



## 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

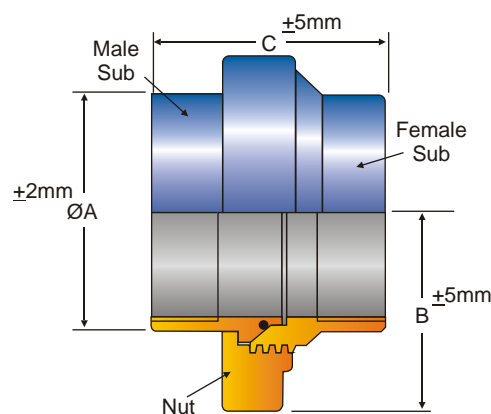
### Quick Reference Table

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.



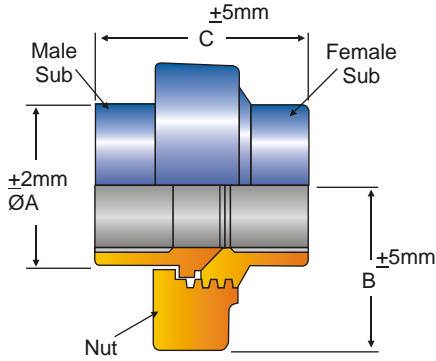
**500 PSI CWP (Fig. - 50)**

Size (Inch)	A		B		C				ACME (TPI)	Union		Weight	
	Inch	mm	Inch	mm	Threaded		Socket Welded End			Threaded	Socket	Welded End	
					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

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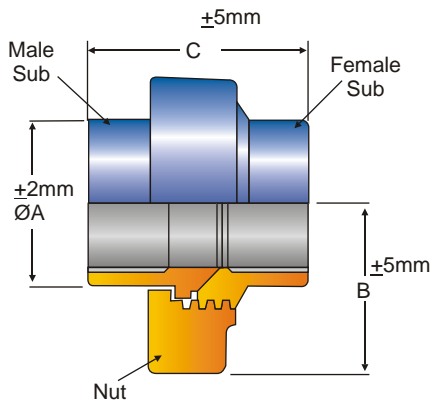
**Fig 100. Black nut - Yellow subs**

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



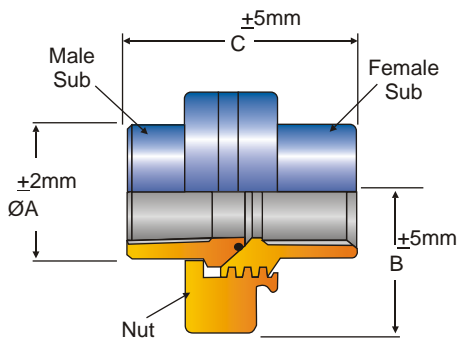
**2,000 PSI CWP (Fig. - 200)**

**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.



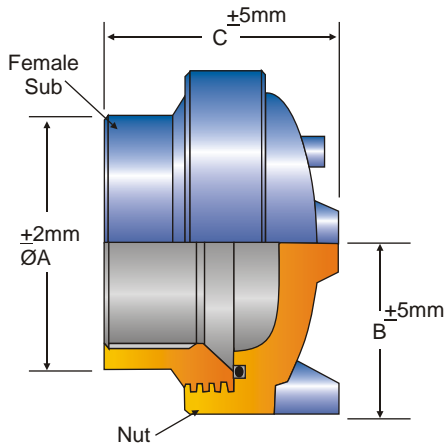
**2,000 PSI CWP (Fig. - 206)**

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**

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.

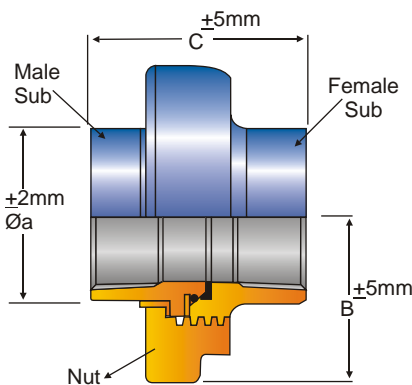


**2,000 PSI CWP (Fig. - 207)**

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 provide additional sealing and protection from corrosion. Suitable for 2000 PSI CWP.

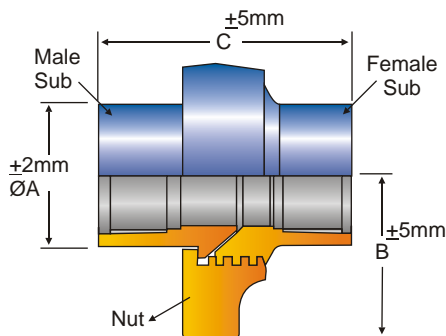


**2,000 PSI CWP (Fig. - 211)**

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