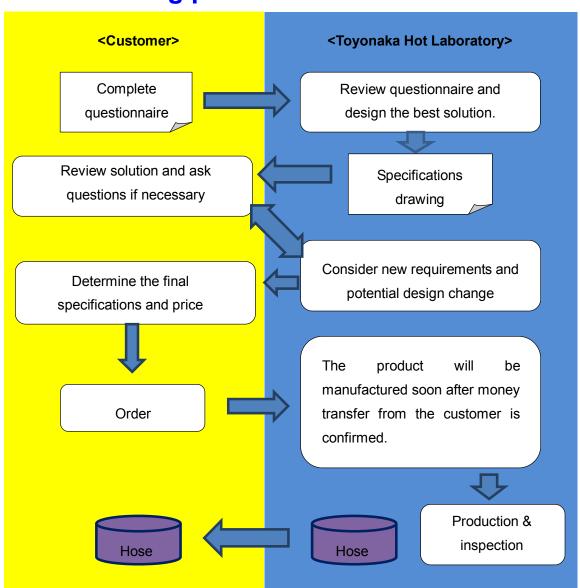
# 74 TOYONAKA HOT LABORATORY CO.,LTD.



#### Introduction

We are a specialized company in the manufacturing of industrial hoses for liquid or gas including manufacturing of hoses where temperature control is critical. We manufacture our products for several domestic and foreign industries such as automotive, shipbuilding, construction, semiconductor, sanitary, bookbinding, food, medical, and apparel. Our hoses are used in painting, sealing, hot melt adhesives, resin molding, steam cleaning and gas sampling. Our company's ISO9001 designation guarantees that continuous efforts are made to meet the high-quality standards of the Japanese local market and aims to deliver these same high-quality standards to international markets as well.

# **Manufacturing process**



# Basic philosophy of our company in craftsmanship

#### A customer's satisfaction is our satisfaction.

At Toyonaka Hot, we always listen to the customer and offer the products in accordance with the requirements specified in the questionnaire.

At Toyonaka Hot, the customer always comes first. Our years of experience help offer products that are appropriate and easy-to-use.

# Materials are selected carefully.

The resisting pressure layer of our hose is using a stainless steel wire rather than the cheaper and more commonly used, iron wire. At Toyonaka Hot, we believe there is no substitute for quality. Even if a cheaper iron wire fits the specification, iron's corrosive properties will then prohibit its use. Corrosion leads to a weaker pressure-resistant layer and ultimately becoming an inferior product that could lead to serious injury in the case of high-pressure hose burst. At Toyonaka Hot, safety is our number one concern. Therefore, we will select and inspect the materials very carefully during the design phase.

#### 100 percent inspections.

100 percent inspections are being conducted from the acceptance of raw material until parts and products shipment. Our ISO9001 designation ensures that total quality is maintained throughout the entire manufacturing process.





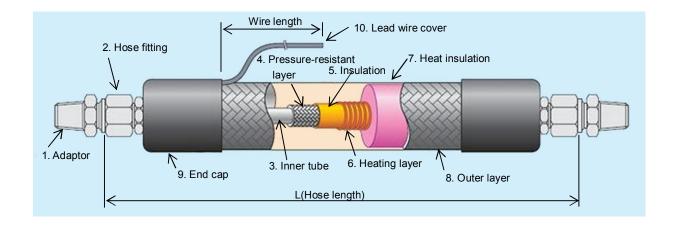


### **Hot Hose**



#### **Features and Benefits**

The hot hose keeps warming and heating and helps prevent an increase in viscosity, decrease in temperature, and aids in the prevention of freezing of fluids. At Toyonaka Hot, we design and manufacture the best solution to meet your specifications. Our Hot Hose will save time and money spent on preparing heater tracers, insulators, and other related activities giving you a big advantage over your competition. In addition, we provide various temperature controllers such as a built-in temperature adjustment thermostat, etc.



Typical Applications	Typical Fluids Handled
Hot melt application	Butyl rubber, Pressure sensitive adhesives, Ethylene
	vinyl acetate, Polyamide, Polyurethane reactive, warm
	melt sealers etc.
Dispenser	Epoxy resins, PVC, adhesives, Urethanes etc.
Automotive manufacturing	Sealants & adhesives, etc.
Resin mold	PP, PE, Acrylic resin, PVC, etc.

# **General specifications**

Tube material	Teflon tube	Nylon tube	Stainless tube	
Maximum working	230°C	50°C	400°C	
temperature	250 C	50 C	400 C	
Maximum working	30 MPa	30 MPa	5 MPa	
pressure	30 IVIPA	30 IVIPA	5 IVIFA	

The above-mentioned specification is standard. We may be unable to manufacture depending on size or the purpose of use.

#### **Standard threads**

G(PF)	Japanese standard straight pipe threads for general use	JIS B0202
R(PT)	Japanese standard taper pipe threads for general use	JIS B0203
UNF	Unified fine pitch thread	JIS B0208
UNC	Unified coarse pitch thread	JIS B0206
М	Metric fine pitch thread	JIS B0205
М	Metric coarse pitch thread	JIS B0205
NPT	American standard taper pipe threads for general use	ANSI/ASME
NPS	American standard straight pipe threads for general use	B1.20.1
NPTF	Dryseal American standard taper pipe threads	ANSI/B1.20.3,
NPSM	American standard straight pipe threads for free-fitting	1.20.4
	mechanical joints fixtures	

#### **Hot Hose Questionnaire**

Please fill in the following questions and send by e-mail.

We will reply to you with a quotation by e-mail.

<Note> Our hot hose is not made of anti-explosion and waterproof materials

Address								
Company name								
Department								
Name								
TEL								
FAX								
E-mail								
Hose material:		□ Teflon □ Nylon □ Stainle □ Others	(Polyami	ide)				)
Inner diameter:	(	)	) mm					
Hose length:	(		) mm					
Fitting material:		inless steel ( ners(	304 □Ir	on □Brass )				
Type of fittings:	(						)	
Voltage:		□ AC-(	) '	V single-phase	Э	□ DC-(	)	V
Wattage:		(	)W	*Not necessa	ary to w	rite, when	unkno	own.
Maximum workin		-	) °	MPa C				

Type of temperature sensor	or:  □ K thermocouple □ T thermocouple □ PT-100Ω □ Others (	<ul><li>□ J thermocouple</li><li>□ Thermostat</li><li>)</li></ul>
Lead wire length: (	) m	
Hose ground:	□ Necessary □ U	nnecessary
Lead wire connector:	<ul><li>□ Necessary *Maker name a</li><li>□ Unnecessary</li></ul>	and P/N ( )
Temperature controller:	□ Necessary □ U	nnecessary
Type of fluid: (		)
Heating conditions  □ Keeping warm  □ Heating	Inlet temperature: ( Inlet temperature: ( Outlet temperature: ( Flow rate: (	) °C ) °C ) °C ) ℓ / min
Environmental temperatu	re: °C	

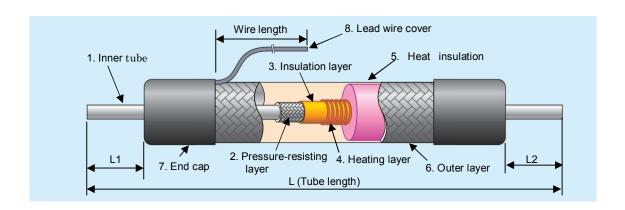
Please write your requirements or questions.

# **Hot Tube**



#### **Features and Benefits**

The tube is being lengthened further out of the hose at both ends. Hence a much smoother transmission of fluid can be easily achieved. This hose is very suitable for frequent hot fluid replacement as the tube can be easily connected and disconnected.



Typical Applications	Typical Fluids Handled
Environmental equipment	Measurement of exhausting gas, gas analyzer, etc.
Dispenser	Epoxy resins, PVC, adhesives, Silicones, etc.
Paint coating	Hot air, etc.
Dew condensation prevention	Water, etc.
Others	Fuel, Ink, etc.

# **General specifications**

Tube material	Teflon tube	Nylon tube	Stainless tube	
Maximum working	230°C	50°C	400°C	
temperature	230 C	50 C	400 C	
Maximum working	Pagas	l an innar tuba anaaifia	ations	
pressure	Based on inner tube specifications			

The above-mentioned specification is standard. We may be unable to manufacture depending on size or the purpose of use.

#### **Hot Tube Questionnaire**

Please fill in the following questions and send by e-mail.

We will reply to you with a quotation by e-mail.

<Note> Our hot hose is not made of anti-explosion and waterproof materials

Address			
Company name			
Department			
Name			
TEL			
FAX			
E-mail			
Tube material:	□ Nylon	(Fluorine resin) (Polyamide) ess flexible tube s (	)
Tube inner diameter:	(	) mm	
Tube outer diameter:	(	) mm	
Hose length (L): (		) mm	
Voltage:	□ AC-(	) V single-phase	□ DC-( ) V
Wattage:	(	)W *Not necessar	y to write, when unknown.
Maximum working pres	sure: (	) MPa	
Current fluid temperatu	re: (	) °C	
Type of temperature ser	nsor:	<ul><li>□ K thermocouple</li><li>□ T thermocouple</li><li>□ PT-100Ω</li><li>□ Others (</li></ul>	<ul><li>□ J thermocouple</li><li>□ Thermostat</li><li>)</li></ul>

Lead wire length: (	) m			
Tube ground:	□ Necessa	ry 🗆 U	nnecessary	
Lead wire connector:	□ Necessa □ Unneces	ry *Maker name a sary	and P/N (	)
Temperature controller:	□ Necessa	ry 🗆 U	nnecessary	
Type of fluid: (			)	
Heating conditions				
□ Keeping warm	n Inl	et temperature: (	) °C	
□ Heating	Inl	et temperature: (	) °C	
	Οι	ıtlet temperature: (	) °C	
	Flo	ow rate: (	) { / min	
Environmental temperatu	ıre:	°C		

Please write your requirements or questions.

# **High Pressure Teflon Hose**



#### **Features and Benefits**

- Flexible and light weight hose makes it easy to use
- High chemical resistance
- Durable and safe
- Comes in a variety of fittings sizes

#### **Typical Applications**

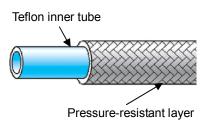
- Water-borne & solvent-borne airless spray
- Adhesive bonding
- Sealing system
- Sanitary equipment
- Industrial machinery

#### **Typical Fluids Handled**

- Moisture-sensitive materials such as isocyanates
- Urethanes
- Sealants and adhesives
- Plural component materials
- Various chemicals

#### R 300 Series

# (10MPa or less)

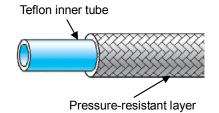


Bulk hose reference number	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
Humber	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/m)
R300-04	1/4	6	8.4	7	27	35	70
R300-05	3/8	8	10	6	22	55	90
R300-07	1/2	11	14.4	5	20	100	200
R300-12	3/4	19	23.8	10	40	160	440

Operating temperature range: -65 to +230°C

#### R 310 Series

# (Between 10MPa to 20Mpa)



Bulk hose reference	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
Humber	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/m)
R310-04	1/4	7	10.5	19	84	70	140
R310-06	3/8	9	12.6	19	79.5	90	180
R310-07	1/2	11	14.8	18	67	110	220
R310-08	1/2	13	16.4	16	64	140	250
R310-10	3/4	16	20.6	14	56	170	400
R310-12	3/4	19	24.6	15	60	190	590
R310-16	1	25	31	15	60	250	790

Operating temperature range: -65 to +230°C

#### R 320 Series

Teflon inner tube

# (Between 20MPa to 30Mpa)

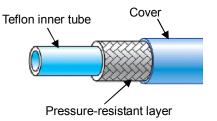
Pressure-resistant la	ayer
-----------------------	------

Bulk hose reference number	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
Humber	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/m)
R320-03	1/8	5	8.6	25	100	40	100
R320-04	1/4	6	9.2	21	90	60	120
R320-05	3/8	8	11.4	21	90	70	170
R320-08	1/2	13	20.4	24	96	180	730
R320-12	3/4	19	26.9	20	80	230	970
R320-16	1	25	33	20	80	280	1360

Operating temperature range: -65 to +230°C

R 320-S Series ··· Cover: Santoprene

R 320-U Series····Cover: Polyurethane



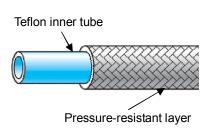
Bulk hose reference number	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
Humber	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/m)
R320-S-04	1/4	6	11.2	21	90	60	150
R320-S-05	3/8	8	13.4	21	90	70	200
R320-S-08	1/2	13	22.2	24	96	180	810
R320-U-04	1/4	6	11.2	21	90	60	160
R320-U-05	3/8	8	13.4	21	90	70	210
R320-U-08	1/2	13	22.2	24	96	180	830

Operating temperature range: S-Series -65 to +130°C

U-Series -65 to +80°C

#### R 330 Series

# (Between 30MPa to40Mpa)



Bulk hose reference number	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight		
Humber	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/m)		
R330-02	1/8	4	7.4	32	130	35	90		
R330-04	1/4	6	10.6	30	120	70	207		
R330-05	3/8	8	14.1	31	125	80	370		
R330-08	1/2	13	20.6	30	112	180	690		
R330-12	3/4		Under development						
R330-16	1			Onder dev	velopitietit				

Operating temperature range: -65 to +230°C

#### Standard threads

G(PF)	Japanese standard straight pipe threads for general use	JIS B0202
R(PT)	Japanese standard taper pipe threads for general use	JIS B0203
UNF	Unified fine pitch thread	JIS B0208
UNC	Unified coarse pitch thread	JIS B0206
М	Metric fine pitch thread	JIS B0205
М	Metric coarse pitch thread	JIS B0205
NPT	American standard taper pipe threads for general use	ANSI/ASME
NPS	American standard straight pipe threads for general use	B1.20.1
NPTF	Dryseal American standard taper pipe threads	ANSI/B1.20.3,
NPSM	American standard straight pipe threads for free-fitting	1.20.4
	mechanical joints fixtures	

# **High Pressure Teflon Hose Questionnaire**

Please fill in the following questions and send by e-mail. We will reply to you with a quotation by e-mail.

Address	
Company name	
Department	
Name	
TEL	
FAX	
E-mail	
Bulk hose reference N	lumber:
Hose length:	mm
· ·	ninless steel 304 □Iron □Brass hers( )
Type of fittings:	
Maximum working pre	ssure: MPa
Type of fluid:	
Fluid temperature:	°C
Environmental temper	ature: °C
Flow rate:	L/min
Please write your requ	uirements or questions.

# **High Pressure Nylon Hose**



#### **Features and Benefits**

- Flexible and light weight hose makes it easy to use
- High pressure hose can handle several high viscosity fluids
- Comes in a variety of fittings sizes

#### **Typical Applications**

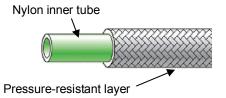
- Adhesive bonding
- Sealing system
- Marine shipbuilding
- High pressure washing

#### **Typical Fluids Handled**

- Water-borne & solvent-borne airless spray
- Moisture-sensitive materials such as isocyanates
- Epoxies
- Sealants and adhesives
- Hydraulic oils

#### R 100 Series

# Outer layer: Stainless wire braid

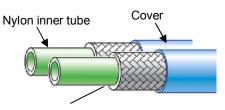


Bulk hose reference number	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
Humber	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/m)
R100-02	1/8	4	7.3	32	130	40	75
R100-04	1/4	6	9.3	22	90	50	90
R100-05	3/8	8	11.6	21	84	60	140
R100-06	3/8	9	12.9	21	84	65	145
R100-08	1/2	12.7	17.6	35	140	100	250
R100-12	3/4	19	25.6	25	100	190	450
R100-16	1	25	32.5	25	100	230	840

Operating temperature range: -40 to +100°C

R 215-P Series····Cover: PVC

R 215-S Series ··· Cover: Santoprene



Pressure-resistant layer

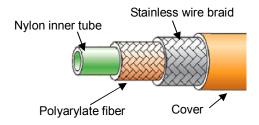
Bulk hose reference	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
number	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/m)
R215-P-04	1/4	6	11.0	22	90	45	120
R215-P-05	3/8	8	13.3	21	84	55	175
R215-P-06	3/8	9	15.0	21	84	85	200
R215-P-08	1/2	12.7	19.5	35	140	90	290
R215-P-12	3/4	19	28.0	25	100	180	580
R215-S-04	1/4	6	11.0	22	90	45	120
R215-S-05	3/8	8	13.3	21	84	55	175

Operating temperature range: P Series -40 to +60°C

S Series -40 to +100°C

#### R 240-P Series ··· Cover: PVC

# R 240-S Series ··· Cover: Santoprene



Bulk hose reference number	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
Humber	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/m)
R240-P-04	1/4	6	12.3	40	160	50	160
R240-P-06	3/8	9	16.0	40	160	90	240
R240-S-04	1/4	6	12.3	40	160	50	140
R240-S-06	3/8	9	16.0	40	160	90	220

Operating temperature range: P Series -40 to +60°C

S Series -40 to +80°C

# Standard threads

G(PF)	Japanese standard straight pipe threads for general use	JIS B0202
R(PT)	Japanese standard taper pipe threads for general use	JIS B0203
UNF	Unified fine pitch thread	JIS B0208
UNC	Unified coarse pitch thread	JIS B0206
М	Metric fine pitch thread	JIS B0205
М	Metric coarse pitch thread	JIS B0205
NPT	American standard taper pipe threads for general use	ANSI/ASME
NPS	American standard straight pipe threads for general use	B1.20.1
NPTF	Dryseal American standard taper pipe threads	ANSI/B1.20.3,
NPSM	American standard straight pipe threads for free-fitting	1.20.4
	mechanical joints fixtures	

# **High Pressure Nylon Hose Questionnaire**

Please fill in the following questions and send by e-mail.

We will reply to you with a quotation by e-mail.

Address	
Company name	
Department	
Name	
TEL	
FAX	
E-mail	
Bulk hose reference N	lumber:
Hose length:	mm
· ·	ainless steel 304 □Iron □Brass hers( )
Type of fittings:	
Maximum working pre	essure: MPa
Type of fluid:	
Fluid temperature:	°C
Environmental temper	rature: °C
Flow rate:	L/min
Please write your requ	uirements or questions.

# **Low Pressure Hose**



#### **Features and Benefits**

- High solvent resistant hose makes this the choice for various applications
- Flexible and light weight hose makes it easy to use
- Can be used as a suction hose or a delivery hose
- Comes in a variety of fittings sizes

#### **Typical Applications**

- Air or air-assisted spray
- Wood industries
- Adhesive and bonding system
- Auto feeder
- General metal

#### **Typical Fluids Handled**

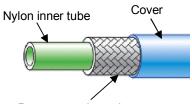
- Paints
- Cleaning fluids
- Protective coatings
- Hydraulic oils

# **RF 20-P Series**

Pressure-resistant layer: 04-08 Polyester

12 Stainless wire braids

Cover: PVC



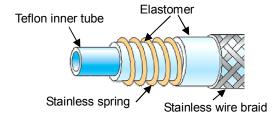
Pressure-resistant layer

Bulk hose reference number	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
number	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/m)
RF20-P-04	1/4	6	12.0	6	24	40	130
RF20-P-05	3/8	8	15.5	6	24	50	170
RF20-P-08	1/2	12.7	19.8	6	24	80	280
RF20-P-12	3/4	19	27	6	24	150	540

Operating temperature range: -40 to +60°C

#### **RF 3W Series**

It is coarsely braided; the fluid can be seen.



Bulk hose reference number	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
Humber	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/m)
RF3W-08	1/2	12	19.3	3	12	40	275
RF3W-12	3/4	19	27.0	3	12	75	440
RF3W-16	1	25	33.0	3	12	100	650

Operating temperature range: -20 to +70°C

# **Standard threads**

G(PF)	Japanese standard straight pipe threads for general use	JIS B0202
R(PT)	Japanese standard taper pipe threads for general use	JIS B0203
UNF	Unified fine pitch thread	JIS B0208
UNC	Unified coarse pitch thread	JIS B0206
М	Metric fine pitch thread	JIS B0205
М	Metric coarse pitch thread	JIS B0205
NPT	American standard taper pipe threads for general use	ANSI/ASME
NPS	American standard straight pipe threads for general use	B1.20.1
NPTF	Dryseal American standard taper pipe threads	ANSI/B1.20.3,
NPSM	American standard straight pipe threads for free-fitting	1.20.4
	mechanical joints fixtures	

#### **Low Pressure Hose Questionnaire**

Please fill in the following questions and send by e-mail. We will reply to you with a quotation by e-mail.

Address					
Company name					
Department					
Name					
TEL					
FAX					
E-mail					
Bulk hose reference N	umber:				
Hose length:	mm				
Fitting material: □Stainless steel 304 □Iron □Brass □Others( )					
Type of fittings:					
Maximum working pressure: MPa					
Type of fluid:					
Fluid temperature:	°C				
Environmental temperature: °C					
Flow rate:	L/min				
Please write your requ	uirements or questions				

# **Insulated Steam Hose**



#### **Features and Benefits**

- Covered with a thick braided polyester
- Flexible and durable
- An additional air layer keeps surface temperature low
- Long life and easy handling

#### **Typical Applications**

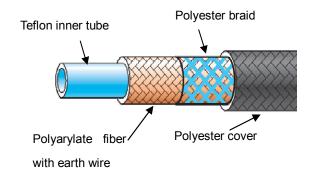
- Cleaning industry
- Garment factory
- Steam washing
- Mold temperature controller (oil & water)

#### **Typical Fluids Handled**

- Steam
- High temperature water

#### R400-03-HG

# for ironing



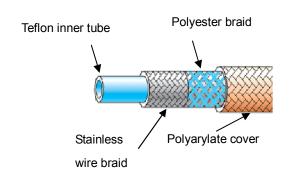
Bulk hose reference	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
number	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/2.5m)
R400-03-HG	1/4	5	15	1	70	30	340

Operating temperature range: Max 200°C

#### **R410-HG**

# for press machine

# for temperature control



Bulk hose reference number	Port diameter	Inner diameter	Outer diameter	Maximum working pressure	Minimum burst pressure	Minimum bending radius	Reference weight
Humber	(in)	(mm)	(mm)	(MPa)	(MPa)	(mm)	(g/0.7m)
R410-04-HG	1/4	6	15.5	1	27	70	200
R410-05-HG	3/8	8	20	1	25	80	270
R410-07-HG	1/2	11	26	1	20	120	470

Operating temperature range: Max 200°C

# **Standard threads**

G(PF)	Japanese standard straight pipe threads for general use	JIS B0202
R(PT)	Japanese standard taper pipe threads for general use	JIS B0203
UNF	Unified fine pitch thread	JIS B0208
UNC	Unified coarse pitch thread	JIS B0206
М	Metric fine pitch thread	JIS B0205
М	Metric coarse pitch thread	JIS B0205
NPT	American standard taper pipe threads for general use	ANSI/ASME
NPS	American standard straight pipe threads for general use	B1.20.1
NPTF	Dryseal American standard taper pipe threads	ANSI/B1.20.3,
NPSM	American standard straight pipe threads for free-fitting	1.20.4
	mechanical joints fixtures	

#### **Insulation Hose Questionnaire**

Please fill in the following questions and send by e-mail. We will reply to you with a quotation by e-mail.

Address					
Company name					
Department					
Name					
TEL					
FAX					
E-mail					
Bulk hose reference N	umber:				
Hose length:	mm				
· ·	ninless steel 304 □lron □Brass hers( )				
Type of fittings:					
Maximum working pressure: MPa					
Type of fluid:					
Fluid temperature:	°C				
Environmental temper	ature: °C				
Flow rate:	L/min				
Please write your requ	uirements or questions.				

# **Company Profile**

Company Name: TOYONAKA HOT LABORATORY CO., LTD.

Year Established: 1987

**Business Type:** Manufacturer

Main Products: Variety types of hoses and heaters

Head Office: Toyonaka-shi Osaka



Main Factory: Miyazaki



Employee number: 50

Management Certification: ISO9001:2008
President: Toshio Kawahara

**Operational Address:** 

209, 4-6-15, Ohomoriminamimachi, Ohta-ku,

Tokyo 143-0013, Japan TEL:+81-3-5737-7221 FAX:+81-3-6423-9375

