

Instrumentation Thread Fitting Index

 <p>ICN 222P Close Nipple</p>	 <p>IRHB 224P Reducing Hex Bushing</p>	 <p>IRSE 226P Reducing Street Elbow</p>
 <p>IHN 222P Hex Nipple</p>	 <p>IHC 224P Hex Coupling</p>	 <p>IME 226P Male Elbow</p>
 <p>IHLN 222P Hex Long Nipple</p>	 <p>IHRC 224P Hex Reducing Coupling</p>	 <p>IFT 226P Female Tee</p>
 <p>IHRN 223P Hex Reducing Nipple</p>	 <p>IPG 225P ISO Parallel Gasket</p>	 <p>IBT 227P Branch Tee</p>
 <p>IA 223P Adapter</p>	 <p>IPP 225P Pipe Plug</p>	 <p>IRT 227P Run Tee</p>
 <p>IRA 224P Reducing Adapter</p>	 <p>IPC 225P Pipe Cap</p>	 <p>IMT 227P Male Tee</p>
 <p>IFE 225P Female Elbow</p>	 <p>ISE 226P Street Elbow</p>	 <p>IFC 227P Female Cross</p>

Instrumentation Thread Fittings

Ordering Information

Example :	I H N	-	8 N	-	8 R	-	B
	1		2 3		2 3		4

1. Fitting Type

Please refer to Instrumentation Thread Fitting Index on page 220.

2. 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

※ For special sizes and configurations, please consult BMT (SUPERLOK) sales representative.

3. Pipe Thread Type

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

4. Material

The numbers in parentheses indicate the maximum temperature rating.

- (Blank) = 316 Stainless Steel [1000°F(537°C)]
- B = Brass [400°F(204°C)]
- C = Carbon Steel [375°F(190°C)]

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.

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)

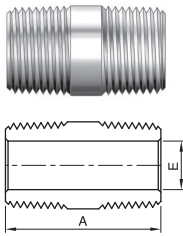
Pressure Ratings

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 B31.3 (Process Piping) with allowable stress 20,000 psi for 316 stainless steel, 10,000 psi for brass, and 20,000 psi for carbon steel.
- To determine pressure ratings in accordance with B31.1: multiply by 0.94 for 316 stainless steel and by 0.75 for carbon steel. For Brass, the ratings remain the same.
- To determine kPa, multiply by 6.89

ICN

Close Nipple

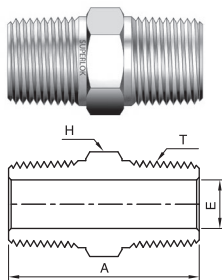


Male NPT Threads

Part No.	NPT Pipe Size	Dimension	
		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

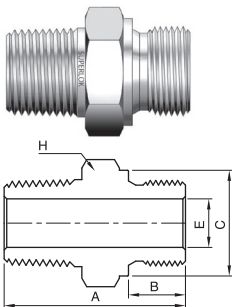
IHN

Hex Nipple



Male NPT Threads

Part No.	NPT Pipe Size	Dimension		
		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

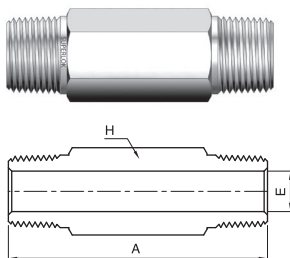


Male NPT to Male ISO Parallel Pipe Threads

Part No.	NPT Pipe Size	ISO/BSP Pipe Size (ISO 228)	Dimension				
			A	B	C	E	H
IHN - 2N - 2G	1/8	1/8	27.7	8	13.7	4.1	14.2
IHN - 4N - 4G	1/4	1/4	36.8	12	18.0	5.8	19.1
IHN - 6N - 6G	3/8	3/8	37.6	12	21.6	7.9	22.2
IHN - 8N - 8G	1/2	1/2	44.4	14	25.9	11.9	26.9
IHN - 12N - 12G	3/4	3/4	49.0	16	32.0	15.7	33.3
IHN - 16N - 16G	1	1	56.6	18	38.9	19.8	41.2

IHLN

Hex Long Nipple



Male NPT Threads

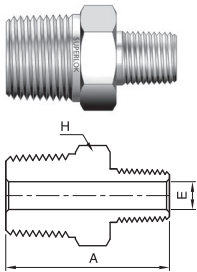
Part No.	NPT Pipe Size	Dimension		
		A	E	H
IHLN - 2N	1/8	*	4.8	11.1
IHLN - 4N	1/4	*	7.1	14.2
IHLN - 6N	3/8	*	9.6	17.4
IHLN - 8N	1/2	*	11.9	22.2
IHLN - 12N	3/4	*	15.7	26.9
IHLN - 16N	1	*	22.4	34.9

* The length of Nipple "A" is defined by user (Part number example : IHLN - 8N - 100L when A = 100mm)

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IHRN

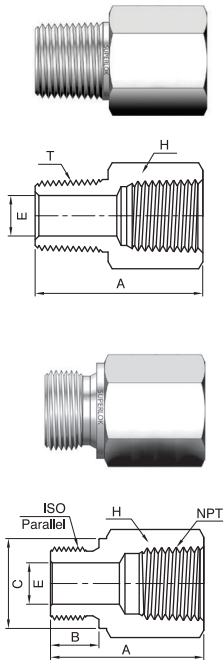
Hex Reducing Nipple

**Male NPT Threads**

Part No.	NPT Pipe Size	Reduced Pipe Size	Dimension		
			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

IA

Adapter

**Male to Female NPT Threads**

Part No.	NPT Pipe Size	Dimension		
		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

Male ISO Parallel Pipe Threads to Female NPT

Part No.	ISO/BSP Pipe Size (ISO 228)	NPT Pipe Size	Dimension				
			A	B	C	E	H
IA - 2G - 2N	1/8	1/8	25.1	8.0	13.7	4.1	14.2
IA - 4G - 4N	1/4	1/4	33.5	12.0	18.0	5.8	19.1
IA - 6G - 6N	3/8	3/8	35.8	12.0	21.6	7.9	22.2
IA - 8G - 8N	1/2	1/2	44.2	14.0	25.9	11.9	26.9
IA - 12G - 12N	3/4	3/4	48.0	16.0	32.0	15.7	33.3
IA - 16G - 16N	1	1	53.3	18.0	38.9	19.8	41.2

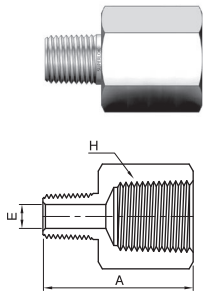
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IRA

Reducing Adapter

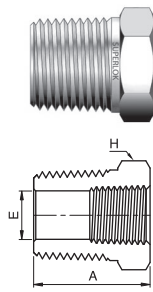


Male to Female NPT Threads

Part No.	Male Pipe Size	Female Pipe Size	Dimension		
			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

IRHB

Reducing Hex Bushing

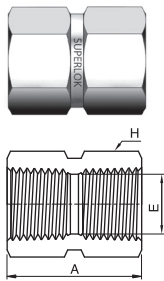


Male to Female NPT Threads

Part No.	Male Pipe Size	Female Pipe Size	Dimension		
			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

IHC

Hex Coupling

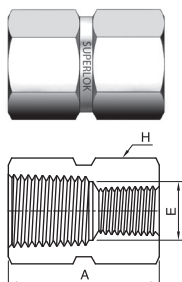


Female NPT Threads

Part No.	Pipe Size	Dimension		
		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

IHRC

Hex Reducing Coupling



Female NPT Threads

Part No.	Pipe Size	Reduced Pipe Size	Dimension		
			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

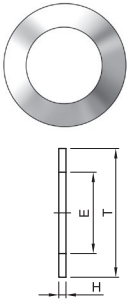
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IPG

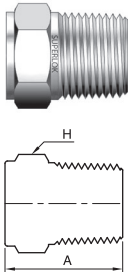
ISO Parallel Gasket

**ISO Parallel Copper Gaskets**

Part No.	Pipe Size	Dimension		
		E	H	T
IPG - 2	1/8	10.2	2.0	16.0
IPG - 4	1/4	13.4	2.0	19.5
IPG - 6	3/8	17.0	2.0	24.0
IPG - 8	1/2	21.2	2.0	29.0
IPG - 12	3/4	27.2	2.0	34.5
IPG - 16	1	34.0	2.0	42.0

IPP

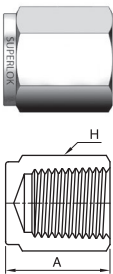
Pipe Plug

**Male NPT Threads**

Part No.	Pipe Size	Dimension	
		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

IPC

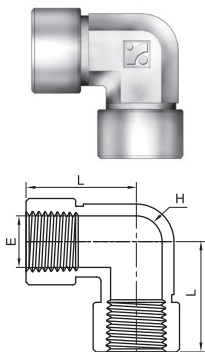
Pipe Cap

**Female NPT Threads**

Part No.	Pipe Size	Dimension	
		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

IFE

Female Elbow

**Female NPT Threads**

Part No.	Pipe Size	Dimension		
		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

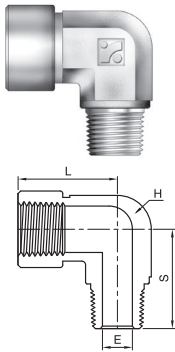
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ISE

Street Elbow

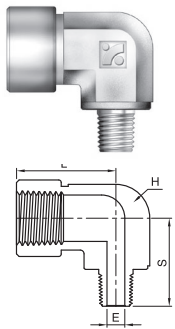


Female to Male NPT Threads

Part No.	Pipe Size	Dimension			
		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

IRSE

Reducing Street Elbow

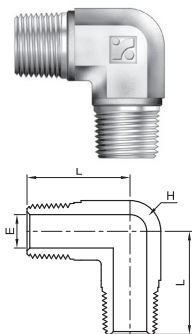


Female to Male NPT Threads

Part No.	Female Pipe Size	Male Pipe Size	Dimension			
			E	L	S	H
IRSE - 2N - 1N	1/8	1/16	3.0	24.1	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	46.5	42.9

IME

Male Elbow

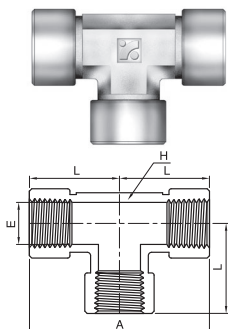


Male NPT Threads

Part No.	Pipe Size	Dimension		
		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

IFT

Female Tee



Female NPT Threads

Part No.	Pipe Size	Dimension			
		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

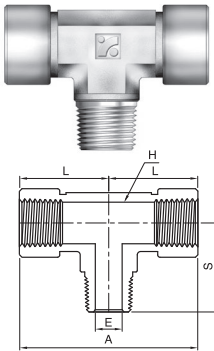
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IBT

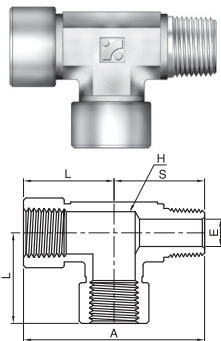
Branch Tee

**Male and Female NPT Threads**

Part No.	Pipe Size	Dimension				
		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

IRT

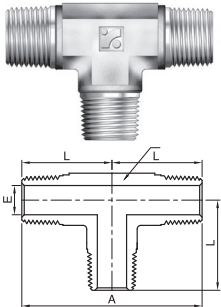
Run Tee

**Male and Female NPT Threads**

Part No.	Pipe Size	Dimension				
		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

IMT

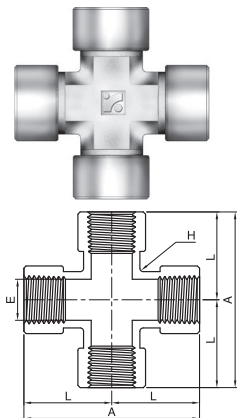
Male Tee

**Male NPT Threads**

Part No.	Pipe Size	Dimension			
		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

IFC

Female Cross

**Female NPT Threads**

Part No.	Pipe Size	Dimension			
		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

- Dimensions and Drawings are for reference only and are subject to change without prior notice.

- Unless otherwise specified, all dimensions are in millimeters.

- Sizes, pressure classes, and end connections not listed are available upon request.