

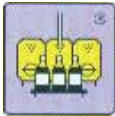






## AIR HOSE

	COMPRESSED AIR HOSE									
	I.D.		AIR MONTANA 10				AIR MONTANA 20			
working pressure			bursting pressure (theoretical)		working pressure		bursting pressure (theoretical)			
<b>AIR MONTANA 10</b>  <b>Application :</b> Mandrel built lightweight air hose suitable for a variety of general purposes in industries construction sites and mining sites.	mm	inch	bar	psi	bar	psi	bar	psi	bar	psi
	10	3/8	10	150	30	450	20	300	60	900
	13	1/2	10	150	30	450	20	300	60	900
	16	5/8	10	150	30	450	20	300	60	900
	19	3/4	10	150	30	450	20	300	60	870
	25	1	10	150	30	450	20	300	60	870
	32	1 1/4	10	150	30	450	20	300	60	870
	38	1 1/2	10	150	30	450	20	300	60	870
	51	2	10	150	30	450	20	300	60	900
	63.5	2 1/2	10	150	30	450	20	300	60	900
	76	3	10	150	30	450	20	300	60	900
	90	3 1/2	10	150	30	450	20	300	60	900
	102	4	10	150	30	450	20	300	60	900
	127	5	10	150	30	450				
<b>AIR MONTANA 20</b>  <b>Application :</b> Softwall hose for compressed air with light traces of oil mist, normally used for heavy duty applications in road construction sites, quarries and mining sites  <b>Temperature range :</b> from -30°C ( -22°F ) to + 70°C ( +158°F ) <b>Construction</b> <b>Tube</b> : black, smooth, SBR rubber, oil mist resistant <b>Reinforcement</b> : high strength synthetic cord <b>Cover</b> : Black, smooth ( wrapped finish ) long lasting EPDM rubber weathering and ozone resistant	152	6	10	150	30	450				
	203	8	10	150	30	450				
	STEEL WIRE COMPRESSED AIR HOSE									
	I.D.		working pressure		bursting pressure (theoretical)					
<b>AIR ALASKA</b>  <b>Application :</b> High pressure steel wire reinforced compressed air hose, designed for applications where a heavy duty hose is necessary.  <b>Temperature range :</b> from -30°C ( -22°F ) to + 70°C ( +158°F ) <b>Construction</b> <b>Tube</b> : black, smooth, SBR rubber <b>Reinforcement</b> : inserts of steel wire <b>Cover</b> : Yellow, smooth ( wrapped finish ) long lasting EPDM rubber, weathering, and ozone resistant.	mm	inch	bar	psi	bar	psi				
	13	1/2	70	1050	210	3150				
	19	3/4	50	750	150	2250				
	25	1	45	675	135	2025				
	32	1 1/4	45	675	135	2025				
	38	1 1/2	45	675	135	2025				
	51	2	40	600	120	1800				
	63.5	2 1/2	35	525	105	1575				
	76	3	35	525	105	1575				
	102	4	30	450	90	1350				




## FOOD AND DRINK HOSE

	I.D.		<b>PREMIUM DELIVERY HOSE FOR NON FATTY FOODS</b>			
			working pressure		bursting pressure (theoretical)	
<b>FOOD SCOTLAND</b>  <b>Application :</b> Softwall hose for delivery of vintage wines and alcohols at 96°. Specially designed for use in breweries and distilleries, completely odourless and taste free.  <b>Reinforcement :</b> high strength synthetic cord, separated by a layer of rubber.	mm	inch	bar	psi	bar	psi
	25	1	10	150	30	450
	32	1 1/4	10	150	30	450
	38	1 1/2	10	150	30	450
	51	2	10	150	30	450
	63.5	2 1/2	10	150	30	450
	76	3	10	150	30	450
	I.D.		<b>PREMIUM SUCTION AND DELIVERY HOSE FOR NON FATTY FOODS</b>			
			working pressure		bursting pressure (theoretical)	
<b>FOOD SCOTLAND LL</b>  <b>Application :</b> Hardwall hose for suction and delivery of vintage wines and alcohols at 96°. Specially designed for use in breweries and distilleries, completely odourless and taste free.  <b>Reinforcement :</b> high strength synthetic cord and helix wire.  <b>Temperature Range :</b> from -40°C (-40°F) to + 120°C ( +248°F ) <b>Construction</b> <b>Tube</b> : white, smooth, food quality, taste free and odourless IIR rubber. <b>Cover</b> : blue, smooth ( wrapped finish ) food quality IIR rubber, weathering resistant.	mm	inch	bar	psi	bar	psi
	25	1	10	150	30	450
	32	1 1/4	10	150	30	450
	38	1 1/2	10	150	30	450
	51	2	10	150	30	450
	63.5	2 1/2	10	150	30	450
	76	3	10	150	30	450
	102	4	10	150	30	450




## STEAM HOSE

	<b>STEAM HOSE FOR 165°C (329°F) TEXTILE REINFORCED</b>					
	I.D.		working pressure		bursting pressure (theoretical)	
<b>STEAM MANITOBA</b>  <b>Application :</b> Softwall steam hose, textile reinforced, recommended for use with saturated steam at a maximum working pressure of 6 bar (87 psi) <b>Temperature range:</b> from -40°C (-40°F) to +165°C (+329°F) <b>Construction</b> <b>Tube</b> : black, smooth, EPDM rubber, resistant to saturated steam. <b>Reinforcement</b> : high strength synthetic cord <b>Cover</b> : black, smooth (wrapped finish), EPDM rubber resistant to high temperatures, weathering and ozone.	mm	inch	bar	psi	bar	psi
	13	1/2	6	90	60	900
	16	5/8	6	90	60	900
	19	3/4	6	90	60	900
	25	1	6	90	60	900
	32	1 1/4	6	90	60	900
	38	1 1/2	6	90	60	900
	51	2	6	90	60	900
	63.5	2 1/2	6	90	60	900
	76	3	6	90	60	900
	102	4	6	90	60	900





## STEAM HOSE

	STEAM HOSE FOR 210°C (410°F) WIRE REINFORCED					
	I.D.		working pressure		bursting pressure (theoretical)	
	mm	inch	bar	psi	bar	psi
<b>STEAM VICTORIA</b> <b>Application :</b> Steel cord hose for saturated steam at a maximum working pressure 18 Bar(261psi), used in the chemical industry, petrochemical and industrial applications in general. Not recommended for steam cleaner. The hose can be used for peaks of superheated steam at 230°C and at 18 bar. <b>Temperature range:</b> from -40°C(-40°F) to +210°C (+410°F) <b>Construction</b> <b>Tube</b> : black, smooth, EPDM rubber, resistant to saturated steam <b>Reinforcement</b> : inserts of steel wire <b>Cover</b> : black, pin pricked, smooth (wrapped finish), EPDM rubber with excellent resistance to high temperatures, weathering, abrasion and ageing.	13	1/2	18	270	180	2700
	16	5/8	18	270	180	2700
	19	3/4	18	270	180	2700
	25	1	18	270	180	2700
	32	1 1/4	18	270	180	2700
	38	1 1/2	18	270	180	2700
	51	2	18	270	180	2700
	63.5	2 1/2	18	270	180	2700
	76	3	18	270	180	2700
	102	4	18	270	180	2700
	125	5	18	270	180	2700



## ACID AND CHEMICAL HOSE

	I.D.		MULTI PURPOSE CHEMICAL AND PETROLEUM DISCHARGE HOSE			
			working pressure		bursting pressure (theoretical)	
<b>SUPERTOP</b> <b>Application :</b> Softwall hose with cross-linked polyethylene tube, suitable for handling a wide range of chemicals, petroleum products and oils. <b>Reinforcement</b> : high strength synthetic cord and antistatic copper wires. <b>Cover</b> : green, smooth (wrapped finish), EPDM rubber specially compounded for higher resistance to weathering and ozone.	mm	inch	bar	psi	bar	psi
	19	3/4	10	150	40	600
	25	1	10	150	40	600
	32	1 1/4	10	150	40	600
	38	1 1/2	10	150	40	600
	51	2	10	150	40	600
	63.5	2 1/2	10	150	40	600
	76	3	10	150	40	600
	102	4	10	150	40	600
	I.D.		MULTI PURPOSE CHEMICAL AND PETROLEUM SUCTION AND DISCHARGE HOSE			
			working pressure		bursting pressure (theoretical)	
<b>SUPERTOP LL</b> <b>Application :</b> Hardwall hose with cross-linked polyethylene tube, suitable for handling a wide range of chemicals, petroleum products and oils. <b>Reinforcement</b> : high strength synthetic cord, steel helix wire and antistatic copper wire. <b>Cover</b> : green, smooth (wrapped finish), EPDM rubber with excellent resistance to weathering and ozone. <b>See IVG chemical resistance tables for details</b> <b>Temperature range:</b> from -30°C(-22°F) to + 70°C( +158°F) <b>Tube:</b> black, smooth, cross-linked polyethylene ( XLPE )	mm	inch	bar	psi	bar	psi
	19	3/4	10	150	40	600
	25	1	10	150	40	600
	32	1 1/4	10	150	40	600
	38	1 1/2	10	150	40	600
	51	2	10	150	40	600
	63	2 1/2	10	150	40	600
	76	3	10	150	40	600
	102	4	10	150	40	600
	152	6	10	150	40	600
	203	8	10	150	40	600



## MATERIAL HANDLING HOSE



### CONCRETE PLACEMENT HOSE, 4 STEEL WIRES, 80 BARS WP

#### ABR SHANNON / 80

##### Application :

Steel cord hose used for concrete placement at casting locations ; it is used at the end of the pumps to distribute the concrete. The hose resists suction during the cleaning process

**Temperature range:** from -40°C (-40°F) to + 70°C (+158°F)

##### Construction

**Tube** : black, smooth, NR / SBR rubber, that withstands the abrasive action of the concrete.

**Reinforcement** : plies of steel wire cord

**Cover** : black, smooth, ( wrapped finish ), NR / SBR rubber, abrasion and weathering resistant.

I.D.		working pressure		bursting pressure (theoretical)	
mm	inch	bar	psi	bar	psi
65	2-9/16	80	1200	200	3000
76	3	80	1200	200	3000
102	4	80	1200	200	3000
125	4-59/64	80	1200	200	3000
152	6	80	1200	175	2625



### BULK MATERIALS SUCTION & DELIVERY HOSE

#### ABR VOLGA

##### Application :

Hardwall hose used for the suction and delivery of dry cement, sand, gravel, etc.

**Temperature Range** : -30°C (-22°F) to + 70°C (+158°F)

##### Construction

**Tube** : black, smooth, antistatic SBR / NR rubber which withstands the passage of abrasive materials.

**Reinforcement** : high strength synthetic cord, steel helix wire and antistatic copper wire

**Cover** : black, smooth (wrapped finish), EPDM rubber, weathering and ozone resistant.

I.D.		working pressure		bursting pressure (theoretical)	
mm	inch	bar	psi	bar	psi
52	2	10	150	30	450
63.5	2 1/2	10	150	30	450
76	3	10	150	30	450
90	3 1/2	10	150	30	450
102	4	10	150	30	450
127	5	10	150	30	450
152	6	10	150	30	450
203	8	10	150	30	450
254	10	10	150	30	450
305	12	10	150	30	450



## OIL AND PETROLEUM HOSE



### WATER COOLING AND OIL RETURN HOSE

#### STEEL MILL OIL RETURN

##### Application :

Mandrel built rubber hose specifically designed for water cooling and oil return operations in steel mills.

**Temperature range:** from -30°C (-22°F) to + 110°C (+230°F)

##### Construction

**Tube** : black, smooth synthetic rubber compound.

**Reinforcement** : high strength synthetic cord plus embedded steel helix wire.

**Cover** : covered with fibre glass, vulcanized, heat resistant.

The fibre glass cover resists radiant heat up to + 530°C (+986°F)

I.D.		working pressure		bursting pressure (theoretical)	
mm	inch	bar	psi	bar	psi
75	3	16	240	48	720
102	4	16	240	48	720

## OIL AND PETROLEUM HOSE

		<b>FUEL &amp; OIL DELIVERY HOSE</b>					
		I.D.		working pressure		bursting pressure (theoretical)	
		mm	inch	bar	psi	bar	psi
		13	1/2	10	150	30	450
		16	5/8	10	150	30	450
		19	3/4	10	150	30	450
		25	1	10	150	30	450
		32	1 1/4	10	150	30	450
		38	1 1/2	10	150	30	450
		51	2	10	150	30	450
		63.5	2 1/2	10	150	30	450
		76	3	10	150	30	450
		102	4	10	150	30	450
<b>OIL AUSTRALIA</b> <b>Application :</b> Softwall hose used for the delivery of petroleum products with aromatic content up to 30% <b>Temperature range:</b> from -20°C(-4°F) to +70°C (+158°F) <b>Construction</b> <b>Tube</b> : black, smooth, NBR rubber <b>Reinforcement</b> : high strength synthetic cord plus antistatic copper wires <b>Cover</b> : black, smooth (wrapped finish), synthetic rubber, weathering and oil resistant.		<b>FUEL &amp; OIL SUCTION AND DELIVERY HOSE</b>					
		I.D.		working pressure		bursting pressure (theoretical)	
		mm	inch	bar	psi	bar	psi
		19	3/4	10	150	30	450
		25	1	10	150	30	450
		32	1 1/4	10	150	30	450
		38	1 1/2	10	150	30	450
		51	2	10	150	30	450
		63.5	2 1/2	10	150	30	450
		76	3	10	150	30	450
		102	4	10	150	30	450
		127	5	10	150	30	450
		152	6	10	150	30	450
		203	8	10	150	30	450
		<b>TYPE SUPER</b>					
		32	1 1/4	16	240	48	720
		38	1 1/2	16	240	48	720
		51	2	16	240	48	720
		63.5	2 1/2	16	240	48	720
		76	3	16	240	48	720
		102	4	16	240	48	720
		127	5	16	240	48	720
		152	6	16	240	48	720
		<b>GAS DELIVERY HOSE</b>					
		I.D.		working pressure		bursting pressure (theoretical)	
		mm	inch	bar	psi	bar	psi
		13	1/2	25	367	100	1470
		25	1	25	367	100	1470
		32	1 1/4	25	367	100	1470
		38	1 1/2	25	367	100	1470
		50	1 31/32	25	367	100	1470
		75	2 61/62	25	367	100	1470
<b>OIL LGP</b> <b>Application :</b> Softwall hose suitable for the delivery of liquefied petroleum gas, LPG ( liquid or gas ) and natural gas. <b>Temperature range:</b> from -30°C(-22°F) to +100°C (+212°F) <b>Construction</b> <b>Tube</b> : extruded, black, smooth, synthetic rubber. <b>Reinforcement</b> : high strength synthetic cord. <b>Cover</b> : black, smooth (wrapped finish), synthetic rubber, weathering and ozone resistant. Pin pricked cover to allow gas permeation.							

## Multi Purpose Hose



- Application** : To convey Air/Water/ Compressed Air with oil mist  
**Construction** : Specially compound rubber tube  
**Cover Smooth** : Red color compound cover with Synthetic rubber  
**Safety factor** : 3 : 1

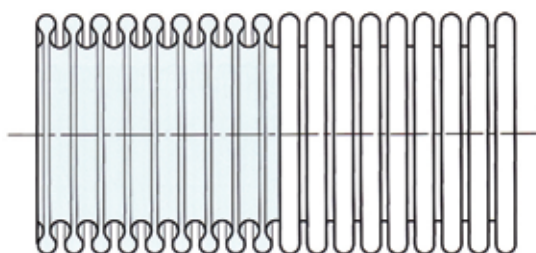
SIZE			working pressure		bursting pressure (theoretical)	
I.D.		O.D.				
inch	mm	mm	bar	psi	bar	psi
1/4	6.4	13.5	20	300	60	900
5/16	8	15	20	300	60	900
3/8	9.5	18	20	300	60	900
1/2	13.0	21.0	20	300	60	900
5/8	16	24	20	300	60	900
3/4	19	32	20	300	60	900
1	25.4	36	20	300	60	900

**FLEXIBLE TUBE**
**PT. BADJATAMA ABADI LESTARI**
**OMEGA TUBES**


These tubes are excellent in dynamic characteristics as well as corrosion resistant and pressure proof properties. The flexibility and pliability have changed public image of metallic tubes.

SIZE	TYPE	DIMENSION	MINIMUM BENDING RADIUS	REACTION FORCE NOTE (1)	BURST PRESSURE (WITH SINGLE WIRE BRAID)
		I.D			
20	QA 20	20.4	80	3	220
25	QA 25	26.0	90	3	190
32	QA 32	32.5	100	4	140
40	QA 40	40.0	120	8	100
50	QA 50	54.0	140	10	80
65	QA 65	65.0	150	10	60
80	QA 80	79.0	220	10	60
90	QA 90	92.0	240	11	50
100	QA 100	102.0	280	14	45
125	QA 125	129.0	350	14	40
150	QA 150	153.0	500	14	35
200	QA 200	203.0	750	14	35
250	QA 250	250.0	850	15	30

Material / SUS304,SUS316L Temperature/ - 200°C~400°C ≒800


**SANKO FLEXI**
**FLEXIBLE METAL HOSE**


Size (inch)	ID ( mm )	Thickness	Working Pressure (Bar)
1/2"	13.2	0.3	65
3/4"	19.2	0.3	61
1"	25	0.3	32
1 1/4"	32.3	0.3	32
1 1/2"	38.5	0.35	34
2"	53.5	0.4	22
3"	74	0.4	23
4"	103.5	0.4	13
6"	152	0.5	9
8"	203	0.5	12

Material : SS 304, SS 316

## WELDING HOSE

### WELDING HOSE

DUAL LINE WELDING HOSE

Red : Acetylene

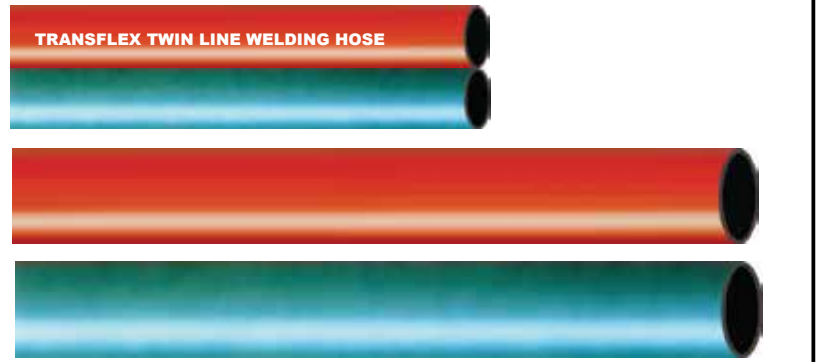
Green : Oxygen

### SINGLE WELDING HOSE

Red : Acetylene

### SINGLE WELDING HOSE

Green : Oxygen



<b>Applications</b>	: For use with welding and allied processes in workshop, shipyards, constructions sites and manufacturing industries.
<b>Tube</b>	: High ignition temperature synthetic rubber.
<b>Reinforcement</b>	: High tensile synthetic textile filament yarn.
<b>Cover</b>	: Excellent ozone and weather resistant synthetic rubber.
<b>Surface</b>	: Smooth
<b>Operating Temperature</b>	: -25°C to 80°C
<b>Safety Factor</b>	: 3 : 1

## DUCT HOSE

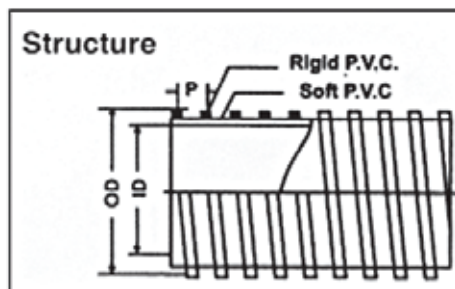


### TYPE : GL "TRANSFLEX" Ex ITALY

Nominal Size		ID (mm)	Pitch (mm)	Toreable Bending Radius (mm)
mm	inch			
32	1 1/4	32.7 ± 0.5	9.0 ± 0.4	30
38	1 1/2	38.0 ± 0.5	9.5 ± 0.4	35
50	2	50.8 ± 1.0	10.0 ± 0.4	50
65	2 1/2	63.5 ± 1.0	10.0 ± 0.4	60
75	3	76.2 ± 1.0	12.0 ± 0.4	75
100	4	101.6 ± 1.5	13.0 ± 0.5	90
125	5	127.0 ± 1.5	16.5 ± 0.5	120
150	6	152.4 ± 1.5	17.0 ± 0.5	150
200	8	203.2 ± 2.0	17.0 ± 0.5	140
250	10	254.0 ± 2.0	20.0 ± 0.5	320
300	12	304.8 ± 2.0	20.0 ± 0.5	350

### APPLICATION

1. For house heating and air conditioning
2. For building ventilation
3. For dust collection in civil-engineering works
4. For ventilation of a mine and coal mine
5. For dust collection in textile spinning and weaving factory
6. For dust collection in metal grinding and machine manufacturing plants
7. For transporting powders and liquid
8. For cleaner hose for auto mobiles and various industrial machines
9. For ventilation of welding gas at shipbuilding yard

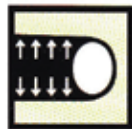


Ø 2" X 20 m	Ø 6" X 20 m
Ø 2 1/2" X 20 m	Ø 8" X 20 m
Ø 3" X 20 m	Ø 10" X 20 m
Ø 4" X 20 m	Ø 12" X 10 m
Ø 5" X 20 m	

## PU DUCT HOSE



Light Weight



Light Pressure  
Resistance



Excellent  
Transparency



High Abrasion  
Resistance



Excellent  
Flexibility

Inner Dia.		Bending Radius (mm)	Standard Length (mm)
In	mm		
1	25	30	20
1 1/4	31.8	35	20
1 1/2	38.1	50	20
2	50.8	70	20
2 1/2	63.5	80	20
3	76.2	100	20
4	101.6	140	20
5	127	170	20
6	152.4	200	20

Light weight and highly flexible polyurethane duct hose reinforced with rigid material helix. Minimum frictional loss achieved by smooth bore. Offers considerably longer life than PVC ducting due to increased abrasion resistance and mechanical strength.

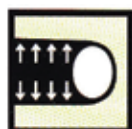
### APPLICATION

1. Excellent for conveyance applications requiring abrasion-resistance, flexibility and compressibility.
2. Widely used in wood-working, electronic and other industrial applications.
3. Ideal for air conveyance, fume extraction and other ventilation applications.
4. Extensively used for conveying of light dust, fluff and small particles under low pressure or vacuum.

## SPRING HOSE



Excellent for  
fluid conveyance



Excellent Pressure  
Resistance



Excellent  
Transparency



Superior Abrasion  
Resistance & Durability



Excellent  
Flexibility

Heavy-Duty Transparent PVC Hose reinforced with high tensile carbon steel helix. Excellent resistance to pressure vacuum and abrasion. Highly flexible to wide range of temperature.

### APPLICATION

1. Suitable for oil and chemical resistance applications.
2. Ideal for pumping and transferring of liquid, powder and granular material.
3. Exceptionally tough and durable for heavy-duty industrial applications.
4. Extensively used for suction and discharge-public utilities, drainage, ships, silos and irrigation plants.

Size (Inch)	Dia. (mm)		W.P. (BAR)	B.P. (BAR)	Coil Length (m)
	I.D.	O.D.			
3/4	19	26	5	15	50
1	25	31	5	15	50
1 1/4	32	28	4	12	40
1 1/2	38	45	4	12	40
2	51	59	3	9	40
2 1/2	63	72	2	6	40
3	76	88	2	6	30
4	102	113	2	6	30
5	127	141	2	6	20
6	152	166	2	6	20

## COMPOSITE HOSE



**Chem 700 HD**



**Oil 800 HD**



**PTFE 300 HD**



**CRYOTEC**

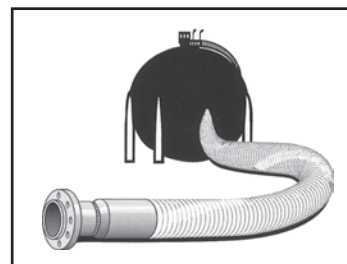
Code	Chem 700 HD PZ	Chem 700 HD PX	Chem 700 HD XZ	Chem 700 HD XX
Inner Wire	PP Coated Steel	PP Coated Steel	St. Steel	St. Steel
Outer Wire	Galv. Steel	St. Steel	Galv. Steel	St. Steel
Application	Heavy duty chemicals / solvents liquid transfer			
Colour	Green			
Temperature	- 40° + 100°C			
WP	16 Bar			

Code	Oil 800 HD ZZ	Oil 800 HD ZX	Oil 800 HD XZ	Oil 800 HD XX
Inner Wire	Galv. Steel	Galv. Steel	St. Steel	St. Steel
Outer Wire	Galv. Steel	St. Steel	Galv. Steel	St. Steel
Application	Heavy duty fuel / oil liquid transfer			
Colour	Blue			
Temperature	-40° + 100°C			
WP	16 Bar			

Code	PTFE 300 HD		Nanotec Inside	
	PTFE 300 HD XZ	PTFE 300 HD XX	Nanotec HD XZ	Nanotec HD XX
Inner Wire	St. Steel	St. Steel	St. Steel	St. Steel
Outer Wire	Galv. Steel	St. Steel	Galv. Steel	St. Steel
Application	Heavy duty aggressive chemicals liquid transfer		Heavy duty aggressive chemicals liquid transfer	
Colour	Red		Red	
Temperature	-40° + 100°C		-40° + 125°C	
WP	16 Bar		16 Bar	

Code	CRYOTEC 660 LG			CRYOTEC 661 N		
	Cryotec 660 ZZ	Cryotec 660 ZX	Cryotec 660 XX	Cryotec 661 ZZ	Cryotec 661 ZX	Cryotec 661 XX
Inner Wire	Galv. Steel	Galv. Steel	Stain. Steel	Galv. Steel	Galv. Steel	Stain. Steel
Outer Wire	Galv. Steel	Stain. Steel	Stain. Steel	Galv. Steel	Stain. Steel	Stain. Steel
Application	Liquid Petroleum Gas LPG			Liquified Natural Gas LNG extremely low temperatures		
Colour	White			White		
Temperature	-105 + 100°C			-200 + 80°C		
WP	25 bar ( until 8 inch ), 15 bar ( for 10 inch ), 10 bar ( for 12 inch )			16 bar ( until 5 inch ), 13 bar ( for 6 inch - 10 inch ), 10 bar ( for 12 inch )		

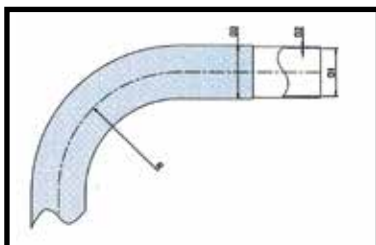
## COMPOSITE HOSE



	Standard Duty Hose	Heavy Duty Hose
<b>Application</b>	Recommended as tank truck, rail car and inplant hose	Recommended as ship to shore hose
<b>Diameter Range</b>	25 mm - 100 mm , 1 inch - 4 inch	75 mm - 250 mm, 3 inch - 10 inch
<b>Working Pressure</b>	10 Bar - 150 psi	14 Bar - 200 psi
<b>Maximum Length</b>	20 meter - 65 Ft	20 meter - 65 Ft
<b>Temperature</b>	- 30°C ( -22°F ) - + 100°C ( +212°F )	-30° ( -22°F ) - +100°C ( +212°F )



## Smooth Bore Teflon Hose with Stainless Steel Braid



### Construction :

Manufactured from virgin PTFE (Polytetrafluorethylene) resin with AISI 304 stainless steel, high tensile braid

### Fitting :

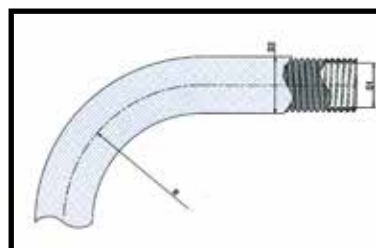
Fitting with PTFE tail.  
Industrial couplings.

Size	DI		D2	D3		R	WP	BP
	min	max	min	min	max	min	Bar 20°C	
1/4"	5,97	6,48	0,64	8,13	9,14	76	241	724
5/16"	7,54	8,05	0,58	9,91	10,82	102	230	690
3/8"	8,69	9,19	0,64	11,18	12,19	127	219	655
13/32"	10,03	10,54	0,76	12,70	13,72	133	195	586
1/2"	12,12	12,62	0,76	14,99	15,8	140	161	483
5/8"	14,86	15,47	0,89	17,78	19,05	165	138	414
3/4"	18,49	19,25	0,89	21,34	22,86	203	114	345
7/8"	21,67	22,43	0,89	24,64	25,91	229	92	276
1"	24,82	25,83	1,02	27,69	29,46	305	69	207

TEMP. - 70°C + 260°C

Other materials on request.  
We reserve the right to alter the specifications without notice.

## Convuluted Teflon Hose with Tape Wrapped & Stainless Steel Braid



### Construction :

Low profile helically convoluted PTFE (Polytetrafluorethylene) liner, glassfiber reinforced, with a AISI 304 high tensile, stainless steel braid.

### Fitting :

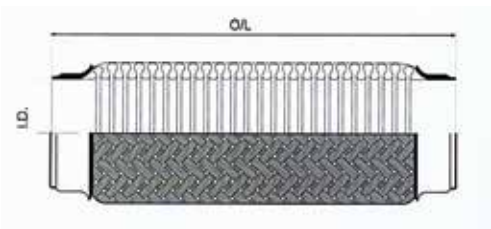
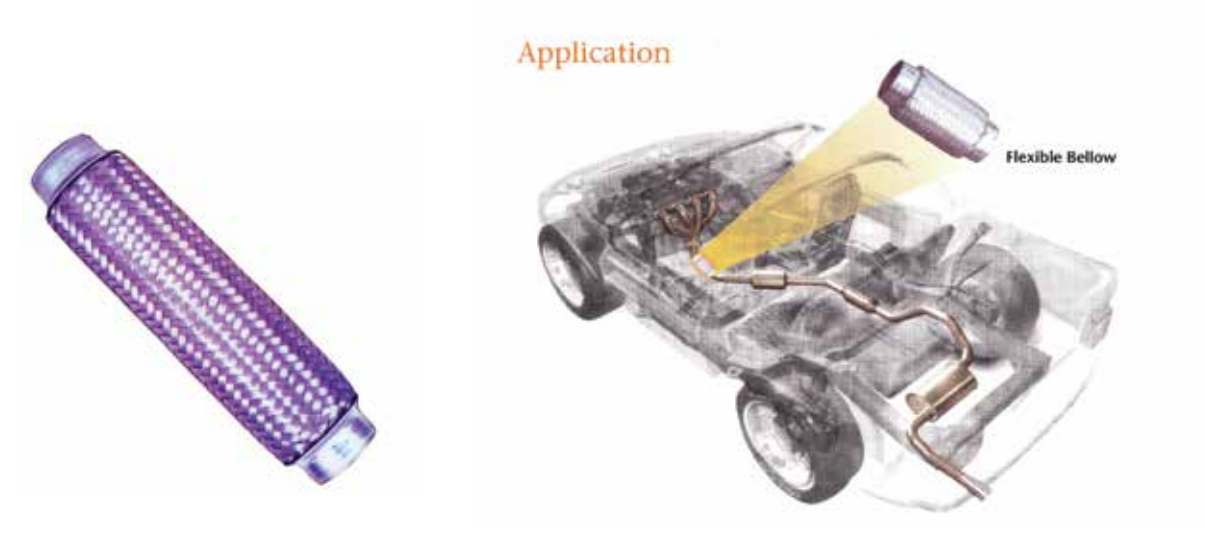
Hose fitting with hydraulic tail, hose assembling without de-convoluting the inner liner. Specially designed for hydraulic tail fittings.

Size	DI	D3	R	WP	BP
	Nominal	Nominal	mm	Bar 20°C	
3/8"	9,53	15,62	25	69	276
1/2"	12,70	19,93	38	86	345
5/8"	16,00	23,03	51	96	386
3/4"	19,05	26,67	64	76	303
1"	25,40	32,25	76	69	276
1 1/4"	31,75	39,88	89	69	276
1 1/2"	38,10	45,97	114	52	207
2"	50,80	58,93	133	34	135

TEMP. - 70°C + 260°C

Other materials on request.  
We reserve the right to alter the specifications without notice.

Application



Material SUS-304

Applications:  
Fitted to Muffler  
Unit to Absorb  
Vibration

SIZE	LENGTH
1 3/4"	15 cm
1 3/4"	20 cm
1 3/4"	25 cm
2"	12 cm
2"	15 cm
2"	20 cm
2"	25 cm
2 1/2"	15.2 cm
2 1/2"	20.3 cm
2 1/2"	25.4 cm

## MARUTEK SAND BLAST HOSE



### SAND BLAST HOSE

- Developed for conveying highly abrasive media suitable for blasting shot and other media, e.g. quartz sand, steel shot, corundum, glass. etc.
- Extremely long service life due to highly abrasion resistant quality of the rubber lining.
- Security against electrical shocks by electrically conductive lining.

**Temperature Range** : -35°C / +80°C (ambient temperature)

**Safety Factor** : 3,5 :1



**Tube** : NR / BR, Black Smooth, Highly Abrasion Resistant, Electrically Conductive

**Reinforcement** : Textile, Wrapped


**Cover** : SBR, Black Smooth, Cloth Impression, Antistatic


Inner Dia.		Wall Thickness in (mm)	Working Pressure (Bar)	Number of piles	Bending Radius in (mm)	Coil Length max. (m)
In	mm					
1 <sup>1</sup> / <sub>4</sub>	32	8	12	2	320	40
1 <sup>1</sup> / <sub>4</sub>	32	11.1	12	2	320	40
1 <sup>1</sup> / <sub>2</sub>	38	8	12	2	380	40
1 <sup>1</sup> / <sub>2</sub>	38	11.1	12	2	380	40
2	51	11.1	12	2	500	40


## HYDRAULIC HOSES

SAE 100 R1 AT / DIN-EN 853 1 SN										
	Inside Ø		Outside Ø	Working Pressure		Burst Pressure		Bending Radius	Weight	Test Pressure
	Inch	mm	mm	bar	psi	bar	psi	mm	kg/m	bar
	3/16	4.8	11.8	250	3625	1000	14500	90	0.19	600
	1/4	6.4	13.4	225	3265	900	13050	100	0.21	540
	5/16	7.9	15.0	215	3120	850	12325	115	0.24	510
	3/8	9.5	17.4	180	2610	720	10440	125	0.33	430
	1/2	12.7	20.6	160	2320	640	9280	180	0.41	385
<b>Tube</b> : Oil resistant synthetic rubber <b>Reinforcement</b> : 1 high tensile steel wire braid <b>Cover</b> : Abrasion, ozone and weather resistant synthetic rubber <b>Application</b> : For high pressure hydraulic systems in industry and agriculture <b>Temperature</b> : -40°C /+100°C (+120°C max )	5/8	15.9	23.7	130	1885	520	7540	200	0.45	310
	3/4	19.0	27.7	105	1525	420	6090	240	0.58	250
	1	25.4	35.6	88	1275	350	5075	300	0.88	210
	1-1/4	31.8	43.5	63	915	250	3625	420	1.23	150
	1-1/2	38.1	50.6	50	725	200	2900	500	1.51	120
	2	50.8	64.0	40	580	160	2320	630	1.97	96
SAE 100 R2 AT / DIN-EN 853 2 SN										
	Inside Ø		Outside Ø	Working Pressure		Burst Pressure		Bending Radius	Weight	Test Pressure
	Inch	mm	mm	bar	psi	bar	psi	mm	kg/m	bar
	3/16	4.8	13.4	415	6020	1650	23925	90	0.31	990
	1/4	6.4	15.0	400	5800	1600	23200	100	0.33	960
	5/16	7.9	16.6	350	5075	1400	20300	115	0.39	840
	3/8	9.5	19.0	330	4785	1320	19140	125	0.50	790
	1/2	12.7	22.2	275	3990	1100	15950	180	0.59	660
<b>Tube</b> : Oil resistant synthetic rubber <b>Reinforcement</b> : 2 high tensile steel wire braids <b>Cover</b> : Abrasion, ozone and weather resistant synthetic rubber <b>Application</b> : For high pressure hydraulic systems in industry and agriculture <b>Temperature</b> : -40°C /+100°C (+120°C max )	5/8	15.9	25.4	250	3625	1000	14500	200	0.71	600
	3/4	19.0	29.3	215	3120	850	12325	240	0.86	515
	1	25.4	38.1	165	2395	650	9425	300	1.28	395
	1-1/4	31.8	48.3	125	1815	500	7250	420	2.02	300
	1-1/2	38.1	54.6	90	1305	360	5220	500	2.20	215
	2	50.8	67.3	80	1160	320	4640	630	2.85	190



## HYDRAULIC HOSES

DIN-EN 856 4 SP										
	Inside Ø		Outside Ø	Working Pressure		Burst Pressure		Bending Radius	Weight	Test Pressure
	Inch	mm	mm	bar	psi	bar	psi	mm	kg/m	bar
	3/8	9.5	21.4	445	6455	1780	25810	180	0.78	1070
	1/2	12.7	24.6	425	6165	1700	24650	230	0.93	1020
	5/8	15.9	28.2	350	5075	1400	20300	250	1.17	840
	3/4	19.0	32.2	350	5075	1400	20300	300	1.48	840
	1	25.4	39.7	280	4060	1120	16240	340	2.02	670
<b>Tube</b> : Oil resistant synthetic rubber <b>Reinforcement</b> : 4 high tensile steel wire spiral layers <b>Cover</b> : Abrasion, ozone and weather resistant synthetic rubber <b>Application</b> : For hydraulic systems with high peak pressures and arduous conditions of operations <b>Temperature</b> : -40°C /+100°C (+120°C max )	1-1/4	31.8	50.8	210	3045	840	12180	460	3.05	500
	1-1/2	38.1	57.2	185	2685	740	10730	560	3.52	445
	2	50.8	69.8	165	2395	660	9570	660	5.20	395

DIN-EN 856 4 SH										
	Inside Ø		Outside Ø	Working Pressure		Burst Pressure		Bending Radius	Weight	Test Pressure
	Inch	mm	mm	bar	psi	bar	psi	mm	kg/m	bar
	3/4	19.0	32.2	420	6090	1680	24360	280	1.53	1000
	1	25.4	38.7	380	5510	1520	22040	340	2.06	910
	1-1/4	31.8	45.5	345	5000	1380	20010	460	2.46	830
	1-1/2	38.1	53.5	290	4205	1160	16820	560	3.35	695
	2	50.8	68.1	250	3625	1000	14500	700	4.55	600
<b>Tube</b> : Oil resistant synthetic rubber <b>Reinforcement</b> : 4 high tensile steel wire spiral layers <b>Cover</b> : Abrasion, ozone and weather resistant synthetic rubber <b>Application</b> : For hydraulic systems with high peak pressures and arduous conditions of operations <b>Temperature</b> : -40°C /+100°C (+120°C max )										

SAE 100 R13 / DIN EN 856 TYPE R13										
	Inside Ø		Outside Ø	Working Pressure		Burst Pressure		Bending Radius	Weight	
	Inch	mm	mm	bar	psi	bar	psi	mm	kg/m	
	3/4	19.0	32	350	5075	1800	26100	240	1.635	
	1	25.4	38.4	350	5075	1750	25375	300	2.080	
	1-1/4	31.8	49.3	350	5075	1700	24650	420	3.885	
	1-1/2	38.1	57.3	350	5075	1650	23925	500	4.870	
	2	50.8	71.6	350	5075	1500	21750	630	6.460	
<b>Tube</b> : Mineral, vegetable, and glycol based hydraulic oil resistant special synthetic rubber. <b>Reinforcement</b> : 4 or 6 high tensile steel spiral <b>Cover</b> : Hydraulic oil, abrasion and weather resistant special synthetic rubber <b>Application</b> : For hydraulic systems with high peak pressures and arduous operating conditions. <b>Temperature</b> : -40°C to + 120°C ( +125°Max )										

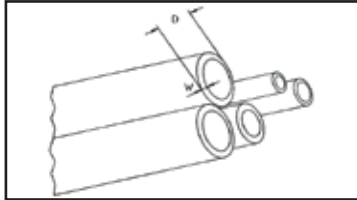
## HYDRAULIC HOSES WITH SMOOTH COVER

SAE 100 R1 AT / DIN-EN 853 1 SN										
	Inside Ø		Outside Ø	Working Pressure		Burst Pressure		Bending Radius	Weight	Test Pressure
	Inch	mm	mm	bar	psi	bar	psi	mm	kg/m	bar
	3/4	19.0	27.7	105	1525	420	6090	240	0.58	250
<p><b>Tube</b> : Oil resistant synthetic rubber  <b>Reinforcement</b> : 1 high tensile steel wire braid  <b>Cover</b> : Abrasion, ozone and weather resistant synthetic rubber  <b>Application</b> : For high pressure hydraulic systems in industry and agriculture  <b>Temperature</b> : -40°C /+100°C (+120°C max )</p>										
SAE 100 R2 AT / DIN-EN 853 2 SN										
	Inside Ø		Outside Ø	Working Pressure		Burst Pressure		Bending Radius	Weight	Test Pressure
	Inch	mm	mm	bar	psi	bar	psi	mm	kg/m	bar
	1/4	6.4	15.0	400	5800	1600	23200	100	0.33	960
	3/8	9.5	19.0	330	4785	1320	19140	125	0.50	790
	1/2	12.7	22.2	275	3990	1100	15950	180	0.59	660
<p><b>Tube</b> : Oil resistant synthetic rubber  <b>Reinforcement</b> : 2 high tensile steel wire braids  <b>Cover</b> : Abrasion, ozone and weather resistant synthetic rubber  <b>Application</b> : For high pressure hydraulic systems in industry and agriculture  <b>Temperature</b> : -40°C /+100°C (+120°C max )</p>										

\*Regarding on smooth cover, both wrapped cover and smooth cover use same rubber compound, the last step technical on cover is different wrapped cover use wrapping cloth to shape the cover, smooth cover use plastic to shape the cover. So the turn out is different.

## CARBON STEEL SEAMLESS TUBE

### Standard Specifications: DIN 2391 C St. 37.4 AS PER SPEC WITH NBK



Tube O.D. D = mm	Wall Thickness D = mm	Design Pressure DIN 2413-1 ( bar)	Burst Pressure ( bar)	Length ( m )
4	1	600	3850	6.0
6	1	426	2340	6.0
6	1.5			6.0
6	2			6.0
8	1	368	1660	6.0
8	1.5	472	2800	6.0
8	2			6.0
10	1	294	1290	6.0
10	1.5	389	1930	6.0
10	2	498	3100	6.0
12	1	245	1220	6.0
12	1.5	368	1580	6.0
12	2	426	2380	6.0
14	2	420	2180	6.0
15	1	196	860	6.0
15	1.5	294	1140	6.0
15	2	392	1750	6.0
16	2	368	1800	6.0
16	2.5	403	2120	6.0
16	3	472	2800	6.0
18	1.5	245	1050	6.0
18	2	327	1520	6.0
20	2	294	1250	6.0
20	2.5	368	1550	6.0
20	3	389	1960	6.0
22	2	267	1020	6.0
22	3			6.0
25	2.5	294	1190	6.0
25	3	353	1520	6.0
28	2	210	880	6.0
28	2.5			6.0
28	3			6.0
30	2.5			6.0
30	3	294	1140	6.0
30	4	392	1650	6.0
35	2	168	670	6.0
35	5			6.0
38	4	309	1240	6.0
38	5			6.0
42	2	140	520	6.0
42	3	210	860	6.0
50	5			6.0

Permissible temperature range and required pressure reductions compared to calculation pressure for higher temperatures correspond to the decrease of 1% proof stress ( DIN 17458 )

TEMP.	-60°C up to + 20°C	50°C	100°C	200°C	300°C	400°C
PRESSURE REDUCTION	-	5.50%	11.50%	21.50%	29%	34%

Intermediate values are to be interpolated

## GALVANIZED CARBON STEEL RECOIL TUBE

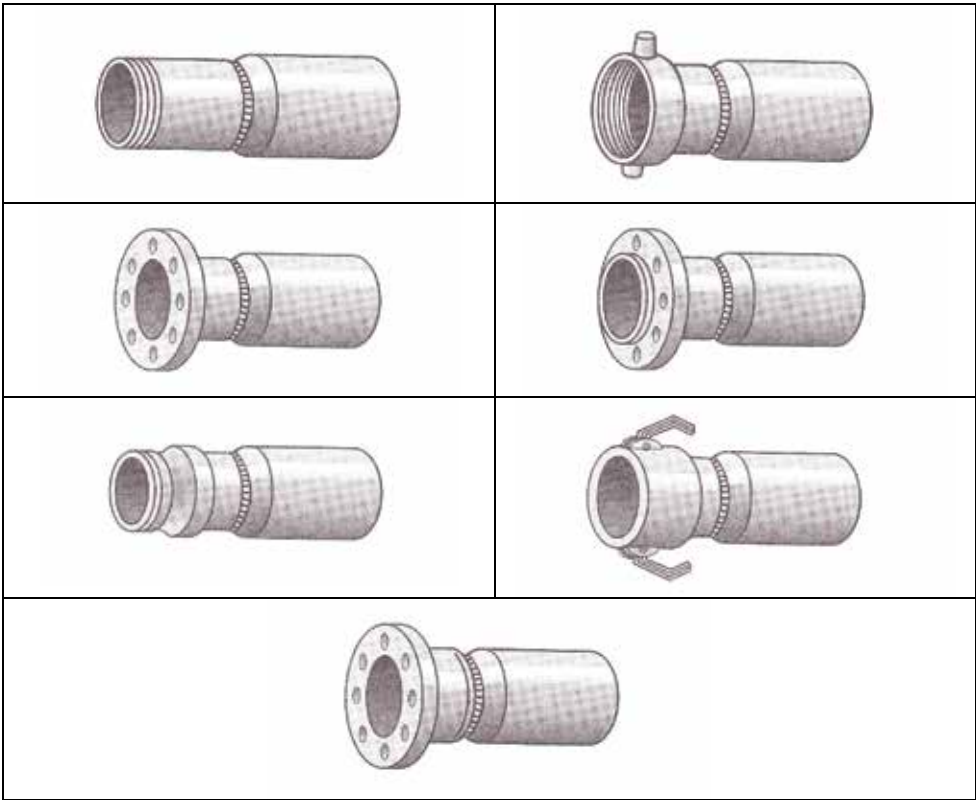


Color : Zinc Multi color plating

Size (inch)	Length (m/roll)
3/16 "	15 m
1/4 "	15 m
5/16 "	15 m
3/8 "	15 m
1/2 "	15 m

# END FITTINGS FOR COMPOSITE HOSE

- Sizes : 1" To 10"  
Materials : Carbon Steel, Stainless Steel, Aluminium, Brass, Polypropylene  
Threads : BSP – NPT  
Flanges : DIN-ASA-JIS  
Attachment : Carbon Steel or Stainless Steel ferrules, externally swaged on to the hose.










## CAM & GROOVE COUPLINGS FOR HOSE AND PIPE

<p>(A)</p>  <p><b>ADAPTOR</b> Female thread: NPT, BSP or special thread as demand</p>	<p>(B)</p>  <p><b>COUPLER</b> Male thread: NPT, BSP or special thread as demand</p>	<p>(C)</p>  <p><b>HOSE SHANK COUPLER</b> attached directly to uncoupled hose with any type clamps or band</p>
<p>(D)</p>  <p><b>COUPLER</b> Female thread: NPT, BSP or special thread as demand</p>	<p>(E)</p>  <p><b>HOSE SHANK ADAPTOR</b> attached directly to uncoupled hose with any type clamps or band</p>	<p>(F)</p>  <p><b>ADAPTOR</b> Male thread: NPT, BSP or special thread as demand</p>
<p>(DC)</p>  <p><b>DUST CAP</b> For Adapter type "A, E, F"</p>	<p>(DP)</p>  <p><b>DUST PLUG</b> For Coupler "B, C, D"</p>	 <p><b>CAM ARM:</b> Brass, Stainless Steel <b>PIN:</b> Stainless Steel</p>

**Available in Size** : Please call  
**Material of Body** : Brass  
 Aluminium  
 Stainless Steel

## CAM & GROOVE COUPLINGS FOR HOSE AND PIPE

<p>( AR )</p>  <p>Aluminium Reducing Adapter - BSPT Female</p>	<p>( AA )</p>  <p>Aluminium Adapter - Adapter</p>	<p>( BR )</p>  <p>Aluminium Reducing Male Thread x Coupler - BSPT</p>
<p>( DD )</p>  <p>Aluminium Reducing Coupler</p>	<p>( DR )</p>  <p>Aluminium Reducing Female Thread x Coupler - BSPT</p>	 <p>Aluminium Gravity Drop Adapter</p>
<p>( FR )</p>  <p>Aluminium Reducing Adapter - BSPT Male</p>		

**Available in Size** : Please call  
**Material of Body** : Aluminium

## CLAMP

### CLAMP HEAVY DUTY DOUBLE BOLT



Material : Galvanised Carbon Steel

TYPE:	SIZE (mm)
SL 29	OD ( 22 - 29 )
SL 34	OD ( 28 - 34 )
SL 40	OD ( 32 - 40 )
SL 49	OD ( 39 - 48 )
SL 60	OD ( 48 - 60 )
SL 76	OD ( 60 - 76 )
SL 94	OD ( 77 - 94 )
SL 115	OD ( 94 - 115 )
SL 400	OD ( 89 - 101 )
SL 525	OD ( 113 - 127 )
SL 550	OD ( 127 - 140 )
SL 600	OD ( 135 - 155 )
SL 675	OD ( 155 - 175 )
SL 769	OD ( 175 - 195 )
SL 875	OD ( 210 - 225 )
SL 988	OD ( 227 - 250 )
SL 1125	OD ( 252 - 275 )
SL 1275	OD ( 298 - 342 )

### CLAMP - BOSS 2 CLAWS 4 BOLTS AND 2 BOLTS



Material : Galvanised Carbon Steel

SIZE (inch)
Ø ½"
Ø ¾"
Ø 1"
Ø 1¼"
Ø 1½"
Ø 2"
Ø 3"


### Aluminium Safety Clamp



Material : Aluminum

1"	25 x 6
1.1/2"	38 x 6.5
2"	50 x 8
2"	50 x 10
2.1/2"	63 x 8
3"	75 x 10
4"	100 x 8
4"	100 x 10
6"	150 x 10

## CLAMP

SUPERIOR CLAMP		
	TYPE:	SIZE mm/Units
	Superior W1	17 - 19
		20 - 22
		23 - 25
		26 - 28
		29 - 31
		32 - 35
		36 - 39
		40 - 43
		44 - 47
		48 - 51
		52 - 55
		56 - 59
		60 - 63
		64 - 67
		68 - 72
		73 - 79
		80 - 85
		86 - 91
		92 - 97
		98 - 103
		104 - 112
		113 - 121
		122 - 130
		130 - 140
		140 - 148
		149 - 161
		162 - 174
		175 - 187
		201 - 213
		227 - 239
	Superior W2	27 - 29
		121 - 130
	Superior W4	47 - 51
		112 - 121
		121 - 130
		130 - 140

## CLAMP SPIRAL



For use on convoluted cover hose. To determine which style clamp is needed for your hose look at the end of the hose, If the helix spirals are in a clockwise direction away from you( along the hose ), a clockwise clamp is needed. If the helix spirals are in a counterclockwise direction away from you, a counterclockwise clamp is needed.  
Material : Galvanised Carbon Steel

### SIZE (inch)

Ø 1 ½"	Ø 6"
Ø 2"	Ø 8"
Ø 2 ½"	Ø 10"
Ø 3"	Ø 12"
Ø 4"	
Ø 5"	

## HOSE MENDER



Material : Galvanised Carbon Steel

### SIZE (inch)


Ø ½"	Ø 2 ½"
Ø ¾"	Ø 3"
Ø 1"	Ø 4"
Ø 1 ¼"	Ø 6"
Ø 1 ½"	Ø 8"
Ø 2"	Ø 10"

## COUPLING SANDBLAST





**Size** : 1.1/4"  
**Material** : Nylon


## BAUER MALE AND FEMALE LEVER TYPE


 <p><b>Male Type</b>      <b>Female Type</b></p>	SIZE (inch)	
	MALE TYPE	FEMALE TYPE
	Ø 2"	Ø 2"
	Ø 3"	Ø 3"
<p>Application : Irrigation suction and delivery hose connectors Heavy duty mining suction and delivery slurry line connectors Medium vacuum line connectors Waste water suction and delivery line connectors</p> <p>Features : Quick connect and disconnect Hot dipped galvanised</p> <p>Material : Galvanised Carbon Steel</p>	Ø 4"	Ø 4"
	Ø 6"	Ø 6"
	Ø 8"	Ø 8"


## KING COMBINATION NIPPLES


	SIZE (inch)	
	Ø 1/2"	Ø 3"
	Ø 3/4"	Ø 4"
	Ø 1"	Ø 5"
	Ø 1 1/4"	Ø 6"
	Ø 1 1/2"	Ø 8"
	Ø 2"	Ø 10"
<p>Combination nipples are recommended for low pressure discharge and suction service for compatible liquids. Thread : NPT &amp; BSPT Material : Galvanised Carbon Steel</p>		


CHICAGO / UNIVERSAL CROWFOOT COUPLING - MALE ENDS		
	Thread Type : NPT Material : Galvanised Carbon Steel	SIZE (inch)
		Ø 1/2"
		Ø 3/4"
		Ø 1"

CHICAGO / UNIVERSAL CROWFOOT COUPLING - FEMALE ENDS		
	Thread Type : NPT Material : Galvanised Carbon Steel	SIZE (inch)
		Ø 1/2"
		Ø 3/4"
		Ø 1"

CHICAGO / UNIVERSAL CROWFOOT COUPLING - HOSE ENDS		
	Material : Galvanised Carbon Steel	SIZE (inch)
		Ø 1/2"
		Ø 3/4"
		Ø 1"

BOSS GROUND JOINT COMPLETE FEMALE SETS			
	Thread Type : NPT Material : Galvanised Carbon Steel	SIZE (inch)	
		Ø ½"	Ø 1 ¼"
		Ø ¾"	Ø 1 ½"
		Ø 1"	Ø 4"

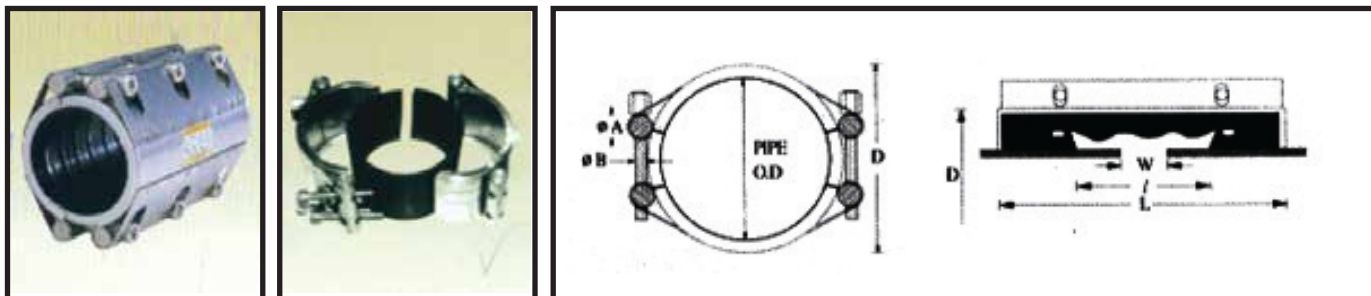
BOSS MALE STEM			
	Thread Type : NPT Material : Galvanised Carbon Steel	SIZE (inch)	
		Ø ½"	Ø 1 ¼"
		Ø ¾"	Ø 1 ½"
		Ø 1"	Ø 4"

DRY BREAK COUPLINGS		
	Dry break couplings are designed for quick and spill free connection and disconnection of hoses and pipelines.  Material : Aluminium Thread BSP and NPT	SIZE Ø 2"

# JW COUPLING

## PIPE JOINT COUPLING

## DOUBLE CLAMP TYPE (MJDL)



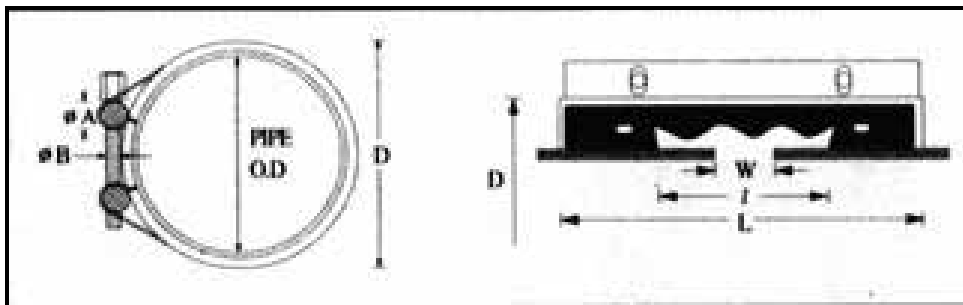
It is applied equally with MJD and the length of joint is 1.6-2 times and when it is used for the new setting up, it is applied to the case which the loose conditions or the elasticity scope is big, and in case it is used for the repairing, it can be applied to the case which the damage scope of pipe is wide

ND	INCH	PIPE		D (mm)	MJDL		MP (kgf/cm)	TORQUE (kg – cm)	Ø A (mm)	Ø B (mm)	W (mm)		
		O.D (mm)	MIN-MAX (mm)		L (mm)	I (mm)							
15A	½	21.7	21.0-23.0	34.3	100	70	64	70-100	10	M6	MJDL 0-16		
20A	¾	27.2	26.0-28.5	39.8									
25A	1	34.0	33.0-35.5	46.6									
32A	1¼	42.7	42.0-44.5	55.3									
40A	1½	48.6	48.0-50.5	61.2									
50A	2	60.5	59.0-62.0	75.5	150	110	56	120-150	14	M8			
65A	2½	76.3	75.0-79.0	91.3				150-200	18	M12			
80A	3	89.1	88.0-92.0	108	200	150		250-300				MJDL 30	MJDL M16
90A	3½	101.6	100.0-103.5	121				201	48				
100A	4	114.3	113.0-118.0	133	250	185				32			
125A	5	139.8	138.0-142.5	160									
150A	6	165.2	163.0-168.5	185			2	1000-					
200A	8	216.3	214.0-219.0	240									
250A	10	267.4	262.0-270.0	292									
300A	12	318.5	316.0-323.0	343									
350A	14	355.6	352.0-360.0	380									
400A	16	406.4	402.0-410.0	431									
450A	18	457.2	453.0-462.0	481									
500A	20	508.0	504.0-513.0	532									
550A	22	558.8	554.0-564.0	583									
600A	24	609.6	604.0-615.0	634									
700A	28	711.2	705.0-717.0	735									
~	~	~	~	~									
2000A	80	2.032.0	2.026.0-2038.0	2.056									

# JW COUPLING

## PIPE JOINT COUPLING

## FLEXIBLE TYPE (MJS / MJSF)



The inner part of joint consists of the rubber sleeve and thus can absorb the impact, vibration, bending ( 2 – 4° ), noise ( about 60% compared with the welding ) and elasticity.

- For the new setting-up, the pipe is fixed and then is used.
- MJSF : MANUFACTURE BY ORDER

ND	INCH	PIPE		D (mm)		MJS (MJSF)		WP(MP) ( kgf / cm )		TORQUE (kg - cm)		ØA (mm)		ØB (mm)		W (mm)																																																																																																														
		O.D (mm)	MIN-MAX (mm)	MJS MJL	MJSF MJSFL	L (mm)	I (mm)	MJS	MJSF	MJS	MJSF	MJS	MJSF	MJS	MJSF																																																																																																															
15A	½	21.7	21.0-22.0	31.7	32.1	60	28 (28)	16 (64)		70-100	~	10	14	M6	M8	0-8																																																																																																														
20A	¾	27.2	26.0-28.0	39.8	40.2	60 (60)																																																																																																																								
25A	1	34.0	33.0-35.0	46.6	47																																																																																																																									
32A	1¼	42.7	42.0-44.0	55.3	55.7																																																																																																																									
40A	1½	48.6	47.5-49.5	61.2	61.6																																																																																																																									
50A	2	60.5	59.0-61.0	75.5	75.5	80 (80)	44 (44)	16 (64)		120-150	120-150	14		M8																																																																																																																
65A	2½	76.3	75.0-78.0	91.3	96.3	80 (111)	44 (59)																																																																																																																							
80A	3	89.1	88.0-91.0	108	109	110 (111)	59 (59)																	14 (56)		150-200	150-200	18	18	M12	M12																																																																																															
90A	3½	101.6	100.0-103.0	121	122																																																																																																																									
100A	4	114.3	113.0-116.0	133	134																						111 (112)								250-300	250-300																																																																																										
125A	5	139.8	138.0-142.0	160	161			12 (48)																																																																																																																						
150A	6	165.2	164.0-167.0	185	186	150 (152)	89 (89)											8 (32)	12 (50)	350-400	350. 400	MJS 22 MJL 30	MJS 22 MJL 30	MJS M14 MJL 30	MJS M14	MJS MJSF 0-15																																																																																																				
200A	8	216.3	214.0-218.5	240	242			7 (28)	8 (32)																																																																																																																					
250A	10	267.4	262.0-268.0	292	294																							6 (24)																																																																																																		
300A	12	318.5	316.0-323.0	343	345																																		5.0 (20)																																																																																							
350A	14	355.6	352.0-359.5	380	382																																													4.6 (19)																																																																												
400A	16	406.4	402.0-410.0	431	433																																																								4.2 (17)																																																																	
450A	18	457.2	453.0-461.0	481	483																																																																			3.7 (15)																																																						
500A	20	508.0	504.0-512.0	532	534																																																																																																																									
550A	22	558.8	555.0-563.0	583	585																																																																																																																									
600A	24	609.6	605.0-614.0	634	636																																																																																																																									
700A	28	711.2	706.0-716.0	735	737																																																																																																																									
~	~	~	~	~	~																																																																																																																									
2000A	80	2.032.0	2.027.0-2.037.0	2.056	2.058																																																																																																																									

**Size range, TODO-GAS<sup>®</sup>**



**1" TODO-GAS<sup>®</sup>**  
( DN19 – DN32, Ø 56 mm )

TODO-GAS<sup>®</sup> couplings are used in a variety of LPG applications from heavy duty Autogas vehicle refuelling to advanced vapour recovery systems. Easy to connect and disconnect, the TODO-GAS<sup>®</sup> 1" coupling offers single handed operation and ultra low release on disconnection. These features make TODO-GAS<sup>®</sup> couplings ideal for unsupervised fuelling of vehicles, in fact, with a release of 0.15 cc per disconnection, fuelling indoors is possible.

The 1" TODO-GAS<sup>®</sup> coupling can easily handle flows up to 200 litres / minute ( 52 USG / min ) with minimal pressure drop.



**2" TODO-GAS<sup>®</sup>**  
( DN40 – DN50, Ø 71 mm )

TODO-GAS<sup>®</sup> 2" couplings are designed primarily for loading and discharge of bobtails or intermediate bulk delivery trucks. Rugged construction plus the same safety features as the rest of the TODO coupling family equip TODO-GAS<sup>®</sup> couplings for frequent use. With one or two handle options and an integral swivel, TODO-GAS<sup>®</sup> 2" couplings can cope with almost any loading equipment configuration.



**3" TODO-GAS<sup>®</sup>**  
( DN 80, Ø 119 mm )

For larger of high flow rate applications, TODO-GAS<sup>®</sup> 3" couplings have no equal. Typically used for rail tank loading and discharge ( 2" in USA ), TODO-GAS<sup>®</sup> 3" couplings can easily handle flows up to 2500 litres / minute ( 658 USG / min ).

Two handle operation plus a robust integral swivel make sure the couplings are able to take the strains of terminal life.

## Size range, TODO-MATIC® Dry-Break®



### 1" TODO-MATIC® Dry-Break® ( DN19 – DN 32, Ø 56 mm )

TODO-MATIC® Dry-Break® couplings in 1" size are designed for smaller bore applications where compact dimensions are required. One handed operation, high flow rate and minimal release on disconnection make TODO-MATIC® perfect for transferring high value or sensitive medias with confidence. The addition of selectivity to prevent product cross contamination expands the operational possibilities in manifold exchange applications.



### 2" TODO-MATIC® Dry-Break® ( DN 40 – DN50, Ø70 mm )

Our 2" coupling size probably covers the most diverse selection of applications in the TODO-MATIC® family. Available in a range of material and connection configurations, TODO-MATIC® 2" is designed for rapid and safe transfers. Offshore chemical dosing, Pharmaceutical feedstock and aggressive chemical vapour transfer are just some of the challenging applications TODO-MATIC® couplings see on a daily basis.



### 2½" TODO-MATIC® Dry-Break® ( DN65 – DN 80, Ø 105 mm )

The 2½" TODO-MATIC® coupling is generally used in road tanker and aviation applications transferring a variety of liquids and vapours. Just like all TODO-MATIC® couplings, the 2½" is available in a full range of materials to offer compatibility with most applications. A strong integral swivel, ergonomic design and rugged construction ensure TODO-MATIC® couplings are equipped for the real world.

**Size range, TODO-MATIC® Dry-Break®**



**3" TODO-MATIC® Dry-Break® ( DN80, Ø119 mm )**

3" coupling, similar in size to the 2 ½" but with greater flow. Typically used for road and rail tank loading / discharge, in plant chemical transfers etc. Tough construction, ease of handling, no spillage and high flow made this coupling from the natural choice for N.A.T.O refuelling standardisation.



**4" TODO-MATIC® Dry-Break® ( DN 100, Ø 164 mm )**

Compact, light, weight, high flow 4" self sealing coupling system available. Used extensively for offshore ship to rig transfers of fuels and drinking water, aviation fuel bunkering, rail tank loading / discharge, chemicals etc. Rapid, positive connection and disconnection make TODO-MATIC® the standard for barge to ferry refuelling and multiple rail tank discharge.



**6" TODO-MATIC® Dry-Break® ( DN150, Ø 238 mm )**

The same features and method of operation as the rest of range make 6" TODO-MATIC® the ideal ship / barge to shore connection. Much faster and safer than any flange coupling means not only environmental standards compliance but real turn around time savings. Full marine construction with rotating lifting loop as standard. As with all TODO-MATIC® couplings, the 6" is equally suitable for flexible hose or loading arm applications.

## FERRULE AND FITTING HYDRAULIC



### FERRULE HYDRAULIC

Type : Ferrule for SAE 100 R1 AT/EN853 1SN Hose  
Ferrule for SAE 100 R2 AT/EN853 2SN Hose  
Ferrule for 4SP, 4SH Hose  
Ferrule interlock for R13 Hose  
Size : 1/4" to 2"  
Materials : Carbon Steel

### FITTING HYDRAULIC

Size : 1/4" to 2"  
Materials : Carbon Steel  
Type : Please call