



OILFIELD SERVICE AND DISTRIBUTION PRODUCTS



Kemper Valve & Fittings Corporation is a rapidly growing and leading provider of oilfield valves, hammer unions, swivel joints, oilfield flowline components, manifolds and complete rebuild / recertification services. This brochure outlines the products that are distributed through leading oilfield supply stores in North America. See our companion brochure "Flow Control and Stimulation Products" for additional products that are specifically designed and sold to the well servicing segment of the oil industry.



ISO 9001 Registered DNV Registered



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Sales & Distribution 12343 Cutten Road Houston, TX 77066 Local: 281-781-2730 Toll Free: 800-231-2724 Fax: 281-781-2731	Sales & Service 2733 Industrial Drive Sulphur, OK 73086 Local: 580-622-2048 Toll Free: 888-533-3722 Fax: 580-622-2058	Sales & Service 1423 4th Avenue Grand Junction, CO 81501 Local: 970-609-5845 Fax: 970-609-5839	Manufacturing HQ 3001 Darrell Road Island Lake, IL 60042 Local: 847-526-2166 Toll Free: 800-323-1659 Fax: 847-526-2241	<u>Sales & Service</u> 111 Arrowhead Drive Unit C Slippery Rock, PA 16057 Local: 724-738-0130 Fax: 724-738-0172
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OILFIELD UNIONS



Sales: 800-231-2724

Figure 100





Figure 1002



Figure 1502

		dard	Nor P	n-Shock (ressure F	Cold Work Rating (ps	ting i)		Nominal Pipe Size (Inches)										
Figure Number	Color	vice Code - Nut)	Stan Ser	dard vice	H2 Ser		1	1-1/4	1-1/2	2	2-1/2	3	4	5	6	8	10	12
			CWP	Test	CWP	Test												
100 ¹			1000	1500						•	•	•	•	•	•	•		
101			1000	1500										•				
200			2000	3000			٠	•	•	•	•	•	•	٠	•	•	•	
201			2000	3000						•	2	•						
206			2000	3000			•	•	•	•	•	•	•	•	•	•	•	
207			2000	3000								•	•		•			
211			2000	3000						•		•						
300			2000	3000						•								
400			4000	6000	4000	6000				•		2	2	•	•			•
402			4000	6000	4000	6000				•								
600			6000	9000			•	•	•	•			•					
Figure G			6000	9000	6000	9000			•	•								
602			6000	9000	6000	9000	•	•	•	•		•	2	•	•			
1002			10000	15000	7500	12000	•	•	•	•		•	•	•	•			
1003			7500	12000	5000	7500						•	•	•	•			
1502			15000	22500	10000	15000	•		•	•		•	•	•				
2002			20000	30000						•								
2202					15000	22500				•								

3 - MINIMUM ORDER QUANTITIES MAY BE REQUIRED FOR UNIONS PREPPED FOR SOUR GAS SERVICE, OR OTHER NON-STANDARD UNION CONFIGURATIONS PLEASE CONSULT MANUFACTURING, DISTRIBUTION OR STIMULATION SALES FOR AVAILABILITY, MINIMUM ORDER QUANTITIES, AND PRICING



OILFIELD HAMMER UNIONS

FIGURE 100 BLACK NUT, YELLOW SUBS

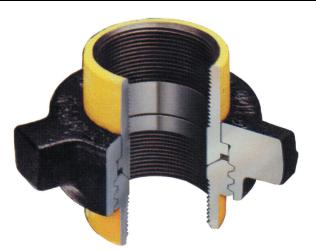


Figure 100. 1,000-psi NSCWP unions are available in 2-inch through 8-inch. Recommended for low-pressure manifolds and applications where working pressures do not exceed 1,000-psi. Figure 100 Unions are made from tough, impact resistant ductile iron, with precisely manufactured ball-cone (male-to-female) seats. This union is also available as a 16" butt-weld Schedule 80.

FIGURE 200 BLUE NUT, GRAY SUBS



Figure 200. 2,000-psi NSCWP unions are available in 1-inch through 10-inch. These unions are compact and popular for low pressure rig piping. They also meet most requirements in the medium pressure ranges for air, water, oil or gas service. Available in butt-weld Schedule 40 and 80. Also available with stainless steel subs.

FIGURE 300 GRAY NUT, YELLOW SUBS



FIGURE 300. 2,000-psi NSCWP unions are available in 2-inch line pipe thread size and are also available in 2" and 2½" 8 round EUE thread sizes. These unions feature the effective and dependable "flat-face/o-ring" sealing design. They seal equally well in low or high pressure vapor or liquid service. The "flat-face" design also permits straight away lateral breakouts of short rigid piping sections, without the need to spread the pipe.

FIGURE 206 BLUE NUT, GRAY SUBS



Figure 206. 2,000-psi NSCWP unions are available in 1-inch through 10-inch. These unions are fitted with an o-ring in the male sub seating surface for enhanced sealing. Available in butt-weld Schedule 40 and 80. Also available with stainless steel subs.



OILFIELD HAMMER UNIONS

FIGURE 207 BLUE CAP, GRAY SUB



Figure 207. 2,000-psi NSCWP unions are available in 3, 4 and 6-inch. These unions are fitted with a nitrile o-ring in a blanking cap for effective closure. With the cap removed, the female sub will make up to hose, pipe or tubing fitted with a Figure 200 or 206 male sub and nut. Recommended for air, water, oil or gas service. Available in butt-weld Schedule 40 and 80.

FIGURE 211 GRAY NUT, BLUE SUBS

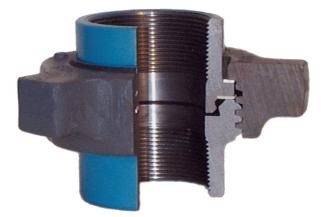


Figure 211. 2,000-psi NSCWP Insulating Unions are available in 2 and 3-inch sizes. The insulated design eliminates metal to metal contact across the union, while dual abrasion resistant precision molded elastomers provide a positive seal. Recommended where electrolytic corrosion prevention is a problem, or to statically isolate sections of piping. Replacement seal kits are available to extend service of the union.

FIGURE 400 BLACK NUT, <mark>RED SUBS</mark>



Figure 400. These unions are available in 2, 3, 4, 5 and 6-inch 4,000-psi and 12-inch 2,500-psi NSCWP. All three parts are made from steel forgings with heavy walls and a rugged design. They feature ball and cone sealing for easy alignment and dependable seals. Also available in butt-weld Schedule 80 and 3" or 4" API 8 or 10 round threaded ends.

FIGURE 600 BLACK NUT, SILVER SUBS



Figure 600. 6,000-psi NSCWP unions are available in 1, 1 ¼, 1 ½, 2, and 4–inch sizes. These unions have a bronze seat insert to provide an additional hardness differential across the seats for enhanced sealing.



OILFIELD HAMMER UNIONS

FIGURE 602 BLACK NUT, ORANGE SUBS



Figure 602. 6,000-psi NSCWP unions are available in 1, 1¼, 1½, 2, 3, 4 and 5-inch sizes in standard or sour gas service. These unions feature a resilient nitrile seal ring that helps sealing and protects the steel-to-steel seating of the union. Recommended for manifold and truck-mounting where size and weight are critical. Fig. 602 unions are also available as non-pressure seal unions and in butt-weld Sch. 80, Sch. 160 and XXH, 4" API 8 round threaded ends.

FIGURE 1002 RED NUT, BLUE SUBS



Figure 1002. These unions are available in 1 thru 4-inch 10,000-psi and 5 and 6-inch 7,500-psi NSCWP. These unions also have a resilient nitrite seal ring (5-inch and 6-inch have nitrile o-ring). They are made from alloy steel and are used primarily by service companies in applications such as cementing, fracturing and acidizing. Designed for high-pressure systems, including truck-mounted systems. Fig. 1002 unions also are available as non-pressure seal unions and in butt-weld Sch. 160, XXH or prepped for sour gas service.

FIGURE 1003 BLACK NUT, GREEN SUBS



Figure 1003. Available in 3-inch rated at 10,000-psi and 4, 5 and 6-inch rated at 7,500-psi CWP. 3 and 4-inch are available in LPT threaded ends and all sizes in butt-weld Sch. 160 or XXH. Recommended for air, water, oil, mud or gas service where alignment of piping is a problem. Especially suitable for high pressure manifolding and drilling rig use. These unions incorporate a ball seat that provides for 7½° of misalignment or angular adjustment from center, for a total of 15° misalignment capability. In addition to the steel-to-steel seating of the union, a nitrile o-ring assures a pressure tight connection in any position of misalignment.

FIGURE 1502 BLUE NUT, <mark>RED SUBS</mark>



Figure 1502. These 15,000-psi NSCWP unions are available in 1, 1½, 2, 3, 4 and 5-inch sizes with a replaceable resilient nitrite seal ring. Alloy steel construction, heavy walls and a rugged design have made these unions popular with the service companies for working pressures up to 15,000-psi. Figure 1502 unions also are available with non-pressure seal threads and in butt-weld Schedule 160 or XXH, 2" or 2½" API 8 round threaded ends or prepped for sour gas service.

All Kemper o-ring and seal rings are available in standard NBR material or upon request, Viton or Highly Saturated Nitrile.



SWIVEL JOINTS - 6000 CWP

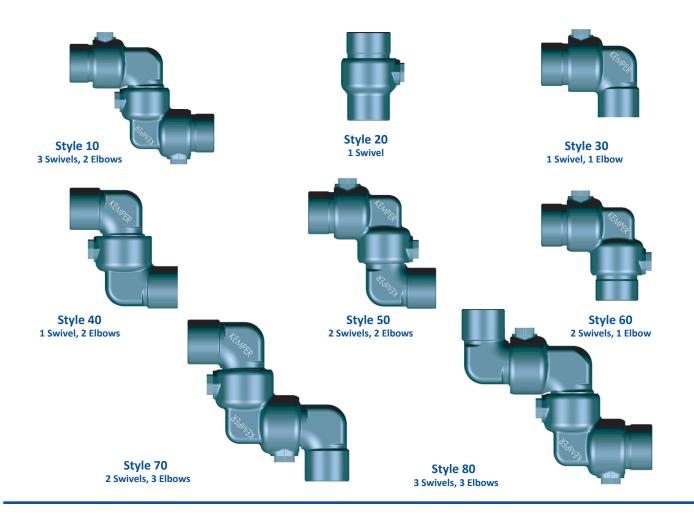
CODE SILVER, STYLE 50



CODE SILVER, STYLE 70



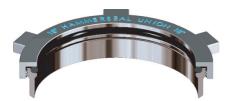
- High Pressure Swivel Joints 6,000-psi CWP (Cold Working Pressure) in 3/4", 1", 11/4", 11/2" and 2" LPT sizes.
- For test lines, fracturing, acidizing, cementing and well servicing up to 6,000-psi CWP.
- Swivel Joints can be custom configured in any style for quick delivery.
- Manufactured to the highest quality standards in the industry.
- All supporting documentation, including MTRs, is available at any time for *no additional cost*.
- Maintenance, rebuild and recertification are available through our Service facilities.





Hammerseal[™] Unions Join drilling mud tanks in a hurry

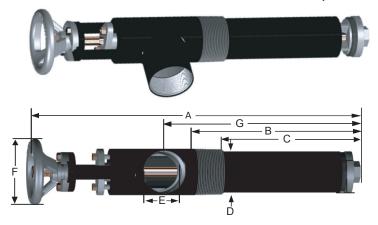
Even if mud tanks aren't aligned perfectly (up to 7°), you can hammer these tough unions tight to a non-leak seal. The externally threaded female portion of the HammerSealTM welds to a Schedule 80 stub pipe at the tank wall. The connecting pipe (nominal size defines the union) extends through the nut component, the o-ring and then the female portion of the union. When the internally threaded lug nut is hammered tight onto the female, the o-ring is compressed into an oblong cross section to seal up to 150-psi against the outside diameter of the connecting pipe.



3" and 20" HammerSeals[™] are Available -Please Consult Factory



Non-Freeze Tank Valves Give trouble-free service in cold country



The only precision-manufactured non-freeze storage tank valves in 2-inch and 3-inch sizes (4-inch valve available on special order only). These valves operate in extremely cold climates when other tank valves freeze up. The stainless steel valve stem meets most corrosive service requirements. Adjustable gland prevents leaking and extends the wear-life of the gland packing. A heavy duty nitrile valve seat and nitrile gland packing tolerate hydrocarbon liquids for long periods without deterioration. Standardline pipe connections permiteasy make-up at the tank connection and valve outlet. Operating pressure is up to 150-psi (10.5 kg/cm²). High torque handwheel makes opening and closing easy at all times. Complete valves and individual parts available. All sizes also available with flange connections.



Seal-O-Grip[™] Connections Provide air-inflatable tight seal between mud tanks

Seal-O-GripTM Unions are used for speedy connect-and-disconnect of mud suction and return lines or other low-pressure fluid lines. A tight seal is maintained even if the pipe is mis-aligned, within certain limits. Available in popular oilfield line pipe sizes: 4, 6, 8, 10, 12 and 16-inch.

The Seal-O-GripTM body (ASTM A216 Grade WCB carbon steel) welds in place on mud tanks, manifold pipe and other fittings. The oil-resistant inflatable tube is heavy duty, abrasion-resistant and is designed for 200-psi maximum air pressure. (Note: Tube inflation pressure must exceed fluid line pressure by 50-psi to seal line pressures up to 150-psi.)



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Sales: 800-231-2724

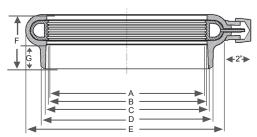
Service: 888-533-3722

Hammerseal[™] Union Dimensions

			-										1	
Connects Female Com-		Female Complete Assembly Com-		O-Ring	Only			Dimen	sions in	Inches			⊢−B•	-
Nominal Size Oilfield Pipe:	ponent Welds To:	Assem- bly P/N	Approx Weight Ibs.	O-Ring P/N	Approx Weight Ibs.	Α	В	С	D	Е	F	G		
3-Inch (3 1/2" O.D.)	4-Inch	PS300A	15	PS30OR	0.38	9.75	2	4.5	3.94	3.75	3.5	3.0) ,
4-Inch (4 1/2" O.D.)	6-Inch	PS400A	22	PS40OR	0.5	10.75	2	6.63	5.88	4.81	3.5	3.0		
6-Inch (6 5/8" O.D.)	8-Inch	PS600A	37	PS60OR	0.75	13.5	2	8.63	7.88	6.88	5.0	4.5		
8-Inch (8 5/8" O.D.)	10-Inch	PS800A	42	PS80OR	1.0	15.75	2	10.75	10	8.88	5.0	4.5		
10-Inch (10 3/4" O.D.)	12-Inch	PS100A	53	PS100R	1.25	17.75	2	12.75	12	11	5.0	4.5	AE +++ 	
12-Inch (12 3/4" O.D.)	14-Inch	PS120A	61	PS12OR	1.5	19.75	2	14	13.25	13	5.0	4.5		
13-Inch (13 3/8" O.D.)	13-Inch (Casing)	PS130A	53	PS130OR	1.6	19.75	2	14.13	13.5	13.5	5.0	4.5		
14-Inch (14" O.D.)	16-Inch	PS140A	83	PS14OR	1.75	22.0	2	16	15	14.25	4.5	4.0		
16-Inch (16" O.D.)	18-Inch	PS160A	99	PS16OR	2.0	24.0	2.25	18	16.5	16.25	4.56	4.0		S
18-Inch (18" O.D.)	20-Inch	PS180A	110	PS18OR	2.25	26.0	2.25	20	18.8	18.25	4.56	4.0		- G -►
20-Inch (20" O.D.)	22-Inch	PS200A	140	PS20OR	3	28.0	2.25	22	20.8	20.25	5.0	5.63		-

Non-Freeze Tank Valve Dimensions

Complete Valve		Non-Freeze Valve Dimensions in Inches										
Part No.	Valve Size	А	В	С	D	E	F	G	н	I		
N-F200	2	22	10 5/8	9 1/4	2	2 1/8	5	13 1/4	2 1/8	2 3/8		
N-F300	3	25	12	10	3	3 1/8	5	15 1/4	3 1/8	3 1/2		



Seal-O-Grip[™] Connector Dimensions

Line Pipe Size		Seal-O-Grip Assembly Complete		table Only	Maximum Mis-Alignment			Seal-O-Gri	p Dimensio	ns (Inches)		
(inches)	Part No.	Approx. Wt (lbs)	Part No.	Approx. Wt (lbs)	Tolerance	A	В	С	D	E	F	G
4	P480	5.3	P480T	.8	7	4 19/32	4 19/32	5 1/6	5 3/4	6 5/8	3	1 1/2
6	P680	23.0	P680T	1.4	14	6 3/4	6 15/16	8	8 5/8	10 1/4	4	2
8	P880	27.0	P880T	1.6	14	8 3/4	8 15/16	10 1/8	10 3/4	12 1/4	4	2
10	P1080	31.0	P1080T	2.4	14	10 15/16	11 1/8	12 1/8	12 3/4	14 1/2	4 1/4	2
12	P1280	38.5	P1280T	3.2	14	12 15/16	13 1/8	13 3/8	14 1/4	16 1/2	4 1/4	2
14	P1480	42.0	P1480T	3.3	14	14 1/8	14 1/4	15 1/4	16 1/4	18 1/4	4 1/2	2
16	P1680	46.5	P1680T	3.5	14	16 1/8	16 1/4	17 1/4	18 1/4	20 1/4	5 1/8	2



INDUSTRIAL UNIONS - 1/2" thru 3" Nominal Pipe Sizes









3000# "AAR" Unions Steel-to-Steel Threaded or Socket Weld

3000# Unions Bronze-to-Steel Threaded or Socket Weld

3000# Unions Bronze-to-Bronze Threaded or Socket Weld

3000# Hi-Speed Unions Steel-to-Steel Threaded or Socket Weld







Unions



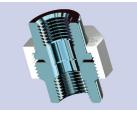
3000# Hi-Speed Hammer-Lug **Nut Unions** Steel-to-Steel Threaded or Socket Weld

3000# Hi-Speed Hammer- Lug **Nut Unions** Flat-Face to O-Ring Threaded or Socket Weld

3000# Hi-Speed Orifice Plate Steel-to-Plate-to-Steel Threaded or Socket Weld

3000# Hi-Speed "Tabbed" **Orifice Plate Unions** Steel-to-Plate-to-Steel Threaded or Socket Weld

ASTM A182 3000# "AAR" Style Unions in Austenitic Stainless Steel Grades 316, 316L, 304, 304L are available. Other A182 grades can be produced for special requirements. Please consult factory directly for pricing and delivery.



3000# "AAR" Unions **ASTM A182 Stainless** Steel-to-Steel Threaded or Socket Weld



3000# "AAR" Unions Steel-to-Steel Threaded Male X Female



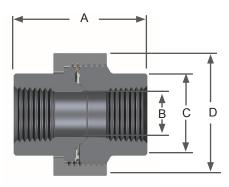
3000# Insulated Unions Flat-Face to O-Ring Threaded



Kemper 3000# Forged Steel Industrial Unions conform to one or more of the following specifications:

- ASTM A105 "Forgings, Carbon Steel, for Piping Components"
- ASTM A182 "Forged or Rolled Alloy-Steel Pipe Flanges, Forged Fittings, and Valve and Parts for High-Temperature Service"
- MSS SP-83 "Carbon Steel Pipe Unions, Socket Welding and Threads"
- MSS SP-25 "Standard Marking Systems for Valves, Fittings, Flanges and Unions"
 - ANSI/ASME B1.20.0 "Pipe Threads, General Purpose"
 - ANSI/ASME B1.8 "Stub Acme Screw Threads"
 - ANSI/ASME B1.1 "Unified Inch Screw Threads"
- NACE MR01-75 "Sulfide Stress Cracking Resistant Metallic Materials for Oilfield Equipment"

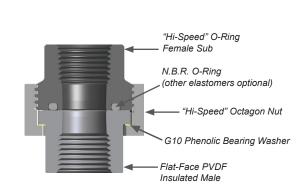
MSS	MSS SP-83 Dimensions and Weights											
Size	А	В	С	D	lb / 100							
1/4	1.65	.380	.78	1.38	34							
3/8	2.00	.540	1.09	1.75	72							
1/2	2.13	.680	1.25	1.81	69							
3/4	2.35	.850	1.50	2.20	117							
1	2.60	1.10	1.81	2.56	167							
1 1/4	3.00	1.38	2.17	3.06	250							
1 1/2	3.19	1.63	2.44	3.42	325							
2	3.53	2.06	2.97	4.09	500							
2 1/2	4.13	2.54	3.63	4.88	815							
3	4.50	3.05	4.31	5.75	1175							



Kemper "Insulated" Flat-Face O-Ring Industrial Unions

Kemper Insulated Unions provide galvanic corrosion protection for piping systems. A tough Polyvinylidene Fluoride polymer is chemically bonded to the flat-faced male component and a phenolic bearing washer sits between the male flange and nut shoulder. PVDF is a high molecular weight thermoplastic polymer with excellent chemical inertness, high dielectric strength and thermal stability.

Properties of Kemper Industrial Union Insulation								
Property	Capability							
Temperature	-20° F to 300° F							
Dielectric constant at 60Hz	(73° F, 50% RH): 9.0							
Dissipation factor at 60Hz	(73° F) : 0.06							
Volume resistivity	5.0x10~14 ohm-cm							
Dielectric strength	280 v/MIL							
Water & Oil Absorption (%)	<0.04%							
Thermal conductivity	1.32 Btu-inch/hr-ft~2- ° F							
Coefficient of linear thermal expansion	7.1x10 ⁻⁶ Max.							
Deformation under load	0.5% @ 4,000 psi							





Sales & Distribution

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 Sales & Service
 Sales &

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 Local:

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1423 4th Avenue Grand Junction, CO 81501 Local: 970-609-5845 Fax: 970-609-5839

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8001 Edgar Industrial Avenue **Red Deer, Alberta** T4P 3S2 Local: 403-348-0872 Fax: 403-348-0873

Sales & Service

111 Arrowhead Drive Unit C **Slippery Rock, PA** 16057 Local: 724-738-0130 Fax: 724-738-0172

Inquiries: sales@kempervalve.com www.kempervalve.com