

# AF AXXION FLEX

 USA BRAND

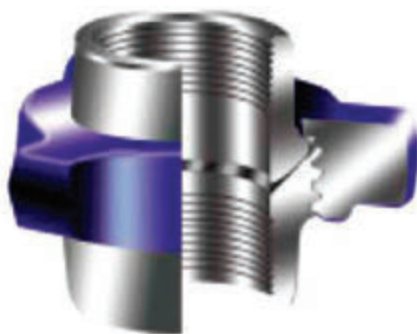
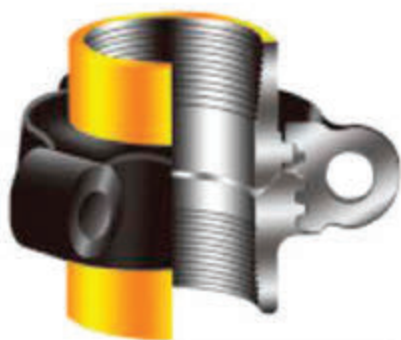


OIL AND GAS DRILLING PRODUCTS

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## OIL AND GAS DRILLING PRODUCTS






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A black and white photograph of an industrial facility, likely a refinery or chemical plant, with numerous pipes, towers, and structures. The image is partially obscured by the orange and grey geometric shapes of the page design.

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## HIGH STRENGTH DRILLING HOSE

- 1. Purpose:** suitable for rotary hose for flexible connection between the top of the drilling riser and the vertically movable water faucet in the oil drilling and mud delivery systems, and for the adjustment of installing error between the drilling pump line and the riser for the connection and vibration isolation. It is also suitable for delivering in large quantity at high pressure the water-based or oil-based mud with the min. ani line point at 66°C pumped out of rotary drilling equipment. Moreover, it resists to corrosion from hydrogen sulfide and delivers water, oil, mud and other high-pressure media in borehole operation in oil field.
- 2. Construction:** It made of inner sub or stainless steel armor inner tube, carbon fiber reinforce sub, middle sub, steel wire reinforce sub (steel catenarian line reinforce sub), and carbon fiber outer sub.
- 3.** The product is classified into steel wire reinforcing type and steel link line reinforcing type.
- 4. Applicable standards:** API Spec7K



Spec. inner dia. mm (in)	51 (2")							64 (2 1/2")							76 (3")						
Classes	A	B	C	D	E	F	G	A	B	C	D	E	F	G	A	B	C	D	E	F	G
Operating pressure Mpa (Psi)	11 1500	14 2000	28 4000	35 5000	52 7500	70 10000	105 15000	11 1500	14 2000	28 4000	35 5000	52 7500	70 10000	105 15000	11 1500	14 2000	20 4000	35 5000	52 7500	70 10000	105 15000
Test pressure Mpa (Psi)	22 3000	28 4000	56 5000	70 10000	101 15000	105 15000	157.75 22500	22 3000	28 4000	56 8000	70 10000	104 15000	105 15000	157.75 225000	22 3000	28 4000	56 8000	70 10000	104 15000	105 15000	157.75 225000
Min. bending radius mm	800	800	850	850	900	950	1000	900	900	1000	1000	1050	100	1150	950	950	1050	1050	1100	1150	1150
Connector code	TBG, LP, Union							TBG, LP, Union							TBG, LP, Union						
Spec. inner dia. mm (in)	89 (3 1/2")							102 (4")						127 (5")				152 (6")			
Classes	A	B	C	D	E	F	G	A	B	C	D	E	F	A	B	C	D	A	B	C	D
Operating pressure Mpa (Psi)	11 1500	14 2000	28 4000	35 5000	52 7500	70 10000	100 15000	11 1500	14 2000	28 4000	35 5000	02 7500	10 10000	11 1000	14 2000	28 4000	35 5000	11 1000	14 2000	28 4000	35 5000
Test pressure Mpa (Psi)	22 3000	28 4000	56 8000	70 10000	104 15000	105 15000	157.75 22500	22 3000	28 4000	56 8000	70 10000	104 15000	105 15000	22 3000	28 4000	56 800	70 10000	22 3000	28 4000	56 8000	70 10000
Min. bending radius mm	1000	1000	1100	1100	1110	1150	1200	1050	1100	1100	1100	1150	1200	1200	1200	1300	1300	1300	1300	1400	1400
Connector code	TBG, LP, Union							TBG, LP, Union						LP, Union				LP, Union			



## WELL CONTROL PROFESSIONAL TUBE BOP CONTROL LINE

### GNG HIGH-PRESSURE FIRE-RESISTANT AND HEAT-INSULATION HOSE ASSEMBLY

**1. Scope of application:** the hose for well control-GNG high-pressure, fire-resistant and heat-insulation hose assembly is mainly used for the hydraulic control of the BOP for drilling and for hydraulic transmission at high temperature and flammable places in the metallurgic industry.

**2. Product classification:** high molecular polymer jacket type, stainless steel armored jacket type and braided stainless steel wire jacket type.

**3. Applicable standards:** API Spec 16D

### SPECIFICATION FOR HOSE AND INDICES FOR TECHNICAL PROPERTIES

NOMINAL INNER DIA. (mm)	OUTER DIA. OF HOSE ASSEMBLY (mm)	OPERATING PRESSURE (MPa)	MIN. BURST PRESSURE (MPa)	MIN. BENDING RADIUS (mm)	THREAD	OPERATING TIME (MIN) WITH FIRE-RESISTING AT 750°C	
						NORMAL	LIMIT
19	44	35	105	280	NPT LP	5	25
	50	70	175				
22	47	35	105	320			
	53	70	175				
25	50	35	105	360			
	56	70	175				
31.5	56	35	105	460			
	62	70	175				
38	63	35	105	560			
	69	70	175				



High molecular polymer jacket type



Braided stainless steel wire jacket type



Double hook stainless steel jacket type

## FLEXIBLE CHOKE KILL LINE

1. Applicable to connection at locations when drill platform, semisubmersible drilling vessel or drilling vessel moves relatively and the installation dimensions of the drill rig subsequently change, and to delivery of oil, gas, mud and other high pressure media (including mainly relief line, blowout control line and choke kill line).
2. **Applicable standards:** API Spec 16C
3. The product features resistance to high pressure, thermal insulation, anti-flaming and fire resistance as well as inner wall with high abrasion resistance.



### SPECIFICATION AND BASIC PARAMETERS FOR FLEXIBLE CHOKE KILL LINE

INTER DIA. IN mm (IN)	RATED OPERATING PRESSURE IN MPa (PSI)	TEST PRESSURE IN MPa (PSI)	MIN. BURST PRESSURE IN MPa (PSI)	MIN. BENDING RADIUS (mm)
50.8 (2)	35.0 (5000)	70.0 (10000)	105.0 (15000)	900
64 (2 1/2)				1000
76.2 (3)				1000
89 (3 1/2)				1110
101.6 (4)				1200
50.8 (2)	70.0 (10000)	105.0 (15000)	157.5 (22500)	1000
63.5 (2 1/2)				1100
76.2 (3)				1150
89 (3 1/2)				1200
101.6 (4)				1250
50.8 (2)	105.0 (15000)	157.5 (22500)	236.25 (33750)	1000
63.5 (2 1/2)				1150
76.2 (3)				1200
50.8 (2)	138.0 (20000)	207.0 (30000)	310.0 (45000)	900
64 (2 1/2)				1100
76.2 (3)				1200



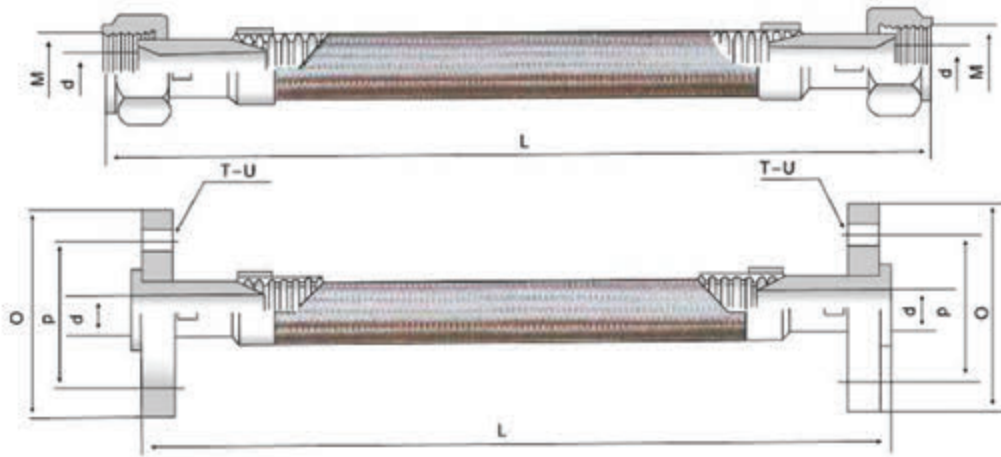
## FLEXIBLE METAL HOSE SERIES

Stainless steel pressure flexible metal tubing is a stainless steel corrugated tube with one or several outer coats of steel wires or steel belt net sleeve and connectors or flanges at the ends for connection . It is flexible element for delivery of various fluid media,featuring resistance to corrosion and low and high temperatures(-196°C>-+ 420°C), light weight, compactness and good flexibility.It is widely used in aviation, spaceflight, petroleum, chemical industry, metallurgy, electricity, paper-making, timber, textile, building, medicine, food, tobacco, traffic and other sectors.

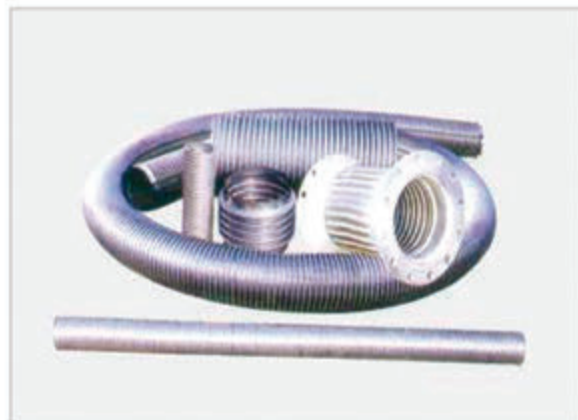


FLEXIBLE METAL TUBING										
CLASSIFICATION	NOMINAL ID (mm)	MIN.ID (mm)	MAX.OD (mm)	WORKING PRESSURE(PN)		TEST PRESSURE (MPa)	BURST PRESSURE (Pb)(MPa)	MIN.BEND RADIUS		
				MPa	PSI			STATIC (Rj) (mm)	DYNAMIC (Rj) (mm)	
High Pressure	4	2.5	8.5							
	6	4.5	12							
	8	6.5	14	35	5071					
	10	8.5	16	23	3332					
	12	10	20							
	14	12	22	21	3043		3PN			
	18	16	26	17	2463					
20	18	28	15	2175						
25	22	34	10	1449						
32	30	42	7	1014						
Medium Pressure	4	2.5	8.5							
	6	4.5	12.5	10	1449					
	8	6.5	14.5							
	10	8.5	16.4							
	12	12	20							
	14	14	22	8.0	1159					
	18	18	26							
Low Pressure	20	20	28	6.4	927					
	25	24	34	4.0	579					
	32	32	42							
	40	40	52							
	4	4	8.5							
	6	6	12	2.5	362		4PN			
	8	8	14							
	10	10	16							
	12	12								
	14	14		1.6	231	1.5PN				
	18	18								
20	20									
25	24	34	1.0	144						
32	32	42								
40	40	52	2.5	362						
50	50	64								
75	75	92	1.6	231						
100	102	122								
125	125	161	1.0	144						
150	150	193								
200	200	252								
250	250	302	0.8	116						

Note: PN, PS, Pb are all the numbers at 20°C



SIZE	TYPE	WORKING PRESSURE (MPa)	TEST PRESSURE (MPa)	BURST PRESSURE (MPa)	MIN. BEND RADIUS (mm)		SCREW THREAD SIZE					INCH	METRIC
					STATIC (Rj)(mm)	DYNAMIC (Rd)(mm)	d	O	P	T	U		
10	AXΦ10	2.5	3.7	10	65	145	7	90	60	4	14	1/4"	18x1.5
12	AXΦ12	1.6	2.4	6.4	70	160	9	95	65	4	14	3/8"	20x1.5
14	AXΦ14	1.6	2.4	6.4	75	175	11	95	65	4	14	1/2"	22x1.5
15	AXΦ15	1.6	2.4	6.4	80	180	12	95	65	4	14	1/2"	24x1.5
16	AXΦ16	1.6	2.4	6.4	85	210	13	105	75	4	14	1/2"	27x1.5
18	AXΦ18	1.6	2.4	6.4	110	220	15	105	75	4	14	3/4"	30x1.5
20	AXΦ20	1.6	2.4	6.4	120	270	16	105	75	4	14	3/4"	33x2
22	AXΦ22	1.6	2.4	4	135	320	18	105	75	4	14	3/4"	36x2
25	AXΦ25	1.6	2.4	4	160	360	21	115	85	4	14	1"	39x2
30	AXΦ30	1.6	2.4	4	170	390	25	115	85	4	18	1 1/4"	42x2
32	AXΦ32	1.6	2.4	4	175	400	28	140	100	4	18	1 1/4"	48x2
38	AXΦ38	1.6	2.4	4	200	480	34	150	110	4	18	1 1/2"	56x2
40	AXΦ40	1.6	2.4	4	225	510	37	150	110	4	18	1 1/2"	58x2
42	AXΦ42	1.6	2.4	4	250	550	37	150	110	4	18	1 1/2"	60x2
48	AXΦ48	1.6	2.4	4	270	600	43	165	125	4	18	2"	68x2
50	AXΦ50	1.2	1.8	3.5	280	640	45	165	125	8	18	2"	68x2
65	AXΦ65	1.2	1.8	3.5	360	700	65	185	145	8	18	2 1/2"	Offered by the buyer.





## LARGE DIAMETER DREDGING RUBBER HOSE



<b>PRODUCT NAME</b>	Dredging Rubber Hose
<b>CONVEYING MEDIUM</b>	Completing set with dredge boat to clear silt, seawater etc in dredging works
<b>TEMPERATURE</b>	From -20°C To 30°C

INSIDE DIAMETER		OUTSIDE DIAMETER		WORKING PRESSURE		BURST PRESSURE		VACUUM PRESSURE		LENGTH
mm	INCH	mm	INCH	MPa	BAR	MPa	BAR	KPa	BAR	m
152	6"	182	7-1/4"	1.2	12	24	24	80	0.8	20
203	8"	233	9-1/5"	1.2	12	24	24	80	0.8	20
254	10"	284	9-1/5"	1	10	2	20	80	0.8	20
304	12"	340	13-2/5"	1	10	2	20	80	0.8	10
350	14"	390	15-2/5"	1	10	2	20	80	0.8	6-10
450	18"	486	19-1/5"	0.7	7	1.5	15	80	0.8	6-10
550	22"	590	23-3/5"	0.7	7	1.5	15	80	0.8	6-10
600	24"	640	25-3/5"	0.7	7	1.5	15	80	0.8	6-10
700	28"	750	29-3/5"	0.7	7	1.5	15	80	0.8	6-10
800	32"	850	33-1/2"	0.5	5	1	10	80	0.8	6-10
1000	40"	1050	41-1/2"	0.5	5	1	10	80	0.8	6
1200	48"	1250	49-1/5"	0.5	5	1	10	80	0.8	6
1300	52"	1350	53-1/5"	0.5	5	1	10	80	0.8	6

Remark: We can produce any specification and property according to customers' requirements.

## MUD SUCTION & DISCHARGE RUBBER HOSE

**Application:** it is used on dredgers of dredging project, like harbors, rivers and, lakes. Its application temperature is -20~+40°C.



**Hose structure:** the inner rubber liner is composed of high strength rubber dipped chemical fiber and reinforced by spiral metal wire. The rubber cover is composed of natural rubber and synthetic rubber. The surface of the hose takes the shape of corrugated.

**There are four types of hoses:** Type 1 is Straight Tube Type 2 is flared type; Type 3 is rubber flange type ; Type 4 is steel flange type.

I.D.			JOINT SIZE (mm)		WORKING PRESSURE (MPa)				MAX. LENGTH	
(INCH)	(mm)	TOLERANCE (mm)	LENGTH	TOLERANCE	A	B	C	D	LENGTH	TOLERANCE
8	203	± 2.0	200	± 30	0.4	0.6	0.8	1.0	10	± 150
10	254	± 3.0								
12	305									
14	355									
16	405									
18	455	300								
20	508									

## EXTRA-LONG CONTROL CABLE



**Scope of application :**

This control pipeline is applicable to BOP at offshore, consisting of a main hydraulic flexible tube at 1" in inner diameter and several flexible conduits at 3/16" (with outer protective layer) arranged around.



## HAMMER UNION

High pressure union is forged and made of high strength alloy steel with imported world-class technology. Strict heat treatment ensures uniform metallographic structure and bearing capacity in the connector. The materials used fully comply with ASTM and AISI of USA, and the technical indicates of the product with API Spec 16C standard. The product is tight and reliable, and provides easy mounting and dismantling and good exchangeability. The connector of the product allows connection for pipeline thread, oil tube thread and butt weld or pressureless seal end.



Figure 100

The connecting surface of precise linear seal ensures reliable pressure sealing. Application is recommended for low-pressure manifold and operating pressure at maximum 1,000 psi.

NOMINAL PIPE SIZE		TOTAL LENGTH		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
2	50.8	3 <sup>5</sup> / <sub>8</sub>	92.1	2 <sup>15</sup> / <sub>16</sub>	74.6	SF	SF	5.25	2.4
2 <sup>1</sup> / <sub>2</sub>	63.8	4 <sup>1</sup> / <sub>4</sub>	108.0	3 <sup>5</sup> / <sub>8</sub>	92.1	SF	SF	8.0	3.6
3	76.2	4 <sup>15</sup> / <sub>16</sub>	125.4	4 <sup>1</sup> / <sub>18</sub>	103.2	SF	SF	14.0	6.4
4	101.6	5 <sup>15</sup> / <sub>16</sub>	150.8	4 <sup>25</sup> / <sub>32</sub>	121.4	SF	SF	23.0	10.4
6	152.4	6 <sup>5</sup> / <sub>8</sub>	168.3	6 <sup>7</sup> / <sub>16</sub>	163.5	SF	SF	44.5	20.2
8	203.2	7 <sup>1</sup> / <sub>4</sub>	184.2	7 <sup>11</sup> / <sub>15</sub>	195.3	SF	SF	61.0	27.7

1000PSi NSCW, test pressure at 1500PSi with black nut and yellow parts

With compact construction, this union is widely used on low-pressure kill line and in application of air, water, oil or steam with medium pressure. Butt weld Sch.40 is desired for the applicable



Figure 200

NOMINAL PIPE SIZE		TOTAL LENGTH		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
1	25.4	2 <sup>11</sup> / <sub>16</sub>	68.3	1 <sup>15</sup> / <sub>16</sub>	49.2	SC/SF	CDB/SF	1.75	0.8
1 <sup>1</sup> / <sub>4</sub>	31.7	2 <sup>7</sup> / <sub>8</sub>	73.0	2 <sup>3</sup> / <sub>8</sub>	60.3	SF	SF	2.37	1.1
1 <sup>1</sup> / <sub>2</sub>	38.1	2 <sup>7</sup> / <sub>8</sub>	73.0	2 <sup>3</sup> / <sub>8</sub>	60.3	SF	SF	2.37	1.1
2	50.8	3 <sup>5</sup> / <sub>16</sub>	84.1	2 <sup>29</sup> / <sub>32</sub>	73.8	SF	SF	2.25	2.4
2 <sup>1</sup> / <sub>2</sub>	63.8	4 <sup>1</sup> / <sub>16</sub>	103.2	3 <sup>11</sup> / <sub>16</sub>	93.7	SF	SF	10.0	4.5
3	76.2	4 <sup>3</sup> / <sub>8</sub>	111.1	3 <sup>7</sup> / <sub>8</sub>	98.4	SF	SF	15.25	6.9
4	101.6	4 <sup>13</sup> / <sub>16</sub>	122.2	5	127.0	SF	SF	20.0	9.1
6	152.4	6 <sup>5</sup> / <sub>8</sub>	168.3	6 <sup>7</sup> / <sub>16</sub>	163.5	SF	SF	44.5	20.2
		1 <sup>1</sup> / <sub>4</sub>		1 <sup>11</sup> / <sub>16</sub>					

2000PSi NSCW, test pressure at 3000PSi with blue nut and gray parts



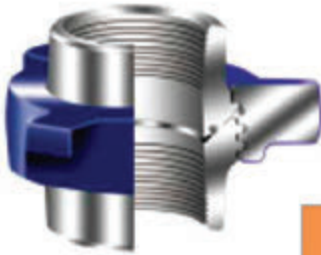


Figure 206

O-shape rubber ring is mounted on the seal surface of the male connector for better sealing. Butt weld Sch.40 is desired for the applicable figure. It is recommended for connection of manifold and pipes and for applications with negative pressure and corrosion.

NOMINAL PIPE SIZE		TOTAL LENGTH		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
1	25.4	2 <sup>11</sup> / <sub>16</sub>	68.3	1 <sup>15</sup> / <sub>16</sub>	49.2	SC/SF	SF	1.75	0.8
1 <sup>1</sup> / <sub>2</sub>	38.1	2 <sup>7</sup> / <sub>8</sub>	73.0	2 <sup>3</sup> / <sub>8</sub>	60.3	SF	SF	2.37	1.1
2	50.8	3 <sup>5</sup> / <sub>16</sub>	84.1	2 <sup>29</sup> / <sub>32</sub>	73.8	SF	SF	2.25	2.4
2 <sup>1</sup> / <sub>2</sub>	63.5	4 <sup>1</sup> / <sub>16</sub>	103.2	3 <sup>11</sup> / <sub>16</sub>	93.7	SF	SF	10.0	4.5
3	76.2	4 <sup>3</sup> / <sub>8</sub>	111.1	3 <sup>7</sup> / <sub>8</sub>	98.4	SF	SF	15.25	6.9
4	101.6	4 <sup>13</sup> / <sub>16</sub>	122.2	5	127.0	SF	SF	20.0	9.1
6	152.4	6 <sup>5</sup> / <sub>8</sub>	168.3	6 <sup>7</sup> / <sub>16</sub>	163.5	SF	SF	44.5	20.2
8	203.2	7 <sup>1</sup> / <sub>4</sub>	184.2	7 <sup>11</sup> / <sub>16</sub>	195.3	SF	SF	61.0	

2000PSi NSCW, test pressure at 3000PSi with blue nut and gray parts



Figure 207 Shutoff Head

O-shape nitrile-butadiene rubber ring is mounted on the shutoff head of the union for effective sealing. The thread connector is exchangeable with those of Figures 200 and 206. Butt weld Sch.40 is recommended for the applicable figure.

NOMINAL PIPE SIZE		TOTAL LENGTH		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
3	76.2	3 <sup>3</sup> / <sub>4</sub>	95.25	2 <sup>7</sup> / <sub>8</sub>	73.03	SC	SF	9.8	4.45
4	101.6	4 <sup>5</sup> / <sub>16</sub>	109.54	3 <sup>19</sup> / <sub>32</sub>	91.28	SF	SF	16.25	7.37
6	152.4	5 <sup>13</sup> / <sub>16</sub>	147.64	4 <sup>31</sup> / <sub>32</sub>	126.2	SF	SF	38.0	17.24

2000PSi NSCW, test pressure at 3000PSi with blue nut and gray parts

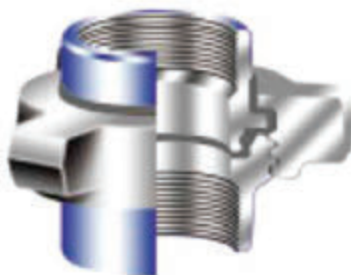


Figure 211

The insulation design of the union connector removes the metal-to-metal contact in connection while the precisely fabricated wear-resistant compound elastomer provides effective sealing. The replaceable O-shape seal assembly prolongs the service life of the union. It is recommended for application or needs involving electrolytic corrosion.

NOMINAL PIPE SIZE		TOTAL LENGTH		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
2	50.8	3 <sup>1</sup> / <sub>2</sub>	88.9	3 <sup>1</sup> / <sub>8</sub>	79.38	SF	SF	6.25	2.8
3	76.2	4 <sup>1</sup> / <sub>2</sub>	114.3	4	101.6	SF	SF	12.50	5.7

2000PSi NSCW, test pressure at 3000PSi with gray nut and light blue parts





Figure 300

Precisely sealed bond surface ensures reliable pressure tightness. It is recommended for application with oil, water, mud, gas or air.

NOMINAL PIPE SIZE		TOTAL LENGTH		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
1	25.4	2 <sup>11</sup> / <sub>16</sub>	68.3	1 <sup>15</sup> / <sub>16</sub>	49.2	SC/SF	SF	1.75	0.8
2	50.8	3 <sup>5</sup> / <sub>16</sub>	84.1	2 <sup>29</sup> / <sub>32</sub>	73.8	SF	SF	5.25	2.4

3000PSi NSCWP, test pressure at 4500PSi with black nut and green parts

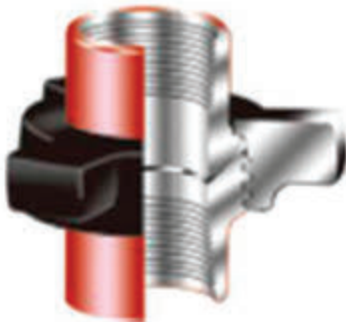


Figure 400

The design of thick wall and robust is used with ring-shape and tapered seal for easy centering and reliable sealing.

NOMINAL PIPE SIZE		TOTAL LENGTH		PIPCK BORE		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
2	50.8	5 <sup>3</sup> / <sub>16</sub>	131.8	1/4	6.4	3 <sup>9</sup> / <sub>16</sub>	90.5	SF	SF	11.0	5.0
3	76.2	6 <sup>1</sup> / <sub>4</sub>	158.8	3/8	9.5	4 <sup>3</sup> / <sub>16</sub>	106.4	SF	SF	19.25	8.7
4	101.6	8 <sup>1</sup> / <sub>8</sub>	206.4	3/8	9.5	5	127.0	SF	SF	32.0	14.5

4000PSi NSCWP, test pressure at 6000PSi with black nut and red parts



Figure 402

Figure 402, black nuts and connecting parts are used. Only the 2" type is available-with nitrile-butadiene rubber seal ring.

Main seal is provided by the bronze holder. It is recommended for use in the steam system and in the connection of manifold and pipe for production,drilling and well repair.



Figure 600

NOMINAL PIPE SIZE		TOTAL LENGTH		PIPCK BORE		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
1	25.4	3 <sup>17</sup> / <sub>32</sub>	89.7	1/4	6.4	2 <sup>5</sup> / <sub>16</sub>	58.7	SF	SF	3.5	1.6
2	50.8	6 <sup>1</sup> / <sub>4</sub>	158.8	3/16	4.8	3 <sup>3</sup> / <sub>4</sub>	95.3	SF	SF	15.0	6.8

6000PSi NSCWP, test pressure at 9000PSi with black nut and silvery parts





Figure 602

With resilient nitrile-butadiene rubber seal ring, this figure is used for sealing and protecting the steel-to-steel match. It is recommended for the connection of manifold and pipe and truck-mounted application and mud delivery. It may be used as pressureless seal union with butt weld Sch.80.

NOMINAL PIPE SIZE		TOTAL LENGTH		PIPCK BORE		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
1	25.4	3 <sup>17</sup> / <sub>32</sub>	89.7	1/4	6.4	2 <sup>5</sup> / <sub>16</sub>	58.75	SF	SF	3.5	1.6
2	50.8	5 <sup>1</sup> / <sub>4</sub>	133.3	1/4	6.4	3 <sup>9</sup> / <sub>16</sub>	90.5	SF	SF	13.25	5.9
3	76.2	6 <sup>3</sup> / <sub>8</sub>	161.92	3/8	9.5	4 <sup>5</sup> / <sub>8</sub>	117.5	SF	SF	21.0	9.5
4	101.6	8 <sup>1</sup> / <sub>16</sub>	208.0	3/8	9.5	5 <sup>1</sup> / <sub>4</sub>	133.4	SF	SF	33.0	15.0

6000PSi NSCW, test pressure at 9000PSi with black nut and orange parts

Resilient nitrile-butadiene rubber seal ring is mounted. It is recommended for cement filling, fracturing, acidizing, testing and choke and kill line. It is designed for high-pressure systems including truck-mounted system. Also, it may be used as pressureless seal union. Butt weld Sch. 160 or XXH is recommended.



Figure 1002

NOMINAL PIPE SIZE		TOTAL LENGTH		PIPCK BORE		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
1	25.4	3 <sup>1</sup> / <sub>2</sub>	88.9	1/4	6.4	2 <sup>1</sup> / <sub>4</sub>	57.2	SF	SF	3.5	1.6
2	50.8	5 <sup>3</sup> / <sub>16</sub>	131.8	1/4	6.4	3 <sup>11</sup> / <sub>16</sub>	93.7	SF	SF	13.25	5.9
3	76.2	6 <sup>3</sup> / <sub>8</sub>	161.9	3/8	9.5	4 <sup>3</sup> / <sub>8</sub>	117.5	SF	SF	21.0	9.5
4	101.6	8 <sup>1</sup> / <sub>16</sub>	204.8	3/8	9.5	5 <sup>1</sup> / <sub>4</sub>	133.4	SF	SF	39.5	17.9
5	127	6 <sup>4</sup> / <sub>5</sub>	172.7			6	152.4	SF	SF	61.67	28
6	152.4	7 <sup>1</sup> / <sub>16</sub>	179.4			7 <sup>1</sup> / <sub>4</sub>	184.2	SF	SF	70.48	32

10000PSi NSCW, test pressure at 15000PSi with red nut and blue parts. Figure #1002 union may also be used in applications with H<sub>2</sub>S and other acid gases.

With an spheric seat, the union allows a deviation by 7-1/2° from the center or angle adjustment with a total deviation capacity of 15°. In addition to the steel-to-steel match, the nitrilebutadiene rubber O-ring ensures air-tightness in connection at any deflected position. It is recommended for the connection of high-pressure lines when alignment is impossible. The product may be used in applications with air, water, oil, mud or gas.



Figure 1003

NOMINAL PIPE SIZE		CONNECTION	TOTAL LENGTH		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm		IN	mm	IN	mm	NUT	PART	LBS	KGS
3	76.2	NPT	9 <sup>1</sup> / <sub>8</sub>	231.8	4 <sup>7</sup> / <sub>8</sub>	123.8	SC	AS	45.0	99.2
3	76.2	SCH160	8 <sup>7</sup> / <sub>8</sub>	225.4	4 <sup>7</sup> / <sub>8</sub>	123.8	SC	AS	47.5	104.7
3	76.2	XXHVY	9 <sup>1</sup> / <sub>8</sub>	231.8	4 <sup>7</sup> / <sub>8</sub>	123.8	SC	AS	48.5	106.9
4	101.6	NPT	10 <sup>15</sup> / <sub>16</sub>	277.8	5 <sup>3</sup> / <sub>4</sub>	146.0	SF	SF	72.0	158.7
4	101.6	SCH160	10 <sup>11</sup> / <sub>16</sub>	271.5	5 <sup>3</sup> / <sub>4</sub>	146.0	SF	AS	76.0	167.5
4	101.6	XXHVY	10 <sup>15</sup> / <sub>16</sub>	277.8	5 <sup>3</sup> / <sub>4</sub>	146.0	SF	AS	78.0	172.0
5	127	SCH160	10 <sup>3</sup> / <sub>4</sub>	273.1	5 <sup>3</sup> / <sub>4</sub>	146.0	SF	AS	74.0	163.0
5	127	XXHVY	10 <sup>15</sup> / <sub>16</sub>	277.8	3/4	146.0	SF	AS	76.5	168.7

10000PSi NSCW (7500 PSi NSCW, 4in, 5in) with black nut and green parts



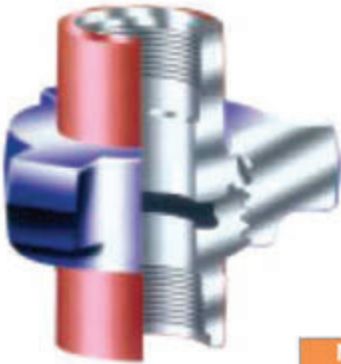


Figure 1502

With replaceable resilient nitrile-butadiene rubber seal ring and robust wall thickness design, this figure is used in high-pressure system. It is recommended for cement filling, fracturing, acidizing, testing and choke and kill line. Also, it may be used in pressureless seal connection. Butt weld Sch. XXH is recommended.

NOMINAL PIPE SIZE		TOTAL LENGTH		PIPK BORE		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
1 1/2	38.1	3 <sup>13</sup> / <sub>32</sub>	137.0	1/4	6.4	3 <sup>21</sup> / <sub>32</sub>	93.0	SF	SF	12.0	5.4
2	50.8	7	177.8	15/64	6.0	3 <sup>3</sup> / <sub>4</sub>	95.3	SF	SF	21.0	9.5
3	76.2	6 <sup>5</sup> / <sub>8</sub>	193.7	3/8	9.5	4 <sup>1</sup> / <sub>2</sub>	114.3	SF	SF	31.0	14.1

1500PSi NSCWP, test pressure at 22500PSi with blue nut and red parts

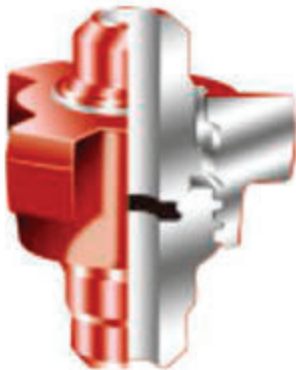


Figure 2002

For this union, only the 2in type is available with a replaceable resilient nitrilebutadiene rubber seal ring combined in the stainless steel liner tube, providing complete compression protection in application with extra high pressure. The design of detachable nut/segment ring/retainer ring simplifies the removal of the nut from the piping.

For figure 2002, 20000 PSi NSCWP, test pressure at 30000PSi with red nut and parts

NOMINAL PIPE SIZE		TOTAL LENGTH		NUT RADIUS		MATERIALS		WEIGHT	
IN	mm	IN	mm	IN	mm	NUT	PART	LBS	KGS
2	50.8	7 <sup>3</sup> / <sub>8</sub>	187.32	3 <sup>11</sup> / <sub>16</sub>	93.66	SF	AS	22.5	49.60



Figure 2202

With fluoroelastomer seal ring, 15000PSi NSCWP and the heat-treated parts 100% subjected to hardness test, this model complies with National Association of Corrosion Engineers Standard MR-01-75 and American Petroleum Institute RP-14E. This product is designated for application with acid gases. Green nuts and parts.

Note: DIC = ductile iron casting SC = casting steel SF = forging steel AS = alloy steel



## QUICK ASSEMBLY FOR SOLID CONTROL SYSTEM



Pneumatic tyre union is widely used in the pipeline with low pressure, large drift diameter and misplacement, and frequent mounting and dismantling, particularly in the connection between the mud tanks of the solid control system in the petroleum sector.

**Product construction:** steel shell and pneumatic tyre

**Operating environment:** -45°C-50°C

**Max. sealing pressure (fluid pressure in the pipeline):**0.4MPa

**Return time of pneumatic tyre when deflated:** 1-3 sec.

The connecting pipe may be in glass-reinforced plastic pipe or hose with connectors at the ends. The glass-reinforced plastic pipe is corrosion-resistant and light for easy handling. The rubber pipe is easy for bending and suitable for field misplacement installation of pipeline.

### PRODUCT SPECIFICATION

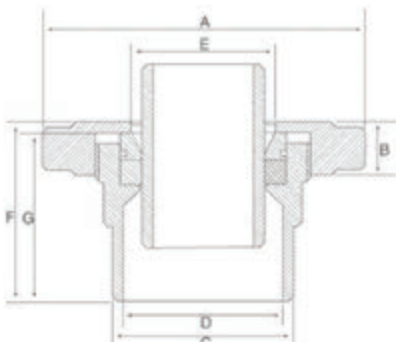
SIZES ( IN /mm)	APPLICABLE PIPE DIAMETER ( mm )	DIMENSION OF CRATER (mm)
4" (Φ 100)	Φ 116	Φ 165
6" (Φ 150)	Φ 168	Φ 219
8" (Φ 200)	Φ 219	Φ 273
10" (Φ 250)	Φ 273	Φ 325
12" (Φ 300)	Φ 325	Φ 377
14" (Φ 350)	Φ 380	Φ 428

## TELESCOPING STEEL UNION



Telescoping steel union is a product updated from the pneumatic tyre union. With outstanding properties and no impact of large misplacement on the connection and sealing of the pipelines, the telescoping steel union meets the special needs for fast field installation and dismantling, greatly reducing the labor intensity and the period of well construction.

### PRODUCT SPECIFICATION



SIZES AND MODEL (IN/mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
4" (Φ 102)	Φ 300	40	Φ 168	Φ 150	Φ 135	170	160
6" (Φ 150)	Φ 350	50	Φ 219	Φ 200	Φ 194	170	160
8" (Φ 200)	Φ 400	50	Φ 273	Φ 253	Φ 248	170	160
10" (Φ 250)	Φ 450	50	Φ 325	Φ 305	Φ 304	170	160
12" (Φ 300)	Φ 510	50	Φ 377 (Φ 355)	Φ 357	Φ 358	170	160



## HIGH STRENGTH MOVEMENT PIPE BEND



Chiksan is forged from high-strength alloy steel and heat-treated, providing the service life at rated Operating pressure and long service life. It allows connection at the ends with LP female thread or union, and is suitable for various types of pipe installation.

## REDUCER UNION



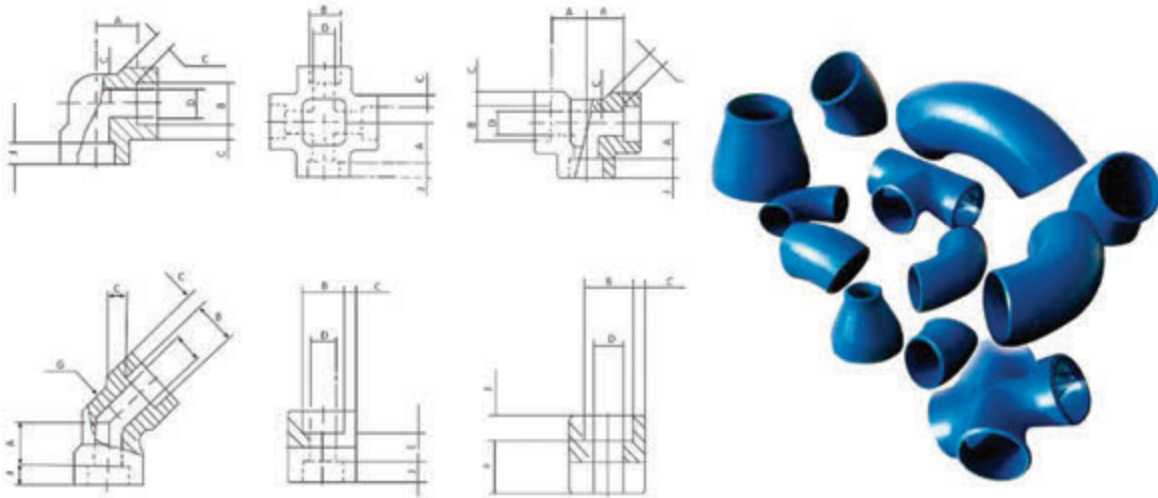
Reducer unions change the dimension of the inner chamber of pipe flow channel. For the standard connection of the ends, the American acme thread for LP petroleum pipelines apply. The reducer unions are forged from highstrength alloy and rigorously heat-treated, providing the durability and bearing capacity.

## NIPPLE



The standard connection of the ends is provided by union or LP thread. The nipples are forged from high-strength alloy and rigorously heat-treated, providing the durability and bearing capacity.

## HIGH PRESSURE T-CONNECTOR AND CROSS JOINT, BEND, SIZE HEAD



## HIGH PRESSURE FLANGE

1. The high pressure flange is forged from high strength alloy steel with imported advanced technology in the world. Strict heat treatment ensures uniform metallographic structure and bearing capacity. It is widely used in the petroleum and chemical industry, boilers and pressure vessels, ships and other sectors for high pressure connection.

2. Applicable standard : API Spec 6A



High pressure flange

RATED PRESSURE MPa (Psi)	6B TYPE mm(IN)
13.8 (2000)	52(2 <sup>1</sup> / <sub>16</sub> )
	65(2 <sup>9</sup> / <sub>16</sub> )
	80(3 <sup>1</sup> / <sub>8</sub> )
	103(4 <sup>1</sup> / <sub>16</sub> )
20.7 (3000)	52(2 <sup>1</sup> / <sub>16</sub> )
	65(2 <sup>9</sup> / <sub>16</sub> )
	80(3 <sup>1</sup> / <sub>8</sub> )
	103(4 <sup>1</sup> / <sub>16</sub> )
34.5 (5000)	52(2 <sup>1</sup> / <sub>16</sub> )
	65(2 <sup>9</sup> / <sub>16</sub> )
	80(3 <sup>1</sup> / <sub>8</sub> )
	103(4 <sup>1</sup> / <sub>16</sub> )
69.0 (10000)	46(1 <sup>13</sup> / <sub>16</sub> )
	52(2 <sup>1</sup> / <sub>16</sub> )
	65(2 <sup>9</sup> / <sub>16</sub> )
	78(3 <sup>1</sup> / <sub>16</sub> )
	103(4 <sup>1</sup> / <sub>16</sub> )
103.5 (15000)	46(1 <sup>13</sup> / <sub>16</sub> )
	52(2 <sup>1</sup> / <sub>16</sub> )
	65(2 <sup>9</sup> / <sub>16</sub> )
	78(3 <sup>1</sup> / <sub>16</sub> )
	103(4 <sup>1</sup> / <sub>16</sub> )



## UNIVERSAL SELF SEALING PIPE JOINT

The self-sealing pipe joint automatically opens when mounting is finished and closes when dismantled, eliminating the possibility of polluting the environment by the out-flowing media, saving the operational cost, preventing the machines from abrasion by the sand and dust coming in the pipes and machines and reducing hazards for accidents. It allows easy mounting and dismantling, reduces labor intensity and saves operating time. The materials used fully comply with ASTM and AISI standards of USA. The product and parts are all treated against corrosion. The pipe joint provides resistance to high pressure, reliable sealing, uniform standard and good exchangeability. The universal self-sealing pipe joint provides automatic regulation depending on the connection direction, neat and aesthetic arrangement of pipelines and reduced fatigue resistance in the pipelines.

The self-sealing pipe joint is classified into the following three major families depending on the constructions:

1. Fast self-sealing steel ball pipe joint
2. Pin key plug-in self-sealing pipe joint



NOMINAL DRIFT DIAMETER mm	TOTAL LENGTH mm	MAX.OPERATING PRESSURE MPa	EXPERIMENTAL PRESSURE MPa	FLOW RATE I/MIN	CONNECTING THREAD
6	62	52	78	16	M14 x 1.5
8	80	52	78	25	M16 x 1.5
10	90	52	78	40	M22 x 1.5
12	100	45	67.5	50	M27 x 1.5
15	106	45	67.5	63	M30 x 1.5
20	110	45	67.5	100	M36 x 2/1" NPT
25	128	35	52.5	160	M42 x 2/1" NPT
32	160	35	52.5	250	M52 x 2
40	190	21	37.5	400	M60 x 2
51	204	16	24	630	M68 x 2

## **BOP RUBBER CORE AND ASSEMBLY**

- 1. Scope of application:** rubber cores for sealing of BOPs in oil prospecting, well drilling, oil test, well repair, oil and gas wells and well control at rated temperatures of -26°C-149°C.
- 2. Applicable standards:** API Spec 16A.
- 3. Sizes and models of rubber pipe rams:** 18-14, 18-21, 18-35, 18-70, 28-35, 28-70, 35-35, 35-70, 54-14.
- 4. Sizes and models of ring rubber cores:** 18-35, 28-35, 35-35, 54-14.



**Spheric rubber core**



**Tapered rubber core**



**Cylindrical rubber core**



**Split rubber pipe ram**



**Monolithic rubber pipe ram**



**Pipe ram assembly**



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