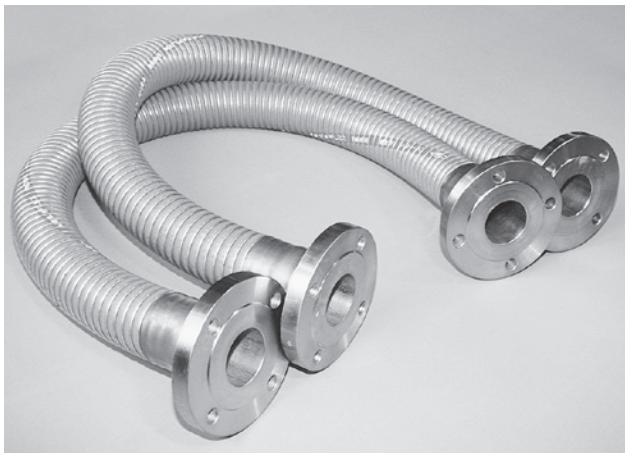
MEIJIFLEX® HOSE

Chemical Hose
Oil & Solvent Hose
Fluoroplastics Hose
Cryogenic Hose
Joint
Coupling

Meijiflex hoses are manufactured under ISO 9001 quality management systems.

ISO9001
JUSE-RA-2189

EMS
ISO14001:JSAE250
(KANAGAWA MAIN FACTORY)
(YAMAKITA FACTORY)



MEIJIFLEX® HOSE

About us

Our products have excellent reputation in wide range of applications such as in the chemical, petroleum, steel, and food industries, and also cargo hose for marine. We keep doing our best to live up to the trust and expectation from customer deposited on us as a composite hose maker.

New application

Recently, our products have found successful applications such as hoses used in emergency water tanks, for vapor recovery, and soil fertilization through hydrogen peroxide.

Structure

Our hoses are called **COMPOSITE HOSE** , with multi-layers plastic films, tubes, clothes, and spiral wires. This structure have excellent performance by follow features.

- **Safety** ·····Perfect conductivity, The fittings we designed have original screw grooves and they highly keeps pressure-resistant.
- **Wide chemical resistance**·····Oils, solvents, aromatic fuels, acids（HCl, H_2SO_4, HNO_3…）, alkalis（NaOH,KOH…）
- **Light and flexible**·····Easy to handle at narrow space.
- **Durability for repeated bending** …Composite structure of multi-reinforced fabrics and films is toughness with repeated bending.

Originality

Only our composite hoses have smooth inner face by using **TRIANGLE WIRE** for the first time in the world.
Smooth face reduces pressure loss greatly and Improved loading time.
Moreover, we are developing hoses with complete flat inner face now.

ISO 9001, 14001

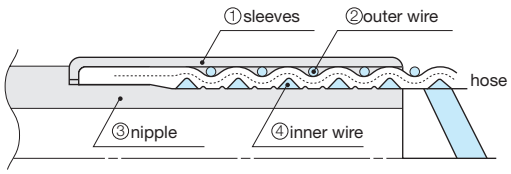
We have produced the composite hoses based on the ISO system and we have kept the high quality and
control quality management system.

SAFETY POINT

Swaged structure

Our **ORIGINAL FITTINGS** have excellent durability for various kind of chemical fluids. The spigot what be set into hose is **SCREW TYPE** and almost types are swaged with rubber seal without adhesive between spigot and hose inner face.

Cross section of assembly



Conductivity

Our composite hoses have always **HIGH ELECTRIC CONDUCTIVITY**.

The fittings are connecting to hose with outer and inner wires. This structure is perfect to keep electric conductivity.

Leak sign

When the fluid leaked from a hose, it can find before the burst and avoid the big damage. Because of multilayers structure, the reinforced fabric is keeping formation and then prevent the burst .

WIDE CHEMICAL RESISTANCE

The composite hose's structure covers wide range chemical fluids, because of the main resin of **POLYPROPYLENE** is possible to resist various chemicals, and besides by combination of **FLUORO RESIN** (**ETFE**) film, the chemical resistance is more wide.

EASY TO HANDLE

Light weight

Weight is **20～40 %** lighter than generic rubber hoses.
It's able to bend easily.

Small bending radius

Bending radius is only **around 30%** in compared to rubber hoses. Its usable in narrow space.

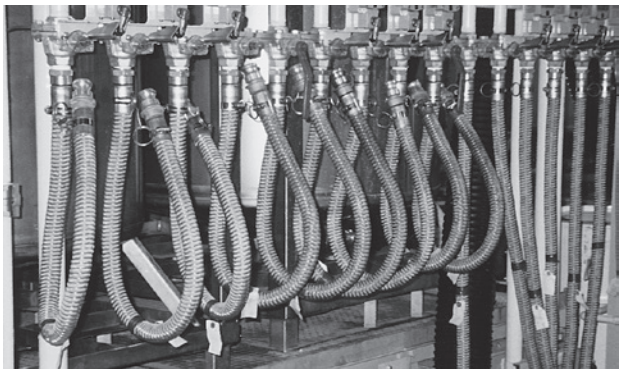
Contents

MEIJIFLEX® HOSE

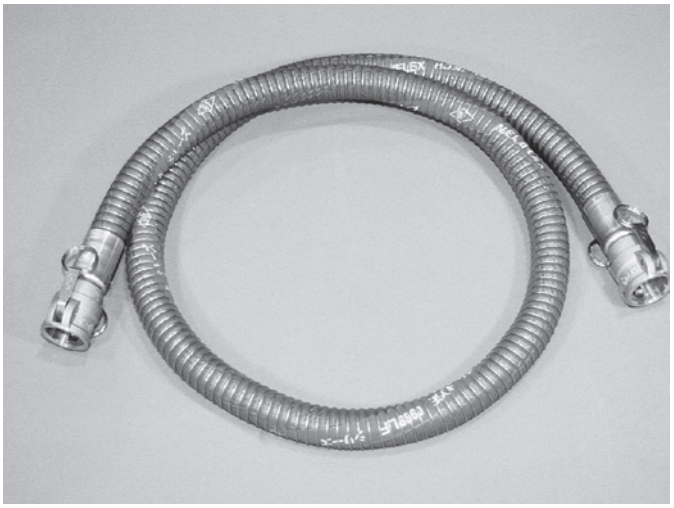
Chemical Hose

●Light weight, flexible chemical hoses●

The chemical hose series uses polypropylene（P.P.）as the main constituent material and therefore offers high flexibility and multiple possibilities of use.



0913F（1 1/2”）hose in a chemical plant



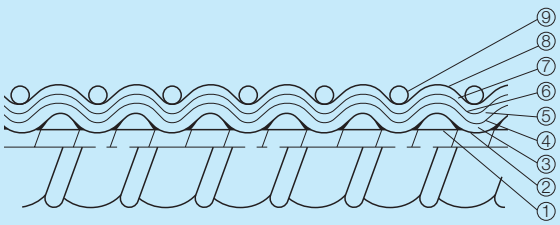
Easily by high flexibility.

Hose code letters		
F	H	S
Flat type	Fluorine film insert	Outer wire is stainless steel

Hose selection

Hose number	Main applications
0913F series ＊0913F, 0913F-S **0915F series** ＊0915F, 0915F-S	Almost every type of chemicals can be used, including abrasive and volatile substances. ＊The hose, including its external surface, does not suffer the effect of liquids even when dipped directly in the tank. Note, however, that terminal fittings must fulfill special specifications. ＊Hoses of this series may undergo wear when used outdoors under direct sunlight or when dragged. Please avoid such kind of usage.
0951F series ＊0951F, 0951F-S, 0951F-H, 0951F-HS	Appropriate for abrasive chemicals containing inorganic chemicals such as sulfuric or hydrochloric acid. ＊Hoses of this series have lower electric conductivity. Please avoid the use of chemicals that need measures against electrostatic discharge.
0969LF series ＊0969LF, 0969LF-S, 0969LF-H, 0969LF-HS	Almost every type of chemicals can be used, including abrasive and volatile substances.
0969F series ＊0969F, 0969F-S, 0969F-H, 0969F-HS	Almost every type of chemicals can be used, including abrasive and volatile substances. ＊Hoses of this series have diameters of 4 inches or more.
0998 series ＊0998, 0998-S, 0998-H, 0998-HS	Appropriate for abrasive chemicals such as strong sulfuric acid, hydrochloric acid, phosphoric acid, and others. ＊Hoses of this series have lower electric conductivity. Please avoid the use of chemicals that need measures against electrostatic discharge. ＊Hoses of this series have diameters of 4 inches or more.

Construction



Item	Part name	0913F	0913F-S	0915F	0951F	0969LF 1/2”～4”	0969F 4”～10”	0998
1	Inner wire	Stainless steel	Stainless steel	Stainless steel	Fluorine coating	Stainless steel	Stainless steel	Fluorine coating
2	Inner fabric	P.P	P.P	Special P.P film	P.P	P.P	P.P	P.P
3	Film	P.P	P.P	P.P	P.P	P.P	P.P	P.P
4	Tube	P.A/P.P	P.A/P.P	P.A/P.P	P.A/P.P	P.A/P.P	P.A/P.P	P.A/P.P
5	Middle fabric	—	—	—	—	—	P.P	P.P
6	Film	P.P	P.P	P.P	P.P	P.P	P.P	P.P
7	Middle fabric	—	—	P.P	P.P	P.P	P.P	P.P
8	Outer cover	P.P	P.P	P.P	PVC coat fabric	PVC coat fabric	PVC coat fabric	PVC coat fabric
9	Outer wire	galvanized steel	Stainless steel	galvanized steel	galvanized steel	galvanized steel	galvanized steel	galvanized steel
10	(Option)	—	—	—	Stainless steel	Stainless steel	Stainless steel	Stainless steel

Chemical Hose

specification

1. For compatibility with different types of fluid, see appendix in P.20 - P.25.
2. Chemicals that are not listed in the table or listed as incompatible may be used depending on conditions. For more information, contact us.
3. These hoses may not be used with the following chemicals:
   ＜Liquid bromine / chlorine gas / chlorosulfonic acid / fuming sulfuric acid / fuming nitric acid＞
4. Typical temperature range：-20℃ to +80℃
   For use with temperatures above +80℃, contact us in advance.

Hose number	Nominal inner diameter mm (in)	Outer diameter mm	Minimum bending radius mm	Maximum pressure MPa (kgf/cm2)	Weight kg/m	Maximum product length m	Color and material of outer cover	Color of name tape
0913F **0915F** (NOTE) 1/2" size is available only for 0915 and 0915S with round inner wire.	13 (1/2")	22	50	1.0 (10.5)	0.4	12	Gray fabric	N/A
	19 (3/4")	29	75		0.5	20		
	25 (1")	35	100		0.6			
	32 (1 1/4")	42	110		0.8			
	38 (1 1/2")	50	125		1.2			
	50 (2")	63	130		1.6			
	65 (2 1/2")	76	150		2.0			
	75 (3")	88	180		2.3			
0951F	19 (3/4")	30	100	1.4 (14.0)	0.8	20	Green PVC coat fabric	Blue
	25 (1")	39	110		0.9			
	32 (1 1/4")	46	125		1.2			
	38 (1 1/2")	50	150		1.5			
	50 (2")	66	180		1.8			
	65 (2 1/2")	80	200		2.6			
	75 (3")	93	220		3.2			
0969LF (NOTE) Only 1/2" size has round inner wire.	13 (1/2")	22	50	1.4 (14.0)	0.4	12	Green PVC coat fabric	Red
	19 (3/4")	30	75		0.6	20		
	25 (1")	37	100		0.7			
	32 (1 1/4")	44	110		0.9			
	38 (1 1/2")	50	150		1.2			
	50 (2")	64	170		1.9			
	65 (2 1/2")	78	200		2.1			
	75 (3")	91	250		3.1			
	100 (4")	116	300	0.5 (5.0)	5.0			
0969F **0998** (NOTE) Only 10" size has round inner wire.	100 (4")	123	500	1.4 (14.0)	7.2	20	Green PVC coat fabric	Orange
	114 (4 1/2")	135	550		8.2	15		
	125 (5")	148	600		8.8			
	150 (6")	175	650		10.8			
	200 (8")	232	1000	1.0 (10.5)	17.5	10		
	250 (10")	287	1200		21.0			

＊Outer diameter values are only for reference.
＊Contact us for chemical tanker hoses because they have special specifications.
＊The hoses are manufactured so that the safety factor is 5 times the maximum pressure for 1.0 MPa and 4 times for 1.4 MPa.
＊0998 hose is only available in nominal diameter size 4" - 6".

Precautions

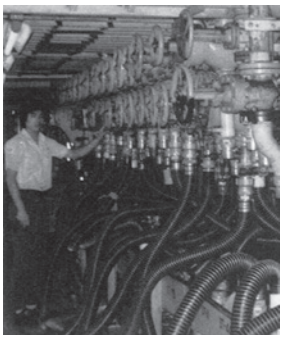
1. These hoses need to be flushed before changing the fluid. Use cold water with compatible detergent or warm water at the temperature of 80℃ or less for flushing.
2. If high purity is required for the fluid, flush the hose with the fluid after temporary flushing described above.
3. Before using the hose, read the catalog and check the specifications, purposes and applications of the hose.

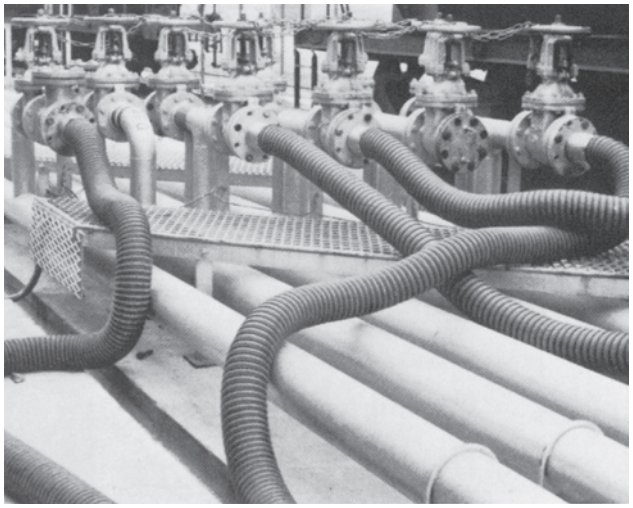
MEIJIFLEX® HOSE

Oil & Solvent Hose

●Light weight, flexible, electrically conductive hoses●

Hoses of this oil/solvent series contain polypropylene (P.P.) as their main constituent component, are unbeatable in terms of durability, and embed thoroughgoing measures against electrostatic discharge.



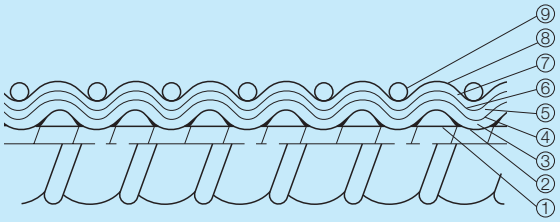


Hose selection

Hose code letters		
F	H	S
Flat type	Fluorine film insert	Outer wire is stainless steel

Hose number	Main applications
0901F series ＊0901F, 0901F-S	A wide range of applications that include gasoline, heavy oil, lubricant, animal and vegetable oil and BTX, ketone, thinner and ink, paint, alcohol, and others
0913F-W series ＊0913F-W (0915F-W)	The applications are the same as those of the 0901F series. ＊The hose, including its external surface, does not suffer the effect of liquids even when dipped directly in the tank. Note, however, that terminal fittings must fulfill special specifications. ＊These hoses may suffer wear when used outdoors under direct sunlight or when dragged. Please avoid such kind of usage.
0982 series ＊0982, 0982-S	The applications are the same as those of the 0901F series. ＊Hoses of this series have diameters of 4 inches or more.
0985F series ＊0985F, 0985F-S	Based on the 0982 series with internal wires replaced by triangular aluminum for weight saving and to improve discharge efficiency. ＊Hoses of this series have diameters of 4 inches or more.

Construction



Item	Part name	0901F	0913F-W	0982	0985F
1	Inner wire	galvanized steel	galvanized steel	galvanized steel	Aluminum
2	Inner fabric	P.P	P.P	P.P	P.P
3	Film	P.P	P.P	P.P	P.P
4	Tube	PA/P.P	PA/P.P	PA/P.P	PA/P.P
5	Middle fabric	—	—	P.P	P.P
6	Film	P.P	P.P	P.P	P.P
7	Middle fabric	P.P	P.P	P.P	P.P
8	Outer cover	PVC coat fabric	P.P	PVC coat fabric	PVC coat fabric
9	Outer wire	galvanized steel	galvanized steel	galvanized steel	galvanized steel
10	(Option)	Stainless steel	—	Stainless steel	Stainless steel

specification

1. For compatibility with different types of fluid, see appendix in P.20 - P.25.
2. Chemicals that are not listed in the table or listed as incompatible may be used depending on conditions. For more information, contact us.
3. Typical temperature range : -20℃ to +80℃
   For use with temperatures above +80℃, contact us in advance.

Hose number	Nominal inner diameter mm (in)	Outer diameter mm		Minimum bending radius mm	Maximum pressure MPa (kgf/cm2)	Weight kg/m		Maximum product length m	Color and material of outer cover	Color of name tape
0901F (NOTE) Only 1/2" size has round inner wire.	13 (1/2")	22		50	1.4 (14.0)	0.4		12	Blue PVC coat fabric	Red
	19 (3/4")	30		75		0.6		20		
	25 (1")	37		100		0.7				
	32 (1 1/4")	44		110		0.9				
	38 (1 1/2")	50		150		1.2				
	50 (2")	64		170		1.9				
	65 (2 1/2")	78		200		2.1				
	75 (3")	91		250		3.1				
	100 (4")	116		300	0.5 (5.0)	5.0				
0913F-W	19 (3/4")	29		75	1.0 (10.5)	0.5		20	Gray fabric	N/A
	25 (1")	35		100		0.6				
	32 (1 1/4")	42		110		0.8				
	38 (1 1/2")	50		125		1.2				
	50 (2")	63		130		1.6				
	65 (2 1/2")	76		150		2.0				
	75 (3")	88		180		2.3				
0982 (NOTE) Has round inner wire. **0985F**	100 (4")	127	*123	500	1.4 (14.0)	7.8	*4.9	20	Blue PVC coat fabric	Orange
	114 (4 1/2")	140	*135	550		8.5	*5.3	15		
	125 (5")	151	*148	600		8.8	*6.1			
	150 (6")	179	*175	650		11.8	*8.9			
	200 (8")	236	—	1000	1.0 (10.5)	19.8	—	10		
	250 (10")	287	—	1200		21.0	—			

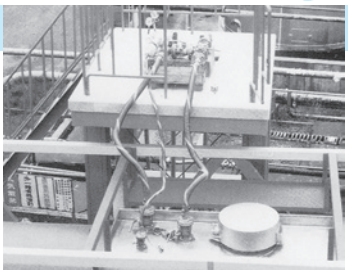
* Outer diameter values are only for reference.
* Values presented with an asterisk (*) are for 0985F hose.
* Contact us for chemical tanker hoses because they have special specifications.
* The hoses are manufactured so that the safety factor is 5 times the maximum pressure for 1.0 MPa and 4 times for 1.4 MPa.

Precautions

1. These hoses need to be flushed before changing the fluid. Use cold water with compatible detergent or warm water at the temperature of 80℃ or less for flushing.
2. If high purity is required for the fluid, flush the hose with the fluid after temporary flushing described above.
3. Before using the hose, read the catalog and check the specifications, purposes and applications of the hose.

Fluoroplastics Hose

MEIJIFLEX® HOSE



●Light weight, flexible, special chemical hoses●

These hoses are resistant to substances that cannot be handled by chemical hoses such as fuming sulfuric acid and concentrated nitric acid thanks to the use of fluorocarbon resin in the parts in contact with liquid. Their specifications in terms of resistance to a wide range of chemicals and durability are top-class, complementing the features of chemical hoses.

Hose selection

Hose number	Main applications
0970F series ＊0970F, 0970F-S	These hoses are considered to be the best of the chemical hoses series in terms of resistance to a wide range of chemicals including those showing abrasive properties. These hoses enhanced the range of applications involving corrosive liquids that contain hydrochloric and hypochlorous acid by using fluoroplastic insulation for internal wires in contact with liquid. ＊Hoses of this series have lower electric conductivity. Please avoid the use of chemicals that need measures against electrostatic discharge.k
0976F series ＊0976F, 0976F-S	These hoses are considered to be the best of the chemical hoses series in terms of resistance to a wide range of chemicals including those showing abrasive and volatile properties. ＊Hoses of the 0976F-WS series may undergo wear when used outdoors under direct sunlight or when dragged. Please avoid such kind of usage.
0978F series ＊0978F, 0978F-S	These are special hoses designed for use at temperatures higher than 80℃. The use of fluorocarbon resin on parts in contact with liquid permits excellent resistance to liquid chemicals.

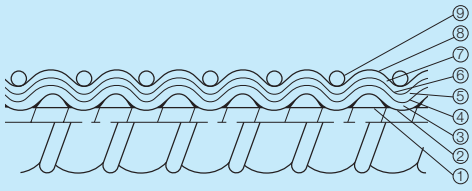
specification

1. For compatibility with different types of fluid, see appendix in P.20 - P.25.
2. Chemicals that are not listed in the table or listed as incompatible may be used depending on conditions. For more information, contact us.
3. These hoses may not be used with the following chemicals:
   ＜Bromine, chlorine / chlorosulfonic acid / metallic phosphorus / toxic gases such as cyanide fume＞
4. Typical temperature range: -20℃ to +80℃
   For use with temperatures above +80℃, contact us in advance.

Hose number	Nominal inner diameter mm (in)	Outer diameter mm	Minimum bending radius mm	Maximum pressure MPa (kgf/cm2)	Weight kg/m	Maximum product length m	Color and material of outer cover	Color of name tape
0970F 0976F 0978F (NOTE) Only 1/2" size has round inner wire.	13 (1/2")	22	50	1.4 (14.0)	0.4	12	Green PVC coat fabric (0970F) Green PVC coat fabric (0976F) Orange PVC coat fabric (0978F) White fabric (0978 1/2")	Yellow (0970F) Orange (0976F) Green (0978F) N/A (0978 1/2")
	19 (3/4")	30	100		0.6	20		
	25 (1")	37	100		0.7			
	32 (1 1/4")	44	150		0.9			
	38 (1 1/2")	50	170		1.2			
	50 (2")	64	200		1.9			
	65 (2 1/2")	78	250		2.3			
	75 (3")	91	280		3.2			
	100 (4")	123	500		7.8			
	114 (4 1/2")	135	550		8.5	15		
	125 (5")	148	600		8.8			
	150 (6")	175	650		10.8			

＊Outer diameter values are only for reference. ＊Contact us for chemical tanker hoses because they have special specifications. ＊The hoses are manufactured so that the safety factor is 5 times the maximum pressure for 1.0 MPa and 4 times for 1.4 MPa. ＊0970F and 0970F-S hoses are only available in nominal diameter size 3/4"-3". ＊Special model 0978F has enhanced heat resistivity up to 120℃. (Please inquire separately for hoses with a diameter between 4 and 6 inches.)

Construction



Item	Partname	0970F 3/4"～3"	0976F 1/2"～6"	0978F 3/4"～6"
1	Inner wire	Fluorine resin coating	Stainless steel	Stainless steel
2	Inner sheet	Fluorine resin	Fluorine resin	Fluorine resin
3	Film	Fluorine resin	Fluorine resin	Fluorine resin
4	Tube	PA／P.P	PA／P.P	PA／P.P
5	Middle fabric	—	P.P	—
6	Film	P.P	P.P	heat resistant resin
7	Middle fabric	P.P	P.P	heat resistant resin
8	Outer cover	PVC coat fabric	PVC coat fabric	PVC coat fabric
9	Outer wire	galvanized steel	galvanized steel	galvanized steel
	(Option)	Stainless steel	Stainless steel	Stainless steel

MEIJIFLEX® HOSE

Cryogenic Hose

●Cryogenic, flexible, liquefied gas hoses●

These hoses possess a combination of flexibility and high pressure characteristics even under extremely low temperatures of liquid nitrogen (LN2), liquefied natural gas (LNG), and liquefied petroleum gas (LNG). Furthermore, as these hoses are resistant to freezing and frost due to their excellent thermal insulation properties, they are the subject of much attention. Also, there are endless hidden applications for these hoses, such as a new application contributing to rocket launchings at the National Space Development Agency's Tanegashima Space Center.

Hose selection

※For use with temperatures above +80℃, contact us in advance.

Hose number	Operating temperature range	Typical fluids handled	Other compatible fluids
0933 series ＊0933, 0933-S	-200℃ to +80℃	LNG (-162℃) Ethylene (-103℃)	Propylene, Propane, Butane, Butadiene, Butylene, Ethane, VCM, Liquefied nitrogen, Liquefied carbon dioxide
0940 series ＊0940, 0940-S	-110℃ to +80℃	LPG VCM	Propylene, Propane, Butane, Butadiene, Butylene, Ethane, Ethylene, Liquefied carbon dioxide, Freon, Liquefied methyl, Methyl bromide, Acetaldehyde

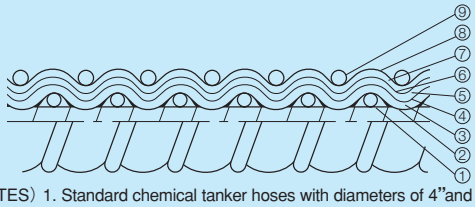
specification

Hose number	Nominal inner diameter mm (in)	Outer diameter mm	Minimum bending radius mm	Maximum pressure MPa (kgf/cm2) —50℃	Maximum pressure MPa (kgf/cm2) —200℃	Weight kg/m	Maximum product length m	Color and material of outer cover	Color of name tape
0933 0940	19(3/4")	29	64	2.2(22.0)	1.0(10.5)	0.4	20	White fabric	N/A
	25(1")	37	70			0.5			
	32(1 1/4")	43	89			0.7			
	38(1 1/2")	51	100			1.2			
	50(2")	63	140			2.0			
	65(2 1/2")	77	170			2.4			
	75(3")	92	200			4.4			
	100(4")	124	400			9.0			
	125(5")	152	600			10.4	15		
	150(6")	180	650			12.0			
	200(8")	236	1000	1.0(10.5)	—	18.7	10		
	250(10")	287	1200		—	22.5			

＊Outer diameter values are only for reference.
＊Contact us for chemical tanker hoses because they have special specifications.
＊These hoses are manufactured so that safety factor is 5 times the maximum pressure.

(NOTE) For use with higher pressure than specified above, contact use.

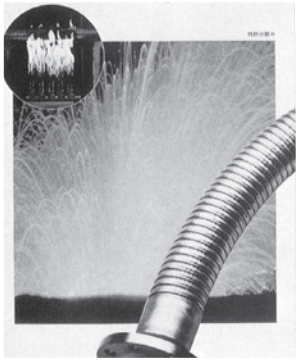
Construction



(NOTES) 1. Standard chemical tanker hoses with diameters of 4"and more are provided with outer cover of tightly wound hemp rope in order to increase abrasion resistance and moisture retention.

Item	Part name	0940	0933
1	Inner wire	Stainless steel	Stainless steel
2	Inner fabric	Nylon	Polyester
3	Film	Nylon	Polyester
4	Tube	PA／PP	PA／PP
5	Middle fabric	Nylon	Polyester
6	Film	Nylon	Polyester
7	Middle fabric	Nylon	Polyester
8	Outer cover	Nylon	Polyester
9	Outer wire	galvanized steel	galvanized steel
10	Option	Stainless steel	Stainless steel

Fire safe Hose



Hoses that stand high radiation heat of blast and electric furnaces

Features

- **Excellent flame resistance**
  These hoses employ aluminum, glass fiber, and polyester fiber in multiple layers in the external covering, and also heat-resistant materials such as fluorocarbon resin film, resulting in superb heat resistance.
  (Note) These flameproof properties exceed those of the basic cloth used in special fire-proof uniforms worn by fire fighters.
- **Easy handling**
- **High level of safety**
  Thanks to the structure of a few dozen layers, these hoses are not prone to rupture and withstand repeated bending without being damaged.
  End fittings are fitted by a special method so that they do not come apart easily.
- **Smaller bending radius compared to metal or rubber hoses, enabling easy handling.**

Hose selection

Hose number	Main applications
0944	Appropriate for vapor collecting pipe systems of loading arms used for cargo such as petroleum derivatives and chemicals.
0944-1	Appropriate for air ducts installed in places with high levels of radiant heat such as around blast furnaces of steel plants.
0944-2	Appropriate for delivering cooling water and lubricating oil (to be discussed separately) installed in places with high levels of radiant heat such as around blast furnaces of steel plants.
0944-3	Top-level specifications within the series of flame-resistant hoses. These hoses can be used in an extremely wide range of applications.
0944-4	Appropriate for cooling water piping systems that require insulation such as around blast furnaces of steel plants. (Joints and couplings use plastic.) (Remark) For usage in places subject to high levels of radiant heat, specify hose number 0944-6.
0946	Chemical flame-resistant hoses ＊These hoses result from improvements on the 0944-2 and are used with a wide range of chemicals due to the stainless steel employed in the internal wires of contact areas. ＊The hose number for external wires made of stainless steel is 0946-S.

specification

Typical temperature range: -20℃ to +80℃. Maximum ambient temperature range: +300℃
Maximum allowed temperature may differ depending on operation conditions. Contact us in advance.

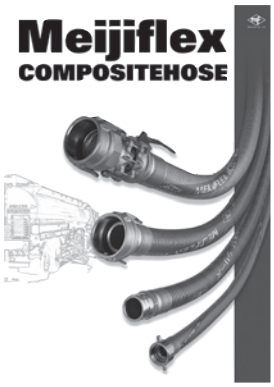
Hose number	Nominal inner diameter mm (in)	Outer diameter mm	Minimum bending radius mm	Maximum pressure MPa (kgf/cm2)	Weight kg/m	Maximum product length m	Color and material of outer cover	Color of name tape
0944	19 (3/4")	30	80	1.0 (10.5)	0.7	20	Silver, Silicon glass fabric	N/A
0944-1	25 (1")	38	100		0.9 (0.7)			
0944-2	32 (1 1/4")	46	120		1.1 (0.9)			
0944-3	38 (1 1/2")	52	130		1.3 (1.2)			
0944-4	50 (2")	66	140		2.0 (1.7)			
0946	65 (2 1/2")	80	180		3.0 (2.5)			
	75 (3")	93	250		4.1 (3.3)			
	100 (4")	119	280		5.4 (4.2)			
	100 (4")	127	500		9.4 (7.8)			
	114 (4 1/2")	140	550		10.2 (8.5)	15		
	125 (5")	151	600		10.6 (8.8)			
	150 (6")	179	650		14.2 (11.8)			

(NOTES) 1. Outer diameter values are only for reference.
2. Weight values (kg/m) in parentheses represent the weight of 0944 hose.
3. 0944 is available in size 1" and larger.

For details of these hoses, contact us for a separate catalog.

Tank Lorry Hose

＊Japanese Patent Number 3556278



Light weight, easy-to-handle, durable hoses

Features

- **High level of safety**
- **Protection against static discharge**
  - No risk of breaking of grounding cable. Both terminals of internal and external wires constituting the hose are connected to fittings to ensure permanent electric conductivity. In addition, a completely sealed construction enables increased safety.

    ＊Recommended by the National Institute of Industrial Safety of Ministry of Health, Labor and Welfare.
  - These hoses do not easily break or crook even if they are repeatedly bent, and unlike rubber hoses, they do not suddenly rupture even when they reach service life.
- **Easy handling**
  - Bending radius is about one third of rubber hoses, enabling easy in a tight space.
  - Handling in cold climates in winter is easy because the hoses are nearly unaffected by temperature.
- **Highly durable**
  - These hoses are about 2 to 3 times more durable than rubber hoses.
  - Unlike rubber or vinyl hoses, these hoses do not easily break near the end fittings after repeated connecting and disconnecting.

Hose selection

Hose number	Main applications
0955F-A	Light-weight hoses with a smooth inner surface to be used for both white and black oil.
0955F-R	These hoses have a smooth inner surface and are also appropriate for black oil such as heavy oil, lubricants, and vegetable oil. These hoses are effective for high-temperature liquids.
0951F series	These hoses are effective for metal-abrasive chemicals such as hydrochloric and hypochlorous acids.
0969LF series	A standard chemical hose targeted on solvents and most other types of chemicals.
0970F series	These hoses represent the best of the 0951F series in terms of resistance to abrasive chemicals such as hydrochloric and hypochlorous acid.
0976F series	The specifications of these hoses are top class, and they can be used for fuming sulfuric acid, concentrated nitric acid, and other substances that cannot be used with conventional chemical hoses.

specification

1. For compatibility with different types of chemicals, see appendix in P.20 - P.25.
2. Typical temperature range: -20 ℃ to +80 ℃.
   For use with temperatures above 80℃, contact us in advance.

Hose number	Nominal inner diameter mm (in)	Outer diameter mm	Minimum bending radius mm	Maximum pressure MPa (kgf/cm2)	Weight kg/m	Standard length m	Color and material of outer cover	Color of name tape
0955F-A (For both white and black oils)	65(2½")	80	200	1.0(10.5)	1.7	3～4	Orange PVC coat fabric Optional: blue, red, green	Red
	75(3")	92	220		2.0			
	90(3½")	104	260		2.3			
	100(4")	116	300		2.6			
0955F-R (For both white and black oils)	65(2½")	80	180	1.0(10.5)	2.3	3～4	Red PVC coat fabric (optional)	Yellow
	75(3")	91	210		2.9			
0951F (For chemicals)	50(2")	66	180	1.4(14.0)	1.8	3～10	Green PVC coat fabric	Blue
	65(2½")	80	200		2.6			
	75(3")	93	220		3.2			
0969LF (For chemicals)	50(2")	64	170	1.4(14.0)	1.9	3～10	Green PVC coat fabric	Red
	65(2½")	78	200		2.1			
	75(3")	91	250		3.1			

(NOTES) 1. See P.6 and separate catalog for 0970F and 0976F hoses.
2. Outer diameter values are only for reference.

For details of these hoses, contact us for a separate catalog.

Cargo Hose

World's first ever COMPOSITE HOSE with smooth internal surface

Features

- Transportation efficiency has been dramatically improved.
- In the newly-developed F series, the internal liquid flow is smoother thanks to a smoothed inner surface.
- This epoch-making hose reduces cargo loading time by approximately 15%.(It has been shown that the reduction in time may reach 20% in some cases.)
- Less amount of residual fluid after cargo loading makes internal flushing easier.
- In terms of safety, the hose has been qualified for the IMO chemical code by Nippon Kaiji Kyokai (NK) like the previous type.

Hose selection

Hose number	Main applications
0969F series (Chemical hose) 0969F, 0969F-S, 0969F-HS	This is a multi-purpose hose for general use with abrasive and volatile chemicals. This type of hose achieves lower pressure loss and permits easier cleaning due to a newly-developed smooth inner surface.
0969 series 0969, 0969-S, 0969-HS	This is a standard hose for use with volatile chemicals.
0982 series (Oil & Solvent hose) 0982, 0982-S	The range of applications of this hose is wide and includes solvents such as B.T.X ketone and alcohols.
0998 series (Chemical hose) 0998, 0998-S, 0998-H, 0998-HS	This hose is effective for abrasive chemicals such as strong sulfuric acid. However, do not use volatile chemicals because of their lower electric conductivity. ＊Sizes of up to 3" are classified as belonging to hose code 0951 series.
0976F series (Fluoroplastics hose) 0976F, 0976F-S	This is a multi-purpose hose with the highest specifications within the chemical hose series and can also be used with fuming sulfuric acid and concentrated nitric acid.
Special specifications product 0969-W, 0969-WS	This hose has chemical resistance on both inner and outer surfaces and is intended for operations inside liquid tanks (can be submerged in liquids).

specification

Typical temperature range: -20℃ to +65℃

Hose number	Nominal inner diameter mm (in)	Outer diameter mm	Minimum bending radius mm	Maximum pressure MPa (kgf/cm2)	Hose weight kg/m	Weight of fittings at both ends JIS 10K kg	Maximum product length m	Color and material of outer cover	Color of name tape
(Smooth type) **0969F-S 0969F-H**	100 (4)	123	500	1.0(10.5)	7.2	16.0	20	Green, PVC coat fabric	Orange
	114 (4 1/2)	135	550		8.2	17.0	15		
	125 (5)	148	600		8.8	22.0			
	150 (6)	175	650		10.8	32.0			
(Smooth and light type) **0969KF 0969KF-S 0969KF-HS**	100 (4)	123	500	1.0(10.5)	5.3	16.0	20	Green, PVC coat fabric	Orange
	114 (4 1/2)	135	550		6.1	17.0	15		
	125 (5)	148	600		6.3	22.0			
	150 (6)	176	650		8.5	32.0			

(NOTES) 1. All sizes of hoses are manufactured so that safety factor is 5 times (rupture pressure of 5.25 MPa or greater) pursuant to IMO BCH and IBC Codes.
2. Outer diameter values are only for reference.
3. Weight of fittings at both ends are only for reference.
4. Standard end fitting for 4 1/2" hoses is a 4" flange.

Fittings ＊registration of designs 1218998

- Meijiflex hoses are coupled with Meijiflex original fittings. Please note that Meijiflex will not bear responsibility for accidents involving fittings supplied and installed（re-fastened）by the user's request.
- Production other than the following metal fittings are also possible.

Male thread type-501

Female thread type-502

Flange type / fixed 503

Flange type 503（FRP）

Flange type 503（PVC）

Flange type loose-504

Exceed Flange 3

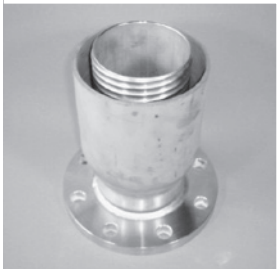
Exceed Flange 4

Pipe type 505

Lorry type male 506

Lorry type female 507

Lorry type female 507（with gripper）



Flange type 603

Quick coupling female C type

Quick coupling male E type

Ferrule

Non-contact joint

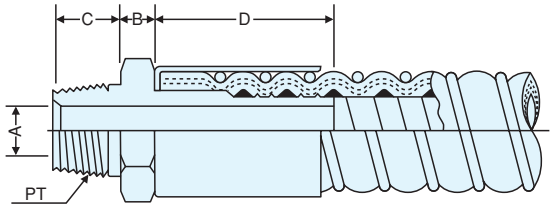
Joint materials

Eight standard materials are available: S (Mild steel), SUS (SUS 304), AL (aluminum), BC (Gunmetal), BS (Brass), P.P (Polypropylene), PVC (Vinyl chloride), FRP (Fiber reinforced plastic).
When ordering, use corresponding code to specify material.
Note that PP and PVC must be used under room temperature condition and fluid pressure of 0.5 MPa or lower (See P.14 for quick couplings).

Types of joints

Male thread type, female thread type, flange type, pipe type, lorry type (male and female), ferrule type, and quick coupling type are available, and their standard dimensions are according to the dimension table. Other special fittings can be prepared in a short lead time.
For special fittings, provide a drawing or a sample.

①Male thread type - 501

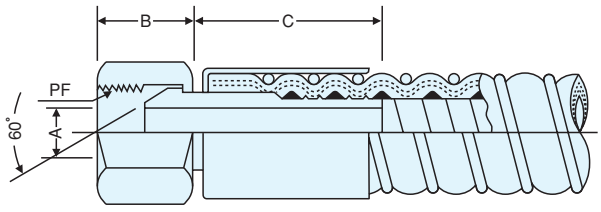


(Unit：mm)

Fitting number	Designation	A			B	C	D	Material
		S.SUS.BS	P.P	AL				
501—13	1/2"	9	—	—	10	18	50	S SUS BS AL P.P
501—19	3/4"	14	12	14	12	20	55	
501—25	1"	20	18	20	12	21	56	
501—32	1 1/4"	27	23	27	14	25	57	
501—38	1 1/2"	32	29	31	15	26	62	
501—50	2"	44	41	44	16	30	65	
501—65	2 1/2"	57	53	57	18	34	75	
501—75	3"	69	65	69	20	40	85	

＊Thread is according to JIS PT.
If threads of other standards or other forms are needed, please specify when ordering.

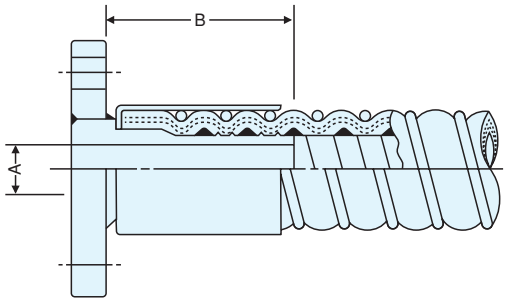
②Female thread type - 502



Fitting number	Designation	A	B	C	Material
502—13	1/2"	9	21	64	S SUS BS
502—19	3/4"	14	24	69	
502—25	1"	20	28	70	
502—32	1 1/4"	26	31	71	
502—38	1 1/2"	33	35	76	
502—50	2"	45	33	79	

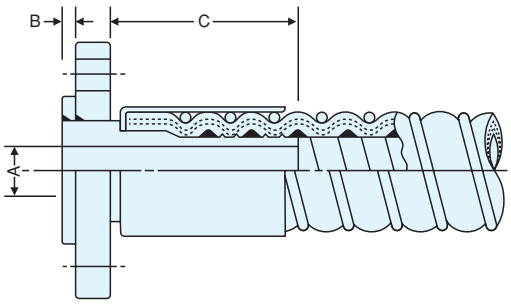
＊Thread is according to JIS PF. It has an external seat.
If threads of other standards or other forms are needed, please specify when ordering.

③Flange type fixed - 503



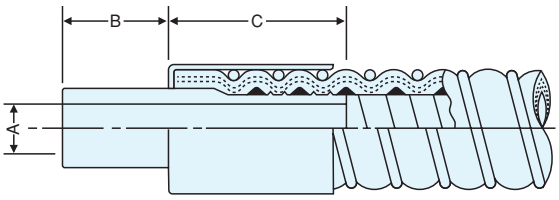
Fitting number	Designation	A			B	Flange standard	Material
		S,SUS,BS	P.P	AL			
503—19	3/4"	16	12		75	JIS 5K 10K 20K JPI·ANSI 150PSI 300PSI	S SUS AL P.P PVC FRP Teflon lining Polyethylene lining
503—25	1"	20	18		76		
503—32	1 1/4"	27	23		77		
503—38	1 1/2"	32	29		82		
503—50	2"	44	41		85		
503—65	2 1/2"	57	53		96		
503—75	3"	69	63	69	106		
503—100	4"	94	84	94	121		

④Flange type loose - 504



Fitting number	Designation	A	B	C	Flange standard	Material
504—19	¾”	16	4	71	JIS 5K 10K 20K JPI·ANSI 150PSI 300PSI	S SUS
504—25	1”	20	4	72		
504—32	1¼”	27	4	73		
504—38	1½”	32	4	78		
504—50	2”	44	4	81		
504—65	2½”	57	5	91		
504—75	3”	69	5	101		
504—100	4”	94	5	116		

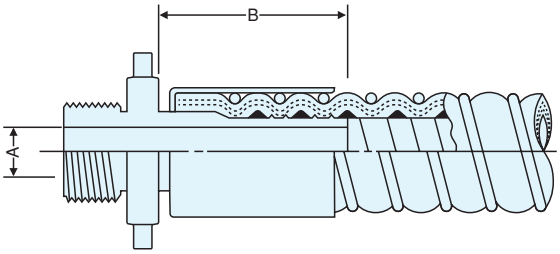
⑤Pipe type - 505



Fitting number	Designation	A			B	C	Material
		S,SUS,BS	P.P	AL			
505—19	¾”	16	12	14	50	55	
505—25	1”	20	18	20	50	56	S
505—32	1¼”	27	23	27	50	57	SUS
505—38	1½”	32	29	31	50	62	BS
505—50	2”	44	41	44	50	65	AL
505—65	2½”	57	53	57	50	75	P.P
505—75	3”	69	65	69	50	85	PVC
505—100	4”	94	84	94	50	100	

※Custom option with varied B dimension is available upon request.

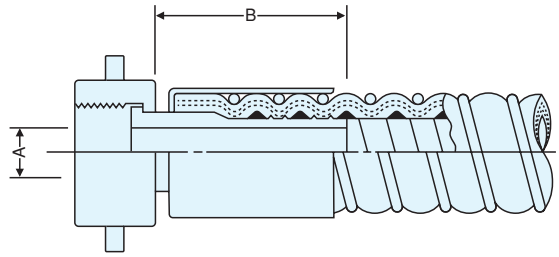
⑥Lorry type male - 506



Fitting number	Designation	A	B	Thread standard	Material
506—50	2”	44	75	M thread Tokyu, Kyokuto, Kawanishi, Kongo, JIS, Fire hose, Morita	BC SUS AL
506—65	2½”	57	85		
506—75	3”	69	95		

※See P.19 for thread dimension.

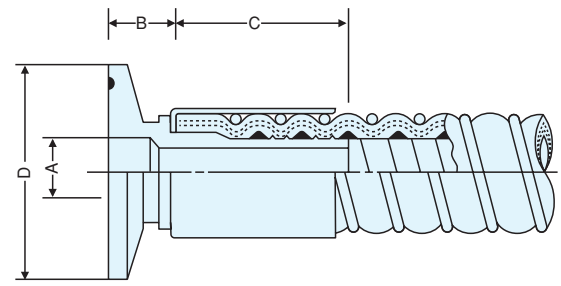
⑦Lorry type female - 507



Fitting number	Designation	A	B	Thread standard	Material
507—50	2”	44	75	M thread Tokyu, Kyokuto, Kawanishi, Kongo, JIS, Fire hose, Morita	BC SUS AL
507—65	2½”	57	85		
507—75	3”	69	95		

※See P.19 for thread dimension.

⑧Ferrule type



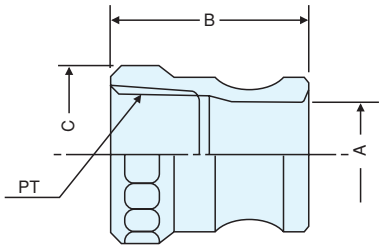
Fitting number	Designation	A	B	C	D	Standard	Material
Ferrule - 25	1”	23	24	56	50.5	IDF	SUS
Ferrule - 38	1.1½”	35.7	24	62	50.5		
Ferrule - 50	2”	47.8	25	65	64		

Joint & Coupling

●Special dust cap and dust plug are available for quick couplings. If needed, please specify “with cap” or “with plug” when ordering.
●Availability of materials for each form is indicated by following symbols.
○-Available ×-Not available
△-There are no hoses that can directly fit into this fitting. Use 501 (male thread) and then connect Type A or D.
●Standard packing for quick couplings is made of NBR. For different material, specify when ordering.
Refer to the catalog of quick coupling or contact us to select appropriate packing for fluids to be used.

⑨Quick coupling, adapter

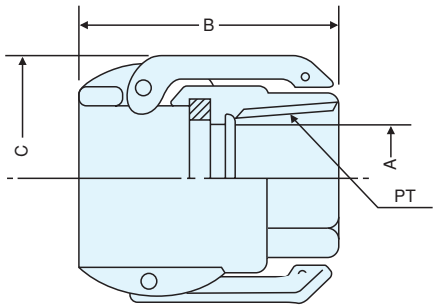
Ⓐ Adapter (male) Brand：OZ/OPW



Fitting number	Designation	A	B	C	Material			
					AL	BC	SUS	P.P
A— 19	3/4”	21	38	32	○	○	○	○
A— 25	1”	24	47	41	○	○	○	○
A— 32	1 1/4”	29	56	48	○	○	○	×
A— 38	1 1/2”	35	59	56	○	○	○	○
A— 50	2”	45	63	67	○	○	○	○
A— 65	2 1/2”	56	87	83	○	○	○	×
A— 75	3”	71	73	96	○	○	○	○
A—100	4”	99	78	127	○	○	○	×
A—150	6”	148	86	192	○	○	○	×

＊External thread type F is also available.

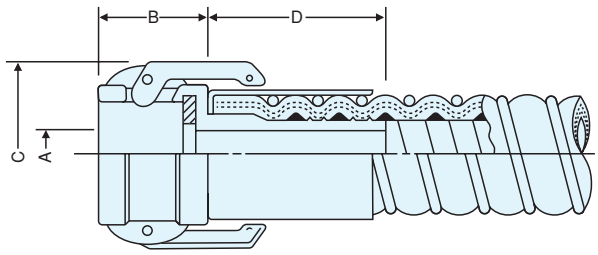
Ⓓ Coupler (female) Brand：OZ/OPW



Fitting number	Designation	A	B	C	Material			
					AL	BC	SUS	P.P
D— 19	3/4”	19	53	52	○	○	○	○
D— 25	1”	26	61	61	○	○	○	○
D— 32	1 1/4”	33	68	81	○	○	○	×
D— 38	1 1/2”	38	71	89	○	○	○	○
D— 50	2”	50	76	99	○	○	○	○
D— 65	2 1/2”	61	84	111	○	○	○	×
D— 75	3”	75	90	137	○	○	○	○
D—100	4”	94	96	166	○	○	○	×
D—150	6”	142	115	258	○	○	○	×

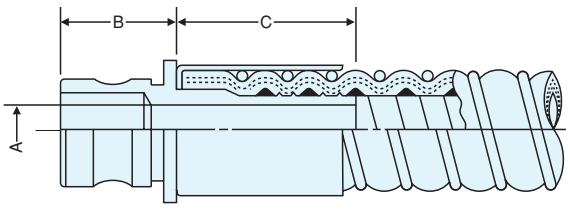
＊External thread type B is also available.

Ⓒ Quick coupling (female) Brand：OZ/OPW



Fitting number	Designation	A	B	C	D	Material			
						AL	BC	SUS	P.P
C— 19	3/4”	14	32	52	70	○	△	○	△
C— 25	1”	20	39	61	76	○	△	○	△
C— 32	1 1/4”	24	48	76	78	○	△	○	×
C— 38	1 1/2”	31	49	84	83	○	△	○	△
C— 50	2”	43	54	97	84	○	△	○	△
C— 65	2 1/2”	55	58	108	96	○	△	△	×
C— 75	3”	67	60	134	102	○	△	△	△
C—100	4”	90	62	164	126	○	△	△	×

Ⓔ Quick coupling (male) Brand：OZ/OPW



Fitting number	Designation	A	B	C	Material			
					AL	BC	SUS	P.P
E— 19	3/4”	14	38	70	○	△	○	△
E— 25	1”	20	44	76	○	△	○	△
E— 32	1 1/4”	24	51	78	○	△	○	×
E— 38	1 1/2”	30	54	84	○	△	○	△
E— 50	2”	43	58	78	○	△	○	△
E— 65	2 1/2”	54	64	97	○	△	△	×
E— 75	3”	67	66	100	○	△	△	△
E—100	4”	90	69	124	○	△	△	×

●Maximum operation pressure of quick couplings

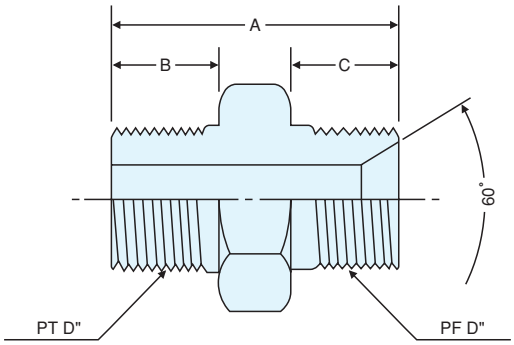
(Unit：MPa)

	1/2～3/4	1～2	2 1/2	3	4	5～6
Aluminum, Bronze	1.76	1.76	1.08	0.88	0.69	0.49
SUS	1.76	1.76	1.57	1.37	1.08	0.69
PP	—	0.69	—	0.39	—	—

※PP may be used under room temperature conditions only.

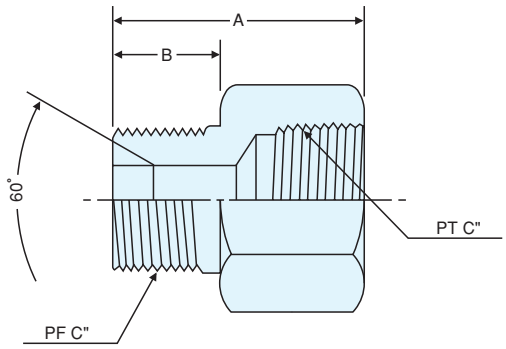
⑩Adapter

Ⓖ Adapter (male, male)



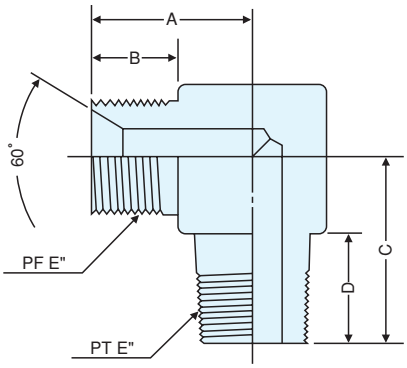
Fitting number	Designation	A	B	C	D	Material
G—19	3/4"	52	20	20	3/4	S SUS BS
G—25	1"	55	21	21	1	
G—32	1 1/4"	63	25	24	1 1/4	
G—38	1 1/2"	63	25	24	1 1/2	
G—50	2"	75	30	28	2	

Ⓗ Adapter (male, female)



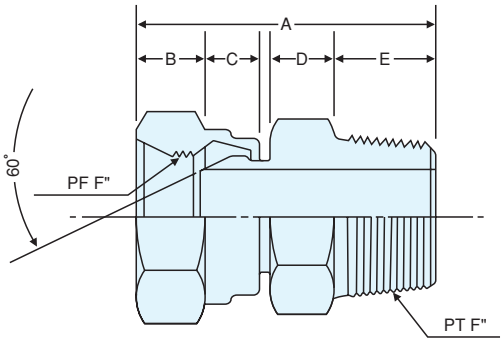
Fitting number	Designation	A	B	C	Material
H—19	3/4"	45	20	3/4	S SUS BS
H—25	1"	49	22	1	
H—32	1 1/4"	54	24	1 1/4	
H—38	1 1/2"	54	24	1 1/2	
H—50	2"	64	28	2	

Ⓘ Adapter (elbow)



Fitting number	Designation	A	B	C	D	E	Material
I—19	3/4"	35	20	43	28	3/4	S SUS BS
I—25	1"	41	22	50	34	1	
I—32	1 1/4"	49.5	25	59.5	37	1 1/4	
I—38	1 1/2"	52	25	63	39	1 1/2	
I—50	2"	64	32	74.5	41	2	

Ⓙ Adapter (male female union)



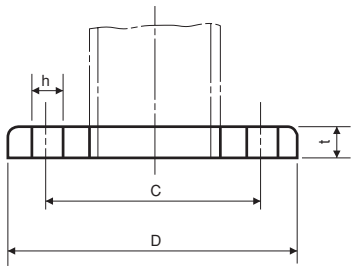
Fitting number	Designation	A	B	C	D	E	F	Material
J—19	3/4"	56	12	10.5	12	20	3/4	S SUS BS
J—25	1"	60	12	12.5	12	22	1	
J—32	1 1/4"	69	14	14	14	25	1 1/4	
J—38	1 1/2"	69	14	14.5	14	25	1 1/2	
J—50	2"	82	17	17.5	17	30	2	

Flange standards

● Standard dimension table for JIS 5 kg/㎠ pipe flange

(Unit: mm)

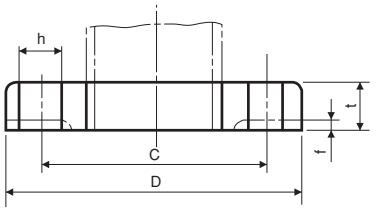
Nominal diameter A	Nominal diameter B	Outer diameter of connecting steel pipe	Flange outer diameter D (A×B)	Flange dimensions t: Steel and malleable cast iron	Flange dimensions t: Cast iron	Flange dimensions f	Flange dimensions Diameter g	Bolt holes Pitch circle diameter C	Bolt holes Number	Bolt holes Bolt hole diameter h	Nominal bolt size
15	½	21.7	80(80×50)	9	12	1	(44)	60	4 (2)	12	M10
20	¾	27.2	85	10	14	1	(49)	65	4	12	M10
25	1	34.0	95	10	14	1	(59)	75	4	12	M10
32	1¼	42.7	115	12	16	2	(70)	90	4	15	M12
40	1½	48.6	120	12	16	2	(75)	95	4	15	M12
50	2	60.5	130	14	16	2	(85)	105	4	15	M12
65	2½	76.3	155	14	18	2	(110)	130	4	15	M12
80	3	89.1	180	14	18	2	(121)	145	4	19	M16
(90)	3½	101.6	190	14	18	2	(131)	155	4	19	M16
100	4	114.3	200	16	20	2	(141)	165	8	19	M16
125	5	139.8	235	16	20	2	(176)	200	8	19	M16
150	6	165.2	265	18	22	2	(206)	230	8	19	M16
200	8	216.3	320	20	24	2	(252)	280	8	23	M20
250	10	267.4	385	22	26	2	(317)	345	12	23	M20

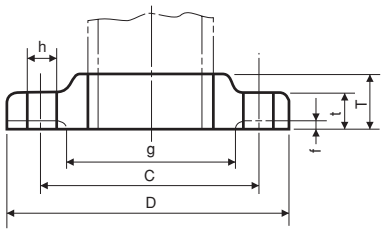


● Standard dimension table for JIS 10 kg/㎠ pipe flange

(Unit: mm)

Nominal diameter A	Nominal diameter B	Outer diameter of connecting steel pipe	Flange outer diameter D	Flange dimensions t: Steel and malleable cast iron	Flange dimensions t: Cast iron	Flange dimensions f	Flange dimensions Diameter g	Bolt holes Pitch circle diameter C	Bolt holes Number	Bolt holes Bolt hole diameter h	Nominal bolt size
15	½	21.7	95	12	16	1	(51)	70	4	15	M12
20	¾	27.2	100	14	18	1	(56)	75	4	15	M12
25	1	34.0	125	14	18	1	(67)	90	4	19	M16
32	1¼	42.7	135	16	20	2	(76)	100	4	19	M16
40	1½	48.6	140	16	20	2	(81)	105	4	19	M16
50	2	60.5	155	16	20	2	(96)	120	4	19	M16
65	2½	76.3	175	18	22	2	(116)	140	4	19	M16
80	3	89.1	185	18	22	2	(126)	150	8	19	M16
(90)	3½	101.6	195	18	22	2	(136)	160	8	19	M16
100	4	114.3	210	18	24	2	(151)	175	8	19	M16
125	5	139.8	250	20	24	2	(182)	210	8	23	M20
150	6	165.2	280	22	26	2	(212)	240	8	23	M20
200	8	216.3	330	22	26	2	(262)	290	12	23	M20
250	10	267.4	400	24	30	2	(324)	355	12	25	M22
300	12	318.5	445	24	32	3	(368)	400	16	25	M22

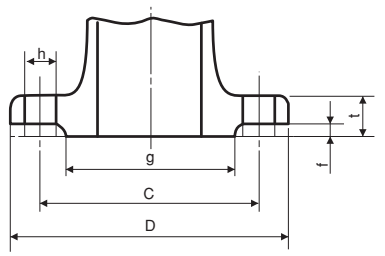


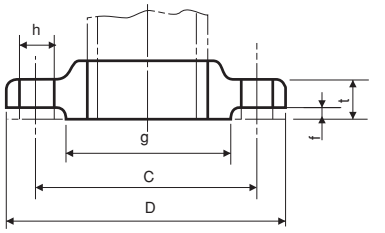


● Standard dimension table for JIS 20 kg/㎠ pipe flange

(Unit: mm)

Nominal diameter A	Nominal diameter B	Outer diameter of connecting steel pipe	Flange dimensions Outer diameter D	Flange dimensions t	Flange dimensions f	Flange dimensions Diameter g	Bolt holes Pitch circle diameter C	Bolt holes Number	Bolt holes Bolt hole diameter h	Nominal bolt size
15	½	21.7	95	14	1	(51)	70	4	15	M12
20	¾	27.2	100	16	1	(56)	75	4	15	M12
25	1	34.0	125	16	1	(67)	90	4	19	M16
32	1¼	42.7	135	18	2	(76)	100	4	19	M16
40	1½	48.6	140	18	2	(81)	105	4	19	M16
50	2	60.5	155	18	2	(96)	120	8	19	M16
65	2½	76.3	175	20	2	(116)	140	8	19	M16
80	3	89.1	200	22	2	(132)	160	8	23	M20
(90)	3½	101.6	210	24	2	(145)	170	8	23	M20
100	4	114.3	225	24	2	(160)	185	8	23	M20
125	5	139.8	270	26	2	(195)	225	8	25	M22
150	6	165.2	305	28	2	(230)	260	12	25	M22
200	8	216.3	350	30	2	(275)	305	12	25	M22
250	10	267.4	430	34	2	(345)	380	12	27	M24
300	12	318.5	480	35	3	(395)	430	16	27	M24





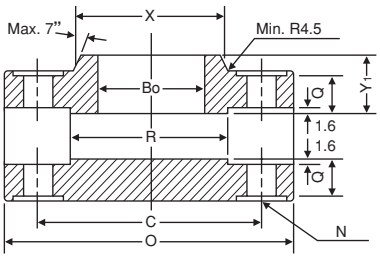
● Standard dimension table for forged steel flanges of Class 150 LB of JPI/ANSI

(Unit: mm)

Nominal diameter		Flange outer diamete	Flange inner diameter (Insert type Socket type)	Hub base diameter	Flat seat diameter	Flange thickness (Min.)	Total length		Bold holes			Nominal bolt size	Bolt length	
							Insert type Socket type	But-welding type	Pitch circle diameter	Number	Bolt hole diameter		Stud bolt	Hex bolt
A	B	O	Bo	X	R	Q	Y_1	Y	C	N				
15	½	89	22.2	30.2	34.9	11.5	16	47.6	60.3	4	16	UNC 1/2	60	45
20	¾	98	27.7	38.1	42.9	13.0	16	52.4	69.9	4	16	UNC 1/2	60	50
25	1	108	34.5	49.2	50.8	14.5	17	55.6	79.4	4	16	UNC 1/2	65	50
32	1¼	117	43.2	58.7	63.5	16.0	21	57.1	88.9	4	16	UNC 1/2	65	56
40	1½	127	49.1	65.1	73.2	17.5	22	61.9	98.6	4	16	UNC 1/2	70	56
50	2	152	61.1	77.6	92.1	19.5	25	63.5	120.6	4	19	UNC 5/8	80	63
65	2½	178	77.1	90.5	104.8	22.5	29	69.8	139.7	4	19	UNC 5/8	85	71
80	3	191	90.0	107.9	127.0	24.0	30	69.8	152.4	4	19	UNC 5/8	90	80
(90)	3½	216	102.6	122.2	139.7	24.0	32	71.4	177.8	8	19	UNC 5/8	90	80
100	4	229	115.4	134.9	157.2	24.0	33	76.2	190.5	8	19	UNC 5/8	90	80
125	5	254	141.2	163.5	185.7	24.0	36	88.9	215.9	8	22	UNC 3/4	95	80
150	6	279	166.6	192.1	215.9	25.5	40	88.9	241.3	8	22	UNC 3/4	100	80
200	8	343	218.0	246.1	269.9	29.0	44	101.6	298.4	8	22	UNC 3/4	110	90
250	10	406	269.5	304.8	323.8	30.5	49	101.6	361.9	12	26	UNC 7/8	120	100
300	12	483	321.0	365.1	381.0	32.0	56	114.3	431.8	12	26	UNC 7/8	120	100

＊This table is based on ANSI B 16.5-1977 (metric unit).

● Insert welding type flange (Flat seat type)



● Blind flange (Flat seat type)

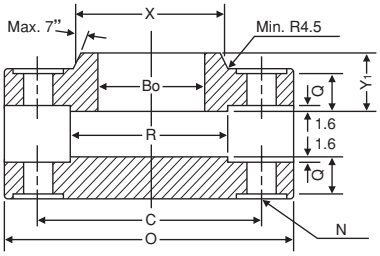
● Standard dimension table for forged steel flanges of Class 300 LB of JPI/ANSI

(Unit: mm)

Nominal diameter		Flange outer diamete	Flange inner diameter (Insert type Socket type)	Hub base diameter	Flat seat diameter	Flange thickness (Min.)	Total length		Bold holes			Nominal bolt size	Bolt length	
							Insert type Socket type Thread-in type	But-welding type	Pitch circle diameter	Number	Bolt hole diameter		Stud bolt	Hex bolt
A	B	O	Bo	X	R	Q	Y_1	Y	C	N				
15	½	95	22.2	38.1	35.1	14.5	22	52.4	66.5	4	16	UNC 1/2	65	50
20	¾	117	27.7	47.6	42.9	16.0	25	57.1	82.6	4	19	UNC 5/8	75	63
25	1	124	34.5	53.8	50.8	17.5	27	61.9	88.9	4	19	UNC 5/8	75	63
32	1¼	133	43.2	63.5	63.5	19.5	27	65.1	98.6	4	19	UNC 5/8	80	63
40	1½	155	49.1	69.9	73.2	21.0	30	68.3	114.3	4	22	UNC 3/4	90	71
50	2	165	61.1	84.1	91.9	22.5	33	69.8	127.0	8	19	UNC 3/4	90	71
65	2½	190	77.1	100.0	104.6	25.5	38	76.2	149.4	8	22	UNC 3/4	100	80
80	3	210	90.0	117.5	127.0	29.0	43	79.4	168.1	8	22	UNC 3/4	110	90
(90)	3½	229	102.6	133.3	139.7	30.5	44	81.0	184.2	8	22	UNC 3/4	110	90
100	4	254	115.4	146.0	157.2	32.0	48	85.7	200.2	8	22	UNC 3/4	110	100
125	5	279	141.2	177.8	185.7	35.0	51	98.4	235.0	8	22	UNC 3/4	120	100
150	6	318	166.6	206.4	215.9	37.0	52	98.4	269.7	12	22	UNC 3/4	120	112
200	8	381	218.0	260.3	269.7	41.5	62	111.1	330.2	12	26	UNC 7/8	140	125
250	10	444	269.5	320.7	323.8	48.0	67	117.5	387.4	16	29	UNC 1/8	160	140
300	12	520	321.0	374.6	381.0	51.0	73	130.2	450.8	16	32	UNC 11/8	170	140

＊This table is based on ANSI B 16.5-1977 (metric unit).

● Insert welding type flange (Flat seat type)



● Blind flange (Flat seat type)

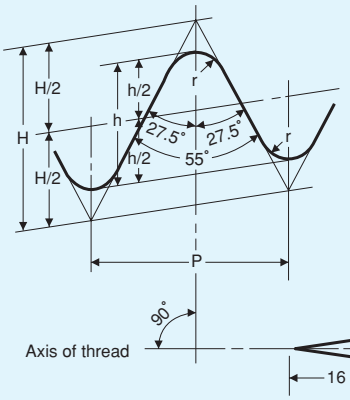
Thread standards

● PT thread standard dimension table (JIS standard)

(Unit:mm)

Thread nominal size	Thread				Gauge diameter			Position of gauge diameter			Tolerance on D, D2 and D1 of parallel internal thread ±	Effective thread length (minimum)				Size of carbon steel pipe for piping (for reference)	
					External thread			External thread		Internal thread		External thread	Internal thread				
								From pipe end		At pipe end		From the position of gauge diameter to larger diameter end f	When imperfect thread portion exists		When no imperfect thread exists	Outer diameter	Thickness
	Number of threads (Per 25.4 mm) n	Pitch P (for reference)	Height of thread h	Radius r or r'	Major diameter d	Pitch diameter d2	Minor diameter d1	Gauge length a	Axial tolerance ±b	Axial tolerance ±c			Taper internal thread	Parallel internal thread	Taper thread / Parallel internal thread		
					Internal thread								From the position of gauge diameter to larger diameter end ℓ	From end of pipe or coupler ℓ'	From the gauge diameter, pipe or pipe joint end t		
					Major diameter D	Pitch diameter D2	Minor diameter D1										
PT 1/8	28	0.9071	0.581	0.12	9.728	9.147	8.566	3.97	0.91	1.13	0.071	2.5	6.2	7.4	4.4	10.5	2.0
PT 1/4	19	1.3368	0.856	0.18	13.157	12.301	11.445	6.01	1.34	1.67	0.104	3.7	9.4	11.0	6.7	13.8	2.3
PT 3/8	19	1.3368	0.856	0.18	16.662	15.806	14.950	6.35	1.34	1.67	0.104	3.7	9.7	11.4	7.0	17.3	2.3
PT 1/2	14	1.8143	1.162	0.25	20.995	19.793	18.631	8.16	1.81	2.27	0.142	5.0	12.7	15.0	9.1	21.7	2.8
PT 3/4	14	1.8143	1.162	0.25	26.441	25.729	24.117	9.53	1.81	2.27	0.142	5.0	14.1	16.3	10.2	27.2	2.8
PT 1	11	2.3091	1.479	0.32	33.249	31.770	30.291	10.39	2.31	2.89	0.181	6.4	16.2	19.1	11.5	34.0	3.2
PT 1 1/4	11	2.3091	1.479	0.32	41.910	40.431	38.952	12.70	2.31	2.89	0.181	6.4	18.5	21.4	13.4	42.7	3.5
PT 1 1/2	11	2.3091	1.479	0.32	47.803	46.324	44.845	12.70	2.31	2.89	0.181	6.4	18.5	21.4	13.4	48.6	3.5
PT 2	11	2.3091	1.479	0.32	59.614	58.135	56.656	15.88	2.31	2.89	0.181	7.5	22.8	25.7	16.9	60.5	3.8
PT 2 1/2	11	2.3091	1.479	0.32	75.184	73.705	72.226	17.46	3.46	3.46	0.216	9.2	26.7	30.1	18.6	76.3	4.2
PT 3	11	2.3091	1.479	0.32	87.884	86.405	84.926	20.64	3.46	3.46	0.216	9.2	29.8	33.3	21.1	89.1	4.2
PT 3 1/2	11	2.3091	1.479	0.32	100.330	98.851	97.372	22.23	3.46	3.46	0.216	9.2	31.4	34.9	22.4	101.6	4.2
PT 4	11	2.3091	1.479	0.32	113.030	111.551	110.072	25.40	3.46	3.46	0.216	10.4	35.8	39.3	25.9	114.3	4.5
PT 5	11	2.3091	1.479	0.32	138.430	136.951	135.472	28.58	3.46	3.46	0.216	11.5	40.1	43.5	29.3	139.8	4.5
PT 6	11	2.3091	1.479	0.32	163.830	162.351	160.872	28.58	3.46	3.46	0.216	11.5	40.1	43.5	29.3	165.2	5.0
PT 7	11	2.3091	1.479	0.32	189.230	187.751	186.272	34.93	5.08	5.08	0.318	14.0	48.9	54.0	35.1	190.7	5.3
PT 8	11	2.3091	1.479	0.32	214.630	213.151	211.672	38.10	5.08	5.08	0.318	14.0	52.1	57.2	37.6	216.3	5.8
PT 9	11	2.3091	1.479	0.32	240.030	238.551	237.072	38.10	5.08	5.08	0.318	14.0	52.1	57.2	37.6	241.8	6.2
PT 10	11	2.3091	1.479	0.32	265.430	263.951	262.472	41.28	5.08	5.08	0.318	14.0	55.3	60.4	40.2	267.4	6.6
PT 12	11	2.3091	1.479	0.32	316.230	314.751	313.272	41.28	6.35	6.35	0.397	17.5	58.8	65.1	41.9	318.5	6.9

● Basic profile applied to taper external and taper internal threads



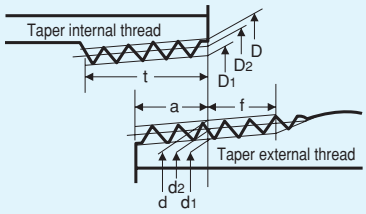
Thick continuous line shows basic profile.

$P = \frac{25.4}{n}$

H=0.960237 P

h=0.640327 P

r=0.1372878 P

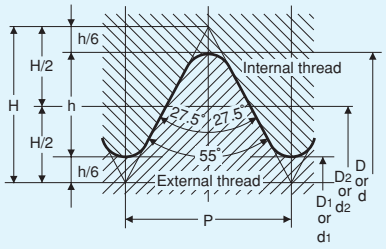


● PF thread standard dimension table (JIS standard)

(Unit:mm)

Thread nominal size	Number of threads (Per 25.4 mm) n	Pitch P (for reference)	Height of thread h	Radius r	External thread / Internal thread	Major diameter d / D	Pitch diameter d2 / D2	Minor diameter d1 / D1
PF 1/8	28	0.9071	0.581	0.12		9.728	9.147	8.566
PF 1/4	19	1.3368	0.856	0.18		13.157	12.301	11.445
PF 3/8	19	1.3368	0.856	0.18		16.662	15.806	14.950
PF 1/2	14	1.8143	1.162	0.25		20.995	19.793	18.631
(PF 5/8)	14	1.8143	1.162	0.25		22.911	21.749	20.587
PF 3/4	14	1.8143	1.162	0.25		26.441	25.729	24.117
(PF 7/8)	14	1.8143	1.162	0.25		30.201	29.039	27.877
PF 1	11	2.3091	1.479	0.32		33.249	31.770	30.291
(PF 1 1/8)	11	2.3091	1.479	0.32		37.897	36.418	34.939
PF 1 1/4	11	2.3091	1.479	0.32		41.910	40.431	38.952
PF 1 1/2	11	2.3091	1.479	0.32		47.803	46.324	44.845
(PF 1 3/4)	11	2.3091	1.479	0.32		53.746	52.267	50.788
PF 2	11	2.3091	1.479	0.32		59.614	58.135	56.656
(PF 2 1/4)	11	2.3091	1.479	0.32		65.710	64.231	62.752
PF 2 1/2	11	2.3091	1.479	0.32		75.184	73.705	72.226
(PF 2 3/4)	11	2.3091	1.479	0.32		81.534	80.055	78.576
PF 3	11	2.3091	1.479	0.32		87.884	86.405	84.926
PF 3 1/2	11	2.3091	1.479	0.32		100.330	98.851	97.372
PF 4	11	2.3091	1.479	0.32		113.030	111.551	110.072
(PF 4 1/2)	11	2.3091	1.479	0.32		125.730	124.251	122.772
PF 5	11	2.3091	1.479	0.32		138.430	136.951	135.472
(PF 5 1/2)	11	2.3091	1.479	0.32		151.130	149.651	148.172
PF 6	11	2.3091	1.479	0.32		163.830	162.351	160.872

● Basic profile applied to parallel internal threads



Thick continuous line shows basic profile.

$P=\frac{25.4}{n}$

$H=0.960237\,P$

$h=0.640327\,P$

$r=0.1372878\,P$

$d_2=d-h$ $D_2=d2$

$d_1=d-2h$ $D_1=d1$

● Tank lorry thread standard dimension table

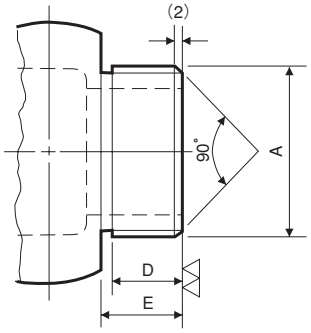
(Unit:mm)

Thread nominal size	Hose nominal size A	Hose nominal size B	A A/inch	B	C	D	E
PF 3/4	20	3/4"	26.441 14threads/	13	15	16	18
PF 1	25	1"	33.249 11threads/	15	17	18	20
PF 1 1/4	32	1 1/4"	41.910 11threads/	15	17	18	20
PF 11 1/2	40	1 1/2"	47.803 11threads/	15	17	18	20
64	50	2	M64P3	17	19	22	25
75	65	2 1/2"	M75P3	17	19	22	25
90	75	3"	M90P3	17	19	22	25
110	100	4"	M110P3	22	25	27	30
115	100	4"	M115P3	22	25	27	30

*1) For the purpose of distinguishing from threads of old standard, these are marked with letter "M" either punched or embossed. New threads are JIS BO207 metric fine threads.

2) Number of threads in dimension B and D is based on the length NOT including the chamfer dimension.

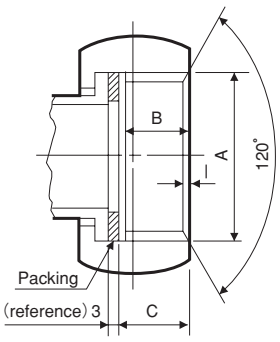
●External thread



● Old standard ● Thread dimension table (for reference)

Designation	Number of threads pre inch	Outer diameter of external thread	Applicable maker
2"	8	60	Tokyu
	11	59.6	JIS
2 1/2"	8	75	Tokyu
	8	72.3	Shell
	11	75.18	JIS
3"	8	87.567	Tokyu, Shell
	11	87.88	JIS

●Internal thread



Chemical Resistance Suitability Table

This suitability table was prepared based on past performances, the experiments we conducted and by comprehensively examining documents supplied by the manufacturers of materials.
Use the table as reference material for selecting hoses, since the results vary particularly for chemicals, depending on the conditions, such as concentration, temperature, pressure and movement.

- Principal chemical names are listed in this suitability table. Contact us for the availability of the chemicals not listed in the table.
- Descriptions of this suitability table are intended for wetted materials.
- Do not use hose number B (0951F, 0970F and 0998) for volatile chemicals for which electrostatic steps must be taken seriously, even if they satisfy material requirements.
- Items in the list marked with an asterisk (*) are recommended for use with hoses inserted with a fluorine film, bearing the code "H" at the end of the hose number (example: 0951F-H).
- General working temperature range : -20℃ to +80℃
  Note 1 : Be aware that the tolerance varies, depending on individual chemicals, as well as the working conditions.
  Note 2 : Contact us in advance if the working temperature is +80℃ or higher, since heat resistant specifications apply also for the fitting mounting amethods for working temperatures +80℃ and higher.
- Contact us in advance if there are any questions regarding this suitability table.

No.		Chemical name	Hose number					Terminal fittings		
			A	B	C	D	E	Iron	SUS	Resin
A	1	Acetaldehyde	●	×	×	×	●	×	●	
	2	Acetaldehyde water solution, 40%	●	×	×	●	●	×	●	
	3	Acetate water solution	●	●	×	●	●	×	●	
	4	Acetic acid (anhydride)	●	×	×	×	●	×	●	
	5	Acetic acid, 40%	●	●	×	●	●	×	●	
	6	Acetone	*●	×	*●	×	●	●	●	
	7	Acetone cyanohydrin	●	×	×	×	●	●	●	
	8	Acetonitrile	●	×	●	×	●	●	●	
	9	Acetophenone	●	×	●	×	●	●	●	
	10	Acrylamide solution, 50% or less	●	●	×	●	●	●	●	
	11	Acrylic acid	●	×	×	×	●	×	●	
	12	Acrylic emulsion	●	●	×	●	●	×	●	
	13	Acrylonitrile	●	×	●	×	●	●	●	
	14	Adipic acid	●	●	×	●	●	×	●	
	15	Aircraft turbine fuel	●	×	●	×	●	●	●	
	16	Alkyl benzene sulphonic acid	●	●	×	●	●	×	●	
	17	Allyl alcohol	●	×	●	×	●	●	●	
	18	Allyl chloride	●	×	●	×	●	●	●	
	19	Aluminum chloride water solution	●	●	×	●	●	×	●	
	20	Aluminum fluoride water solution	●	●	×	●	●	×	●	
	21	Aluminum sulfate	*●	*●	×	●	●	●	●	
	22	Alunite water solution	●	●	×	●	●	×	●	
	23	2-(2-Aminoethoxy) ethanol	●	×	×	×	●	●	●	
	24	Aminoethyl ethanol amine	●	●	●	●	●	●	●	
	25	N-Aminoethyl piperazine	●	●	●	●	●	●	●	
	26	Ammonia anhydride solution	●	●	●	●	●	●	●	
	27	Ammonia aqueous	●	●	●	●	●	●	●	
	28	Ammonia salt solution	●	●	×	●	●	×	●	
	29	Ammonium sulphide solution (45% or less)	●	●	×	●	●	×	●	
	30	n-Amyl acetate	●	×	●	×	●	●	●	
	31	Amyl acetate, commercial	●	×	●	×	●	●	●	
	32	Aniline	●	×	●	×	●	●	●	
	33	Anisole	●	●	×	●	●	×	●	
	34	Antimony chloride water solution	●	●	×	●	●	×	●	
	35	Antimony trichloride anhydride solution	×	●	×	●	●	×	●	
	36	Arsenic water solution	●	●	×	●	●	×	●	
	37	Aviation fuel (JP4 and up)	●	×	●	×	●	●	●	
B	38	Barium saline solution	●	●	×	●	●	×	●	

No.		Chemical name	Hose number					Terminal fittings		
			A	B	C	D	E	Iron	SUS	Resin
B	39	Benzaldehyde solution	●	×	×	×	●	×	●	
	40	Benzene	●	×	●	×	●	●	●	
	41	Benzene sulphonyl chloride	●	×	×	×	●	×	●	
	42	Benzoic acid	●	●	×	●	●	×	●	
	43	Benzoyl chloride	*●	×	×	×	●	×	●	
	44	Benzyl acetate	●	●	●	●	●	●	●	
	45	Benzyl alcohol	●	×	●	×	●	●	●	
	46	Benzyl chloride	●	×	×	×	●	×	●	
	47	Bismuth chloride solution	●	●	×	●	●	×	●	
	48	Borax	●	●	×	●	●	×	●	
	49	Boric acid	●	●	×	●	●	×	●	
	50	Bromic acid	×	●	×	●	×	×	×	●
	51	Butadiene	●	×	●	×	●	●	●	
	52	Butadiene-50% alcohol solution	●	×	●	×	●	●	●	
	53	Butane	●	×	●	×	●	●	●	
	54	Butanediol	●	×	●	×	●	●	●	
	55	Butyl acetate	●	×	●	×	●	●	●	
	56	N-Butyl acetate	●	×	●	×	●	●	●	
	57	N-Butyl acrylate	*●	×	*●	×	●	●	●	
	58	Butyl alcohol	●	×	●	×	●	●	●	
	59	Butyl benzyl phthalate	●	●	●	●	●	●	●	
	60	N-Butyl ether	●	×	●	●	●	●	●	
	61	Butyl methacrylate	●	×	●	×	●	●	●	
	62	Butyl phthalate	●	●	●	●	●	●	●	
	63	Butyl phthalate	●	●	●	●	●	●	●	
	64	Butyl/decyl/cet osyl methacrylate mixture	●	×	●	×	●	●	●	
	65	N-Butylaldehyde	●	×	●	×	●	●	●	
	66	Butylamine (all isomers)	●	×	×	×	●	●	●	
	67	Butylene glycol	●	×	●	×	●	●	●	
	68	Butylene liquid	●	×	●	×	●	●	●	
	69	Butyric acid	●	●	●	●	●	●	●	
C	70	Calcium chloride	●	●	×	●	●	●	●	
	71	Calcium hydroxide	●	●	×	●	●	×	●	
	72	Calcium hypochlorite solution	Available for use with the hose number 0970F series only.					×	×	●
	73	Calcium naphthenate in mineral oil	●	●	●	●	●	●	●	
	74	Calcium nitrate	●	●	×	●	●	×	●	
	75	Camphor oil	●	●	●	●	●	●	●	

● : Available　　× : Unavailable

＊Even when a chemical is marked as unavailable for use, the chemical may still be available for use, depending on the conditions. Contact us for details.

● Headings "A" to "E" in the "Hose number" column and "Resin" in the "Terminal fittings" column represent the following hose numbers and resin categories.

A	0913F／0913F-S／0969F／0969LF
B	0951F／0998
C	0913F-W／0901F／0982
D	0970F／0970F-S
E	0976F／0976F-S
Resin	P.P／PVC／FRP　Note：As a general rule, fiber reinforced plastic（FRP）is used for hydrochloric acid and Diluted sulfuric acid.

No.		Chemical name	Hose number					Terminal fittings		
			A	B	C	D	E	Iron	SUS	Resin
C	76	Camphor oil alcohol solution	●	●	●	●	●	●	●	
	77	Camphor oil $C_{16}M_{16}O$ water solution	●	●	×	●	●	×	●	
	78	Carbon disulphide	*●	×	×	×	●	×	●	
	79	Carbon tetrachloride	●	●	●	●	●	●	●	
	80	Carbondioxide（liquefied）	●	●	●	●	●	●	●	
	81	Carbonic water	●	●	×	●	●	×	●	
	82	Carbonyl chloride	×	●	×	●	×	×	×	●
	83	Cashew nut shell oil（untreated）	●	●	●	●	●	●	●	
	84	Castor oil	●	●	●	●	●	●	●	
	85	Cetyl alcohol	●	●	●	●	●	●	●	
	86	Chloral hydrate	×	×	×	●	×	×	●	
	87	Chloral hydrate solution	×	●	×	●	×	×	×	●
	88	Chloric acid	Available for use with the hose numbers 0951F, 0998 and 0970F series only.					×	×	●
	89	Chloroacetic acid	●	●	×	●	●	×	●	
	90	Chlorobenzene	×	×	×	×	●	×	●	
	91	Chloroethanol	●	×	●	×	●	●	●	
	92	Chloroform	●	●	●	●	●	●	●	
	93	Chlorohydrins（crude）	●	×	●	×	●	●	●	
	94	Chloromethane	●	×	●	×	●	●	●	
	95	o-Chloronitrobenzenes	●	×	●	×	●	●	●	
	96	2- or 3-Chloropropionic acid	●	●	×	●	●	×	●	
	97	Chlorosulphonic acid	×	×	×	×	×	×	×	
	98	（o-, m-, p-）Chlorotoluene	●	×	●	×	●	●	●	
	99	Chlorous acid solution	×	●	×	●	×	×	×	●
	100	Chrom alum water solution	●	●	×	●	●	×	●	
	101	Chromic acid, 80%	×	×	×	●	●	×	●	
	102	Citric acid	●	●	×	●	●	×	●	
	103	Coal tar	●	●	●	●	●	●	●	
	104	Coal tar naphtha	●	×	●	×	●	●	●	
	105	Creosote（coal tar or wood）	●	●	●	●	●	●	●	
	106	Cresols mixed isomers	●	×	●	×	●	●	●	
	107	Crotonaldehyde	●	×	●	×	●	●	●	
	108	Cumene	●	×	●	×	●	●	●	
	109	Cyclohexane	●	×	●	×	●	●	●	
	110	Cyclohexanol	●	×	●	×	●	●	●	
	111	Cyclohexanone	●	×	●	×	●	●	●	
	112	Cyclohexylamine	●	●	×	●	●	●	●	
	113	p-Cymene	●	●	●	●	●	●	●	

No.		Chemical name	Hose number					Terminal fittings		
			A	B	C	D	E	Iron	SUS	Resin
D	114	Decalin	●	×	●	×	●	●	●	
	115	Decyl alcohol	●	×	●	●	●	●	●	
	116	Detergent liquid	●	●	×	●	●	×	●	
	117	Developer（photographic）	●	●	×	●	●	×	●	
	118	Dextrin water solution	●	●	●	●	●	●	●	
	119	Di(2-Ethylhexyl) Phosphoric acid	●	●	×	●	●	×	●	
	120	Dibutyl ether	●	×	●	×	●	●	●	
	121	Dibutyl phthalate	●	●	●	●	●	●	●	
	122	Dibutylamine	●	×	●	×	●	●	●	
	123	o-Dichlorobenzene	●	×	●	×	●	●	●	
	124	1-1-Dichloroethane	*●	×	*●	×	●	●	●	
	125	Dichloroethane（methylene chloride）	*●	*●	*●	●	●	●	●	
	126	Dichloroethyl ether	●	●	●	●	●	●	●	
	127	Dichloroethylene	●	×	×	×	●	×	●	
	128	2-2-Dichloroisopropyl ether	●	●	●	●	●	●	●	
	129	2-4-Dichlorophenol	●	●	×	●	●	×	●	
	130	1.3-Dichloropropane	●	×	●	×	●	●	●	
	131	1,3-Dichloropropene	●	●	●	●	●	●	●	
	132	Diesel oil	●	●	●	●	●	●	●	
	133	Diethanolamine	●	●	×	●	●	●	●	
	134	Diethyl benzene	●	×	●	×	●	●	●	
	135	Diethyl ethanolamine	●	●	×	●	●	●	●	
	136	Diethyl ether	●	×	●	×	●	●	●	
	137	Diethyl phthalate	●	●	●	●	●	●	●	
	138	Diethyl sulphate	●	●	●	●	●	●	●	
	139	Diethylamine	●	×	×	×	●	●	●	
	140	Diethylamino ethanol	●	●	×	●	●	●	●	
	141	Diethylene glycol methyl ether	●	×	●	×	●	●	●	
	142	Diethylenetriamine	●	×	●	×	●	●	●	
	143	Diisobutyl phthalate	●	●	●	●	●	●	●	
	144	Diisobutylamine	●	●	●	●	●	●	●	
	145	Diisobutylene	●	●	●	●	●	●	●	
	146	Diisopropanolamine	●	●	×	●	●	●	●	
	147	Diisopropyl benzene（all isomers）	●	●	●	●	●	●	●	
	148	Diisopropylamine	●	●	×	●	●	●	●	
	149	Diluted mixture of nitric acid and hydrochloric acide　Note：Details to be worked out separately	●	×	●	●	×	×	●	
	150	Diluted sulfonic acid solution	●	●	×	●	●	×	●	

Chemical Resistance Suitability Table

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Use the table as reference material for selecting hoses, since the results vary particularly for chemicals, depending on the conditions, such as concentration, temperature, pressure and movement.

● : Available　　× : Unavailable

＊Even when a chemical is marked as unavailable for use, the chemical may still be available for use, depending on the conditions. Contact us for details.

No.		Chemical name	Hose number					Terminal fittings		
			A	B	C	D	E	Iron	SUS	Resin
D	151	N.N-Dimethylcyclohexylamine	●	×	×	×	●	●	●	
	152	Dimethyl ethanolamine	●	×	×	×	●	●	●	
	153	Dimethyl formamide	●	×	●	×	●	●	●	
	154	Dimethyl phthalate	●	●	●	●	●	●	●	
	155	Dimethylamine aqueous, 40% or less	●	●	×	●	●	●	●	
	156	Dinitrotoluene（molten）	*●	×	×	×	●	●	●	
	157	Di-n-propylamine	●	×	×	×	●	●	●	
	158	1.4-Dioxane	●	×	●	×	●	●	●	
	159	Dipenten	●	●	●	●	●	●	●	
	160	Diphenyl ether	●	×	●	×	●	●	●	
	161	Diphenyl oxide	●	×	●	×	●	●	●	
	162	Diphenylmethane diisocyanate	●	●	×	●	●	×	●	
	163	Dodecene（all isomers）	●	●	●	●	●	●	●	
	164	Dodecyl alcohol	●	●	●	●	●	●	●	
	165	Dodecyl benzene	●	●	●	●	●	●	●	
	166	Dodecyl diphenyl oxide disulphonate solution	●	●	●	●	●	●	●	
	167	Dodecyl methacrylate	●	×	●	×	●	●	●	
	168	Dodecyl phenol	●	×	●	×	●	●	●	
E	169	Emulsifier	●	●	●	●	●	●	●	
	170	Epichlorohydrin	●	×	●	×	●	●	●	
	171	Ethanolamine	●	×	×	×	●	●	●	
	172	Ether maleic anhydride solution	●	●	×	●	●	×	●	
	173	2-Ethoxyethyl acetate	●	×	●	×	●	●	●	
	174	Ethyl acetate	●	×	●	×	●	●	●	
	175	Ethyl acrylate	●	●	●	●	●	●	●	
	176	Ethyl alcohol	●	×	●	×	●	●	●	
	177	Ethyl benzene	●	×	●	×	●	●	●	
	178	Ethyl chloride	×	×	×	●	●	●	●	
	179	Ethyl dichloride	●	×	●	×	●	●	●	
	180	Ethyl ether	*●	×	*●	×	●	●	●	
	181	2-Ethyl hexylamine	●	×	×	×	●	●	●	
	182	Ethyl methacrylate	●	×	●	×	●	●	●	
	183	Ethyl toluene	●	×	●	×	●	●	●	
	184	Ethylamine	●	×	×	×	●	●	●	
	185	Ethylamine solution（72% or less）	●	●	×	●	●	●		
	186	n-Ethylbutylamine	●	×	×	×	●	●	●	
	187	N-Ethylcyclohexylamine	●	×	×	×	●	×	●	
E	188	Ethylene chlorohydrin	*●	×	*●	×	●	●	●	
	189	Ethylene cyanohydrin	●	×	●	×	●	●	●	
	190	Ethylene diamine	●	×	×	×	●	●	●	
	191	Ethylene dibromoide	●	●	●	●	●	●	●	
	192	Ethylene dichloride	*●	×	*●	×	●	●	●	
	193	Ethylene glycol	●	×	●	×	●	●	●	
	194	Ethylene oxide	×	×	×	×	×	×	×	
	195	Ethylene Oxide/propylene oxide mixtures containing < 30% ethylene oxide	×	×	×	×	×	×	×	
	196	Ethylene oxilate（25%）	×	×	×	×	●	×	●	
	197	2-Ethylhexyl acrylate	●	●	●	●	●	●	●	
	198	Ethylidene norbonene	●	●	●	●	●	●	●	
F	199	Fatty acid	●	●	●	●	●	●	●	
	200	Fatty alcohols（C_{12}-C_{20}）	●	●	●	●	●	●	●	
	201	Ferric and ferrous chloride solution	×	●	×	●	×	×	×	●
	202	Formaldehyde solution 45% or less	●	●	●	●	●	●	●	
	203	Formic acid	●	×	×	×	●	×	●	
	204	Freon 12	●	●	●	●	●	●	●	
	205	Fructose solution	●	●	×	●	●	×	●	
	206	Fruit juice	●	●	×	●	●	×	●	
	207	Fuel oil	●	×	●	×	●	●	●	
	208	Fumaric adduct of rosin, water dispersion	●	●	●	●	●	●	●	
	209	Fuming sulfuric acid	×	×	×	●	●	×	●	
	210	Furfural	●	×	●	×	●	●	●	
	211	Furylmethyl alcohol	●	●	●	●	●	●	●	
	212	Furfuryl alcohol	●	×	●	×	●	●	●	
G	213	Gasoline	●	×	●	×	●	●	●	
	214	Gelatin	●	●	●	●	●	●	●	
	215	Glucose	●	●	●	●	●	●	●	
	216	Glutaraldehyde solution, 50% or less	●	●	●	●	●	●	●	
	217	Glycerine	●	●	●	●	●	●	●	
	218	Glycol	●	●	●	●	●	●	●	
H	219	halogen methyl sulfuric acid	●	●	×	●	●	×	●	
	220	Heavy oil	●	●	●	●	●	●	●	
	221	Heptanol（all isomers）	●	●	●	●	●	●	●	
	222	Hexamethylenediamine solutions	●	×	●	×	●	●	●	
	223	1-Hexene	●	×	●	×	●	●	●	
	224	Hydrazine hydrate	*●	×	×	×	●	×	●	

● Headings "A" to "E" in the "Hose number" column and "Resin" in the "Terminal fittings" column represent the following hose numbers and resin categories.

A	0913F／0913F-S／0969F／0969LF
B	0951F／0998
C	0913F-W／0901F／0982
D	0970F／0970F-S
E	0976F／0976F-S
Resin	P.P／PVC／FRP　Note：As a general rule, fiber reinforced plastic（FRP）is used for hydrochloric acid and Diluted sulfuric acid.

No.		Chemical name	Hose number					Terminal fittings		
			A	B	C	D	E	Iron	SUS	Resin
H	225	Hydrobromic silver oxide, 50%	×	●	×	●	×	×	×	●
	226	Hydrochloric acid	Available for use with the hose numbers 0951F, 0998 and 0970F series only.					×	×	●
	227	Hydrochloric acid, 35%						×	×	●
	228	Hydrogen chloride	●	●	×	●	●	×	●	
	229	Hydrogen peroxide solution 60%-70%	*●	×	×	×	●	×	●	
	230	Hydrogen peroxide solution 8%-60%	*●	×	×	×	●	×	●	
	231	Hydrogen sulfide	●	×	×	×	●	×	●	
	232	Hydrogen sulfide solution	●	●	×	●	●	×	●	
	233	Hydroquinone solution	●	●	×	●	●	●	●	
	234	Hydroxylamine sulfate 12%	●	●	×	●	●	×	●	
	235	2-Hydroxyethyl acrylate	●	●	×	●	●	×	●	
I	236	Ink	●	×	●	×	●	●	●	
	237	Isoamyl acetate	●	×	●	×	●	●	●	
	238	Isobutyl acetate	●	×	●	×	●	●	●	
	239	Isobutyl acrylate	●	×	●	×	●	●	●	
	240	Isobutylaldehyde	●	●	●	●	●	●	●	
	241	Isooctane	●	×	●	×	●	●	●	
	242	Isophorone	●	×	●	×	●	●	●	
	243	Isophorone diamine	●	●	×	●	●	●	●	
	244	Isoprene	●	×	●	×	●	●	●	
	245	Isopropanolamine	●	●	×	●	●	●	●	
	246	Isopropyl alcohol	●	×	●	×	●	●	●	
	247	Isopropyl benzene	●	×	●	×	●	●	●	
	248	Isopropyl ether	●	×	●	×	●	●	●	
	249	Isopropylamine	●	×	×	×	●	●	●	
K	250	Ketone	*●	×	*●	×	●	●	●	
L	251	Lactic acid	●	●	×	●	●	×	●	
	252	Linseed oil	●	●	●	●	●	●	●	
	253	Liquefied petroleum gas	●	×	●	×	●	●	●	
	254	Lubrication oil	●	●	●	●	●	●	●	
M	255	Magnesium chloride solution	●	●	×	●	●	×	●	
	256	Maleic acid water solution	●	●	×	●	●	×	●	
	257	Maleic anhydride	×	×	×	×	●	×	●	
	258	Mercaptobenzothiazol, sodium salt solution	●	●	●	●	●	●	●	
	259	Mercury chloride solution	×	●	×	●	×	×	×	●
	260	Mesityl oxide	●	●	●	●	●	●	●	
	261	Methacrylic acid	●	●	×	●	●	●	●	
	262	Methacrylonitrile	●	●	●	●	●	●	●	

No.		Chemical name	Hose number					Terminal fittings		
			A	B	C	D	E	Iron	SUS	Resin
M	263	Methanol	●	×	●	×	●	●	●	
	264	Methyl acetate	●	×	●	×	●	●	●	
	265	Methyl acrylate	●	×	●	×	●	●	●	
	266	Methyl acrylate	●	×	×	×	●	●	●	
	267	Methyl amyl acetate	●	×	●	×	●	●	●	
	268	Methyl amyl alcohol	●	×	●	×	●	●	●	
	269	Methyl amyl ketone	●	×	●	×	●	●	●	
	270	2-Methyl ethyl aniline	●	●	●	●	●	●	●	
	271	Methyl ethyl ketone（MEK）	*●	×	*●	×	●	●	●	
	272	Methyl formate	●	×	●	×	●	●	●	
	273	Methyl halogen sulfuric acid	×	×	×	●	×	×	●	
	274	4-Methyl pyridine	●	●	●	●	●	●	●	
	275	Methyl salicylate	●	×	●	×	●	●	●	
	276	2-Methyl-1-pentene	●	×	●	×	●	●	●	
	277	2-Methyl-2-hydroxy-3-butyne	●	●	●	●	●	●	●	
	278	N-Methyl-2-pyrrolidone	●	●	●	●	●	●	●	
	279	2-Methyl-5-ethylpyridine	●	●	●	●	●	●	●	
	280	Methylamine solutions 40% or less	*●	×	×	×	●	×	●	
	281	Methylmethacrylate	●	×	●	×	●	●	●	
	282	α-Methylstyrene	●	×	●	×	●	●	●	
	283	Monochlor benzene	×	×	×	×	●	×	●	
	284	Morpholine	●	●	×	●	●	●	●	●
	285	Motor oil	●	●	●	●	●	●	●	
N	286	Naphthalene molten	●	●	●	●	●	●	●	
	287	Neodecanoic acid	●	●	×	●	●	●	●	
	288	Nickel saline solution	●	●	×	●	●	×	●	
	289	Nitrating acid（mixture of sulphuric and nitric acids）	*●	*●	×	●	●	×	●	
	290	Nitric acid（20 to 90%）	×	×	×	●	●	×	●	
	291	Nitric acid（20% or less）	*●	×	×	●	●	×	●	
	292	Nitric acid（90% or more） Note: Details to be worked out separately	×	×	×	●	●	×	●	
	293	Nitrobenzene（20℃）	*●	×	*●	×	●	●	●	
	294	o-Nitrophenol（molten）	●	×	×	×	●	●	●	
	295	1- or 2-Nitropropane	●	×	●	×	●	●	●	
	296	Nitropropane/nitroethane（60/40 mixture）	●	×	●	×	●	●	●	
	297	Nitrotoluene	●	×	●	×	●	●	●	
	298	Nonene	●	●	●	●	●	●	●	
	299	Nonyl alcohol	●	×	●	×	●	●	●	

Chemical Resistance Suitability Table

This suitability table was prepared based on past performances, the experiments we conducted and by comprehensively examining documents supplied by the manufacturers of materials.
Use the table as reference material for selecting hoses, since the results vary particularly for chemicals, depending on the conditions, such as concentration, temperature, pressure and movement.

●：Available　　×：Unavailable

＊Even when a chemical is marked as unavailable for use, the chemical may still be available for use, depending on the conditions. Contact us for details.

No.		Chemical name	Hose number					Terminal fittings		
			A	B	C	D	E	Iron	SUS	Resin
N	300	Nonyl phenol	●	●	●	●	●	●	●	
O	301	Octanol（all isomers）	●	●	●	●	●	●	●	
	302	Octene（all isomers）	●	●	●	●	●	●	●	
	303	Octyl cresol	●	×	×	×	●	×	●	
	304	Oil and grease	●	●	●	●	●	●	●	
	305	Oil for transformer	*●	*●	*●	●	●	●	●	
	306	Olefins, straight chain mixtures	●	●	●	●	●	●	●	
	307	Oleic acid	●	●	●	●	●	●	●	
	308	Oxalic acid 50% water solution	●	●	×	●	●	×	●	
	309	Ozone	×	×	×	●	●	×	●	
P	310	Paraffin	●	●	●	●	●	●	●	
	311	Paraldehyde	●	×	●	×	●	●	●	
	312	Pentachloroethane	●	●	●	●	●	●	●	
	313	1, 3-Pentadiene	●	×	●	×	●	●	●	
	314	n-Pentane	*●	×	*●	×	●	●	●	
	315	Pentene（all isomers）	●	×	●	×	●	●	●	
	316	Perchloric acid	×	●	×	●	×	×	×	●
	317	Perchloroethylene	●	●	●	●	●	●	●	
	318	Petroleum	●	×	●	×	●	●	●	
	319	Petroleum ether	×	×	×	×	●	●	●	
	320	Phenol	*●	×	*●	×	●	●	●	
	321	1-Phenyl-1-xylyl ethane	●	×	●	×	●	●	●	
	322	Phenylhydrazine	●	×	×	×	●	×	●	
	323	Phosgene	×	×	×	●	●	×	●	
	324	Phosphoric acid	●	●	×	●	●	×	●	●
	325	Phosphorus oxychloride	×	●	×	●	×	×	×	●
	326	Phosphorus yellow or white	×	×	×	×	×	×	×	
	327	Phthalic acid	●	×	●	×	●	●	●	
	328	Phthalic anhydride	●	×	×	×	●	×	●	
	329	Picric acid	●	●	×	●	●	×	●	
	330	Polyethylene polyamines	●	●	×	●	●	×	●	
	331	Potassium hydroxide solution	●	●	×	●	●	×	●	
	332	Potassium salt solution	×	●	×	●	×	×	×	●
	333	n-Propanolamine	●	×	●	×	●	●	●	
	334	Propionic acid	●	●	×	●	●	×	●	
	335	Propionic anhydride	●	●	×	●	●	×	●	
	336	Propionitrile	●	×	●	×	●	●	●	
	337	Propyl alcohol	●	×	●	×	●	●	●	
P	338	Propyl alcohol	●	×	●	×	●	●	●	
	339	n-Propylamine	●	×	●	×	●	●	●	
	340	Propylene dimer	●	×	●	×	●	●	●	
	341	Propylene oxide	●	×	×	×	●	×	●	
	342	Pyridine	●	×	●	×	●	●	●	
R	343	Rosin	●	●	●	●	●	●	●	
S	344	Saturated saline	×	●	×	●	×	×	×	●
	345	Sea water	×	●	×	●	×	×	×	●
	346	Sec-Amyl acetate	●	×	●	×	●	●	●	
	347	Silicon oil	●	●	●	●	●	●	●	
	348	Sodium dichromate（70% or more）	●	●	×	●	●	×	●	
	349	Sodium chlorate solution 50% or less	●	●	×	●	●	×	●	
	350	Sodium hydrosulphide solution 45% or less	●	●	●	●	●	●	●	
	351	Sodium hydrosulphide/ ammonium sulphide solution	●	●	×	●	●	×	●	
	352	Sodium hydroxide, 50%	●	●	×	●	●	●	●	
	353	Sodium hypochlorite	Available for use with the hose number 0970F series only.					×	×	●
	354	Sodium hypochlorite solution 15% or less						×	×	●
	355	Solid paraffin	●	●	●	●	●	●	●	
	356	Stearic acid	●	●	●	●	●	●	●	
	357	Styrene monomer	●	×	●	×	●	●	●	
	358	Sulfonic acid	●	●	×	●	●	×	●	
	359	Sulfur chloride	×	●	×	●	×	×	×	●
	360	Sulfur dioxide	●	●	×	●	●	×	●	
	361	Sulfuric acid 70% or less	×	●	×	●	×	×	×	●
	362	Sulfuric acid 98%	*●	*●	×	●	●	●	●	●
T	363	Tall oil（crude and distilled）	●	●	●	●	●	●	●	
	364	Tall oil fatty acid（resin acids less than 20%）	●	●	●	●	●	●	●	
	365	Tannic acid	●	●	×	●	●	×	●	
	366	Tartaric acid	●	●	×	●	●	×	●	
	367	Tetrachloroethane	●	●	●	●	●	●	●	
	368	Tetraethyl lead	●	×	×	×	●	×	●	
	369	Tetraethylene pentamine	●	×	●	×	●	●	●	
	370	Tetrahydrofuran	×	×	×	×	●	●	●	
	371	Tetrahydronaphthalene	●	×	●	×	●	●	●	
	372	Tetralin	●	×	●	×	●	●	●	
	373	Thinner	●	×	●	×	●	●	●	
	374	Thionyl chloride	×	●	×	●	×	×	×	●

Note：Contact us in advance if you intend to use nitric acids, since a special type of shielding material is required.

● Headings "A" to "E" in the "Hose number" column and "Resin" in the "Terminal fittings" column represent the following hose numbers and resin categories.

A	0913F／0913F-S／0969F／0969LF
B	0951F／0998
C	0913F-W／0901F／0982
D	0970F／0970F-S
E	0976F／0976F-S
Resin	P.P／PVC／FRP　Note：As a general rule, fiber reinforced plastic（FRP）is used for hydrochloric acid and Diluted sulfuric acid.

No.		Chemical name	Hose number					Terminal fittings		
			A	B	C	D	E	Iron	SUS	Resin
T	375	Thiophene	●	●	×	●	●	×	●	
	376	Toluene	*●	×	*●	×	●	●	●	
	377	Toluene diisocyanate	●	×	●	×	●	●	●	
	378	o-Toluidine	●	×	●	×	●	●	●	
	379	Tributyl phosphate	●	●	●	●	●	●	●	
	380	Trichloroacetic acid, 10%	●	●	×	●	●	×	●	
	381	1.2.4-Trichlorobenzene	●	×	●	×	●	●	●	
	382	1.1.1-Trichloroethane	●	●	●	●	●	●	●	
	383	1.1.2-Trichloroethane	●	●	●	●	●	●	●	
	384	Trichloroethylene	●	●	●	●	●	●	●	
	385	1.2.3-Trichloropropane	●	●	●	●	●	●	●	
	386	Tricresyl phosphate （containing less than 1% ortho isomer）	●	●	●	●	●	●	●	
	387	Triethanolamine	●	×	●	×	●	●	●	
	388	Triethyl benzene	●	×	●	×	●	●	●	
	389	Triethyl phosphate	●	●	×	●	●	×	●	
	390	Triethylamine	●	×	●	×	●	●	●	
	391	Triethylene tetramine	●	×	●	×	●	●	●	
	392	1.2.4-Trimethyl benzene	●	×	●	×	●	●	●	
	393	Trimethyl phosphate	●	●	●	●	●	●	●	
	394	Trimethylacetic acid	●	●	×	●	●	●	●	
	395	Trimethylhexamethylene diamine	●	●	×	●	●	●	●	
	396	Trimethylhexamethylene diisocyanate	●	●	●	●	●	●	●	
	397	Trioctyl phosphite	●	●	●	●	●	●	●	
	398	Trixylyl phosphate	●	●	●	●	●	●	●	
	399	Turpentine	*●	*●	*●	●	●	●	●	
	400	Turpentine oil	*●	*●	*●	●	●	●	●	
U	401	Undecane	●	×	●	×	●	●	●	
	402	Undecylic alcohol	●	●	●	●	●	●	●	
	403	Urea, ammonium solution containing aqua ammonia	●	●	●	●	●	●	●	
V	404	n-Valeraldehyde	●	●	●	●	●	●	●	
	405	Vaseline	●	●	●	●	●	●	●	
	406	Vinegar	●	●	×	●	●	×	●	
	407	Vinyl acetate	●	×	●	×	●	●	●	
	408	Vinyl chloride monomer	●	●	×	●	●	●	●	
V	409	Vinyl ethyl ether	●	×	●	×	●	●	●	
	410	Vinyl neodecanoate	●	●	●	●	●	●	●	
	411	Vinyl toluene	●	×	×	×	●	●	●	
	412	Vinylidene chloride	×	×	×	×	●	×	●	
W	413	Water	●	●	×	●	●	●	●	●
	414	White paraffin	●	●	●	●	●	●	●	
	415	White spirit, low（15-20%）aromatic	●	×	●	×	●	●	●	
X	416	Xylenes	●	×	●	×	●	●	●	
	417	Xylenols	●	×	●	×	●	●	●	
Y	418	Yeast water solution	●	●	×	●	●	×	●	

Caution for handling

For long operation life and safe use of the hoses, please keep in mind the following precautions.
Note that we shall not be liable for any damage caused by failing to follow these precautions.

1

Slack must be provided when using the hose.

The hose stretches when pressurized and shrinks under negative pressure. Do not connect both ends of hose while the hose is tightly pulled.

2

Do not use the hose when it is twisted.

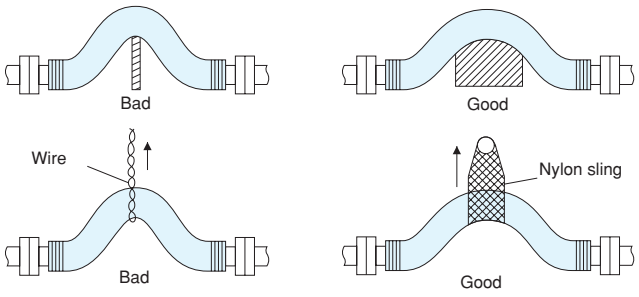
Particular care must be taken when connecting the hose.

3

Do not bend the hose sharply near its end fittings.

4

When supporting the hose from below, provide as much supporting surface as possible so that it will not be damaged. Do not hang or rest the hose on a sharp corner.



5

Prevent strong friction on the outer surface of the hose.

The outer surface of the hose is abrasion-resistant. However, in order to achieve long operational life, avoid as much as possible dragging it over, throwing it on, or roll over a concrete or ballast surface.

When selecting a hose, please consider the fact that hoses with fabric outer cover, such as 0913F, 0933, 0940 etc., are less abrasion-resistant than other types.

6

If contact with other object is unavoidable or if the hose must be hung with a rope, use some kind of pad (for example a piece of rubber from old tire) for protection.

＊Stainless steel outer braid can also be provided.

7

When storing the hose, avoid direct sunlight as much as possible and do not exceed minimum bending radius indicated in the catalog.

＊If possible, lay the hose straight.

8

Do not allow a person to step on the hose and prevent a heavy or sharp object from being placed or dropped on it.

＊Do not cut or pierce the hose with a knife or a similar tool.

9

When moving, attaching and detaching a piping system, support not only the hose itself but also the connection fittings.

10

Do not exceed the maximum fluid temperature specified in the catalog when using the hose.
If flushing is needed, avoid using hot water exceeding 80 ℃. If use of steam is unavoidable, use insulation material between the hose and the steam pipe to prevent direct contact with the hose and keep the end of the hose open.

＊In general, use the hose within the temperature range of -20 ℃ to +80 ℃.

11

Carry out periodical inspection of the hose.

For details, please see Periodical Inspection of Hose on the next page.

12

Avoid a situation in which limit values of temperature, pressure and minimum bending radius specified in the catalog are reached at the same time.

Example: 0982 4" Hose
Temperature 80 ℃, Pressure 1.4 MPa, Minimum bending radius 500 mm

Inspection manual

For long operation life and safety of **Meijiflex Hose**, carry out daily and periodic inspections as instructed below.
Note that we shall not be liable for any damage caused by failing to follow these precautions.

Important notes

Visual inspection, pressure test, and conductivity inspection must be performed.
If the outer wire is broken (for example by a contact with an object), immediately stop using the hose.

Inspection method

1. Visual inspection of the hose

1—1 Check if the outer wire of the hose is not deformed or crushed as in the figure below.

1—2 Before and after using the hose, visually check if any fault exits inside the hose (e.g., crack of covering wire, scratch on inner fabric or film).

1—3 Check that the film is not exposed from under the outer cover through a crack or by wear.
PVC coating on the fabric substrate of outer cover (excluding 0913 hoses) may come apart by friction, but this is not a problem and the hose can still be used.

1—4 If the film under the outer fabric is visible, replace the hose as soon as possible.

1—5 If the wire diameter of the outer wire has become less than half of its original diameter due to wear or rust, replace the hose immediately.

1—6 If the outer cover is considerably discolored, replace the hose as soon as possible.

2. Visual inspection of end fittings

2—1 Check that there is no damage or deformation to the fastening portions of the fittings.

2—2 Check that there is no damage to the neck of the hose.

2—3 Check that the threaded portion is not deformed.

2—4 Check that there is no fault in the welds.

3. Pressure test (water leak test)

3—1 As a general rule, apply 1.5 times the operation pressure for at least 15 minutes. During this period, check that there is no leakage or other fault on the whole length of the hose and at the junction with fittings. Unlike rubber hoses, these hoses show very little change of outer diameter when pressure is applied. However, when a test pressure of 1 MPa is applied, they stretch in length by approximately 10 percent. This is a normal behavior due to their unique construction and is not a defect.

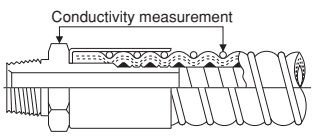
(**NOTE**) **The same behavior is observed when using the hose, stretching under pressure and shrinking under negative pressure.**

3—2 When pressure is applied, small bubbles may be observed on the outer surface of the hose. These bubbles are formed when water or air trapped inside the outer cover or the inner layers is forced to come out, and their amount gradually reduces over time. This does not indicate a problem with air tightness of the hose.

(**NOTE**) **The same behavior may be observed when using the hose. If it occurs, bubbles can be reduced or removed by wiping them off with a dry cloth.**

4. Conductivity test

4—1 When flammable solvent is used, check the conductivity between the outer wire and end fitting as shown in the illustration (between arrows).



Judgment

If no fault is detected in appearance, pressure and continuity inspections, you can continue to use the hose.
If you have a question regarding how to make judgment of fault from appearance, please contact us.

Inquiry / Order for

Date:

■For inquiry or order, please fill in this form with as much detail as possible so that the right choice can be made.

If you are making an inquiry for your currently used hose, please provide the lot number stamped on the fitting. It helps us identify the specifications and production history and make quick response possible.

Company name		**Department**	
Name		**TEL**	
Address		**FAX**	
		E-mail	

Type of request （ Quotation / Order / Others ）

Please encircle one.

●Operating conditions

＊If you are placing an order, please note that we shall not be liable for any damage caused by operation conditions that are different from indicated herein.

Fluid	Name of fluid / Concentration / Composition etc.			
Temperature	Normal operating temperature	℃	Maximum operating temperature	℃
Pressure	Normal operating pressure	MPa	Maximum operating pressure	MPa
Size / Length	Size（diameter）		Length	M
Application	Location of use / Method of use, etc.			
Installation condition	Minimum bending radius / Repeated movement, etc.			
Surrounding environment	**Indoor** / **Outdoor**	Ambient temperature / Whether the outer surface of the hose is wetted by liquid or not, etc.		
End fitting				
Currently used hose			Existing issues, etc.	
Other requirements	Special operating conditions, Illustration, etc.			

How to specify fitting

See P.12 to 15 for fitting types.

Fitting number — **Size** — **Material**

（1） **One end: 501-50-S**
（2" male type, material: steel）
Other end: 504-50-10K-S
（2" flange type loose, JIS 10kg/cm2 standard, Material: steel）
Sleeve S （Material: steel, zinc plated）

（2） **One end: 503-50-20K-SUS**
（2" flange type fixed, JIS 20 kg/cm2 standard, Material: SUS 304）
Other end: 504-50-20K-Flange S, Liquid contact portion SUS
（2" flange type loose, JIS 20 kg/cm2 standard, Material: Flange portion = Steel, Liquid contact portion = SUS 304）
Sleeve SUS （Material: SUS 304）

NOTE: How to specify details of #504 fitting

Because it is a loose flange, flange portion and nipple（liquid contact）portion can have different materials. Please pay attention when specifying materials.

504-50-10K-SUS
（2" flange type loose, JIS 10kg / - standard, Material: Flange & Liquid contact portions both SUS 304）

504-50-10K, Flange S, Liquid contact portion SUS
（2" flange type loose, JIS 10kg / - standard, Material: Flange portion = Steel, Liquid contact portion = SUS 304）

How to specify when using adapter

Fitting number — **Size** — **Material** — **Fitting number** — **Size** — **Material**

（Hose fitting） （Adapter fitting）

（1） **One end 502-50-S+G-50-S**
（2" female thread type, Material: Steel + Adapter male female, Material: Steel）

（2） **Other end 502-50-S+1-50-S**
（2" female thread type, Material: Steel + Adapter elbow, Material: Steel）

Brief History

Feb., 1900	Establishment of Partnership Firm Meiji Rubber Production
Jun., 1901	The first ever naval force specific factory for rubber production in Japan Has since produced battery containers for submarines, railway products, rubber mats, rubber mills for paper manufacturing, suction hoses, solid tires, airplane tires, thrust axis rubber rolls, high pressure hoses, rubber tiles, air brake hose, anti-vibration rubbers.
Nov., 1936	Establishment of Meiji Rubber Co., Ltd. Amalgamation with Partnership Firm Meiji Rubber Production. Capital:1,200,000 yen
Oct., 1942	Capital advance:2,400,000 yen
Oct., 1945	Capital advance:4,800,000 yen
From 1945 on	Shifted production to contribute industrial rubber products to civil requirements Production of rubber mills for paper/iron manufacturing, automobile parts, printing blankets, electrical parts, elevating machine parts, large size battery containers for submarines, harbor related products, anti-vibration rubbers for ships, products related to architecture, etc
Feb., 1950	Capital advance:9,000,000 yen
Sep., 1954	Establishment of the Osaka branch(relabeled Osaka Marketing Office in 1974) Establishment of the Nagoya branch (relabeled Nagoya Automobile Marketing office in 1984)
Apr., 1957	Capital advance:36,000,000 yen
Oct., 1959	Capital advance:180,000,000 yen
Dec., 1961	Capital advance:216,000,000 yen
Feb., 1962	Technical tie up with SW Industries, Inc. (U.S.A.)
Apr., 1963	Establishment of the Kanagawa factory
Jul., 1964	Technical tie up with Alexander Scherrer, Inc. (West Germany)
Sep., 1965	Commencement of the production of plastic returnable containers
May., 1969	Closing of the Tokyo factory. Collective amassment to the Kanagawa factory
Nov.,	Conversion of the corporate name to Meiji Rubber & Chemical Co., Ltd. Relocation of the head office to:Nishishinjuku 1-10-2, Shinjuku-ku, Tokyo

Jul., 1972	Establishment of MEIJIFLEX CO., LTD.
Aug.,	Technological sublicense contract with San Miguel Brewery Hong Kong Limited
Feb., 1974	Technological alliance with Polyflex Schwarz GmbH & Co.(West Germany)
Nov., 1976	Establishment of the Nagoya Marketing Office
Jul., 1978	Execution of the technological licensing contract with Scherrer Wort Company(West Germany)
Mar., 1979	Execution of the technological licensing contract with Pyramid Sales Company (U.S.A.)
Sep.,	Execution of the technological disclosure contract with BTR Company(U.S.A.)
Jul., 1980	Execution of the patent licensing agreement with Monsanto Company(U.S.A.)
Sep., 1982	Advancement of 237,600,000 yen
May., 1984	Technological alliance with Z. F Company (West Germany) Execution of the technological licensing contract with Carl Freudenberg Company (West Germany)
Sep.,	Advancement of 312,600,000 yen
Feb., 1985	Acquirement of the JIS mark indication permit for automobile fluid pressure brake hoses.
Mar., 1988	Advancement of 692,310,000 yen
Sep., 1989	Execution of the technological cross license contract with Teito Rubber Co., Ltd.
May., 1991	Execution of the technological licensing contract with Imperial Cable Industry Co., Ltd. (India)
Mar., 1994	Execution of the technological licensing contract with Tecalmit Co., Ltd.(Austrailia)
Apr., 1995	Relocation of the head office to:Nishishinjuku 2-3-1, Shinjuku-ku. Tokyo
Aug.,	Execution of the technological licensing contract with DaeHeung Industrial Co., Ltd. (Korea)
Nov., 1996	Acquirement of the ISO 9001 certification (assessment/registration) Technological alliance with McKechnie UK Ltd.(U.K.)
Dec., 1999	Acquirement of the QS-9000 certification (assessment/registration)
Jul., 2000	Acquirement of the ISO14001 certification (assessment/registration)
Feb., 2002	Relocation of the head office to:Nishishinjuku 7-22-35, Shinjuku-ku, Tokyo
Oct., 2004	Establishment of Meiji Flow Systems Co., Ltd., separating the auto part enterprise
Aug., 2007	Foundation of Meiji Rubber & Chemical (Shenzhen)Co., Ltd. in Shenzhen city (China)
Apr., 2013	Amalgamation with MEIJIFLEX CO., LTD.

MEIJIFLEX® HOSE

MEIJI RUBBER & CHEMICAL CO., LTD.

FLEXHOSE DIV.

MARKETING DEPT.TOKYO
Nishi-Shinjuku Sanko Building 2F, Nishi-Shinjuku 7-22-35,
Shinjuku-ku, Tokyo 160-0023, Japan
Tel. +81 3-5332-3571, Fax: 3-5332-3572

MARKETING DEPT.OSAKA
Osaka Yonei Building 3F, Koraibashi 4-4-6, Chuo-ku, Osaka-shi,
Osaka 541-0043, Japan
Tel. +81 6-7711-8050, Fax: 6-6222-2485

MARKETING DEPT.NAGOYA
Fuji Jingu Building 7F, Yokota 1-11-6, Atsuta-ku,
Nagoya-shi, Aichi 456-0022, Japan
Tel. +81 52-671-7880, Fax: 52-671-7885

YAMAKITA FACTORY
Yamakitamachi Yaga 970-11, Ashigarakami-gun, Kanagawa 258-0115
Tel. +81 465-77-2239, Fax: 465-77-2238

http://www.meiji-rubber.co.jp/

Distributor

- Specifications and appearances provided in this catalog may change without prior notice for the purpose of product improvement.
- When selecting and using your hose, read Precautions for Use and Instruction Guide attached to the product as well as this catalog and make sure you understand all precautions and operating conditions including pressure, temperature, and chemical compatibility.
- Read Periodical Inspection of Hoses and follow its instructions.
- Note that we shall not be liable for any damage caused as a result of exceeding allowed operating conditions of the hose and hose clamp, and failing to follow the precaution instructions.

2014.2.500. (AD)