

Instrument Thread Fittings

High Technology Valve & Flange & Fitting Series



 **SUPERLOK®**

 **BMT Co., Ltd.**
www.superlok.com

■ Ordering Information

I HN - 8N - 8R - B

I II III IV III IV V

I : INSTRUMENT THREAD FITTINGS
IV : PIPE THREAD TYPE

II : FITTING TYPE
V : MATERIAL

III : PIPE THREAD SIZE

■ Material Standards & Temperature Rating

Material	Identify	Max. Temperature °F(°C)
316 Stainless Steel	Nil	1000(537)
Brass	B	400(204)
Carbon Steel	C	375(190)

■ Thread Specifications

Thread Type	Identify	Specification
NPT	N	ASME B1.20.1, SAE AS71051
ISO/BSP (Parallel)	G	ISO 228/1, JIS B 0202
ISO/BSP (Tapered)	R	ISO 7/1, JIS B 0203

■ Pipe Thread Size

Size (inch)	1/8	1/4	3/8	1/2	3/4	1
ISO Tapered	2R	4R	6R	8R	12R	16R
NPT	2N	4N	6N	8N	12N	16N
ISO Parallel	2G	4G	6G	8G	12G	16G

■ Gasket, O-ring Materials

Component	Material	Temperature range °F(°C)
O-ring	Buna N	-25°C to 110°C (-13°F to 230°F)
	Fluorocarbon	-28°C to 204°C (-20°F to 400°F)
Copper gasket	Copper	-196°C to 204°C (-325°F to 400°F)

■ Installation Instructions

To ensure a leak-tight seal, BMT recommends the use of a pipe thread sealant on all NPT, ISO Tapered threads. The most effective sealing method is teflon tape. Tape should be used only on male tapered pipe threads.

Do not use tape on flared, coned or tube fitting ends!

Clean both male and female tapered threads. Wrap tape in the direction of the male tapered thread spiral.

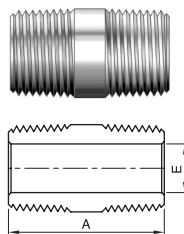
■ Pressure Ratings

Size Designator	NPT Size	316 Stainless Steel				Brass				Carbon Steel			
		Male		Female		Male		Female		Male		Female	
		psig	bar	psig	bar	psig	bar	psig	bar	psig	bar	psig	bar
1	1/16	11000	757	6700	461	5500	378	3300	227	11000	757	6700	461
2	1/8	10000	689	6500	447	5000	344	3200	220	10000	689	6500	447
4	1/4	8000	551	6600	454	4000	275	3300	227	8000	551	6600	454
6	3/8	7800	537	5300	365	3900	268	2600	179	7800	537	5300	365
8	1/2	7700	530	4900	337	3800	261	2400	165	7700	530	4900	337
12	3/4	7300	502	4600	316	3600	248	2300	158	7300	502	4600	316
16	1	5300	365	4400	303	2600	179	2200	151	5300	365	4400	303
20	1 1/4	6000	413	5000	344	3000	206	2500	172	6000	413	5000	344
24	1 1/2	5000	344	4600	316	2500	172	2300	158	5000	344	4600	316
32	2	3900	268	3900	268	1900	130	1900	130	3900	268	3900	268

- Pressure ratings are based on ASME Code for Pressure Piping B31.3, Process Piping with allowable stress 20,000psi for SS316, 10,000psi/Brass, and 20,000psi/ Carbon steel.
- To determine pressure ratings in accordance with B31.1, Power Piping:
 - 316 Stainless steel material : multiply by 0.94, Carbon steel material : multiply by 0.75, Brass material ratings remain the same
- To determine kPa, multiply by 6.89

ICN Close Nipple

Male NPT Threads

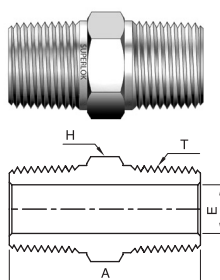


Part Number	NPT Pipe Size	Dimension(mm)	
		A	E
ICN - 2N	1/8	19.1	4.8
ICN - 4N	1/4	28.4	7.1
ICN - 6N	3/8	28.4	9.6
ICN - 8N	1/2	38.1	11.9
ICN - 12N	3/4	38.1	15.7
ICN - 16N	1	47.8	22.4

※ ISO Tapered Threads are available upon request.

IHN Hex Nipple

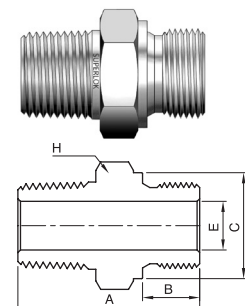
Male NPT Threads



Part Number	NPT Pipe Size	Dimension(mm)		
		A	E	H
IHN - 2N	1/8	25.6	4.8	11.1
IHN - 4N	1/4	35.6	7.1	14.2
IHN - 6N	3/8	36.3	9.6	17.4
IHN - 8N	1/2	46.7	11.9	22.2
IHN - 12N	3/4	46.7	15.7	26.9
IHN - 16N	1	58.9	22.4	34.9

※ ISO Tapered Threads are available upon request.

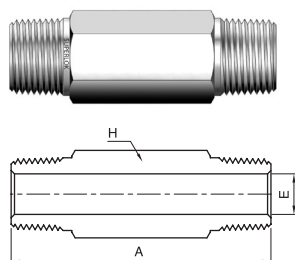
Male NPT to Male ISO Parallel Pipe Threads



Part Number	NPT Pipe Size	ISO/BSP Pipe Size (ISO 228)	Dimension(mm)				
			A	B	C	E	H
IHN - 2N - 2G	1/8	1/8	27.7	7.1	13.7	4.1	14.2
IHN - 4N - 4G	1/4	1/4	36.8	11.2	18.0	5.8	19.1
IHN - 6N - 6G	3/8	3/8	37.6	11.2	21.6	7.9	22.2
IHN - 8N - 8G	1/2	1/2	44.4	14.2	25.9	11.9	26.9
IHN - 12N - 12G	3/4	3/4	49.0	15.7	32.0	15.7	33.3
IHN - 16N - 16G	1	1	56.6	18.3	38.9	19.8	41.2

IHLN Hex Long Nipple

Male NPT Threads

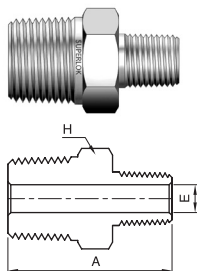


Part Number	NPT Pipe Size	Dimension(mm)		
		A	E	H
IHLN - 2N	1/8	*	4.8	11.1
IHLN - 4N	1/4	*	7.1	14.2
IHLN - 6N	3/8	*	9.6	17.4
IHLN - 8N	1/2	*	11.9	22.2
IHLN - 12N	3/4	*	15.7	26.9
IHLN - 16N	1	*	22.8	34.9

※ NOTE : The length of Nipple "A" is defined by user
Part Number Example : IHLN - 8N - 100L(length "A" : 100mm)

※ ISO Tapered Threads are available upon request.

IHRN Hex Reducing Nipple

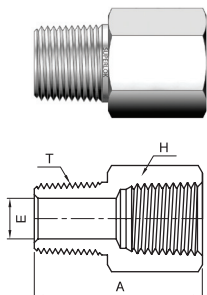


Male NPT Threads

Part Number	NPT Pipe Size	Reduced Pipe Size	Dimension(mm)		
			A	E	H
IHRN - 2N - 1N	1/8	1/16	25.6	3.0	11.1
IHRN - 4N - 2N	1/4	1/8	31.0	4.8	14.2
IHRN - 6N - 2N	3/8	1/8	31.8	4.8	17.4
IHRN - 6N - 4N	3/8	1/4	36.3	7.1	17.4
IHRN - 8N - 2N	1/2	1/8	37.3	4.8	22.2
IHRN - 8N - 4N	1/2	1/4	41.9	7.1	22.2
IHRN - 8N - 6N	1/2	3/8	41.9	9.6	22.2
IHRN-12N - 4N	3/4	1/4	41.9	7.1	26.9
IHRN-12N - 8N	3/4	1/2	46.7	11.9	26.9
IHRN-16N - 4N	1	1/4	49.3	7.1	34.9
IHRN-16N - 8N	1	1/2	54.1	11.9	34.9
IHRN-16N -12N	1	3/4	54.1	15.7	34.9

※ ISO Tapered Threads are available upon request.

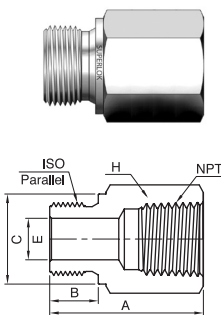
IA Adapter



Male to Female NPT Threads

Part Number	NPT Pipe Size	Dimension(mm)		
		A	E	H
IA - 2N	1/8	27.9	4.8	14.2
IA - 4N	1/4	35.6	7.1	19.1
IA - 6N	3/8	38.4	9.6	22.2
IA - 8N	1/2	49.3	11.9	26.9
IA - 12N	3/4	51.3	15.7	33.3
IA - 16N	1	57.9	22.4	41.2

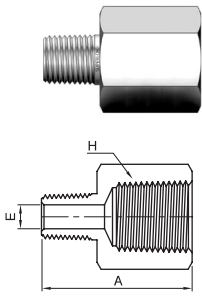
※ ISO Tapered Threads are available upon request.



Male ISO Parallel Pipe Threads to Female NPT

Part Number	ISO/BSP Pipe Size (ISO 228)	NPT Pipe Size	Dimension(mm)				
			A	B	C	E	H
IA - 2G - 2N	1/8	1/8	25.1	7.1	13.7	4.1	14.2
IA - 4G - 4N	1/4	1/4	33.5	11.2	18.0	5.8	19.1
IA - 6G - 6N	3/8	3/8	35.8	11.2	21.6	7.9	22.2
IA - 8G - 8N	1/2	1/2	44.2	14.2	25.9	11.9	26.9
IA - 12G - 12N	3/4	3/4	48.0	15.7	32.0	15.7	33.3
IA - 16G - 16N	1	1	53.3	18.3	38.9	19.8	41.2

IRA Reducing Adapter

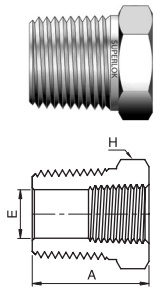


Male to Female NPT Threads

Part Number	Male Pipe Size	Female Pipe Size	Dimension(mm)		
			A	E	H
IRA - 2N - 4N	1/8	1/4	32.0	4.8	19.1
IRA - 2N - 6N	1/8	3/8	33.8	4.8	22.2
IRA - 4N - 6N	1/4	3/8	38.1	7.1	22.2
IRA - 2N - 8N	1/8	1/2	40.1	4.8	26.9
IRA - 4N - 8N	1/4	1/2	44.7	7.1	26.9
IRA - 6N - 8N	3/8	1/2	44.4	9.6	26.9
IRA - 4N - 12N	1/4	3/4	47.0	7.1	33.3
IRA - 6N - 12N	3/8	3/4	46.2	9.6	33.3
IRA - 8N - 12N	1/2	3/4	51.3	11.9	33.3
IRA - 4N - 16N	1/4	1	49.8	7.1	41.2
IRA - 8N - 16N	1/2	1	54.9	11.9	41.2
IRA - 12N - 16N	3/4	1	55.1	15.7	41.2

※ ISO Tapered Threads are available upon request.

IRHB Reducing Hex Bushing

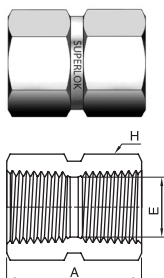


Male to Female NPT Threads

Part Number	Male Pipe Size	Female Pipe Size	Dimension(mm)		
			A	E	H
IRHB - 4N - 2N	1/4	1/8	26.9	7.1	14.2
IRHB - 6N - 2N	3/8	1/8	21.8	8.6	17.4
IRHB - 6N - 4N	3/8	1/4	30.2	9.6	19.1
IRHB - 8N - 2N	1/2	1/8	27.4	8.6	22.2
IRHB - 8N - 4N	1/2	1/4	27.4	11.4	22.2
IRHB - 8N - 6N	1/2	3/8	35.8	11.9	22.2
IRHB - 12N - 4N	3/4	1/4	27.4	11.4	26.9
IRHB - 12N - 6N	3/4	3/8	27.4	15.0	26.9
IRHB - 12N - 8N	3/4	1/2	41.4	15.7	26.9
IRHB - 16N - 4N	1	1/4	34.8	11.4	34.9
IRHB - 16N - 6N	1	3/8	34.8	15.0	34.9
IRHB - 16N - 8N	1	1/2	34.8	18.5	34.9
IRHB - 16N - 12N	1	3/4	47.0	22.4	34.9

※ ISO Tapered Threads are available upon request.

IHC Hex Coupling

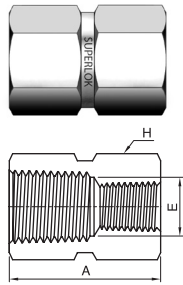


Female NPT Threads

Part Number	Pipe Size	Dimension(mm)		
		A	E	H
IHC - 2N	1/8	20.6	8.6	14.2
IHC - 4N	1/4	30.2	11.4	19.1
IHC - 6N	3/8	33.3	15.0	22.2
IHC - 8N	1/2	39.6	18.5	26.9
IHC - 12N	3/4	41.1	23.9	33.3
IHC - 16N	1	50.8	29.7	41.2

※ ISO Tapered Threads are available upon request.

IHRC Hex Reducing Coupling

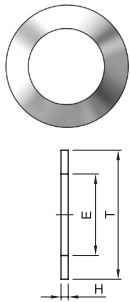


Female NPT Threads

Part Number	Pipe Size	Reduced Pipe Size	Dimension(mm)		
			A	E	H
IHRC - 4N - 2N	1/4	1/8	31.0	8.6	19.1
IHRC - 6N - 4N	3/8	1/4	35.1	11.4	22.2
IHRC - 8N - 2N	1/2	1/8	39.6	8.6	26.9
IHRC - 8N - 4N	1/2	1/4	44.4	11.4	26.9
IHRC - 8N - 6N	1/2	3/8	45.2	15.0	26.9
IHRC-12N - 4N	3/4	1/4	46.0	11.4	33.3
IHRC-12N - 8N	3/4	1/2	52.3	18.5	33.3
IHRC-16N - 8N	1	1/2	55.6	18.5	41.2
IHRC-16N -12N	1	3/4	57.2	23.9	41.2

※ ISO Tapered Threads are available upon request.

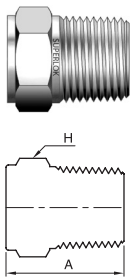
IPG ISO Parallel Gasket



ISO Parallel Copper Gaskets

Part Number	Pipe Size	Dimension(mm)		
		E	H	T
IPG - 2	1/8	10.2	1.0	16.0
IPG - 4	1/4	13.4	1.5	19.5
IPG - 6	3/8	17.0	1.5	24.0
IPG - 8	1/2	21.2	1.5	29.0
IPG - 12	3/4	27.2	2.0	34.5
IPG - 16	1	34.0	2.0	42.0

IPP Pipe Plug

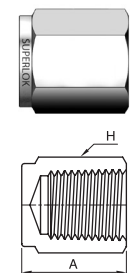


Male NPT Threads

Part Number	Pipe Size	Dimension(mm)	
		A	H
IPP - 2N	1/8	19.1	11.1
IPP - 4N	1/4	24.4	14.2
IPP - 6N	3/8	25.1	17.4
IPP - 8N	1/2	30.7	22.2
IPP - 12N	3/4	30.7	26.9
IPP - 16N	1	38.1	34.9

※ ISO Tapered Threads are available upon request.

IPC Pipe Cap



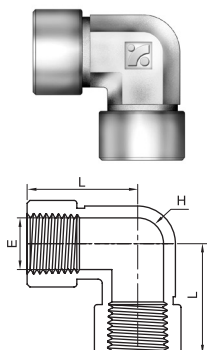
Female NPT Threads

Part Number	Pipe Size	Dimension(mm)	
		A	H
IPC - 2N	1/8	19.1	14.2
IPC - 4N	1/4	23.1	19.1
IPC - 6N	3/8	26.2	22.2
IPC - 8N	1/2	34.0	26.9
IPC - 12N	3/4	36.6	33.3
IPC - 16N	1	41.1	41.2

※ ISO Tapered Threads are available upon request.

IFE Female Elbow

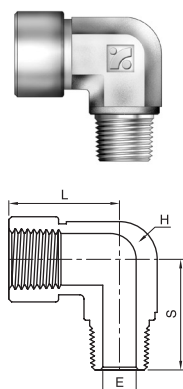
Female NPT Threads



Part Number	Pipe Size	Dimension(mm)		
		E	L	H
IFE - 2N	1/8	8.6	24.0	12.7
IFE - 4N	1/4	11.4	29.0	17.5
IFE - 6N	3/8	15.0	34.5	20.6
IFE - 8N	1/2	18.5	37.0	25.4
IFE - 12N	3/4	23.9	46.5	31.8
IFE - 16N	1	29.7	48.8	42.9

※ ISO Tapered Threads are available upon request.

ISE Street Elbow

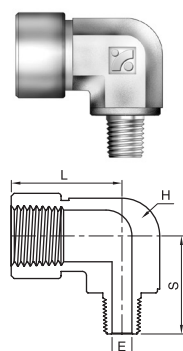


Female to Male NPT Threads

Part Number	Pipe Size	Dimension(mm)			
		E	L	S	H
ISE - 2N	1/8	4.8	24.1	19.6	12.7
ISE - 4N	1/4	7.1	29.0	26.5	17.5
ISE - 6N	3/8	9.6	34.5	28.2	20.6
ISE - 8N	1/2	11.9	37.0	35.3	25.4
ISE - 12N	3/4	15.7	46.5	39.6	31.8
ISE - 16N	1	22.4	48.8	49.2	42.9

※ ISO Tapered Threads are available upon request.

IRSE Reducing Street Elbow



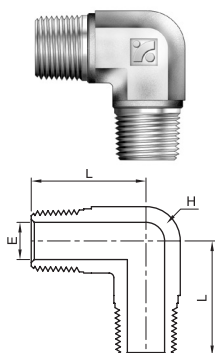
Female to Male NPT Threads

Part Number	Female Pipe Size	Male Pipe Size	Dimension(mm)			
			E	L	S	H
IRSE - 2N - 1N	1/8	1/16	3.0	26.4	22.1	12.7
IRSE - 4N - 2N	1/4	1/8	4.8	29.0	22.4	17.5
IRSE - 6N - 4N	3/8	1/4	7.1	34.5	28.2	20.6
IRSE - 8N - 4N	1/2	1/4	7.1	37.0	30.5	25.4
IRSE - 8N - 6N	1/2	3/8	9.6	37.0	30.5	25.4
IRSE - 12N - 8N	3/4	1/2	11.9	46.5	39.6	31.8
IRSE - 16N - 8N	1	1/2	11.9	48.8	44.5	42.9

※ ISO Tapered Threads are available upon request.

IME Male Elbow

Male NPT Threads

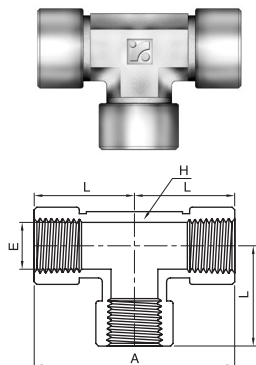


Part Number	Pipe Size	Dimension(mm)		
		E	L	H
IME - 2N	1/8	4.8	19.1	12.7
IME - 4N	1/4	7.1	24.5	12.7
IME - 6N	3/8	9.6	26.9	17.5
IME - 8N	1/2	11.9	33.2	20.6
IME - 12N	3/4	15.7	35.3	25.4
IME - 16N	1	22.4	44.5	31.8

※ ISO Tapered Threads are available upon request.

IFT Female Tee

Female NPT Threads

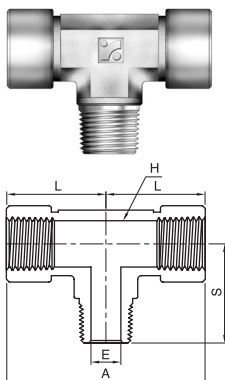


Part Number	Pipe Size	Dimension(mm)			
		A	E	L	H
IFT - 2N	1/8	48.0	8.6	24.0	12.7
IFT - 4N	1/4	58.0	11.4	29.0	17.5
IFT - 6N	3/8	69.0	15.0	34.5	20.6
IFT - 8N	1/2	74.0	18.5	37.0	25.4
IFT - 12N	3/4	93.0	23.9	46.5	31.8
IFT - 16N	1	97.0	29.7	48.5	42.9

※ ISO Tapered Threads are available upon request.

IBT Branch Tee

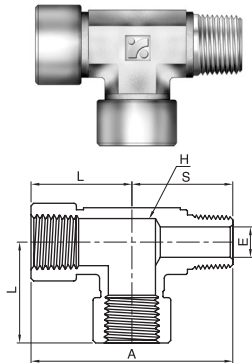
Male and Female NPT Threads



Part Number	Pipe Size	Dimension(mm)				
		A	E	L	S	H
IBT - 2N	1/8	48.0	4.8	24.0	19.6	12.7
IBT - 4N	1/4	58.0	7.1	29.0	26.5	17.5
IBT - 6N	3/8	69.0	9.6	34.5	28.2	20.6
IBT - 8N	1/2	74.0	11.9	37.0	35.3	25.4
IBT - 12N	3/4	93.0	15.7	46.5	39.6	31.8
IBT - 16N	1	97.0	22.4	48.5	49.2	42.9

※ ISO Tapered Threads are available upon request.

IRT Run Tee

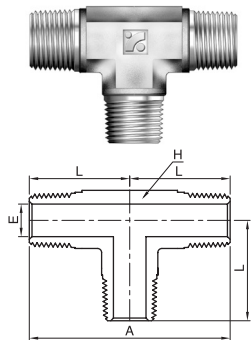


Male and Female NPT Threads

Part Number	Pipe Size	Dimension(mm)				
		A	E	L	S	H
IRT - 2N	1/8	43.6	4.8	24.0	19.6	12.7
IRT - 4N	1/4	56.2	7.1	29.0	26.5	17.5
IRT - 6N	3/8	62.7	9.6	34.5	28.2	20.6
IRT - 8N	1/2	72.3	11.9	37.0	35.3	25.4
IRT - 12N	3/4	86.1	15.7	46.5	39.6	31.8
IRT - 16N	1	97.7	22.4	48.5	49.2	42.9

※ ISO Tapered Threads are available upon request.

IMT Male Tee

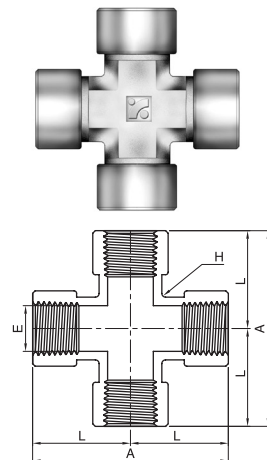


Male NPT Threads

Part Number	Pipe Size	Dimension(mm)			
		A	E	L	H
IMT - 2N	1/8	38.2	4.8	19.1	12.7
IMT - 4N	1/4	49.0	7.1	24.5	12.7
IMT - 6N	3/8	53.8	9.6	26.9	17.5
IMT - 8N	1/2	66.4	11.9	33.2	20.6
IMT - 12N	3/4	70.6	15.7	35.3	25.4
IMT - 16N	1	89.0	22.4	44.5	31.8

※ ISO Tapered Threads are available upon request.

IFC Female Cross



Female NPT Threads

Part Number	Pipe Size	Dimension(mm)			
		A	E	L	H
IFC - 2N	1/8	48.0	8.6	24.0	12.7
IFC - 4N	1/4	58.0	11.4	29.0	17.5
IFC - 6N	3/8	69.0	15.0	34.5	20.6
IFC - 8N	1/2	74.0	18.5	37.0	25.4
IFC - 12N	3/4	93.0	23.9	46.5	31.8
IFC - 16N	1	97.0	29.7	48.5	42.9

※ ISO Tapered Threads are available upon request.

Valve Series

- Key Operation Ball Valves
- Key Operation Needle Valves
- Ball Valves
- Integral Bonnet Needle Valves
- Union Bonnet Needle Valves
- Check Valves
- High Pressure Check Valves
- High Pressure Needle Valves
- Plug Valves
- Manifold Valves
- Vacuum Clamps
- Water Regulators
- Flexible Hoses
- Double Block & Bleed Valves
- Swing-Out Ball Valves
- Toggle Valves
- Bleed & Purge Valves
- Quick Connectors
- High Pressure Ball Valves
- Hydraulic Ball Valves
- Trunnion Ball Valves
- Rising Plug Valves
- Relief Valves
- Cryogenic Needle Valves
- Cryogenic Ball Valves
- Micron in-Line Filters
- Gauge Root Valves
- Hydraulic Flange and Components

Fitting Series

- Integration Tube Fittings
- Tube Fittings (Compression Type)
- Instrument Thread Fittings
- Forged Fittings
- Bite Type Tube Fittings (DIN2353)
- Bite Type Tube Fittings (JIS B2351)
- 37 Flared Tube Fittings (SAE J514)
- O-Ring Face Seal Fittings
- Hose Connectors & Push-On Hose Fittings

Electric Equipment

- MCPD(Molded Case Power Distributor)
- SPIDER
- Smart Eye Module



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