



KURAT ENTERPRISE

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Stainless Steel Hose Convoflex

CONVOFLEX' STAINLESS STEEL CORRUGATED FLEXIBLE MET HOSE (GSS)

Convoflex (SS304 / SS304L / SS316 / SS316L / SS321)

SPECIFICATION : BS 6501



CONSTRUCTION:

Hose & Braid

Material : 304 / 304L / 316 / 316L / 321

Tube: Heavy wall Inner core for corrosive service. Butt welded Annular Corrugations, close-pitch, tubing.

Size Range: 6mm I.D to 600mm

Temperature: -200°C. to + 800°C. for AISI 321 & 316 -200°C. to + 420°C. for AISI 304 & 304L

APPLICATION

This hose is suited for any application where working conditions demand one or a combination of any of the following: absolute leak proof -ness, a high safety factor, extreme temperatures, vibrations, high working pressure and corrosion resistance.

Applicable for cryogenic and chemical transfer, vacuum, super-heated steam, coolant lines, fuel and oil burner lines, petroleum, refrigerants, gases, poisonous media and food stuff.

HOSE SPECIFICATION CHART

CODE	I.D inches	I.D mm	O.D mm	Working pressure kgf / cm ²	Test pressure kgf / cm ²	Minimum bend radius mm
GSS - 6	1/4	6	14	184	276	90
GSS -10	3/8	10	19	90	135	150
GSS -12	1/2	12	22	80	120	200
GSS -20	3/4	20	29	64	96	203
GSS -25	1	25	36	50	75	229
GSS -32	1 1/4	32	35	40	60	267

GSS -38 1½ 38 55 30 45 292
 GSS -50 2 50 68 28 42 318
 GSS -65 2½ 65 84 24 36 508
 GSS -80 3 80 97 18 27 610
 GSS -100 4 100 126 16 24 750
 GSS -125 5 125 152 12 18 900
 GSS -150 6 150 178 10 15 1050
 GSS -200 8 200 225 8 12 1180
 GSS -250 10 250 278 6 9 1250
 GSS -300 12 300 330 5 7.5 1400

For Static pipe work the bend radius can be reduced considerably. For extra high pressure, extra braid can be provided. Consult our Technical Department. For pressure drop estimates, for corrugated metal hose, consult our Technical Department. The above pressure ratings are for fluid & ambient temp. Of 30°C.

TEMPERATURE

As the operating temperature of a hose assembly increases, the maximum working pressure of the assembly decreases. Below is a chart showing temperature correction factors for 'CONVOFLEX' Stainless Steel Metal Hose.

TEMPERATURE CORRECTION FACTORS

(°C) Correction Factor	(°C) Correction Factor
- 200 to 50 1.00	400 0.67
100 0.94	450 0.64
150 0.88	500 0.61
200 0.84	550 0.60
250 0.79	600 0.58
300 0.76	700 0.56
350 0.71	800 0.54

How to use Temperature Corrections Factor Chart?

Determine the maximum operating temperature of the application.
 Locate this temperature on the chart and read across to the proper factor.
 Multiply this factor times the maximum working pressure as determined from the Hose Specification Chart.
 This answer is your maximum Safe Working Pressure at that Elevated Temperature.

ADVANTAGES OF FLEXIBLE METALLIC HOSE

- High physical strength.
- Suitable for elevated temperature (800°C).
- Fire resistant.
- Good corrosion characteristics.
- Long life (When installed correctly)
- Resistance to penetration & damage.

FLEXIBLE HOSES ARE USED FOR THE FOLLOWING MODES OF MOVEMENT

- Static Installations
Where the Flexible hose is used to connect pipe work out of alignment and remain in static position.
- Occasional Flexing

When the hose is only required to flex occasionally. Such as manual handling.

Constant Flexing

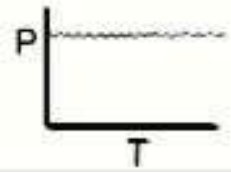
When the hose is required to flex continuously, usually on moving machinery.

Vibration

High frequency, low amplitude movement, i .e. on a compressor.

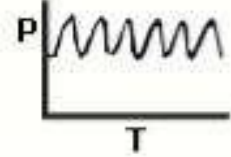
PRESSURE - FOUR EFFECTS

System pressure:



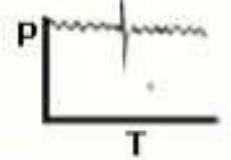
System pressure is the first factor considered in selecting a hose or wall thickness. Where significant pressure fluctuations are not present, a standard hose may be selected by choosing one rated at a pressure equal to or greater than your nominal operating pressure.

Pulsating pressure:



Pulsating pressure is a continuous rippling pressure superimposed on the operating pressure. If the pulsations are significant it is proper to provide margin in selecting the rated pressure for a standard hose.

Surge pressure:



Surge pressures usually occur during system start up, shut down, and rapid valve closure. It is proper to consider the possibility of surge pressures and to provide adequate margin.

Flexibility:



Logically, increasing pressure requires a heavier wall and braid and tightens the braid grip increasing hose stiffness proportionately. As covered in the vibration section however, the tightening of the braid is valuable in controlling vulnerability to vibration by providing necessary damping.

HOSE MOTION -THREE TYPES

Angular motion:



Occurs when one end of the hose is held fixed and the other is deflected in an arc.

Offset Motion:



Occurs when one end of the hose is fixed and the other end is offset but remains parallel to the fixed end. Do not allow this motion to stretch the hose. Use a stress relief loop or equivalent to provide slack.

Axial Motion:



Occurs when one end of the hose is held fixed and the other end of the hose is deflected along the axis of the hose. This type of motion should only be applied to unbraided annular hose or to braided hose where a stress relief loop or offset is provided so that the motion is only locally axial and the hose is not stretched or compressed.

Warning for Your Safety

The system designer and user have the sole responsibility to select products suitable for their special application requirements to ensure the proper installation. Operation and maintenance of the product. Application details, material compatibility and product ratings should all be considered in the individual selection. Improper selection or use of products can cause property damage or personal injury. KURAT accepts no liability for any improper selection, installation, operation or maintenance.

Jacketed



MATERIAL AND DESIGN:

For the Internal hose and the Jacketed hose our stainless steel corrugated hoses are used, with stainless steel Braiding in each case. The internal and the Jacketed hose are joined with pressure tight fit.

Core & Jacket : SS 304 / 321 / 304L / 316 / 316L

Braid of Core & Jacket : SS 304 / 304L / 316 / 316L.

Operating Temperature : 400°C max. 600°C is possible as a special design.

APPLICATION

When ordinary insulation is not sufficient for certain applications, or when specific minimum temperatures are needed to convey viscous substances, traced piping is generally used; this consists of two tubes, one inside the other, with various differences in cross-section.

One of the tubes, generally the inner one, carries the medium, and the other one carries a heating or cooling agent; sometimes it is the other way around .In other cases, the external tube is used as a safety measure.

Occasionally, such traced piping has to be flexible. It is for such applications that we supply our *Jacketed*hose.

Its high flexibility makes this hose very suitable for angular and lateral (offset) movements. The *Jacketed*hose is pressure-and vacuum-proof and, due to the materials used in its manufacture, resistant to temperature and corrosion. The large surface area of the corrugated section results in particularly high heat transfer efficiency, the hose combining the functions of a flexible conduit and a highly efficient heat exchanger in the simplest possible form.

HOSE SPECIFICATION CHART

Core (Internal Hose)	Jacket Tracer Conduit Threaded Connection (Pipe thread)	inches
10	25 3/8	
16	32 3/8	
20	40 1/2	
25	50 1/2	
32	50 1/2	
40	65 1/2	
50	80 3/4	
65	100 3/4	
80	100 3/4	
100	150 3/4	
125	175 1	
150	200 1	

The JACKETED Hose is suitable for many different purposes.

As heat able element the hose is mainly used in the chemical, pharmaceutical, oil and civil engineering machinery industries to convey viscous or temperature-sensitive media, such as-

bitumen polyester paraffin heavy fuel oil dimethylterephthalate

(DMT)

fats mercury tar naphthalene synthetic resin

naphthol sulphur chlorophenol explosive (TNT) organic liquefied

phenol fatty acids chocolate thermosetting

plastics

materials

phthalic acid, waxes
and others

As a cool able element the JACKETED Hose is particularly popular in compressor and engine construction to cool air and waste gases.

The heating agents used are hot water, steam, heat transfer oils or other heat transfer agents; for cooling, water is the most usual agent.

End Connections:

As a connection for the heating or cooling medium, one weld-neck flange or union is provided at each hose end of the tracer conduit, the two connections being offset by 180° in relation to one another.

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PTFE LINED HOSE



PTFE ASTM D 1547 Type III

All Wetted parts are PTFE

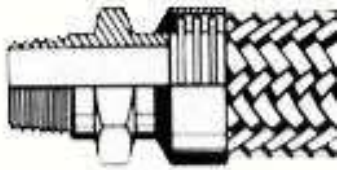
KURAT PTFE lined hose has the internal tube of PTFE inside the corrugated metallic hose.

The flange is assembled with the internal tube providing a liner inside and across the face of the flange. Chemical inertness is therefore maintained throughout the entire assembly.

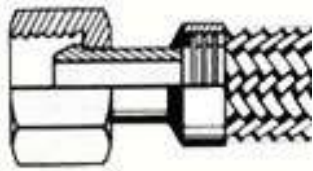
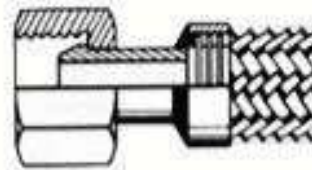
KURAT PTFE lined hose assemblies permit full utilization of the wide operating extremes characteristics of PTFE and are rated for continuous service from -100°F to 400° F. These ratings can be exceeded for intermittent operations, depending on time and over-all conditions.

STANDARD END CONNECTIONS

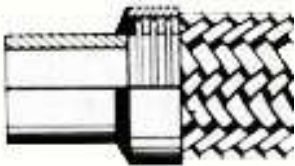
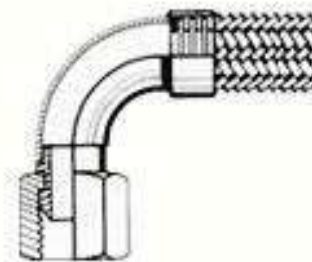
STANDARD END CONNECTIONS FOR 'CONVOFLEX' SS CORRUGATED FLEXIBLE METAL HOSE



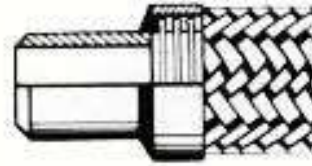
Fixed Male Connector Fixed Female Connector



Swivel Female Union Female Union Swept Elbow 90°



Standpipe



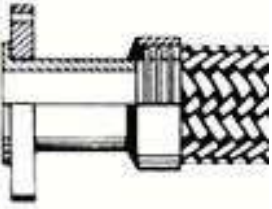
Pipe End



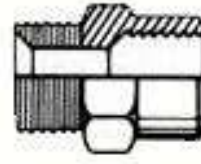
Fixed Flange



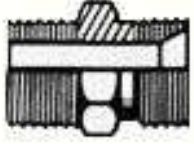
Fixed Flange On Pipe End



Swivel Flange



Male /Female Threaded Adaptor



Male /Male Threaded Adaptor

Material of End

Connections : M. S . Carbon steel, Brass, G.M., SS 304 / 304L / 316 / 316L / 321

Type of End

connections : Threaded type (BSP, BSPT, NPT, NPTF, METRIC, SAE, JIC).

Flange: As per BS, ASA, DIN, Slipon, weld neck, R TJ or as per your requirement.

Connections : Argon or Tig Welding or Brazed

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CHEMICAL RESISTANCE CHART

This Chemical Resistance Chart is intended as guides to the materials which may be appropriate various convey ants. The Indicated Extend of Resistance refers to the material such. This information is presented as a general guide only. It represents the effects of a given chemical on PTFE and v arious materials. It is not intended to establish absolute compatibility with KURAT C onvoflex Metallic hose, PTFE hose product, in cases where the choice of material, is in any doubt w hatever, we suggest that our technical department is called into advise.

Material Compatibility Key: 1. Excellent 2. Acceptable 3. Not Recommended 0. No Information, Test before using.

Chemical	PTFE	CS	SS			Chemical	PTFE	CS	SS		
			321	304	316 BRASS				321	304	316 BRASS
Acetaldehyde	1	1	1	1	1	Benzyl Benzoate	1	1	1	1	0
Acetic Acid	1	1	1	1	1	Benzyl Chloride	1	1	0	0	0
Glacial Acetic Acid, 30 %	1	0	2	2	0	Bismuth Carbonate	1	1	1	1	0
Acetic Anhydride	1	3	2	2	3	Black Sulfate Liquor	1	1	1	1	0
Acetone	1	3	2	2	3	Blast Furnace Gas	1	1	1	1	1
	1	1	1	1	1	Borax	1	2	1	1	2
Acetylene*	1	0	1	1	2	Bordeaux Mixture	1	0	1	1	0
Acrylonirile	1	1	1	1	0	Boric Acid	1	3	2	1	3
Alum, Ammonium or Potassium	1	3	2	2	3	Bunker Oil	1	1	1	1	1
Aluminum Acetate	1	0	1	1	3	Butadiene	1	0	1	1	1
Aluminum Bromide	1	3	2	2	3						
Aluminum Chloride	1	3	2	2	3	Butane	1	1	1	1	1
Aluminum Fluoride	1	3	2	2	3	Butter Oil	1	1	1	1	1
Aluminum Hydroxide	1	0	1	1	1	Butyric Acid	1	1	1	1	1
Aluminum Nitrate	1	3	1	1	0	Butyl Acetate	1	0	1	1	0
Aluminum Salts	1	0	2	2	0	Butyl Alcohol	1	0	0	0	1
Aluminum Sulfate	1	3	3	2	3	Butyl Amine	0	1	1	1	1
Ammonia, Anhydrous	1	1	1	1	0	Butyl Carbitol	1	1	1	1	1
AmmoniumAqueous	1	0	1	1	3	Butyl Sterate	1	1	1	1	1
AmmoniumCarbonate	0	1	1	1	0	Butyl Mercaptan	1	0	1	1	0
Ammonium Chloride	1	0	2	2	3	Butyraldehyde	1	0	0	0	1
Ammonium Hydroxide						Calcium Acetate	1	1	1	1	1
Ammonium	1	2	1	1	3	Calcium Bisulfate	1	0	1	1	1
metaphosphate	1	1	1	1	0	Calcium Bisulfite	1	0	1	1	1
Ammonium Nitrate	1	1	1	1	3	Calcium Carbonate	1	1	1	1	0
Ammonium Nitrite	0	0	1	1	0	Calcium Chlorate	1	0	0	0	1
Ammonium Persulfate	0	0	1	1	0						
Ammonium Phosphate						Calcium Chloride	1	3	2	1	2
Ammonium Sulfate						Calcium Hydroxide	1	3	3	1	2
Ammonium Thiocynate	1	3	2	1	0	Calcium Hypochlorite	1	0	3	2	3
Amyl Acetate	1	1	1	1	3	Calcium Nitrate	1	1	1	1	1
Amyl Alcohol	1	1	1	1	0	Calcium Silicate	1	1	1	1	1
	1	3	1	1	1						
	1	1	1	1	1						
Amyl Chloride						Calcium	1	1	1	1	1
Amyl Chloronaphthalene	1	0	1	1	0	Calcium	1	1	1	1	0
Amyl Naphthalene	1	0	1	1	0	Cane Sugar Liquors	1	1	1	1	2

Aniline	1	0	1	1	0	Carbolic Acid	1	3	1	1	3
Aninile Dyes	1	2	1	1	3	Carbon Dioxide	1	1	1	1	1
	1	3	1	1	0						
Aniline Hydrochloride	1	0	3	3	3	Carbon Disulfide	0	2	1	1	2
Animal Fats	1	1	1	1	0	Carbonic Acid	1	3	1	1	3
Aqua Regia	1	0	3	3	0	Carbon Monoxide	1	1	1	1	1
Arsenic Acid	1	2	0	1	0	Carbon Tetrachloride	1	3	2	2	2
Askarel	0	1	1	1	1	Castor Oil	1	1	1	1	1
Asphalt	1	1	1	1	2	Caustic Soda	1	2	1	1	3
Barium Carbonate	1	2	1	1	1	Cellosolve, Acetate	1	1	1	1	0
Barium Chloride	1	3	1	1	2	Cellosolve, Butyl	1	1	1	1	0
Barium Hydroxide	1	2	1	1	0	Cellulube	1	1	1	1	1
Barium Sulphate	1	1	1	1	2	Chlorine, Gaseous, Dry	1	2	3	3	2
Barium Sulfide	1	3	1	1	3	Chlorine, Gaseous, Wet	1	3	3	3	3
Beer	1	2	1	1	1	Chlorine Trifluoride	0	3	0	0	0
Beet Sugar Liquors	1	1	1	1	0	Chloroacetic Acid	1	3	3	3	2
Benzene	1	1	1	1	1	Chlorobenzene	1	1	1	1	1
Benzene Sulfonic Acid	0	3	0	2	0	Chlorobromomethane	1	1	1	1	1
Benzaldehyde	1	1	0	0	0	Chloroform	1	1	1	1	1
Benzene	1	1	1	1	1	O Chlorobromomethane	1	1	1	1	1
Benzyl Alcohol	1	1	1	1	1	Chlorotoluene	1	1	1	1	1

Material Compatibility Key : 1. Excellent 2. Acceptable 3. Not Recommended 0. No Information, Test before using.

Chemical	SS					Chemical	SS				
	PTFE	321	304	316	BRASS		PTFE	321	304	316	BRASS
Chromic Acid	1	3	3	2	3	Ferrous Nitrate	1	0	1	1	0
Citric Acid	1	3	3	1	3	Ferrous Sulfate	1	3	1	1	2
Cod Liver Oil	1	1	1	1	1	Fluoroboric Acid	1	0	1	1	0
Coke Oven Gas	1	1	1	1	0	Formaldehyde	1	0	1	1	1
Copper Chloride	1	3	3	1	3	Formic Acid	1	3	2	1	2
Copper Cyanide	1	0	1	1	3	Freon 12	2	3	1	1	0
Copper Sulphate	1	3	1	1	3	Freon 114	2	3	1	1	0
Corn Oil	1	1	1	1	1	Fuel Oil	1	2	2	2	1
Corn Syrup	1	1	1	1	0	Fumaric Acid	0	0	0	1	0
Cottonseed Oil	1	1	1	1	1	Furan Furfuran	1	1	1	1	1
Creosote	1	2	1	1	3	Furfural	3	2	1	1	1
Cresol	1	2	1	1	0	Gallic Acid	0	3	1	1	0
Crude Wax	1	1	1	1	1	Gasoline	1	2	1	1	1
Cutting Oil	1	1	1	1	1	Glauber's Salt	1	1	1	1	0
Cyclohexane	1	1	1	1	1	Glucose	1	1	1	1	1
Cyclohexanone	1	0	1	1	0	Glue	1	2	1	1	3
Cymene	1	0	0	0	1	Glycerin	1	2	1	1	1
Decalin	1	0	0	0	1	Glycols	1	1	1	1	1
Denatured Alcohol	1	1	1	1	1	Green Sulfate Liquor	1	1	1	1	0
Diacetone	1	1	1	1	1	n-Hexaldehyde	1	1	1	1	1
Diacetone Alcohol	1	1	1	1	1	Hexane	1	1	1	1	1
Dibenzyl Ether	1	1	1	1	1	Hexene	1	1	1	1	1
Dibutyl Ether	1	1	1	1	1	Hexyl Alcohol	1	1	1	1	2
Dibutyl phthalate	1	1	1	1	1	Hydraulic Oil, Petroleum	1	1	1	1	1

Dibutyl Sebacate	1	0	1	1	1	Hydrochloric Acid, 15%	1	3	3	3	3
Dichlorobenzene	1	0	1	1	1	Hydrochloric Acid, 37%	1	3	3	3	3
Diesel Oil	1	1	1	1	1	Hydrocarbon Acid	1	3	1	1	1
Diethylamine	1	3	0	2	3	Hydrofluoric Acid,					
Diethyl Ether	1	1	1	1	1	Concentrated	1	3	3	3	3
Diethylene Glycol	1	1	1	1	1	Hydrofluosilicic Acid	1	0	3	3	3
						Hydrogen, Gaseous	1	1	1	1	1
Diethyl Phthalate	1	0	1	1	1	Hydrogen Peroxide, 70%	1	3	2	1	3
Diethyl Sebacate	1	0	1	1	1	Hydrogen Sulfide, Gaseous	1	3	2	1	3
Di-Isobutylene	0	0	1	1	1	Hydroquinone					
Di-Isopropyl Ketone	1	0	1	1	1	Isobutyl Alcohol	0	0	1	1	0
Dimethyl Aniline	1	0	0	0	1	Iso Octane	1	1	1	1	2
							1	1	1	1	1
Dimethyl Formamide	0	1	1	1	0	Isopropyl Acetate	1	1	1	1	1
Dimethyl Phthalate	1	0	0	0	1	Isopropyl Alcohol	1	1	1	1	2
Dioctyl Phthalate	1	1	1	1	1	Isopropyl Ether	1	1	1	1	1
Dioxane	1	1	1	1	1	Kerosene	1	1	1	1	1
Dipentene	1	1	1	1	1	Lacquers	1	3	3	1	1
Ethanolamine	1	1	1	1	1	Lacquers Solvent	1	3	3	1	1
Ethyl Acetate	1	1	1	1	1	Lactic Acid	1	3	2	1	2
Ethyl Acetoacetate	1	2	1	1	2	Lard	1	1	1	1	3
Ethyl Acrylate	1	2	1	1	1	Lead Acetate	1	2	1	1	1
Ethyl Mercaptan	1	2	0	0	0	Lead Nitrate	0	1	1	1	0
Ethyl Benzene	1	1	1	1	1	Lime Bleach	0	3	2	1	0
Ethyl Cellulose	1	1	1	1	1	Linoleic Acid	1	0	0	0	0
Ethyl Chloride	1	2	1	1	2	Linseed Oil	1	2	1	1	2
Ethyl Ether	1	2	1	1	1	Lubricating Oils, Petroleum	1	1	1	1	1
Ethyl Mercaptan	1	2	0	0	0	Magnesium Chloride	1	3	2	1	2
Ethyl Pentachlorobenzene	1	2	1	1	1	Magnesium Hydroxide	1	1	1	1	0
Ethyl Silicate	1	1	1	1	1	Magnesium Sulfate	1	2	1	1	1
Ethylene Chloride	1	2	1	1	2	Malic Acid	1	2	2	1	0
Ethylene Chlorohydrin	1	0	0	0	0	Mercuric chloride	1	3	1	1	3
Ethylene Diamine	1	0	0	0	1	Mercury	1	1	1	1	3
Ethylene Glycol	1	2	1	1	1	Mesityl Oxide	1	1	1	1	1
Fatty Acids	1	1	1	1	1	Methyl Acetate	1	1	1	1	1
Ferric Chloride	1	2	1	1	2	Methyl Acrylate	0	1	1	1	1
Ferric Nitrate	1	0	0	0	0	Methyl Alcohol	1	1	1	1	2
Ferric Sulfate	1	0	0	0	1	Methyl Bromide	1	1	1	1	1
Ferrous Chloride						Methyl Butyl Ketone	1	1	1	1	1

Material Compatibility Key : 1. Excellent 2. Acceptable 3. Not Recommended 0. No Information, Test before using.

Chemical	SS 321 304					Chemical	SS 316 BRASS				
	PTFE	CS	SS 321	SS 304	316 BRASS		PTFE	CS	SS 321	SS 304	316 BRASS
Methyl Chloride	1	1	1	1	1	Silicon Oils	0	1	1	1	1
Methylene Chloride	1	1	1	1	1	Silver Nitrate	1	2	1	1	2
Methyl Ethyl Keton(Mek)	1	1	1	1	1	Skydrol 500 & 700	1	1	1	1	0
Methyl Formate						Soap Solutions	1	1	1	1	1
Methyl Isobutyl Keton	1	1	1	1	1	Soda Ash	0	1	1	1	2
	1		1	1	1						

Methyl	1	1	1	1	0	Sodium Acetate	1	1	1	1	1
Methyl	1	1	1	1	1	Sodium Bicarbonate	1	2	1	1	2
Milk	1	3	1	1	3	Sodium Bisulfite	1	1	1	1	0
Mineral Oil	1	1	1	1	1	Sodium Borate	1	1	1	1	0
Monochlorobenzene	1	1	1	1	1	Sodium Chloride	1	2	2	1	3
Monothanolamine	0	1	1	1	1	Sodium Cyanide	1	2	1	1	3
Naphtha	1	2	2	1	1	Sodium Hydroxide, 40%	1	2	1	1	3
Napthalene	1	0	0	1	0	Sodium Hypochlorite	1	3	3	2	3
Naphthenic Acid,	1	0	0	1	0	Sodium Metaphosphate	1	3	1	1	3
Natural Gas	1	1	1	1	2	Sodium Nitrate	1	1	2	2	0
Nickel Acetate	1	1	1	1	1	Sodium Perborate	1	3	1	1	3
Nickel Chloride	1	3	2	2	3	Sodium Peroxide	1	3	1	1	3
Nickel Sulfate	1	0	2	1	3	Sodium Phosphate	1	0	1	1	3
Niter Cake	0	3	2	1	3	Sodium Thiosulphate	1	3	1	1	0
Nitric Acid ,All						Soybean Oil	1	1	1	1	3
Concentrations	1	3	2	2	0						
Nitric Acid, Red Fuming	1	3	2	2	3	Stannic Chloride	1	3	0	0	3
Nitrobenzene	1	1	1	1	1	Steam	1	1	1	1	2
Nitroethane	1	0	1	1	1	Stearic Acid	1	3	2	1	3
Nitrogen, Gaseous	1	1	1	1	1	Stoddard Solvent	1	2	1	1	1
Nitrogen Tetroxide	0	0	0	2	0	Styrene	1	2	0	2	2
n-Octane	0	1	1	1	1	Sucrose Solution	1	1	1	1	0
Octyl Alcohol	1	1	1	1	2	Sulfur, 200°F	1	2	2	1	3
Oil, SAE	1	1	1	1	1	Sulfur Chloride	1	3	3	2	3
Oleic Acid	1	2	2	1	2	Sulfur Dioxide	1	2	1	1	1
Olive Oil	1	2	2	1	2	Sulfur Trioxide	1	2	2	2	0
Oxalic Acid	1	3	2	1	3	Sulfuric Acid, 10%	1	3	3	2	3
Oxygen, Gaseous	1	1	1	1	1	Sulfuric Acid , 98%	1	2	3	2	3
Ozone	1	1	1	1	1	Sulfuric Acid, Fuming	1	2	0	1	3
Paint	1	0	1	1	1	Sulfurous Acid, 10%	1	3	2	1	3
Palmitic Acid	1	1	2	1	3	Sulfurous Acid, 75%	1	3	3	2	3
Peanut Oil	1	1	1	1	3	Tannic Acid, 10%	1	2	1	1	3
Perchloric Acid	1	0	2	1	1	Tar Bituminous	1	1	1	1	2
Perchloroethylene	1	1	1	1	1	Tartaric Acid	1	0	2	2	0
petroleum	1	1	1	1	1	Terpineol	1	0	0	0	0
Phenol	1	3	1	1	3	Titanium Tetrachloride	0	1	2	2	3
Phorone	1	1	1	1	1	Toluene	1	1	1	1	1
Picric Acid	1	3	1	1	3	TolueneDiisocyanate	0	0	0	0	0
Pinene	1	1	1	1	1	Transformer Oil	1	1	1	1	1
Pine Oil	1	1	1	1	0	Transmission Fluid TypeA	1	1	1	1	1
Plating Solution, Chrome						Tributoxyethy l Phosphate					
	1	0	3	3	0		1	1	0	0	0
Potassium Acetate	1	0	1	1	0	Tributyl Phosphate	1	1	0	0	0
Potassium Chloride	1	2	2	1	3	Trichloroethylene	1	3	0	1	1
Potassium Cyanide	1	2	1	1	3	Tricresyl Phosphate	1	1	0	2	0
Potassium Dichromate	1	0	1	1	0	Tung Oil	1	1	1	1	1
Potassium Hydroxide, 30%						Turpentine	1	0	1	1	2
	1	3	1	1	3						
Potassium Nitrate	1	3	1	1	2	Urea Solution, 50%	1	1	1	1	0
Potassium Sulphate	1	2	1	1	2	Varnish	0	2	1	1	2
Propane	1	1	1	1	1	Vegetable Oils	1	1	1	1	0
Propyl Acetate	0	1	1	1	1	Versilube	1	1	1	1	1
Propyl Alcohol	1	1	1	1	2	Vinegar	1	3	2	1	3

Pyridine, 50%	1	0	1	1	1	Vinyl Chloride	1	2	1	1	3
Red Oil	1	2	2	1	2	Water	1	2	1	1	1
Salicylic Acid	0	0	1	1	0	Whiskey, Wines	1	3	2	1	3
Salt Water	1	2	1	1	3	Xylene	1	2	2	2	0
Sewage	1	3	1	1	1	Zinc Acetate	1	1	1	1	1
Silicone Greases	0	1	1	1	1	Zinc Chloride	1	3	2	1	3
						Zinc Sulphate	1	3	2	1	3

Warning for Your Safety

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KURAT ENTERPRISE

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HOSE FITTINGS QUICK RELEASE COUPLINGS

DESIGN PRINCIPLE:

This work on simple 'Push & Pull Principle'. The adaptor when pushed into the coupler is securely held by the self locking arrangement resulting in a positive and leak proof connections. This action simultaneously opens the valve and fluid flow starts. To disconnect, pull back sleeve of the coupler, the adaptor ejects out and the valve shuts off automatically. Valves are provided in types GSV and GDV.

GDV Quick Release Coupling



COUPLER



ADAPTOR



ASSEMBLY

GDV Quick coupling with self sealing valve at coupler & adaptor ends.

GT Quick Release Coupling



COUPLER



ADAPTOR



ASSEMBLY

GT Quick coupling through type.

Types

GSV Quick coupling with self sealing valve at the coupler end and through adaptor.

END CONNECTION AVAILABLE

Socket weld, hose thread, hose shank, pipe thread, and flanged.

Size : 1/8" to 4"

Pressure : Up to 4000 psi.

Temperature : -25°C to 250°C with right selection of body & material.

Advantages : Fast positive, Leak proof connections, instant connections, without tools, without threading or twisting, without strains, without sweat, Hence time saving.

MATERIALS

Body : Mild Steel, Carbon Steel duly hardened, brass aluminum, SS 304, SS 316, SS 316L.

Spring : Spring Steel, SS 304, SS 316, SS 316L.

Ball : SS 304, SS 316, SS 316L.

Seal Material : Nitrile, Neoprene, Viton, Silicone, PTFE.

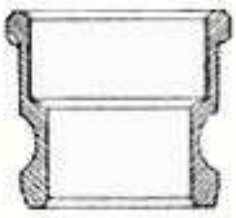
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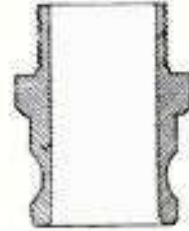
CAMLOCK COUPLING

DESIGN PRINCIPLE:

The principle behind the design of Cam lock Coupling is simple pivot pins for coupler cam arms which lock into the adaptor groove are located so that when line pressure attempts to force the cam lock coupler and adaptor apart, the bottom edge of the adaptor groove pushes with equal pressure against the under edge of the cam arm, increasing the locking action. When properly coupled, line pressure will not separate a cam lock connection with recommended pressure limits.



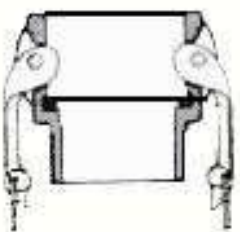
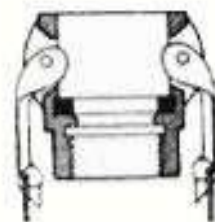
ADAPTOR Female Thread GAFT ADAPTOR Male Thread GAMT



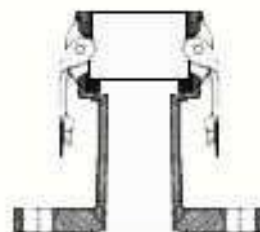
ADAPTOR pipe Flange GAPF ADAPTOR Hose Shank GAHS

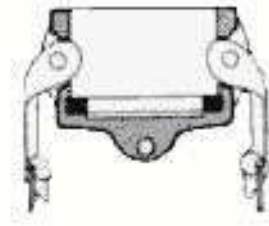
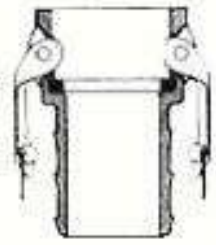


ADAPTOR Dust Plug GADP COUPLER Female Thread GCFT



COUPLER Male Thread GCMT COUPLER Pipe Flange GCPF





COUPLER Pipe Shank GCHS COUPLER Dust Cap GCDC

End Connection : Socket Weld, Hose thread, Pipe thread, Hose shank and Flanged.

Size : "1/4 to 6"

Pressure : Up to 500 psi.

Temperature : The coupling can handle fluids from -40°C to 250°C with right selection of body material and Gasket

MATERIALS BODY:

- . Available in Aluminum, Mild Steel, Brass, SS 304, & SS 316
- . Available in casting of carbon steel grade WCB or I.S. 1030, Gunmetal grade LG2C, Aluminum Bronze grade AB2C, SS 304 with c.f. 0.08 & SS 316 with e.f. 0.08.

Cam Arms : Available in casting of SS 304, with c.f. 0.08, SS 316 with c.f. 0.08

Gaskets : Gunmetal grade LG2C & aluminum Bronze grade AB2C

Gaskets : Available in Nitrile, Viton, Neoprene, Silicone, PTFE.

Warning for Your Safety

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product ratings should all be considered in the individual selection. Improper selection or use of products can cause property damage or personal injury. KURAT accepts no liability for any improper selection, installation, operation or maintenance.

CHICAGO COUPLING



Quick Type Coupling



Quick Type Coupling

Warning for Your Safety

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SMS/Din Fittings



Size : 3/4" to 3"

Material

Available : SS 304 SS 304L SS 316 and S 316L

Seals

Available : nitrile, EPDM, Viton, Neoprene

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PTFE HOSE PLAIN

PTFE (PTFE) HOSE (GPT) SMOOTH BORE - MEDIUM PRESSURE PTFE HOSE



CONSTRUCTION:

Smooth inner core of extruded white PTFE with stainless steel wire braid reinforcement.

Temperature:

-65°F to 450° (-54°C to 232°C) for continuous service. -100°F to 500°F (-73°C to 260°C) for intermittent service.

Specifications

CODE	I.D. inches	I.D. mm	O.D. mm	Operating Pressure psi at Room Temp.	Minimum Bend Radius mm
GPT - 3	3/16	4.76	5.9	3000	50.8
GPT - 4	1/4	6.35	7.9	3000	50.8
GPT - 5	5/16	7.93	9.5	3000	76.2
GPT - 6	3/8	9.52	11.3	2500	101.6
GPT - 8	1/2	12.70	13.9	2000	132.1
GPT - 10	5/8	15.87	16.5	1500	165.1
GPT - 12	3/4	19.05	19.8	1200	195.6
GPT - 16	1	25.04	26.2	1000	228.6

ADVANTAGES OF PTFE FOR FLEXIBLE HOSE

PTFE is an ideal material for flexible hose, to which a wire or over-braid is added for excellent pressure ratings. Such hose gives extremely long life because its inner core has outstanding resistance to steam, chemicals, solvent, heat, pressure impulses, flexing, vibration, and aging.

Flexible :	Hose of PTFE will stand up under severe conditions of continuous flexing and vibration without failure from flex fatigue.
Chemical resistant :	Inert PTFE creates a nearly "Universal" hose, capable of handling the broadest range of applications. Except the molten alkali metals such as sodium and potassium, and fluoro-chemicals such as chlorine tri-fluoride, oxygen di-fluoride and fluorine gas.
Temperature resistant :	Even handles 350°F steam alternating with cold water..
Non-stick :	Hose is easily cleaned, to maintain batch purity when using one hose for several services.
Low friction:	Hose exhibits low pressure drop, which remains constant because no deposits accumulate on inside walls.
Moisture resistant :	Ideal for pneumatic systems requiring low dew point.
Non-aging :	Properties of hose do not change with age or exposure to weather.
End Connection :	Swaged or crimped or Reusable type.

Warning for Your Safety

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PTFE HOSE CORRUGATED

PTFE (PTFE) CORRUGATED TRANSFER HOSE (GTC)



CONSTRUCTION:

Inner core of corrugated PTFE externally reinforced with stain steel wire braid.

Temperature:

65°F to 400°F (-54°C to 204°C)

Specifications

CODE	I.D. inches	I.D. mm	O.D. mm	Operating Pressure psi at Room Temp.	Minimum Bend Radius mm
GTC - 8 1/2	12.7	20.0	1,000	25.4	
GTC - 12 3/4	19.5	27.7	1,000	50.8	
GTC - 16 1	25.4	33.0	1,000	76.2	
GTC - 20 1 1/4	31.7	39.6	1,000	158.8	
GTC - 24 1 1/2	38.1	45.5	750	190.5	
GTC - 32 2	50.8	59.2	500	266.7	
GTC - 48 3	76.2	93.5	250	393.7	
GTC - 64 4	101.6	123.2	150	622.3	

APPLICATION:

Corrugated transfer hose is the most broadly applied a general-purpose workhorse found in hundreds of chemical transfer and food handling situations. Its present locations are as diverse as water purification systems, mercury transfer lines, and food processing equipment-delivering better to mixing kettles or sausage and other processed meats to packaging machines.

It has unusually high resistance to thermal cycling; therefore issued extensively in tire presses, laundry presses and other types of steam service where on-off operating cycles cause wide temperature fluctuations inside the hose. Corrugated transfer hose is an extraordinarily versatile hose, combining excellent flexibility with large size in both length and I.D. (see specifications table). Present users rate this as the ideal bulk transfer hose for a wide range of caustics, chemicals and raw materials. Their applications include tank car and ship off loading; bulk handling, chemical and petrochemical transfer, pump connections and many others. This hose can also be used as a suction hose for unloading or transfer at negative pressure to 28"Hg.

CHEMICAL RESISTANCE CHART

This Chemical Resistance Chart is intended as a guide to the materials which may be appropriate various conveyants. The Indicated Extend of Resistance refers to the material such. This information is presented as a general guide only. It represents the effects of a given chemical on PTFE and various materials. It is not intended to establish absolute compatibility with KURAT ConvoFlex Metallic hose, PTFE hose product, in cases where the choice of material, is in any doubt whatever, we suggest that our technical department is called into advise.

Material Compatibility Key: 1. Excellent 2. Acceptable 3. Not Recommended 0. No Information, Test before using.

Chemical	PTFE	CS	SS			Chemical	PTFE	CS	SS		
			321	304	316 BRASS				321	304	316 BRASS
Acetaldehyde	1	1	1	1	1	Benzyle Benzoate	1	1	1	1	0
Acetic Acid	1	0	2	2	0	Benzyl Chloride	1	1	0	0	0
Acetic Acid, 30 %	1	3	2	2	3	Bismuth Carbonate	1	1	1	1	0
Anhydride	1	3	2	2	3	Black Sulfate Liquo r	1	1	1	1	0
Acetone	1	1	1	1	1	Blast Furnace Gas	1	1	1	1	1
Acetylene*	1	0	1	1	2	Borax	1	2	1	1	2
Acrylonirile	1	1	1	1	0	Bordeaux Mixture	1	0	1	1	0
Alum, Ammonium or Potassium	1	3	2	2	3	Boric Acid	1	3	2	1	3
Aluminum Acetate	1	0	1	1	3	Bunker Oil	1	1	1	1	1
Aluminum Bromide	1	3	2	2	3	Butadine	1	0	1	1	1
Aluminum Chloride	1	3	2	2	3	Butane	1	1	1	1	1
Aluminum Fluoride	1	3	2	2	3	Butter Oil	1	1	1	1	1
Aluminum Hydroxide	1	0	1	1	1	Butyric Acid	1	1	1	1	1
Aluminum Nitrate	1	3	1	1	0	Butyl Acetate	1	0	1	1	0
Aluminum Salts	1	0	2	2	0	Butyl Alcohol	1	0	0	0	1
Aluminum Sulfate	1	3	3	2	3	Butyl Amine	0	1	1	1	1
Ammonia, Anhydrous	1	1	1	1	0	Butyl Carbitol	1	1	1	1	1
AmmoniumAqueous	1	0	1	1	3	Butyl Sterate	1	1	1	1	1
AmmoniumCarbonate	0	1	1	1	0	Butyl Mercaptan	1	0	1	1	0
Ammonium Chloride	1	0	2	2	3	Butyraldehyde	1	0	0	0	1
Ammonium Hydroxide						Calcium Acetate	1	1	1	1	1
Ammonium metaphosphate	1	2	1	1	3	Calcium Bisulfate	1	0	1	1	1
Ammonium Nitrate	1	1	1	1	3	Calcium Bisulfite	1	0	1	1	1
Ammonium Nitrite	0	0	1	1	0	Calcium Carbonate	1	1	1	1	0
Ammonium Persulfate	0	0	1	1	0	Calcium Chlorate	1	0	0	0	1
Ammonium Phosphate						Calcium Chloride	1	3	2	1	2
Ammonium Sulfate						Calcium Hydroxide	1	3	3	1	2
Ammonium Thiocyanate	1	3	2	1	0	Calcium Hypochlorite	1	0	3	2	3
Amyl Acetate	1	1	1	1	3	Calcium Nitrate	1	1	1	1	1
Amyl Alcohol	1	1	1	1	0	Calcium Silicate	1	1	1	1	1
	1	3	1	1	1						
	1	1	1	1	1						
Amyl Chloride						Calcium	1	1	1	1	1
Amyl Chloronaphthalene	1	0	1	1	0	Calcium	1	1	1	1	0
Amyl Naphthalene	1	0	1	1	0	Cane Sugar Liquors	1	1	1	1	2
Aniline	1	0	1	1	0	Carbolic Acid	1	3	1	1	3
Aniline Dyes	1	2	1	1	3	Carbon Dioxide	1	1	1	1	1
	1	3	1	1	0						
Aniline Hydrochloride	1	0	3	3	3	Carbon Disulfide	0	2	1	1	2
Animal Fats	1	1	1	1	0	Carbonic Acid	1	3	1	1	3
Aqua Regia	1	0	3	3	0	Carbon Monoxide	1	1	1	1	1

Arsenic Acid	1	2	0	1	0	Carbon Tetrachloride	1	3	2	2	2
Askarel	0	1	1	1	1	Castor Oil	1	1	1	1	1
Asphalt	1	1	1	1	2	Caustic Soda	1	2	1	1	3
Barium Carbonate	1	2	1	1	1	Cello solve, Acetate	1	1	1	1	0
Barium Chloride	1	3	1	1	2	Cello solve, Butyl	1	1	1	1	0
Barium Hydroxide	1	2	1	1	0	Cellulube	1	1	1	1	1
Barium Sulphate	1	1	1	1	2	Chlorine, Gaseous, Dry	1	2	3	3	2
Barium Sulfide	1	3	1	1	3	Chlorine, Gaseous, Wet	1	3	3	3	3
Beer	1	2	1	1	1	Chlorine Trifluoride	0	3	0	0	0
Beet Sugar Liquors	1	1	1	1	0	Chloroacetic Acid	1	3	3	3	2
Benzene	1	1	1	1	1	Chlorobenzene	1	1	1	1	1
Benzene Sulfonic Acid	0	3	0	2	0	Chlorobromomethane	1	1	1	1	1
Benzaldehyde	1	1	0	0	0	Chloroform	1	1	1	1	1
Benzene	1	1	1	1	1	Chlorobromomethane	1	1	1	1	1
Benzyl Alcohol	1	1	1	1	1	Chlorotoluene	1	1	1	1	1

Material Compatibility Key: 1. Excellent 2. Acceptable 3. Not Recommended 0. No Information, Test before using.

Chemical	SS					Chemical	SS				
	PTFE	CS	321	304	316 BRASS		PTFE	CS	321	304	316 BRASS
Chromic Acid	1	3	3	2	3	Ferrous Nitrate	1	0	1	1	0
Citric Acid	1	3	3	1	3	Ferrous Sulfate	1	3	1	1	2
Cod Liver Oil	1	1	1	1	1	Fluoroboric Acid	1	0	1	1	0
Coke Oven Gas	1	1	1	1	0	Formaldehyde	1	0	1	1	1
Copper Chloride	1	3	3	1	3	Formic Acid	1	3	2	1	2
Copper Cyanide	1	0	1	1	3	Freon 12	2	3	1	1	0
Copper Sulphate	1	3	1	1	3	Freon 114	2	3	1	1	0
Corn Oil	1	1	1	1	1	Fuel Oil	1	2	2	2	1
Corn Syrup	1	1	1	1	0	Fumaric Acid	0	0	0	1	0
Cottonseed Oil	1	1	1	1	1	Furan Furfuran	1	1	1	1	1
Creosote	1	2	1	1	3	Furfural	3	2	1	1	1
Cresol	1	2	1	1	0	Gallic Acid	0	3	1	1	0
Crude Wax	1	1	1	1	1	Gasoline	1	2	1	1	1
Cutting Oil	1	1	1	1	1	Glauber's Salt	1	1	1	1	0
Cyclohexane	1	1	1	1	1	Glucose	1	1	1	1	1
Cyclohexanone	1	0	1	1	0	Glue	1	2	1	1	3
cymene	1	0	0	0	1	Glycerin	1	2	1	1	1
Decalin	1	0	0	0	1	Glycols	1	1	1	1	1
Denatured Alcohol	1	1	1	1	1	Green Sulfate Liquor	1	1	1	1	0
Diacetone	1	1	1	1	1	n-Hexaldehyde	1	1	1	1	1
Diacetone Alcohol	1	1	1	1	1	Hexane	1	1	1	1	1
Dibenzyl Ether	1	1	1	1	1	Hexene	1	1	1	1	1
Dibutyl Ether	1	1	1	1	1	Hexyl Alcohol	1	1	1	1	2
Dibutyl phthalate	1	1	1	1	1	Hydraulic Oil, Petroleum	1	1	1	1	1
Dibutyl Sebacate	1	0	0	0	1	Hydrochloric Acid, 15%	1	3	3	3	3
Dichlorobenzene	1	0	1	1	1	Hydrochloric Acid, 37%	1	3	3	3	3

Die se l Oil	1	1	1	1	1	Hydrocarbon Acid	1	3	1	1	1
Diethylamine	1	3	0	2	3	Hydrofluoric Acid, Concentrated	1	3	3	3	3
Diethyl Ether	1	1	1	1	1	Hydrofluosilicic Acid	1	0	3	3	3
Diethylene Glyco l	1	1	1	1	1	Hydro gen, Gaseous	1	1	1	1	1
Diethyl Phthalate	1	0	1	1	1	Hydrogen Peroxide, 70%	1	3	2	1	3
Diethyl Sebacate	1	0	1	1	1	Hydrogen Sulfide, Gaseous	1	3	2	1	3
Di-Isobutylene	0	0	1	1	1	Hydroquinone	0	0	1	1	0
Di-Isopropyl Ketone	1	0	1	1	1	Isobutyl Alcohol	1	1	1	1	2
Dimethyl Aniline	1	0	0	0	1	Iso Octane	1	1	1	1	1
Dimethyl Formamide	0	1	1	1	0	Isopropyl Acetate	1	1	1	1	1
Dimethyl Phthalate	1	0	0	0	1	Isopropyl Alcoho l	1	1	1	1	2
Dioctyl Phthalate	1	1	1	1	1	Isopropyl Ether	1	1	1	1	1
Dio xane	1	1	1	1	1	Kerosene	1	1	1	1	1
Dipentene	1	1	1	1	1	Lacquers	1	3	3	1	1
Ethano lamine	1	1	1	1	1	Lacquers Solvent	1	3	3	1	1
Ethyl Acetate	1	1	1	1	1	Lactic Acid	1	3	2	1	2
Ethyl Acetoacetate	1	2	1	1	2	Lard	1	1	1	1	3
Ethyl Acrylate	1	2	1	1	1	Lead Acetate	1	2	1	1	1
Ethyl Mercaptan	1	2	0	0	0	Lead Nitrate	0	1	1	1	0
Ethyl Benzene	1	1	1	1	1	Lime Bleach	0	3	2	1	0
Ethyl Celloulose	1	1	1	1	1	Lino leic Acid	1	0	0	0	0
Ethyl Chloride	1	2	1	1	2	Linseed Oil	1	2	1	1	2
Ethyl Ether	1	2	1	1	1	Lu br icating Oils, Petroleum	1	3	2	1	2
Ethyl Mercaptan	1	2	0	0	0	Magnesium Chloride					
EthylPentochloro benzene	1	2	1	1	1	Magnesium Hydroxide	1	1	1	1	0
Ethyl Silicate	1	1	1	1	1	Magnesium Su lfate	1	2	1	1	1
Ethylene Chlor ide	1	2	1	1	2	Malic Acid	1	2	2	1	0
Ethylene Cholorohydr in	1	0	0	0	0	Mercur ic chloride	1	3	1	1	3
Ethylene Diamine	1	0	0	0	1	Mercur y	1	1	1	1	3
Ethylene Glyco l	1	2	1	1	1	Mesityl Oxide	1	1	1	1	1
Fatty Acids	1	1	1	1	1	Methyl Acetate	1	1	1	1	1
Ferr ic Chlor ide	1	2	1	1	2	Methyl Acrylate	0	1	1	1	1
Ferr ic Nitra te	1	0	0	0	0	Methyl Alcohol	1	1	1	1	2
Ferr ic Sulfate	1	0	0	0	1	Methyl Bromide	1	1	1	1	1
Ferrous Chlor ide						Methyl Butyl Ketone	1	1	1	1	1

Material Compatibility Key: 1. Excellent 2. Acceptable 3. Not Recommended 0. No Information, Test before using.

Chemical	PTFE	CS	SS			Chemical	PTFE	CS	SS		
			321	304	316 BRASS				321	304	316 BRASS
Methyl Chlor ide	1	1	1	1	1	Silico n Oils	0	1	1	1	1
Methylene Chloride	1	1	1	1	1	Silver Nitrate	1	2	1	1	2
Methyl Ethyl Keton(Mek)	1	1	1	1	1	Skydrol 500 & 700	1	1	1	1	0
						Soap Solutions	1	1	1	1	1

Methyl Formate	1	1	1	1	Soda Ash	0	1	1	1	2
Methyl Isobutyl Keton	1		1	1						
Methyl	1	1	1	1	0	Sodium Acetate	1	1	1	1
Methyl	1	1	1	1	1	Sodium Bicarbonate	1	2	1	2
Milk	1	3	1	1	3	Sodium Bisulfate	1	1	1	0
Mineral Oil	1	1	1	1	1	Sodium Borate	1	1	1	0
Monochlorobenzene	1	1	1	1	1	Sodium Chloride	1	2	2	3
Monothanolamine	0	1	1	1	1	Sodium Cyanide	1	2	1	3
Naphtha	1	2	2	1	1	Sodium Hydroxide, 40%	1	2	1	3
Napthalene	1	0	0	1	0	Sodium Hypochlorite	1	3	3	3
Naphthenic Acid,	1	0	0	1	0	Sodium Metaphosphate	1	3	1	3
Natural Gas	1	1	1	1	2	Sodium Nitrate	1	1	2	0
Nickel Acetate	1	1	1	1	1	Sodium Perborate	1	3	1	3
Nickel Chloride	1	3	2	2	3	Sodium Peroxide	1	3	1	3
Nickel Sulfate	1	0	2	1	3	Sodium Phosphate	1	0	1	3
Niter Cake	0	3	2	1	3	Sodium Thiosulphate	1	3	1	0
Nitric Acid ,All						Soybean Oil	1	1	1	3
Concentrations	1	3	2	2	0					
Nitric Acid, Red Fuming	1	3	2	2	3	Stannic Chloride	1	3	0	3
Nitrobenzene	1	1	1	1	1	Steam	1	1	1	2
Nitroethane	1	0	1	1	1	Stearic Acid	1	3	2	3
Nitrogen, Gaseous	1	1	1	1	1	Stoddard Solvent	1	2	1	1
Nitrogen Tetroxide	0	0	0	2	0	Styrene	1	2	0	2
n-Octane	0	1	1	1	1	Sucrose Solution	1	1	1	0
Octyl Alcohol	1	1	1	1	2	Sulfur, 200°F	1	2	2	3
Oil, SAE	1	1	1	1	1	Sulfur Chloride	1	3	3	3
Oleic Acid	1	2	2	1	2	Sulfur Dioxide	1	2	1	1
Olive Oil	1	2	2	1	2	Sulfur Trioxide	1	2	2	0
Oxalic Acid	1	3	2	1	3	Sulfuric Acid, 10%	1	3	3	3
Oxygen, Gaseous	1	1	1	1	1	Sulfuric Acid , 98%	1	2	3	3
Ozone	1	1	1	1	1	Sulfuric Acid, Fuming	1	2	0	3
Paint	1	0	1	1	1	Sulfurous Acid, 10%	1	3	2	3
Palmitic Acid	1	1	2	1	3	Sulfurous Acid, 75%	1	3	3	3
Peanut Oil	1	1	1	1	3	Tannic Acid, 10%	1	2	1	3
Perchloric Acid	1	0	2	1	1	Tar Bituminous	1	1	1	2
Perchloroethylene	1	1	1	1	1	Tartaric Acid	1	0	2	0
petroleum	1	1	1	1	1	Terpineol	1	0	0	0
Phenol	1	3	1	1	3	Titanium Tetrachloride	0	1	2	3
Phorone	1	1	1	1	1	Toluene	1	1	1	1
Picric Acid	1	3	1	1	3	TolueneDiisocyanate	0	0	0	0
Pinene	1	1	1	1	1	Transformer Oil	1	1	1	1
Pine Oil	1	1	1	1	0	Transmission Fluid TypeA	1	1	1	1
Plating Solution, Chrome						Tributoxyethyl Phosphate				
	1	0	3	3	0		1	1	0	0
Potassium Acetate	1	0	1	1	0	Tributyl Phosphate	1	1	0	0
Potassium Chloride	1	2	2	1	3	Trichloroethylene	1	3	0	1
Potassium Cyanide	1	2	1	1	3	Tricresyl Phosphate	1	1	0	0
Potassium Dichromate	1	0	1	1	0	Tung Oil	1	1	1	1
Potassium Hydroxide, 30%	1	3	1	1	3	Turpentine	1	0	1	2
Potassium Nitrate	1	3	1	1	1					
Urea Solution, 50%	1	2	1	1	1					

Potassium Sulphate	1	2	1	1	2	Varnish	0	2	1	1	2
Propane	1	1	1	1	1	Vegetable Oils	1	1	1	1	0
Propyl Acetate	0	1	1	1	1	Versilube	1	1	1	1	1
Propyl Alcohol	1	1	1	1	2	Vinegar	1	3	2	1	3
Pyridine, 50%	1	0	1	1	1	Vinyl Chloride	1	2	1	1	3
Red Oil	1	2	2	1	2	Water	1	2	1	1	1
Salicylic Acid	0	0	1	1	0	Whiskey, Wines	1	3	2	1	3
Salt Water	1	2	1	1	3	Xylene	1	2	2	2	0
Sewage	1	3	1	1	1	Zinc Acetate	1	1	1	1	1
Silicone Greases	0	1	1	1	1	Zinc Chloride	1	3	2	1	3
						Zinc Sulphate	1	3	2	1	3

Warning for Your Safety

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Hydraulic Hoses

SAE - 100 R1

SPECIFICATION: Conforming to std. SAE - 100 R1



CONSTRUCTION:

- Tube :** Seamless oil resistant.
- Reinforcement :** One braid of HTS wire.
- Cover :** Oil, weather & a brasion resistant
- Temperature:** -40°C to 120°C.
- Application :** For high pressure hydraulic oils fuel, lubricating oils, water and air.
- End Connection :** Swaged or Crimped or Reusable type .

I.D inches	I. D mm	O.D mm	Working pressure psi	Test pressure psi	Minimum bend radius mm
3/16	4.8	11.8	3000	6000	89
1/4	6.4	13.4	2750	5500	102
5/16	7.9	15	2500	5000	114
3/8	9.5	17.4	2250	4500	127
13/32	10.3	18.9	2250	4500	140
1/2	12.7	20.5	2000	4000	178
5/8	15.9	23.7	1500	3000	203
3/4	19.0	27.7	1250	2500	241
7/8	22.2	31.8	1125	2250	279
1	25.4	35.6	1000	2000	305
1 ¼	31.8	44.8	625	1250	419
1 ½	38.1	50.6	500	1000	508
2	50.8	64.1	375	750	635

Warning for Your Safety

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product ratings should all be considered in the individual selection. Improper selection or use of products can cause property damage or personal injury. KURAT accepts no liability for any improper selection, installation, operation or maintenance.

SAE-100 R2

SPECIFICATION: Conforming to std. SAE - 100 R2



CONSTRUCTION:

- Tube :** Seamless oil resistant.
- Reinforcement :** Two braid of HTS wire.
- Cover :** Oil, Weather & abrasion resistant.
- Temperature:** -40°C to 120°C.
- Application :** For high pressure hydraulic oils fuel, lubricating oils, water and air.
- End Connection :** Swaged or Crimped or Reusable type .

I.D inches	I. D mm	O.D mm	Working pressure psi	Test pressure psi	Minimum bend radius mm
3/16	4.8	14.1	5000	10000	89
1/4	6.4	15.7	5000	10000	102
5/16	7.9	17.3	4250	8500	114
3/8	9.5	19.7	4000	8000	127
1/2	12.7	23.1	3500	7000	178
5/8	15.9	26.3	2750	5500	203
3/4	19.0	30.2	2250	4500	241
7/8	22.2	33.4	2000	4000	279
1	25.4	38.9	2000	4000	305
1 ¼	31.8	49.6	1625	3250	419
1 ½	38.1	56.5	1250	2500	508
2	50.8	68.6	1125	2250	635

Warning for Your Safety

The system designer and user have the sole responsibility to select products suitable for their special application requirements to ensure the proper installation. Operation and maintenance of the product. Application details, material compatibility and product ratings should all be considered in the individual selection. Improper selection or use of products can cause property damage or personal injury. Pioneer accepts no liability for any improper selection, installation, operation or maintenance.

SAE-100 R3

SPECIFICATION: Conforming to std. SAE - 100 R3



CONSTRUCTION:

- Tube :** Seamless oil resistant.
- Reinforcement :** Two braids of suitable textile yarn.
- Cover :** Oil & Weather resistant.
- Temperature:** -40°C to 120°C.
- Application :** Hydraulic oils, fuel, lubricating oils, anti-freeze solutions and water
- End Connection :** Swaged or Crimped or Reusable type.

I.D inches	I. D mm	O.D mm	Working pressure psi	Test pressure psi	Minimum bend radius mm
3/16	4.8	12.7	1500	3000	76
1/4	6.4	14.3	1250	2500	76
5/16	7.9	17.5	1200	2400	102
3/8	9.5	19.0	1125	2250	102
1/2	12.7	23.8	1000	2000	127
5/8	15.9	27.0	875	1750	140
3/4	19.0	31.8	750	1500	152
1	25.4	38.1	565	1125	203
1 ¼	31.8	44.5	375	750	254
1 ½	38.1	50.8	250	500	305

Warning for Your Safety

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SAE-100 R4

SPECIFICATION: Conforming to std. SAE - 100 R4



CONSTRUCTION:

- Tube :** Seamless oil resistant.
- Reinforcement :** Consisting of braided textile fibres with a suitable spiral of body & wire.
- Cover :** Synthetic Rubber against oil, weather and abrasion.
- Vacuum :** 25 " Hg.
- Temperature:** -40°C to 110°C.
- End Connection :** Swaged or Crimped or Reusable type.

I.D inches	I. D mm	O.D mm	Working pressure psi	Test pressure psi	Minimum bend radius mm
3/4	19.0	34.9	300	600	127
1	25.4	41.3	250	500	152
1 ¼	31.8	50.8	200	400	203
1 ½	38.1	57.2	150	300	254
2	50.8	69.9	100	200	305

Warning for Your Safety

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product ratings should all be considered in the individual selection. Improper selection or use of products can cause property damage or personal injury. KURAT accepts no liability for any improper selection, installation, operation or maintenance.

FOUR WIRE SPIRAL HOSE (DIN 20023 4SP)

FLEXOR 4SP



Construction:

Synthetic rubber black tube, oil resistant; four layers of spirally wrapped, high tensile steel wire reinforcement separated by synthetic rubber over a fabric layer; synthetic rubber black outer cover oil, fuel, weather, ozone and abrasion resistant.

Application:

Extremely high pressure service with petroleum base hydraulic fluids. Abrasion resistant rubber cover increases service life in heavy duty applications.

Temperature Range:

-40° C to + 100° C (-40° F to +212° F) constant operation. Max operating temp. +125° C (+257° F). Operating temperatures in excess of +100° C (+212° F) may materially reduce the life of the hose.

HOSE I.D.	HOSE DASH	HOSE O.D.	MIN. BURST PRESS.	MAX. WORK. PRESS.	MIN. BEND RADIUS	WEIGHT
(in) (mm)	(in) (mm)	(in) (mm)	(MPa) (psi)	(MPa) (psi)	(in) (mm)	lb/C f f kg/m
1/4	6.4-0.4	0.71 17.9	180 26200	45.0 6550	6.0 150	39 0.58
3/8	9.5-0.6	0.84 21.4	178 25840	44.5 6450	7.0 180	50 0.75
1/2	12.7-0.8	0.97 24.6	168 24100	42.0 6000	9.0 230	61 0.91
5/8	15.9-1.0	1.11 28.2	140 20000	35.0 5000	10.0 250	73 1.09
3/4	19.0-1.2	1.27 32.2	140 20000	35.0 5000	12.0 300	102 1.52
1	25.4-1.6	1.56 39.7	112 16000	28.0 4000	13.5 340	137 2.003
1 1/4	31.8-2.0	2.00 50.8	84 12200	21.0 3000	18.0 460	219 3.26
1 1/2	38.1-2.4	2.25 57.2	74 10800	18.5 2700	22.0 560	259 3.85
2	50.8-2.7	2.75 69.8	70 10000	17.5 2500	26.0 660	303 4.50

Warning for Your Safety

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FOUR WIRE SPIRAL HOSE (DIN 20023 4SH)

FLEXOR 4SH



Construction:

Synthetic rubber black tube, oil resistant; four layers of spirally wrapped, high tenacity steel wire reinforcement separated by synthetic rubber over a fabric layer; synthetic rubber black outer cover oil, fuel, weather, ozone and abrasion resistant.

Application:

Extremely high pulsating pressure service with petroleum base hydraulic fluids. Specially designed to achieve long impulse life together with an excellent flexibility at the most severe high pulsating working pressure and temperature conditions. MSHA or LOBA accepted cover on request.

Temperature Range:

-40° C to + 100° C (-40° F to +212° F) constant operation. Max operating temp. +125° C (+250° F). Operating temperatures in excess of +100° C (+212° F) may materially reduce the life of the hose.

HOSE I.D.	HOSE DASH	HOSE O.D.	MIN. BURST PRESS.	MAX. WORK. PRESS.	MIN. BEND RADIUS	WEIGHT
(in) (mm)	(in) (mm)	(in) (mm)	(MPa) (psi)	(MPa) (psi)	(in) (mm)	lb/C f f kg/m
3/4	19 -20	1.27 32.2	168.0 24000	42.0 6000	11.0 280	114 1.70
1	25. 4 -25	1.52 38.7	152.0 22000	38.0 5500	13.5 340	144 2.14
1 ¼	31. 8 -32	1.79 45.5	130.0 18800	32.5 4700	18.0 460	171 2.55

1 ½ 38.1 -40 2.11 53.5 116.0 16800 29.0 4200 22.0 560 230 3.42
2 50.8 -50 2.68 68.1 100.0 14600 25.0 3650 27.5 700 331 4.93

Warning for Your Safety

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Steam Hoses

TYPE "M"

Low Temperature Steam Hose

SPECIFICATION:

As per BS 5122. This hose can be supplied also as per BS 796 or BS 924 Type M.



CONSTRUCTION:

- Tube :** Heat Resistant lining.
- Reinforcement :** Suitable textile reinforcement
- Cover :** Heat & Abrasion resistant.
- Temperature :** -30°C to 150°C.
- Steam Pressure :** 5.2 kgf/cm²
- Hydraulic Test Pressure :** 25 Kgf/cm²
- Bursting Pressure :** 50 Kgf/cm²
- End Connections :** Swaged or crimped or Reusable type.
- Electrical Continuity :** If electrical continuity required by providing additional braided copper wire, it can be supplied on a special request.

I.D inches I.D mm O.D mm Minimum bend radius mm

1/2 12.7 25 120

5/8 15.9 28 160

3/4 19.0 32 190
 1 25.4 40 250
 1¼ 31.8 48 320
 1½ 38.1 54 380
 2 50.8 65 500
 2½ 63.0 83 630
 2¾ 70.0 90 700

TEMPERATURE OF SATURATED STEAM

Ibf / in ²	Gauge Pressure Temperature					Ibf / in ²	Gauge Pressure Temperature				
	Kgf/in ²	Atm	Bar	° C	° F		Kgf/cm ²	ATM	Bar	° C	° F
25	1.76	1.70	1.73	130	267	120	8.44	8.16	8.26	177	350
30	2.11	2.04	2.07	134	274	140	9.84	9.52	9.66	182	361
35	2.46	2.38	2.42	138	281	160	11.25	10.88	11.04	188	371
40	2.81	2.72	2.76	141	287	180	12.65	12.24	12.42	193	379
45	3.16	3.06	3.11	144	292	200	14.06	13.60	13.80	198	388
50	3.52	3.40	3.45	148	298	225	15.82	15.30	15.53	203	397
60	4.22	4.08	4.14	153	307	250	17.58	17.00	17.25	208	406
70	4.92	4.76	4.83	158	316	275	19.33	18.70	18.89	212	414
80	5.62	5.44	5.52	162	324	300	21.09	20.40	20.70	216	422
90	6.32	6.12	6.21	166	330	325	22.85	22.10	22.43	221	429
100	7.03	6.80	6.90	170	338	350	24.61	23.80	24.15	225	437

Warning for Your Safety

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HIGH TEMPERATURE STEAM HOSE - TYPE I (Single Wire)



CONSTRUCTION:

- Tube :** Made out of synthetic rubber heat resist ant.
- Reinforcement :** One Braid of HTS wire.
- Cover :** Synthetic rubber cover against oil, weather & abrasion resistant.
- Temperature:** Up to 200°C.
- Steam Pressure :** 150 psi or 10 kgf/ cm²
- Electrical continuity**
: **:** Yes.
- End Connection :** Swaged, crimped or Reusable type.

I.D. inches I.D. mm O.D. mm Min. Bend radius

mm

3/16	4.8	12.8	90
1/4	6.4	15.0	100
5/16	7.9	17.1	115
3/8	9.5	20.0	125
1/2	12.7	24.7	180
5/8	15.9	27.9	200
3/4	19.0	31.4	240
1	25.4	38.0	380
1 ¼	31.8	47.2	420
1 ½	38.1	53.5	510
2	50.8	66.8	635

Warning for Your Safety

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HIGH TEMPERATURE STEAM HOSE - TYPE II (Double Wire)



CONSTRUCTION:

- Tube :** Made out of synthetic rubber heat resistant.
- Reinforcement :** Two Braid of HTS wire.
- Cover :** Synthetic rubber covers against oil, weather & abrasion resistant.
- Temperature:** Up to 200°C.
- Steam Pressure :** 200 psi
- Electrical continuity**
: **:** Yes.
- End Connection :** Swaged or Crimped or Reusable type.

I.D. inches I.D. mm O.D. mm Min. Bend radius

mm

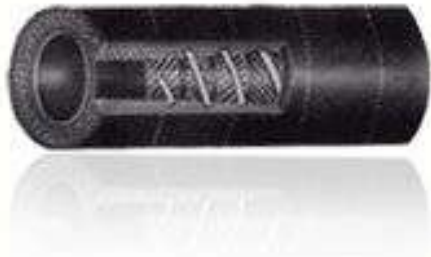
3/16	4.8	14.8	90
1/4	6.4	17.0	100
5/16	7.9	19.1	115
3/8	9.5	22.0	125
1/2	12.7	26.7	180
5/8	15.9	22.9	200
3/4	19.0	33.4	240
1	25.4	40.0	380
1 ¼	31.8	50.0	420
1 ½	38.1	56.7	510

Warning for Your Safety

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ROAD & RAIL TANKER HOSE

Specification: BS 3492 / IS 10733



CONSTRUCTION:

- Lining :** Resistant to petroleum liquids.
- Reinforcement :** Cotton textile or synthetic material with G.I . embedded wire.
- Cover :** Resistant to weather abrasion and petroleum products.
- Electrical Continuity :** By providing anti-static copper wire.
- End connections :** Normally flanged type or threaded nipple i .e. built in type / vulcanize / crimped / swaged in hose.
- Couplings :** As per BS 2464 or Lug type or Cam lock type . Male or female or both ends male or female as per requirement of purchaser.
- Application :** Discharging of petrol and diesel oil from tank truck & between tank, & trucks & trailers, suitable for pressure, vacuum and self discharge. Very low deformation where used for petrol.

I.D. inches	Working pr. 1A & 1B kgf/cm ²	Min. bend radius 1A & 1B mm	Working pressure 2A & 2B kgf/cm ² mm	Min. bend radius 2A & 2B mm
32	3.5	130	7.0	190
38	3.5	140	7.0	230
50	3.5	200	7.0	310
63	3.5	260	7.0	380
76	3.5	310	7.0	460
100	3.5	410	7.0	560

Different types of construction in BS 3492

Type 1A:

Rough bore, light weight, maximum flexibility with internal and external wire reinforcement and corrugated outer cover.

Working pressure :	3.5 kgf/cm ²
Bursting pressure :	14.0 kgf/cm ²
Test pressure :	3.5 kgf/cm ²

Type 1B:

Smooth bore, light weight and maximum flexibility with fully embedded wire reinforcement and smooth or corrugated outer cover.

Working pressure :	3.5 kgf/cm ²
Bursting pressure :	14.0 kgf/cm ²
Test pressure :	3.5 kgf/cm ²

Type 2A:

Rough bore, medium weight, maximum flexibility with internal and external wire reinforcement and corrugated outer cover.

Working pressure :	7.0 kgf/cm ²
Bursting pressure :	28.0 kgf/cm ²
Test pressure :	7.0 kgf/cm ²

Type 2B :

Smooth bore, medium weight and maximum flexibility with fully embedded wire reinforcement and smooth or corrugated outer cover.

Working pressure :	7.0 kgf/cm ²
Bursting pressure :	28.0 kgf/cm ²
Test pressure :	7.0 kgf/cm ²

Warning for Your Safety

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OIL SUCTION & DISCHARGE HOSE SPECIFICATION: BS 1435 or IS 8189



CONSTRUCTION:

- Tube :** Lining resistant to petroleum products.
Reinforcement : Multiple plies of textile fabric with GI embedded wire
Cover : Oil, Weather & abrasion resistant.

Working Pressure Test Pressure

- S . 7- 0.7 mpa 100 psi 150 psi
 S .10-1.0 mpa 150 psi 225 psi
 S .15-1.5 mpa 220 psi 310 psi

There are two types

- . Smooth Bore
- . Rough Bore

APPLICATIONS : Loading and discharging of petroleum products aboard ship with an aromatic content.

Features : Integrally embedded spiral and is designed for pressure or vacuum.

I.D.in mm	I.D.in inches	Min. bend	radius	Length available
50	2	400 mm	15 mt r	
63	2 ½	520 mm	15 mt r	
76	3	600 mm	15 mt r	
102	4	800 mm	15 mt r	
152	6	1200 mm	7.5 mt r	
204	8	1600 mm	6.0 mt r	
254	10	2290 mm	4.5 mt r	

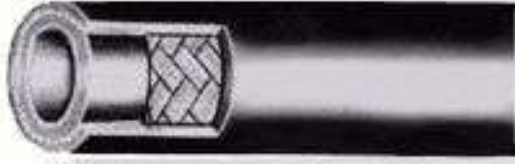
305 12 3050 mm 4.5 mt r

Above hose is suitable for petrol and all other petroleum products with an aromatic content less than 50%
For Electrical continuity Anti-static braided copper wire is provided.

End Connections : Flanged type or threaded nipple duly vulcanized in hose or as per purchaser's requirement.

LPG Hose

SPECIFICATION: IS 9573 / 1980 OR BS 4089



CONSTRUCTION:

- Lining :** Suitable rubber compound resistant to liquefied petroleum gas.
- Reinforcement :** The reinforcement shall be of woven textile fabric or braided textile yarn, natural or synthetic or combination of both or braided with HTS wire.
- Cover :** The cover shall be of rubber compound resistant to abrasion, weather, and ozone and petroleum fuel.
- Size :** The hoses are available from 8 mm to 75 mm in standard length of 15 meters or less.
- Application :** This hose is suitable for use in LPG vapor phase and LPG /Air installations. These hoses can also be put to wet use i.e. permanently filled with liquid and in the temperature range from -0°C to + 40°C.
- Test :** Internal Hydraulic Burst pressure 1 00 kgf/cm²
- Electrical Continuity :** Can be provided by providing braided copper wire .
- End Connection :** Flanged or threaded type.

Warning for Your Safety

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CHEMICAL HOSE (ACID & ALKALI HOSE) CD (490)

For suction and discharge service handling many inorganic acids, except strong oxidizing agent, withstands most salts and alkalis.

SPECIFICATION: ARE 7654 / 1975.

TYPES

There are two types of hoses they are as follows:

TYPE 1 Conveying diluted chemicals.



CONSTRUCTION:

- Tube :** Natural rubber
- Reinforcement :** Multiple plies rubber impregnated strong woven fabric with helical steel wire, full-vacuum and discharge pressure, that vary according to size. Flexible construction keeps hose round when bend, reducing kinking and damaging.
- Cover :** Black outer rubber cover resists abrasion, sunlight and weather.
- Couplings :** Couplings must be selected for corrosion and pressure.
- Maximum Length:** 15 meters only.

TYPE 2 Conveying concentrated chemicals.



CONSTRUCTION:

- Tube :** Hypalon.
- Reinforcement :** Multiple plies rubber impregnated strong woven fabric with helical steel wire, full-vacuum and discharge pressure, that vary according to size. Flexible construction keeps hose round when bend, reducing kinking and damaging.
- Cover :** Hypalon resists abrasion sunlight, weather, and abrasion.
- Couplings :** Couplings must be selected for corrosion and pressure.
- Maximum Length:** 15 meters only.

For special application alternate construction can be supplied.

- Tube :** Nitrile, Neoprene, Butyl, SBR, EPDM, Thiocol.
- Cover :** Nitrile, Neoprene, Butyl, SBR, EPDM, Thiocol.

I.D.in inches	I.D.in mm	No. of plies	Working pressure psi	Min. bend radius
3/4	20	4	100	160
1	25	4	150	200
1 1/4	32	4	150	250
1 3/8	35	4	150	280
1 1/2	38	4	150	300
1 3/4	45	4	100	360
2	50	4	100	400
2 1/2	63	4	100	500
2 3/4	70	4	100	560
3	75	4	100	600
3 1/2	88	4	100	700
4	100	4	100	800
4 1/2	113	5	100	900
5	125	5	100	1000
6	150	6	100	1200
8	200	6	100	1600

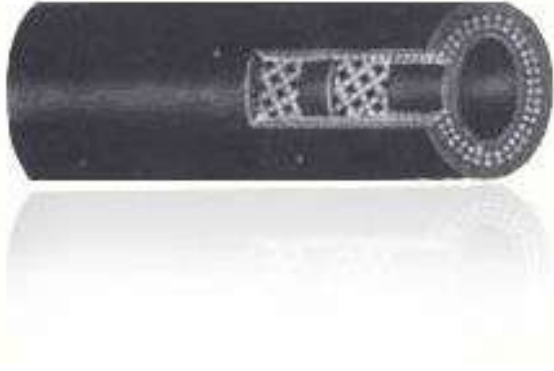
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CARBON FREE/DAIRY/BREWERY HOSE

CARBON FREE HOSE (GCF)

Heat Resistant



CONSTRUCTION:

- Lining :** Carbon free made from the synthetic rubber absolutely with having white wall.
- Reinforcement :** Cotton textile fabric
- Cover :** Abrasion, weather and heat resistant.
- Temperature :** Up to 150°C
- Working Pressure :** 10 kgf/cm²

Carbon free hose are available in red, blue or green color for identification.

I.D. inches	I.D. mm	No. of Braids	No. of Plies	Min. bending radius mm
1/2	12.5	2	3	100
3/4	20.0	2	3	160
1	25.0	2	3	200
1¼	31.5	3	4	252
1 3/8	35.0	3	4	280
1½	38.0	3	4	304

1¾ 45.0 3 4 360
2 50.0 4 5 400
2¼ 55.0 4 5 440
2½ 63.0 4 6 504
2¾ 70.0 4 6 560
3 75.0 4 6 600
- 90.0 - 6 720

BREWERY & CREM0ERY HOSE (GBC)



FOOD, JUICE, MILK, DAIRY, & CLEANING HOSE

CONSTRUCTION:

- Tube :** White smooth oil resist ant synthetic rubber.
- Reinforcement :** Synthetic textile.
- Cover :** Blue, red or green oil resist ant synthetic rubber.
- Inside diameter :** Up to 300 mm
- Working pressure :** 7 kgf/cm²
- Applications :** Cleaning within food industry.
It is used where hot water and cleaning solutions are necessary.
- Transport of food :** Vegetable oil, Grease, beer, wine, milk, cream.

CONSTRUCTION:

- Tube :** White smooth oil resist ant synthetic rubber..
- Reinforcement :** Synthetic textile
- Spiral :** Galvanized steel.
- Cover :** Blue, red or green oil resist ant rubber.

Inside diameter : Up to 300 mm

Working pressure : 7 kgf/cm²

Vacuum : 625 mercury

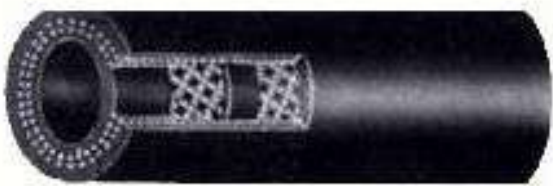
APPLICATION : Pressure and suction hose for vegetable oil, grease, beer, wine, milk, cream, juice.
Used as mainly tank truck hose.

ROCKDRILL / AIR, PNEUMATIC HOSE

SPECIFICATION:

IS : 446 / 1980

IS : 446 / 1968 covering both textile woven and braided constructions) or IS911



CONSTRUCTION:

Air Hose

Pneumatic Hose

Lining : Rubber lining free from porosity, air blisters and any other visible defects.

Rock Drill Hose

Lining : Rubber lining shall be resistant to oil mist.

Reinforcement : Shall be either woven fabric well rubberized on both sides and braided textile reinforcement with yarn, natural or synthetic or combination of both.

Cover: The outer cover shall be of high tensile abrasion resistant compound.

APPLICATION : These hoses are used for various applications like general construction work, road building, tunneling in constructional jobs used with chipping, grinding and riveting appliances; in Service Stations for tire inflation, for rock drilling applications in mines and quarries etc.

TYPES: There are 3 types of hoses

TYPE I : Air hose for a working pressure 7 kgf/ cm²

TYPE II : Pneumatic tool hose for a working pressure of 10 kgf/ cm²

TYPE III: Rock Drill hose for a working pressure of 14 kgf / cm²

Availability of Sizes & Reinforcement Recommendation

I.D inches	Type I	Type II	Type III
	Wov Br	Wov Br	Wov Br
5.0	2 ply 1 Br.	2 ply 1 Br.	3 ply 1 Br.
6.3	2 1 2 1 3 1		
8.0	2 1 3 1 3 1		
10.0	2 1 3 1 4 1		
12.5	2 1 3 2 4 2		
16.0	2 1 3 2 4 2		
20.0	3 1 4 2 5 2		
25.0	4 2 5 2 6 3		
31.5	4 2 5 3 6 3		
38.0	4 2 5 3 7 3		
50.0	-- 6 3 --		

50 mm & above sizes in Type I, II, II, are supplied as per request.

TEST : The hoses will undergo hydraulic test as per the following

TYPE I : Air Hose : Minimum bursting pressure 28 kgf/ cm²

TYPE II : Pneumatic Tool Hose : Minimum bursting pressure 40 kgf/ cm²

TYPE III: Rock Drill Hose : Minimum bursting pressure of 56 kgf / cm²

Warning for Your Safety

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WATER SUCTION HOSE

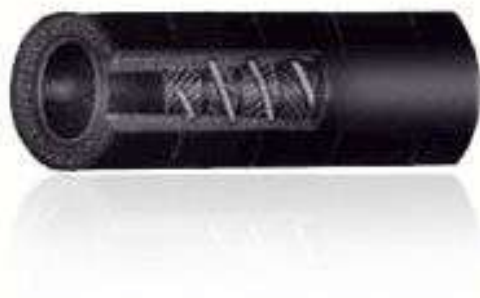
These hoses are used on Agricultural Pump sets and other Water pumps.

SPECIFICATION:

Equivalent to IS 2482 of 1982 (light) There are two types of Hoses in this specification:

TYPE I: Smooth Bore.

TYPE II: Rough Bore (Semi-embedded)



CONSTRUCTION:

TYPE I

Rubber Lining.

One ply of Rubber impregnated fabric. Rubber Lining

Spiral Wire.

Rubber Filler

Plies of rubber impregnated fabric & rubber cover.

TYPE II

Semi-embedded internal wire.

Rubber Filler.

Plies of rubber impregnated fabric & rubber Cover.

AVAILABILITY OF SIZES :

I.D. inches	I.D. mm	No. of plies	Maximum discharge pressure Kgf/cm ²
1 25 3 2			

1¼ 32 3 2

1½ 38 3 2

1¾ 45 3 1.5

2 50 4 1.5

2¼ 56 4 1.5

2½ 63 4 1

3 75 5 1

3½ 88 6 1

4 100 6 1

5 125 6 1

6 150 6 1

8 200 6 1

Higher sizes can also be supplied but not covered under ISI specifications.

Project Quality Double Armored Water Suction Hose Heavy Duty As Per IS-3549 of 1983

USES:

These hoses are used on High Pressure Water Pumps required in various project like Irrigation, Coal Mines, Steel Plants, Railways & Industries etc.

SPECIFICATION:

EQUIVALENT TO BE 3549 OF 1983

Rough Bore Hoses Smooth Bore Hoses

Galvanized mild steel internal wire. Rubber compound lining.

One ply of rubber impregnated woven fabric. Ply or plies of rubberized textile fabric.

Rubber Lining.

Galvanized mild steel embedded wire.

Ply or plies of rubberized cotton fabric. Rubber filler.

Galvanized mild steel embedded wire. Ply or plies of rubberized textile fabric.

Rubber Filler.

Embedded wire.

Plies of rubber impregnated woven. Rubber filler.

Cotton Fabric.

Ply or plies of rubberized textile fabric.

Rubber cover.

Rubber cover.

End Connections:

Flanged type or threaded nipple built in vulcanized in hose.

AVAILABILITY OF SIZES:

I.D. inches	I.D. mm	No. of plies	Discharge pressure Kg/cm ²	Vacuum Max. mm of Hg
2 50	3 7	-		
2½	63	4	7	-
3	75	5	7	-
4	100	6	5	-
5	125	7	5	625
6	150	8	5	-
8	200	10	5	-
10	250	12	5	-
12	300	16	5	-

Above 75mm hoses can be supplied in longer lengths but not covered under I.S. specifications. These hoses are supplied with internal armoring & external armoring.

SAND & GRAVEL HOSE (GSG)



CONSTRUCTION:

Tube :	Wear or abrasion resistant
Reinforcement :	Cotton textile reinforcement, fully embedded G.I. steel wire
Cover :	Abrasion & weather resistant.
Application :	Extraction and transport of abrasive materials such as sand, Gravel, Rock, Sludge, Powder etc.
End Connections :	Flanged type or as per Purchasers requirements.

I.D inches	I.D mm	Working	pressure psi	Test pressure psi	Min. bending radius mm
2	51.0	100	150	450	
2½	63.0	100	150	560	
3	76.0	75	110	690	
3½	90.0	75	110	810	
4	100.0	75	110	900	
5	125.0	75	110	1100	
6	152.0	75	110	1500	
8	204.0	75	110	1850	
10	250.0	75	110	2250	

Warning for Your Safety

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SAND BLASTING & CEMENT HOSE (GSC)

SPECIFICATION: IS6417 OR 5894 OR 5137



CONSTRUCTION:

- Tube :** Highly abrasion resistant rubber
- Reinforcement :** Textile reinforcement.
- Cover :** Weather and abrasion resistant
- Electrical continuity :** By providing braided anti-static copper wire.
- Applications :** For providing and blasting castings, metal, stone and concrete surface.

Different Types

TABLE:

- TYPE I :** W.P 7 Kgf/cm² B.P 35 kgf/cm²
- TYPE II :** W.P 10 Kgf/cm² B.P 50 kgf/cm²
- TYPE III :** W.P 14 Kgf/cm² B.P 70 kgf/cm²

I.D inches I.D mm Working

pressure psi Min. bending radius mm

¾ 19.0 40 170
1 25.4 46 200
1¼ 31.5 55 230
1½ 38.0 60 285
2 50.0 73 450
2½ 63.0 87 570
3 76.0 98 700
4 102.0 125 920

Warning for Your Safety

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PHOSPHORIC ACID SUCTION & DISCHARGE HOSE (GPS)



CONSTRUCTION:

Tube :

Lining resistant to phosphoric acid & Gypsum.

Reinforcement :

Several special high tensile textile fabric plies embedded with G.I. wire for suction & pressure loading fitted with a rubber flange or with a rubber collar backing with steel flanges.

Cover :

Heat weather and abrasion resistant

Maximum I.D. :

300 mm.

Temperature :

150°C

MBR :

8 multiply by dia.

Applications :

These hoses are very flexible allowing full flow and pipe line made with abrasion & acid resistant available with or without wire reinforcement. Wire reinforcement type has coil of steel wire buried in hose to keep it from collapsing under full suction. Used in both suction & discharge hose. Flanged ends are drilled to bolt to companion flanges using standard flat faced flanges. They provide a tight seal without a gasket since the flanges rotate freely. Alignment of bolt holes is easy, reducing installation time to a minimum.

Working Pressure

TYPE I

3.5kgf/cm²

TYPE II

5kgf/cm²

Warning for Your Safety

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CABLE/FURNACE COOLANT HOSE (GFC)**CONSTRUCTION:**

Tube :	Synthetic rubber.
Reinforcement :	Textile reinforcement.
Cover :	Synthetic rubber with outside asbestos cloth duly vulcanized during manufacturing or asbestos yarn braiding is provided.
Temperature :	Up to 100°C
Applications :	Used as a cable and as in Industrial Cooling hose for melting furnaces at steel works, glass works, foundries etc.
Note:	Cover can be provided with outside Asbestos cloth duly vulcanized or asbestos yarn braiding is provided. This hose can be supplied in 3 types -

Type I	Working pressure 10kgf/ cm ²
Type II	Working pressure 15kgf/ cm ²
Type III	Working pressure 30kgf/ cm ²

I.D.inches	I.D.mm	O.D.mm	Min. bend radius mm
1/2	12.5	23	110

3/4	19.0	32 170
1	25.4	38 225
1 1/4	31.5	45 285
1 3/8	35.0	48 315
1 1/2	38.0	53 345
1 3/4	45.0	58 405
2	50.0	63 450
2 1/4	55.0	75 495
2 1/2	63.0	83 565
2 3/4	70.0	90 630
3	76.0	96 685
-	90.0	110 800

END FITTINGS FOR PTFE, THERMOPLASTICS, HYDRAULIC HOSES.

G1 G2 G3 G4



Metric Female Swivel



Metric Female Swivel 45° elbow



Metric Female Swivel 90° elbow



BSP Female Swivel

G5 G6 G7 G8



BSP Female Swivel 45° elbow



BSP Female Swivel 90° elbow



Metric Female Swivel with 'O' ring



Metric Female Swivel 45° elbow with 'O' ring

G9 G10 G11 G12



Metric Female Swivel 90° elbow with 'O' ring



Male BSP with 60° Flare



Metric Male



Male NPTF

G13 G14 G15 G16



Male SAE with 45° tape Male JIC with 37° tape r Female Swivel JIC Female Swivel JIC 45° elbow

G17 G18 G19 G20



Female Swivel JIC 90° elbow Female Swivel SAE Female Swivel SAE 45° elbow

Female Swivel SAE 90° elbow

G21 G22 G23 G24



SAE split flange SAE split flange 45° SAE split flange 90° Stand pipe

HOSE SIZE & THREAD SIZE SELECTING CHART FOR ALL TYPES HOSES.

Hose Size inches	mm / nw	Corresponding Thread Stand Pipe NPTF*			Metric Pipe dia mm	Length mm	Thread	inches	TPI
		BSP inches	NPT inches	SAE inches					
3/16	4 1/4	1/4	7/16-20UNF	M12x1.5	6	20	1/8	27	
				M16x1.5	8	22	1/4	18	
1/4	6 1/4	1/4	7/16-20UNF	M14x1.5	8	22	1/8	27	
			1/2-20UNF	M16x1.5	10	24	1/4	18	
			9/16-18UNF	M18x1.5	12	25	3/8	18	
			5/8-18UNF						
5/16	8 3/8	3/8	1/2-20UNF	M16x1.5	10	24	1/4	18	
			9/16-18UNF	M20x1.5	12	25	3/8	18	
			5/8-18UNF						
3/8	10 3/8	1/2	3/8	M18x1.5	12	25	1/4	18	
			1/2-20UNF	M22x1.5	14	27	3/8	18	
			9/16-18UNF						
			3/4-16UNF		10	24	1/2	14	

7 / 8-14UNF

9 /16-18UNF

3 / 4-16UNF

7 / 8-14UNF

1.1/16-12UNF

3 / 4-16UNF

7 / 8-14UNF

1.1/16-12UNF

7 / 8-14UNF

1.1/16-12UNF

1.3/16-12UNF

1.5/16-12UNF

1.5 /16-12UNF

1.5 / 8-12UNF

1.5 /16-12UNF

1.7 /8-12UNF

1.7 /8-12UNF

2 1/ 4-12UNF

2 1/ 2- 2UNF

M22x1.5

M24x1.5

M26x1.5

M26x1.5 18

M30x1.5

M30 x 2.0

M36 x 2.0

M38x1.5

M42x2.0

M45x1.5

M52x1.5

M52x1.5

M52x2.0

15

16

18

20

20

22

25

28

30

38

30

35

42

50

25

30

25

32

25

23 3/4 14

25

34

40

36

40

38

35

30

36

70

3/8

1/2

3/4

25

23 3/4 14

3/4

1

1 11 1/2

36

40

38

35

30

36

70

18

14

14

14

11 1/2

1 11 1/2

38

35

30

11 1/2

11 1/2

1/2 13 1/2 1/2

5/8 16 5/8

3/4 3/4

3/4 20 3/4

1

3/4

1

7/8 25 1

1 1/4

1

1 1/4

1 32 1 1/4

1 1/2

1 1/4

1 1/2

1 1/4 38 1 1/2

2

1 1/2

2

1 1/2 50 2 2 2 1/2-12UNF M65x2.0 - - 2 11 1/2

2 63 2 1/2

3

2 1/2

3 3-12UNF M78x2.0 - - - -

3 76 3 3 - M100x2.0 - - - -

Note:

The National Pipe Tapered Thread for fuels is a dry seal thread used for both for male & female ends .The Interface crest and root fit of the mating threads produces the seal.

(This thread should not be confused with American Standard NPT thread which does not produce and crest and root seal.)

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Composite hose

OIL, SOLVENT HOSE, MEDIUM DUTY

**RECOMMENDED AS TANKTRUCK AND RAILCAR HOSE
COMPLIES WITH BS
3492 TYPE AX AND BX**

HOSE TYPES

CODE SERVICE INNER WIRE TUBE COVER COLOUR

0604-GG OIL/SOLV GALVANIZED STEEL POLYPROPYLENE BLUE

0216-PG CHEMICAL POLYPROPYLENE COATED STEEL POLYPROPYLENE BLACK

0214-SG CHEMICAL STAINLESS STEEL 316 POLYPROPYLENE GREEN

0224-SG CHEMICAL STAINLESS STEEL 316 PTFE RED

STAINLESS STEEL OUTER WIRE ON REQUEST



TECHNICAL DATA:

INSIDE DIAMETER	WORKING PRESSURE	MIN. BEND RADIUS	APPROX WEIGHT	MAXIMUM LENGTH
INCH MM PSI BAR	INCH MM LBS/FT	KG/M FT MTR		
1½ 38 100 7 4 100	0.65 1.0 65 20			
2 50 100 7 5 125	1.20 1.80 65 20			
2½ 65 100 7 6 150	1.60 2.40 65 20			
3 80 100 7 7 175	1.90 2.80 65 20			
4 100 100 7 11 275	2.70 4.0 65 20			

OIL, SOLVENT HOSE, STANDARD DUTY

**RECOMMENDED FOR USE AS A TANKTRUCK, RAILCAR AND
INPLANT TRANSFER HOSE COMPLIES WITH BS 5842**

HOSE TYPES

CODE SERVICE INNER WIRE TUBE COVER COLOUR

0804-GG OIL/SOLV GALVANIZED STEEL POLYPROPYLENE BLUE

0416-PG CHEMICAL POLYPROPYLENE COATED STEEL POLYPROPYLENE BLACK

0414-SG CHEMICAL STAINLESS STEEL 316 POLYPROPYLENE GREEN

0424-SG CHEMICAL STAINLESS STEEL 316 PTFE RED

Warning for Your Safety

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OIL, SOLVENT HOSE, HEAVY DUTY

**RECOMMENDED FOR HEAVY DUTY MARINE OPERATIONS,
INCLUDING SHIP AND BARGE LOADING AND UNLOADING TYPE
APPROVED AS COMPLYING WITH PAR. 2.12 AND 5.7 OF THE IMO
CODE COMPLIES WITH BS 5842**

HOSE TYPES

CODE SERVICE INNER WIRE TUBE COVER COLOUR

0824-GG OIL/SOLV GALVANIZED STEEL POLYPROPYLENE BLUE

0436-PG CHEMICAL POLYPROPYLENE COATED STEEL POLYPROPYLENE BLACK

0434-SG CHEMICAL STAINLESS STEEL 316 POLYPROPYLENE GREEN

0444-SG CHEMICAL STAINLESS STEEL 316 PTFE RED

STAINLESS STEEL OUTER WIRE ON REQUEST



TECHNICAL DATA:

INSIDE DIAMETER		WORKING PRESSURE		MIN. BEND RADIUS		APPROX WEIGHT	MAXIMUM LENGTH		
INCH	MM	PSI	BAR	INCH	MM	LBS/FT	KG/M	FT	MTR
3	75	200	14	11	280	2.50	3.70	65	20
4	102	200	14	16	400	4.40	6.50	65	20
5	125	200	14	18	460	5.80	8.60	65	20
6	152	200	14	20	500	7.00	10.50	65	20
8	204	200	14	29	740	12.00	18.00	65	20
10	254	200	10	36	920	15.00	23.00	50	15

CHEMICAL HOSE, MEDIUM DUTY

**RECOMMENDED AS TANKTRUCK AND RAILCAR HOSE
COMPLIES WITH BS
3492 TYPE AX AND BX**

HOSE TYPES

CODE	SERVICE	INNER WIRE	TUBE	COVER	COLOUR
0604-GG	OIL/SOLV	GALVANIZED STEEL	POLYPROPYLENE	BLUE	
0216-PG	CHEMICAL	POLYPROPYLENE COATED STEEL	POLYPROPYLENE	BLACK	
0214-SG	CHEMICAL	STAINLESS STEEL 316	POLYPROPYLENE	GREEN	
0224-SG	CHEMICAL	STAINLESS STEEL 316	PTFE	RED	

STAINLESS STEEL OUTER WIRE ON REQUEST



TECHNICAL DATA:

INSIDE		WORKING		MIN. BEND		APPROX	MAXIMUM	
DIAMETER		PRESSURE		RADIUS				
INCH	MM	PSI	BAR	INCH	MM	WEIGHT	LENGTH	
1½	38	100	7.4	100	0.65	1.0	65	20
2	50	100	7.5	125	1.20	1.80	65	20
2½	65	100	7.6	150	1.60	2.40	65	20
3	80	100	7.7	175	1.90	2.80	65	20
4	100	100	7.11	275	2.70	4.0	65	20

CHEMICAL HOSE, STANDARD DUTY

RECOMMENDED FOR USE AS A TANKTRUCK, RAILCAR AND INPLANT TRANSFER HOSE COMPLIES WITH BS 5842

HOSE TYPES

CODE SERVICE INNER WIRE TUBE COVER COLOUR
0804-GG OIL/SOLV GALVANIZED STEEL POLYPROPYLENE BLUE
0416-PG CHEMICAL POLYPROPYLENE COATED STEEL POLYPROPYLENE BLACK
0414-SG CHEMICAL STAINLESS STEEL 316 POLYPROPYLENE GREEN
0424-SG CHEMICAL STAINLESS STEEL 316 PTFE RED

STAINLESS STEEL OUTER WIRE ON REQUEST



TECHNICAL DATA:

INSIDE DIAMETER	WORKING PRESSURE	MIN. BEND RADIUS	APPROX WEIGHT	MAXIMUM LENGTH
INCH MM PSI BAR	INCH MM LBS/FT	KG/M FT MTR		
1 25 150 10 4 100	0.65 1.0 65 20			
1 ¼ 32 150 10 4¾ 120	0.75 1.12 65 20			
1 ½ 38 150 10 5¼ 130	0.85 1.25 65 20			
2 50 150 10 6½ 165	1.20 1.80 65 20			
2½ 65 150 10 7½ 185	1.70 2.50 65 20			
3 80 150 10 9½ 240	2.00 3.0 65 20			
4 100 150 10 14½ 360	3.00 4.50 65 20			

CHEMICAL HOSE, HEAVY DUTY

RECOMMENDED FOR HEAVY DUTY MARINE OPERATIONS, INCLUDING SHIP AND BARGE LOADING AND UNLOADING TYPE APPROVED AS COMPLYING WITH PAR. 2.12 AND 5.7 OF THE IMO CODE COMPLIES WITH BS 5842

HOSE TYPES

CODE SERVICE INNER WIRE TUBE COVER COLOUR

0824-GG OIL/SOLV GALVANIZED STEEL POLYPROPYLENE BLUE

0436-PG CHEMICAL POLYPROPYLENE COATED STEEL POLYPROPYLENE BLACK

0434-SG CHEMICAL STAINLESS STEEL 316 POLYPROPYLENE GREEN

0444-SG CHEMICAL STAINLESS STEEL 316 PTFE RED

STAINLESS STEEL OUTER WIRE ON REQUEST



TECHNICAL DATA:

INSIDE DIAMETER		WORKING PRESSURE		MIN. BEND RADIUS		APPROX WEIGHT	MAXIMUM LENGTH		
INCH	MM	PSI	BAR	INCH	MM	LBS/FT	KG/M	FT	MTR
3	75	200	14	11	280	2.50	3.70	65	20
4	102	200	14	16	400	4.40	6.50	65	20
5	125	200	14	18	460	5.80	8.60	65	20
6	152	200	14	20	500	7.00	10.50	65	20
8	204	200	14	29	740	12.00	18.00	65	20
10	254	200	10	36	920	15.00	23.00	50	15

VAPOUR RECOVERY HOSE

RECOMMENDED FOR VAPOUR RECOVERY SYSTEMS IN TANKTRUCK, BOTTOM LOADING, INPLANT AND SHIP TO SHORE APPLICATIONS COMPLIES WITH USCG MARINE VAPOUR CONTROL SYSTEMS 33 CFR PART 154.810

HOSE TYPES

CODE SERVICE INNER WIRE TUBE COVER COLOUR

0864-GG GALVANIZED STEEL POLYPROPYLENE YELLOW

0466-PG POLYPROPYLENE COATED STEEL POLYPROPYLENE YELLOW

0464-SG STAINLESS STEEL 316 POLYPROPYLENE YELLOW

0446-SG STAINLESS STEEL 316 PTFE YELLOW

STAINLESS STEEL OUTER WIRE ON REQUEST



TECHNICAL DATA:

INSIDE DIAMETER	WORKING PRESSURE	MIN. BEND RADIUS	APPROX WEIGHT	MAXIMUM LENGTH
INCH MM PSI BAR	INCH MM LBS/FT	KG/M FT MTR		
2 50 100 7 4 125 1.00 1.50 65 20				
3 75 100 7 5 175 1.75 2.60 65 20				
4 102 100 7 11 275 2.55 3.80 65 20				
5 125 100 7 14 360 3.05 4.50 65 20				
6 152 100 7 16 410 3.60 5.30 65 20				
8 204 100 7 22 560 8.05 11.90 65 20				
10 254 100 7 30 760 10.35 15.30 50 15				

BOTTOM LOADING HOSE

**RECOMMENDED FOR USE WITH BOTTOM LOADING
INSTALLATIONS SPECIAL REINFORCEMENT FOR MINIMAL
ELONGATION**

ASSEMBLIES ARE FITTED WITH SWAGED ON TTMA FLANGES

HOSE TYPES

CODE SERVICE INNER WIRE TUBE COVER COLOUR

0104-GG GALVANIZED STEEL POLYPROPYLENE

0116-PG POLYPROPYLENE COATED STEEL POLYPROPYLENE

0114-SG STAINLESS STEEL 316 POLYPROPYLENE

0124-SG STAINLESS STEEL 316 PTFE

ANY COLOUR
ON REQUEST

STAINLESS STEEL OUTER WIRE ON REQUEST



TECHNICAL DATA:

INSIDE DIAMETER	WORKING PRESSURE	MIN. BEND RADIUS	APPROX WEIGHT	MAXIMUM LENGTH
INCH MM PSI BAR	INCH MM LBS/FT KG/M	FT MTR		
3 80 150 10 9.5 240	2.20 3.25 65 20			
4 100 150 10 14.5 360	3.40 5.10 65 20			

SUBMERSIBLE HOSE

RECOMMENDED FOR USE WITH SUBMERSIBLE PUMPS AND FOR ALL OTHER APPLICATIONS WHERE THE HOSE IS EXPOSED TO THE PRODUCT, BOTH INSIDE AND OUTSIDE

HOSE TYPES

CODE SERVICE INNER WIRE TUBE COVER COLOUR

0904-GG GALVANIZED STEEL POLYPROPYLENE WHITE

0916-PG POLYPROPYLENE COATED STEEL POLYPROPYLENE WHITE

0914-SG STAINLESS STEEL 316 POLYPROPYLENE WHITE

0924-SG STAINLESS STEEL 316 PTFE WHITE



TECHNICAL DATA:

INSIDE DIAMETER	WORKING PRESSURE	MIN. BEND RADIUS	APPROX WEIGHT	MAXIMUM LENGTH
INCH MM PSI BAR	INCH MM LBS/FT	KG/M FT MTR		
1½ 38 200 14	4½ 112 0.85 1.25 65 20			
2 50 200 14	5½ 140 1.35 2.00 65 20			
2½ 63 200 14	6½ 165 1.75 2.60 65 20			
3 75 200 14	9 230 2.50 3.70 65 20			
4 102 200 14	15 380 4.40 6.50 65 20			
5 125 200 14	17 435 5.80 8.60 65 20			
6 152 200 14	18 460 7.00 10.50 65 20			
8 204 200 14	27 690 12.00 18.00 65 20			

CRYOGENIC HOSE -50°C

**RECOMMENDED FOR FULLY REFRIGERATED CONVEYANTS
DOWN TO -50° C
(-58° F) IN ROAD, RAILROAD, INPLANT AND SHIP TO SHORE
APPLICATIONS INCLUDING THE FOLLOWING:**

AMMONIA BUTANE ETHYLCHLORIDE PROPADIEN

ACETALDEHYDE BUTYLENE METHYL

ACETYLENE PROPYLENE

BUTADIENE DIMETHYLAMINE METHYL BROMIDE VINYL-

BUTANE/PROPANE ETHYLAMINE PROPANE CHLORIDE

ALSO SUITABLE FOR :

LIQUID ETHYLENE AT -105° C (-157° F)

LIQUID ETHANE AT -88° C (-126° F)

COMPLIES WITH B S 4089

HOSE TYPES

CODE SERVICE INNER WIRE TUBE COVER COLOUR

0050-SS CRYOGENIC STAINLESS STEEL 316 POLYAMIDE WHITE

ROPE LAGGING ON REQUEST



TECHNICAL DATA:

INSIDE DIAMETER	WORKING PRESSURE	MIN. BEND RADIUS	APPROX WEIGHT	MAXIMUM LENGTH
INCH MM	PSI BAR	INCH MM	LBS/FT KG/M	FT MTR
1½	38 350 25 7	175 1.10	1.50	65 20
2	50 350 25 7½	185 1.55	2.30	65 20
2½	63 350 25 9½	240 2.15	3.20	65 20
3	75 350 25 11	280 2.95	4.40	65 20
4	102 300 21 20	500 4.95	7.30	65 20
5	125 300 21 24	610 7.75	11.50	65 20
6	152 300 21 26	660 9.45	14.00	65 20
8	204 200 14 37	940 12.75	18.90	65 20
10	254 150 10 75	1905 15.00	23.00	50 15

Warning for Your Safety

The system designer and user have the sole responsibility to select products suitable for their special application requirements to ensure the proper installation. Operation and maintenance of the product. Application details, material compatibility and product ratings should all be considered in the individual selection. Improper selection or use of products can cause property damage or personal injury. KURAT accepts no liability for any improper selection, installation, operation or maintenance.

CRYOGENIC HOSE -200°C

**RECOMMENDED FOR FULLY REFRIGERATED CONVEYANTS
DOWN TO -200° C
(-328° F) SUCH AS LIQUID NITROGENE AND L.N.G. IN ROAD,
RAILROAD, INPLANT AND SHIP TO SHORE APPLICATIONS
COMPLIES WITH BS 4089**

HOSE TYPES

CODE SERVICE INNER WIRE TUBE COVER COLOUR
0200-SS CRYOGENIC STAINLESS STEEL 316 POLYAMIDE WHITE

ROPE LAGGING ON

WORKING PRESSURE	MIN. BEND RADIUS	APPROX WEIGHT	MAXIMUM LENGTH
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REQUEST



TECHNICAL DATA:

INSIDE

DIAMETER

INCH MM PSI BAR INCH MM LBS/FT KG/MFT MTR

1	25	150	10	6	150	0.60	0.90	65	20
1½	38	150	10	7	175	0.80	1.20	65	20
2	50	150	10	7½	185	1.55	2.30	65	20
3	75	150	10	11	280	2.95	4.40	65	20
4	102	150	10	20	500	4.95	7.30	65	20
5	125	150	10	24	610	7.75	11.50	65	20
6	152	150	10	26	660	9.45	14.00	65	20
8	204	150	10	37	940	12.75	18.90	65	20
10	254	150	10	75	1905	15.00	23.00	50	



STAINLESS STEEL BELLOWS

Pioneer Metallic Bellows widely used in industries for mis-matching of pipe lines and expansion joints. Design based on EJMA standards.



RANGE

- 15mm NB to 1000mm NB Circular Bellows
- Rectangular Bellows as per your requirement

TYPES

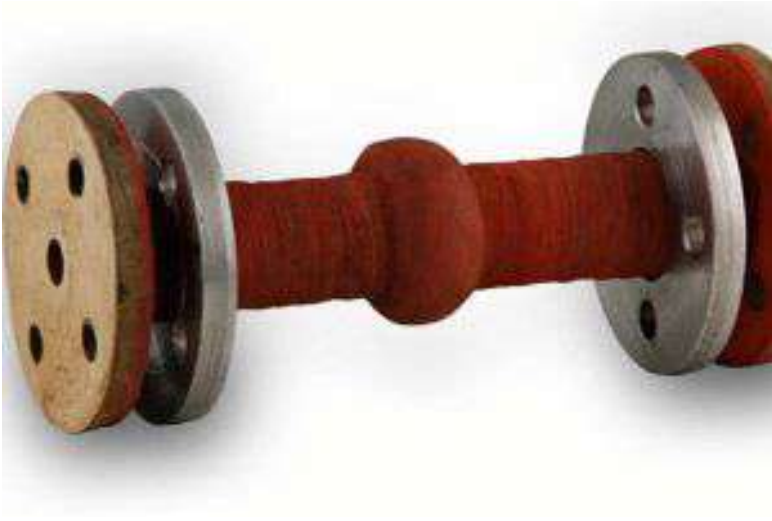
- Single Expansion joints
- Double Expansion joints
- Universal Expansion joints (Tied or Untied)

Warning for Your Safety

The system designer and user have the sole responsibility to select products suitable for their special application requirements to ensure the proper installation. Operation and maintenance of the product. Application details, material compatibility and product ratings should all be considered in the individual selection. Improper selection or use of products can cause property damage or personal injury. KURAT accepts no liability for any improper selection, installation, operation or maintenance.

RUBBER BELLOWS

- Rubber expansion joints are used in between the pipelines to take the thermal expansion and Misalignment of pipe lines.



Construction As per customer's requirement.

Size Range : 1" to 25".

End

Connection : Flanged - Tied or Untied

Warning for Your Safety

The system designer and user have the sole responsibility to select products suitable for their special application requirements to ensure the proper installation. Operation and maintenance of the product. Application details, material compatibility and product ratings should all be considered in the individual selection. Improper selection or use of products can cause property damage or personal injury. KURAT accepts no liability for any improper selection, installation, operation or maintenance.

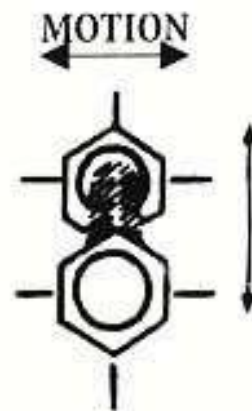
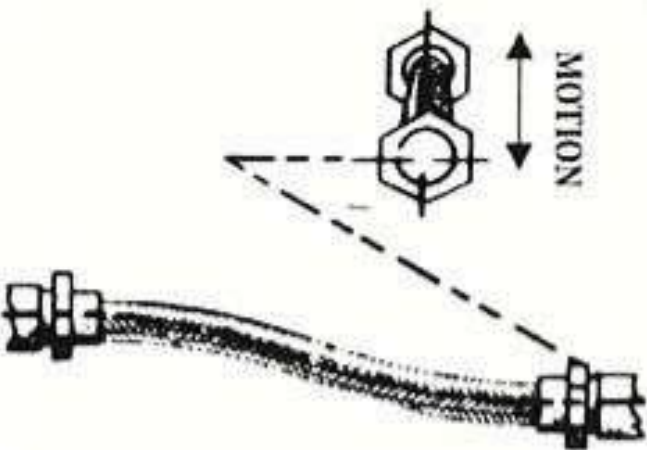
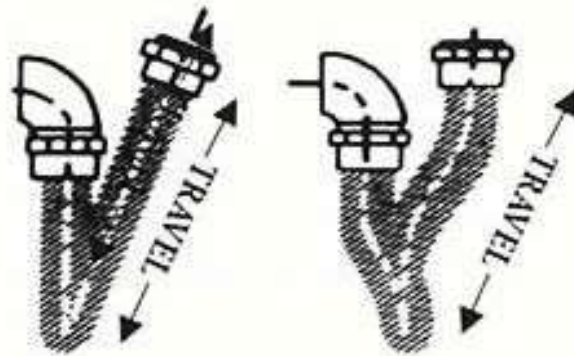
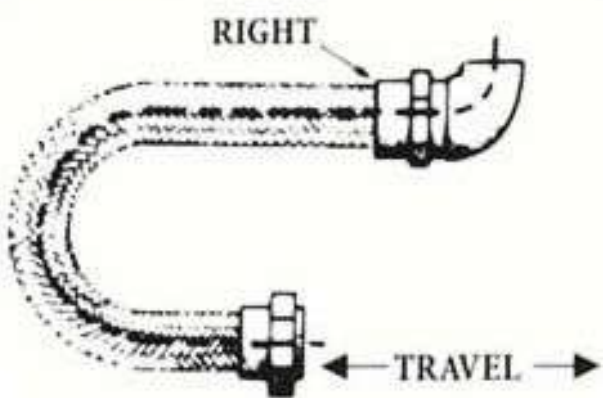
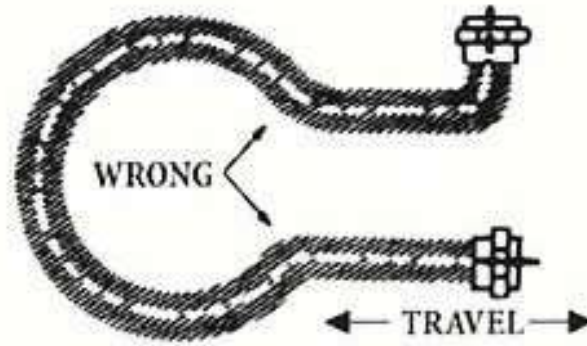
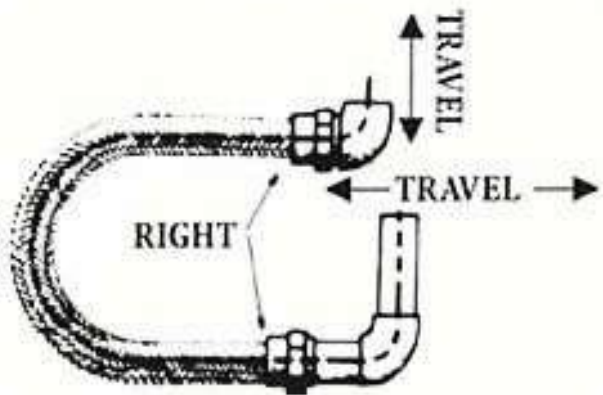
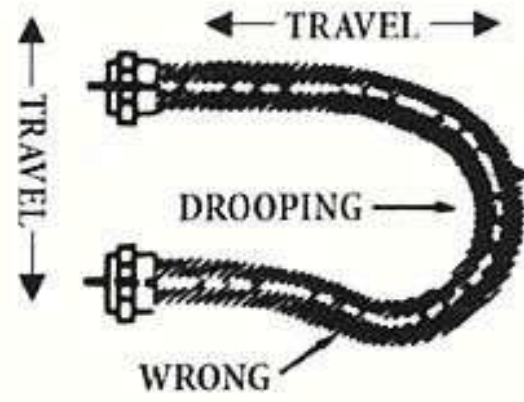
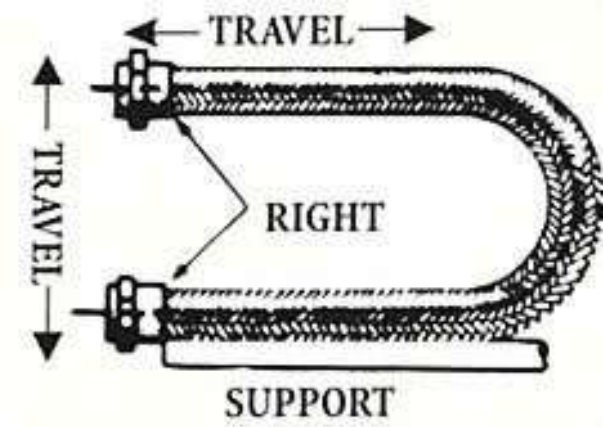


FLEXIBLE METAL HOSE

INSTALLING FLEXIBLE METAL HOSE

To assure maximum service life, the following precaution should be adhered to when installing a flexible metal hose assembly.

CORRECT WRONG



Avoid Over bending

Avoid Improper Handling

Avoid Torque and Twisting

Warning for Your Safety

The system designer and user have the sole responsibility to select products suitable for their special application requirements to ensure the proper installation, operation and maintenance of the product. Application details, material compatibility and product ratings should all be considered in the individual selection. Improper selection or use of products can cause property damage or personal injury. Pioneer accepts no liability for any improper selection, installation, operation or maintenance.

HOSE SIZE & THREAD SIZE SELECTING CHART FOR ALL TYPES OF HOSES.

Hose Size inches	mm nw	Co rrespo nd ing Thread Stand Pipe NPTF*		SAE inches	Metric Pipe dia mm	Length	mm	Thread	
		BSP inches	NPT inches					inches	TPI
3/16	4 1/4	1/4	7/16-20UNF	M12x1.5		6	20		
					M16x1.5	8	22	65	18
			7/16-20UNF		M14x1.5	8	22		27
1/4	6 1/4	1/4	1/2-20UNF		M16x1.5	10	24	65	18
			9/16-18UNF		M18x1.5	12	25		18
			5/8-18UNF						
			1/2-20UNF		M16x1.5	10	24		
5/16	8 3/8	3/8	9/16-18UNF		M20x1.5	12	25	65	18
			5/8-18UNF						
			1/2-20UNF						
			9/16-18UNF		M18x1.5	12	25		18
3/8	10 3/8	3/8	3/4-16UNF	1/2	M22x1.5	14	27	65	18
			7/8-14UNF			10	24		14
			9/16-18UNF						
			3/4-16UNF		M22x1.5	15	25		18
1/2	13 1/2	1/2	7/8-14UNF		M24x1.5	16	30	65	14
			1.1/16-12UNF		M26x1.5	18	25		14
			3/4-16UNF			20	32		
5/8	16 5/8		7/8-14UNF	3/4	M26x1.5	18	25		
			1.1/16-12UNF			20	23	65	14
			7/8-14UNF						
			1.1/16-12UNF		M30x1.5	22	25		
3/4	20 3/4		1.3/16-12UNF	3/4	M30 x 2.0	25	34	65	14
			1.5/16-12UNF	1	M36 x 2.0				11 1/2
							25		
			1.5/16-12UNF	1	M38x1.5	28	40		
1	25 1		1.5/8-12UNF	1 1/4	M42x2.0	30	36	65	11
							40		1/2
			1.5/16-12UNF		M45x1.5	38	38		
1 1/4	32 1 1/4		1.7/8-12UNF	1 1/2	M52x1.5	30	35	50	11 1/2
				1 1/2		35	30		
			1.7/8-12UNF						
			2 1/4-12UNF		M52x1.5	42	36		11 1/2
1 1/2	38 1 1/2		2 1/2-2UNF	2	M52x2.0	50	70		11 1/2
2	50 2 2 1/2		1/2-12UNF	M65x2.0					2 11 1/2
2 1/2	63 2 1/2			2 1/2					
3	76 3 3			3	M78x2.0				
3	76 3 3				M100x2.0				

Note

The National Pipe Tapered Thread for fuels is a dry seal thread used for both for male & female ends .The Interface crest and root fit of the mating threads produces the seal .(This thread should not be confused with American Standard NPT thread which do es not produce and crest and root seal.)

KURAT ENTERPRISE

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