



Precision Instrument

Pipe Fittings



OTG-lok Pipe Fittings February 2022

Features

- ❖ OTG precision instruments pipe fitting are designed in accordance with ASME B31.3 for instrumentation and process control 1/8" to 1"
- ❖ Every fitting is cleaned to remove particle and oil at the precision equipment.
- ❖ Compact design for high pressure application.
- ❖ Male pipe threads are capped for protection.
- ❖ Straight fittings are manufactured form quality bar stock for strength.
- ❖ NPT threads are based on requirement of ASME B1. 20. 1

Fitting Cleaning and Surface Protection

Fittings are cleaned to remove surface contamination, loose particles, iron particles out of cutting tools, and oil from cutting fluid.

Fittings are further processed for the surface protection to enhance its corrosion-resistance in service.

Material	Surface Protection
Stainless steel 316	Passivation
Carbon steel	White Zinc Plating
Brass	Acid cleaning

Materials of Construction

Material	Fitting Designator	Bar Stock	Forgings
Stainless steel 316	SS	ASTM A479 Type 316 ASTM A276 Type 316	ASTM A182 F316
Carbon steel	CS	ASTM A108 JIS G4051 S20C - S45C	ASTM A105 / JIS G4051 S20C
Brass	BS	ASTM B16 UNS C36000 JIS H3250 C3604	ASTM B283 C37700 JIS H3250 C3771

Temperature Rating

Fittings with O-ring, or gasket may be limited in temperature ratings.

Fitting Material	Maximum Temperature °C (°F)
Stainless steel 316	537 (1000)
Carbon steel	204 (400)
Brass	190 (375)

Component	Material	Temperature °C (°F)	
		Minimum	Maximum
SAE O-Rings	FKM	-28 (-20)	204 (400)
Bonded Seal Gasket	NBR	-25 (-13)	110 (230)
	FKM	-15 (5)	204 (400)
Copper Gasket	Copper	-198 (-325)	204 (400)

Pressure Ratings Basis

Pressure ratings are based on ASME Code for pressure Pipeing B31.3 Process Piping, at ambient temperature of 37°C (100°C)

Material	Allow Stress Value
Stainless steel 316	20,000psig (1378bar)
Carbon steel	20,000psig (1378bar)
Brass	10,000psig (689bar)

Pipe End Pressure Rating

Size Designator	ISO / NPT Pipe Size	Stainless Steel 316 / Carbon Steel				Brass			
		Male		Female		Male		Female	
		bar	psig	bar	psig	bar	psig	bar	psig
2	1/8	689	10,000	440	6,500	345	5,000	220	3,200
4	1/4	550	8,000	455	6,600	275	4,000	227	3,300
6	3/8	538	7,800	365	5,300	269	3,900	179	2,600
8	1/2	531	7,700	338	4,900	262	3,800	165	2,400
12	3/4	503	7,300	317	4,600	248	3,600	158	2,300
16	1	365	5,300	303	4,400	179	2,600	152	2,200

Temperature De-rating Factors

The de-rating factors for the allowable working pressure at a specific temperature are as per the requirements of ASME B31.3 process piping code.

Temperature	°C	38	93	149	204	260	316	371	427	482	537	649
	°F	100	200	300	400	500	600	700	800	900	1000	1200
De-rating Factors	Stainless steel 316	1.00	1.00	1.00	0.97	0.90	0.85	0.82	0.80	0.78	0.77	0.49
	Carbon steel	1.00	0.94	0.90	0.86	-	-	-	-	-	-	-
	Brass	1.00	0.78	0.69	0.13	-	-	-	-	-	-	-

Threads

Thread Designator and Standards

Designator	Description in catalog	Industrial Symbol	Thread	Standard
N	NPT	NPT	Tapered Pipe Thread	ANSI / ASME B1.20.1, SAE AS71051
R	ISO Tapered	BSPT, PT	Tapered Pipe Thread	ISO 7-1, DIN 2999, BS21(BSPT), JIS B0203(PT)
G	ISO Parallel	BSPP, PF	Parallel Pipe Thread	ISO 228-1, BS 2779 (BSPP), JIS B0202(PF)
GG	Gauge ISO Paralle	BSPP, PF	Parallel Pipe Thread	ISO 228-1, BS 2779 (BSPP), JIS B0202(PF)
U	Female SAE Straight Thread	UNF, SAE	Unified Thread	ASME B1.1
UO	Male SAE Straight Thread	UNF, SAE	Unified Thread	ASME B1.1

Pipe Thread Size Designator

Nominal Pipe Size, IN.	1/16	1/8	1/4	3/8	1/2	3/4	1
Size Designator	1	2	4	6	8	12	16
NPT	1N	2N	4N	6N	8N	12N	16N
ISO Tapered	1R	2R	4R	6R	8R	12R	16R
ISO Parallel	-	2G	4G	6G	8G	12G	16G
Gauge ISO Parallel	-	-	4GG	6GG	8GG		

SAE straight Thread Designator / Application O-Ring Number



















SAE Thread Size, In.	Corresponding Tube OD, In.	Designator		AS568 O-Ring Number	Female
		Male JIC(AN) Tube Flare Port	Male SAE Straight Thread with O-Ring		Designator
5/16 - 24	1/8	2T	2UO	902	2U
7/16 - 20	1/4	4T	4UO	904	4U
1/2 - 20	5/16	5T	5UO	905	5U
9/16 - 20	3/8	6T	6UO	906	6U
3/4 - 16	1/2	8T	8UO	908	8U
1 1/6 - 12	3/4	12T	12UO	912	12U
1 5/16 - 12	1	16T	16UO	916	16U

How to order

Select the desired fitting basic part number and add a material designator.

Example : I-PHN-4N-SS

CONTENTS

	I-PE _____ 06 Elbow (Female NPT both ends)		I-PHN _____ 08 Hex Nipple (Male NPT both ends)
	I-PSE _____ 06 Street Elbow (Female to male NPT)		I-PHRN _____ 08 Hex Reducing Nipple (Male NPT to reduced male NPT)
	I-PRSE _____ 06 Reducing Street Elbow (Female to male NPT)		I-PHN-NR _____ 08 Hex Nipple (Male NPT to ISO tapered)
	I-PME _____ 06 Male Elbow (Male NPT both ends)		I-PHN-NG _____ 09 Hex Nipple (Male NPT to male ISO parallel)
	I-PT _____ 07 Tee (Female NPT)		I-PHLN _____ 09 Hex Long Nipple (Male NPT both ends)
	I-PBT _____ 07 Branch Tee (Female to male to male NPT)		I-PMFA _____ 09 Adapter (Male NPT to Female NPT)
	I-PRT _____ 07 Run Tee (Female to male to Female NPT)		I-PMFRA _____ 09 Reducing Adapter (Male NPT to reduced female NPT)
	I-PMT _____ 07 Male Tee (Male NPT)		I-PMFA-RN _____ 10 Adapter (Male ISO tapered to Female NPT)
	I-PCN _____ 08 Close Nipple (Male NPT both ends)		I-PMFA-GN _____ 10 Adapter (Male ISO parallel to Female NPT)

**I-PHB** _____ 10Reducing Hex Bushing
(Male NPT to reduced female NPT)**I-PSWE** _____ 13Union Elbow
(Socket weld Ends)**I-PC** _____ 11Pipe Cap
(Female NPT)**I-PSWT** _____ 13Union Tee
(Socket weld Ends)**I-PP** _____ 11Pipe Plug
(Male NPT)**I-PSWMC** _____ 14

Male Connector

**I-PHC** _____ 11Hex Coupling
(Female NPT both ends)**I-PSWFC** _____ 14

Female Connector

**I-PHRC** _____ 11Hex Reducing Coupling
(Female NPT reduced female NPT)**I-PSWME** _____ 14

Male Elbow

**I-PUJ** _____ 12Union Ball Joint
(Female NPT both ends)**I-PSWFE** _____ 15

Female Elbow

**R-CG** _____ 12

ISO Parallel Gasket

**I-PWRM** _____ 15

Pipe Weld to Tube Socket Weld

**I-PVP** _____ 12

Vent Protector

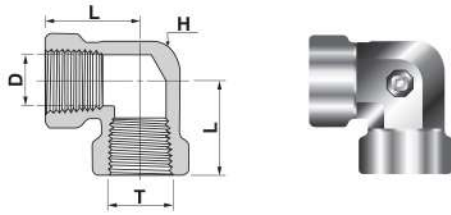
**I-PWRM** _____ 15

Tube Weld to Tube Socket Weld

**I-PSWU** _____ 13Union
(Socket weld Ends)

I-PE

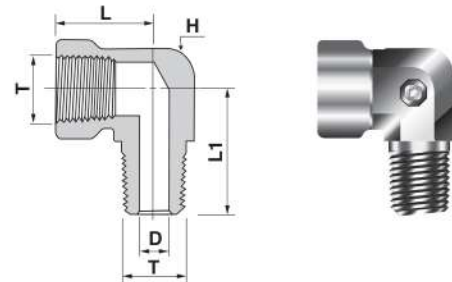
Elbow(Female NPT both ends)



Part Number	NPT Size T	L	D	H Wrench Flat
I-PE-2N	1/8	24.1	8.9	12.7
I-PE-4N	1/4	29.0	11.7	17.5
I-PE-6N	3/8	34.5	15.0	20.6
I-PE-8N	1/2	37.0	18.7	25.4
I-PE-12N	3/4	46.5	23.5	31.8
I-PE-16N	1	48.5	29.7	42.9
Heavy Wall 10,000psig				
I-PE-4N-10K	1/4	37.0	11.4	25.4
I-PE-8N-10K	1/2	49.2	18.5	42.9

I-PSE

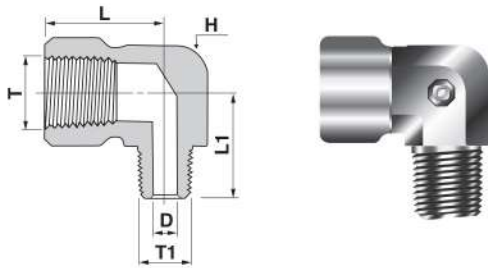
Street Elbow(Female to male NPT)



Part Number	NPT Size T	L	L1	D	H Wrench Flat
I-PSE-2N	1/8	24.1	22.1	4.8	12.7
I-PSE-4N	1/4	29.0	29.0	7.1	17.5
I-PSE-6N	3/8	34.5	32.0	9.6	20.6
I-PSE-8N	1/2	37.0	37.0	11.9	25.4
I-PSE-12N	3/4	46.5	42.4	15.7	31.8
I-PSE-16N	1	48.5	49.3	22.4	42.9

I-PRSE

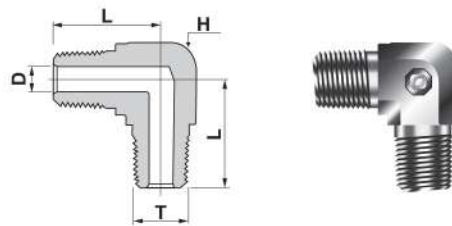
Reducing Street Elbow(Female to male NPT)



Part Number	Female NPT Size T	Male NPT Size T1	L	L1	D	H Wrench Flat
I-PRSE-4-2N	1/4	1/8	29.0	25.4	4.8	17.5
I-PRSE-6-4N	3/8	1/4	34.5	32.0	7.1	20.6
I-PRSE-8-4N	1/2	1/4	37.0	35.1	7.1	25.4
I-PRSE-8-6N	1/2	3/8	37.0	35.1	9.6	25.4
I-PRSE-12-8N	3/4	1/2	46.5	41.6	11.9	31.8
I-PRSE-16-8N	1	1/2	48.5	45.5	11.9	42.9

I-PME

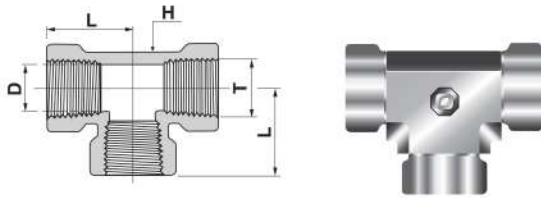
Male Elbow(Male NPT both ends)



Part Number	NPT Size T	L	D	H Wrench Flat
I-PME-2N	1/8	22.4	4.8	12.7
I-PME-4N	1/4	24.5	7.1	12.7
I-PME-6N	3/8	29.0	9.6	17.5
I-PME-8N	1/2	33.2	11.9	20.6
I-PME-12N	3/4	35.3	15.7	25.4
I-PME-16N	1	44.5	22.4	31.8

I-PT

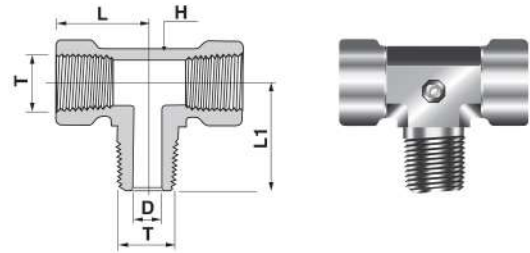
Tee(Female NPT)



Part Number	NPT Size T	L	D	H Wrench Flat
I-PT-2N	1/8	24.1	8.9	12.7
I-PT-4N	1/4	29.0	11.7	17.5
I-PT-6N	3/8	34.5	15.0	20.6
I-PT-8N	1/2	37.0	18.7	25.4
I-PT-12N	3/4	46.5	23.5	31.8
I-PT-16N	1	48.5	29.7	42.9
Heavy Wall 10,000psig				
I-PT-4N-10K	1/4	37.0	11.4	25.4
I-PT-8N-10K	1/2	49.3	18.5	42.9

I-PBT

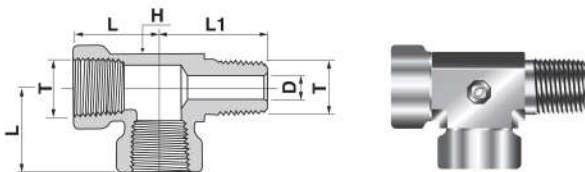
Branch Tee(Female to male to male NPT)



Part Number	NPT Size T	L	L1	D	H Wrench Flat
I-PBT-2N	1/8	24.1	22.4	4.8	12.7
I-PBT-4N	1/4	29.0	29.0	7.1	17.5
I-PBT-6N	3/8	34.5	32.0	9.6	20.6
I-PBT-8N	1/2	37.0	37.0	11.9	25.4
I-PBT-12N	3/4	46.5	42.4	15.7	31.8
I-PBT-16N	1	48.5	49.3	22.4	42.9

I-PRT

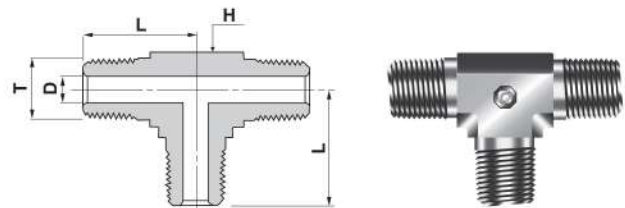
Run Tee(Female to male to Female NPT)



Part Number	NPT Size T	L	L1	D	H Wrench Flat
I-PRT-2N	1/8	24.1	22.4	4.8	12.7
I-PRT-4N	1/4	29.0	29.0	7.1	17.5
I-PRT-6N	3/8	34.5	32.0	9.6	20.6
I-PRT-8N	1/2	37.0	37.0	11.9	25.4
I-PRT-12N	3/4	46.5	42.4	15.7	31.8
I-PRT-16N	1	48.5	49.3	22.4	42.9

I-PMT

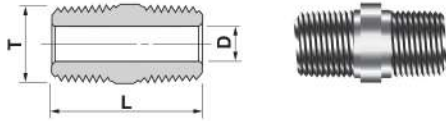
Male Tee(Male NPT)



Part Number	NPT Size T	L	D	H Wrench Flat
I-PMT-2N	1/8	22.4	4.8	12.7
I-PMT-4N	1/4	24.5	7.1	12.7
I-PMT-6N	3/8	29.0	9.6	17.5
I-PMT-8N	1/2	33.2	11.9	20.6
I-PMT-12N	3/4	35.3	15.7	25.4
I-PMT-16N	1	44.5	22.4	31.8

I-PCN

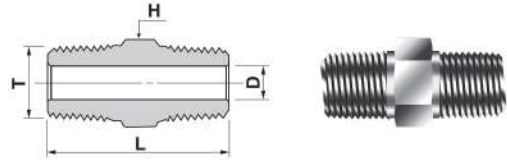
Close Nipple(Male NPT both ends)



Part Number	NPT Size T	L	D
I-PCN-2N	1/8	19.05	4.8
I-PCN-4N	1/4	28.4	7.1
I-PCN-6N	3/8	28.4	9.6
I-PCN-8N	1/2	38.1	11.9
I-PCN-12N	3/4	38.1	15.7
I-PCN-16N	1	47.8	22.4

I-PHN

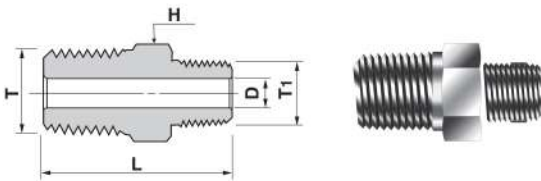
Hex Nipple(Male NPT both ends)



Part Number	NPT Size T	L	D	H Wrench Flat
I-PHN-2N	1/8	25.0	4.8	11.1
I-PHN-4N	1/4	35.5	7.1	14.2
I-PHN-6N	3/8	36.3	9.6	17.4
I-PHN-8N	1/2	46.7	11.9	22.2
I-PHN-12N	3/4	46.7	15.7	26.9
I-PHN-16N	1	58.9	22.4	34.9
Heavy Wall 10,000psig				
I-PHN-4N-10K	1/4	35.6	5.8	14.2
I-PHN-8N-10K	1/2	46.7	9.9	22.2

I-PHRN

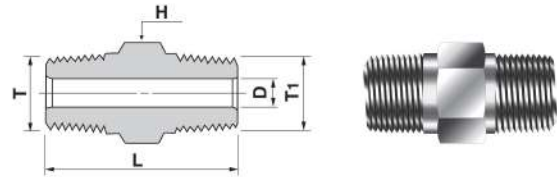
Hex Reducing Nipple(Male NPT to reduced male NPT)



Part Number	NPT Size T	Reduced NPT Size T1	L	D	H Wrench Flat
I-PHRN-4-2N	1/4	1/8	31.0	4.8	14.2
I-PHRN-4-2N	3/8	1/8	31.8	4.8	17.4
I-PHRN-4-4N	3/8	1/4	36.3	7.1	17.4
I-PHRN-4-2N	1/2	1/8	37.2	4.8	22.2
I-PHRN-4-4N	1/2	1/4	41.9	7.1	22.2
I-PHRN-4-6N	1/2	3/8	41.9	9.6	22.2
I-PHRN-4-4N	3/4	1/4	41.9	7.1	26.9
I-PHRN-4-6N	3/4	1/2	46.7	11.9	26.9
I-PHRN-4-4N	1	1/4	49.3	7.1	34.9
I-PHRN-4-8N	1	1/2	54.1	11.9	34.9
Heavy Wall 10,000psig					
I-PHRN-8-4N-10K	1/2	1/4	41.9	5.8	22.2

I-PHN-NR

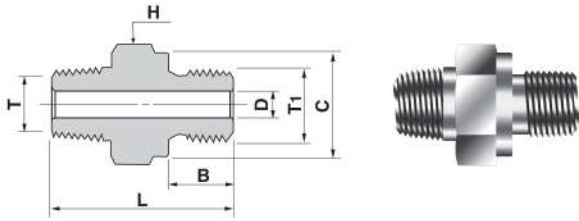
Hex Nipple(Male NPT to ISO tapered)



Part Number	NPT Size T	PT Size T1	L	D	H Wrench Flat
I-PHN-2NR	1/8	1/8	25.6	4.8	11.1
I-PHN-4NR	1/4	1/4	35.6	7.1	14.2
I-PHN-6NR	3/8	3/8	36.3	9.6	17.4
I-PHN-8NR	1/2	1/2	46.7	11.9	22.2
I-PHN-12NR	3/4	3/4	46.7	15.7	26.9
I-PHN-16NR	1	1	58.9	22.4	34.9

I-PHN-NG

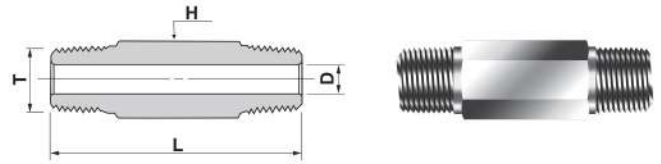
Hex Nipple(Male NPT to male ISO parallel)



Part Number	NPT Size T	PF Size T1	L	B	C	D	H Wrench Flat
I-PHN-2NG	1/8	1/8	27.7	8.1	13.7	4.1	14.2
I-PHN-4NG	1/4	1/4	36.8	11.9	17.8	5.8	19.05
I-PHN-6NG	3/8	3/8	37.6	11.9	21.8	7.9	22.2
I-PHN-8NG	1/2	1/2	44.4	14.0	25.9	11.9	26.9
I-PHN-12NG	3/4	3/4	49.0	16.0	31.8	15.7	33.3
I-PHN-16NG	1	1	56.6	18.0	38.9	19.8	41.2

I-PHLN

Hex Long Nipple(Male NPT both ends)

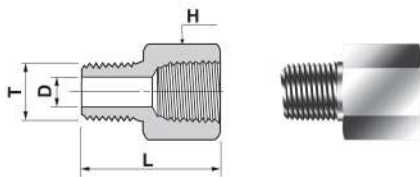


Part Number	NPT Size T	L	D	H Wrench Flat
I-PHLN-2N	1/8	★	4.8	11.1
I-PHLN-4N	1/4	★	7.1	14.2
I-PHLN-6N	3/8	★	9.6	17.4
I-PHLN-8N	1/2	★	11.9	22.2
I-PHLN-12N	3/4	★	15.7	26.9
I-PHLN-16N	1	★	22.4	34.9

★ Configure to order

I-PMFA

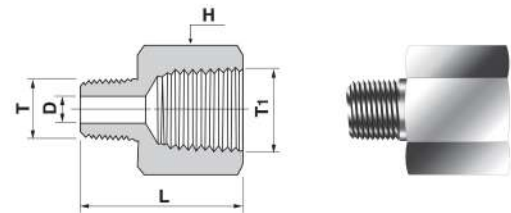
Adapter(Male NPT to Female NPT)



Part Number	NPT Size T	L	D	H Wrench Flat
I-PMFA-2N	1/8	27.9	4.8	14.2
I-PMFA-4N	1/4	35.6	7.1	19.05
I-PMFA-6N	3/8	38.4	9.6	22.2
I-PMFA-8N	1/2	49.3	11.9	26.9
I-PMFA-12N	3/4	51.3	15.7	33.3
I-PMFA-16N	1	58.0	22.4	41.2
Heavy Wall 10,000psig				
I-PMFA-4N-10K	1/4	36.3	5.8	25.4
I-PMFA-8N-10K	1/2	51.3	9.9	38.1

I-PMFRA

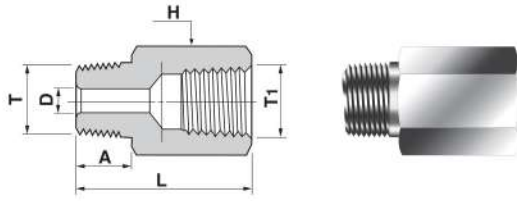
Reducing Adapter(Male NPT to reduced female NPT)



Part Number	NPT Size T	NPT Size T1	L	D	H Wrench Flat
I-PMRFA-2-4N	1/8	1/4	32.0	4.8	19.05
I-PMRFA-2-6N	1/8	3/8	33.5	4.8	22.2
I-PMRFA-4-6N	1/4	3/8	37.8	7.1	22.2
I-PMRFA-2-8N	1/8	1/2	40.0	4.8	26.9
I-PMRFA-4-8N	1/4	1/2	44.5	7.1	26.9
I-PMRFA-6-8N	3/8	1/2	44.5	9.6	26.9
I-PMRFA-4-12N	1/4	3/4	45.7	7.1	33.3
I-PMRFA-6-12N	3/8	3/4	45.7	9.6	33.3
I-PMRFA-8-12N	1/2	3/4	51.1	11.9	33.3
I-PMRFA-4-16N	1/4	1	49.8	7.1	41.2
I-PMRFA-8-16N	1/2	1	54.9	11.9	41.2
I-PMRFA-12-12N	3/4	1	55.1	15.7	41.2
Heavy Wall 10,000psig					
I-PMRFA-8-4N-10K	1/2	1/4	46.0	5.8	38.1

I-PMFA-RN

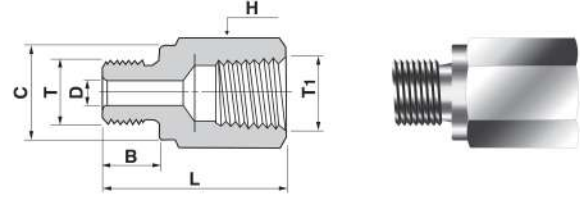
Adapter(Male ISO tapered to Female NPT)



Part Number	PT Size T	NPT Size T1	L	A	D	H Wrench Flat
I-PMFA-2RN	1/8	1/8	27.4	9.7	4.8	14.2
I-PMFA-4RN	1/4	1/4	35.6	14.2	7.1	19.05
I-PMFA-6RN	3/8	3/8	38.4	14.2	9.6	22.2
I-PMFA-8RN	1/2	1/2	49.3	19.1	11.9	26.9
I-PMFA-12RN	3/4	3/4	51.3	19.1	15.7	33.3
I-PMFA-16-8N	1	1	58.0	23.9	22.4	41.2

I-PMFA-GN

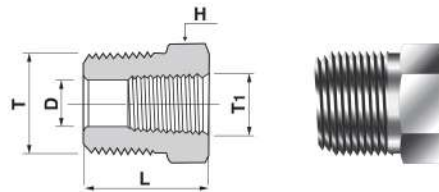
Adapter(Male ISO paralled to Female NPT)



Part Number	PF Size T	NPT Size T1	L	B	C	D	H Wrench Flat
I-PMFA-2GN	1/8	1/8	24.9	8.1	13.7	4.1	14.2
I-PMFA-4GN	1/4	1/4	33.3	11.9	17.8	5.8	19.05
I-PMFA-6GN	3/8	3/8	35.8	11.9	21.8	7.9	22.2
I-PMFA-8GN	1/2	1/2	44.2	14.0	26.1	11.9	26.9
I-PMFA-12GN	3/4	3/4	48.0	16.0	31.5	15.7	33.3
I-PMFA-16GN	1	1	53.1	18.0	38.9	19.8	41.2

I-PHB

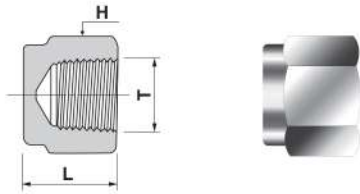
Reducing Hex Bushing(Male NPT to reduced female NPT)



Part Number	Male NPT Size T	Female NPT Size T1	L	D	H Wrench Flat	Pressure Rasting, psig(bar)	
						316SS / Carbon Steel	Brass
I-PHB-4-2N	1/4	1/8	26.7	7.1	14.2	6,500(447)	3,300(227)
I-PHB-6-2N	3/8	1/8	21.8	8.5	17.2	9,200(633)	4,700(323)
I-PHB-6-4N	3/8	1/4	30.0	9.6	19.05	6,600(454)	3,300(227)
I-PHB-8-2N	1/2	1/8	27.4	8.5	22.2	12,200(840)	6,200(427)
I-PHB-8-4N	1/2	1/4	27.4	11.7	22.2	8,300(571)	4,400(303)
I-PHB-8-6N	1/2	3/8	35.6	11.9	22.2	5,300(365)	2,600(179)
I-PHB-12-4N	3/4	1/4	27.4	11.4	26.9	12,000(826)	6,000(413)
I-PHB-12-6N	3/4	3/8	27.4	15.0	26.9	8,200(564)	4,300(296)
I-PHB-12-8N	3/4	1/2	41.4	15.7	26.9	4,900(337)	2,400(165)
I-PHB-16-4N	1	1/4	34.8	11.4	34.9	14,500(999)	7,400(509)
I-PHB-16-6N	1	3/8	34.8	15.0	34.9	11,600(799)	5,900(406)
I-PHB-16-8N	1	1/2	34.8	18.5	34.9	8,600(592)	4,300(296)
I-PHB-16-12N	1	3/4	47.0	22.4	34.9	5,300(365)	2,600(179)

I-PC

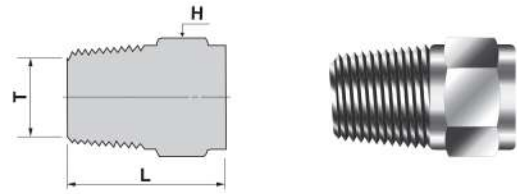
Pipe Cap(Female NPT)



Part Number	NPT Size T	L	H Wrench Flat
I-PC-2N	1/8	19.1	14.2
I-PC-4N	1/4	22.9	19.05
I-PC-6N	3/8	26.2	22.2
I-PC-8N	1/2	34.0	26.9
I-PC-12N	3/4	36.6	33.3
I-PC-16N	1	41.1	41.2
Heavy Wall 10,000psig			
I-PC-4N-10K	1/4	28.2	25.4
I-PC-8N-10K	1/2	40.1	38.1

I-PP

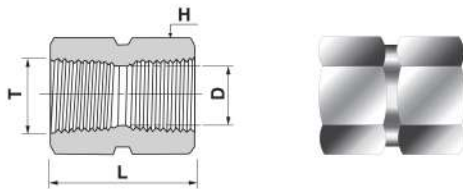
Pipe Plug(Male NPT)



Part Number	NPT Size T	L	H Wrench Flat
I-PP-2N	1/8	19.05	11.1
I-PP-4N	1/4	24.1	14.2
I-PP-6N	3/8	25	17.4
I-PP-8N	1/2	30.5	22.2
I-PP-12N	3/4	30.5	26.9
I-PP-16N	1	38.1	34.9

I-PHC

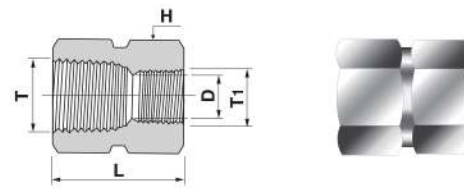
Hex Coupling(Female NPT both ends)



Part Number	NPT Size	L	D	H Wrench Flat
I-PHC-2N	1/8	20.3	8.9	14.2
I-PHC-4N	1/4	30.0	11.7	19.05
I-PHC-6N	3/8	33.0	15.0	22.2
I-PHC-8N	1/2	39.4	18.7	26.9
I-PHC-12N	3/4	41.0	23.9	33.3
I-PHC-16N	1	50.5	29.7	41.2
Heavy Wall 10,000psig				
I-PHC-4N-10K	1/4	30.2	11.4	25.4
I-PHC-8N-10K	1/2	39.6	18.5	38.1

I-PHRC

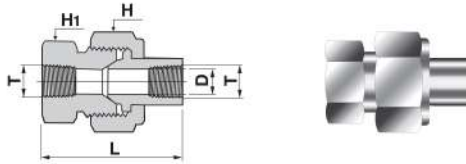
Hex Reducing Coupling(Female NPT reduced female NPT)



Part Number	NPT Size T	Reduced NPT Size T1	L	D	H Wrench Flat
I-PHRC-4-2N	1/4	1/8	31.2	8.9	19.05
I-PHRC-6-4N	3/8	1/4	35.1	11.7	22.2
I-PHRC-8-2N	1/2	1/8	39.4	8.7	26.9
I-PHRC-8-4N	1/2	1/4	44.2	11.7	26.9
I-PHRC-8-6N	1/2	3/8	45.0	15.0	26.9
I-PHRC-12-4N	3/4	1/4	45.7	11.7	33.3
I-PHRC-12-8N	3/4	1/2	52.0	18.7	33.3
I-PHRC-16-4N	1	1/4	50.8	11.7	41.2
I-PHRC-16-8N	1	1/2	55.4	18.7	41.2
I-PHRC-16-12N	1	3/4	57.0	23.9	41.2
Heavy Wall 10,000psig					
I-PHRC-8-4N-10K	1/2	1/4	44.4	11.7	38.1

I-PUJ

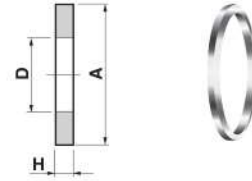
Union Ball Joint(Female NPT both ends)



Part Number	NPT Size T	L	D	H Wrench Flat	H Wrench Flat
I-PUJ-2N	1/8	45.7	6.9	28.6	23.8
I-PUJ-4N	1/4	59.4	9.1	34.9	30.2
I-PUJ-6N	3/8	63.5	13.2	38.1	33.3
I-PUJ-8N	1/2	68.6	15.7	44.5	41.3
I-PUJ-12N	3/4	79.2	22.4	50.8	47.6
I-PUJ-16N	1	90.4	26.2	63.5	60.3

R-CG

ISO Parallel Copper Gasket



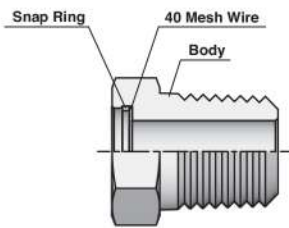
Part Number	ISO Paraller Thread	D	H	A
R-CG-2-CU	1/8	10.2	1.0	15.0
R-CG-4-CU	1/4	13.3	2	18.0
R-CG-6-CU	3/8	16.7	2	22.0
R-CG-8-CU	1/2	21.2	2	27.0
R-CG-12-CU	3/4	26.7	2.0	33.0
R-CG-16-CU	1	33.6	2.0	42.0

PVP - Vent Protector

Features

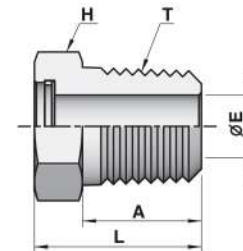
- ❖ OTG-Lok vent protectors, more commonly known as mud dauber fittings, protect open ends of instrument, tubing, outlet vent and bleed-off lines.
- ❖ The mesh wire screen prevents foreign object, such as mud insects, form entering and clogging various systems and causing damage.
- ❖ Vent protectors are available in stainless steel and brass.
- ❖ Dimensions are for reference only and are subject to change without prior notice

Materials of Construction



No	Parts Name	Material
1	Body	316 Stainless steel or Brass
2	Wire Screen	316 Stainless steel
3	Snap Ring	Stainless steel

Dimensions

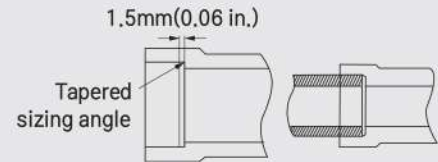


Basic Ordering Number	NPT Size T	A	E	L	H
I-PVP-4N	1/4	14	7.1	19.8	14.28
I-PVP-6N	3/8	15	10.4	20.6	17.46
I-PVP-8N	1/2	19	12.7	26.2	22.22
I-PVP-12N	3/4	19	18.3	26.9	26.9

Instruments Weld Fittings

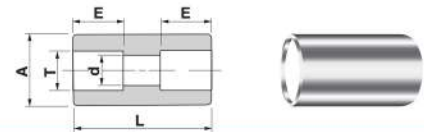
Features

- ❖ **OTG-Lok** instrument weld fittings are designed in accordance with ASME B16.11 welding connections.
- ❖ All socket weld port have a tapered shape at the end that hold tubing properly and consistent alignment.
- ❖ The inside diameter of the tube socket port have approximately 1.5mm(0.06 in.) welding gap as specified in ANSI / ASME B16.11 standard.
- ❖ The tapered sizing angle eliminates welder's effort in attempt to have the gap physically in the fitting.
- ❖ The feature allow consistent welding assembly as well as preassembly of many tubing-runs before welding.



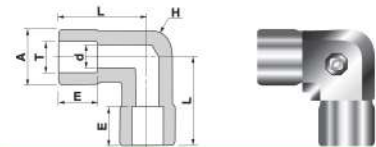
Pressure rating shown in the dimensional data chart are calculated in accordance with ASME B31.1 with safety factor=4 Stainless steel 316

I-PSWU Union(Socket weld Ends)



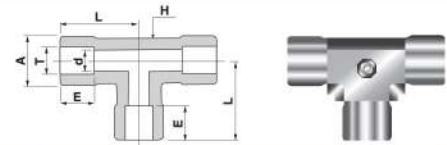
Part Number	Tube O. D T	d	A	E	L	Pressure Ratings SS316	
						Psig	bar
I-PSWU-4T	1/4	4.6	13.0	7.1	19.0	10,000	689
I-PSWU-6T	3/8	7.1	15.8	7.9	22.4	7,600	523
I-PSWU-8T	1/2	10.2	19.0	9.7	26.9	6,200	427
I-PSWU-10T	5/8	12.7	24.0	10.4	30.2	6,400	440
I-PSWU-12T	3/4	15.7	26.9	11.2	33.3	5,500	378
I-PSWU-16T	1	22.1	35.0	15.7	36.6	5,200	358

I-PSWE Union Elbow(Socket weld Ends)



Part Number	Tube O. D T	d	A	E	H Wrench Flat	L	Pressure Ratings SS316	
							Psig	bar
I-PSWE-4T	1/4	4.6	13.4	7.1	12.7	21.8	11,300	778
I-PSWE-6T	3/8	7.1	15.8	7.9	12.7	24.5	8,400	578
I-PSWE-8T	1/2	10.2	20.6	9.7	17.5	29.0	7,800	537
I-PSWE-10T	5/8	12.7	23.8	10.4	20.6	34.5	6,700	461
I-PSWE-12T	3/4	15.7	28.6	11.2	25.4	37.0	6,700	461
I-PSWE-16T	1	22.1	35.0	15.7	31.8	46.5	6,100	420

I-PSWT Union Tee(Socket weld Ends)

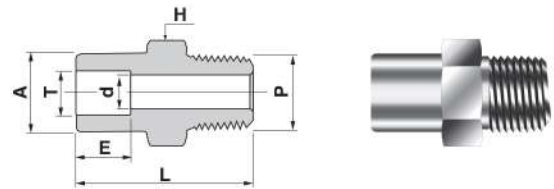


Part Number	Tube O. D T	d	A	E	H Wrench Flat	L	Pressure Ratings SS316	
							Psig	bar
I-PSWT-2T	1/8	2.3	13.4	2.5	12.7	15.0	11,800	813
I-PSWT-4T	1/4	4.6	13.4	7.1	12.7	21.8	11,300	778
I-PSWT-6T	3/8	7.1	15.8	7.9	12.7	24.5	8,400	578
I-PSWT-8T	1/2	10.2	20.6	9.7	17.4	29.0	7,800	537
I-PSWT-10T	5/8	12.7	23.8	10.4	20.6	34.5	6,700	461
I-PSWT-12T	3/4	15.7	28.6	11.2	25.4	37.0	6,700	461
I-PSWT-16T	1	22.1	35.0	15.7	31.8	46.5	6,100	420

All dimensions are in millimeters unless otherwise specified and only for reference. / All dimensions are subjected to change.

I-PSWMC

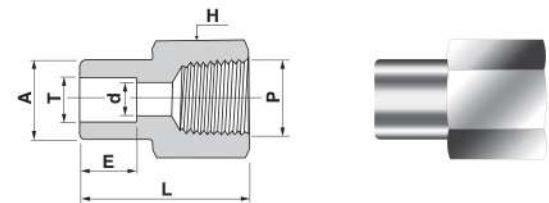
Male Connector



Part Number	Tube O. D T	P - NPT	d	A	E	H Wrench Flat	L	Pressure Ratings SS316	
								Psig	bar
I-PSWMC-4T-4N	1/4	1/4	4.6	12.2	7.1	14.2	29.2	7,500	516
I-PSWMC-6T-4N	3/8	1/4	7.1	15.8	7.9	15.8	31.8	7,500	516
I-PSWMC-6T-6N	3/8	3/8	7.1	15.8	7.9	17.4	31.8	7,300	502
I-PSWMC-6T-8N	3/8	1/2	7.1	15.8	7.9	22.2	37.3	7,200	496
I-PSWMC-8T-4N	1/2	1/4	7.1	18.5	9.7	19.05	33.3	6,200	427
I-PSWMC-8T-6N	1/2	3/8	9.4	18.5	9.7	19.05	33.3	6,200	427
I-PSWMC-8T-8N	1/2	1/2	10.2	18.5	9.7	22.2	38.9	6,200	427

I-PSWFC

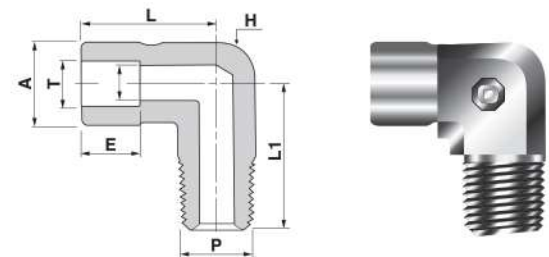
Female Connector



Part Number	Tube O. D T	Female pipe size P - NPT	d	A	E	H Wrench Flat	L	Pressure Ratings SS316	
								Psig	bar
I-PSWFC-2T-2N	1/8	1/8	2.3	7.4	2.5	14.2	21.1	6,100	420
I-PSWFC-4T-2N	1/4	1/8	4.6	12.2	7.1	14.2	26.7	6,100	420
I-PSWFC-4T-4N	1/4	1/4	4.6	12.2	7.1	19.05	30.0	6,200	427
I-PSWFC-6T-4N	3/8	1/4	7.1	15.8	7.9	19.05	31.5	6,200	427
I-PSWFC-8T-6N	1/2	3/8	10.2	18.5	9.7	22.2	34.5	5,000	344
I-PSWFC-8T-8N	1/2	1/2	10.2	18.5	9.7	26.9	40.4	4,600	316
I-PSWFC-10T-8N	5/8	1/2	12.7	23.4	10.4	26.9	41.9	4,600	316
I-PSWFC-12T-12N	3/4	3/4	15.7	26.9	11.2	33.3	43.9	4,300	296

I-PSWME

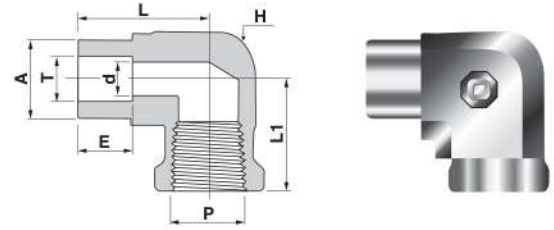
Male Elbow



Part Number	Tube O. D T	Male pipe size P - NPT	d	A	E	H Wrench Flat	L	L1	Pressure Ratings SS316	
									Psig	bar
I-PSWME-4T-4N	1/4	1/4	4.6	15.8	7.1	12.7	20.1	24.5	7,500	516
I-PSWME-6T-4N	3/8	1/4	7.1	15.8	7.9	12.7	24.1	24.5	7,500	516
I-PSWME-6T-6N	3/8	3/8	7.1	20.6	7.9	17.5	24.6	29.0	7,300	502
I-PSWME-6T-8N	3/8	1/2	7.1	23.8	7.9	20.6	25.9	34.5	7,200	496
I-PSWME-8T-8N	1/2	1/2	10.2	23.8	9.7	20.6	27.4	34.5	6,200	427
I-PSWME-12T-12N	3/4	3/4	15.7	28.6	11.2	25.4	37.0	37.0	6,700	461

I-PSWFE

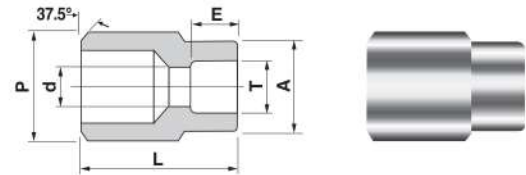
Female Elbow



Part Number	Tube O. D T	P-NPT	d	A	E	H Wrench Flat	L	L1	Pressure Ratings SS316	
									Psig	bar
I-PSWFE-4T-4N	1/4	1/4	4.6	12.2	7.1	17.5	22.9	29.7	6,200	427
I-PSWFE-6T-4N	3/8	1/4	7.1	15.8	7.9	17.5	25.1	29.7	7,000	482
I-PSWFE-6T-8N	3/8	1/2	7.1	15.8	7.9	25.4	28.7	37.0	5,400	372
I-PSWFE-8T-8N	1/2	1/2	10.2	18.5	9.7	25.4	30.2	37.0	5,400	372

I-PWSR

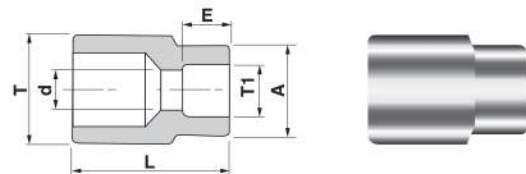
Pipe Weld to Tube Socket Weld



Part Number	Pipe size P	Tube socket size T	d	A	E	L	Pressure Ratings SS316	
							Psig	bar
I-PWSR-4P-4T	1/4	1/4	4.6	13.7	7.1	22.4	9,600	661
I-PWSR-6P-6T	3/8	3/8	7.1	15.3	7.9	26.2	7,600	523
I-PWSR-6P-8T	3/8	1/2	10.2	18.5	9.7	27.9	6,200	427
I-PWSR-8P-4T	1/2	1/4	4.6	12.2	7.1	28.4	7,300	502
I-PWSR-8P-6T	1/2	3/8	7.1	15.3	7.9	28.4	7,300	502
I-PWSR-8P-8T	1/2	1/2	10.2	18.5	9.7	30.2	6,200	427
I-PWSR-12P-6T	3/4	3/8	7.1	15.3	7.9	38.1	6,200	427
I-PWSR-12P-8T	3/4	1/2	10.2	18.5	9.7	38.1	6,200	427

I-PWSR

Tube Weld to Tube Socket Weld



Part Number	Tube O. D T	Tube socket size T1	d	A	E	L	Pressure Ratings SS316	
							Psig	bar
I-PWSR-4T-2T	1/4	1/8	2.3	7.4	2.5	14.2	11,800	813
I-PWSR-6T-4T	3/8	1/4	4.6	12.2	7.1	19.1	7,700	530
I-PWSR-8T-4T	1/2	1/4	4.6	12.7	7.1	22.4	7,000	482
I-PWSR-8T-6T	1/2	3/8	8.1	15.7	7.9	22.4	7,000	482
I-PWSR-12T-8T	3/4	1/2	10.2	18.5	9.7	28.4	5,900	406
I-PWSR-16T-8T	1	1/2	10.2	18.5	9.7	35.1	5,600	344



TEL 82 · 70 · 8690 · 8889

FAX 82 · 51 · 955 · 3565

E-mail otg@otglok.com

