)	STYLE-10 (2 NOS.)	STYLE-50 (2 NOS.)	STYLE-10 (2 NOS.)
MODEL NUMBER.	PSSCCH-50-2-1U-T	PSSCCH-10-2-1U-T	PSSCCH-50-2-2U-T	PSSCCH-10-2-2U-T	PSSCCH-50-2-4U-T	PSSCCH-10-2-4U-T

CONFIGURATION OF THREADED END MODELS

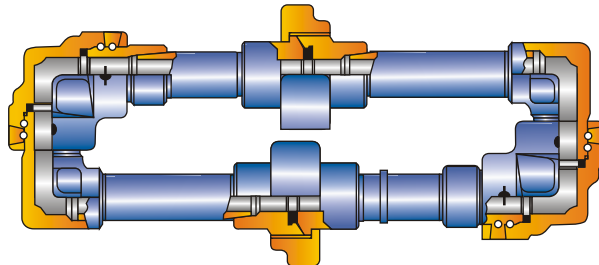
MODEL NUMBER: PSSCCH-50-2-1U-T



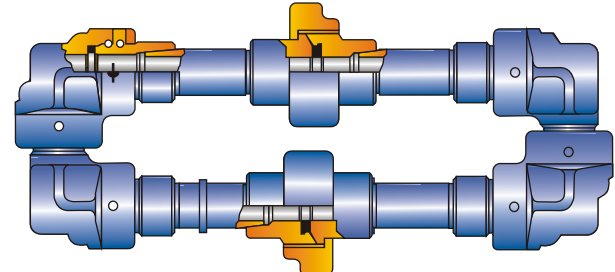
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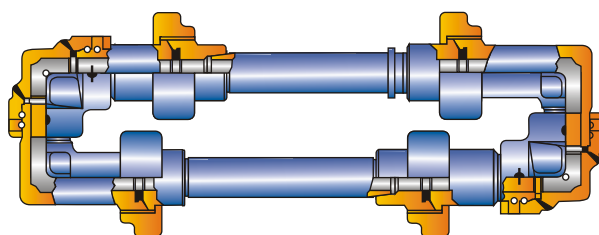
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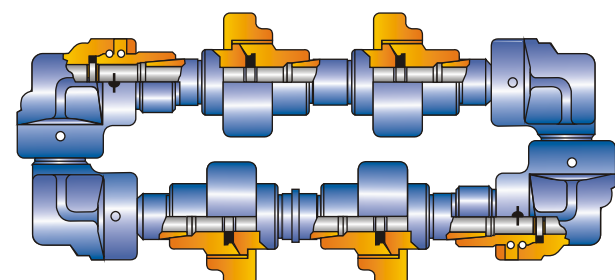
MODEL NUMBER: PSSCCH-10-2-2U-T



MODEL NUMBER: PSSCCH-50-2-4U-T



MODEL NUMBER: PSSCCH-10-2-4U-T





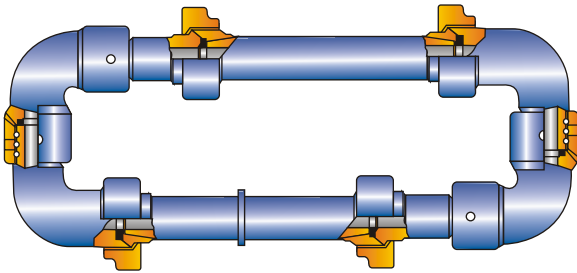
CEMENTING & CIRCULATING HOSES

2. NPS ENDS

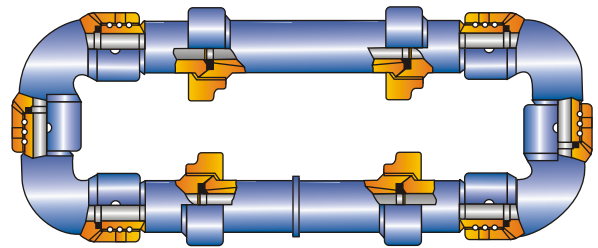
UNION	4 NOS.	4 NOS.	4 NOS.	4 NOS.
SWIVEL JOINT UNION END	STYLE-50 (2 NOS.)	STYLE- 10 (2 NOS.)	STYLE-50 (2 NOS.)	STYLE- 10 (2 NOS.)
MODEL NUMBER.	PLSCCH-50-2-4U-N	PLSCCH-10-2-4U-N	PSSCH-50-2-4U-N	PSSCCH-10-2-4U-N

CONFIGURATION OF NPS END MODELS

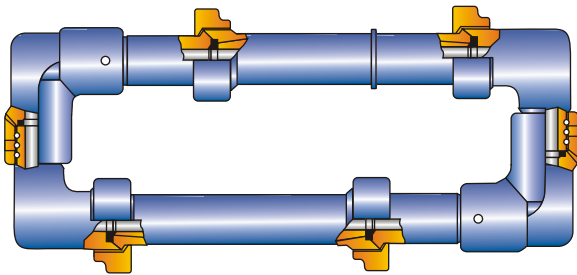
MODEL NUMBER: PLSCCH-50-2-4U-N



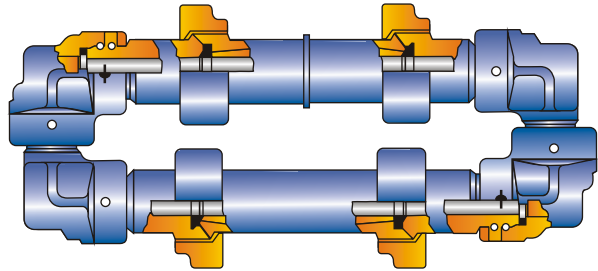
MODEL NUMBER: PLSSCCH-10-2-4U-N



MODEL NUMBER: PSSCCH-50-2-4U-N



MODEL NUMBER: PSSCCH-10-2-4U-N

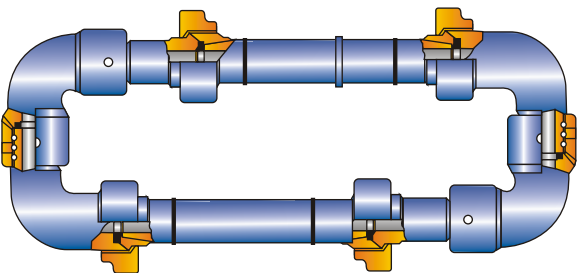


3. WELDED ENDS

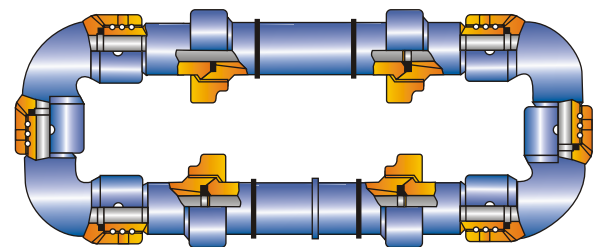
UNION	4 NOS.	4 NOS.	4 NOS.	4 NOS.
SWIVEL JOINT UNION END	STYLE-50 (2 NOS.)	STYLE- 10 (2 NOS.)	STYLE-50 (2 NOS.)	STYLE- 10 (2 NOS.)
MODEL NUMBER.	PLSCCH-50-2-4U-W	PLSCCH-10-2-4U-W	PSSCCH-50-2-4U-W	PSSCCH-10-2-4U-W

CONFIGURATION OF WELDED END MODELS

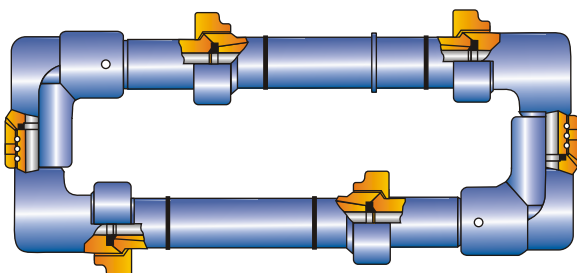
MODEL NUMBER: PLSCCH-50-2-4U-W



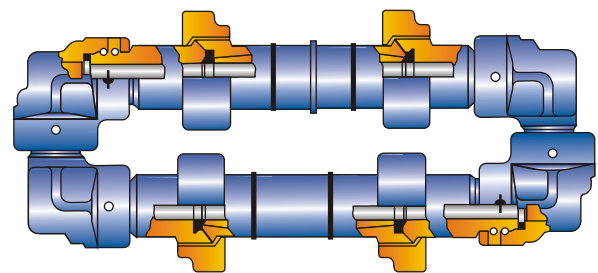
MODEL NUMBER: PLSSCCH-10-2-4U-W



MODEL NUMBER: PSSCCH-50-2-4U-W



MODEL NUMBER: PSSCCH-10-2-4U-W



Treating Irons, Unions, Swivels & Circulating Heads



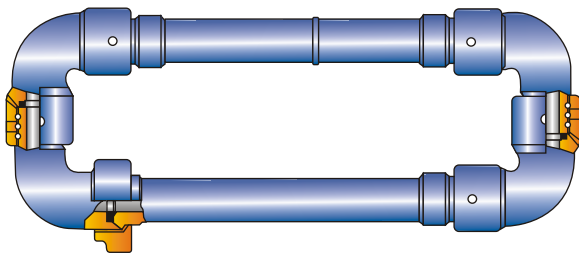
CEMENTING & CIRCULATING HOSES

4. INTEGRAL UNION ENDS

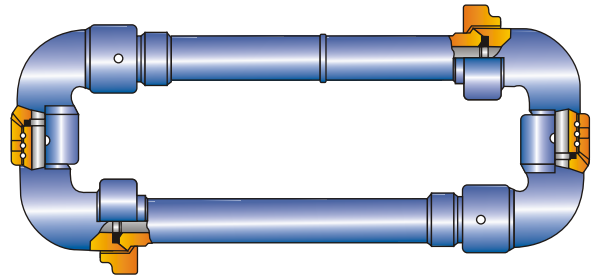
UNION	1 NO.	2 NOS.	2 NOS.	1 NO.	4 NOS.	4 NOS.
SWIVEL JOINT (UNION ENDS)	STYLE-50 (1 NO)	STYLE- 50 (2 NOS.)	STYLE-10 (2 NOS.)	STYLE-10 (2 NOS.)	STYLE-50 (2 NOS.)	STYLE-10 (2 NOS.)
MODEL NUMBER	PLSCCH-50-1-10- 1-1U-I	PLSCCH-50-2-2U-I	PLSCCH-10-2-2U-I	PLSCCH-10-2-1U-I	PLSCCH-50-2-4U-I	PLSCCH-10-2-4U-I

CONFIGURATION OF INTEGRAL UNION END MODELS

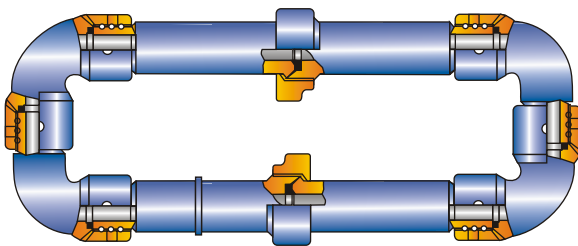
MODEL NUMBER: PLSCCH-50-1-10-1-1U-I



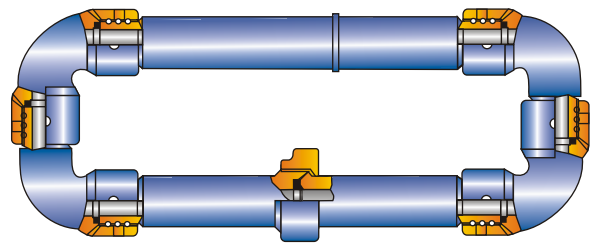
MODEL NUMBER: PLSCCH-50-2-2U-I



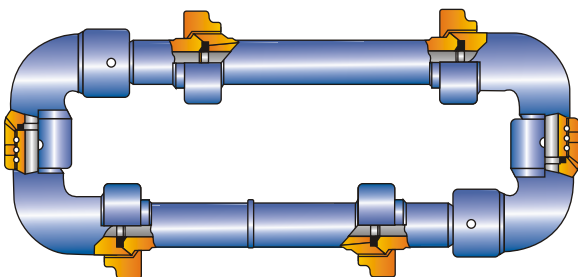
MODEL NUMBER: PLSCCH-10-2-2U-I



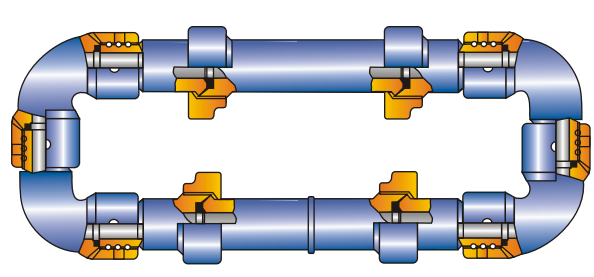
MODEL NUMBER: PLSCCH-10-2-1U-I



MODEL NUMBER: PLSCCH-50-2-4U-I



MODEL NUMBER: PLSCCH-10-2-4U-I



Treating Irons, Unions,
Swivels & Circulating Heads

SWIVEL JOINTS

Products Description

Swivel Joints are manufactured both for standard service & sour service. Long sweep swivel joints are designed generally from 6000 PSI CWP to 20,000 PSI CWP, both for standard and sour service and ensure better flow characteristics. Smooth and round bore design keeps pressure drop low and minimizes turbulence.

Long sweep sour service swivel joints are manufactured in accordance with National Association of Corrosion Engineers (NACE) standard, MR-01 - 75 (Latest) and the American Petroleum Institute's (API) standard RP -14 E.

PARVEEN Swivel Joints have following features

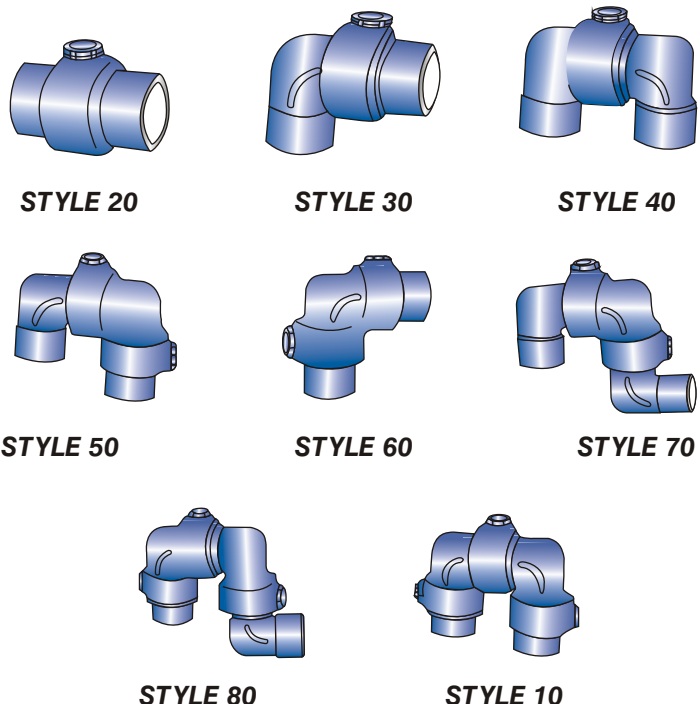
- Swivel Joints are made from carbon steel and low alloy steel and are specially heat treated for controlled hardness.
- All union ends are interchangeable with other manufacturers adhering to Industry Standards. All long sweep swivel joints-Jar- sour service have union ends of corresponding pressure rating.
- Swivel joints for sour service are provided with snap rings to assure high load bearing capacity.
- These swivel joints are provided with dual packing arrangement. Primary seal with stainless steel anti-extrusion ring and an additional 'O' ring between ball races and primary seal is provided which acts as a secondary seal. When leakage occurs, it is diverted through the leak detection port. A leak at this port indicates the necessity of primary seal replacement.
- The grease retainer is self-relieving to prevent pressure accumulation in the ball race chamber if leakage occurs through the secondary packing.

PARVEEN's Swivel Joints bearings assure long and dependable service. These bearings are either dual race or tri race ball bearings and are matched to load capacity and service conditions. All ball races are either carburized and hardened or use snap ring in stainless steel.

Style of Swivel Joints

PARVEEN manufactures all styles of swivel joints to suit various service condition and installations. These are style 10, 20, 30, 40, 50, 60, 70, 80 as described below:

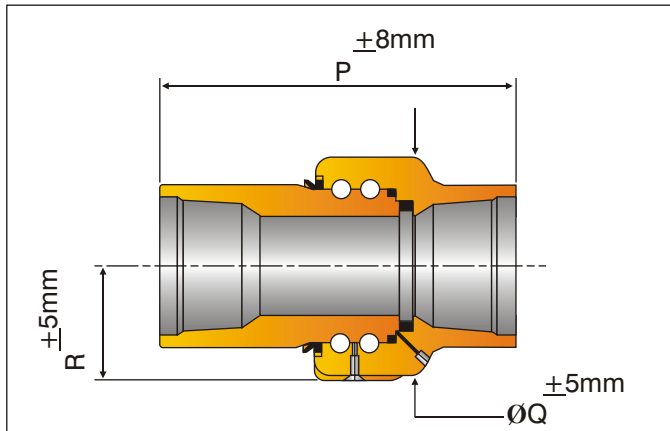
1. STYLE 10
Three swivels with two elbows.
2. STYLE 20
Single swivel coupling.
3. STYLE 30
Single swivel with one elbow
4. STYLE 40
Single swivel with two elbows.
5. STYLE 50
Two swivels with two elbows
6. STYLE 60
Two swivels with one elbow
7. STYLE 70
Two swivels with three elbows
8. STYLE 80
Three swivels with three elbows.



Sizes of Swivel Joint

PARVEEN manufactures size 1" to 4" for normal application. PARVEEN can also manufacture higher/lower sizes if required by customer.

SHORT SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-20

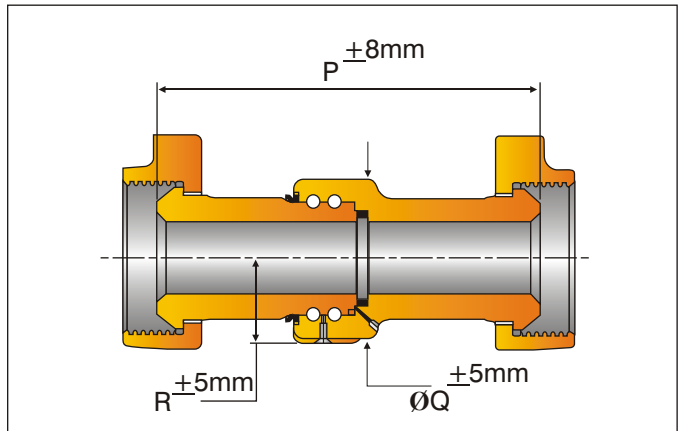


STYLE - 20 SHORT SWEEP SWIVEL JOINT

END CONNECTION = LP THREAD

MODEL:- PSSSJ - 20T

SIZE	P (MM)	P (INCH)	ØQ (MM)	ØQ (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	133	5.24	64	2.52	41	1.61	4.40	2
1 1/2"	140	5.51	75	2.95	46	1.81	5.84	2.65
2"	170	6.69	103	4.06	56	2.20	15.43	7.0
2 1/2"	211	8.31	115	4.53	63	2.48	19.30	8.75
3"	234	9.21	144	5.67	76	3.0	34.06	15.45
4"	246	9.68	175	6.88	91.5	3.60	53.80	24.40

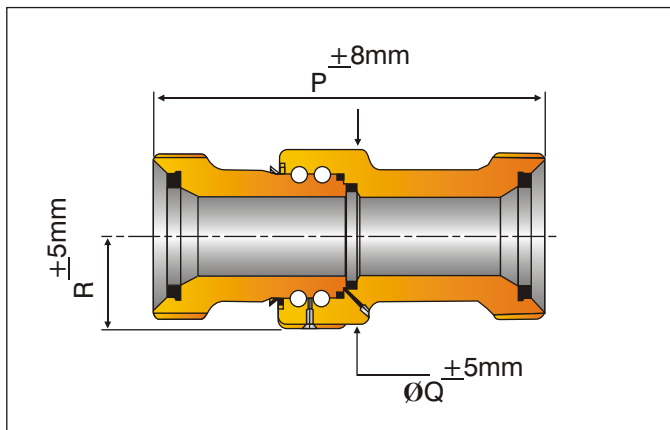


STYLE - 20 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X M) FIG.602/1002/1502

MODEL:- PSSSJ - 20MM

SIZE	P (MM)	P (INCH)	ØQ (MM)	ØQ (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	165	6.49	64	2.52	41	1.61	9.15	4.15
1 1/2"	190	7.48	75	2.95	46	1.81	17.42	7.90
2"	215	8.46	103	4.06	56	2.20	34.74	15.76
2 1/2"	225	8.85	115	4.53	63	2.48	35.27	16.0
3"	223	9.17	144	5.67	76	3.0	52.68	23.9
4"	268	10.55	175	6.88	91.5	3.60	74.62	33.85

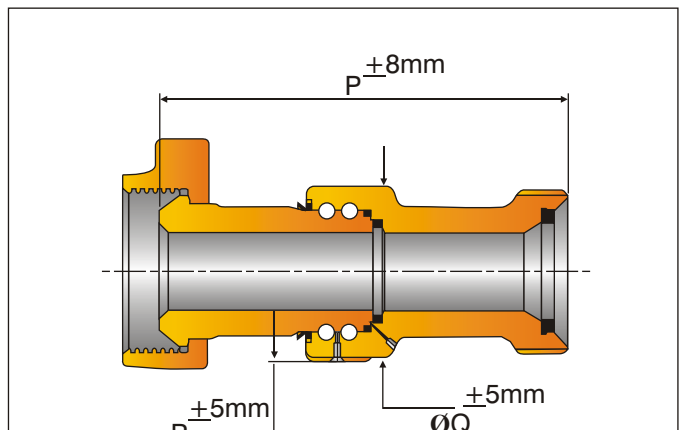


STYLE - 20 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (F X F) FIG.602/1002/1502

MODEL:- PSSSJ - 20FF

SIZE	P (MM)	P (INCH)	ØQ (MM)	ØQ (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	165	6.49	64	2.52	41	1.61	8.00	3.60
1 1/2"	190	7.48	75	2.95	46	1.81	9.92	4.50
2"	215	8.46	103	4.06	56	2.20	19.06	8.65
2 1/2"	225	8.85	115	4.53	63	2.48	28.54	12.95
3"	223	9.17	144	5.67	76	3.0	44.10	20.00
4"	268	10.55	175	6.88	91.5	3.60	60.40	27.4



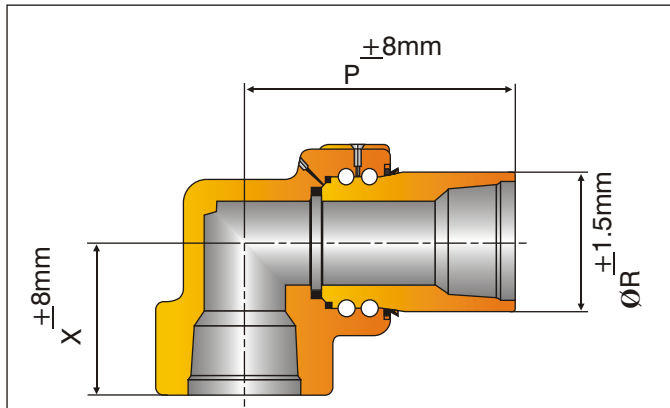
STYLE - 20 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X F) FIG.602/1002/1502

MODEL:- PSSSJ - 20MF

SIZE	P (MM)	P (INCH)	ØQ (MM)	ØQ (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	165	6.49	64	2.52	41	1.61	8.64	3.92
1 1/2"	190	7.48	75	2.95	46	1.81	14.10	6.40
2"	215	8.46	103	4.06	56	2.20	27.34	12.40
2 1/2"	225	8.85	115	4.53	63	2.48	33.14	15.15
3"	223	9.17	144	5.67	76	3.0	50.0	22.70
4"	268	10.55	175	6.88	91.5	3.60	70.0	31.70

SHORT SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-30

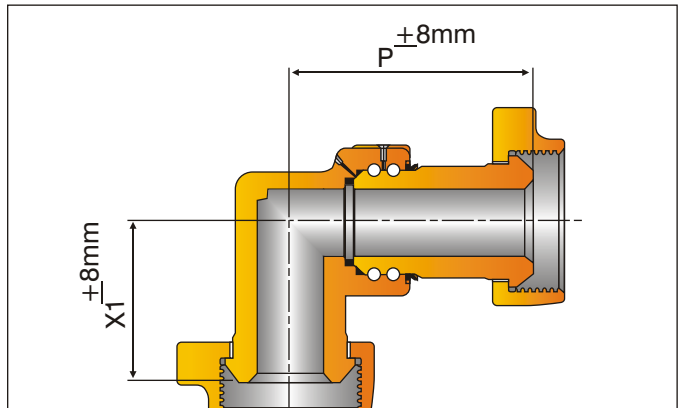


STYLE - 30 SHORT SWEEP SWIVEL JOINT

END CONNECTION = LP THREAD

MODEL:- PSSSJ - 30T

SIZE	P (MM)	P (INCH)	ØQ (MM)	ØQ (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	118	4.65	72	2.83	49	1.92	5.80	2.63
1 1/2"	121	4.76	75	2.95	61	2.40	7.82	3.55
2"	150	5.90	98	3.86	78	3.07	18.0	8.15
2 1/2"	182	7.16	120	4.72	90	3.54	24.80	11.25
3"	220	8.66	128	5.04	108	4.25	46.84	21.25
4"	252	9.92	158	6.22	132	5.19	64.81	29.4

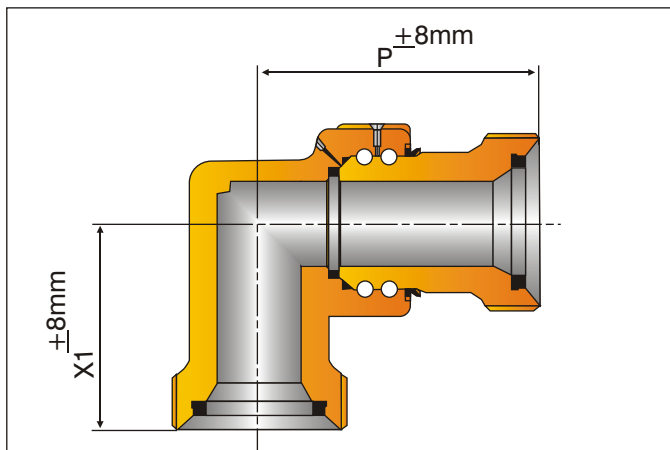


STYLE - 30 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X M) FIG.602/1002/1502

MODEL:- PSSSJ - 30MM

SIZE	P (MM)	P (INCH)	X1 (MM)	X1 (INCH)	WT. (LBSF)	WT. (KGF)
1"	118	4.65	153	6.02	10.7	4.85
1 1/2"	121	4.76	165	6.50	17.64	8.00
2"	150	5.90	198	7.80	37.14	16.85
2 1/2"	182	7.16	233	9.17	46.74	21.20
3"	220	8.66	271	10.67	68.68	31.15
4"	252	9.92	306	12.05	104.38	47.35

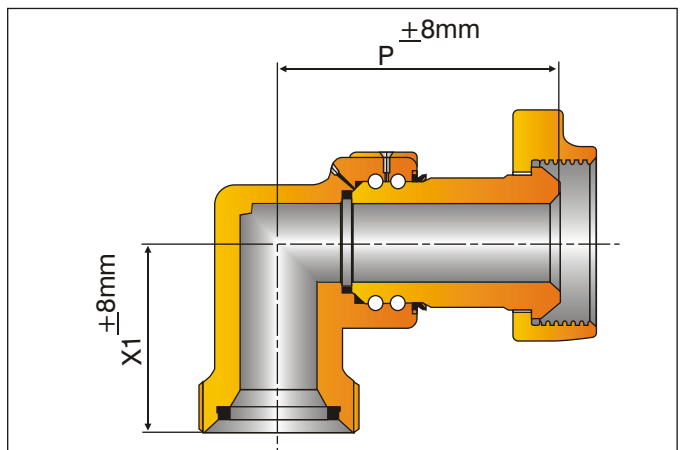


STYLE - 30 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (F X F) FIG.602/1002/1502

MODEL:- PSSSJ - 30FF

SIZE	P (MM)	P (INCH)	X1 (MM)	X1 (INCH)	WT. (LBSF)	WT. (KGF)
1"	118	4.65	153	6.02	9.20	4.17
1 1/2"	121	4.76	165	6.50	10.50	4.75
2"	150	5.90	198	7.80	23.14	10.5
2 1/2"	182	7.16	233	9.17	40.78	18.5
3"	220	8.66	271	10.67	60.62	27.5
4"	252	9.92	306	12.05	90.16	40.9



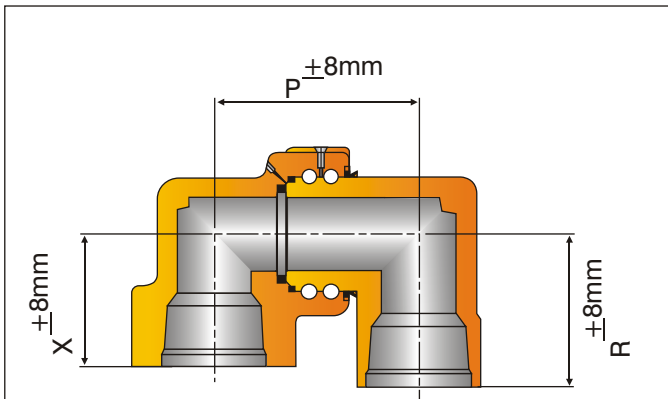
STYLE - 30 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X F) FIG.602/1002/1502

MODEL:- PSSSJ - 30MF

SIZE	P (MM)	P (INCH)	X1 (MM)	X1 (INCH)	WT. (LBSF)	WT. (KGF)
1"	118	4.65	153	6.02	10.6	4.8
1 1/2"	121	4.76	165	6.50	14.66	6.65
2"	150	5.90	198	7.80	31.41	14.25
2 1/2"	182	7.16	233	9.17	45.63	20.70
3"	220	8.66	271	10.67	66.58	30.20
4"	252	9.92	306	12.05	100.00	45.20

SHORT SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-40

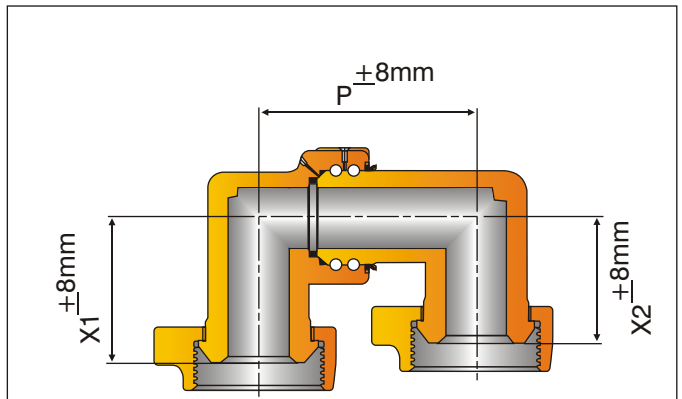


STYLE - 40 SHORT SWEEP SWIVEL JOINT

END CONNECTION = LP THREAD

MODEL:- PSSSJ - 40T

SIZE	P (MM)	P (INCH)	X (MM)	X (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	72	2.83	70	2.75	6.92	3.14
1 1/2"	110	4.33	75	2.95	90	3.54	10.36	4.70
2"	152	5.98	98	3.86	110	4.33	24.25	11.0
2 1/2"	195	7.67	120	4.72	130	5.11	33.62	15.25
3"	202	7.95	128	5.03	110	4.33	52.91	24.0
4"	260	10.23	158	6.22	130	5.11	82.67	37.5

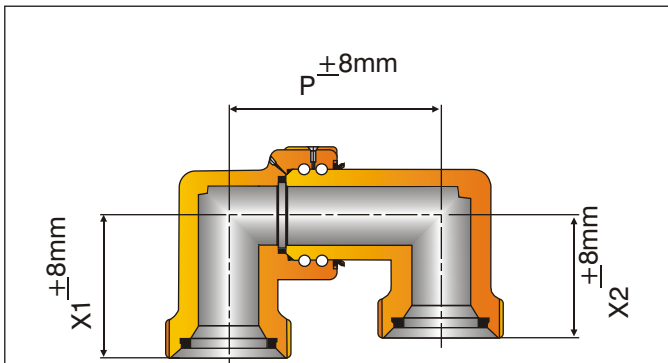


STYLE - 40 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X M) FIG.602/1002/1502

MODEL:- PSSSJ - 40MM

SIZE	P (MM)	P (INCH)	X1 (MM)	X1 (INCH)	X2 (MM)	X2 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	153	6.02	118	4.65	12.34	5.6
1 1/2"	110	4.33	165	6.50	121	4.75	18.52	8.4
2"	152	5.98	198	7.80	150	5.90	45.0	20.4
2 1/2"	195	7.67	233	9.17	182	7.16	58.00	26.3
3"	202	7.95	271	10.67	220	8.66	79.00	35.8
4"	260	10.23	306	12.05	252	9.92	131.20	59.5

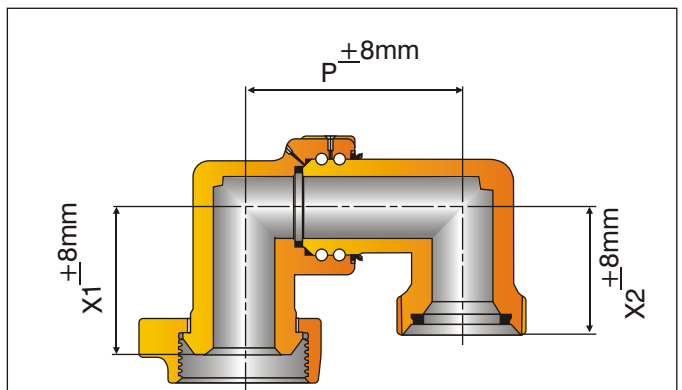


STYLE - 40 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (F X F) FIG.602/1002/1502

MODEL:- PSSSJ - 40FF

SIZE	P (MM)	P (INCH)	X1 (MM)	X1 (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	153	6.02	118	4.65	10.91	4.95
1 1/2"	110	4.33	165	6.50	121	4.75	14.0	6.35
2"	152	5.98	198	7.80	150	5.90	32.0	14.5
2 1/2"	195	7.67	233	9.17	182	7.16	53.0	24.0
3"	202	7.95	271	10.67	220	8.66	78.3	35.5
4"	260	10.23	306	12.05	252	9.92	124.0	56.25



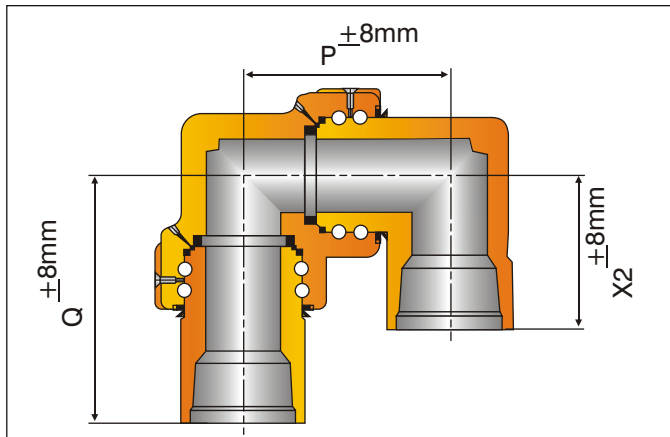
STYLE - 40 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X F) FIG.602/1002/1502

MODEL:- PSSSJ - 40MF

SIZE	P (MM)	P (INCH)	X1 (MM)	X1 (INCH)	X2 (MM)	X2 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	153	6.02	118	4.65	11.7	5.3
1 1/2"	110	4.33	165	6.50	121	4.75	17.2	7.8
2"	152	5.98	198	7.80	150	5.90	37.5	17.0
2 1/2"	195	7.67	233	9.17	182	7.16	54.2	24.6
3"	202	7.95	271	10.67	220	8.66	80.4	36.5
4"	260	10.23	306	12.05	252	9.92	128.7	58.4

SHORT SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-50

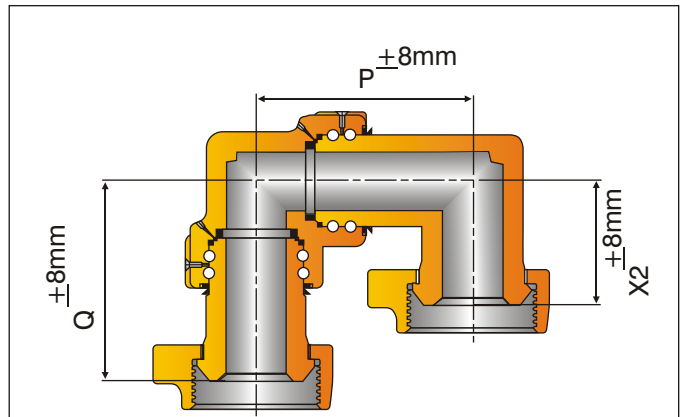


STYLE - 50 SHORT SWEEP SWIVEL JOINT

END CONNECTION = LP THREAD

MODEL:- PSSSJ - 50T

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	118	4.65	70	2.75	8.60	3.9
1 1/2"	110	4.33	121	4.75	90	3.54	12.90	5.85
2"	152	5.98	150	5.90	110	4.33	29.10	13.2
2 1/2"	195	7.67	182	7.16	130	5.11	39.68	18.0
3"	202	7.95	220	8.66	110	4.33	66.60	30.2
4"	260	10.23	252	9.22	130	5.11	98.0	44.4

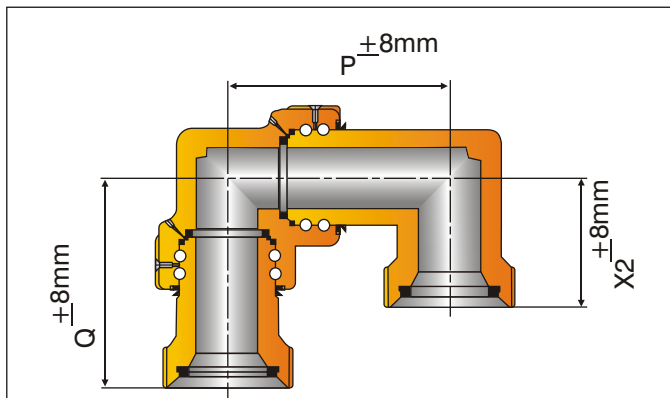


STYLE - 50 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X M) FIG.602/1002/1502

MODEL:- PSSSJ - 50MM

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	X2 (MM)	X2 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	153	6.02	118	4.65	13.80	6.26
1 1/2"	110	4.33	165	6.50	121	4.75	23.46	10.60
2"	152	5.98	198	7.80	150	5.90	51.72	23.46
2 1/2"	195	7.67	233	9.17	182	7.16	60.30	27.35
3"	202	7.95	271	10.67	220	8.66	96.00	43.55
4"	260	10.23	306	12.05	252	9.92	140.65	63.80

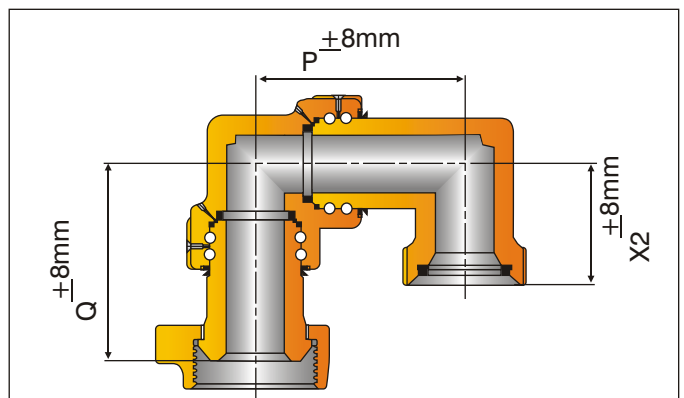


STYLE - 50 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (F X F) FIG.602/1002/1502

MODEL:- PSSSJ - 50FF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	X2 (MM)	X2 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	153	6.02	118	4.65	12.80	5.8
1 1/2"	110	4.33	165	6.50	121	4.75	18.0	8.15
2"	152	5.98	198	7.80	150	5.90	35.7	16.2
2 1/2"	195	7.67	233	9.17	182	7.16	51.2	23.25
3"	202	7.95	271	10.67	220	8.66	91.7	41.60
4"	260	10.23	306	12.05	252	9.92	128.70	58.38



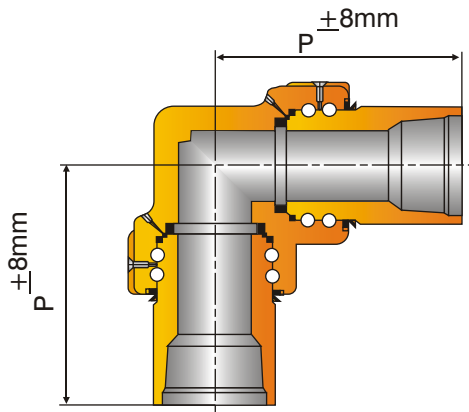
STYLE - 50 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X F) FIG.602/1002/1502

MODEL:- PSSSJ - 50MF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	X2 (MM)	X2 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	153	6.02	118	4.65	13.22	6.0
1 1/2"	110	4.33	165	6.50	121	4.75	22.40	10.0
2"	152	5.98	198	7.80	150	5.90	44.10	20.0
2 1/2"	195	7.67	233	9.17	182	7.16	56.43	25.6
3"	202	7.95	271	10.67	220	8.66	97.44	44.2
4"	260	10.23	306	12.05	252	9.92	138.11	62.65

SHORT SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-60

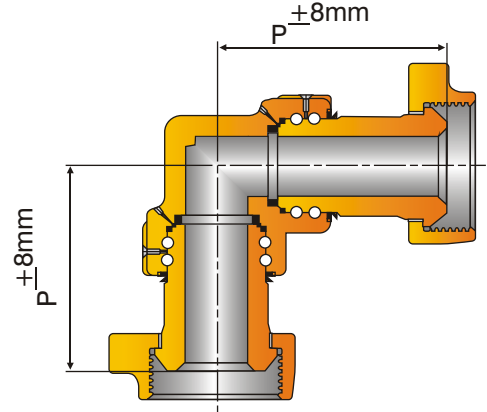


STYLE - 60 SHORT SWEEP SWIVEL JOINT

END CONNECTION = LP THREAD

MODEL:- PSSSJ - 60T

SIZE	P (MM)	P (INCH)	WT. (LBSF)	WT. (KGF)
1"	118	4.65	7.45	3.38
1 1/2"	121	4.75	10.36	4.70
2	150	5.90	23.15	10.50
2 1/2"	182	7.16	30.86	14.0
3"	220	8.66	60.6	27.5
4"	252	9.92	80.0	36.3

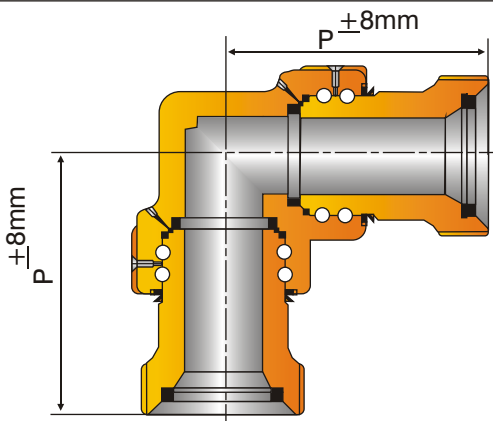


STYLE - 60 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X M) FIG.602/1002/1502

MODEL:- PSSSJ - 60MM

SIZE	P (MM)	P (INCH)	WT. (LBSF)	WT. (KGF)
1"	118	4.65	11.80	5.35
1 1/2"	121	4.75	21.60	9.80
2	150	5.90	42.00	19.0
2 1/2"	182	7.16	48.30	21.9
3"	220	8.66	82.45	37.4
4"	252	9.92	109.34	49.6

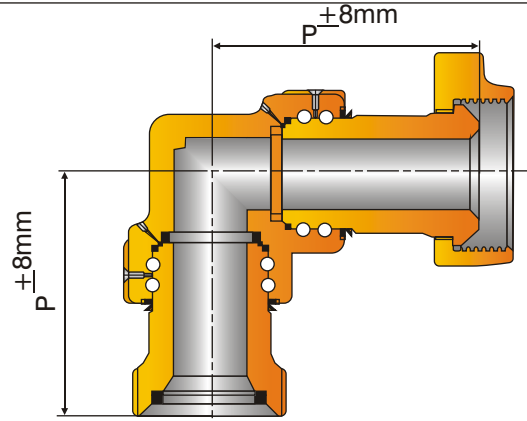


STYLE - 60 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (F X F) FIG.602/1002/1502

MODEL:- PSSSJ - 60FF

SIZE	P (MM)	P (INCH)	WT. (LBSF)	WT. (KGF)
1"	118	4.65	10.4	4.7
1 1/2"	121	4.75	13.2	6.0
2	150	5.90	25.3	11.5
2 1/2"	182	7.16	39.0	17.5
3"	220	8.66	70.5	32.0
4"	252	9.92	90.4	41.0



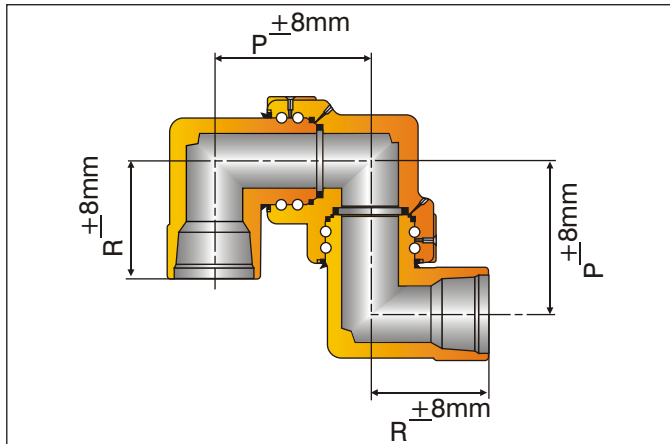
STYLE - 60 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X F) FIG.602/1002/1502

MODEL:- PSSSJ - 60MF

SIZE	P (MM)	P (INCH)	WT. (LBSF)	WT. (KGF)
1"	118	4.65	11.0	5.0
1 1/2"	121	4.75	18.0	8.0
2	150	5.90	42.76	19.4
2 1/2"	182	7.16	43.00	19.7
3"	220	8.66	76.5	34.7
4"	252	9.92	100.0	45.3

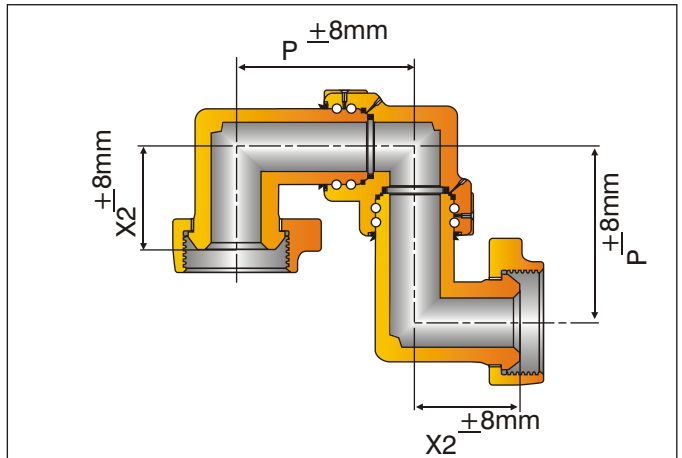
SHORT SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-70


STYLE - 70 SHORT SWEEP SWIVEL JOINT

END CONNECTION = LP THREAD

MODEL:- PSSSJ - 70T

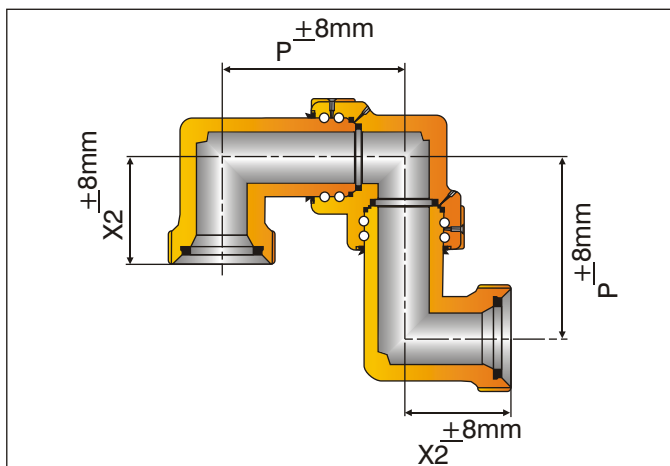
SIZE	P (MM)	P (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	70	2.75	10.0	4.4
1 1/2"	110	4.33	90	3.54	15.4	7.0
2"	152	5.98	110	4.33	35.0	15.85
2 1/2"	195	7.67	130	5.11	48.5	22.0
3"	202	7.95	110	4.33	73.0	33.0
4"	260	10.23	130	5.11	116.0	52.5


STYLE - 70 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X M) FIG.602/1002/1502

MODEL:- PSSSJ - 70MM

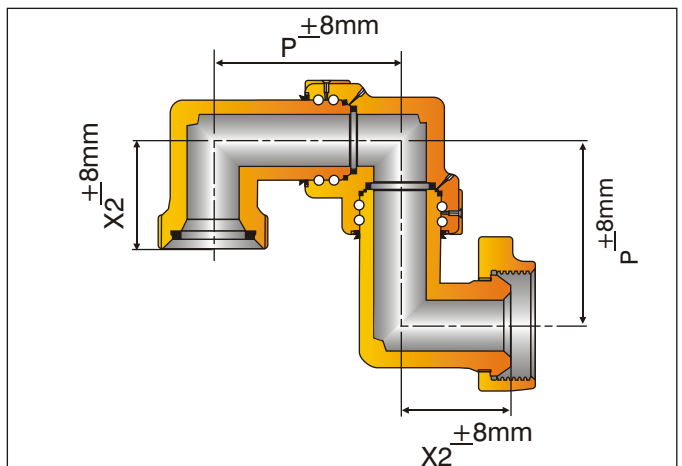
SIZE	P (MM)	P (INCH)	X2 (MM)	X2 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	118	4.65	14.0	6.3
1 1/2"	110	4.33	121	4.75	20.3	9.2
2"	152	5.98	150	5.90	43.0	19.5
2 1/2"	195	7.67	182	7.16	63.5	28.8
3"	202	7.95	220	8.66	106.0	48.0
4"	260	10.23	252	9.92	158.0	71.7


STYLE - 70 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (F X F) FIG.602/1002/1502

MODEL:- PSSSJ - 70FF

SIZE	P (MM)	P (INCH)	X2 (MM)	X2 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	118	4.65	6.94	3.15
1 1/2"	110	4.33	121	4.75	21.60	9.80
2"	152	5.98	150	5.90	50.26	22.8
2 1/2"	195	7.67	182	7.16	66.13	30.0
3"	202	7.95	220	8.66	104.7	47.5
4"	260	10.23	252	9.92	160.5	72.8

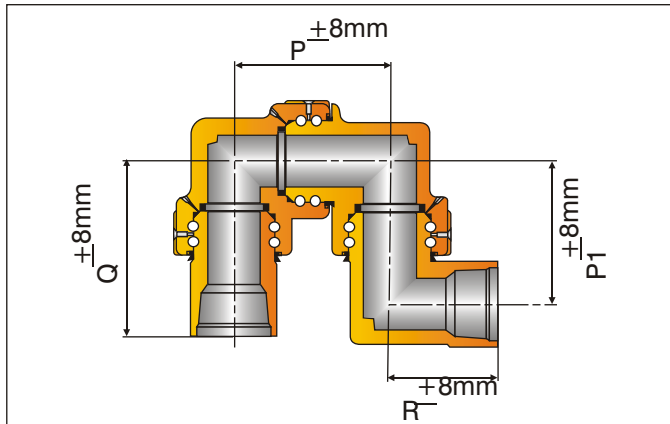

STYLE - 70 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X F) FIG.602/1002/1502

MODEL:- PSSSJ - 70MF

SIZE	P (MM)	P (INCH)	X2 (MM)	X2 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	118	4.65	15.0	6.8
1 1/2"	110	4.33	121	4.75	23.0	10.4
2"	152	5.98	150	5.90	58.0	26.2
2 1/2"	195	7.67	182	7.16	71.0	32.2
3"	202	7.95	220	8.66	103.0	46.7
4"	260	10.23	252	9.92	163.0	74.0

SHORT SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-80

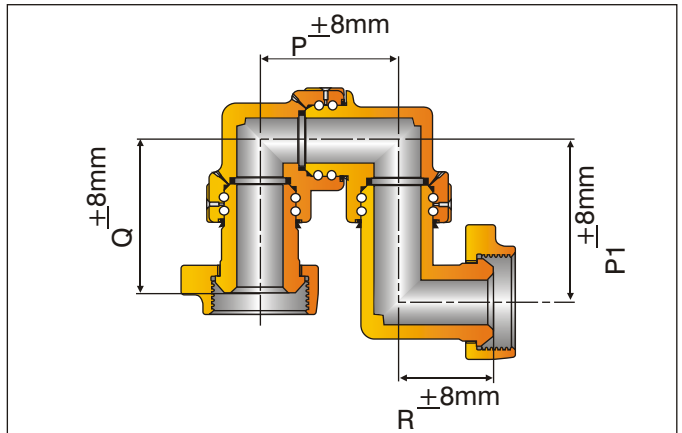


STYLE - 80 SHORT SWEEP SWIVEL JOINT

END CONNECTION = LP THREAD

MODEL:- PSSSJ - 80T

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	P1 (MM)	P1 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	118	4.65	70	2.75	108	4.25	9.0	4.0
1 1/2"	110	4.33	121	4.75	90	3.54	125	4.92	13.2	6.0
2"	152	5.98	150	5.90	110	4.33	167	6.57	29.0	13.0
2 1/2"	195	7.67	182	7.16	130	5.11	239	9.40	40.5	18.0
3"	202	7.95	220	8.66	110	4.33	221	8.70	66.0	30.0
4"	260	10.23	252	9.92	130	5.11	283	11.14	98.0	44.4

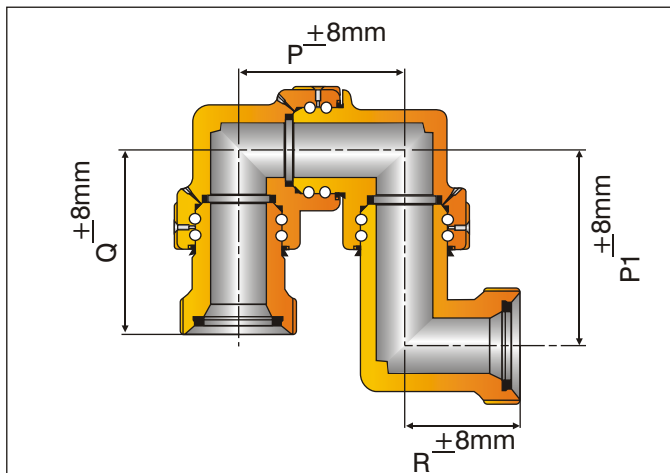


STYLE - 80 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X M) FIG.602/1002/1502

MODEL:- PSSSJ - 80MM

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	P1 (MM)	P1 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	118	4.65	118	4.65	108	4.25	18.0	8.0
1 1/2"	110	4.33	121	4.75	121	4.75	125	4.92	26.4	12.0
2"	152	5.98	150	5.90	150	5.90	167	6.57	60.6	27.5
2 1/2"	195	7.67	182	7.16	182	7.16	239	9.40	79.3	36.0
3"	202	7.95	220	8.66	220	8.66	221	8.70	130.0	59.0
4"	260	10.23	252	9.92	252	9.92	283	11.14	189.0	86.0

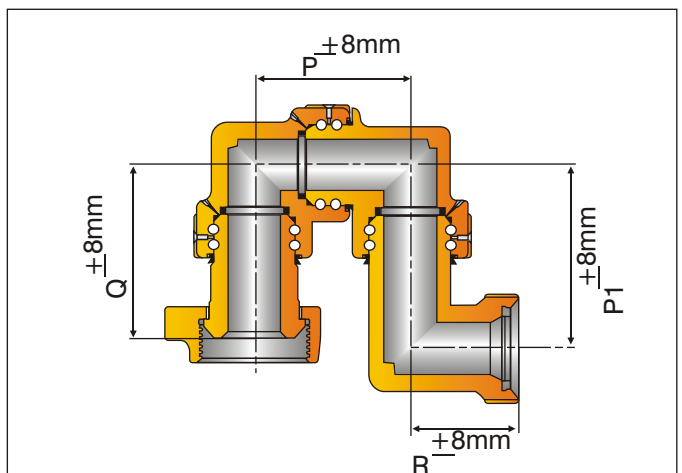


STYLE - 80 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (F X F) FIG.602/1002/1502

MODEL:- PSSSJ - 80FF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	P1 (MM)	P1 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	118	4.65	118	4.65	108	4.25	16.3	7.4
1 1/2"	110	4.33	121	4.75	121	4.75	125	4.92	21.1	9.6
2"	152	5.98	150	5.90	150	5.90	167	6.57	45.2	20.5
2 1/2"	195	7.67	182	7.16	182	7.16	239	9.40	70.8	32.1
3"	202	7.95	220	8.66	220	8.66	221	8.70	114.6	52.0
4"	260	10.23	252	9.92	252	9.92	283	11.14	172.0	78.0



STYLE - 80 SHORT SWEEP SWIVEL JOINT

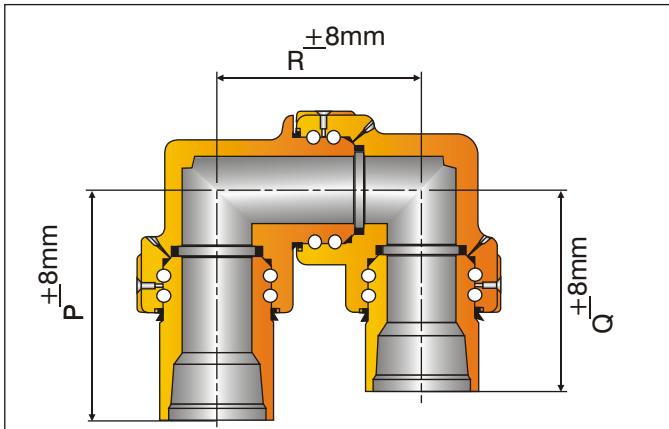
END CONNECTION = UNION (M X F) FIG.602/1002/1502

MODEL:- PSSSJ - 80MF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	P1 (MM)	P1 (INCH)	WT. (LBSF)	WT. (KGF)
1"	108	4.25	118	4.65	118	4.65	108	4.25	17.2	7.8
1 1/2"	110	4.33	121	4.75	121	4.75	125	4.92	25.4	11.5
2"	152	5.98	150	5.90	150	5.90	167	6.57	53.1	24.1
2 1/2"	195	7.67	182	7.16	182	7.16	239	9.40	75.6	34.3
3"	202	7.95	220	8.66	220	8.66	221	8.70	121.2	55.0
4"	260	10.23	252	9.92	252	9.92	283	11.14	169.0	76.5



SHORT SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-10

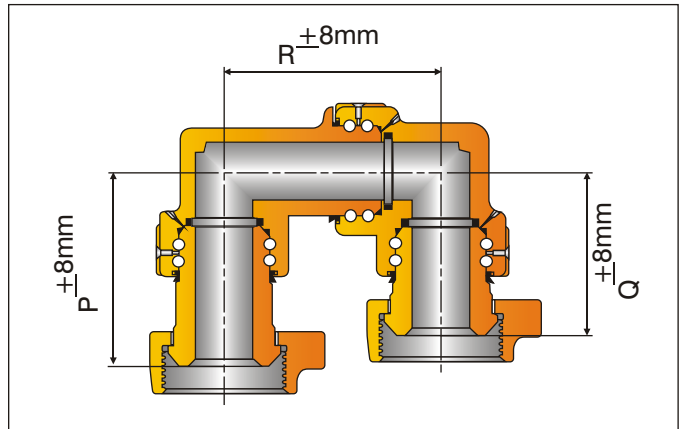


STYLE - 10 SHORT SWEEP SWIVEL JOINT

END CONNECTION = LP THREAD

MODEL:- PSSSJ - 10T

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	118	4.65	118	4.65	108	4.25	11.6	5.25
1 1/2"	136	5.35	121	4.75	110	4.33	15.0	6.70
2"	165	6.49	150	5.90	152	5.98	43.0	19.5
2 1/2"	225	8.85	182	7.16	195	7.67	51.0	23.0
3"	240	9.44	220	8.66	202	7.95	86.0	39.0
4"	275	10.82	252	9.92	260	10.23	126.3	57.3

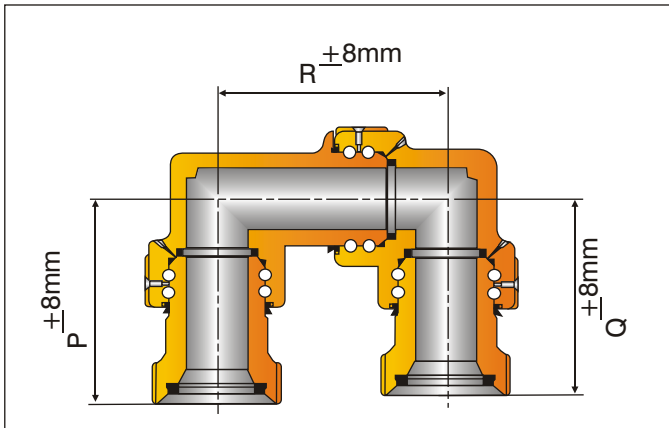


STYLE - 10 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X M) FIG.602/1002/1502

MODEL:- PSSSJ - 10MM

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	153	6.02	118	4.65	108	4.25	16.3	7.4
1 1/2"	165	6.50	121	4.75	110	4.33	27.1	12.3
2"	198	7.80	150	5.90	152	5.98	54.0	24.5
2 1/2"	233	9.17	182	7.16	195	7.67	69.0	31.2
3"	271	10.67	220	8.66	202	7.95	112.0	50.65
4"	306	12.05	252	9.92	260	10.23	161.0	73.0

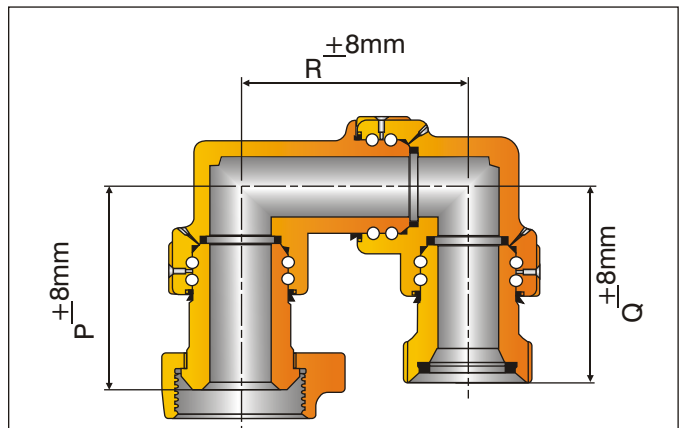


STYLE - 10 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (F X F) FIG.602/1002/1502

MODEL:- PSSSJ - 10FF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	153	6.02	118	4.65	108	4.25	15.4	7.0
1 1/2"	165	6.50	121	4.75	110	4.33	19.0	8.55
2"	198	7.80	150	5.90	152	5.98	38.1	17.3
2 1/2"	233	9.17	182	7.16	195	7.67	59.0	26.6
3"	271	10.67	220	8.66	202	7.95	100.0	45.3
4"	306	12.05	252	9.92	260	10.23	142.2	64.5



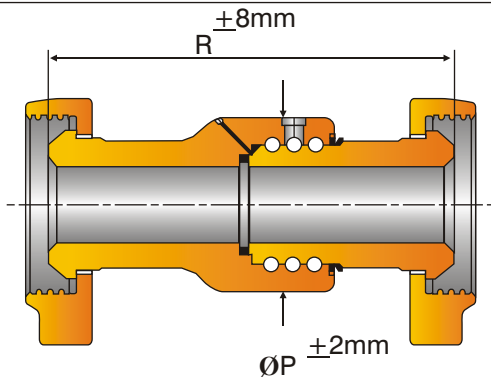
STYLE - 10 SHORT SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X F) FIG.602/1002/1502

MODEL:- PSSSJ - 10MF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	153	6.02	118	4.65	108	4.25	15.65	7.1
1 1/2"	165	6.50	121	4.75	110	4.33	23.0	10.4
2"	198	7.80	150	5.90	152	5.98	46.3	21.0
2 1/2"	233	9.17	182	7.16	195	7.67	64.0	29.0
3"	271	10.67	220	8.66	202	7.95	106.0	48.0
4"	306	12.05	252	9.92	260	10.23	152.2	69.0

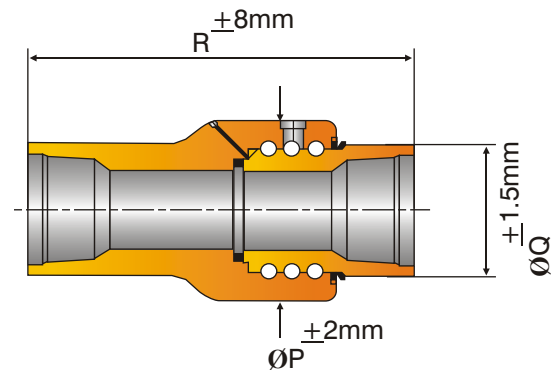
LONG SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-20



STYLE - 20 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X M) FIG.602/1002/1502*
MODEL:- PLSSJ - 20MM

SIZE	ØP (MM)	ØP (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	65	2.41	239	9.40	16.75	7.6
1 1/2"	108	4.25	287	11.30	42.5	19.3
2"	108	4.25	287	11.30	44.5	20.2
3"	148	5.82	320	12.60	77.1	35.0
4"	185	7.28	365	14.37	172.6	78.3

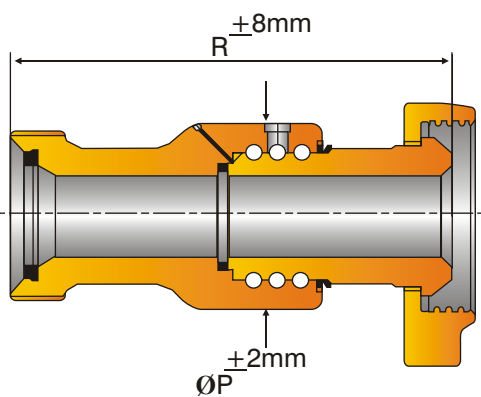
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 20 LONG SWEEP SWIVEL JOINT
 END CONNECTION = THREADED
MODEL:- PLSSJ - 20T

SIZE	ØP (MM)	ØP (INCH)	ØQ (MM)	ØQ (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	65	2.41	48.5	1.91	207	8.15	6.5	2.95
1 1/2"	108	4.25	82.0	3.22	232	9.13	17.6	8.00
2"	108	4.25	82.0	3.22	240	9.45	17.9	8.12
3"	148	5.82	108.0	4.25	280	11.02	40.9	18.55
4"	185	7.28	127.0	5.00	315	12.40	69.0	31.33

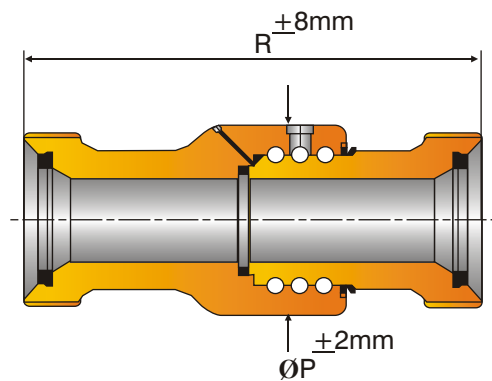
Treating Irons, Unions, Swivels & Circulating Heads



STYLE - 20 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X F) FIG.602/1002/1502*
MODEL:- PLSSJ - 20MF

SIZE	ØP (MM)	ØP (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	65	2.41	239	9.40	14.0	6.4
1 1/2"	108	4.25	287	11.30	35.0	16.0
2"	108	4.25	287	11.30	35.3	16.1
3"	148	5.82	320	12.60	66.1	30.0
4"	185	7.28	365	14.37	128.0	58.0

* FOR 2002 /2202 UNION ENDS CONSULT FACTORY

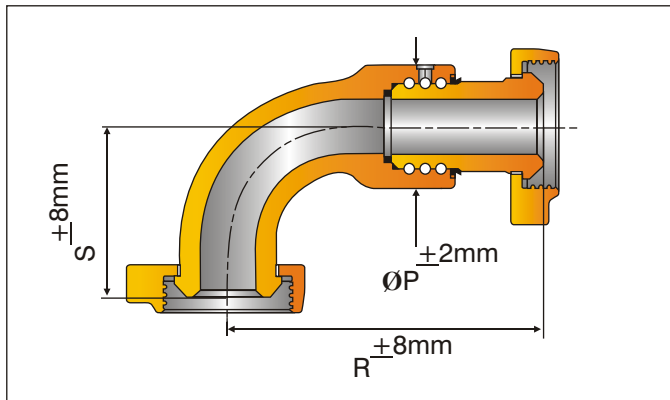


STYLE - 20 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (F X F) FIG.602/1002/1502*
MODEL:- PLSSJ - 20FF

SIZE	ØP (MM)	ØP (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	65	2.41	239	9.40	10.0	4.5
1 1/2"	108	4.25	287	11.30	23.8	10.8
2"	108	4.25	287	11.30	24.2	11.0
3"	148	5.82	320	12.60	53.0	24.0
4"	185	7.28	365	14.37	84.0	38.0

* FOR 2002 /2202 UNION ENDS CONSULT FACTORY

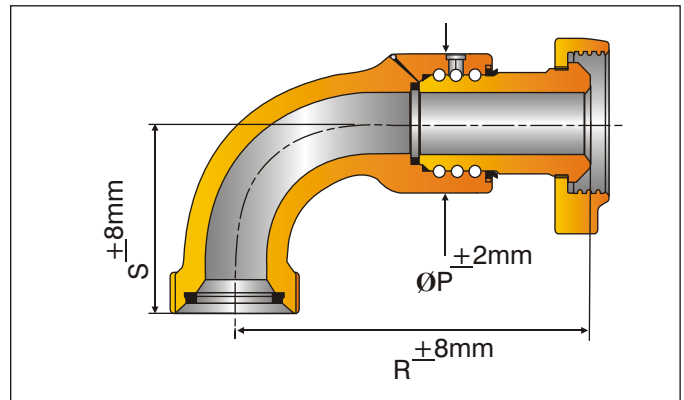
LONG SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-30



STYLE - 30 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X M) FIG.602/1002/1502*
 MODEL:- PLSSJ - 30MM

SIZE	ØP (MM)	ØP (INCH)	R (MM)	R (INCH)	S (MM)	S (INCH)	WT. (LBSF)	WT. (KGF)
1"	65	2.41	214	8.42	115	4.52	18.3	8.3
1 1/2"	108	4.25	259	10.20	151	5.94	51.0	23.0
2"	108	4.25	277	10.90	156	6.14	52.0	23.5
3"	148	5.82	369	14.52	230	9.05	101.4	46.0
4"	185	7.28	452	17.80	310	12.20	227.0	103.0

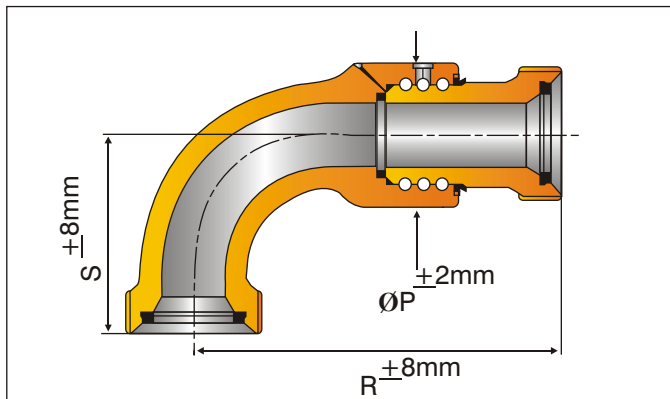
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 30 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 30MF

SIZE	ØP (MM)	ØP (INCH)	R (MM)	R (INCH)	S (MM)	S (INCH)	WT. (LBSF)	WT. (KGF)
1"	65	2.41	214	8.42	111	4.37	15.0	6.7
1 1/2"	108	4.25	259	10.20	128	5.04	41.4	18.8
2"	108	4.25	277	10.90	145	5.70	42.0	19.0
3"	148	5.82	369	14.52	203	8.00	86.0	39.0
4"	185	7.28	452	17.80	247	9.72	181.0	82.0

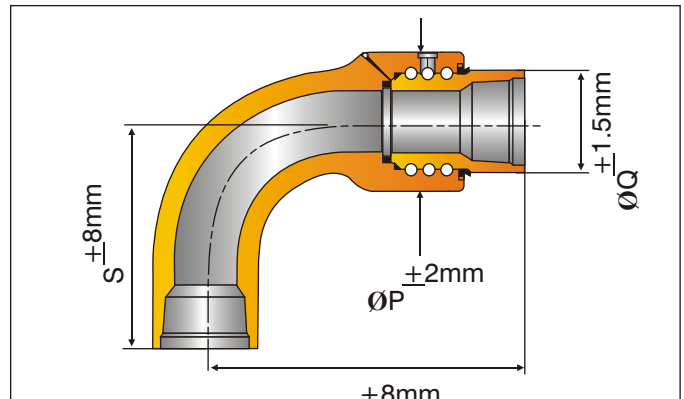
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 30 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (F X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 30FF

SIZE	ØP (MM)	ØP (INCH)	R (MM)	R (INCH)	S (MM)	S (INCH)	WT. (LBSF)	WT. (KGF)
1"	65	2.41	214	8.42	111	4.37	10.5	4.75
1 1/2"	108	4.25	259	10.20	128	5.04	30.2	13.7
2"	108	4.25	277	10.90	145	5.70	31.0	14.0
3"	148	5.82	369	14.52	203	8.00	73.0	33.0
4"	185	7.28	452	17.80	247	9.72	137.5	62.4

* FOR 2002 /2202 UNION ENDS CONSULT FACTORY

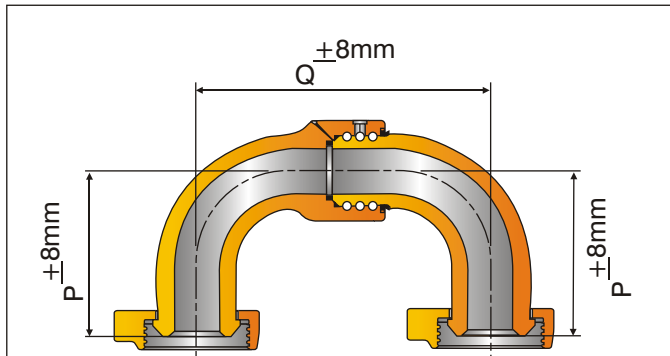


STYLE - 30 LONG SWEEP SWIVEL JOINT
 END CONNECTION = THREADED
 MODEL:- PLSSJ - 30T

SIZE	ØP (MM)	ØP (INCH)	ØQ (MM)	ØQ (INCH)	R (MM)	R (INCH)	S (MM)	S (INCH)	WT. (LBSF)	WT. (KGF)
1"	65	2.41	48.5	1.91	182	7.16	112	4.41	7.7	3.5
1 1/2"	108	4.25	82.0	3.22	204	8.03	144	5.67	26.4	12.0
2"	108	4.25	82.0	3.22	230	9.05	163	6.42	27.5	12.5
3"	148	5.82	108.0	4.25	328	12.91	239	9.41	66.0	30.0
4"	185	7.28	127.0	5.00	403	15.86	285	11.22	132.2	60.0

Treating Irons, Unions, Swivels & Circulating Heads

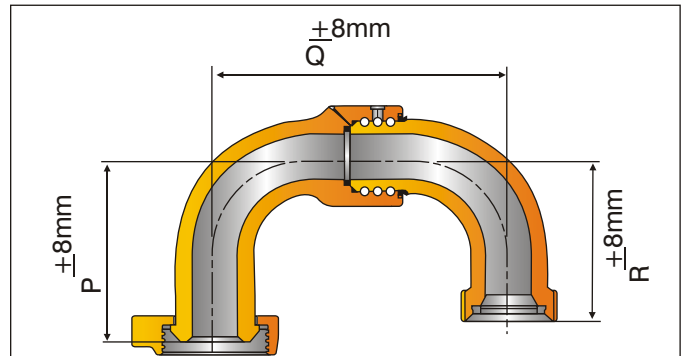
LONG SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-40



STYLE - 40 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X M) FIG.602/1002/1502*
 MODEL:- PLSSJ - 40MM

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	WT. (LBSF)	WT. (KGF)
1"	115	4.52	188	7.40	19.0	8.4
1 1/2"	151	5.94	239	9.41	57.0	26.0
2"	156	6.14	272	10.70	58.0	26.2
3"	230	9.05	417	16.42	123.0	56.0
4"	310	12.20	539	21.22	273.0	124.0

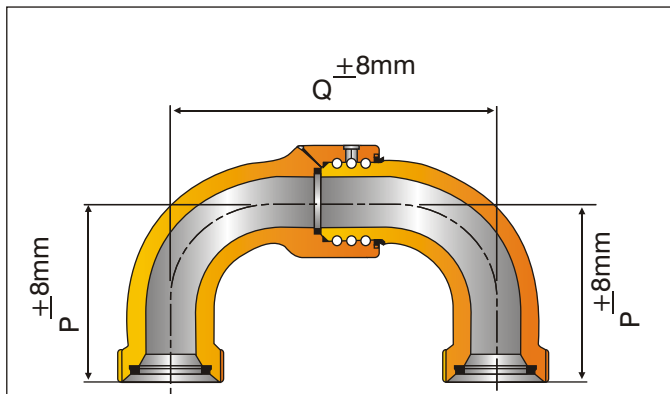
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 40 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 40MF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	115	4.52	188	7.40	111	4.37	15.0	6.8
1 1/2"	151	5.94	239	9.41	128	5.04	46.3	21.0
2"	156	6.14	272	10.70	145	5.70	47.4	21.5
3"	230	9.05	417	16.42	203	8.00	108.0	49.0
4"	310	12.20	539	21.22	247	9.72	229.0	104.0

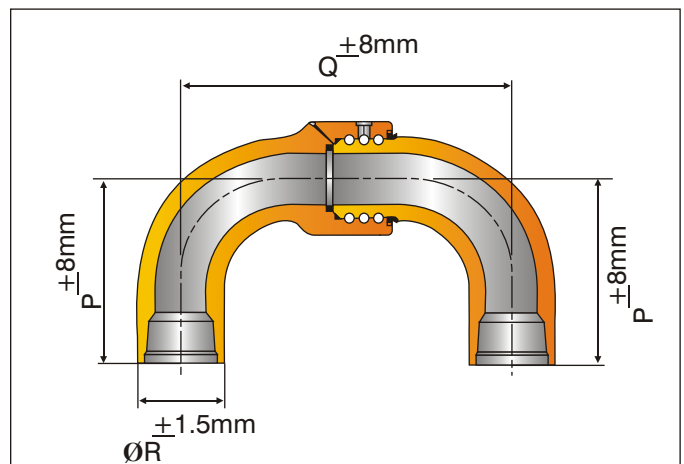
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 40 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (F X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 40FF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	WT. (LBSF)	WT. (KGF)
1"	111	4.37	188	7.40	11.24	5.1
1 1/2"	128	5.04	239	9.41	37.0	16.7
2"	145	5.70	272	10.70	37.5	17.0
3"	203	8.00	417	16.42	92.5	42.0
4"	247	9.72	539	21.22	183.0	83.0

* FOR 2002 /2202 UNION ENDS CONSULT FACTORY

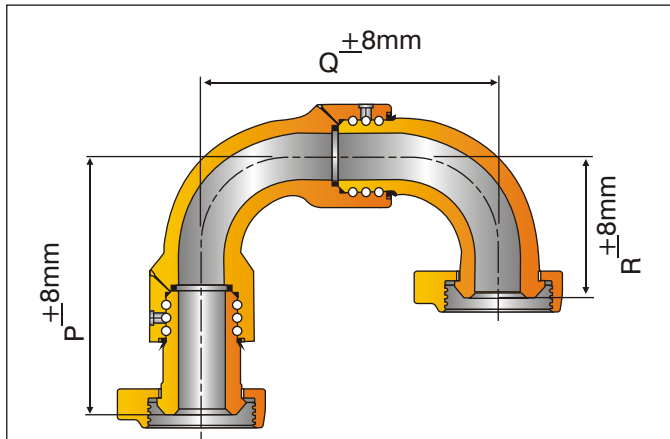


STYLE - 40 LONG SWEEP SWIVEL JOINT
 END CONNECTION = THREADED
 MODEL:- PLSSJ - 40T

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	112	4.41	188	7.40	48.5	1.91	10.0	4.4
1 1/2"	144	5.67	239	9.41	182.0	3.22	37.0	16.7
2"	163	6.42	272	10.70	82.0	3.22	37.5	17.0
3"	239	9.41	417	16.42	108.0	4.25	95.0	43.0
4"	285	11.22	539	21.22	127.0	5.00	196.0	89.0



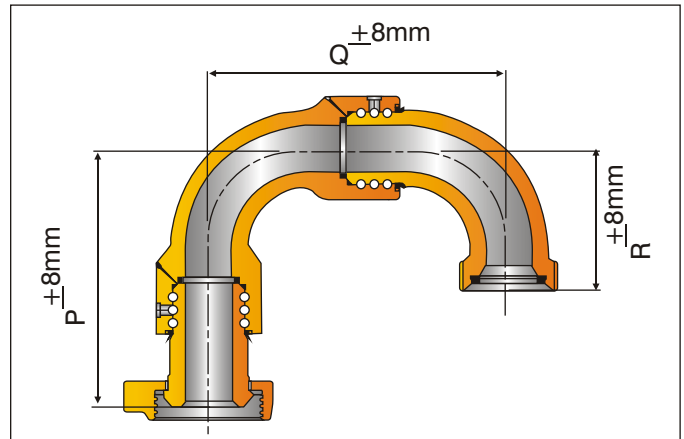
LONG SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-50



STYLE - 50 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X M) FIG.602/1002/1502*
 MODEL:- PLSSJ - 50MM

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	188	7.40	115	4.52	24.0	10.88
1 1/2"	259	10.20	239	9.40	151	5.94	70.5	32.0
2"	277	10.90	272	10.70	156	6.14	73.0	33.0
3"	369	14.52	417	16.42	230	9.05	155.4	70.5
4"	452	17.80	539	21.22	310	12.20	335.0	152.0

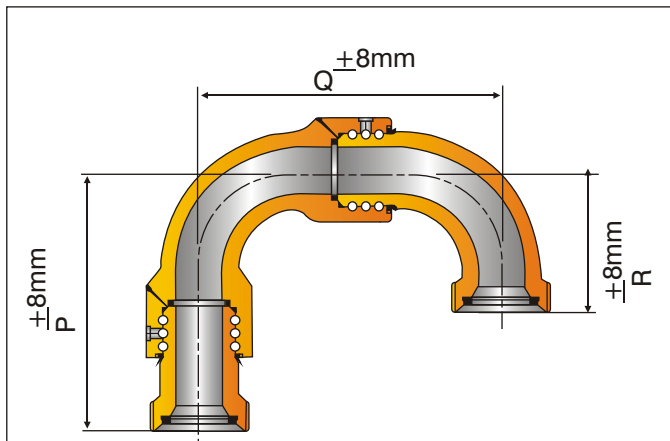
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 50 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 50MF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	188	7.40	111	4.37	19.84	9.00
1 1/2"	259	10.20	239	9.40	128	5.04	59.5	27.0
2"	277	10.90	272	10.70	145	5.70	62.0	28.0
3"	369	14.52	417	16.42	203	8.00	141.0	64.00
4"	452	17.80	539	21.22	247	9.72	291.0	132.0

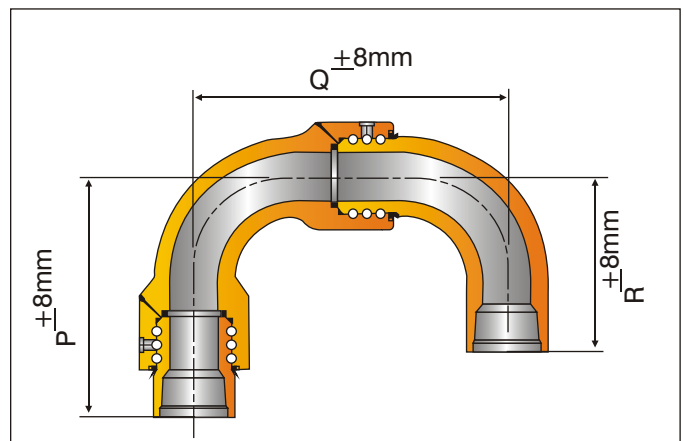
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 50 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (F X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 50FF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	188	7.40	111	4.37	16.0	7.1
1 1/2"	259	10.20	239	9.40	128	5.04	48.5	22.0
2"	277	10.90	272	10.70	145	5.70	51.0	23.1
3"	369	14.52	417	16.42	203	8.00	128.0	58.00
4"	452	17.80	539	21.22	247	9.72	247.0	112.0

* FOR 2002 /2202 UNION ENDS CONSULT FACTORY

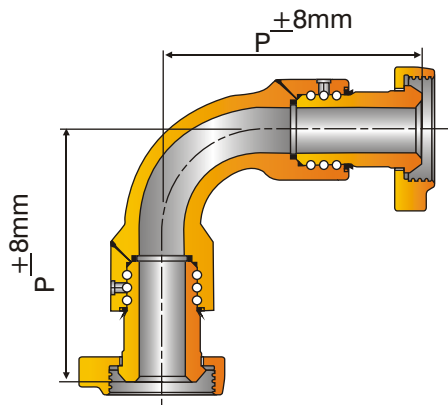


STYLE - 50 LONG SWEEP SWIVEL JOINT
 END CONNECTION = THREADED
 MODEL:- PLSSJ - 50T

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	182	7.16	188	7.40	112	4.41	13.2	6.0
1 1/2"	204	8.03	239	9.40	144	5.67	46.3	21.0
2"	230	9.06	272	10.70	163	6.42	48.5	22.0
3"	328	12.91	417	16.42	239	9.41	121.2	55.0
4"	403	15.86	539	21.22	285	11.22	240.3	109.0

Treating Irons, Unions, Swivels & Circulating Heads

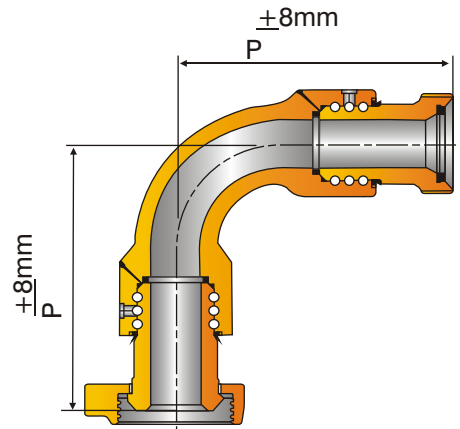
LONG SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-60



STYLE - 60 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X M) FIG.602/1002/1502*
 MODEL:- PLSSJ - 60MM

SIZE	P (MM)	P (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	23.4	10.6
1 1/2"	259	10.20	64.0	29.0
2"	277	10.90	67.0	30.4
3"	369	14.52	134.0	60.6
4"	452	17.80	288.0	130.6

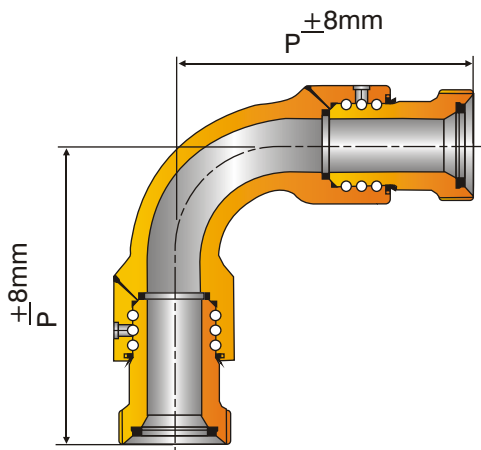
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 60 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 60MF

SIZE	P (MM)	P (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	20.0	9.0
1 1/2"	259	10.20	51.0	23.20
2"	277	10.90	55.0	25.0
3"	369	14.52	121.2	55.0
4"	452	17.80	245.0	111.0

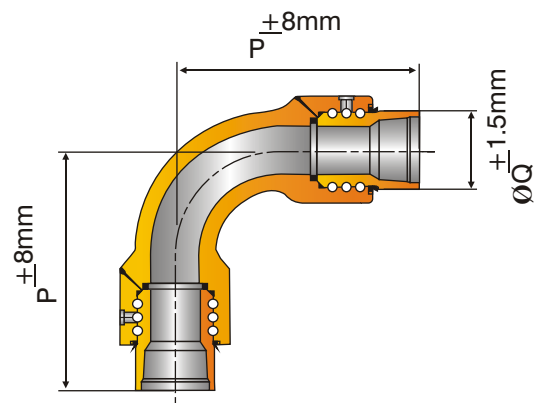
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 60 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (F X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 60FF

SIZE	P (MM)	P (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	14.7	6.7
1 1/2"	259	10.20	42.0	19.0
2"	277	10.90	44.5	20.2
3"	369	14.52	108.0	49.0
4"	452	17.80	201.0	91.0

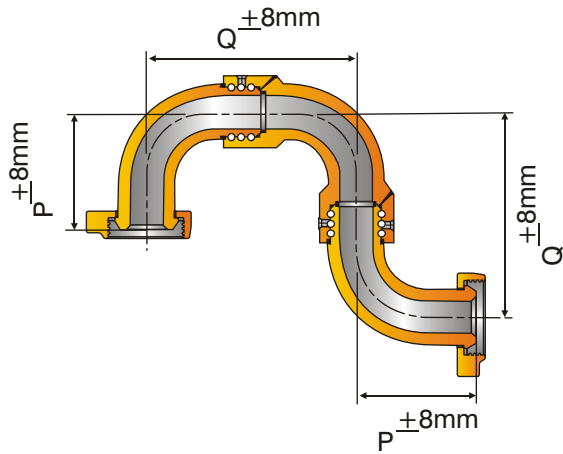
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 60 LONG SWEEP SWIVEL JOINT
 END CONNECTION = THREADED
 MODEL:- PLSSJ - 60T

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	WT. (LBSF)	WT. (KGF)
1"	182	7.16	48.5	1.91	11.0	5.0
1 1/2"	204	8.03	82.0	3.22	35.2	16.0
2"	230	9.05	82.0	3.22	38.00	17.2
3"	328	12.91	108.0	4.25	93.00	42.10
4"	403	15.86	127.0	15.00	178.0	81.0

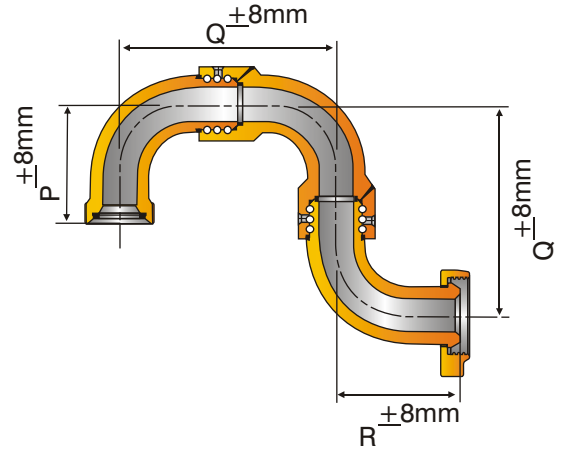
LONG SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-70



STYLE - 70 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X M) FIG.602/1002/1502*
 MODEL:- PLSSJ - 70MM

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	WT. (LBSF)	WT. (KGF)
1"	115	4.52	188	7.40	24.0	10.8
1 1/2"	151	5.94	239	9.40	75.0	34.0
2"	156	6.14	272	10.70	79.0	36.0
3"	230	9.05	417	16.42	176.0	80.0
4"	310	12.20	539	21.22	384.0	174.0

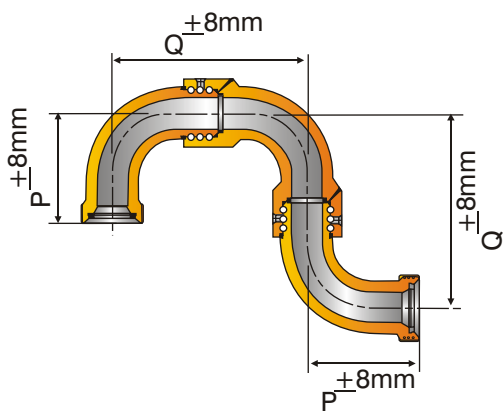
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 70 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 70MF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	111	4.37	188	7.40	115	4.52	20.0	9.1
1 1/2"	128	5.04	239	9.40	151	5.94	65.0	29.5
2"	145	5.47	272	10.70	156	6.14	68.0	31.0
3"	203	8.00	417	16.42	230	9.05	163.0	74.0
4"	247	9.72	539	21.22	310	12.20	337.0	153.0

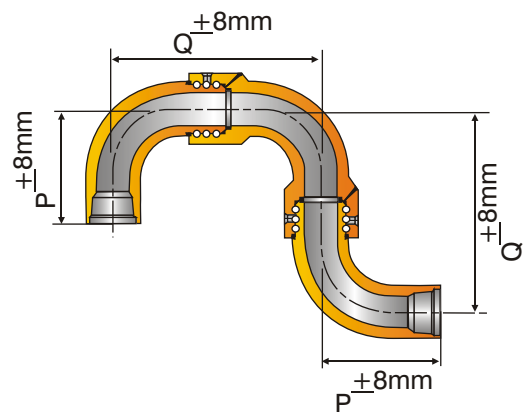
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 70 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (F X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 70FF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	WT. (LBSF)	WT. (KGF)
1"	111	4.37	188	7.40	17.0	7.5
1 1/2"	128	5.04	239	9.40	55.0	25.0
2"	145	5.47	272	10.70	57.0	26.0
3"	203	8.00	417	16.42	148.0	67.0
4"	247	9.72	539	21.22	293.0	133.0

* FOR 2002 /2202 UNION ENDS CONSULT FACTORY

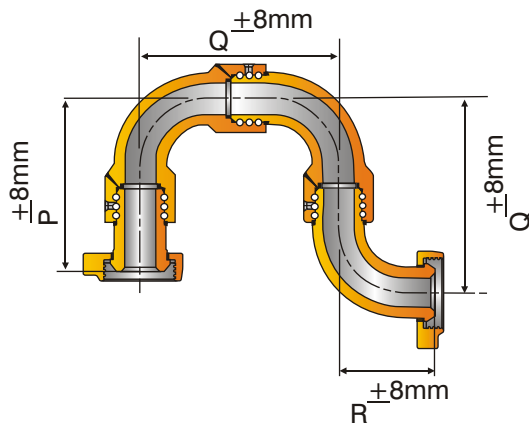


STYLE - 70 LONG SWEEP SWIVEL JOINT
 END CONNECTION = THREADED
 MODEL:- PLSSJ - 70T

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	WT. (LBSF)	WT. (KGF)
1"	112	4.41	188	7.40	15.0	7.0
1 1/2"	144	5.67	239	9.40	55.0	25.0
2"	163	6.42	272	10.70	59.0	27.0
3"	239	9.41	417	16.42	150.0	68.0
4"	285	11.22	539	21.22	304.0	138.0



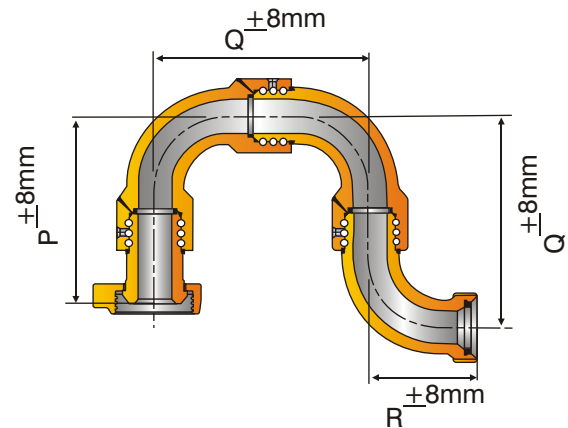
LONG SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-80



STYLE - 80 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X M) FIG.602/1002/1502*
 MODEL:- PLSSJ - 80MM

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	188	7.40	115	4.52	29.0	13.0
1 1/2"	259	10.19	239	9.40	151	5.94	84.0	38.0
2"	277	10.90	272	10.70	156	6.14	88.0	40.0
3"	369	14.52	417	16.42	230	9.05	196.0	89.0
4"	452	17.80	539	21.22	310	12.20	406.0	184.0

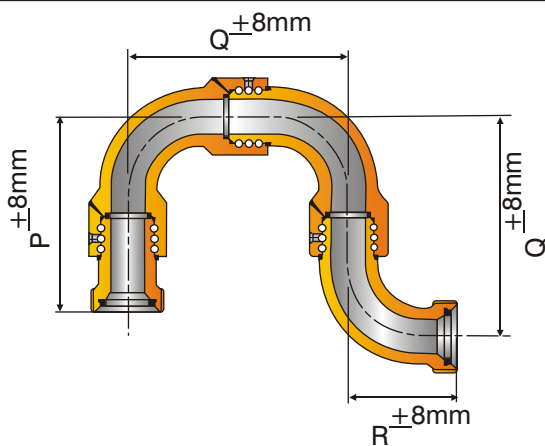
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 80 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (M X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 80MF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	188	7.40	111	4.37	25.0	11.4
1 1/2"	259	10.19	239	9.40	128	5.04	79.0	36.0
2"	277	10.90	272	10.70	145	5.47	84.0	38.0
3"	369	14.52	417	16.42	203	8.00	194.0	88.0
4"	452	17.80	539	21.22	247	9.72	400.0	181.4

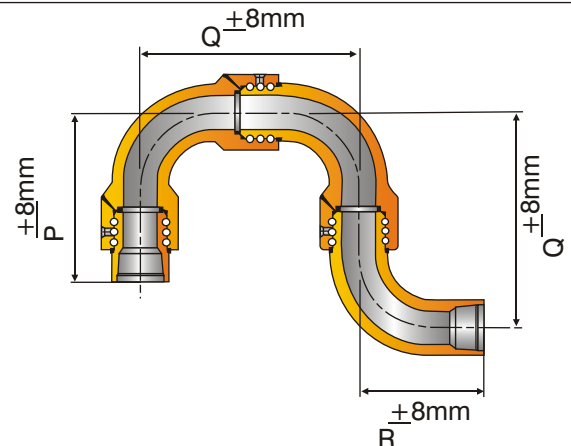
* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 80 LONG SWEEP SWIVEL JOINT
 END CONNECTION = UNION (F X F) FIG.602/1002/1502*
 MODEL:- PLSSJ - 80FF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	188	7.40	111	4.37	21.0	9.5
1 1/2"	259	10.19	239	9.40	128	5.04	68.0	31.0
2"	277	10.90	272	10.70	145	5.47	72.0	32.5
3"	369	14.52	417	16.42	203	8.0	181.0	82.0
4"	452	17.80	539	21.22	247	9.72	357.0	162.0

* FOR 2002 /2202 UNION ENDS CONSULT FACTORY

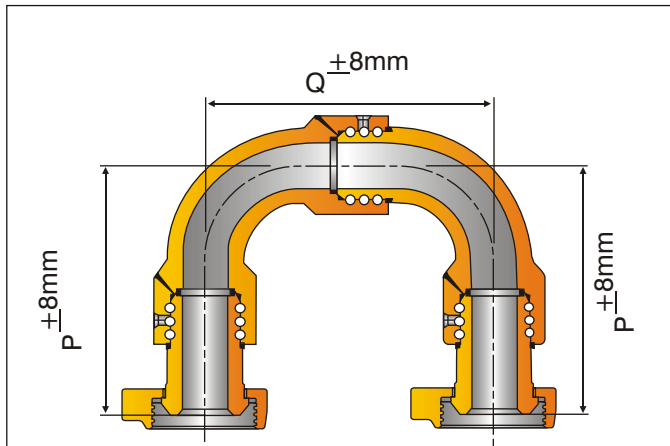


STYLE - 80 LONG SWEEP SWIVEL JOINT
 END CONNECTION = THREADED
 MODEL:- PLSSJ - 80T

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	R (MM)	R (INCH)	WT. (LBSF)	WT. (KGF)
1"	182	7.16	188	7.40	112	4.41	18.3	8.3
1 1/2"	204	8.03	239	9.40	144	5.67	65.0	29.5
2"	230	9.06	272	10.70	163	6.42	68.3	31.0
3"	328	12.91	417	16.42	239	9.41	176.4	80.0
4"	403	15.86	539	21.22	285	11.22	351.0	159.1

Treating Irons, Unions, Swivels & Circulating Heads

LONG SWEEP SWIVEL JOINT (BASIC DIMENSIONS) STYLE-10



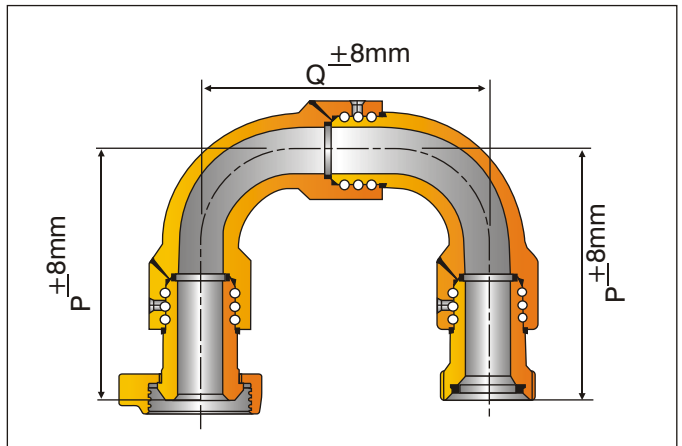
STYLE - 10 LONG SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X M) FIG.602/1002/1502*

MODEL:- PLSSJ - 10MM

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	188	7.40	29.0	13.0
1 1/2"	259	10.19	239	9.40	84.0	38.0
2"	277	10.90	272	10.70	88.0	40.0
3"	369	14.52	417	16.42	187.0	85.0
4"	452	17.80	539	21.22	397.0	180.0

* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



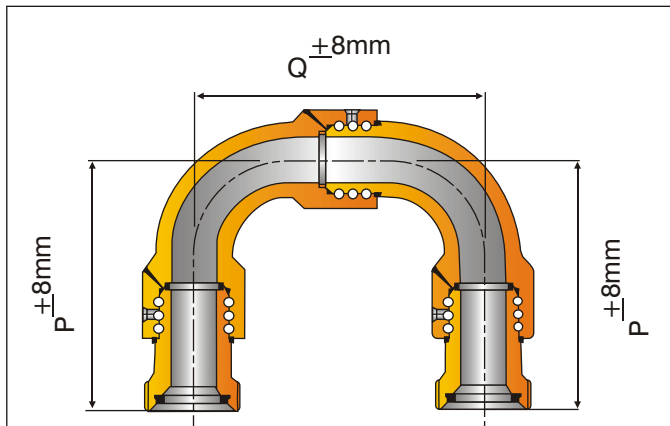
STYLE - 10 LONG SWEEP SWIVEL JOINT

END CONNECTION = UNION (M X F) FIG.602/1002/1502*

MODEL:- PLSSJ - 10MF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	188	7.40	24.2	11.0
1 1/2"	259	10.19	239	9.40	73.0	33.0
2"	277	10.90	272	10.70	77.0	35.0
3"	369	14.52	417	16.42	175.0	79.5
4"	452	17.80	539	21.22	354.0	160.5

* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



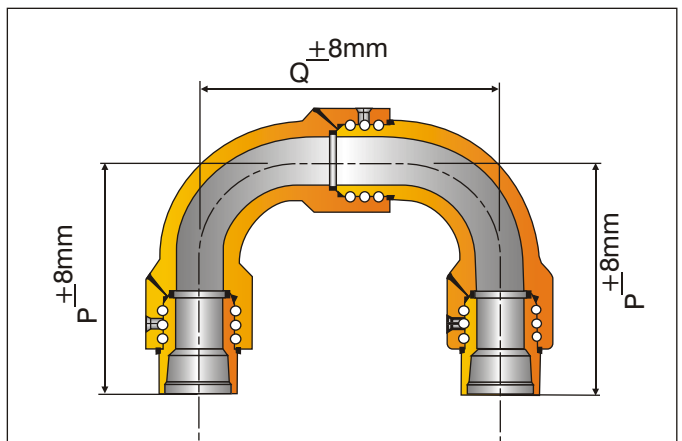
STYLE - 10 LONG SWEEP SWIVEL JOINT

END CONNECTION = UNION (F X F) FIG.602/1002/1502*

MODEL:- PLSSJ - 10FF

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	WT. (LBSF)	WT. (KGF)
1"	214	8.42	188	7.40	29.0	13.0
1 1/2"	259	10.19	239	9.40	84.0	38.0
2"	277	10.90	272	10.70	88.0	40.0
3"	369	14.52	417	16.42	189.0	86.0
4"	452	17.80	539	21.22	388.0	176.0

* FOR 2002 /2202 UNION ENDS CONSULT FACTORY



STYLE - 10 LONG SWEEP SWIVEL JOINT

END CONNECTION = THREADED

MODEL:- PLSSJ - 10T

SIZE	P (MM)	P (INCH)	Q (MM)	Q (INCH)	WT. (LBSF)	WT. (KGF)
1"	182	7.16	188	7.40	16.3	7.4
1 1/2"	204	8.03	239	9.40	55.1	25.0
2"	230	9.06	272	10.70	57.3	26.5
3"	328	12.91	417	16.42	148.0	67.0
4"	403	15.86	539	21.22	287.0	130.4



HAMMER UNIONS

General

PARVEEN manufactures Hammer Unions from raw materials in the form of forgings or castings in accordance with service requirements in sizes 1 to 12" with ratings up to 20,000 PSI cold working pressure. Unions for sour gas service are manufactured in accordance with NACE MR-01-75 & API RP-14E.

Interchangeability

PARVEEN'S Hammer Unions are interchangeable with WECO or other manufacturers adhering to the industry standards.

Thread Gauging

Acme thread and line pipe threads are gauged by standard plug & ring gauges.

Sealing Design

The conical and spherical surfaces of the female and male subs respectively form an effective metal-to-metal seal in case of low pressure services.

For medium pressure mostly an 'O' ring is provided in the male sub in addition to the metal to metal seal. For high pressure a lip type seal ring is provided for primary seal in the female sub. The seal protects the secondary metal to metal seal from corrosion and limits fluid flow turbulence. For sour service applications viton seals are provided.

Quality Control

PARVEEN unions are manufactured using modern manufacturing techniques to attain first class workmanship and dimensional control. Correctly chosen raw materials for a particular service together with correct heat-treatment process is used to ensure better service and longer life in extreme conditions.

Notes

1. Line pipe threads in Fig-1002, Fig 1502 for Pipe diameters above 4" are not recommended for sour service application.
2. For Fig-1003, 4" & 5" sizes are rated at ,7500 PSI cold working pressure and 12000 PSI test pressure.
3. Sour gas service unions are painted OLIVE GREEN and stamped "NACE".
4. For other types of threading like casing, tubing or NPS thread seal configuration, consult factory.

HAMMER UNIONS

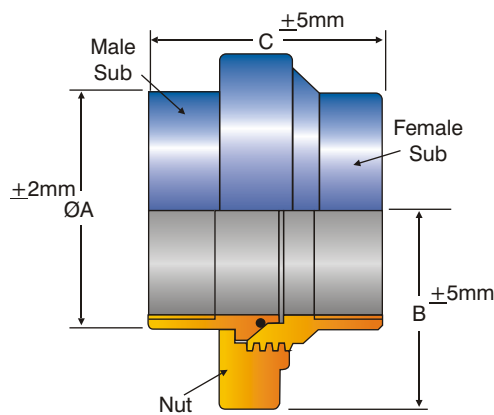
Quick Reference Table

The following table giving figures of unions, end connections and pressure rating is given for quick reference.

Union Fig.	End Connections	Pressure Rating (PSI)			
		Standard Service		Sour Service	
		C.W.P	T.P	C.W.P	T.P
50	LINE PIPE	500	750	-	-
100	LINE PIPE	1000	1500	-	-
200	LINE PIPE /BUTT WELD	2000	3000	-	-
206	LINE PIPE /BUTT WELD	2000	3000	-	-
207	LINE PIPE /BUTT WELD	2000	3000	-	-
211	LINE PIPE	2000	3000	-	-
400	LINE PIPE /BUTT WELD	2500	3750	2500	3750
400	LINE PIPE /BUTT WELD	4000	6000	4000	6000
600	LINE PIPE /BUTT WELD	6000	9000	-	-
602	LINE PIPE /BUTT WELD /NPTS	6000	9000	6000	9000
1002	LINE PIPE /BUTT WELD /NPTS	10000	15000	7500	12000
1003	LINE PIPE /BUTT WELD	10000	15000	7500	12000
1004	LINE PIPE /BUTT WELD	10000	15000	7500	12000
1502	LINE PIPE /BUTT WELD /NPTS	15000	22500	10000	15000
2002	BUTT WELD	20000	30000	-	-
2202	BUTT WELD	-	-	15000	22500

Fig 50. Orange Nut - Orange Subs

These low pressure and suction union of Fig-50 are made from carbon steel. The nut and O-ring are common in both sizes. Available in 4" or 5" sizes in threaded & socket welded connection. These unions are suitable for 500 PSI wp.



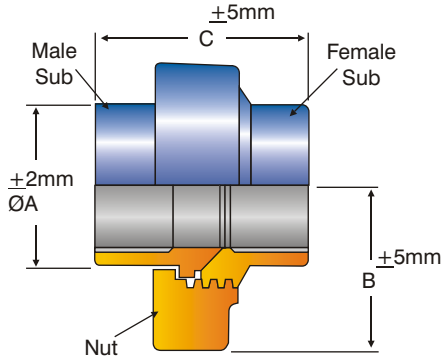
500 PSI CWP (Fig. - 50)

Size (Inch)	A		B		C				ACME (TPI)	Union		Weight	
	Inch	mm	Inch	mm	Threaded		Socket Welded End			Threaded	Socket	Threaded	Socket
					Inch	mm	Inch	mm					
4"	6.0	152.5	5.07	129.0	6.15	156.21	4.12	104.64	3MOD	28.0	12.7	27.0	12.24
5"	6.0	152.5	5.07	129.0	5.77	146.74	4.12	104.64	3MOD	23.0	10.43	21.5	9.75

HAMMER UNIONS

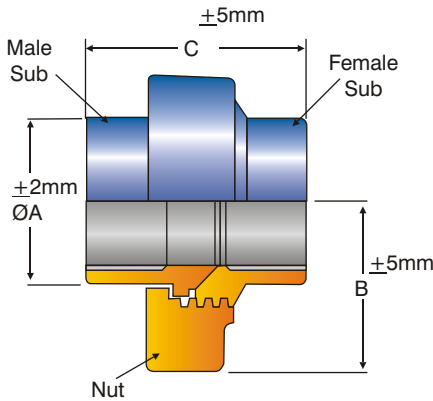
Fig 100. Black nut - Yellow subs

These low pressure unions are ideal for manifold and applications where CWP does not exceed 1000 PSI.



1,000 PSI CWP (Fig. - 100)

SIZE (INCH)	A		B		C		ACME (TPI)	UNION WEIGHT	
	INCH	MM	INCH	MM	INCH	MM		LBSF	KGf
1	1.60	40.5	1.95	50	2.57	65	6STD	1.75	0.79
2	2.74	69.5	2.91	74	3.66	93	3MOD	5.73	2.60
2 1/2	3.30	84	3.81	97	4.29	109	3MOD	9.47	4.30
3	4.09	104	4.09	104	4.88	124	3MOD	1.33	6.05
4	5.19	132	5.00	127	5.78	147	3MOD	19.84	9.00
5	6.37	162	5.75	146	6.03	153	4STD	33.00	15.0
6	7.36	187	6.92	176	6.71	170.5	3STD	46.0	20.90
8	9.52	242	8.00	203	7.20	183	3STD	61.72	28.0



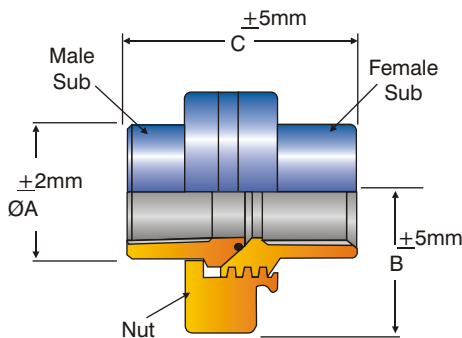
2,000 PSI CWP (Fig. - 200)

Fig 200. Blue Nut - Grey subs

These unions are best suited for medium pressure ranges involving air, water, oil & gas service for cold working pressure upto 2,000 PSI. (For dimensions see fig. 206). Upto 4" no O-ring is used on the male sub. Beyond 4" size, an O-Ring is used on the male sub for sealing.

Fig 206. Blue Nut - Grey subs

These unions have an additional 'O' ring on the spherical surface of the male sub providing a leak proof seal. All dimensions of fig:- 200 & Fig-206 are identical.

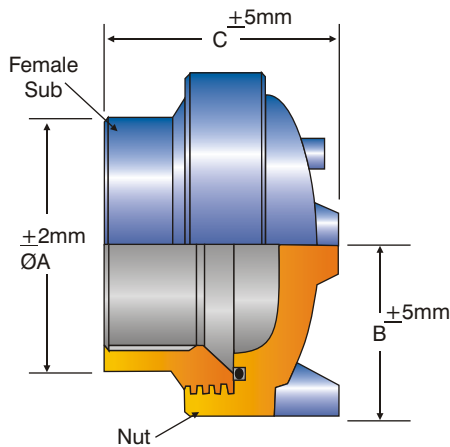


2,000 PSI CWP (Fig. - 206)

SIZE (INCH)	A		B		C		ACME (TPI)	UNION WEIGHT	
	INCH	MM	INCH	MM	INCH	MM		LBSF	KGf
1	1.59	40.5	1.96	50	2.55	65	6STD	1.76	0.80
1 1/4"	2.00	51	2.11	53.6	2.79	71	6STD	2.20	1.00
1 1/2"	2.28	58	2.52	64	2.73	69.5	6STD	2.42	1.10
2	2.79	71	2.91	74	3.54	90	4STD	5.00	2.30
2 1/2	3.30	84	3.87	98.5	4.25	108	4STD	9.25	4.20
3	4.17	106	3.89	99	4.52	115	4STD	13.67	6.20
4	5.23	133	4.52	115	4.96	126	3MOD	18.52	8.40
5	6.32	162	5.75	146	6.03	153	4STD	33.0	15.0
6	7.50	190.5	6.06	154	6.65	169	3STD	42.50	19.30
8	9.56	243	7.18	182.5	7.15	181.5	3STD	61.70	28.0
10	11.49	292	9.01	220.7	9.09	231	3STD	90.39	41.00

HAMMER UNIONS

Fig 207. Blue Cap - Grey Subs



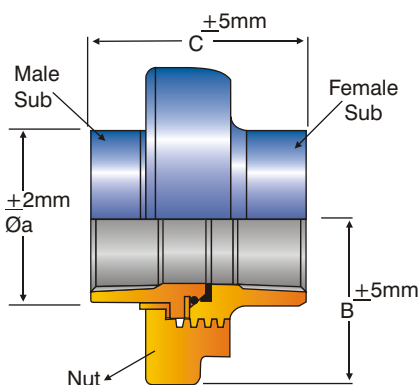
2,000 PSI CWP (Fig. - 207)

These banking unions have a resilient 'O' ring in the blanking cap to provide an efficient and leak-proof seal suitable for 2000 PSI CWP.

Size (inch)	A		B		C		ACME (TPI)	Union lbsf	Weight kgf
	inch	mm	inch	mm	inch	mm			
3	4.09	104	2.91	74	3.74	95	4STD	10.36	4.70
4	5.15	131	3.58	91	4.33	110	3MOD	16.30	7.40
6	7.55	192	5.00	127	5.90	150	3STD	38.13	17.30
8	9.60	245	6.10	155	6.10	220	3STD	70.76	32.10
10	11.53	293	7.16	182	7.16	248	3STD	96.11	43.60

Fig. 211. Blue Subs - Grey Nut

These unions protect against electrolytic action. There is no metal-to-metal contact between the subs. A resilient seal ring in the female sub provides additional sealing and protection from corrosion. Suitable for 2000 PSI CWP.

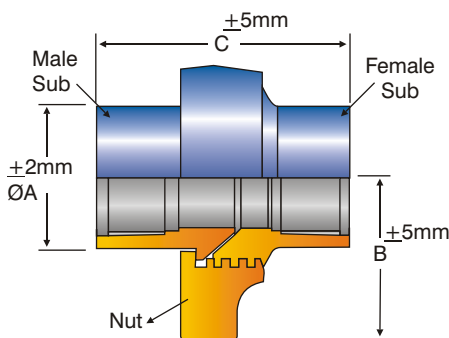


2,000 PSI CWP (Fig. - 211)

Size (inch)	A		B		C		ACME (TPI)	Union lbsf	Weight kgf
	inch	mm	inch	mm	inch	mm			
1	1.57	40	2.09	53	2.72	69	6STD	2.20	1.00
1 1/4"	2.20	56	2.43	62	3.00	76	6STD	3.70	1.68
1 1/2"	2.20	56	2.43	62	3.00	76	6STD	3.20	1.45
2	2.84	72.2	3.07	78	3.49	88.8	4STD	6.40	2.90
2 1/2	3.38	86	3.67	93	4.13	105	4STD	9.70	4.40
3	4.09	104	3.96	101	4.45	113	4STD	15.80	7.16
4	5.12	130	4.68	119	4.84	123	3MOD	18.40	8.34
6	7.56	192	7.25	184	7.21	183	3STD	43.50	19.60
8	9.62	244	8.75	222	9.12	232	3STD	65.50	29.50

Fig 400. Black Nut - Red Subs

These unions are rigid in design and have all the three parts made of steel forgings. These unions are best suited for manifold and line connections. Unions from 3 inch through 8 inch sizes have O-rings for primary sealing. From 5" to 8" sizes C.W.P. is 2,500 PSI.



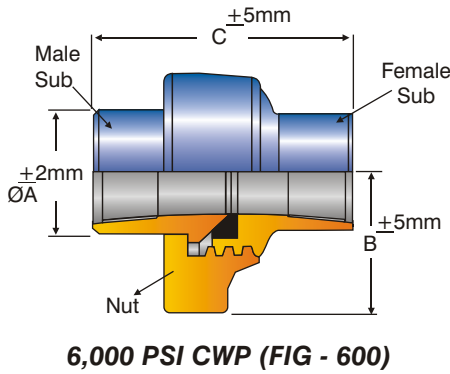
4,000 PSI CWP (Fig. - 400)

Size (inch)	A		B		C		ACME (TPI)	Union lbsf	Weight kgf
	inch	mm	inch	mm	inch	mm			
1	1.75	44.5	2.28	58.0	3.54	90.0	3STD	3.0	1.35
2	3.06	76.8	3.44	87.5	5.24	133	3STD	11.00	5.00
2 1/2	3.54	90	4.17	106	6.18	157	3STD	16.3	7.40
3	4.19	106.6	4.29	109	6.18	157	3STD	19.40	8.80
4	5.23	133	4.74	120.5	8.25	209.7	3STD	28	12.70
5	6.26	159	5.63	143	10.47	266	3STD	48.5	22.0
5 1/2	6.29	160	5.78	147	10.43	265	3STD	48.0	21.80
6	7.75	197	6.52	165.6	11.02	280	3STD	75.0	34.0
7	7.75	198	6.62	168	11.03	280	3STD	61	27.70
8	9.59	243.5	7.71	196	11.42	290	3STD	94.13	42.70
10	11.75	298.4	9.60	244	11.29	287	3STD	121.2	55.0
12	13.98	355	10.62	270	11.02	280	3STD	158.7	72.0

HAMMER UNIONS

Fig. 600. Silver Subs - Black Nut

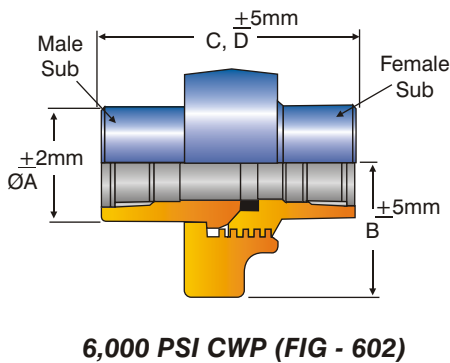
These unions have wide range of applications including steam service and line connections. These unions are provided with a bronze seat in the female for the effective sealing and prevention of rust formation. Suitable for 6000 PSI CWP



SIZE (INCH)	A		B		C		ACME (TPI)	UNION WEIGHT	
	INCH	MM	INCH	MM	INCH	MM		LBSF	KGF
1	1.75	44.5	2.26	57.5	3.58	91	6STD	3.52	1.6
1 1/2	2.55	65	3.07	78	4.92	125	4STD	9.26	4.20
2	3.07	78	3.70	94	6.42	163	2STD	15.43	7.00
2 1/2	3.54	90	4.17	106	7.52	191	2STD	20.28	9.20
3	4.25	108	4.54	115.5	8.72	221.5	2STD	27.23	12.40
4	5.27	134	5.19	132	10.04	255	2STD	40.0	18.10

Fig 602. Orange Subs - Black Nut

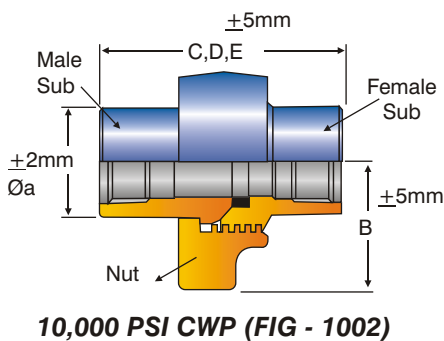
These unions are recommended for manifold and line connections truck mounting and in mud services. This union has resilient lip-type seal for positive sealing and also protects secondary metal - to metal seal. Suitable for 6000



SIZE	A		B		C		BUTT WELDED END D		ACME (TPI)	UNION WEIGHT	
	INCH	MM	INCH	MM	INCH	MM	INCH	MM		LBSF	KGF
1	1.75	44.5	2.28	58	3.50	89	3.50	89	6STD	3.30	1.5
1 1/4	2.60	66	3.23	82	4.88	124	4.88	124	4STD	11.00	5.0
1 1/2	2.56	65	3.06	77.8	4.88	124	4.88	124	4STD	9.7	4.4
2	3.07	78	3.81	97	5.25	133.5	5.28	133.5	3MOD	12.12	5.5
2 1/2	3.51	89.1	3.75	95.5	6.24	158.5	5.59	142	3MOD	15.87	7.2
3	4.25	108	4.52	115	6.22	158	5.62	143	3MOD	20.94	9.5
4	5.27	134	5.04	128	8.23	209	5.67	144	3MOD	30.86	14.0

Fig 1002. Blue Subs - Red Nut

These unions are designed for high pressure systems like choke and kill lines, cementing , acidizing, testing and truck mounted system. This union has a lip-type seal made of nitrile rubber and subs made of alloy steel, suitable for 10,000 PSI.

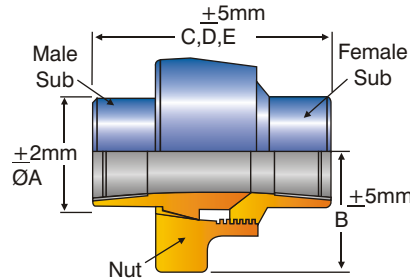


SIZE	A		B		C		BUTT WELDED END				ACME (TPI)	UNION WEIGHT	
	INCH	MM	INCH	MM	INCH	MM	D SCH-160		E SCH-XXS			LBSF	KGF
							INCH	MM	INCH	MM			
1	1.75	44.5	2.28	58	3.50	89	3.50	89	3.50	89	6STD	3.5	1.6
1 1/4	2.60	66	2.95	75	4.88	124	4.88	124	4.88	124	4STD	9.7	4.4
1 1/2	2.55	65	3.18	81	4.88	124	4.88	124	4.88	124	4STD	9.25	4.2
2	3.07	78	3.81	97	5.25	133.5	5.28	133.5	5.28	133.5	3MOD	12.12	5.5
2 1/2	3.46	88	3.78	96	6.18	157	6.18	157	6.18	157	4STD	16.0	7.0
2 1/2(EUE)	3.81	97	4.00	100	5.51	140	-	-	-	-	4STD	17.8	8.1
3	4.25	108	4.52	115	6.22	158	5.51	140	5.51	140	4STD	22.26	10.1
4	5.27	134	5.04	128	8.23	209	5.67	144	5.67	144	4STD	33.0	15.0
5	5.55	141	6.10	155	6.22	158	6.22	158	6.22	158	3STD	56.0	25.4
6	6.62	168.3	6.81	173	6.57	167	6.57	167	6.57	167	3STD	79.8	36.2

HAMMER UNIONS

Fig 1003. Green Subs - Black Nut

These unions have a ball seat incorporating a primary 'O' ring seal with a metal secondary seal which assures perfect sealing in misalignment position. Degree of misalignment upto 2" size is 4° and beyond 2" size it is 7 1/2°. This union is ideally suited for use on high pressure lines. Available in 10000 PSI with end threaded or butt-welded for welding.

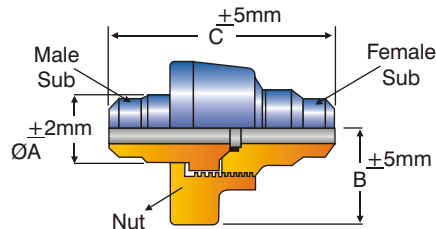


10,000 PSI CWP (FIG - 1003)

Size (Inch)	A		B		C		Beveled Ends				ACME (TPI)	Union Weight	
	Inch	mm	Inch	mm	Inch	mm	D		E			lbsf	kgf
							Sch-160 Inch	mm	Sch-xxs Inch	mm			
1	1.77	45	2.36	60	5.0	127	5.0	127	5.0	127	4STD	5.0	2.3
2	3.00	76	3.86	98	4.80	122	4.80	122	4.80	122	4STD	12.6	5.7
3	4.29	109	4.96	126	9.17	233	8.82	224	9.17	233	4STD	44.5	20.0
4	5.43	138	5.74	146	10.94	278	10.78	274	10.98	279	4STD	73.0	32.8
5	5.62	143	6.74	146	-	-	10.78	274	10.98	279	6STD	73.0	32.8

Fig 1004. Red Nut - Grey Subs

These union use lip type seal ring end here faces of male and female sub are perfectly square. These are available in 5" & 6" butt weld sizes.



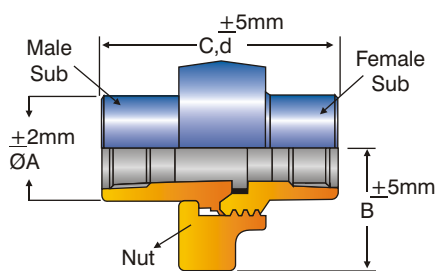
10,000 PSI CWP (FIG - 1004)

Size (Inch)	A		B		C		ACME (TPI)	Union Weight	
	Inch	mm	Inch	mm	BUTT WELDED ENDS			lbsf	kgf
					Inch	mm			
5	6.30	160.0	6.50	165.1	8.15	207.0	-	86	39
6	7.40	189.0	7.2	182.8	9.50	241.3	-	142	64

HAMMER UNIONS

Fig 1502. Blue Nut - Pink Subs

These unions are widely used in cementing, manifold and other services wherein extra high pressures of 15,000 PSI CWP are encountered. These unions are provided with replaceable seal ring.



15,000 PSI CWP (FIG - 1502)

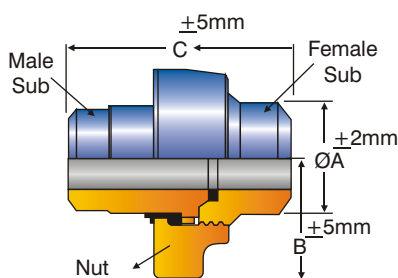
Size (Inch)	A		B		C		D		ACME (TPI)	Union Weight	
	Inch	mm	Inch	mm	Inch	mm	BEVELED ENDS			lbsf	kgf
							Inch	mm			
1	2.18	55.5	2.75	70	4.33	110	4.33	110	3.5STD	8.5	3.8
1.1/2	2.96	75.2	3.48	88.5	5.39	137	5.39	137	3.5STD	12.8	5.7
2	3.22	82	3.86	98	7.03	178.5	6.30	160	3STD	20.3	9.2
2.1/2	3.74	95.2	3.96	100.6	7.28	185	7.08	180	3STD	23.0	10.3
3	4.45	113	4.53	115	7.67	195	5.28	134	3.5STD	29.5	13.3
4	5.75	146.1	6.00	152.2	8.54	217	10.55	268	3MOD	76.5	34.4
5	6.45	164	6.53	166	-	-	9.0	230	-	96	43
6	7.48	190	7.2	183	-	-	9.8	249	-	148	67

Fig 2002. Green Nut - Grey Subs

These unions are provided with replacement lip-type seal and are recommended for choke and kill lines, cementing, acidizing and testing services for pressure up to 20,000 PSI CWP

Fig 2202. (H2S) - Olive Green

These unions are specially designed for sour gas service in accordance with NACE Std. MR-01-75 and API Std. RP-14E for pressure up to 15000 PSI CWP. Dimensions identical with Fig-2002 above.



20,000 PSI CWP (Fig. - 2002)

15,000 PSI CWP (Fig. - 2202)

Size (Inch)	A		B		C		ACME (TPI)		Union Weight	
	Inch	mm	Inch	mm	Inch	mm	Fig. 2002	Fig. 2202	lbsf	kgf
							-	-		
2	2.5	63.5	3.75	95.2	7.44	189	4	5	22.6	10.1
3	5.38	136.7	6.00	152	10.51	267	4	5	49.0	22.2
4	5.5	139.7	6.00	152	8.65	220	-	-	77.5	35.1
5	6.12	155.4	6.55	166	10.9	277	-	-	112.0	50.8
6	7.75	197.0	7.30	185	13.20	335	-	-	169.0	76.7

NOTE:

1. PARVEEN 2" Fig 2202 is interchangeable with Fig 2" 2052/2252 & 2 1/2" 2052/2252 of other reputed makes.
2. Dimension 'A' will vary depending upon size of weld preparation.

AIR - UNIONS

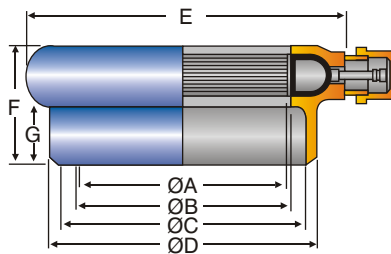
PARVEEN'S AIR-UNIONS are designed for 150 PSI maximum line pressure.

Features

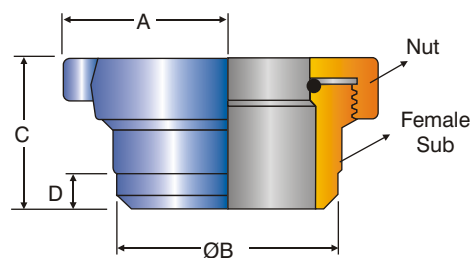
- Air inflates tube to seal around pipe.
- Fast and easy make up without close alignment.
- Allows Pipe expansion or misalignment (12°-15°) without breaking the seal.
- No wrenches, bolts & nuts required.
- Available in 4", 6", 8", 10", 12", 13", 16" sizes.

NOTE: Line pressure = 150 PSI max. Tube pressure = Line pressure + 50 PSI = 150+50=200 PSI (max.)

SIZE(IN)	4"		6"		8"		10"		12"		13"		16"	
	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM
A	4.60	117	6.75	172	8.75	222	10.95	277.5	12.95	329	13.66	347	16.30	414
B	4.60	117	6.93	177	8.93	228	11.14	283	13.12	333	13.78	350	16.41	417
C	5.08	129	8.00	203	10.12	258	12.12	307	13.38	337	15.43	392	17.40	442
D	5.56	141	8.62	223	10.75	279	12.75	324	14.02	358	16.02	407	18.03	458
E	6.62	168	10.5	263	12.25	313	14.50	370	16.50	419	17.24	438	19.84	504
F	3.12	79	4.00	102	4.00	102	4.25	108	4.25	107	4.40	112	4.29	109
G	1.50	38	2.00	51	2.00	51	2.00	51	2.00	51	2.04	52	2.04	52
TOTAL MISALIGNMENT DEGREE	6		14		14		14		14		14		14	
WEIGHT (LBSF)	7.25		17.5		21.75		26.00		30.00		34.5		38.8	
WEIGHT (KGF)	3.3		8.0		10.0		11.8		13.6		15.6		17.6	



Air - Union



Mud Tank Union

PARVEEN Mud Tank Unions

PARVEEN manufactures and supplies unions for mud tanks, mud tank connecting lines and pump suction flanges. These are manufactured for a maximum line pressure of 150 PSI. The nitrile seal provides compressive seal, the cross-section of the seal designed to provide greater sealing surface. The union is designed to take a maximum of 7° misalignment on the pipe. Sizes which are catered for are 6", 8", 10" and 12", 6", 8" and 10" sizes can be socket welded to pipe or butt welded to tubing. 12" size requires butt weld.

	6"		8"		10"		12"	
	INCH	MM	INCH	MM	INCH	MM	INCH	MM
A (CLEARANCE RADIUS)	6.25	159	7.50	191	8.50	216	9.75	248
B (OUTSIDE DIAMETER)	7.88	200	9.88	251	11.88	302	14.00	356
C (END TO FACE)	4.38	111	4.38	111	4.52	115	4.52	115
D (SOCKET WELD DEPTH)	0.38	9.5	0.38	9.5	0.38	9.5	0.38	9.5
WEIGHT (LBSF)	22		31		37		50	
WEIGHT (KGF)	10		14		16.8		22.7	

NOTE:
Material is steel casting.



TREATING IRONS, UNION CONNECTIONS, BULL PLUGS, CROSS OVER ADAPTORS & SWAGES

Treating Irons

PARVEEN'S one piece Treating Iron comprises an integral PARVEEN'S wing union end connection which eliminates welds and threads. Available in length up to 12 feet. Material is of carbon steel and alloy steel and is light weight. This integral treating iron is capable of handling a variety of fluids at cold working pressure of 15000 psi. PARVEEN'S treating irons are also available for sour service upto a CWP of 10,000 psi & in other lengths if required.

Recommended. service

These are suitable for High Pressure Discharge Lines, Temporary Flow Lines, Auxiliary Flow Lines, Well Testing Lines, Water Lines, Choke and Kill Lines and Abrasive Applications.

Salient Benefits

Since there are no welds and threads, PARVEEN'S treating irons provide an uniform bore of greater flow capacity and improved flow characteristics. PARVEEN'S design allows for uniform heat treating of the entire joint for better structural qualities. Nut can be detached for easy disassembly if replacement becomes necessary. For this only a circlip has to be removed.

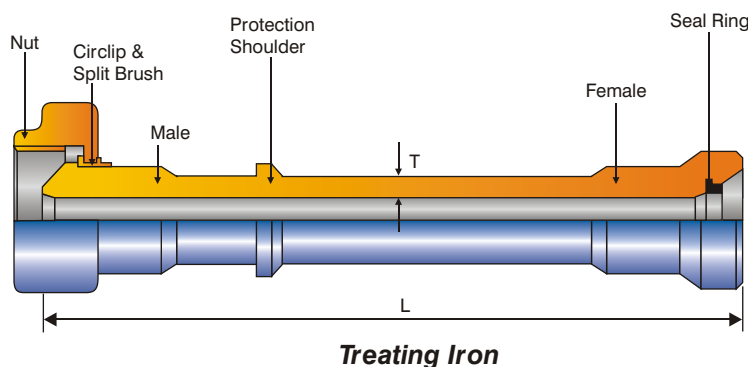
End Connections

End connections can be provided for fig 602, fig 1002 and fig 1502 or any other fig required by the customer.

NOTE: PARVEEN can also provide welded & threaded type treating iron if required by the customer.

DIMENSIONAL REFERENCE CHART												
SIZE (IN)	1"		1- 1/2"		2"		2- 1/2"		3"		4"	
FIGURE	602	1502	602	1502	602	1502	602	1502	602	1502	602	1502
WORKING PRESSURE (PSI)	6000	15000	6000	15000	6000	15000	6000	15000	6000	15000	6000	15000
TEST PRESSURE (PSI)	9000	22500	9000	22500	9000	22500	9000	22500	9000	22500	9000	22500
WALL (T) MM	6.35	9.09	7.14	10.16	7.14	11.1	7.14	14.02	7.62	15.24	13.49	17.11
INCH	0.250	0.358	0.281	0.400	0.281	0.4360	0.281	0.552	0.300	0.600	0.531	0.674
APPROX WT. PIPE:												
LBSF /FT	2.84	3.66	4.86	6.41	6.28	9.03	8.0	11.81	10.25	18.58	22.51	28.65
KGF /M	4.24	5.45	7.25	9.56	9.36	13.44	14.92	20.39	15.27	27.68	33.54	42.65
H UNION:												
LBSF	3.30	8.5	9.70	12.80	12.12	20.30	15.87	23.00	20.94	29.50	30.66	76.50
KGF	1.50	3.80	4.40	5.70	5.50	9.20	7.20	10.30	9.50	13.30	14.00	34.40
LENGTH L (FEET)	2', 3', 4', 5', 6', 7', 8', 9', 10', 12'											

NOTE: Other lengths, Figures , Pressure Rating, Buttweld and integral Connections are also available on customer's request.



Treating Irons, Unions, Swivels & Circulating Heads



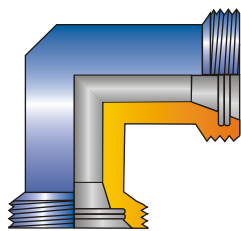
INTEGRAL / FABRICATED UNION CONNECTIONS

PARVEEN manufactures a quality line of high pressure integral/fabricated union connections with unions in various configurations and sizes from 1" to 4" and in pressure ratings up to 20,000 PSI CWP. These items are manufactured from high strength alloy steel forgings and fully heat treated under controlled conditions to assure uniform quality throughout. Available in combinations male by male, male by female to suit virtually any installation. The type of connections that PARVEEN manufactures are:

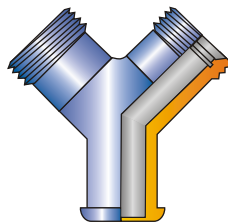
- a. Cross, Elbows, Tees and Wyes.
- b. 45° and 60° Laterals
- c. Crows foot
- d. Goat Head.

Recommended Service.

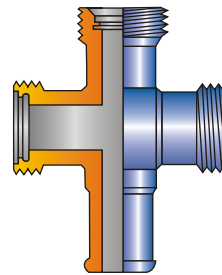
High Pressure Discharge Lines, Auxiliary Flow Lines, Temporary Flow Lines, Cementing and Circulating Lines, Well Testing Lines and other High Pressure applications.



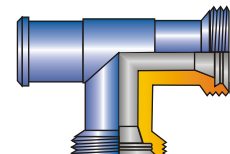
90° Elbow



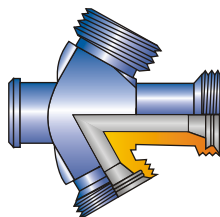
90° Y-Male



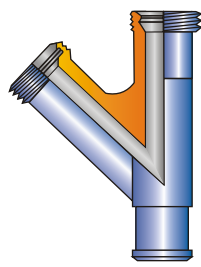
Cross



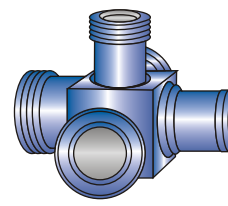
T - Conn



Crowsfoot



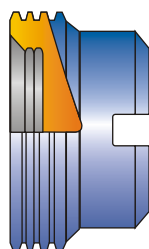
Lateral 45° & 60°



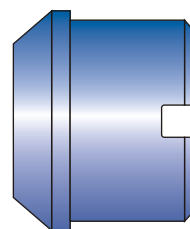
Goat Head

Bull Plugs, Gauge Bull Plugs and Lifting Bull Plugs

PARVEEN's bull plugs are available in sizes 1" to 4" male and female models and with pressure ratings up to 15000 PSI CWP.



Female Plug



Male Plug



CHANGEOVER / CROSSOVER ADAPTORS

PARVEEN's changeover/crossover adaptors are manufactured in different sizes and threads, types Male to Male, Female to Female, Female to Male configurations with sizes varying from 1" to 4" and in pressure ratings from 1 000 PSI to 20000 PSI CWP.

Swages

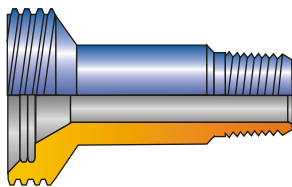
PARVEEN manufactures integral swages with unions male and female to pipe and tubing threads, in different sizes 1" to 4" and thread configurations, in pressure ratings from 6000 PSI to 15000 PSI CWP. These are made to highest quality standards to provide trouble free service to users.

Precautions

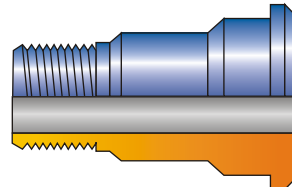
1. Do not expose standard service products to sour gas fluid.
2. Pressure ratings given are for temperatures,; between -20°F to 100°F For services above 100°F consult factory.
3. Excessive hammering force should not be used for tightening hammer unions.
4. For using hammer unions below freezing temperatures, correct safety precautions should be taken.
5. Hammer unions under pressure should not be struck otherwise failure may occur causing personnel injury or death.

Integral Female Adaptor Flanges

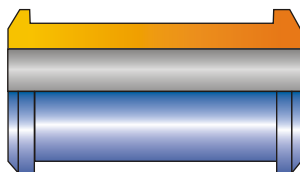
We manufacture these adaptor flanges of various sizes commencing from 1 13/16" onwards and various flanges pressure ratings with integral hammer union ends.



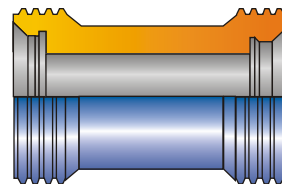
Female To Tubing Thread



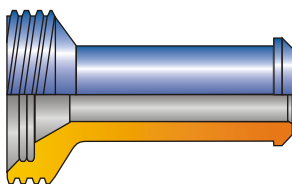
Male To Tubing Thread



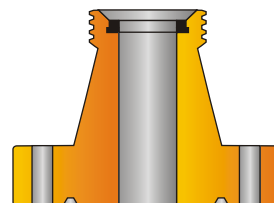
Double Wing (Male)



Double Thread (Female)



**Thread To Wing
(Male To Female)**



**Integral Female
Adaptor Flange**

CIRCULATING HEAD

Description

PARVEEN Circulating Head is basically consisting of

- i. Tee (having swivels at two ends & female line pipe connection at the upper end).
- ii. 45° angle connection with male line pipe thread for Circulating Hose at one end & other end is swivel for 'Tee'.
- iii. Lower adaptor connection having one end is suitable for connecting tubing, Casing, drill pipe, or tool joints and other end is swivel for 'Tee'.

At 6000 psi test pressure rotating in both Vertical & Horizontal planes is possible through the provision of swivel in 'Tee' and this head is supplied with an opening (female line pipe thread) in the Top through which wire line instruments may be run. It is compact & light in weight and thus an ideal standby tool. Circulating Head with other types of connections and other pressure ratings can also be supplied as per customer request, either with this type design or with any other type design.

Application

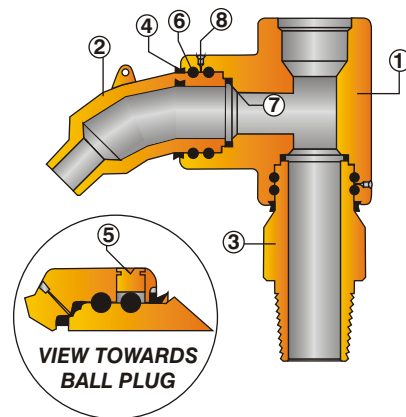
Helps to eliminate stuck drill pipe by making it possible to maintain pressure and circulation in the hole and to rotate drill pipe with the rotary table while conducting wireline coring operations, fishing jobs' or directional testing.

How to Order

When order please specify.

1. Pipe Size
2. Pressure Rating (i.e. working & test pressure).
3. Type of Connection i.e. - Upper Connection in Tee (Male or Female line Pipe Threads)
 - Lower Connection (Pin & Box) for Tubing, Casing, Drill Pipe & Tool Joint
 - Circulating Hose Connections (Male or Female Line Pipe Threads)

ITEM NO.	DESCRIPTION	QTY.
1.	TEE	1
2.	45 ANGLE ELBOW	1
3.	LOWER ADAPTOR	1
4.	GREASE RETAINER	2
5.	BALL PLUG	4
6.	BALLS	4 SETS
7.	SEAL & METAL SEAL	2
8.	GREASING SCREW	2



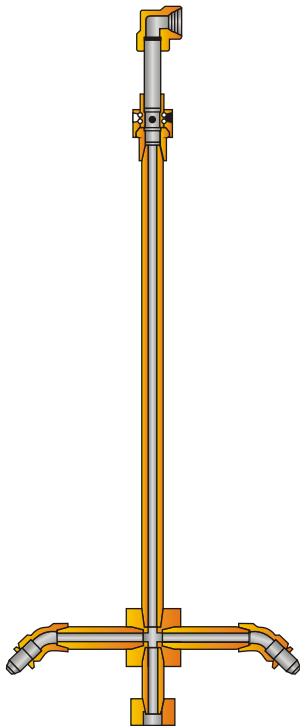
MUD GUN

PARVEEN mud mixing guns are simple in design. All turning takes place on double rows of steel balls in flame hardened races. There is nothing to tighten or adjust. Flow is unrestricted and pressure drop is minimum. Parveen mud mixing guns are of 3 types:

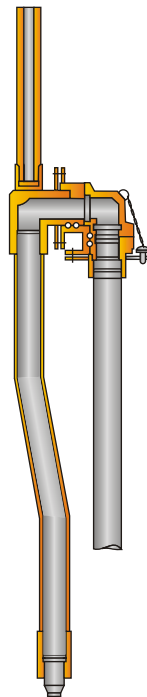
1. Spinner/ Pivot Type

2. Non Spin Type

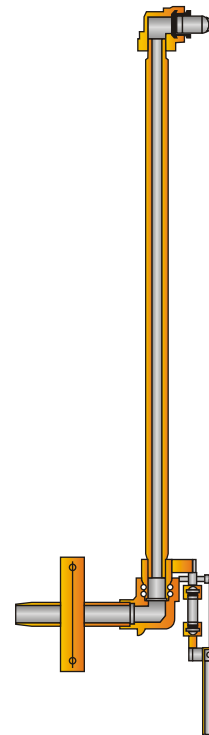
3. Bottom Type.



Spinner / Pivot Type



Non Spin Type



Bottom Type

Spinner /Pivot Type

The spinner/pivot type mud gun is designed for use in tanks where the utmost in constant agitation is desired. The nozzles are set at an angle and the pressure in the line imparts a spinning motion which is accommodated by a style 20 high pressure swivel joints. Furnished in any desired length as specified in order.

Size : 2", 3", 4" **Pressure :** Upto 5000 PSI

Non Spin Type

The non spin type mud gun is designed for mixing large volume of muds in the top of the tank or pit and also for transferring mud from one tank to another tank.

Non spin mud gun cannot spin because centrifugal force is neutralized by the offset of the barrel of the gun. Perforated flanges and locking pins permit locking of gun in any position.

Size : 2", 3", 4" **Pressure :** Upto 5000 PSI

Bottom Type

The bottom type mud gun is designed for use where large size metal tanks are employed as mud pits.

It is simple in construction, easy to install and easy to operate.

Size : 2", 3", 4" **Pressure :** Upto 5000 PSI

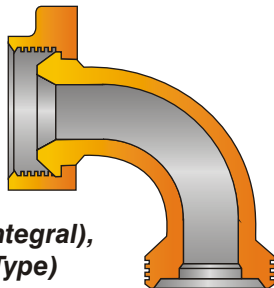
NOTE: 1. Discharge nozzles in all mud guns are equipped with tungsten carbide insert.

2. Other sizes & pressure ratings are also available on request.

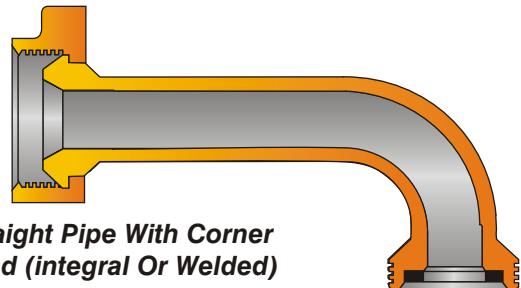


INTEGRAL / WELDED UNION END FITTINGS (FIG. 602, 1002, 1502)

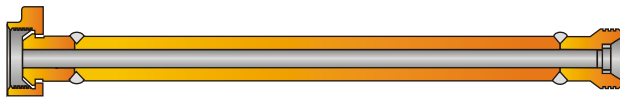
Size: 1" To 6" Upto W.P 15,000 PSI, T.P 22,500 PSI For Standard & Sour Service



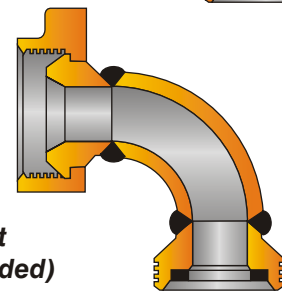
**Corner Joint (integral),
(Split Bush Type)**



**Straight Pipe With Corner
Bend (integral Or Welded)**

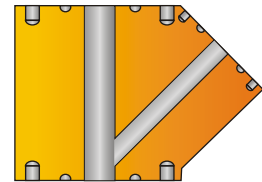
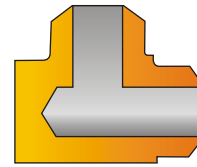
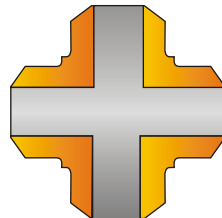
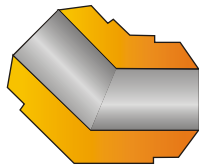
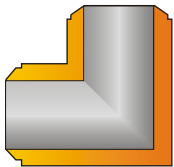


Straight Pipe (integral Or Welded)

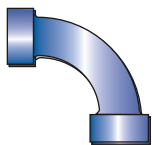


**Corner Joint
(integral Or Welded)**

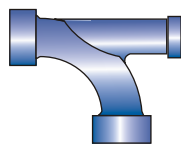
Block Type Fittings (Welded & Studded Flanged Type) (Up To 30,000 PSI Test Pressure In Any Sizes)



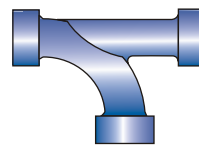
Manifold Fittings (Threaded, Butt Welded & Socket Welded) (Up To 10,000 PSI Test Pressure, Sizes: 2", 3", 4", & 5")



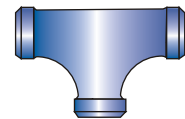
Long Sweep Elbow 90°



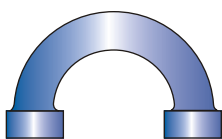
**Long Sweep Tee
With Two Outlet**



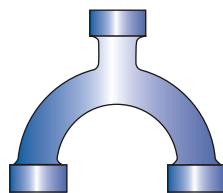
Long Sweep Tee



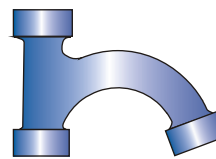
**Long Sweep Full
Flow Tee**



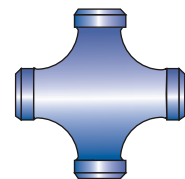
**Standpipe
Gooseneck 180°**



Long Sweep 'Y'



**Standpipe Gooseneck
160°
With Top Outlet**



Full Flow Cross

NOTE: For other sizes, pressures and services, consult factory.



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