

High Pressure Pipe Fittings (15,000 psi)



www.panamengineers.com

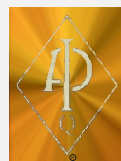
Introduction

PANAM has been in the field of manufacturing precision High Pressure Fittings and Instrumentation valves since the last Three decades. With a team of dedicated specialists **PANAM** has always endeavored to satisfy their customers ever widening demands with unmatched precision.

With the latest in-house machinery and infrastructure under one roof, **PANAM** is manufacturing a wide range of High Pressure Fittings and Instrumentation products in different sizes and metals like brass, stainless steel, monel and in various other metals as per the customer's specific requirements. Variety of end connections - Male & Female NPT, BSPP, BSPT, ISO tapered pipe ends, Tube / Pipe socket weld.

PANAM High Pressure Fittings are 100% factory tested and are NACE certified with Heat code traceability. Maximum working pressure upto 15,000 psig (1034 bar) or Higher available upon request

- API ISO 9001:2008 Certified
- API ISO TS 29001 Certified
- API Spec Q1 Certified
- API 6A Certified
- API 6D Certified
- API 600 Certified
- API 602 Certified
- MFG. Facility Approved by ABS Ind.
- ASTM F1387-99
- Leak Test Approved by TUV
- CE Marking



Contents

Features & Ordering Information

01

Hex Nipples

NPT

02



Reducing Hex Nipples

NPT

02



Hex Nipples

ISO Parallel

02



Hex Nipples

NPT x ISO Parallel

03



Hex Nipples

37° JIC

03



Hex Nipples

37° JIC x NPT

04



Hex Nipples

37° JIC x ISO Parallel

04



Hex Nipples

Swivel x ISO Parallel

05



Hex Nipples

37° JIC Swivel x 37° JIC

05



Swivel Unions

ISO Parallel

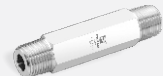
05



Hex Long Nipples

NPT x NPT

06



Hex Coupling

NPT

06



Reducing Hex Couplings

NPT

07



Hex Coupling

ISO Parallel

07



Hex Reducing Coupling

ISO Parallel

07



Adapters

NPT

08



Adapters

ISO Parallel

09



Hex Plugs

NPT

09



Hex Plugs

ISO Parallel

09



Tube Plugs

37° JIC

10



Pipe Caps

NPT

10



Pipe Caps

ISO Parallel

10



Pipe Caps

37° JIC

11



Male Elbows

NPT

11



Male Elbows

ISO Parallel

11



Female Elbows

NPT

12



Female Elbows

ISO Parallel

12



Swivel Male Elbows

Swivel x ISO Parallel

12



Swivel Union Elbows

Swivel

13



Street Elbows

NPT

13



Street Elbow

ISO Parallel

13



Female Tees

NPT

14



Female Tees

ISO Parallel

14



Male Tee

NPT

14



Male Tees

ISO Parallel

15



Swivel Union Tees

Swivel

15



Female Cross

NPT

15



Features

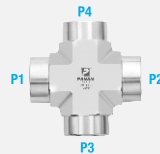
- Size Ranges from 1/16" to 2".
- For smooth flow path elbows are designed with radius junction.
- All Fittings are marked with Size, Material and Heat code for easy source tracing.
- All threads are capped for protection and properly packaged
- Straight fittings are manufactured from bar stock & Forged fittings are manufactured from forgings
- All pipe threads meet the requirement if ASME/ANSI B1.20.1 for tapered pipe threads (NPT)
- Working pressure meets the requirements of ANSI/ASME B31.3 at ambient temperature.

Ordering Information

PANAM

P - HN - 4N - 4N - SS - 15K / 10K (15K - 15,000 PSIG / 10K - 10,000 PSIG)

Fitting Type		P1 Size		P1 Type		P2, P3, and P4	Material	
HN	Hex Nipples	1	1/16	N	NPT Threads	Specify as per P Type and P Size	SS	316 SS
RHN	Reducing Hex Nipples	2	1/8	R	ISO Tapered Threads		B	Brass
HRN	Hex Long Nipples	3	3/16	G	ISO Parallel Threads		MO	Alloy 400
U	Unions	4	1/4	M	Metric Threads		INC	Alloy 600
HC	Hex Couplings	5	5/16-24	S	SAE/MS Straight Threads		CS	Carbon Steel
RHC	Reducing Hex Couplings	6	3/8 or 3/8-24	J	37° Flare		Materials like Hastloy, Monel, Duplex 2205, Duplex 2507 etc are available upon request	
A	Adapters	7	7/16-20	SWL	Swivel			
HP	Hex Plugs	8	1/2 or M8 x 1	JSWL	JIC Swivel			
TP	Tube Plugs	9	9/16-18					
PC	Pipe Caps	10	M10 x 1					
ME	Male Elbows	12	3/4 or 3/4-16 or M12 x 1.5					
FE	Female Elbows	14	7/8-14 or M14 x 1.5					
UE	Union Elbows	16	1 or M16 x 1.5					
SE	Street Elbows	17	1 1/16-12					
FT	Female Tees	18	M15 x 1.5					
MT	Male Tees	19	1 3/16-12					
UT	Union Tees	20	1 1/4 or M20 x 1.5					
FC	Female Cross	21	1 5/16-12					
		22	M22 x 1.5					
		24	1 1/2 or M24 x 1.5					
		26	1 5/8-12					
		27	M27 x 2					
		30	1 7/8 or M30 x 2					
		32	2					



P1, P2, P3 & P4 Shall be described in the following orders. For tees the run shall proceed the branch, for cross the run shall proceed the branch

Installation Instructions

To ensure leak proof tight seal, **PANAM** recommends use of pipe thread sealant on all NPT threads. The most effective sealing method is the use of Teflon tape, Tape should be used on male NPT tapered threads. Clean both male and female tapered threads, wrap tape in direction of male tapered, cut off excess tape.

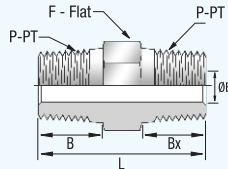
Thread Relevant Standards & Material

Thread Relevant Standards	
NPT Threads	ASME B1.20.1, SAE AS71051
ISO Tapered Threads	ISO 7-1, BS 21, JIS B0203
ISO Parallel Threads	ISO 228, JIS B0202
SAE/MS	ASME B1.1, SAE J475
Metric	ISO 261

Material	Bar Stock	Forging
316 SS	ASTM A276, ASME SA479, EN 1.4401	ASTM A182, ASME SA182, EN 1.4401
304 SS	ASTM A276, ASME SA479, EN 1.4301	ASTM A182, ASME SA182, EN 1.4301
Alloy 400	ASTM B164, ASME SB164	ASTM B564, ASME SB564
Alloy 600	ASTM B166, ASME SB166	ASTM B564, ASME SB564
Brass	ASME B16/ASTM B453	ASTM B283
Carbon Steel	ASTM A108	ASTM A105

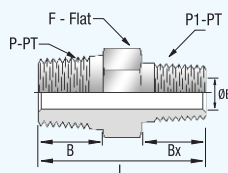
High Pressure Pipe Fittings

Hex Nipples - NPT



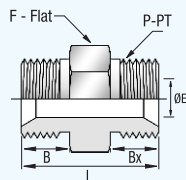
Part No	Pipe Size	Dimensions				
	P-PT, NPT	L	F	B	Bx	E
PHN-2N-SS-15K	1/8	44.5	14.0	9.5	9.5	3.0
PHN-4N-SS-15K	1/4	47.6	15.8	14.2	14.2	4.8
PHN-6N-SS-15K	3/8	50.8	22.2	14.2	14.2	6.0
PHN-8N-SS-15K	1/2	54.0	25.4	19.3	19.3	9.0
PHN-12N-SS-10K	3/4	60.3	28.5	19.3	19.3	12.0
PHN-16N-SS-10K	1	66.6	35.0	24.0	24.0	18.0

Reducing Hex Nipples - NPT



Part No	Pipe Size		Dimensions				
	P-PT, NPT	P1-PT, NPT	L	F	B	Bx	E
PRHN-4N-2N-SS-15K	1/4	1/8	32.9	15.8	14.2	9.7	3.0
PRHN-4N-6N-SS-15K	1/4	3/8	50.8	15.8	14.2	14.2	4.8
PRHN-6N-2N-SS-15K	3/8	1/8	34.1	22.2	14.2	9.7	3.0
PRHN-6N-4N-SS-15K	3/8	1/4	38.6	22.2	14.2	14.2	4.8
PRHN-8N-2N-SS-15K	1/2	1/8	40.2	25.4	19.3	9.5	3.0
PRHN-8N-4N-SS-15K	1/2	1/4	44.7	25.4	19.3	14.2	4.8
PRHN-8N-6N-SS-15K	1/2	3/8	50.8	25.4	19.3	14.2	6.0
PRHN-12N-2N-SS-10K	3/4	1/8	42.4	28.5	19.3	9.5	3.0
PRHN-12N-4N-SS-10K	3/4	1/4	46.9	28.5	19.3	14.2	4.8
PRHN-12N-6N-SS-10K	3/4	3/8	46.9	28.5	19.3	14.2	6.0
PRHN-12N-8N-SS-10K	3/4	1/2	51.8	28.5	19.3	19.3	9.0
PRHN-16N-2N-SS-10K	1	1/8	49.8	35.0	24.0	9.5	3.0
PRHN-16N-4N-SS-10K	1	1/4	54.3	35.0	24.0	14.2	4.8
PRHN-16N-6N-SS-10K	1	3/8	54.3	35.0	24.0	14.2	6.0
PRHN-16N-8N-SS-10K	1	1/2	59.2	35.0	24.0	19.3	9.0
PRHN-16N-12N-SS-10K	1	3/4	59.2	35.0	24.0	19.3	12.0

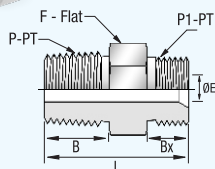
Hex Nipples - ISO Parallel



Part No	Pipe Size	Dimensions				
	P-PT, BSPP	L	F	B	Bx	E
PHN-2G-SS-15K	1/8	23.5	14.0	8.0	8.0	3.0
PHN-4G-SS-15K	1/4	31.5	19.0	11.0	11.0	4.8
PHN-6G-SS-15K	3/8	34.7	22.0	12.0	12.0	6.0
PHN-8G-SS-15K	1/2	40.7	27.0	14.0	14.0	9.0
PHN-10G-SS-10K	5/8	45.2	30.0	16.0	16.0	10.0
PHN-12G-SS-10K	3/4	45.2	32.0	16.0	16.0	12.0
PHN-16G-SS-10K	1	51.9	41.0	19.0	19.0	18.0
PHN-20G-SS-10K	1 1/4	61.4	50.0	20.0	20.0	22.0
PHN-24G-SS-10K	1 1/2	67.4	55.0	22.0	22.0	24.0
PHN-32G-SS-10K	2	76.4	70.0	25.0	25.0	24.0

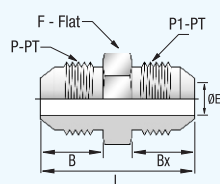
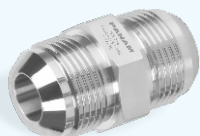
High Pressure Pipe Fittings

Hex Nipples - NPT x ISO Parallel



Part No	Pipe Size		Dimensions				
	P-PT, NPT	P1-PT, BSPP	L	F	B	Bx	E
PHN-2N-2G-SS-15K	1/8	1/8	7.1	14.2	9.5	7.1	4.3
PHN-2N-4G-SS-15K	1/8	1/4	11.2	19.0	9.5	11.2	4.3
PHN-4N-2G-SS-15K	1/4	1/8	7.1	15.8	14.2	7.1	4.3
PHN-4N-4G-SS-15K	1/4	1/4	11.2	19.0	14.2	11.2	5.8
PHN-4N-6G-SS-15K	1/4	3/8	11.2	22.2	14.2	11.2	6.3
PHN-4N-8G-SS-15K	1/4	1/2	14.2	27.0	14.2	14.2	5.8
PHN-6N-4G-SS-15K	3/8	1/4	11.2	22.2	14.2	11.2	5.8
PHN-6N-6G-SS-15K	3/8	3/8	11.2	22.2	14.2	11.2	8.1
PHN-6N-8G-SS-15K	3/8	1/2	14.2	27.0	14.2	14.2	8.1
PHN-8N-4G-SS-15K	1/2	1/4	11.2	25.4	19.3	11.2	5.8
PHN-8N-6G-SS-15K	1/2	3/8	11.2	25.4	19.3	11.2	8.1
PHN-8N-8G-SS-15K	1/2	1/2	14.2	27.0	19.3	14.2	10.2
PHN-8N-10G-SS-10K	1/2	5/8	14.2	30.0	19.3	14.2	10.4
PHN-8N-12G-SS-10K	1/2	3/4	15.7	32.0	19.3	15.8	10.4
PHN-12N-8G-SS-10K	3/4	1/2	14.2	28.5	19.3	14.2	13.4
PHN-12N-12G-SS-10K	3/4	3/4	15.7	33.3	19.3	15.8	13.4
PHN-12N-16-SS-10K	3/4	1	18.3	41.0	19.3	18.3	13.4
PHN-16N-8G-SS-10K	1	1/2	14.2	41.0	24.0	14.2	11.9
PHN-16N-12G-SS-10K	1	3/4	15.7	41.0	24.0	15.8	13.4
PHN-16N-16G-SS-10K	1	1	18.3	41.0	24.0	18.3	17.0
PHN-16N-20G-SS-10K	1	1 1/4	18.5	50.0	24.0	18.6	17.0

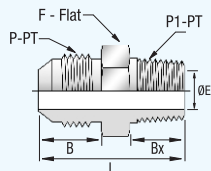
Hex Nipples - 37° JIC x 37° JIC



Part No	Tube Size				Dimensions				
	Inch	P-PT, JIC / UNF	Inch	P1-PT, JIC / UNF	L	F	B	Bx	E
PHN-4J-SS-15K	1/4	7/16-20	1/4	7/16-20	34.8	19.0	14.0	14.0	4.3
PHN-5J-SS-15K	5/16	1/2-20	5/16	1/2-20	34.8	14.2	14.0	14.1	5.8
PHN-6J-SS-15K	3/8	9/16-18	3/8	9/16-18	35.8	15.8	14.2	14.2	6.6
PHN-8J-SS-15K	1/2	3/4-16	1/2	3/4-16	41.1	20.6	16.8	16.8	9.1
PHN-10J-SS-10K	5/8	7/8-14	5/8	7/8-14	47.8	23.8	19.3	19.3	10.7
PHN-12J-SS-10K	3/4	1 1/16-12	3/4	1 1/16-12	54.9	28.5	21.8	21.8	13.2
PHN-16-SS-10K	1	1 5/16-12	1	1 5/16-12	57.1	35.0	23.1	23.1	17.0
PHN-6J-4J-SS-10K	3/8	9/16-18	1/4	7/16-20	35.6	15.8	14.2	14.2	4.3
PHN-8J-4J-SS-15K	1/2	3/4-16	1/4	7/16-20	38.4	20.6	16.8	16.8	4.3
PHN-12J-10J-SS-10K	1/2	3/4-16	3/8	9/16-18	38.6	20.6	16.8	16.8	6.6

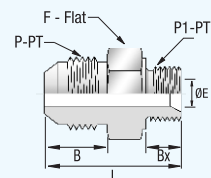
High Pressure Pipe Fittings

Hex Nipples - 37° JIC x NPT



Part No	Tube Size		Pipe Size	Dimensions				
	Inch	P-PT, JIC / UNF	P1-PT, NPT	L	F	B	Bx	E
PHN-2J-4N-SS-10K	1/8	5/16-24	1/4	33.5	14.3	14.2	11.4	1.5
PHN-4J-4N-SS-15K	1/4	7/16-20	1/4	36.1	15.0	14.2	14.0	4.3
PHN-4J-6N-SS-15K	1/4	7/16-20	3/8	36.1	22.2	14.2	14.0	4.3
PHN-4J-8N-SS-15K	1/4	7/16-20	1/2	42.7	28.6	19.3	14.0	4.3
PHN-6J-4N-SS-15K	3/8	9/16-18	1/4	36.3	15.8	14.2	14.2	6.6
PHN-6J-6N-SS-15K	3/8	9/16-18	3/8	36.3	22.2	14.2	14.2	6.6
PHN-6J-8N-SS-15K	3/8	9/16-18	1/2	42.9	25.4	19.3	14.2	6.6
PHN-8J-4N-SS-15K	1/2	3/4-16	1/4	38.9	20.5	14.2	16.8	9.1
PHN-8J-6N-SS-15K	1/2	3/4-16	3/8	38.9	22.2	14.2	16.8	9.1
PHN-8J-8N-SS-15K	1/2	3/4-16	1/2	45.5	28.5	19.3	16.8	9.1
PHN-8J-12N-SS-10K	1/2	3/4-16	3/4	47.0	28.5	19.3	16.8	9.1
PHN-12J-8N-SS-10K	3/4	1 1/16-12	1/2	52.3	28.5	19.3	21.8	13.2
PHN-12J-12N-SS-10K	3/4	1 1/16-12	3/4	52.3	28.5	19.3	21.8	13.2
PHN-16J-6N-SS-10K	1	1 5/16-12	3/8	48.8	35.0	14.2	23.1	17.0
PHN-16J-8N-SS-10K	1	1 5/16-12	1/2	53.6	35.0	19.3	23.1	17.0
PHN-16J-12N-SS-10K	1	1 5/16-12	3/4	53.6	35.0	14.2	23.1	17.0
PHN-16J-16N-SS-10K	1	1 5/16-12	1	58.4	35.0	24.0	23.1	17.0

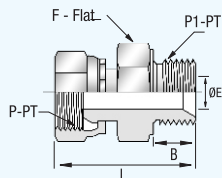
Hex Nipples - 37° JIC x ISO Parallel



Part No	Tube Size		Pipe Size	Dimensions				
	Inch	P-PT, JIC / UNF	P1-PT, BSPP	L	F	B	Bx	E
PHN-4J-4G-SS-15K	1/4	7/16-20	1/4	31.8	15.8	14.0	11.2	4.3
PHN-4J-6G-SS-15K	1/4	7/16-20	3/8	33.0	22.2	14.0	11.2	4.3
PHN-4J-8G-SS-15K	1/4	7/16-20	1/2	38.6	28.6	14.0	14.2	4.3
PHN-6J-6G-SS-15K	3/8	9/16-18	3/8	33.0	22.2	14.2	11.2	6.6
PHN-8J-8G-SS-15K	1/2	3/4-16	1/2	41.4	28.6	16.8	14.2	9.9
PHN-8J-12G-SS-10K	1/4	7/16-20	3/4	39.4	33.3	14.0	15.7	4.3

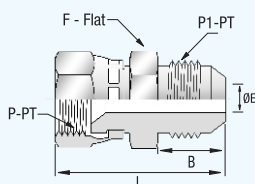
High Pressure Pipe Fittings

Hex Nipples - Swivel x ISO Parallel



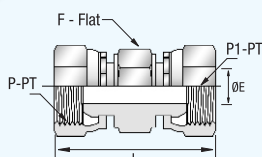
Part No	Pipe Size		Dimensions			
	P-PT, BSPP	P1-PT, BSPP	L	F	B	E
PHN-4GSWL-4G-SS-10K	1/4	1/4	36.6	19.0	11.0	6.0
PHN-4GSWL-6G-SS-10K	1/4	3/8	38.5	22.0	11.0	6.0
PHN-4GSWL-8G-SS-10K	1/4	1/2	42.0	27.0	11.0	6.0
PHN-6GSWL-4G-SS-10K	3/8	1/4	38.3	22.0	12.0	7.0
PHN-6GSWL-6G-SS-10K	3/8	3/8	40.0	22.0	12.0	7.0
PHN-6GSWL-8G-SS-10K	3/8	1/2	43.6	27.0	14.0	7.0
PHN-8GSWL-6G-SS-10K	1/2	3/8	43.5	27.0	14.0	9.0
PHN-8GSWL-8G-SS-10K	1/2	1/2	46.1	27.0	14.0	9.0
PHN-8GSWL-12G-SS-10K	1/2	3/4	48.0	32.0	14.0	9.0
PHN-12GSWL-8G-SS-10K	3/4	1/2	48.6	32.0	16.0	12.0
PHN-12GSWL-12G-SS-10K	3/4	3/4	50.0	32.0	16.0	12.0
PHN-12GSWL-16G-SS-10K	3/4	1	54.3	41.0	16.0	12.0
PHN-16GSWL-16G-SS-10K	1	1	57.3	41.0	19.0	18.0

Hex Nipples - 37° JIC Swivel x 37° JIC



Part No	Tube OD (P-PT)		P1-PT		Dimensions			
	inch	JIC/UNF	inch	JIC/UNF	L	F	B	E
PHN-4JSWL-4J-SS-10K	1/4	7/16-20	1/4	7/16-20	28.4	14.3	14.0	4.3
PHN-4JSWL-6J-SS-10K	1/4	7/16-20	3/8	9/16-18	32.8	17.5	14.0	4.3
PHN-4JSWL-8J-SS-10K	1/4	7/16-20	1/2	3/4-16	34.0	23.8	14.0	4.3
PHN-5JSWL-4J-SS-10K	5/16	1/2-20	1/4	7/16-20	30.0	14.3	14.0	5.8
PHN-6JSWL-4J-SS-10K	3/8	9/16-18	1/4	7/16-20	30.7	14.3	14.2	6.6
PHN-6JSWL-6J-SS-10K	3/8	9/16-18	3/8	9/16-18	33.0	17.5	14.2	6.6
PHN-6JSWL-8J-SS-10K	3/8	9/16-18	1/2	3/4-16	35.1	23.8	14.2	6.6
PHN-8JSWL-4J-SS-10K	1/2	3/4-16	1/4	7/16-20	33.3	20.6	16.8	9.1
PHN-8JSWL-6J-SS-10K	1/2	3/4-16	3/8	9/16-18	35.6	20.6	16.8	9.1
PHN-8JSWL-8J-SS-10K	1/2	3/4-16	1/2	3/4-16	35.6	23.8	16.8	9.1
PHN-8JSWL-12J-SS-10K	1/2	3/4-16	3/4	1 1/16-12	38.1	31.8	16.8	9.1

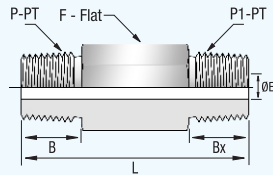
Swivel Union - ISO Parallel



Part No	Pipe Size		Dimensions		
	P-PT, BSPP	P1-PT, BSPP	L	F	E
PSU-4GSWL-SS-10K	1/4	1/4	23.1	14.3	4.3
PSU-6GSWL-4GSWL-SS-10K	3/8	1/4	26.4	17.5	4.3
PSU-6GSWL-SS-10K	3/8	3/8	28.7	17.5	7.6
PSU-8GSWL-4GSWL-SS-10K	1/2	1/4	31.2	23.8	4.3
PSU-8GSWL-6GSWL-SS-10K	1/2	3/8	31.2	23.8	7.6
PSU-8GSWL-SS-10K	1/2	1/2	32.8	23.8	9.9
PSU-12GSWL-SS-10K	3/4	3/4	41.1	31.8	14.2
PSU-16GSWL-SS-10K	1	1	42.2	38.1	19.0

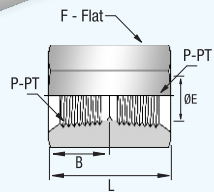
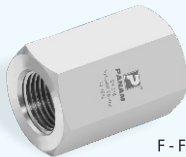
High Pressure Pipe Fittings

Hex Long Nipples - NPT x NPT



Part No	Pipe Size		Dimensions				
	P-PT, NPT	P1-PT, NPT	L	F	B	Bx	E
PHLN-2N-SS-L1.5-15K	1/8	1/8	38.1	14.0	9.5	9.5	3.0
PHLN-4N-SS-L2.0-15K	1/8	1/8	50.8	14.0	9.5	9.5	3.0
PHLN-4N-6N-SS-L2.5-15K	1/8	1/8	63.5	14.0	9.5	9.5	3.0
PHLN-4N-8N-SS-L3.0-15K	1/8	1/8	76.2	14.0	9.5	9.5	3.0
PHLN-6N-SS-L1.5-15K	1/4	1/4	38.1	15.8	14.2	14.2	4.8
PHLN-6N-8N-SS-L2.0-15K	1/4	1/4	50.8	15.8	14.2	14.2	4.8
PHLN-8N-SS-L2.5-15K	1/4	1/4	63.5	15.8	14.2	14.2	4.8
PHLN-12N-SS-L3.0-10K	1/4	1/4	76.2	15.8	14.2	14.2	4.8
PHLN-16N-SS-L4.0-10K	1/4	1/4	101.6	15.8	14.2	14.2	4.8
PHLN-4N-SS-L1.5-15K	3/8	3/8	38.1	22.2	14.2	14.2	6.0
PHLN-4N-6N-SS-L2.0-15K	3/8	3/8	50.8	22.2	14.2	14.2	6.0
PHLN-4N-8N-SS-L2.5-15K	3/8	3/8	63.5	22.2	14.2	14.2	6.0
PHLN-6N-SS-L3.0-15K	3/8	3/8	76.2	22.2	14.2	14.2	6.0
PHLN-6N-8N-SS-L4.0-15K	3/8	3/8	101.6	22.2	14.2	14.2	6.0
PHLN-8N-SS-L2.0-15K	1/2	1/2	50.8	25.4	19.3	19.3	9.0
PHLN-12N-SS-L3.0-10K	1/2	1/2	76.2	25.4	19.3	19.3	9.0
PHLN-16N-SS-L4.0-10K	1/2	1/2	101.6	25.4	19.3	19.3	9.0
PHLN-4N-8N-SS-L6.0-15K	1/2	1/2	152.6	25.4	19.3	19.3	9.0
PHLN-6N-SS-L2.0-15K	3/4	3/4	50.8	28.5	19.3	19.3	12.0
PHLN-6N-8N-SS-L3.0-15K	3/4	3/4	76.2	28.5	19.3	19.3	12.0
PHLN-8N-SS-L4.0-15K	3/4	3/4	101.6	28.5	19.3	19.3	12.0
PHLN-12N-SS-L3.0-10K	1	1	76.2	35.0	24.0	24.0	18.0
PHLN-16N-SS-L4.0-10K	1	1	101.6	35.0	24.0	24.0	18.0

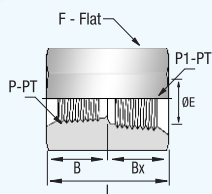
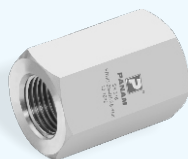
Hex Coupling - NPT



Part No	Pipe Size	Dimensions		
	P-PT, NPT	L	F	B
PHC-2N-SS-15K	1/8	25.4	16.0	9.5
PHC-4N-SS-15K	1/4	31.8	19.1	14.2
PHC-6N-SS-15K	3/8	35.1	25.4	14.2
PHC-8N-SS-15K	1/2	38.1	35.1	19.3
PHC-12N-SS-10K	3/4	44.5	35.1	19.3
PHC-16N-SS-10K	1	55.4	44.5	24.0

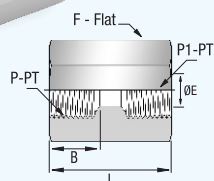
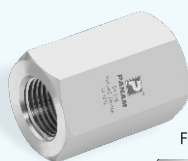
High Pressure Pipe Fittings

Reducing Hex Coupling - NPT



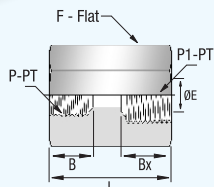
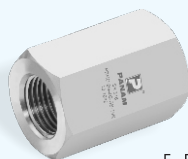
Part No	Pipe Size		Dimensions				
	P-PT, NPT	P1-PT, NPT	L	F	B	Bx	E
PRHC-2N-4N-SS-15K	1/8	1/4	31.8	19.1	9.5	14.2	3.0
PRHC-2N-6N-SS-15K	1/8	3/8	35.1	25.4	9.5	14.2	3.0
PRHC-2N-8N-SS-15K	1/8	1/2	38.1	31.8	9.5	19.3	3.0
PRHC-2N-12N-SS-10K	1/8	3/4	41.1	35.1	9.5	19.3	3.0
PRHC-2N-16N-SS-10K	1/8	1	50.8	44.5	9.5	24.0	3.0
PRHC-4N-6N-SS-15K	1/4	3/8	35.1	25.4	14.2	14.2	4.8
PRHC-4N-8N-SS-15K	1/4	1/2	41.1	35.1	14.2	19.3	4.8
PRHC-4N-12N-SS-10K	1/4	3/4	44.5	35.1	14.2	19.3	4.8
PRHC-4N-16N-SS-10K	1/4	1	50.8	44.5	14.2	24.0	4.8
PRHC-6N-8N-SS-15K	3/8	1/2	41.4	35.1	14.2	19.3	6.0
PRHC-6N-12N-SS-10K	3/8	3/4	44.5	35.1	14.2	19.3	6.0
PRHC-6N-16N-SS-10K	3/8	1	50.8	44.5	14.2	24.0	6.0
PRHC-8N-12N-SS-10K	1/2	3/4	44.5	35.1	19.3	19.3	9.0
PRHC-8N-16N-SS-10K	1/2	1	55.6	44.5	19.3	24.0	9.0

Hex Coupling - ISO Parallel



Part No	Pipe Size	Dimensions			
	P-PT, BSPP	L	F	B	E
PHC-2G-SS-15K	1/8	25.4	16.0	9.5	3.0
PHC-4G-SS-15K	1/4	31.8	19.1	15.5	4.8
PHC-6G-SS-15K	3/8	35.1	25.4	15.5	6.0
PHC-8G-SS-15K	1/2	38.1	35.1	19.0	9.0
PHC-12G-SS-10K	3/4	44.5	35.1	22.0	12.0
PHC-16G-SS-10K	1	55.4	44.5	22.0	18.0

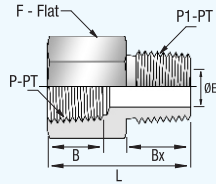
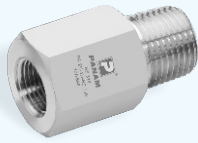
Hex Reducing Coupling - ISO Parallel



Part No	Pipe Size		Dimensions				
	P-PT, BSPP	P1-PT, BSPP	L	F	B	Bx	E
PRHC-2G-4G-SS-15K	1/8	1/4	31.8	19.0	9.5	15.5	3.0
PRHC-2G-6G-SS-15K	1/8	3/8	35.1	22.0	9.5	15.5	3.0
PRHC-2G-8G-SS-15K	1/8	1/2	38.1	35.1	9.5	19.0	3.0
PRHC-2G-12G-SS-10K	1/8	3/4	41.1	35.1	9.5	22.0	3.0
PRHC-2G-16G-SS-10K	1/8	1	50.8	44.5	9.5	24.5	3.0
PRHC-4G-6G-SS-15K	1/4	3/8	35.1	25.4	15.5	15.5	4.8
PRHC-4G-8G-SS-15K	1/4	1/2	41.1	35.1	15.5	19.0	4.8
PRHC-4G-12G-SS-10K	1/4	3/4	44.5	35.1	15.5	22.0	4.8
PRHC-4G-16G-SS-10K	1/4	1	50.8	44.5	15.5	24.5	4.8
PRHC-6G-8G-SS-15K	3/8	1/2	41.4	35.1	15.5	19.0	6.0
PRHC-6G-12G-SS-10K	3/8	3/4	44.5	35.1	15.5	15.5	6.0
PRHC-6G-16G-SS-10K	3/8	1	50.8	44.5	15.5	24.5	6.0
PRHC-8G-12G-SS-10K	1/2	3/4	44.5	35.1	19.0	22.0	9.0
PRHC-8G-16G-SS-10K	1/2	1	55.6	44.5	19.0	24.5	9.0

High Pressure Pipe Fittings

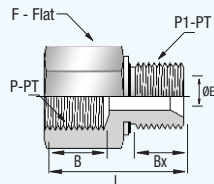
Adapters - NPT



Part No	Pipe Size		Dimensions				
	P-PT, NPT	P1-PT, NPT	L	F	B	Bx	E
PA-2N-4N-SS-15K	1/8	1/4	35.1	19.1	9.5	15.5	8.5
PA-2N-6N-SS-15K	1/8	3/8	39.6	25.4	9.5	15.5	14.0
PA-2N-8N-SS-15K	1/8	1/2	39.6	35.1	9.5	22.0	18.0
PA-2N-12N-SS-10K	1/8	3/4	53.8	35.1	9.5	22.0	22.0
PA-2N-16N-SS-10K	1/8	1	57.2	44.5	9.5	24.5	22.0
PA-4N-2N-SS-15K	1/4	1/8	38.1	19.1	14.2	9.5	8.5
PA-4N-6N-SS-15K	1/4	3/8	44.5	22.4	14.2	15.5	14.0
PA-4N-8N-SS-15K	1/4	1/2	44.5	35.1	14.2	22.0	18.0
PA-4N-12N-SS-10K	1/4	3/4	57.2	35.1	14.2	22.0	22.0
PA-4N-16N-SS-10K	1/4	1	60.5	44.5	14.2	24.5	22.0
PA-6N-2N-SS-15K	3/8	1/8	38.1	22.2	14.2	9.5	8.5
PA-6N-4N-SS-15K	3/8	1/4	41.1	22.2	14.2	15.5	11.0
PA-6N-8N-SS-15K	3/8	1/2	50.8	35.1	14.2	22.0	18.0
PA-6N-12N-SS-10K	3/8	3/4	50.8	35.1	14.2	22.0	22.0
PA-6N-16N-SS-10K	3/8	1	65.0	44.5	14.2	24.5	22.0
PA-8N-2N-SS-15K	1/2	1/8	44.5	25.4	19.3	9.5	8.5
PA-8N-4N-SS-15K	1/2	1/4	46.0	25.4	19.3	15.5	11.0
PA-8N-6N-SS-15K	1/2	3/8	50.8	25.4	19.3	15.5	14.0
PA-8N-12N-SS-10K	1/2	3/4	63.5	35.1	19.3	22.0	22.0
PA-8N-16N-SS-10K	1/2	1	65.0	44.5	19.3	24.5	22.0
PA-12N-2N-SS-10K	3/4	1/8	38.4	28.5	19.3	9.5	8.5
PA-12N-4N-SS-10K	3/4	1/4	38.4	28.5	19.3	15.5	11.0
PA-12N-6N-SS-10K	3/4	3/8	50.8	28.5	19.3	15.5	14.0
PA-12N-8N-SS-10K	3/4	1/2	50.8	28.5	19.3	22.0	18.0
PA-12N-16N-SS-10K	3/4	1	65.0	44.5	19.3	24.5	22.0
PA-16N-2N-SS-10K	1	1/8	50.8	35.1	24.0	9.5	8.5
PA-16N-4N-SS-10K	1	1/4	47.8	35.1	24.0	15.5	11.0
PA-16N-6N-SS-10K	1	3/8	57.2	35.1	24.0	15.5	14.0
PA-16N-8N-SS-10K	1	1/2	60.2	35.1	24.0	22.0	18.0
PA-16N-12N-SS-10K	1	3/4	69.9	35.1	24.0	22.0	22.0

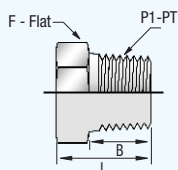
High Pressure Pipe Fittings

Adapters - ISO Parallel



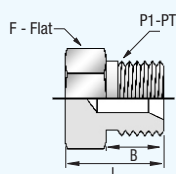
Part No	Pipe Size		Dimensions				
	P-PT, BSPP	P1-PT, BSPP	L	F	B	Bx	E
PA-2G-4G-SS-15K	1/8	1/4	37.1	22.0	12.0	11.0	4.8
PA-2G-6G-SS-15K	1/8	3/8	36.9	22.0	12.0	12.0	6.0
PA-2G-8G-SS-15K	1/8	1/2	38.0	27.0	14.0	11.0	4.8
PA-2G-10G-SS-10K	1/8	5/8	45.3	27.0	14.0	12.0	6.0
PA-12G-4G-SS-10K	3/4	1/4	40.0	30.0	16.0	11.0	4.8
PA-12G-6G-SS-10K	3/4	3/8	41.6	32.0	16.0	12.0	6.0
PA-12G-8G-SS-10K	3/4	1/2	47.3	32.0	16.0	14.0	9.0
PA-16G-4G-SS-10K	1	1/4	43.0	41.0	19.0	11.0	4.8
PA-16G-6G-SS-10K	1	3/8	44.6	41.0	19.0	12.0	6.0
PA-16G-8G-SS-10K	1	1/2	50.3	41.0	19.0	14.0	9.0
PA-16G-12G-SS-10K	1	3/4	52.2	41.0	19.0	16.0	12.0

Hex Plug - NPT



Part No	Pipe Size	Dimensions		
	P-PT, NPT	L	F	B
PHP-2N-SS-15K	1/8	25.4	12.7	9.5
PHP-4N-SS-15K	1/4	28.4	16.0	14.2
PHP-6N-SS-15K	3/8	28.4	19.1	14.2
PHP-8N-SS-15K	1/2	38.1	25.4	19.3
PHP-12N-SS-10K	3/4	38.1	35.1	19.3
PHP-16N-SS-10K	1	47.8	35.1	24.0

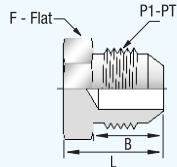
Hex Plug - ISO Parallel



Part No	Pipe Size	Dimensions		
	P-PT, BSPP	L	F	B
PHP-2G-SS-15K	1/8	14.3	14.0	8.0
PHP-4G-SS-15K	1/4	18.8	19.0	11.0
PHP-6G-SS-15K	3/8	20.5	22.0	12.0
PHP-8G-SS-15K	1/2	24.0	27.0	14.0
PHP-10G-SS-10K	5/8	24.0	30.0	16.0
PHP-12G-SS-10K	3/4	26.5	32.0	16.0
PHP-16G-SS-10K	1	30.2	41.0	19.0
PHP-20G-SS-10K	1 1/4	38.7	50.0	20.0
PHP-24G-SS-10K	1 1/2	42.7	55.0	22.0
PHP-32G-SS-10K	2	48.2	70.0	25.0

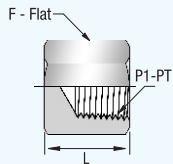
High Pressure Pipe Fittings

Tube Plug - 37° JIC



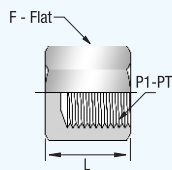
Part No	Tube Size		Dimensions		
	Inch	P-PT, JIC / UNF	L	F	B
PTP-4J-SS-10K	1/4	7/16-20	20.3	12.7	20.3
PTP-5J-SS-10K	5/16	1/2-20	20.3	14.2	20.3
PTP-6J-SS-10K	3/8	9/16-18	21.3	15.8	21.3
PTP-8J-SS-10K	1/2	3/4-16	23.9	20.6	23.9
PTP-10J-SS-10K	5/8	7/8-14	27.9	23.8	27.9
PTP-12J-SS-10K	3/4	1 1/16-12	32.5	28.6	32.5
PTP-16J-SS-10K	1	1 5/16-12	33.8	34.9	33.8

Pipe Cap - NPT



Part No	Pipe Size	Dimensions	
	P-PT, NPT	L	F
PPC-2N-SS-15K	1/8	19.1	16.0
PPC-4N-SS-15K	1/4	25.4	19.1
PPC-6N-SS-15K	3/8	25.4	25.4
PPC-8N-SS-15K	1/2	31.8	35.1
PPC-12N-SS-10K	3/4	38.1	35.1
PPC-16N-SS-10K	1	42.7	44.5

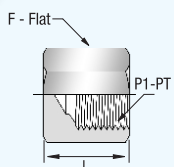
Pipe Cap - ISO Parallel



Part No	Pipe Size	Dimensions		
	P-PT, BSPP	L	F	B
PPC-2G-SS-15K	1/8	19.1	16.0	9.5
PPC-4G-SS-15K	1/4	25.4	19.1	14.2
PPC-6G-SS-15K	3/8	25.4	25.4	14.2
PPC-8G-SS-15K	1/2	31.8	35.1	19.3
PPC-12G-SS-10K	3/4	38.1	35.1	19.3
PPC-16G-SS-10K	1	42.7	44.5	24.0

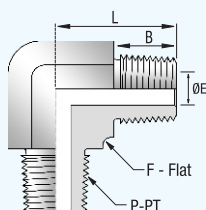
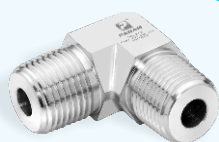
High Pressure Pipe Fittings

Pipe Cap - 37° JIC



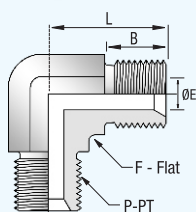
Part No	Tube Size		Dimensions	
	Inch	P-PT, JIC / UNF	L	F
PPC-4J-SS-10K	1/4	7/16-20	17.0	14.3
PPC-5J-SS-10K	5/16	1/2-20	19.6	15.9
PPC-6J-SS-10K	3/8	9/16-18	20.6	17.5
PPC-8J-SS-10K	1/2	3/4-16	23.9	22.2
PPC-10J-SS-10K	5/8	7/8-14	27.2	25.4
PPC-12J-SS-10K	3/4	1 1/16-12	31.5	31.8
PPC-16J-SS-10K	1	1 5/16-12	32.8	38.1

Male Elbow - NPT



Part No	Pipe Size	Dimensions				
	P-PT, NPT	L	Lx	F	B	E
PME-2N-SS-15K	1/8	23.5	23.5	15.8	9.5	3.0
PME-4N-SS-15K	1/4	28.0	28.0	19.5	14.2	4.8
PME-6N-SS-15K	3/8	28.0	28.0	22.5	14.2	6.0
PME-8N-SS-15K	1/2	29.0	29.0	24.0	19.3	9.0
PME-12N-SS-10K	3/4	35.0	35.0	30.5	19.3	12.0
PME-16N-SS-10K	1	48.5	48.5	42.0	24.0	18.0

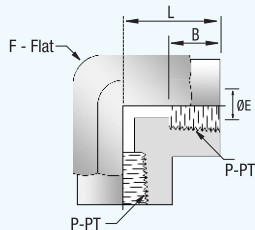
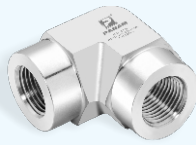
Male Elbow - ISO Parallel



Part No	Pipe Size	Dimensions				
	P-PT, BSPP	L	Lx	F	B	E
PME-2G-SS-15K	1/8	23.5	23.5	15.8	9.0	3.0
PME-4G-SS-15K	1/4	28.0	28.0	19.5	11.0	4.8
PME-6G-SS-15K	3/8	28.0	28.0	22.5	11.0	6.0
PME-8G-SS-15K	1/2	29.0	29.0	24.0	13.5	9.0
PME-12G-SS-10K	3/4	35.0	35.0	30.5	19.3	12.0
PME-16G-SS-10K	1	48.5	48.5	42.0	24.0	18.0

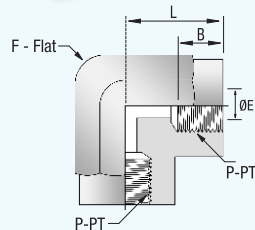
High Pressure Pipe Fittings

Female Elbow - NPT



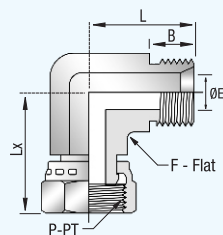
Part No	Pipe Size	Dimensions			
	P-PT, NPT	L	F	B	E
PFE-2N-SS-15K	1/8	23.5	19.0	9.5	4.8
PFE-4N-SS-15K	1/4	28.0	24.0	15.5	6.0
PFE-6N-SS-15K	3/8	28.0	30.5	15.5	7.0
PFE-8N-SS-15K	1/2	29.0	36.0	22.0	9.0
PFE-12N-SS-10K	3/4	39.5	36.0	22.0	12.0
PFE-16N-SS-10K	1	48.5	44.5	24.0	18.0

Female Elbow - ISO Parallel



Part No	Pipe Size	Dimensions			
	P-PT, BSPP	L	F	B	E
PFE-2G-SS-15K	1/8	23.5	19.0	9.5	4.8
PFE-4G-SS-15K	1/4	28.0	24.0	15.5	6.0
PFE-6G-SS-15K	3/8	28.0	30.5	15.5	7.0
PFE-8G-SS-15K	1/2	29.0	36.0	19.0	9.0
PFE-12G-SS-10K	3/4	39.5	36.0	22.0	12.0
PFE-16G-SS-10K	1	48.5	44.5	24.0	18.0

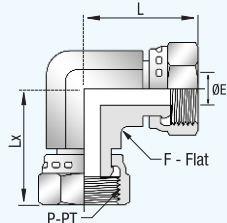
Swivel Male Elbow - Swivel x ISO Parallel



Part No	Pipe Size		Dimensions				
	P-PT, BSPP	P1-PT, BSPP	L	Lx	F	B	E
PME-2GSWL-2G-SS-10K	1/8	1/8	23.5	23.5	15.8	8.0	4.8
PME-4GSWL-4G-SS-10K	1/4	1/4	28.0	28.0	19.5	11.0	6.0
PME-6GSWL-6G-SS-10K	3/8	3/8	28.0	28.0	19.5	12.0	7.0
PME-8GSWL-8G-SS-10K	1/2	1/2	29.0	29.0	24.0	14.0	9.0
PME-10GSWL-10G-SS-10K	5/8	5/8	35.0	35.0	30.5	16.0	10.0
PME-12GSWL-12G-SS-10K	3/4	3/4	39.5	39.5	36.0	16.0	12.0
PME-16GSWL-16G-SS-10K	1	1	39.5	39.5	36.0	19.0	18.0
PME-20GSWL-20G-SS-10K	1 1/4	1 1/4	48.5	48.5	42.0	20.0	22.0
PME-24GSWL-24G-SS-10K	1 1/2	1 1/2	48.5	48.5	42.0	22.0	24.0

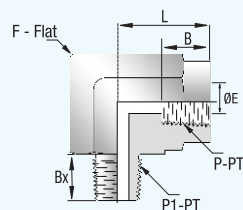
High Pressure Pipe Fittings

Swivel Union Elbow



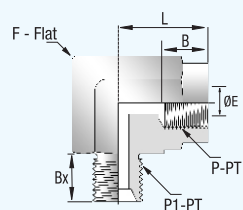
Part No	Pipe Size		Dimensions					
	P-PT, BSPP	P1-PT, BSPP	L	Lx	F	B	E	
PUE-4GSWL-SS-10K	1/4	1/4	28.0	28.0	19.5	11.0	6.0	
PUE-6GSWL-SS-10K	3/8	3/8	28.0	28.0	19.5	12.0	7.0	
PUE-8GSWL-SS-10K	1/2	1/2	29.0	29.0	24.0	14.0	9.0	
PUE-10GSWL-SS-10K	5/8	5/8	35.0	35.0	30.5	16.0	10.0	
PUE-12GSWL-SS-10K	3/4	3/4	39.5	39.5	36.0	16.0	12.0	
PUE-16GSWL-SS-10K	1	1	39.5	39.5	36.0	19.0	18.0	
PUE-20GSWL-SS-10K	1 1/4	1 1/4	48.5	48.5	42.0	20.0	22.0	
PUE-24GSWL-SS-10K	1 1/2	1 1/2	48.5	48.5	42.0	22.0	24.0	

Street Elbow - NPT



Part No	Pipe Size		Dimensions					
	P-PT, NPT	P1-PT, NPT	L	F	B	Bx	E	
PSE-2N-SS-15K	1/8	1/8	28.0	19.0	9.5	9.5	3.0	
PSE-4N-SS-15K	1/4	1/4	29.0	24.0	14.2	15.5	4.8	
PSE-6N-SS-15K	3/8	3/8	35.0	30.5	14.2	15.5	6.0	
PSE-8N-SS-15K	1/2	1/2	39.5	36.0	19.3	22.0	9.0	
PSE-12N-SS-10K	3/4	3/4	39.5	36.0	19.3	19.3	12.0	
PSE-16N-SS-15K	1	1	48.5	44.5	24.0	24.0	18.0	

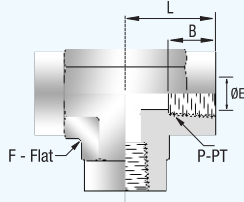
Street Elbow - ISO Parallel



Part No	Pipe Size		Dimensions					
	P-PT, BSPP	P1-PT, BSPP	L	F	B	Bx	E	
PSE-2G-SS-15K	1/8	1/8	28.0	19.0	9.5	9.5	3.0	
PSE-4G-SS-15K	1/4	1/4	29.0	24.0	14.2	15.5	4.8	
PSE-6G-SS-15K	3/8	3/8	35.0	30.5	14.2	15.5	6.0	
PSE-8G-SS-15K	1/2	1/2	39.5	36.0	19.3	19.3	9.0	
PSE-12G-SS-10K	3/4	3/4	39.5	36.0	19.3	19.3	12.0	
PSE-16G-SS-10K	1	1	48.5	44.5	24.0	24.0	18.0	

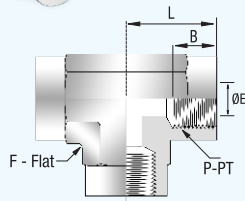
High Pressure Pipe Fittings

Female Tee - NPT



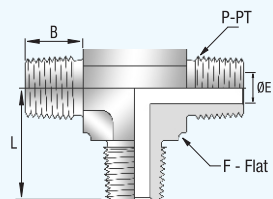
Part No	Pipe Size	Dimensions			
	P-PT, NPT	L	F	B	E
PFT-2N-SS-15K	1/8	52.5	19.0	9.5	4.8
PFT-4N-SS-15K	1/4	58.0	24.0	15.5	6.0
PFT-6N-SS-15K	3/8	70.0	30.5	15.5	7.0
PFT-8N-SS-15K	1/2	79.0	36.0	22.0	9.0
PFT-12N-SS-10K	3/4	39.5	36.0	22.0	12.0
PFT-16N-SS-10K	1	48.5	44.5	24.0	18.0

Female Tee - ISO Parallel



Part No	Pipe Size	Dimensions			
	P-PT, BSPP	L	F	B	E
PFT-2G-SS-15K	1/8	52.5	19.0	9.5	4.8
PFT-4G-SS-15K	1/4	58.0	24.0	15.5	6.0
PFT-6G-SS-15K	3/8	70.0	30.5	15.5	7.0
PFT-8G-SS-15K	1/2	79.0	36.0	19.0	9.0
PFT-12G-SS-10K	3/4	39.5	36.0	22.0	12.0
PFT-16G-SS-10K	1	48.5	44.5	24.0	18.0

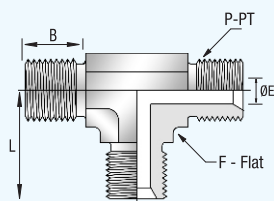
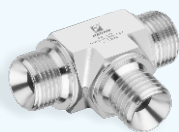
Male Tee - NPT



Part No	Pipe Size	Dimensions			
	P-PT, NPT	L	F	B	E
PMT-2N-SS-15K	1/8	45.5	15.8	9.5	3.0
PMT-4N-SS-15K	1/4	52.5	19.0	14.2	4.8
PMT-6N-SS-15K	3/8	52.5	22.2	14.2	6.0
PMT-8N-SS-15K	1/2	58.0	24.0	19.3	9.0
PMT-12N-SS-10K	3/4	39.5	36.0	22.0	12.0
PMT-16N-SS-10K	1	48.5	42.0	24.0	18.0

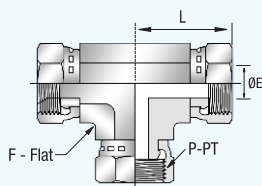
High Pressure Pipe Fittings

Male Tee - ISO Parallel



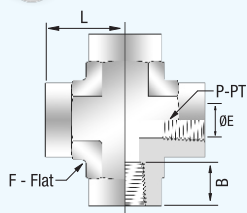
Part No	Pipe Size	Dimensions			
	P-PT, BSPP	L	F	B	E
PMT-2G-SS-15K	1/8	45.5	15.8	9.5	3.0
PMT-4G-SS-15K	1/4	52.5	19.0	14.2	4.8
PMT-6G-SS-15K	3/8	52.5	19.0	14.2	6.0
PMT-8G-SS-15K	1/2	58.0	24.0	19.3	9.0
PMT-12G-SS-10K	3/4	39.5	36.0	22.0	12.0
PMT-16G-SS-10K	1	48.5	42.0	24.0	18.0

Swivel Union Tee



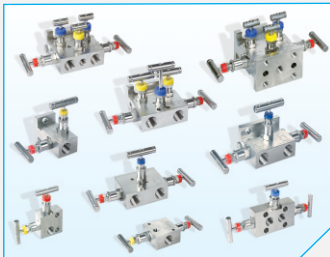
Part No	Pipe Size		Dimensions			
	P-PT, BSPP	P1-PT, BSPP	L	F	B	E
PUT-4GSWL-SS-10K	1/4	1/4	52.5	19.0	11.0	6.0
PUT-6GSWL-SS-10K	3/8	3/8	52.5	19.0	12.0	7.0
PUT-8GSWL-SS-10K	1/2	1/2	58.0	24.0	14.0	9.0
PUT-10GSWL-SS-10K	5/8	5/8	70.0	30.5	16.0	10.0
PUT-12GSWL-SS-10K	3/4	3/4	79.0	36.0	16.0	12.0
PUT-16GSWL-SS-10K	1	1	79.0	36.0	19.0	18.0
PUT-20GSWL-SS-10K	1 1/4	1 1/4	97.0	42.0	20.0	22.0

Female Cross - NPT

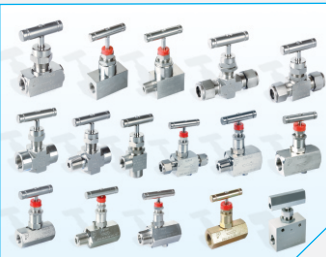


Part No	Pipe Size	Dimensions			
	P-PT, NPT	L	F	B	E
PFC-2N-SS-15K	1/8	49.0	19.0	9.5	4.8
PFC-4N-SS-15K	1/4	58.0	24.0	15.5	6.0
PFC-6N-SS-15K	3/8	70.0	30.0	15.5	7.0
PFC-8N-SS-15K	1/2	79.0	36.0	22.0	9.0
PFC-12N-SS-10K	3/4	79.0	36.0	22.0	12.0
PFC-16N-SS-10K	1	97.0	44.5	24.0	18.0

Other Products



2, 3 & 5 Valve Manifolds



Needle Valves



Ball Valves



Check Valves



Relief Valves



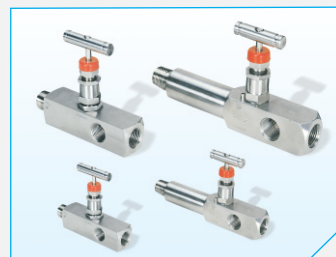
Tube Fittings



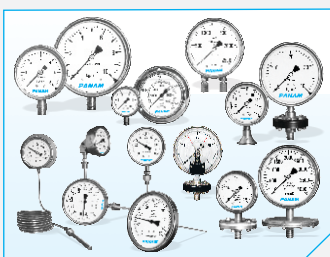
Pipe Fittings



Thermowells



Gauge Root Valves



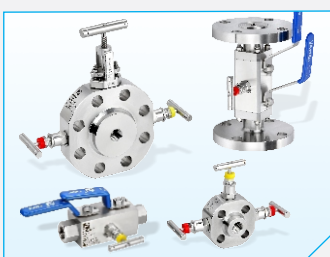
Pressure, Temperature & Diaphragm Gauges



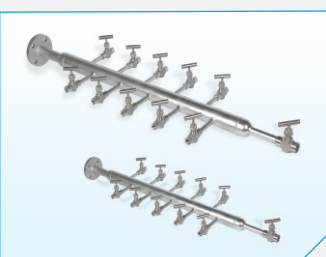
Pressure Transmitters



Pressure Regulators



Double Block & Bleed Valves



Air Header



Industrial Valves



PANAM ENGINEERS LTD.

An ISO 9001:2008 Company

203, Jaisingh Business Center, Parsiwada, Sahar Road, Andheri (East), Mumbai - 400 099. INDIA
Tel.: +91 22 2831 5555 / 57 / 58 • Fax: +91 22 2831 5574 • email: sales@panamengineers.com / sales@panam.in
website: www.panamengineers.com / www.panam.in