

## ITALFLEX HAMMER UNIONS

### Material

Our hammer unions are manufactured from steel forgings using materials appropriate to specific pressure ratings.

### End Connections

Our hammer unions are available in a choice of end connections. API line pipe threads are standard. Butt weld ends can be provided. Customer to specify schedule of pipe while ordering.

### Sour Service

Sour service is available and all H2S service parts of hammer unions conform to the latest NACE Specifications.

### Low Temperature Service

Our hammer unions can be supplied for low temperature applications with suitable impact value testing.

### Interchangeability

All our hammer unions components of the same size and figure number are Weco interchangeable. All union nuts have 3 hammer lugs.

### Traceability

Our hammer unions are supplied with full traceability documentation for each component.



# HAMMER UNIONS

## PRODUCT RANGE

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Integral Blind Subs

Hammer Seal

Unions Adaptors

and Crossovers

Clamps and Hubs

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Tees, Wyes Steel Hose

Assemblies

Pup

Joints

Plug

Valves

Check

Valves

API Flanges, Tees, and Crosses



# HAMMER UNIONS

## INTEGRAL BLIND SUBS



### INTEGRAL BLIND SUBS

- Blind Male and Female Subs with NPT ports, with or without SS chain for all sizes ranging from 1" to 10" for all pressure ratings.

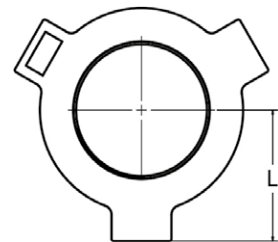


### HAMMER SEAL UNIONS

- Designed to quickly connect mud tanks with flanged connections.
- Nitrile O-ring provides a compressive non leak seal that limits the line fluid pressure to 150 psi.
- Tank Unions accept up to 7° of pipe misalignment.
- The female sub of the hammer seal union welds to a schedule 40 / 80 pipe.

### Specifications

Size	Nut Radius	Total Length	Weight
Inch	Inch / L	Inch / L1	lbs / Approx.
4	5.31	3.67	22.05
6	6.57	5.22	33.07
8	7.71	5.24	43.65
10	8.86	5.24	52.03
12	9.84	5.19	63.71



Gray Nut  
Gray Sub



## ADAPTORS AND CROSSOVERS

Italflex Crossovers are available in high quality forged construction with threaded, integral and welding hammer lug union end connection.

### Specifications

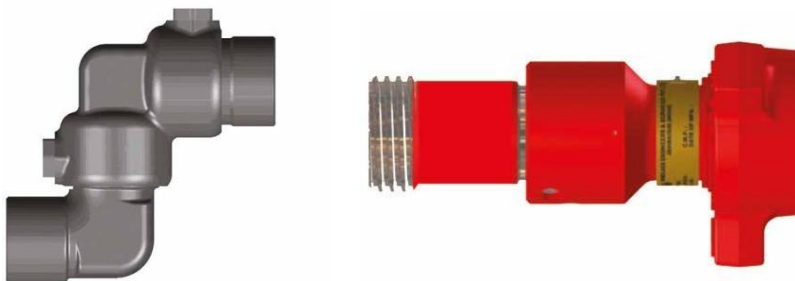
Size	Configuration	End Connection	CWP	Weight
Inch		Inch / L1	psi	lbs
2	M x M	1502	15,000	17
2	M x F	1502	15,000	22
2	F x F	1502	15,000	11
2 x 3	M x M	1502	15,000	38
2 x 3	M x F	1502	15,000	32
2 x 3	F x M	1502	15,000	31
2 x 3	F x F	1502	15,000	30
3	M x M	1502	15,000	41
3	F x F	1502	15,000	41

Note: Also available in other configuration on request.

# SWIVEL JOINTS

## SWIVEL JOINTS

- Smooth rotation and movement without sacrificing strength and integrity of the steel.
- Streamlined bore minimizes flow restrictions, turbulence and pressure drop.
- Long-sweep Swivel Joints have extra-long radius elbows for better flow characteristics.
- Manufactured specifically for high pressure applications.
- Dual and tri-race ball bearing Swivel Joints are matched to load capacities and service conditions.
- All ball races are either flame hardened, carburized and hardened or snap-in stainless steel.
- All Swivel Joints are field repairable and easy to use. Repair kits are available.
- Eight short radius Swivel Joint styles and configurations are available.
- Threaded, integral wing union, beveled for welding or flanged end connections are available.
- Sizes available 1" to 4" furnished with high nitrile packing and brass or stainless-steel ring.
- All joints are specially heat treated to achieve optimal hardness.
- All materials meet ASTM and / or AISI standards.
- 100% quality control and testing.
- Sour gas Swivel Joints are manufactured in accordance with the National Association of Corrosion Engineers (NACE) standard MR-01-75 and the American Petroleum Institutes (API) standard RP-14-E.



## Specifications

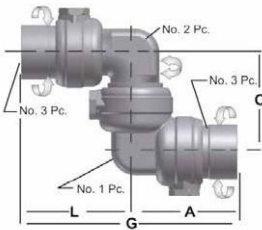
Models	Colour Code	Cold Working Pressure	Material	End Connections	Sizes							
					inch							
					3/4	1	1 1/4	1 1/2	2	3	4	
Low Pressure Swivel Joints	Blue	1,000	Carbon Steel	NPT							x	
				Beveled for welding							x	
High Pressure Swivel Joints	Silver	6,000	Alloy Steel	Female line pipe threads	x	x	x	x	x	x		
				Figure 602 Union	x	x	x	x	x	x		
Long Sweep Swivel Joints	Olive Green (Sour Gas)	7,500	Alloy Steel	Figure 1002 Union					x	x	x	
	Olive Green (Sour Gas)	10,000	Alloy Steel	Figure 1502 Union					x	x	x	
	Black	10,000	Alloy Steel	Female line pipe threads					x	x	x	
				Figure 1002 Union					x	x	x	
	Olive Green (Sour Gas)	15,000	Alloy Steel	Figure 2202 Union					x	x		
	Red	15,000	Alloy Steel	Figure 1502 Union					x	x	x	
Light Blue	20,000	Alloy Steel	Figure 2002 Union					x	x			

## HIGH PRESSURE SHORT RADIUS SWIVEL JOINTS

Available in sizes 3/4" through 3" for 6,000 psi, non-shock cold working pressure. All sizes available in eight styles for 3600 rotation in one, two or three planes. These Swivel Joints are recommended for hydraulic control lines, mud lines, rotary, line connections, BOP lines, test lines, water lines, offshore wellhead connections, cementing, circulating hoses and choke-kill lines.

- Smooth rotation and movement without sacrificing strength and integrity of the steel.
- Streamlined bore minimizes flow restrictions, turbulence and pressure drop.
- End connections are threaded or union ends.
- All joints are specially heat treated to maintain optimal hardness and undergo strict quality control.
- All material meets ASTM and/or AISI standards.

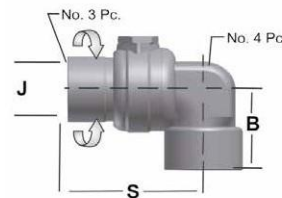
**Style 10-3 Plane**



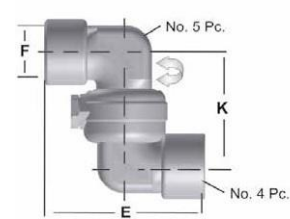
**Style 20-1 Plane**



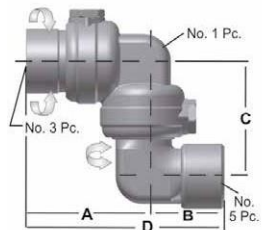
**Style 30-1 Plane**



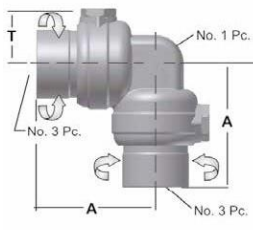
**Style 40-1 Plane**



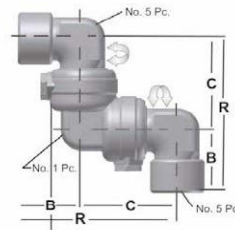
**Style 50-2 Plane**



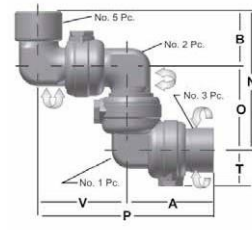
**Style 60-2 Plane**



**Style 70-2 Plane**



**Style 80-3 Plane**



## Size Chart

Size	A	B	C	D	E	F	G	H	J
Inch									
3/4-1	4-5/8	2-23/32	4-7/32	7-11/32	5-7/16	1-3/4	9-1/4	2-7/16	1-3/4
1-1/4 / 1-1/2	4-23/32	3-3/16	4-9/32	7-29/32	6-3/8	2-1/2	10-1/32	2-7/8	2-3/8
2	5-27/32	4-1/32	5-7/8	9-7/8	8-1/16	3-1/8	12-5/16	4-1/8	3-5/16
3	8-5/8	4-5/8	7-15/16	13-1/4	9-1/4	4-5/16	18-1/16	5-13/16	4-1/2

Size	K	L	M	N	O	P	R	S	T	V
Inch										
3/4-1	4-7/32	4-5/8	5-3/16	6-15/16	4-7/32	8-27/32	6-15/16	4-5/8	1-7/8	4-7/32
1-1/4 / 1-1/2	4-9/32	5-5/16	5-15/32	7-15/32	4-9/32	9-9/16	7-15/32	4-23/32	2-1/8	4-27/32
2	5-7/8	6-15/32	6-21/32	10-1/32	6	12-11/32	9-29/32	5-27/32	2-21/32	6-1/2
3	8-3/4	9-7/16	9-1/8	12-9/16	7-15/16	17-3/8	12-9/16	9-7/16	3-3/8	8-3/4

# SWIVEL JOINTS

## EXTRA HIGH PRESSURE LONG SWEEP SWIVEL JOINTS

Our tri-race code black swivels are available in 10,000 psi working pressure with female line pipe thread and connections.

Our tri-race code red Swivel Joints are designed for the critical service conditions that exist in fracturing, cementing, acidizing and well testing. They are available in 2", 3" and 4" sizes with 15,000 psi working pressure and 22,500 psi test pressure. With 1502 union ends for fast, easy make-up.

- Long sweep joints have extra long radius elbows for better flow characteristics.
- Manufactured specifically for high pressure applications.
- All Swivel Joints are field repairable and easy to use. Repair kits are available.
- Tri-race ball bearing Swivel Joints are matched to load capacities and service conditions.
- All ball races are either flame hardened or snap-in stainless steel.

Style 10



Style 20



Style 30



Style 40



Style 50



Style 60



Style 70



Style 80



Style 100



### Styles and Types:

2" Union Ends	3" Union Ends	4" Union Ends, 1002	4" Union Ends, 1502
STYLE NO. 10 - Male x Female	STYLE NO. 10 - Male x Female	STYLE NO. 10 - Male x Male	STYLE NO. 10 - Male x Female
STYLE NO. 10 - Male x Male	STYLE NO. 10 - Male x Male	STYLE NO. 10 - Male x Female	STYLE NO. 10 - Male x Male
STYLE NO. 10 - Female x Female	STYLE NO. 10 - Female x Female	STYLE NO. 20 - Male x Female	STYLE NO. 50 - Male x Female
STYLE NO. 20 - Male x Female	STYLE NO. 30 - Male x Female	STYLE NO. 30 - Male x Female	STYLE NO. 60 - Male x Female
STYLE NO. 30 - Male x Female	STYLE NO. 50 - Male x Female	STYLE NO. 50 - Male x Female	-
STYLE NO. 40 - Male x Female	STYLE NO. 50 - Female x Female	-	-
STYLE NO. 50 - Male x Female	STYLE NO. 60 - Male x Female	-	-
STYLE NO. 50 - Female x Female	STYLE NO. 80 - Male x Female	-	-
STYLE NO. 60 - Male x Female	-	-	-
STYLE NO. 70 - Male x Female	-	-	-
STYLE NO. 80 - Male x Female	-	-	-
STYLE NO. 100 - Male x Female	-	-	-



## INTEGRAL FITTINGS

High quality forged construction with wing union end connections and can be combined to suit virtually any installation. All Integral Fittings come with full material traceability.

### Quick Reference Chart

Integral Fitting Sizes	Hammer Union Figure No.	Long Sweep Elbows		Block Elbows		
		F x M / lbs	M x M / lbs	F x M / lbs	M x M / lbs	F x F / lbs
2	602	23	28	28	34	23
	1002	23	28	28	34	23
	1502	29	35	34	40	28
3	602	51	59	64	73	55
	1002	51	59	64	73	55
	1502	56	69	70	83	57
4	602	89	102	-	-	-
	1002	89	102	-	-	-
	1502	122	162	-	-	-

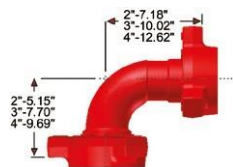
Integral Fitting Sizes	Hammer Union Figure No.	Tees						Wyes
		F x F x F / lbs	F x F x M / lbs	M x F x F / lbs	M x F x M / lbs	M x M x F / lbs	M x M x M / lbs	M x F x F / lbs
2	602	27	34	34	39	39	44	30
	1002	27	34	34	39	39	44	30
	1502	33	39	39	45	45	51	33
3	602	60	69	69	77	77	86	-
	1002	60	69	69	77	77	86	-
	1502	61	74	74	86	86	100	-

### Dimensions

#### Longsweep Elbow (M x F)



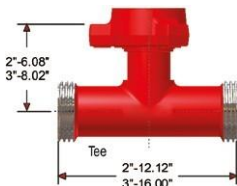
#### Longsweep Elbow (M x M)



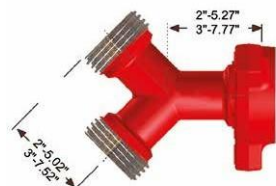
#### Block Elbow (M x F)



#### Tee (F x F x M)



#### Wye (M x F x F)



# STEEL HOSE ASSEMBLIES & PUP JOINTS

## STEEL HOSE ASSEMBLIES

- Used in a variety of high pressure well service applications.
- Utilize swivel joint and hammer union end connections for fast and secure make up and breakout operations.
- Made with stand cold working pressures up to 15,000 psi for standard service and 10,000 psi for sour service.
- Steel Hose Assemblies eliminate the need for exact alignment when installing to facilitate the routing of lines around fixed objects and simplify folding, transporting and storage of equipment.

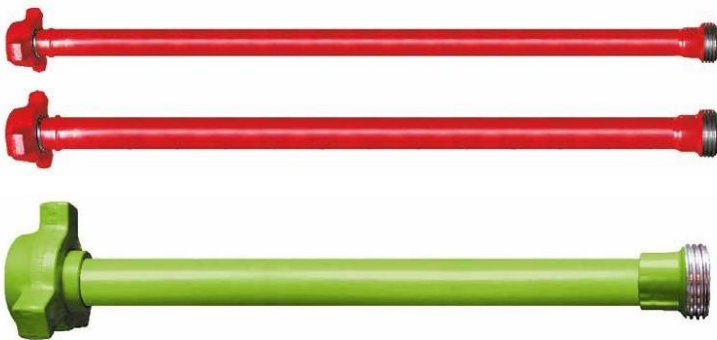


Size	Swivel Joint Style	Quantity of Wing Unions	Weight lbs
2" x 10"	50, 10	1	147
2" x 12"	50, 10	1	170
2" x 12"	(2) 50	2	179
2" x 12"	(2) 50	4	207
3" x 12"	(2) 50	4	454

## PUP JOINTS

Pup Joints with integral hammer lug union end connections. This enables faster, easier make-up and break-out of temporary flow lines.

- Integrally forged hammer lug union end connections eliminate welding or threading.
- Lightest Pup Joint available for fast, easy handling.
- Available in butt weld, integral, threaded (LPT and NPST).
- Sizes from 2" to 4". Integral Pup Joint available in lengths up to 12 feet while threaded / butt weld is available up to 20 feet.
- Available in 6,000 to 20,000 psi pressure rating.
- All products manufactured from forged steel which meets ASTM and / or AISI standards.
- Available in both standard and H2S service.
- Pup Joints with integral hammer lug union end connections. This enables faster, easier make-up.



### PLUG VALVES

- High pressure low torque Plug Valves are available in 2"x 2" and 2"x 1". They come in multiple bores and are available up to 15,000 psi for standard service and 10,000 PSI for H2S or sour gas service. Our plug valves are pressure balanced type and have replaceable metal liners between the body and plug. Repair kits are also available to increase their life and make them perform safely for longer. These manually operated valves are fitted with high stem torques and manual gearboxes.
- These Plug Valves are designed to meet the needs and requirements of the oilfield. They can withstand the high erosion rates and pressures encountered in today's operating environment.



### CHECK VALVES

- Designed and manufactured primarily for use in portable and temporary flow lines and are used to isolate well servicing equipment from high pressure treating fluids during fracturing applications.
- Standard Specifications
- 2" nominal bore size.
- Standard service applications.
- Maximum CWP up to 15,000 psi.
- Comes standard with female and male union end connections.
- Features
- Suitable for in-line maintenance in fixed applications.
- Forged alloy steel body and stainless-steel valve seats.
- Easy maintenance and high-quality construction ensure long product life and low total cost of ownership.
- Ideal for use in portable and temporary flow lines.

