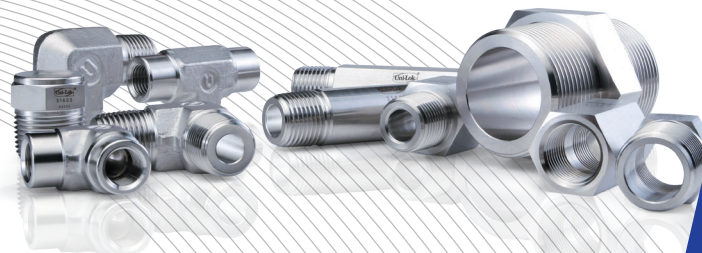




INSTRUMENTATION PIPE FITTINGS

www.unilok.com



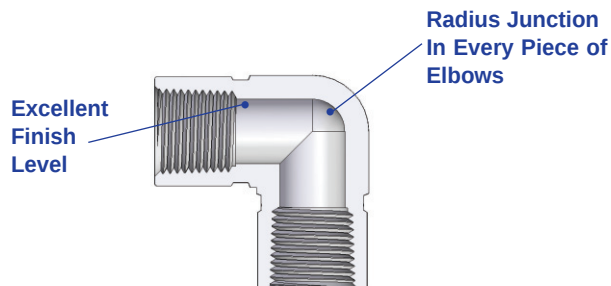
Features

Excellent finish level to allow smooth flow transaction

Every pieces of elbows have radius junction to eliminate entrapment areas and to allow smooth flow transition for all elbows including pipe fittings

Fine threads meets the requirement of ASEM/ANSI B1.20.1 to ensure maximum thread engagement

Working pressures are higher than the traditional piping class, 3000 pipe fittings to ASME B16.1



Materials

Uni-Lok pipe fittings are available in various kinds of materials as below. Straight fittings are machined from cold finished bar stock and shaped fittings from forgings. For more details or special application, contact your local distributors.

Materials	Bar Stock	Forgings
316 SS or 316L SS	ASTM A479 ASME SA479	ASTM A182 ASME SA182
Brass	ASTM B16 ASTM B453	ASTM B283
Alloy 400 (Monel®)	ASTM B164	ASTM B564 ASME SB564

*Monel is the trade mark of Special Metals.

Sour Environment Services

Uni-Lok pipe fittings are comply with NACE MR-0175/ISO 115156 for sour oilfield application or NACE MR-0103 for petroleum refining operations.

To order, add-N to the end of part number.

Installation Instruction

Pipe thread sealant is recommended for a leak tight seal. Teflon tape is commonly used only for installation of the pipe fittings with male thread.

Make sure both male and female threads clean.

Warp Teflon tape clockwise from the first thread.

Two time of wrapping is recommended.

Don't overhang tape on the first thread as it might be entered the system.

Cut off excess tape.

Cleaning

Uni-Lok pipe fittings are free from machine oils, loose particles and grease throughout the close cleaning process.

Pipe End Thread Information

The end connections with the lower pressure rating is the determining factor of pressure rating for the fittings with both Uni-Lok tube ends and pipe thread ends .

Pressure Rating for Pipe End Thread

Tapered Pipe Threads - NPT or ISO 7/1(BSPT)

Allowable pressure ratings for male and female threads are based on ASME B31.3 at ambient temperature.

Pipe Size	316SS				Brass			Uni-Lok Desig - nator
	Male		Female		Male	Female		
inch	bar	psig	bar	psig	psig	bar	psig	
1/16	760	11000	460	6700	5500	230	3300	-01N/R
1/8	690	10000	440	6500	5000	220	3200	-02N/R
1/4	550	8000	450	6600	4000	220	3300	-04N/R
3/8	540	7800	360	5300	3900	180	2600	-06N/R
1/2	530	7700	330	4900	3800	160	2400	-08N/R
3/4	500	7300	320	4600	3600	160	2300	-12N/R
1	370	5300	300	4400	2600	150	2200	-16N/R
1-1/4	410	6000	350	5000	3000	170	2500	-20N/R
1-1/2	340	5000	310	4600	2500	150	2300	-24N/R
2	270	3900	270	3900	1900	130	1900	-32N/R

Designator for NPT pipe thread is N, ISO/7 is R.

ISO 228/1 Parallel Thread (BSPP)

The pressure ratings are at ambient temperature.

Male Pipe Size	316SS		Uni-Lok Designator
	bar	psig	
1/8	316	4568	-02G
1/4	315	4568	-04G
3/8	315	4568	-06G
1/2	160	2320	-08G

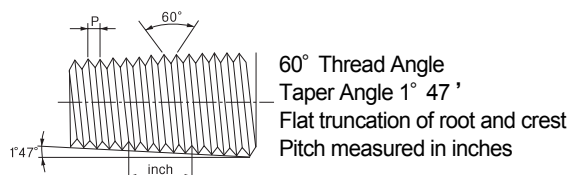
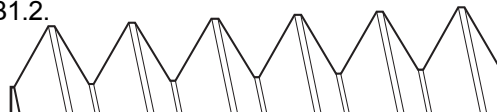
O-Seal Fittings

Rated to 206 bar (3000 psig) for 316SS fittings up to 1 inch and 25mm

Kinds of Pipe End Thread

NPT Pipe Thread

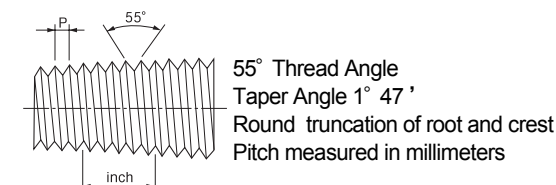
NPT (National Pipe Thread) is based on ANSI B1.2.



ISO 7/1 Tapered Pipe Thread

International Organization for Standard (ISO 7/1) Tapered (PT)

Equivalent to BSPT (British Standard Pipe Taper Thread), DIN 2999, JIS B0203

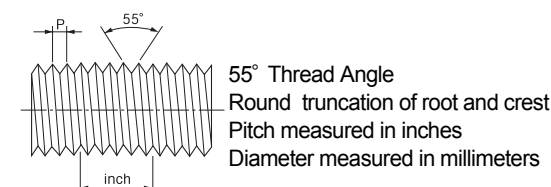
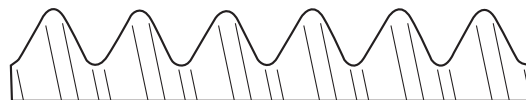


ISO 228/1 Parallel Pipe Thread

International Organization for Standard (ISO 228/1) Parallel(PF)

Equivalent to BSPP (British Standard Pipe Parallel Thread), DIN ISO228/1, JIS B0202

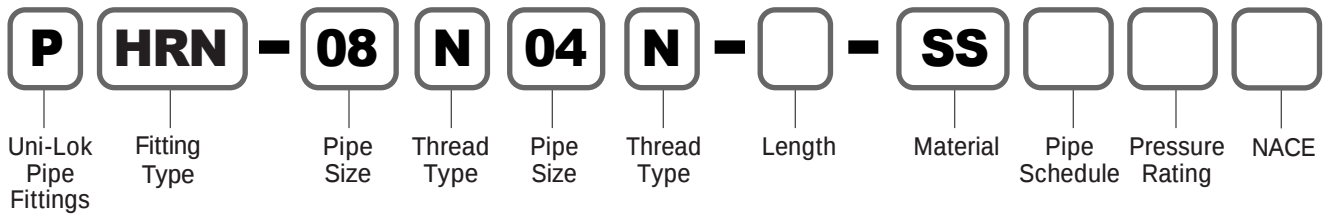
Gasket or O-ring is normally used to seal into the parallel female threaded components.



How To Order

Uni-Lok pipe fittings are ordered by part number as shown as below.

Example : The following part number, **PHRN-08N04N-SS** is designated for Reducing Hex Nipple, 1/2" M-NPT x 1/4" M-NPT, 316SS.



Pipe Size Designation						
Pipe Size	1/8	1/4	3/8	1/2	3/4	1
Designator	02	04	06	08	12	16

Thread Type Designation		
Thread Type		Designator
NPT	National Standard Pipe Thread	N
ISO 7/1	Taper Pipe Thread	R
ISO 228/1	Parallel Pipe Thread	G
	Socket Weld-Tube	WS-*T
	Socket Weld-Pipe	WS-*P

Material	
SS	316SS
BS	Brass
MO	Alloy400

Pipe Schedule Designation	
Pipe Schedule	Designator
Sch80	None
Sch160	S16

Pipe fittings to be machined from pipes (PLN & PSN) have different pipe schedule. Schedule 80 is the standard.

Pressure Rating Designation	
Pressure Rating	Designator
6000 psi	6K
10000 psi	10K

Pipe fittings for high pressure application are available. The standard pressure ratings for each thread sizes are based on ASME B31.3 at ambient temperature.

For the availability of 6000psig and 10000psig, contact your local distributors.

Length Designation	
Fitting Length	Designator
1.5"	1.5
2"	2.0
2.5"	2.5
3"	3.0
4"	4.0
6"	6.0

PHLN and PLN have different length.

Visual Index

Male Pipe to Male Pipe



Hex Long Nipple
PHLN

6



Close Nipple
PCN

6



Reducing
Hex Nipple
PHRN

7



Hex Nipple
PHN

6



Long Nipple
PLN

7



Male Elbow
PME

8



Male Tee
PMT

8

Female Pipe to Male Pipe



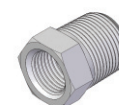
Adapter
PA

8



Reducing Adapter
PRA

8



Reducing Bushing
PRB

9



Street Elbow
PSE

9



Street Tee
PST

9



Branch Tee
PBT

9

Female Pipe to Female Pipe



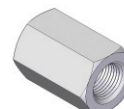
Female Elbow
PFE

10



Coupling
PC

10



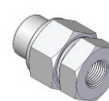
Reducing
Coupling
PRC

10



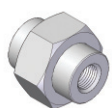
Female Tee
PFT

10



Ball Joint
Union
PBJ

11



Pipe Union
PU

11



Swage Nipple
PSN

11

Female Pipe to SW Systems (Socket Weld)



SW Coupling
PCWS

12



Reducing
SW Coupling
PCRWS

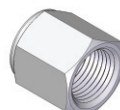
12



Special Coupling
PCS

12

Components



Pipe Cap
PCP

12

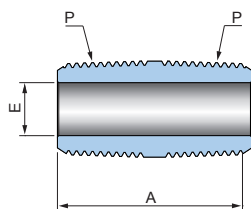


Pipe Plug
PPG

12

Close Nipple

PCN

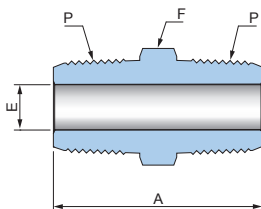


Connects Female Pipe to Female Pipe

Part No.	Pipe Size	Dimensions (mm)	
	P	A	E
PCN-02	1/8	21.8	4.8
PCN-04	1/4	33.0	7.0
PCN-06	3/8	34.0	10.0
PCN-08	1/2	44.0	12.0
PCN-12	3/4	38.1	19.4
PCN-16	1	58.9	22.0

Hex Nipple

PHN

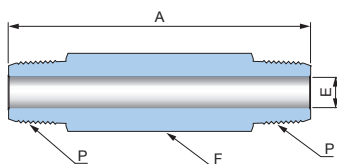
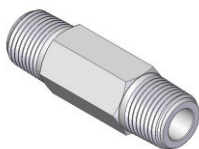


Connects Female Pipe to Female Pipe

Part No.	Pipe Size	Dimensions (mm)			
	P	A	E	F	
PHN-02	1/8	25	4.8	7/16	
PHN-04	1/4	35	7.0	9/16	
PHN-06	3/8	36	10.0	11/16	
PHN-08	1/2	47	12.0	7/8	
PHN-12	3/4	47	16.0	1-1/16	
PHN-16	1	59	22.0	1-3/8	

Hex Long Nipple

PHLN



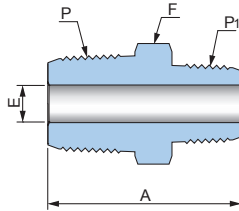
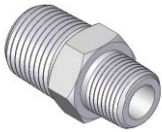
Connects Female Pipe to Female Pipe

Part No.	Pipe Size	Dimensions (mm)			
	P	A	E	F	
PHLN-02-1.5	1/8	40	4.8	7/16	
PHLN-02-2.0		50			
PHLN-02-2.5		65			
PHLN-02-3.0		75			
PHLN-02-4.0		100			
PHLN-04-1.5	1/4	40	7.0	9/16	
PHLN-04-2.0		50			
PHLN-04-2.5		65			
PHLN-04-3.0		75			
PHLN-04-4.0		100			
PHLN-04-6.0		150			
PHLN-06-2.0	3/8	50	10.0	11/16	
PHLN-06-3.0		75			
PHLN-06-4.0		100			
PHLN-08-2.0	1/2	50	12.0	7/8	
PHLN-08-3.0		75			
PHLN-08-4.0		100			
PHLN-08-6.0		150			
PHLN-12-3.0	3/4	75	46.0	1-1/16	
PHLN-12-4.0		100			
PHLN-16-3.0	1	75	22.0	1-3/8	
PHLN-16-4.0		100			

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

Reducing Hex Nipple

PHRN

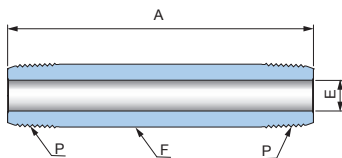


Connects Female Pipe to Female Pipe

Part No.	Pipe Size		Dimensions (mm)		
	P	P1	A	E	F
PHRN-0402	1/4	1/8	31	4.8	9/16
PHRN-0604	3/8	1/4	36	7.0	11/16
PHRN-0804	1/2	1/4	42	7.0	7/8
PHRN-0806	1/2	3/8	42	10.0	7/8
PHRN-1206	3/4	3/8	44	10.0	1-1/16
PHRN-1208	3/4	1/2	49	12.0	1-1/16
PHRN-1608	1	1/2	54	16.0	1-3/8
PHRN-1612	1	3/4	54	16.0	1-3/8

Long Nipple

PLN



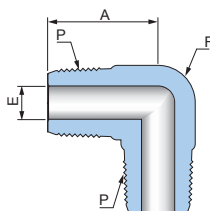
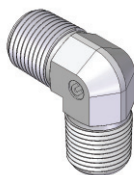
Connects Female Pipe to Female Pipe

Part No.	Pipe Size	Dimensions (mm)		
	P	A	E	F
PLN-02-1.5	1/8	40	5.7	ø 10.5
PLN-02-2.0		50		
PLN-02-2.5		65		
PLN-02-3.0		75		
PLN-02-4.0		100		
PLN-04-1.5	1/4	40	7.8	ø 13.8
PLN-04-2.0		50		
PLN-04-2.5		65		
PLN-04-3.0		75		
PLN-04-4.0		100		
PLN-04-6.0		150		
PLN-06-2.0	3/8	50	10.9	ø 17.3
PLN-06-3.0		75		
PLN-06-4.0		100		
PLN-08-2.0	1/2	50	14.3	ø 21.7
PLN-08-3.0		75		
PLN-08-4.0		100		
PLN-08-6.0		150		
PLN-12-3.0	3/4	75	19.4	ø 27.2
PLN-12-4.0		100		
PLN-16-3.0	1	75	25.0	ø 34.0
PLN-16-4.0		100		

PLN is machined from Seamless Pipe, ASTM A312 TP316. The standard pipe schedule is 80, and schedule 160 is also available upon request.

Male Elbow

PME

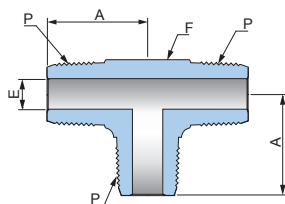


Connects Female Pipe to Female Pipe

Part No.	Pipe Size	Dimensions (mm)		
	P	A	E	F
PME-02	1/8	18.0	4.8	1/2
PME-04	1/4	24.6	7.0	9/16
PME-06	3/8	28.7	10.0	11/16
PME-08	1/2	33.0	12.0	13/16

Male Tee

PMT

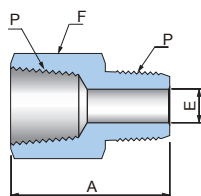
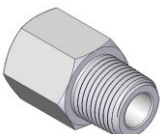


Connects Female Pipe to Female Pipe

Part No.	Pipe Size	Dimensions (mm)		
	P	A	E	F
PMT-02	1/8	18.0	4.8	1/2
PMT-04	1/4	23.8	7.0	9/16
PMT-06	3/8	26.0	10.0	11/16
PMT-08	1/2	37.0	12.0	7/8

Adapter

PA

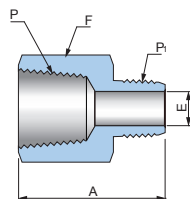
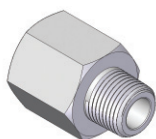


Connects Male Pipe to Female Pipe

Part No.	Pipe Size	Dimensions (mm)		
	P	A	E	F
PA-02	1/8	28	4.8	9/16
PA-04	1/4	33	7.0	3/4
PA-06	3/8	36	10.0	7/8
PA-08	1/2	45	12.0	1-1/16
PA-12	3/4	50	16.0	1-1/4
PA-16	1	58	22.0	1-5/8

Reducing Adapter

PRA



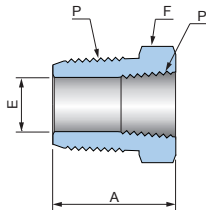
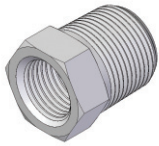
Connects Male Pipe to Female Pipe

Part No.	Pipe Size		Dimensions (mm)		
	P	P ₁	A	E	F
PRA-0402	1/4	1/8	30	4.8	3/4
PRA-0604	3/8	1/4	35	7.0	7/8
PRA-0804	1/2	1/4	39	6.4	1-1/16
PRA-0806	1/2	3/8	41	10.0	1-1/16
PRA-1206	3/4	3/8	44	10.0	1-1/4
PRA-1208	3/4	1/2	48	12.0	1-1/4
PRA-1608	1	1/2	55	12.0	1-5/8
PRA-1612	1	3/4	55	16.0	1-5/8

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

Reducing Bushing

PRB

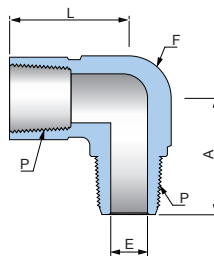


Connects Female Pipe to Male Pipe

Part No.	Pipe Size		Dimensions (mm)		
	P	P1	A	E	F
PRB-0402	1/4	1/8	22	7.0	9/16
PRB-0604	3/8	1/4	23	11.0	11/16
PRB-0804	1/2	1/4	28	11.0	7/8
PRB-0806	1/2	3/8	28	14.8	7/8
PRB-1204	3/4	1/4	31	11.4	1-1/16
PRB-1206	3/4	3/8	31	14.8	1-1/16
PRB-1208	3/4	1/2	31	18.3	1-1/16
PRB-1608	1	1/2	35	17.3	1-3/8
PRB-1612	1	3/4	35	22.0	1-3/8

Street Elbow

PSE

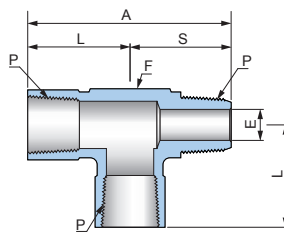


Connects Male Pipe to Female Pipe

Part No.	Pipe Size	Dimensions (mm)			
	P	A	L	E	F
PSE-02	1/8	21.0	22.3	4.8	5/8
PSE-04	1/4	28.7	28.7	7.0	11/16
PSE-06	3/8	30.2	27.0	10.0	15/16
PSE-08	1/2	38.0	39.0	12.0	1

Street Tee

PST

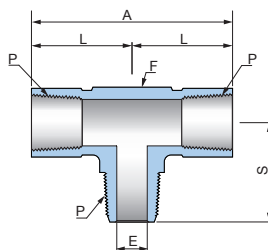


Connects Male Pipe to Female Pipe

Part No.	Pipe Size	Dimensions (mm)				
	P	A	L	S	E	F
PST-02	1/8	43.8	23.0	20.8	4.8	5/8
PST-04	1/4	52.4	26.2	26.2	7.0	13/16
PST-06	3/8	57.9	27.0	30.9	10.0	1-1/16
PST-08	1/2	78.7	39.6	39.1	12.0	1

Branch Tee

PBT



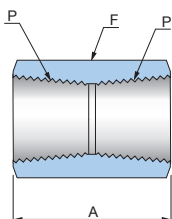
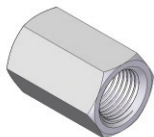
Connects Male Pipe to Female Pipe

Part No.	Pipe Size	Dimensions (mm)				
	P	A	L	S	E	F
PBT-02	1/8	44.6	22.3	21.0	4.8	5/8
PBT-04	1/4	52.4	26.2	26.2	7.0	13/16
PBT-06	3/8	54.0	27.0	30.2	10.0	1
PBT-08	1/2	79.2	39.6	39.1	12.0	1

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

Coupling

PC

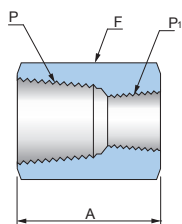
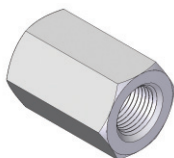


Connects Male Pipe to Male Pipe

Part No.	Pipe Size	Dimensions (mm)	
	P	A	F
PC-02	1/8	21	9/16
PC-04	1/4	30	3/4
PC-06	3/8	30	7/8
PC-08	1/2	40	1-1/16
PC-12	3/4	42	1-1/4
PC-16	1	51	1-5/8

Reducing Coupling

PRC

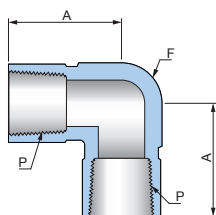


Connects Male Pipe to Male Pipe

Part No.	Pipe Size		Dimensions (mm)	
	P	P1	A	F
PRC-0402	1/4	1/8	30	3/4
PRC-0604	3/8	1/4	31	7/8
PRC-0804	1/2	1/4	40	1-1/16
PRC-0806	1/2	3/8	40	1-1/16
PRC-1206	3/4	3/8	42	1-1/4
PRC-1208	3/4	1/2	42	1-1/4
PRC-1608	1	1/2	51	1-5/8
PRC-1612	1	3/4	51	1-5/8

Female Elbow

PFE

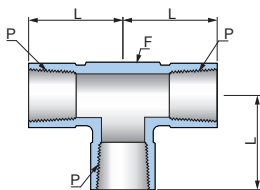


Connects Male Pipe to Male Pipe

Part No.	Pipe Size	Dimensions (mm)	
	P	A	F
PFE-02	1/8	23.0	5/8
PFE-04	1/4	28.7	11/16
PFE-06	3/8	27.0	15/16
PFE-08	1/2	39.0	1

Female Tee

PFT



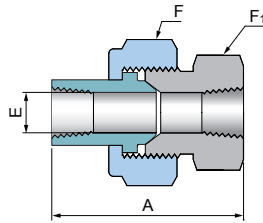
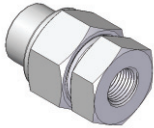
Connects Male Pipe to Male Pipe

Part No.	Pipe Size	Dimensions (mm)	
	P	L	F
PFT-02	1/8	23.0	5/8
PFT-04	1/4	26.2	15/16
PFT-06	3/8	27.0	15/16
PFT-08	1/2	39.6	1

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

Ball Joint
Union

PBJ

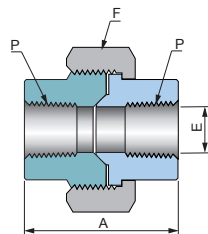
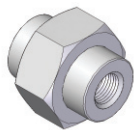


Connects Male Pipe to Male Pipe

Part No.	Pipe Size	Dimensions (mm)			
	P	A	E	F	F1
PBJ-04	1/4	59.4	9.1	1-3/8	1-3/16
PBJ-06	3/8	63.5	13.2	1-1/2	1-5/16
PBJ-08	1/2	68.3	15.7	1-3/4	1-5/8
PBJ-12	3/4	79.2	22.4	2-1/8	1-7/8
PBJ-16	1	90.4	26.2	2-1/2	2-3/8

Pipe
Union

PU

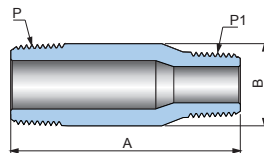


Connects Male Pipe to Male Pipe

Part No.	Pipe Size	Dimensions (mm)		
	P	A	E	F
Pressure Rating, 3000psig				
PU-08	1/2	49.2	17.0	46
PU-12	1/4	57.2	22.0	54
PU-16	3/8	62.2	28.0	63
Pressure Rating, 6000psig				
PU-08-6K	1/2	58.3	17.0	54
PU-12-6K	3/4	64.3	22.0	63
PU-16-6K	1	72.4	28.0	82

Swage Nipple

PSN

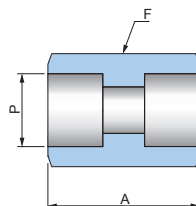


Connects Male Pipe to Male Pipe

Part No.	Pipe Size		Dimensions (mm)	
	P	P1	A	B
Schedule 80				
PSN-1208	3/4	1/2	76.0	27.2
Schedule 160				
PSN-1208-S16	3/4	1/2	76.0	27.2

SW Coupling

PCWS



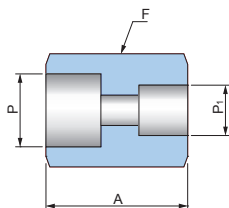
Connects Both SW Systems

Part No.	Pipe Size		Dimensions (mm)	
	Nom Size	P-SW	A	F
PCWS-08	1/2	22.2	29.5	ø 32
PCWS-12	3/4	27.7	35.5	ø 38
PCWS-16	1	34.5	38.7	ø 46

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

Reducing SW Coupling

PWRC

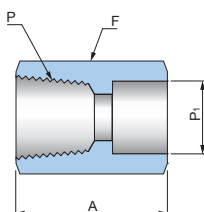


Connects Both SW Systems

Part No.	Pipe Size			Dimensions (mm)	
	Nom Size	P-SW	P1-SW	A	F
PCRWS-1208	3/4 * 1/2	27.7	22.2	32.5	ø 38
PCRWS-1608	1 * 1/2	34.5	22.2	35.7	ø 46
PCRWS-1612	1 * 3/4	34.5	27.7	38.7	ø 46

Special Coupling

PCS

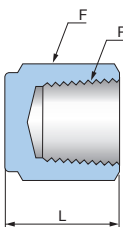
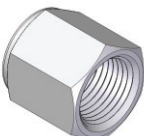


Connects Male Pipe to SW System

Part No.	Pipe Size			Dimensions (mm)	
	Nom Size	P	P1-SW	A	F
PCS-0808	1/2	1/2	22.2	40	ø 32
PCS-1212	3/4	3/4	27.7	43	ø 38
PCS-1616	1	1	34.5	40	ø 48

Pipe Cap

PCP

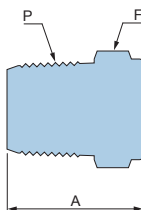
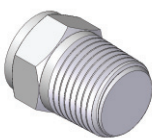


Connects Male Pipe

Part No.	Pipe Size	Dimensions (mm)	
	P	L	F
PCP-02	1/8	19	9/16
PCP-04	1/4	23	3/4
PCP-06	3/8	23	7/8
PCP-08	1/2	34	1-1/16
PCP-12	3/4	34	1-1/4
PCP-16	1	41	1-5/8

Pipe Plug

PPG



Connects Female Pipe

Part No.	Pipe Size	Dimensions (mm)	
	P	A	F
PPG-02	1/8	19	7/16
PPG-04	1/4	24	9/16
PPG-06	3/8	25	11/16
PPG-08	1/2	31	7/8
PPG-12	3/4	31	1-1/16
PPG-16	1	38	1-3/8

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

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