international polymer solutions

Proud manufacturer of high purity flow control products

BECO manufacturing

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www.ipolymer.com | info@ipolymer.com

Fittings

IPS

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High Purity Tubing

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IPS offers three types of **High Purity Tubing**. All three are classified as High Purity solutions for ultra-clean applications and are excellent with corrosive media.

These three tubing choices are UL 94 VO Flammability Rated. They resist combustion and do not promote flame spread. They are also approved for use in food contact applications in compliance with FDA regulation: 21 CFR 177.1550.

We process tubing orders in discrete increments of 5-ft lengths.

Polytetrafluoroethylene - PTFE Tubing

- 100% pure true virgin PTFE
- Flexible with extremely smooth ID and OD
- Bendable to form tight controlled flow paths
- Good for applications requiring lubricity
- Excellent High Temperature Performance
- Excellent Chemical Resistance & Biocompatibility
- Excellent Dielectric Insulation Properties
- Low Permeability
- Compatible with all conventional fittings

Fluorinated Ethylene-Propylene - FEP Tubing

- Flexible but will kink if bent too tightly
- Can be welded and sealed by melting
- Very tough material – can be rigorously cleaned
- For visual clarity FEP is an alternate to PTFE

Perfluoroalkoxy - PFA Tubing

- Thermoplastic which is virtually non-porous
- Tolerates tight bends (shape with hot air heat gun)
- Translucent with a Bluish Tint
- Accommodates extreme temperature ranges
- Similar to PTFE and more formable into shapes
- Can be welded and sealed by melting

Temperature Ratings		
PTFE	-200°C/240°C	(-328°F/464°F)
FEP	-70°C/180°C	(-94°F/356°F)
PFA	-180°C/240°C	(-292°F/464°F)

PTFE TUBING

Part Number	OD Size	OD Tolerance	ID Size	ID Tolerance	Wall Thickness	Wall Tolerance
PTFE-125-030	1/8"	±.004	1/16"	±.004	.030"	±.005
PTFE-250-030	1/4"	±.004	3/16"	±.004	.030"	±.008
PTFE-250-062	1/4"	±.004	1/8"	±.004	.062"	±.008
PTFE-375-030	3/8"	±.005	5/16"	±.005	.030"	±.008
PTFE-375-062	3/8"	±.005	1/4"	±.005	.062"	±.008
PTFE-500-030	1/2"	±.006	7/16"	±.006	.030"	±.008
PTFE-500-062	1/2"	±.006	3/8"	±.006	.062"	±.008
PTFE-625-062	5/8"	±.007	1/2"	±.007	.062"	±.008
PTFE-750-062	3/4"	±.008	5/8"	±.008	.062"	±.008
PTFE-875-062	7/8"	±.009	3/4"	±.009	.062"	±.008
PTFE-1000-062	1"	±.010	7/8"	±.010	.062"	±.008

PFA TUBING

Part Number	OD Size	OD Tolerance	ID Size	ID Tolerance	Wall Thickness	Wall Tolerance
PFA-125-030	1/8"	±.004"	1/16"	±.004"	.030"	±.005"
PFA-188-030	3/16"	±.005"	1/8"	±.005"	.030"	±.005"
PFA-250-030	1/4"	±.005"	3/16"	±.005"	.030"	±.005"
PFA-250-062	1/4"	±.005"	1/8"	±.005"	.062"	±.005"
PFA-313-030	5/16"	±.006"	1/4"	±.006"	.030"	±.005"
PFA-375-030	3/8"	±.007"	5/16"	±.007"	.030"	±.005"
PFA-375-062	3/8"	±.007"	1/4"	±.007"	.062"	±.006"
PFA-500-030	1/2"	±.009"	7/16"	±.009"	.030"	±.006"
PFA-500-062	1/2"	±.009"	3/8"	±.009"	.062"	±.006"
PFA-625-030	5/8"	±.010"	9/16"	±.010"	.030"	±.006"
PFA-625-062	5/8"	±.010"	1/2"	±.010"	.062"	±.006"

FEP TUBING

Part Number	OD Size	OD Tolerance	ID Size	ID Tolerance	Wall Thickness	Wall Tolerance
FEP-250-030	1/4"	±.005"	3/16"	±.005"	.030"	±.007"
FEP-250-047	1/4"	±.005"	5/32"	±.005"	.047"	±.007"
FEP-250-062	1/4"	±.005"	1/8"	±.005"	.062"	±.007"
FEP-313-062	5/16"	±.005"	3/16"	±.005"	.062"	±.007"
FEP-375-030	3/8"	±.005"	5/16"	±.005"	.030"	±.007"
FEP-375-062	3/8"	±.005"	1/4"	±.005"	.062"	±.007"
FEP-500-030	1/2"	±.005"	7/16"	±.005"	.030"	±.008"
FEP-500-062	1/2"	±.005"	3/8"	±.005"	.062"	±.008"
FEP-1000-062	1.00"	±.010"	7/8"	±.010"	.062"	±.007"
FEP-1125-062	1-1/8"	±.010"	1"	±.010"	.062"	±.008"

Tubing Tensile Strength (psi)			Derate Factor
PTFE	1800 @ 20°C	300 @ 240°C	6.82 psi/°C
FEP	2000 @ 20°C	200 @ 180°C	11.25 psi/°C
PFA	4000 @ 20°C	900 @ 240°C	14.09 psi/°C

Pressure Ratings

To estimate the allowable pressure rating please use the following formula: **OP = W*T/I**

Where:
OP = Operating Pressure (psi)
W = Wall Thickness (inch)
T = Tensile Strength (psi)
I = Inside Diameter (inch)

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications.
3. With industry common practices the original factory one-year warranty applies.
4. For further details please contact your local Distributor or our factory directly.

international polymer solutions inc. • *manufacturer of high purity flow control products*
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High Purity Fittings & Connectors

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FITTING MATERIALS AVAILABLE

- PTFE
- PFA
- PVDF

THREE COMPRESSION NUT MATERIAL TYPES

- HA - Injection Molded PVDF Nut** (Standard Configuration)
- TA - PTFE Nut with Anodized Aluminum Support Band
- TS - PTFE Nut with Stainless Support Band

TUBE FITTINGS

Barbed Fitting
Bugle “Bug” Straight Connector
Bugle “Bug” Tee
Bulkhead Female Connector
Bulkhead Male Connector
Bulkhead Union
Female Branch Tee
Female Connector
Female Elbow
Female Run Tee
Male Branch Tee
Male Connector
Male Elbow
Male Run Tee
Reducing Union
Tube Cap
Tube Insert
Union
Union Cross
Union Elbow
Union Elbow Reducer
Union Tee

FLARED FITTINGS

Male Connector
Female Connector
Union Elbow
Union Elbow Reducer
Union Tee
Male Run Tee
Male Branch Tee
Bulkhead Union
Bulkhead Male Connector
Bulkhead Union Reducer
Union
Union Reducer
Male Elbow

PIPE FITTINGS

Bushing
Coupling
Elbow
Female Reducer
Pipe Nipple
Pipe Union
Plug
Tee

SPARES

Ferrule**
Nut
Panel Nut

MINI FITTINGS

Nut
Ferrule
Insertion Tool

**All HA style fittings are standard equipped with a PTFE ferrule & Kynar Gripper.

SPECIFICATIONS: Tube Fitting Assembly

Pressure Ratings:

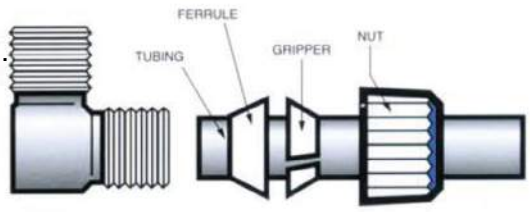
- Performance at ambient room conditions: 120 psi for 1/16” fittings linear decreasing to 80 psi for 3/4” fittings and 60 psi for fittings larger than 3/4”.
- Performance at elevated temperatures up to 85ºC/185ºF: 90 psi for 1/16” fittings linear decreasing to 60 psi for 3/4” fittings and 40 psi for fittings larger than 3/4”.
- Contact factory for pressure temperature ratings above 85ºC / 185ºF.

Materials of Construction

- Fittings: Machined from virgin Polytetrafluoroethylene (PTFE).
- Ferrules: Ferrules are machined from virgin Polytetrafluoroethylene (PTFE).
- Grippers: The Gripper in the two piece Ferrule-Gripper assemblies are manufactured from PVDF.
- Nuts: The “HA” style nuts are molded PVDF. The “TA” style nuts are machined from PTFE and include an external anodized aluminum band. “TS” style nuts are also machined from PTFE but include an external stainless steel band.

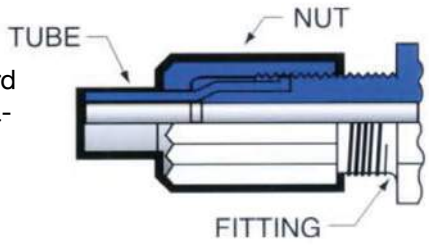
Pressure performance ratings are based on laboratory testing, industry standard material characteristics and historical data. A combination of extreme temperature and pressure may affect these products. It is recommended that the user satisfy themselves as to the suitability of these products for their application.

FERRULE & GRIPPER STYLE



1. Cut tubing to desired length.
2. Loosen the nut, insert tube.
3. Tighten the nut finger tight.
4. The fitting is ready to use.

FLARED END STYLE



ORDERING FORMAT

MC - F - 8 6 - HA

Indicates Nut Style
(For Compression style only)
HA = Injection Molded PVDF (HA is standard / default)
TA = Teflon Nut with Outer Aluminum Anodized Band
TS = Teflon Nut with Outer Stainless Steel Band

Indicates Connection Size
Tube O.D., FNPT, MNPT, or Flared I.D
Example: 6 = 6/16” (3/8”), O.D
6 = 6mm Tube O.D
6 = 3/8 Flared I.D

Indicates Connection Size
Tube O.D., FNPT, MNPT, or Flared I.D
Example: 6 = 6/16” (3/8”), O.D
6 = 6mm Tube O.D
6 = 3/8 Flared I.D

Tube O.D or Flare O.D is Listed Before NPT Size

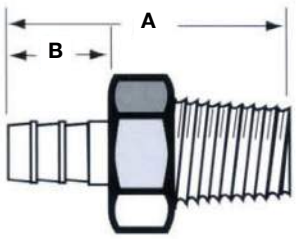
Indicates Fitting Category
F = Fractional Size Tube Fitting
M = Metric Size Tube Fitting
P = Pipe Fitting
FF = Fractional Flared

Indicates Type of Fitting
Example: MC-F-86-HA = Male Connector Fractional Size to connect 1/2” O.D Tubing to 3/8” MNPT, PVDF Nut

Note:
Exceptions to above ordering procedure
Barbed Fittings
Bugle Fittings
Mini Fittings

Barbed Fitting

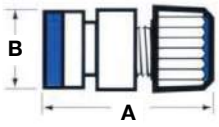
101660



Part #	Hose I.D.	Male Pipe	A Dim.	B Dim.
BF-F-12	1/16”	1/8” NPT	.99	.38
BF-F-22	1/8”	1/8” NPT	.99	.38
BF-F-32	3/16”	1/8” NPT	1.13	.50
BF-F-34	3/16”	1/4” NPT	1.44	.50
BF-F-36	3/16”	3/8” NPT	1.44	.50
BF-F-54	5/16”	1/4” NPT	1.56	.63
BF-F-56	5/16”	3/8” NPT	1.56	.63
BF-F-58	5/16”	1/2” NPT	1.88	.63
BF-F-64	3/8”	1/4” NPT	1.13	.50
BF-F-66	3/8”	3/8” NPT	1.44	.50
BF-F-68	3/8”	1/2” NPT	1.75	.50
BF-F-74	7/16”	3/8” NPT	1.69	.75
BF-F-76	7/16”	3/8” NPT	1.69	.75
BF-F-78	7/16”	1/2” NPT	2.00	.75
BF-F-712	7/16”	3/4” NPT	2.00	.75
BF-F-1112	11/16”	3/4” NPT	2.13	.88
BF-F-1116	11/16”	1” NPT	2.32	.88
BF-F-1616	1”	1” NPT	2.44	1.00

Bugle “Bug” Straight Connector

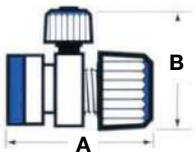
103073



Part #	Glass Joint	Tube O.D.	A Dim.	B Dim.
BUG-1809-4T-XX	1809	1/4”	2.00	1.00
BUG-2815-4T-XX	2815	1/4”	2.15	1.30
BUG-3520-12M6T-XX	3520	3/8”	2.75	1.75
MBUG-1809-4T-XX	1809	1/4”	1.75	1.00
MBUG-2815-4T-XX	2815	1/4”	1.90	1.30
MBUG-3520-6T-XX	3520	3/8”	2.50	1.75

Bugle “Bug” Tee

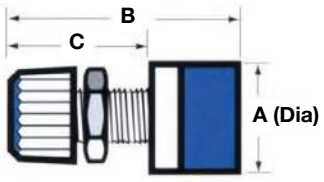
100867



Part #	Glass Joint (Bug End)	Tube O.D. (Oposite Bug)	Tube O.D.	A Dim.	B Dim.
BUG-2815-9M4T-XX	2815	9mm	1/4”	2.36	2.04
BUG-2815-12M4T-XX	2815	12mm	1/4”	2.36	2.04
BUG-3520-9M6T-XX	3520	9mm	3/8”	2.36	2.04
BUG-3520-12M6T-XX	3520	12mm	3/8”	2.36	2.04

Bulkhead Female Connector

101772

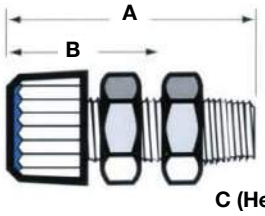


Part #	Tube O.D.	FNPT	Panel Hole (Drill Size)	A Dim.	B Dim.	C Dim.
BFC-F-22-XX	1/8”	1/8” NPT	21/64	.63	1.38	.75
BFC-F-32-XX	3/16”	1/8” NPT	25/64	.63	1.33	.75
BFC-F-42-XX	1/4”	1/8” NPT	29/64	.63	1.70	.94
BFC-F-44-XX	1/4”	1/4” NPT	29/64	.75	1.88	.94
BFC-F-54-XX	5/16”	1/4” NPT	37/64	.75	1.88	.94
BFC-F-56-XX	5/16”	3/8” NPT	37/64	.88	1.88	.94
BFC-F-66-XX	3/8”	3/8” NPT	45/64	.88	1.94	1.00
BFC-F-88-XX	1/2”	1/2” NPT	57/64	1.13	2.33	1.13
BFC-F-1616-XX	1”	1” NPT	11/64	1.50	2.99	1.50
BFC-M-42-XX	4mm	1/8” NPT	25/64	.63	1.38	.75
BFC-M-62-XX	6mm	1/8” NPT	29/64	.63	1.70	.94
BFC-M-64-XX	6mm	1/4” NPT	29/64	.75	1.88	.94
BFC-M-84-XX	8mm	1/4” NPT	37/64	.75	1.88	.94
BFC-M-104-XX	10mm	1/4” NPT	45/64	.75	1.94	1.00
BFC-M-106-XX	10mm	3/8” NPT	45/64	.88	1.94	1.00

IPS TUBE FITTINGS

Bulkhead Male Connector

101788

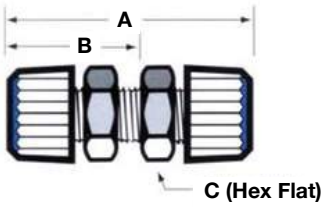


NOTE: For 1/4" max. panel thickness

Part #	Hose I.D.	Male Pipe	Panel Hole (Drill Size)	A Dim.	B Dim.	C Dim.
BMC-F-22-XX	1/8"	1/8 NPT	21/64	1.38	.75	.44
BMC-F-32-XX	3/16"	1/8 NPT	25/64	1.38	.75	.44
BMC-F-42-XX	1/4"	1/8 NPT	29/64	1.57	.94	.56
BMC-F-44-XX	1/4"	1/4 NPT	29/64	1.88	.94	.56
BMC-F-54-XX	5/16"	1/4 NPT	37/64	1.88	.94	.75
BMC-F-56-XX	5/16"	3/8 NPT	37/64	1.88	.94	.75
BMC-F-64-XX	3/8"	1/4 NPT	45/64	1.94	1.00	.75
BMC-F-66-XX	3/8"	3/8 NPT	45/64	1.94	1.00	.75
BMC-F-88-XX	1/2"	1/2 NPT	57/64	2.3	.94	.94
BMC-F-1616-XX	1"	1" NPT	11/64	2.94	1.50	1.50
BMC-M-42-XX	4mm	1/8 NPT	25/64	1.38	.75	.44
BMC-M-62-XX	6mm	1/8 NPT	29/64	1.57	.94	.56
BMC-M-64-XX	6mm	1/4 NPT	29/64	1.88	.94	.56
BMC-M-84-XX	8mm	1/4 NPT	37/64	1.88	.9	.75
BMC-M-104-XX	10mm	1/4 NPT	45/64	1.94	1.00	.75
BMC-M-106-XX	10mm	3/8 NPT	45/64	1.51	.88	.75

Bulkhead Union

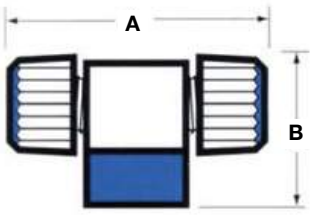
101004



Part #	Tube O.D.	Panel Hole (Drill Size)	A Dim.	B Dim.	C Dim.
BU-F-2-XX	1/8"	21/64	1.55	.88	.44
BU-F-3-XX	3/16"	25/64	1.51	.88	.44
BU-F-4-XX	1/4"	29/64	1.81	.94	.56
BU-F-5-XX	5/16"	37/64	1.81	.94	.75
BU-F-6-XX	3/8"	45/64	1.81	.94	.75
BU-F-8-XX	1/2"	57/64	2.25	1.19	.94
BU-F-10-XX	5/8"	1-1/64	2.33	1.23	1.13
BU-F-12-XX	3/4"	1-9/64	2.33	1.25	1.13
BU-F-16-XX	1"	1-25/64	2.53	1.33	1.50
BU-F-11-XX	1.1"	1-1/2	2.62	1.44	1.59
BU-M-4-XX	4mm	25/64	1.81	.88	.44
BU-M-6-XX	6mm	29/64	1.81	.94	.56
BU-M-8-XX	8mm	37/64	1.81	.94	.75
BU-M-10-XX	10mm	45/64	1.81	.94	.75
BU-M-12-XX	12mm	57/64	2.25	1.19	.94

Female Branch Tee

101612

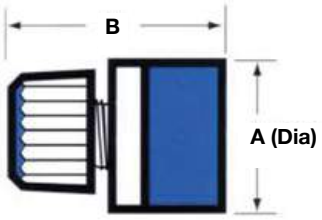


Part #	Tube O.D.	Female Pipe	A Dim.	B Dim.
FBT-F-22-XX	1/8"	1/8 NPT	1.39	1.01
FBT-F-32-XX	3/16"	1/8 NPT	1.39	1.01
FBT-F-42-XX	1/4"	1/8 NPT	1.63	1.01
FBT-F-44-XX	1/4"	1/4 NPT	1.75	1.31
FBT-F-64-XX	3/8"	1/4 NPT	1.75	1.31
FBT-F-66-XX	3/8"	3/8 NPT	1.88	1.44
FBT-F-68-XX	3/8"	1/2 NPT	2.13	1.88
FBT-F-86-XX	1/2"	3/8 NPT	2.12	1.56
FBT-F-88-XX	1/2"	1/2 NPT	2.25	1.88
FBT-F-108-XX	5/8"	1/2 NPT	2.33	1.88
FBT-F-1212-XX	3/4"	3/4 NPT	2.62	2.13
FBT-F-1616-XX	1"	1" NPT	2.90	2.44
FBT-M-42-XX	4mm	1/8 NPT	1.39	1.01
FBT-M-62-XX	6mm	1/8 NPT	1.63	1.01
FBT-M-64-XX	6mm	1/4 NPT	1.75	1.31
FBT-M-84-XX	8mm	1/4 NPT	1.75	1.31
FBT-M-104-XX	10mm	1/4 NPT	1.75	1.31
FBT-M-106-XX	10mm	3/8 NPT	1.88	1.44

Female Connector

101619

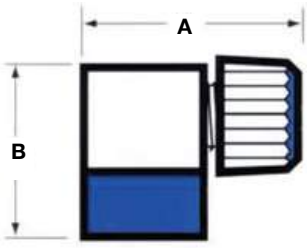
Part #	Tube O.D.	Female Pipe	A Dim.	B Dim.
FC-F-22-XX	1/8”	1/8” NPT	.63	1.01
FC-F-24-XX	1/8”	1/4” NPT	.75	1.19
FC-F-32-XX	3/16”	1/8” NPT	.63	1.01
FC-F-42-XX	1/4”	1/8” NPT	.63	1.26
FC-F-44-XX	1/4”	1/4” NPT	.75	1.44
FC-F-46-XX	1/4”	3/8” NPT	.88	1.44
FC-F-66-XX	3/8”	3/8” NPT	.88	1.44
FC-F-84-XX	1/2”	1/4” NPT	.75	1.44
FC-F-86-XX	1/2”	3/8” NPT	.88	1.62
FC-F-88-XX	1/2”	1/2” NPT	1.13	1.81
FC-F-124-XX	3/4”	1/4” NPT	.75	1.68
FC-F-128-XX	3/4”	1/2” NPT	1.13	1.87
FC-F-1212-XX	3/4”	3/4” NPT	1.38	1.68
FC-F-1616-XX	1”	1” NPT	1.50	2.14
FC-M-42-XX	4mm	1/8” NPT	.63	1.01
FC-M-62-XX	6mm	1/8” NPT	.63	1.26
FC-M-64-XX	6mm	1/4” NPT	.75	1.44
FC-M-84-XX	8mm	1/4” NPT	.75	1.44
FC-M-104-XX	10mm	1/4” NPT	.75	1.44
FC-M-106-XX	10mm	3/8” NPT	.88	1.44
FC-M-128-XX	12mm	1/2” NPT	1.13	1.81



Female Elbow

101611

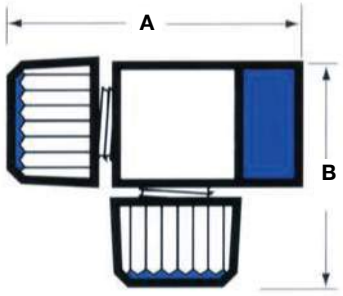
Part #	Tube O.D.	Female Pipe	A Dim.	B Dim.
FE-F-22-XX	1/8”	1/8” NPT	1.01	1.01
FE-F-32-XX	3/16”	1/8” NPT	1.01	1.01
FE-F-42-XX	1/4”	1/8” NPT	1.13	1.01
FE-F-44-XX	1/4”	1/4” NPT	1.25	1.31
FE-F-64-XX	3/8”	1/4” NPT	1.25	1.31
FE-F-66-XX	3/8”	3/8” NPT	1.33	1.44
FE-F-68-XX	3/8”	1/2” NPT	1.63	1.88
FE-F-86-XX	1/2”	3/8” NPT	1.56	1.56
FE-F-88-XX	1/2”	1/2” NPT	1.69	1.88
FE-F-108-XX	5/8”	1/2” NPT	1.73	1.88
FE-F-128-XX	3/4”	1/2” NPT	1.87	2.00
FE-F-1212-XX	3/4”	3/4” NPT	2.00	2.13
FE-F-1616-XX	1”	1” NPT	2.20	2.44
FE-M-42-XX	4mm	1/8” NPT	1.01	1.01
FE-M-62-XX	6mm	1/8” NPT	1.13	1.01
FE-M-64-XX	6mm	1/4” NPT	1.25	1.31
FE-M-68-XX	6mm	1/2” NPT	1.25	1.31
FE-M-104-XX	10mm	1/4” NPT	1.25	1.31
FE-M-106-XX	10mm	3/8” NPT	1.33	1.44



Female Run Tee

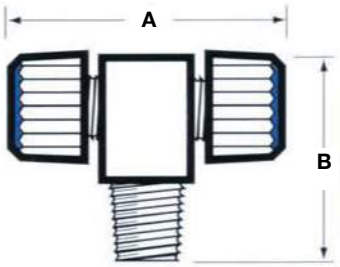
101003

Part #	Tube O.D.	Female Pipe	A Dim.	B Dim.
FRT-F-22-XX	1/8”	1/8” NPT	1.38	1.00
FRT-F-32-XX	3/16”	1/8” NPT	1.38	1.00
FRT-F-42-XX	1/4”	1/8” NPT	1.50	1.13
FRT-F-44-XX	1/4”	1/4” NPT	1.81	1.25
FRT-F-52-XX	5/16”	1/8” NPT	1.50	1.13
FRT-F-64-XX	3/8”	1/4” NPT	1.81	1.25
FRT-F-86-XX	1/2”	3/8” NPT	2.12	1.56
FRT-F-88-XX	1/2”	1/2” NPT	2.44	1.69
FRT-F-108-XX	5/8”	1/2” NPT	2.48	1.73
FRT-F-1212-XX	3/4”	3/4” NPT	2.75	2.00
FRT-F-1616-XX	1”	1” NPT	3.14	2.20
FRT-M-42-XX	4mm	1/8” NPT	1.38	1.00
FRT-M-62-XX	6mm	1/8” NPT	1.50	1.13
FRT-M-64-XX	6mm	1/4” NPT	1.81	1.25
FRT-M-84-XX	8mm	1/4” NPT	1.81	1.25
FRT-M-104-XX	10mm	1/4” NPT	1.81	1.25
FRT-M-106-XX	10mm	3/8” NPT	1.94	1.38



Male Branch Tee

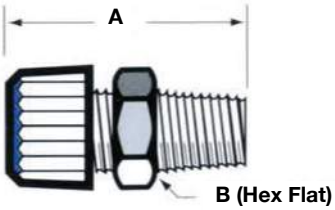
101613



Part #	Tube O.D.	Female Pipe	A Dim.	B Dim.
MBT-F-22-XX	1/8”	1/8” NPT	1.20	.82
MBT-F-24-XX	1/8”	1/4” NPT	1.32	1.12
MBT-F-32-XX	3/16”	1/8” NPT	1.20	.82
MBT-F-42-XX	1/4”	1/8” NPT	1.56	.94
MBT-F-44-XX	1/4”	1/4” NPT	1.56	1.12
MBT-F-46-XX	1/4”	3/8” NPT	1.75	1.31
MBT-F-64-XX	3/8”	1/4” NPT	1.75	1.31
MBT-F-66-XX	3/8”	3/8” NPT	1.75	1.31
MBT-F-68-XX	3/8”	1/2” NPT	2.00	1.75
MBT-F-86-XX	1/2”	3/8” NPT	2.12	1.56
MBT-F-88-XX	1/2”	1/2” NPT	2.12	1.75
MBT-F-108-XX	5/8”	1/2” NPT	2.33	1.88
MBT-F-1212-XX	3/4”	3/4” NPT	2.49	2.00
MBT-F-1616-XX	1”	1” NPT	2.90	2.44
MBT-M-42-XX	4mm	1/8” NPT	1.20	.82
MBT-M-62-XX	6mm	1/8” NPT	1.56	.94
MBT-M-64-XX	6mm	1/4” NPT	1.56	1.12
MBT-M-84-XX	8mm	1/4” NPT	1.75	1.31
MBT-M-104-XX	10mm	1/4” NPT	1.75	1.31
MBT-M-106-XX	10mm	3/8” NPT	1.75	1.31

Male Connector

101008

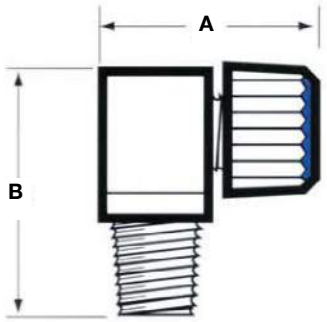


Part #	Tube O.D.	Male Pipe	A Dim.	B Dim.
MC-F-12-XX	1/16”	1/8” NPT	1.01	.44
MC-F-21-XX	1/8”	1/16” NPT	1.01	.44
MC-F-22-XX	1/8”	1/8” NPT	1.01	.44
MC-F-24-XX	1/8”	1/4” NPT	1.32	.56
MC-F-32-XX	3/16”	1/8” NPT	1.01	.44
MC-F-41-XX	1/4”	1/16” NPT	1.25	.56
MC-F-42-XX	1/4”	1/8” NPT	1.25	.56
MC-F-44-XX	1/4”	1/4” NPT	1.44	.56
MC-F-46-XX	1/4”	3/8” NPT	1.44	.75
MC-F-48-XX	1/4”	1/2” NPT	1.75	.94
MC-F-52-XX	5/16”	1/8” NPT	1.25	.75
MC-F-54-XX	5/16”	1/4” NPT	1.44	.75
MC-F-56-XX	5/16”	3/8” NPT	1.44	.75
MC-F-64-XX	3/8”	1/4” NPT	1.44	.75
MC-F-66-XX	3/8”	3/8” NPT	1.44	.75
MC-F-68-XX	3/8”	1/2” NPT	1.75	.94
MC-F-84-XX	1/2”	1/4” NPT	1.44	.94
MC-F-86-XX	1/2”	3/8” NPT	1.44	.94
MC-F-88-XX	1/2”	1/2” NPT	1.81	.94
MC-F-108-XX	5/8”	1/2” NPT	1.85	1.13
MC-F-1212-XX	3/4”	3/4” NPT	1.87	1.25
MC-F-1612-XX	1”	3/4” NPT	1.95	1.50
MC-F-1616-XX	1”	1” NPT	2.14	1.50
MC-M-42-XX	4mm	1/8” NPT	1.01	.44
MC-M-62-XX	6mm	1/8” NPT	1.25	.56
MC-M-64-XX	6mm	1/4” NPT	1.44	.56
MC-M-84-XX	8mm	1/4” NPT	1.44	.75
MC-M-104-XX	10mm	1/4” NPT	1.44	.94
MC-M-106-XX	10mm	3/8” NPT	1.44	.75
MC-M-126-XX	12mm	3/8” NPT	1.85	1.12
MC-M-128-XX	12mm	1/2” NPT	1.65	1.25

The Bore-Through (“-BT”) option is available for Male Connectors #101008 and Unions #101616. This option allows the associated tube to pass completely through the fitting.

Male Elbow

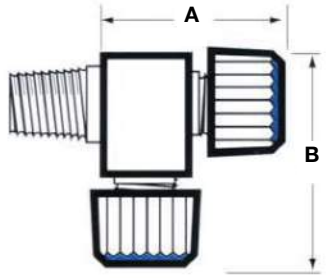
101006



Part #	Tube O.D.	Male Pipe	A Dim.	B Dim.
ME-F-22-XX	1/8”	1/8” NPT	.44	.82
ME-F-24-XX	1/8”	1/4” NPT	.44	.82
ME-F-32-XX	3/16”	1/8” NPT	.44	.82
ME-F-41-XX	1/4”	1/16” NPT	.56	1.06
ME-F-42-XX	1/4”	1/8” NPT	.56	1.06
ME-F-44-XX	1/4”	1/4” NPT	.56	1.06
ME-F-46-XX	1/4”	3/8” NPT	.75	1.25
ME-F-52-XX	5/16”	1/8” NPT	.75	1.25
ME-F-54-XX	5/16”	1/4” NPT	.75	1.25
ME-F-62-XX	3/8”	1/8” NPT	.75	1.25
ME-F-64-XX	3/8”	1/4” NPT	.75	1.25
ME-F-66-XX	3/8”	3/8” NPT	.75	1.25
ME-F-68-XX	3/8”	1/2” NPT	1.00	1.50
ME-F-86-XX	1/2”	3/8” NPT	1.00	1.56
ME-F-88-XX	1/2”	1/2” NPT	1.00	1.56
ME-F-1212-XX	3/4”	3/4” NPT	1.25	1.88
ME-F-168-XX	1”	1/2” NPT	1.50	2.20
ME-F-1616-XX	1”	1” NPT	1.50	2.20
ME-M-42-XX	4mm	1/8” NPT	.44	.82
ME-M-62-XX	6mm	1/8” NPT	.56	1.06
ME-M-64-XX	6mm	1/4” NPT	.56	1.06
ME-M-84-XX	8mm	1/4” NPT	.75	1.25
ME-M-104-XX	10mm	1/4” NPT	.75	1.25
ME-M-106-XX	10mm	3/8” NPT	.75	1.25

Male Run Tee

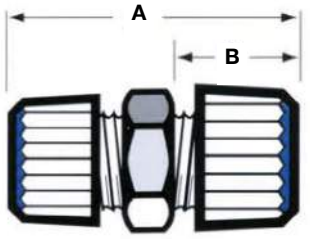
101195



Part #	Tube O.D.	Male Pipe	A Dim.	B Dim.
MRT-F-32-XX	3/16”	1/8” NPT	1.20	.82
MRT-F-41-XX	1/4”	1/16” NPT	1.44	1.06
MRT-F-42-XX	1/4”	1/8” NPT	1.44	1.06
MRT-F-44-XX	1/4”	1/4” NPT	1.56	1.06
MRT-F-52-XX	5/16”	1/8” NPT	1.63	1.25
MRT-F-54-XX	5/16”	1/4” NPT	1.81	1.25
MRT-F-64-XX	3/8”	1/4” NPT	1.81	1.25
MRT-F-66-XX	3/8”	3/8” NPT	1.81	1.25
MRT-F-86-XX	1/2”	3/8” NPT	2.12	1.56
MRT-F-88-XX	1/2”	1/2” NPT	2.31	1.56
MRT-F-108-XX	5/8”	1/2” NPT	2.48	1.73
MRT-F-1012-XX	5/8”	3/4” NPT	2.48	1.73
MRT-F-1212-XX	3/4”	3/4” NPT	2.62	1.75
MRT-F-1616-XX	1”	1” NPT	3.14	2.20
MRT-M-42-XX	4mm	1/8” NPT	1.20	.82
MRT-M-62-XX	6mm	1/8” NPT	1.44	1.06
MRT-M-64-XX	6mm	1/4” NPT	1.56	1.06
MRT-M-84-XX	8mm	1/4” NPT	1.81	1.25
MRT-M-104-XX	10mm	1/4” NPT	1.81	1.25
MRT-M-106-XX	10mm	3/8” NPT	1.81	1.25

Reducing Union

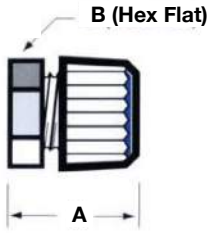
101620



Part #	Tube O.D.	Tube O.D.	A Dim.	B Dim.
RU-F-32-XX	3/16”	1/8”	1.01	.38
RU-F-42-XX	1/4”	1/8”	1.26	.50
RU-F-43-XX	1/4”	3/16”	1.26	.50
RU-F-52-XX	5/16”	1/8”	1.26	.50
RU-F-54-XX	5/16”	1/4”	1.38	.50
RU-F-64-XX	3/8”	1/4”	1.38	.50
RU-F-84-XX	1/2”	1/4”	1.56	.56
RU-F-86-XX	1/2”	3/8”	1.56	.56
RU-F-104-XX	5/8”	1/4”	1.60	.60
RU-F-106-XX	5/8”	3/8”	1.60	.60
RU-F-108-XX	5/8”	1/2”	1.66	.60
RU-F-128-XX	3/4”	1/2”	1.68	.62
RU-F-1210-XX	3/4”	5/8”	1.72	.62
RU-F-166-XX	1”	3/8”	1.70	.70
RU-F-168-XX	1”	1/2”	1.76	.70
RU-F-1610-XX	1”	5/8”	1.80	.70
RU-F-1612-XX	1”	3/4”	1.82	.70
RU-M-46-XX	4mm	6mm	1.26	.50
RU-M-68-XX	6mm	8mm	1.38	.50
RU-M-610-XX	6mm	10mm	1.38	.50
RU-M-810-XX	8mm	10mm	1.56	.56
RU-M-812-XX	8mm	10mm	1.56	.56
RU-M-1012-XX	10mm	16mm	1.56	.56
RU-M-1216-XX	12mm	19mm	1.66	.60
RU-M-1519-XX	15mm	12mm	1.72	.62
RU-M-2012-XX	20mm	12mm	1.68	.62
RU-M-2612-XX	26mm	12mm	1.75	.69

Tube Cap

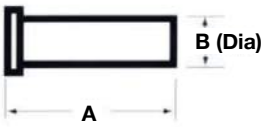
101875



Part #	Tube O.D.	A Dim.	B Dim.
TC-F-2-XX	1/8”	.63	.44
TC-F-3-XX	3/16”	.63	.44
TC-F-4-XX	1/4”	.88	.56
TC-F-5-XX	5/16”	.88	.75
TC-F-6-XX	3/8”	.88	.75
TC-F-8-XX	1/2”	1.06	1.00
TC-F-10-XX	5/8”	1.10	1.13
TC-F-12-XX	3/4”	1.12	1.25
TC-F-16-XX	1”	1.20	1.50

Tube Insert

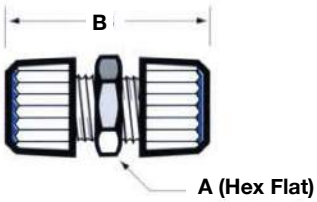
100635



Part #	Tube O.D.	Tube I.D.	A Dim.	B Dim.
TI-F-4	1/4”	3/16”	.50	.19
TI-F-5	5/16”	1/4”	.50	.25
TI-F-6	3/8”	5/16”	.55	.31
TI-F-8	1/2”	7/16”	.75	.44
TI-F-10	5/8”	9/16”	.68	.56
TI-F-12	3/4”	11/16”	.80	.69
TI-F-16	1”	.875”	.93	.88

Union

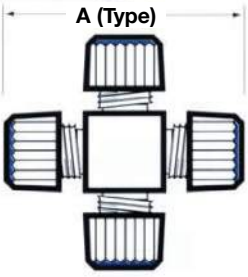
101616



Part #	Tube O.D.	A Dim.	B Dim.
U-F-1-XX	1/16”	.44	1.01
U-F-2-XX	1/8”	.44	1.01
U-F-3-XX	3/16”	.44	1.01
U-F-4-XX	1/4”	.56	1.38
U-F-5-XX	5/16”	.75	1.38
U-F-6-XX	3/8”	.75	1.38
U-F-8-XX	1/2”	1.00	1.62
U-F-10-XX	5/8”	1.13	1.70
U-F-12-XX	3/4”	1.25	1.75
U-F-16-XX	1”	1.50	1.90
U-F-1.1-XX	1.1”	1.63	2.12
U-M-4-XX	4mm	.44	1.01
U-M-6-XX	6mm	.56	1.38
U-M-8-XX	8mm	.75	1.38
U-M-10-XX	10mm	.75	1.38
U-M-12-XX	12mm	1.00	1.62

Union Cross

101610

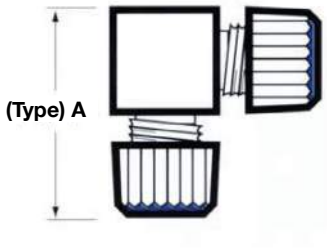


Part #	Tube O.D.	A Dim.
UC-F-2-XX	1/8”	1.20
UC-F-3-XX	3/16”	1.20
UC-F-4-XX	1/4”	1.56
UC-F-5-XX	5/16”	1.75
UC-F-6-XX	3/8”	1.75
UC-F-8-XX	1/2”	2.12
UC-F-10-XX	5/8”	2.33
UC-F-12-XX	3/4”	2.49
UC-F-16-XX	1”	2.90
UC-F-1.1-XX	1.1”	3.25
UC-M-4-XX	4mm	1.20
UC-M-6-XX	6mm	1.56
UC-M-8-XX	8mm	1.75
UC-M-10-XX	10mm	1.75
UC-M-12-XX	12mm	2.12

Union Elbow

100870

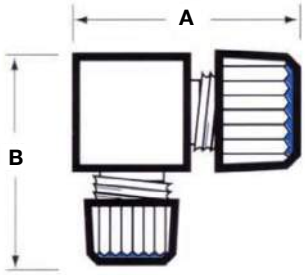
Part #	Tube O.D.	A Dim.
UE-F-2-XX	1/8”	.82
UE-F-3-XX	3/16”	.94
UE-F-4-XX	1/4”	1.06
UE-F-5-XX	5/16”	1.13
UE-F-6-XX	3/8”	1.31
UE-F-8-XX	1/2”	1.63
UE-F-10-XX	5/8”	1.81
UE-F-12-XX	3/4”	1.94
UE-F-16-XX	1”	2.44
UE-F-1.1-XX	1.1”	2.44
UE-M-4-XX	4mm	.94
UE-M-6-XX	6mm	1.06
UE-M-8-XX	8mm	1.13
UE-M-10-XX	10mm	1.31
UE-M-12-XX	12mm	1.63



Union Elbow Reducer

101787

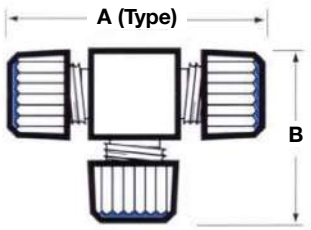
Part #	Tube O.D.	Tube O.D.	A Dim.	B Dim.
UER-F-42-XX	1/4”	1/8”	1.06	.94
UER-F-64-XX	3/8”	1/4”	1.25	1.25
UER-F-84-XX	1/2”	1/4”	1.44	1.38
UER-F-86-XX	1/2”	3/8”	1.44	1.38
UER-F-108-XX	5/8”	1/2”	1.60	1.56
UER-F-1210-XX	3/4”	5/8”	1.75	1.73
UER-F-1612-XX	1”	3/4”	2.20	2.12
UER-M-84-XX	8mm	4mm	1.13	1.01



Union Tee

101005

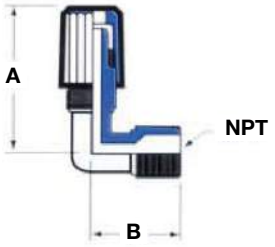
Part #	Tube O.D.	A Dim.	B Dim.
UT-F-2-XX	1/8”	1.20	.82
UT-F-3-XX	3/16”	1.20	.82
UT-F-4-XX	1/4”	1.56	1.06
UT-F-5-XX	5/16”	1.75	1.25
UT-F-6-XX	3/8”	1.75	1.25
UT-F-8-XX	1/2”	2.12	1.56
UT-F-10-XX	5/8”	2.33	1.73
UT-F-12-XX	3/4”	2.50	1.87
UT-F-16-XX	1”	2.90	2.20
UT-F-1.1-XX	1.1”	3.25	2.44
UT-M-4-XX	4mm	1.20	.82
UT-M-6-XX	6mm	1.56	1.06
UT-M-8-XX	8mm	1.75	1.25
UT-M-10-XX	10mm	1.75	1.25
UT-M-12-XX	12mm	2.12	1.56



IPS FLARED FITTINGS

Male Elbow

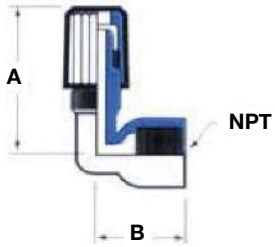
104590



Part #	Tube Size	NPT Size	Orifice	A Dim.	B Dim.
ME-FF-42	1/4”	1/8”	.125	1.83	1.07
ME-FF-44	1/4”	1/4”	.125	1.83	1.07
ME-FF-46	1/4”	3/8”	.125	1.83	1.07
ME-FF-64	3/8”	1/4”	.25	1.93	1.07
ME-FF-66	3/8”	3/8”	.25	1.93	1.07
ME-FF-68	3/8”	1/2”	.25	1.93	1.18
ME-FF-86	1/2”	3/8”	.38	2.03	1.07
ME-FF-88	1/2”	1/2”	.38	2.03	1.18
ME-FF-812	1/2”	3/4”	.38	2.03	1.36
ME-FF-128	3/4”	1/2”	.63	2.18	1.37
ME-FF-1212	3/4”	3/4”	.63	2.18	1.37
ME-FF-1216	3/4”	1”	.63	2.18	1.37

Female Elbow

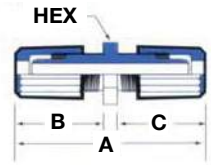
108639



Part #	Tube Size	Tube I.D.	Orifice	A Dim.	B Dim.
FE-FF-42	1/4”	1/8”	.125	1.83	.81
FE-FF-44	1/4”	1/4”	.125	1.83	.94
FE-FF-46	1/4”	3/8”	.125	1.83	1.00
FE-FF-64	3/8”	1/4”	.25	1.93	1.00
FE-FF-66	3/8”	3/8”	.25	1.93	1.00
FE-FF-68	3/8”	1/2”	.25	1.93	1.23
FE-FF-86	1/2”	3/8”	.38	2.03	1.00
FE-FF-88	1/2”	1/2”	.38	2.03	1.23

Union

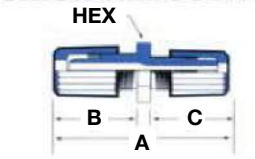
101621



Part #	Tube Size	Orifice	A Dim.	B Dim.	Hex
U-FF-4	1/4”	.125	2.49	1.15	11/16
U-FF-6	3/8”	.25	2.71	1.25	13/16
U-FF-8	1/2”	.38	2.93	1.35	15/16
U-FF-12	3/4”	.63	3.25	1.50	1-3/16

Reducing Union

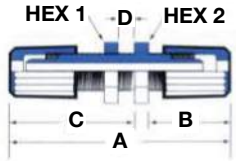
106881



Part #	Tube Size	Tube Size	Orifice	A Dim.	B Dim.	C Dim.	Hex
RU-FF-64	3/8”	1/4”	.125	2.61	1.25	1.15	15/16
RU-FF-86	1/2”	3/8”	.25	2.83	1.35	1.25	15/16
RU-FF-128	3/4”	1/2”	.38	3.10	1.50	1.35	1-3/16

Bulkhead Union

105368

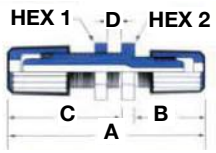


Part #	Tube Size	Tube Size	Orifice	A Dim.	B Dim.	C Dim.	D (Max)	Hex 1	Hex 2
BU-FF-4	1/4”	1/4”	.125	3.27	1.15	1.93	.50	3/4	11/16
BU-FF-6	3/8”	3/8”	.25	3.49	1.25	2.03	.50	15/16	13/16
BU-FF-8	1/2”	1/2”	.38	3.71	1.35	2.13	.50	1-1/16	15/16
BU-FF-12	3/4”	3/4”	.63	4.03	1.50	2.28	.50	1-5/16	1-3/16

Bulkhead Union Reducer

105368

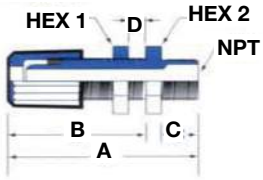
Part #	Tube	Tube	Orifice	A Dim.	B Dim.	C Dim.	D (Max)	Hex 1	Hex 2
BUR-FF-64	3/8”	1/4”	.125	3.39	1.15	2.03	.50	15/16	13/16
BUR-FF-86	1/2”	3/8”	.25	3.61	1.25	2.13	.50	1-1/16	15/16
BUR-FF-128	3/4”	1/2”	.38	4.03	1.50	2.28	.50	1-5/16	1-3/16



Male Connector Panel Mount

101789

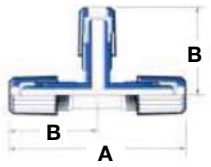
Part #	Tube Size	NPT Size	Orifice	A Dim.	B Dim.	C Dim.	D (Max)	Hex 1	Hex 2
BMC-FF-42	1/4”	1/8”	.125	2.67	1.93	.55	.50	3/4	11/16
BMC-FF-44	1/4”	1/4”	.125	2.67	1.93	.55	.50	3/4	11/16
BMC-FF-46	1/4”	3/8”	.125	2.67	1.93	.55	.50	3/4	11/16
BMC-FF-64	3/8”	1/4”	.25	2.79	2.03	.55	.50	15/16	13/16
BMC-FF-66	3/8”	3/8”	.25	2.79	2.03	.55	.50	15/16	13/16
BMC-FF-68	3/8”	1/2”	.25	2.90	2.03	.66	.50	15/16	15/16
BMC-FF-86	1/2”	3/8”	.38	2.91	2.13	.55	.50	1-1/16	15/16
BMC-FF-88	1/2”	1/2”	.38	3.02	2.13	.66	.50	1-1/16	15/16
BMC-FF-812	1/2”	3/4”	.38	3.03	2.13	.67	.50	1-1/16	1-3/16
BMC-FF-128	3/4”	1/2”	.63	3.19	2.28	.66	.50	1-5/16	1-3/16
BMC-FF-1212	3/4”	3/4”	.63	3.20	2.25	.67	.50	1-5/16	1-3/16



Union Tee

104591

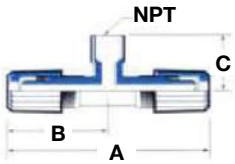
Part #	Tube Size	Orifice	A Dim.	B Dim.
UT-FF-4	1/4”	.125	3.66	1.83
UT-FF-6	3/8”	.25	3.86	1.93
UT-FF-8	1/2”	.38	3.06	2.03
UT-FF-12	3/4”	.63	4.36	2.18



Male Branch Tee

104609

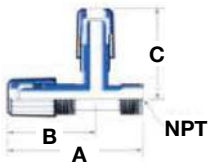
Part #	Tube Size	NPT Size	Orifice	A Dim.	B Dim.	C Dim.
MBT-FF-44	1/4”	1/4”	.125	3.66	1.83	1.07
MBT-FF-66	3/8”	3/8”	.25	3.866	1.93	1.07
MBT-FF-88	1/2”	1/2”	.38	4.06	2.03	1.18
MBT-FF-1212	3/4”	3/4”	.63	4.36	2.18	1.36



Male Run Tee

101197

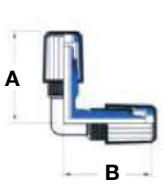
Part #	Tube Size	Tube Size	Orifice	A Dim.	B Dim.
MRT-FF-44	1/4”	1/4”	.125	2.90	1.83
MRT-FF-66	3/8”	3/8”	.125	2.90	1.83
MRT-FF-1212	3/4”	3/4”	.63	3.53	2.18



IPS FLARED FITTINGS

Union Elbow

108000



Part #	Tube Size	Orifice	A Dim.	B Dim.
UE-FF-4	1/4”	.125	1.83	1.83
UE-FF-6	3/8”	.25	1.93	1.93
UE-FF-8	1/2”	.38	2.03	2.03
UE-FF-12	3/4”	.63	2.18	2.18

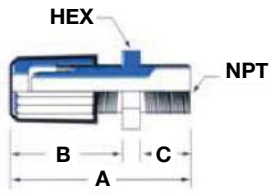
Union Elbow Reducer

108877

Part #	Tube Size	Tube Size	Orifice	A Dim.	B Dim.
UER-FF-64	3/8”	1/4”	.125	1.93	1.83
UER-FF-66	3/8”	3/8”	.25	2.03	1.93
UER-FF-128	3/4”	1/2”	.38	2.18	2.03
UER-FF-1612	1”	3/4”	.63	2.40	2.18

Male Connector

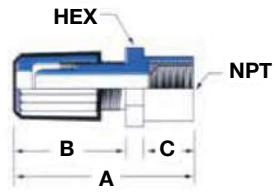
104950



Part #	Tube Size	NPT Size	Orifice	A Dim.	B Dim.	C Dim.	Hex
MC-FF-42	1/4”	1/8”	.125	1.79	1.15	.45	5/8
MC-FF-44	1/4”	1/4”	.125	1.89	1.15	.55	5/8
MC-FF-46	1/4”	3/8”	.125	1.91	1.15	.55	11/16
MC-FF-64	3/8”	1/4”	.25	1.99	1.25	.55	13/16
MC-FF-66	3/8”	3/8”	.25	2.01	1.25	.55	13/16
MC-FF-68	3/8”	1/2”	.25	2.14	1.25	.66	15/16
MC-FF-86	1/2”	3/8”	.38	2.11	1.35	.55	15/16
MC-FF-88	1/2”	1/2”	.39	2.24	1.35	.66	15/16
MC-FF-812	1/2”	3/4”	.38	2.27	1.35	.68	1-3/16
MC-FF-128	3/4”	1/2”	.55	2.39	1.50	.66	1-3/16
MC-FF-1212	3/4”	3/4”	.63	2.42	1.50	.67	1-3/16
MC-FF-1216	3/4”	1”	.88	2.62	1.50	.85	1-7/16

Female Connector

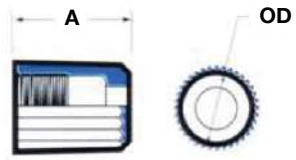
108586



Part #	Tube Size	NPT Size	Orifice	A Dim.	B Dim.	C Dim.	Hex
FC-FF-42	1/4”	1/8”	.125	1.97	1.15	.63	5/8
FC-FF-44	1/4”	1/4”	.125	1.97	1.15	.63	3/4
FC-FF-46	1/4”	3/8”	.125	1.99	1.15	.63	15/16
FC-FF-64	3/8”	1/4”	.25	2.07	1.25	.63	3/4
FC-FF-66	3/8”	3/8”	.25	2.09	1.25	.63	15/16
FC-FF-68	3/8”	1/2”	.25	2.11	1.25	.63	1
FC-FF-86	1/2”	3/8”	.38	2.19	1.35	.63	15/16
FC-FF-88	1/2”	1/2”	.38	2.21	1.35	.63	1-1/8
FC-FF-812	1/2”	3/4”	.38	2.27	1.35	.67	1-3/16
FC-FF-128	3/4”	1/2”	.63	2.36	1.50	.63	1-3/16
FC-FF-1212	3/4”	3/4”	.63	2.42	1.50	.67	1-3/16

Nut

103350

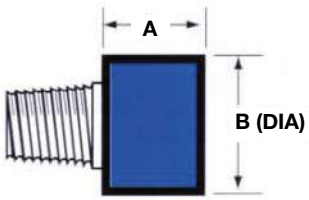


Part #	Tube Size	Tube Size	Orifice
N-FF-4	1/4”	1.00	.73
N-FF-6	3/8”	1.01	.85
N-FF-8	1/2”	1.09	1.00
N-FF-12	3/4”	1.25	1.32
N-FF-16	1”	1.52	1.70

Bushing

100640

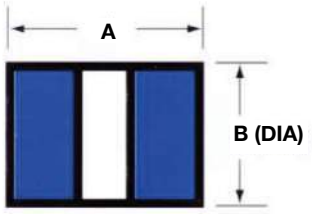
Part #	Male Pipe	Female Pipe	A Dim.	B Dim.
B-P-42-XX	1/4" NPT	1/8" NPT	1.19	.63
B-P-44-XX	1/4" NPT	1/4" NPT	1.37	.75
B-P-46-XX	1/4" NPT	3/8" NPT	1.37	.88
B-P-64-XX	3/8" NPT	1/4" NPT	1.50	.75
B-P-68-XX	3/8" NPT	1/2" NPT	1.69	1.13
B-P-84-XX	1/2" NPT	1/4" NPT	1.69	.75
B-P-86-XX	1/2" NPT	3/8" NPT	1.69	.88
B-P-124-XX	3/4" NPT	1/4" NPT	1.81	.75
B-P-128-XX	3/4" NPT	1/2" NPT	2.00	1.13
B-P-1212-XX	3/4" NPT	3/4" NPT	2.00	1.38
B-P-168-XX	1" NPT	1/2" NPT	2.19	1.13
B-P-1612-XX	1" NPT	3/4" NPT	2.19	1.38



Coupling

101617

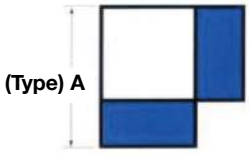
Part #	Female Pipe	A Dim.	B Dim.
C-P-2-XX	1/8" NPT	1.01	.63
C-P-4-XX	1/4" NPT	1.50	.75
C-P-6-XX	3/8" NPT	1.50	.88
C-P-8-XX	1/2" NPT	2.00	1.13
C-P-12-XX	3/4" NPT	2.00	1.38
C-P-16-XX	1" NPT	2.38	1.50



Elbow

101196

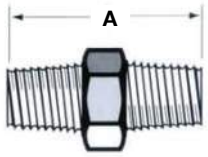
Part #	Female Pipe	A Dim.
E-P-2-XX	1/8" NPT	1.00
E-P-4-XX	1/4" NPT	1.31
E-P-6-XX	3/8" NPT	1.44
E-P-8-XX	1/2" NPT	1.87
E-P-12-XX	3/4" NPT	2.12
E-P-16-XX	1" NPT	2.44
E-P-24-XX	1.5" NPT	3.25



Pipe Nipple

101618

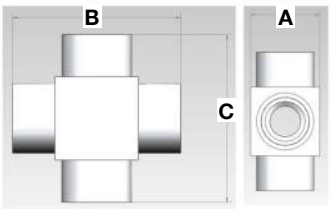
Part #	MNPT Pipe	A Dim.	Hex
NP-P-2	1/8" NPT	1.01	7/16
NP-P-4	1/4" NPT	1.50	9/16
NP-P-6	3/8" NPT	1.50	3/4
NP-P-8	1/2" NPT	2.00	7/8
NP-P-12	3/4" NPT	2.00	1-1/8
NP-P-16	1" NPT	2.38	1-3/8



IPS supplies custom extended length Pipe Nipples (NP-P-XX-XXX defining the overall pipe length). Custom lengths up to 18" can be supplied. These are supplied in 1/16" increments. 1" is represented as 16. 2" is represented as 32. 12" is represented as 192.

Female Pipe Cross

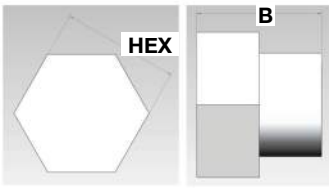
112065



Part #	Pipe Size	A Dim.	B Dim.	C Dim.
FPC-P-2	1/8	.750	1.510	1.510
FPC-P- 4	1/4	.875	1.935	1.935
FPC-P-6	3/8	1.000	2.120	2.120
FPC-P-8	1/2	1.250	2.750	2.750
FPC-P-12	3/4	1.500	3.000	3.000
FPC-P-16	1	1.750	.630	3.630

Female Pipe Cap

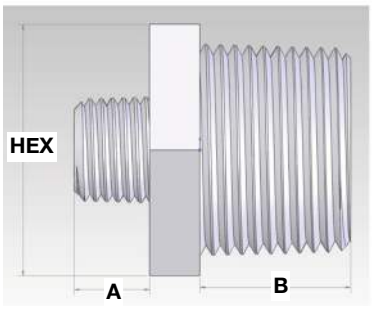
112066



Part #	Pipe Size	Hex	Length
PC-P-1	1/16	3/4	.760
PC-P-2	1/8	7/8	.760
PC-P-4	1/4	1	.940
PC-P-6	3/8	1-1/8	.940
PC-P-8	1/2	1-3/8	1.250
PC-P-12	3/4	1-1/2	1.250
PC-P-16	1	1-3/4	1.440
PC-P-20	1-1/4	2-1/4	1.500
PC-P-24	1-1/2	2-3/8	1.500
PC-P-32	2	2-1/2	1.500

Nipple Pipe Reducer

112067

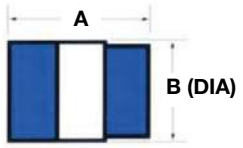


Part #	"A" Pipe	"B" Pipe	Hex	Length
NPR-P-24	1/8	1/4	9/16	1.320
NPR-P-26	1/8	3/8	7/8	1.320
NPR-P-28	1/8	1/2	15/16	1.630
NPR-P-212	1/8	3/4	1-1/4	1.630
NPR-P-216	1/8	1	1-1/2	1.820
NPR-P-46	1/4	3/8	7/8	1.500
NPR-P-48	1/4	1/2	15/16	1.810
NPR-P-412	1/4	3/4	1-1/4	1.810
NPR-P-416	1/4	1	1-1/2	2.000
NPR-P-68	3/8	1/2	15/16	1.810
NPR-P-612	3/8	3/4	1-1/4	1.810
NPR-P-616	3/8	1	1-1/2	2.000
NPR-P-812	1/2	3/4	1-1/4	2.000
NPR-P-816	1/2	1	1-1/2	2.190
NPR-P-1216	3/4	1	1-1/2	2.190

Female Reducer

101775

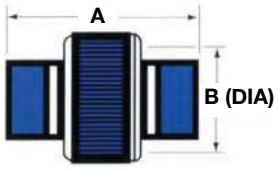
Part #	FNPT Pipe	Female Pipe	A Dim.	B Dim.
FR-P-42-XX	1/4" NPT	1/8" NPT	1.32	.63
FR-P-48-XX	1/4" NPT	1/2" NPT	1.81	1.13
FR-P-62-XX	3/8" NPT	1/8" NPT	1.32	.88
FR-P-64-XX	3/8" NPT	1/4" NPT	1.50	.88
FR-P-84-XX	1/2" NPT	1/4" NPT	1.81	1.13
FR-P-86-XX	1/2" NPT	3/8" NPT	1.81	1.13
FR-P-128-XX	3/4" NPT	1/2" NPT	2.00	1.38
FR-P-168-XX	1" NPT	1/2" NPT	2.19	1.50
FR-P-1612-XX	1" NPT	3/4" NPT	2.19	1.50



Pipe Union

101665

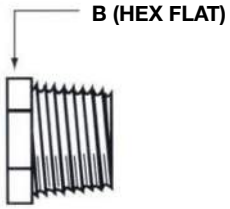
Part #	Female Pipe	A Dim.	B Dim.
PU-P-2-XX	1/8 NPT	1.60	1.25
PU-P-4-XX	1/4 NPT	2.05	1.50
PU-P-6-XX	3/8 NPT	2.13	1.75
PU-P-8-XX	1/2 NPT	2.51	1.75
PU-P-12-XX	3/4 NPT	2.90	2.25
PU-P-16-XX	1" NPT	3.43	2.69



Plug

101780

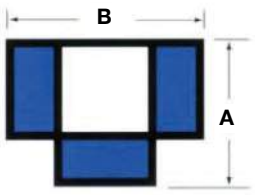
Part #	MNPT Pipe	A Dim.	B Dim.
P-P-1	1/16" NPT	.38	.44
P-P-2	1/8" NPT	.38	.44
P-P-4	1/4" NPT	.56	.56
P-P-6	3/8" NPT	.56	.75
P-P-8	1/2" NPT	.75	.88
P-P-12	3/4" NPT	.75	1.13
P-P-16	1" NPT	.94	1.38
P-P-24	1.5" NPT	1.50	2.00



Tee

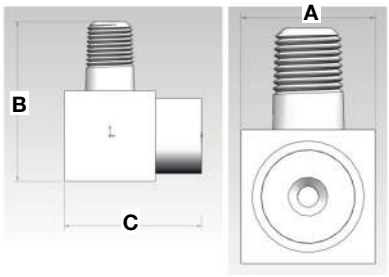
101782

Part #	Female Pipe	A Dim.	B Dim.
T-P-2-XX	1/8" NPT	1.01	1.39
T-P-4-XX	1/4" NPT	1.31	1.87
T-P-6-XX	3/8" NPT	1.43	2.00
T-P-8-XX	1/2" NPT	1.88	2.63
T-P-12-XX	3/4" NPT	2.13	2.88
T-P-16-XX	1" NPT	2.44	3.38



Street Elbow

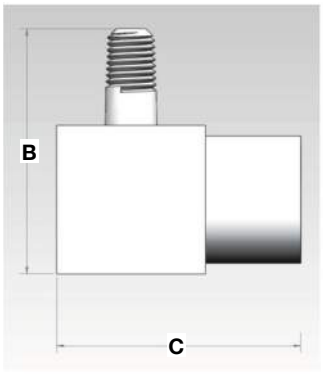
104138



Part #	Pipe Size	A Dim.	B Dim.	C Dim.
SE-P-1	1/16	.750	1.320	1.130
SE-P-2	1/8	.750	1.320	1.130
SE-P-4	1/4	.875	1.625	1.435
SE-P-6	3/8	1.000	1.940	1.560
SE-P-8	1/2	1.250	2.190	2.000
SE-P-12	3/4	1.500	2.440	2.250
SE-P-16	1	1.750	2.880	2.440

Male Pipe Elbow Reducer

112069

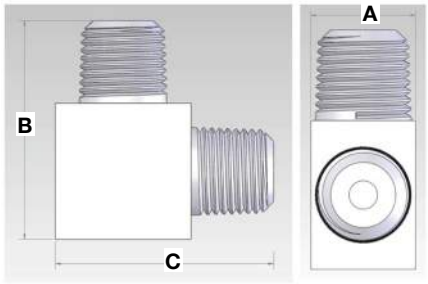


Part #	MNPT	FNPT	A Dim.	B Dim.	C Dim.
SER-P-24	1/8	1/4	.875	1.445	1.435
SER-P-26	1/8	3/8	1.000	1.570	1.560
SER-P-28	1/8	1/2	1.250	1.820	2.000
SER-P-212	1/8	3/4	1.500	2.070	2.250
SER-P-216	1/8	1	1.750	2.320	2.690
SER-P-42	1/4	1/8	.750	1.500	1.130
SER-P-46	1/4	3/8	1.000	1.750	1.560
SER-P-48	1/4	1/2	1.250	2.000	2.000
SER-P-412	1/4	3/4	1.500	2.250	2.250
SER-P-416	1/4	1	1.750	2.500	2.690
SER-P-62	3/8	1/8	.750	1.500	1.130
SER-P-64	3/8	1/4	.875	1.625	1.435
SER-P-68	3/8	1/2	1.250	2.000	2.000
SER-P-612	3/8	3/4	1.500	2.250	2.250
SER-P-616	3/8	1	1.750	2.500	2.690
SER-P-82	1/2	1/8	1.000	1.940	1.380
SER-P-84	1/2	1/4	1.000	1.940	1.560
SER-P-86	1/2	3/8	1.000	1.940	1.560
SER-P-812	1/2	3/4	1.500	2.400	2.250
SER-P-816	1/2	1	1.750	2.690	2.690
SER-P-122	3/4	1/8	1.500	2.440	1.880
SER-P-124	3/4	1/4	1.500	2.440	2.060
SER-P-126	3/4	3/8	1.500	2.440	2.060
SER-P-128	3/4	1/2	1.500	2.440	2.250
SER-P-1216	3/4	1	1.750	2.690	2.690
SER-P-162	1	1/8	1.500	2.630	1.880
SER-P-164	1	1/4	1.500	2.630	2.060
SER-P-166	1	3/8	1.500	2.630	2.060
SER-P-168	1	1/2	1.500	2.630	2.250
SER-P-1612	1	3/4	1.500	2.630	2.250

Male Pipe Elbow

112070

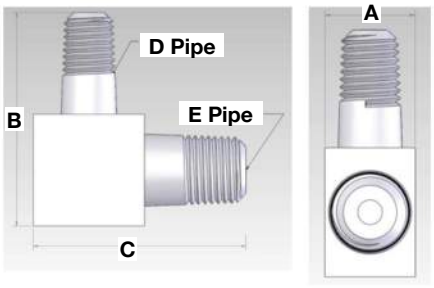
Part #	Pipe Size	A Dim.	B Dim.	C Dim.
ME-P-1	1/16	.440	1.010	1.010
ME-P-2	1/8	.440	1.010	1.010
ME-P-4	1/4	.560	1.310	1.310
ME-P-6	3/8	.750	1.500	1.500
ME-P-8	1/2	1.000	1.940	1.940
ME-P-12	3/4	1.250	2.190	2.190
ME-P-16	1	1.500	2.630	2.630



Male Pipe Reducing Elbow

112071

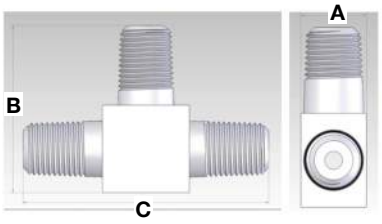
Part #	"D" Pipe	"E" Pipe	A Dim.	B Dim.	C Dim.
MPRE-P-12	1/16	1/8	.440	1.010	1.010
MPRE-P-24	1/8	1/4	.560	1.130	1.310
MPRE-P-26	1/8	3/8	.750	1.320	1.500
MPRE-P-28	1/8	1/2	1.000	1.570	1.940
MPRE-P-212	1/8	3/4	1.250	1.820	2.190
MPRE-P-216	1/8	1	1.500	2.070	2.630
MPRE-P-46	1/4	3/8	.750	1.500	1.500
MPRE-P-48	1/4	1/2	1.000	1.750	1.940
MPRE-P-412	1/4	3/4	1.250	2.000	2.190
MPRE-P-416	1/4	1	1.500	2.250	2.630
MPRE-P-68	3/8	1/2	1.000	1.750	1.940
MPRE-P-612	3/8	3/4	1.250	2.000	2.190
MPRE-P-616	3/8	1	1.500	2.250	2.630
MPRE-P-812	1/2	3/4	1.250	2.190	2.190
MPRE-P-816	1/2	1	1.500	2.440	2.630
MPRE-P-1216	3/4	1	1.500	2.440	2.630



Male Pipe Tee

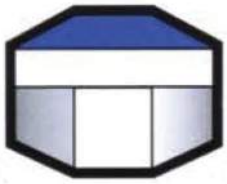
112068

Part #	Pipe Size	A Dim.	B Dim.	C Dim.
MPT-1	1/16	.440	1.010	1.580
MPT-2	1/8	.440	1.010	1.580
MPT-4	1/4	.560	1.310	2.060
MPT-6	3/8	.750	1.500	2.250
MPT-8	1/2	1.000	1.940	2.880
MPT-12	3/4	1.250	2.190	3.130
MPT-16	1	1.500	2.630	3.760



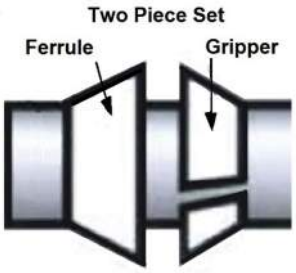
Plumber Ferrule (PF)

100426



Ferrule Gripper (FG)

112090



Tempress Ferrule (TF)

101661

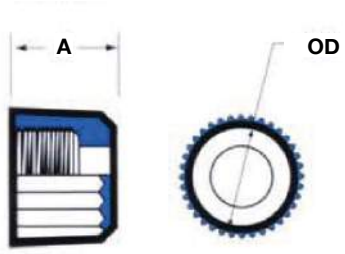
One Piece Snap-In Type.
for use with -TA & -TS
Teflon Nuts Only

Plumber Ferrule P/N	Ferrule Gripper P/N	Tempress Ferrule P/N	Tube O.D.
PF-F-1	FG-F-1	TF-F-1	1/16”
PF-F-2	FG-F-2	TF-F-2	1/8”
PF-F-3	FG-F-3	TF-F-3	3/16”
PF-F-4	FG-F-4	TF-F-4	1/4”
PF-F-5	FG-F-5	TF-F-5	5/16”
PF-F-6	FG-F-6	TF-F-6	3/8”
PF-F-8	FG-F-8	TF-F-8	1/2”
PF-F-10	FG-F-10	TF-F-10	5/8”
PF-F-12	FG-F-12	TF-F-12	3/4”
PF-F-16	FG-F-16	TF-F-16	1”
PF-F-11	FG-F-11	TF-F-11	1.1”
PF-F-22	FG-F-22	TF-F-22	1-3/8”
PF-M-4	FG-M-4	TF-M-4	4mm
PF-M-6	FG-M-6	TF-M-6	6mm
PF-M-7	FG-M-7	TF-M-7	7mm
PF-M-8	FG-M-8	TF-M-8	8mm
PF-M-9	FG-M-9	TF-M-9	9mm
PF-M-10	FG-M-10	TF-M-10	10mm
PF-M-12	FG-M-12	TF-M-12	12mm
PF-M-15	FG-M-15	TF-M-15	15mm
PF-M-20	FG-M-20	TF-M-20	20mm
PF-M-26	FG-M-26	TF-M-26	26mm

Nut

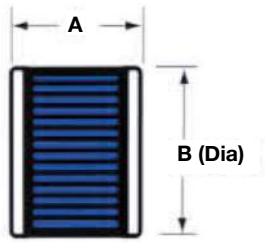
111722

Part #	Tube O.D.	Thread Size	A Dim. (Max)	B Dim. (Max)
N-F-1-XX	1/16”	1/4-28	.61	.50
N-F-2-XX	1/8”	5/16-24	.61	.50
N-F-3-XX	3/16”	3/8-24	.61	.59
N-F-4-XX	1/4”	7/16-20	.61	.68
N-F-5-XX	5/16”	9/16-18	.64	.78
N-F-6-XX	3/8”	1-1/16-16	.64	.88
N-F-8-XX	1/2”	7/8-14	.73	1.25
N-F-10-XX	5/8”	1-12	.77	1.38
N-F-12-XX	3/4”	1-1/8-12	.82	1.50
N-F-16-XX	.1”	1-3/8-12	.90	1.75
N-F-1.1-XX	1.1”	1-1/2-12	1.04	1.88
N-F-22-XX	1-3/8”	1-3/4-12	1.29	2.25
N-M-4-XX	4mm	3/8-24	.61	.59
N-M-6-XX	6mm	7/16-20	.61	.66
N-M-7-XX	7mm	7/16-20	.61	.66
N-M-8-XX	8mm	9/16-18	.64	.88
N-M-9-XX	9mm	11/16-16	.64	.88
N-M-10-XX	10mm	11/16-16	.64	.91
N-M-12-XX	12mm	7/8-14	.73	1.16
N-M-15-XX	15mm	1-12	.77	1.38
N-M-20-XX	20mm	1-1/8-12	.82	1.50
N-M-26-XX	26mm	1-1/2-12	1.04	1.88



TA & TS NUT STYLE

101615

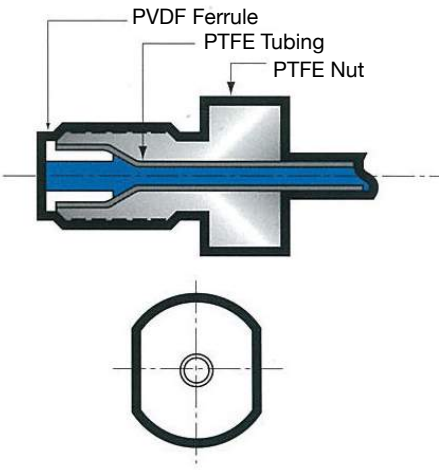


Panel Nut

100162

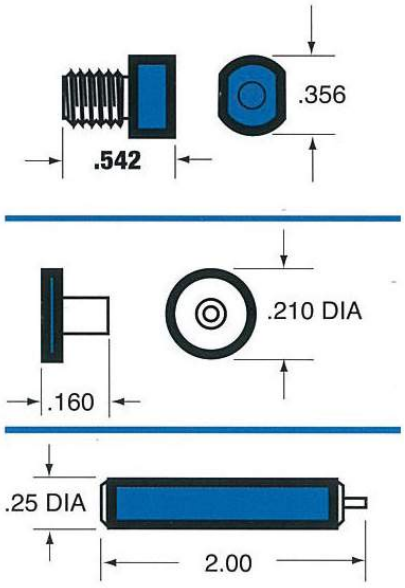
Part #	Thread Size	A Dim.	B Dim.
PN-F-1	5/16-24	.50	.25
PN-F-2	3/8-24	.56	.25
PN-F-3	7/16-20	.69	.25
PN-F-4	9/16-18	.88	.25
PN-F-5	1-1/16-16	.94	.28
PN-F-6	7/8-14	1.31	.31
PN-F-7	1-12	1.25	.31
PN-F-8	1-1/8-12	1.38	.31
PN-F-9	1-3/8-12	1.75	.31
PN-F-10	1-1/2-12	2.00	.31
PN-F-11	1-5/8-12	2.12	.31
PN-F-12	1-3/4-12	2.25	.31
PN-F-18	1-7/8-12	2.38	.31
PN-M-10	11/16-16	.94	.28

112091



Part #	Tube O.D.	Tube I.D.	Tube Wall	Recommended Tubing	Thread Size
TN062016	.063”	.031”	.016”	FEP-062-016 or FT-062-016	1/4” - 28
TN125016	.125”	.093”	.016”	FEP-125-016 or FT-125-016	1/4” - 28
TN125030	.125”	.065”	.030”	FEP-125-030 or FT-125-030	1/4” - 28
KF062016	.063”	.031”	.016”	FEP-062-016 or FT-062-016	n/a
KF125016	.125”	.093”	.016”	FEP-125-016 or FT-125-016	n/a
KF125030	.125”	.065”	.030”	FEP-125-030 or FT-125-030	n/a

Part #	Tube O.D.	Tube I.D.	Tube Wall	Contruction
ITMTF-A		.031”		1 pc metal
ITMTF-B		.093”		1 pc metal
ITMTF-C		.065”		1 pc metal

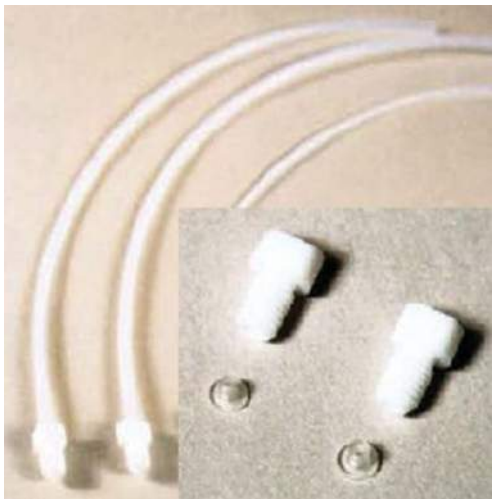


These small High-Purity PTFE Fittings are design to mate with 1/32”, 2/32” and 3/32” I.D. precision tube.

Common Applications:

- Gas & Liquid Analysis
- Precision Chemical Dosing
- Chromatography Stations
- Analytical Reagenting Blending
- Calibration Standard Sampling

Call us with your Special Applications.



IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Fittings with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

Spray Devices

IPS

international polymer solutions

international polymer solutions

PTFE Spray Guns

BECO manufacturing TEQCOM

Spray Guns (SG)

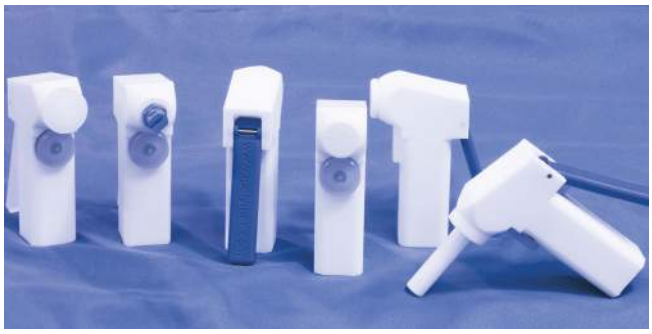
Our spray guns are constructed of virgin PTFE and Polypropylene to provide them with a long life span in harsh acidic or corrosive environments. Due to their design and comfortable grip Spray Guns are quickly becoming the industry standard in semiconductor fab plants, wet benches and work processing stations. All the Spray Guns may be purchased individually or with a variety of fittings and hoses.

Recirculating Spray Gun (RC)

The Recirculating Spray Guns all have molded PTFE bodies with PVDF pistons. Theses RC Guns are designed so that there is very little dead space for bacteria to grow. DI water is able to circulate up to the sealing seat through out the entire gun and piston. From the sealing seat on, bacteria build up is kept to a minimum by using a 1/16” thick spray nozzle.

Nitrogen Guns (Nitro)

Our PTFE Nitrogen Guns (Nitro) can deliver maximum anti-corrosion protection wherever extreme chemical environments are used in the vicinity of nitrogen dispensing or dying. Like its companion, the DI Water Spray, Nitro is manufactured of the same durable materials to resist acid attacks.



Dispense Guns (DG)

Both of the dispense guns, standard or high flow, are designed with the spring totally isolated from the media, thus making them the perfect choice for dispensing acids and solvents. The longer nozzle on the dispense guns allows for them to be inserted into a container thus minimizing splashing.

Eye Wash (EW)

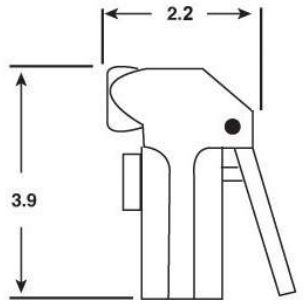
PTFE Eye Wash is designed to provide emergency eye/facial rinse. When activated a soft flow of aerated water is released. The non-metallic aerator converts harsh city water into a bubbly smooth stream while the PTFE body remains inert to its potentially hostile chemical environment.

DI SPRAY / RINSING GUNS

(Max. operating pressure 75 PSI)
(Media Temperature Range: 40ºF – 130ºF)

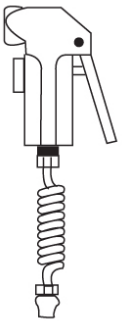
Part No.	Description
SG-103	Standard Spray Gun with 1/2” FNPT inlet thread.
SG-102	Spray Gun with 3/8” FNPT inlet thread.
SG-101	Spray Gun with 1/4” FNPT inlet thread.

NOTE: ADD -FT FOR FRONT TRIGGER OPTION.

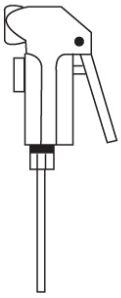


SG-101
SG-102
SG-103

Assemblies Part No.	Gun	Hose	Intercon. Fitting	Source Fitting
SG-401	SG-101	C4-FEP	MC-F-44	MC-F-44
SG-402	SG-101	C4-PU	J44	J44
SG-403	SG-101	304	MC-F-44	MC-F-44
SG-601	SG-102	C6-FEP	MC-F-66	MC-F-66
SG-602	SG-102	C6-PU	J66	J66
SG-603	SG-102	306	MC-F-66	MC-F-66
SG-801	SG-103	C8-FEP	MC-F-88	MC-F-88
SG-802	SG-103	C8-PU	J88	J88
SG-803	SG-103	308	MC-F-88	MC-F-88



SG-X01
SG-X02



SG-X03

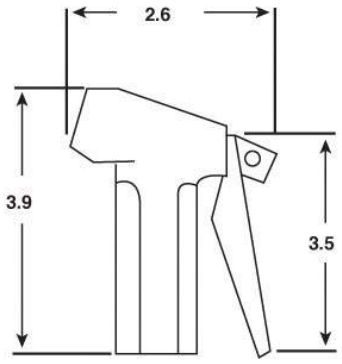
RECIRCULATING SPRAY GUNS

(Max. operating pressure 75 psi)
(Media Temperature Range: 40ºF – 130ºF)

Part No.	Description
RC-103	Recirculating spray gun with 1/2” FNPT inlet thread (gun only).

Assemblies

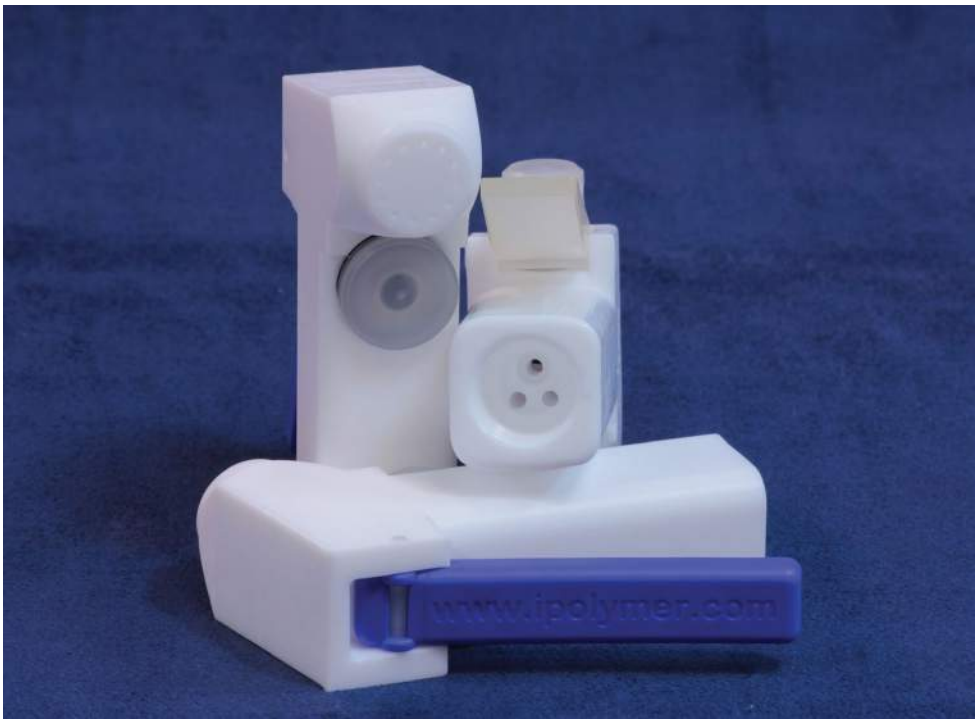
Part No.	Gun	Hose Assy.
RC-105	RC-103	RC-3
RC-106	RC-103	RC-5

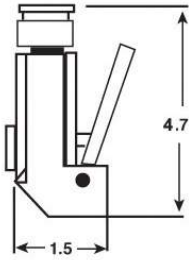


RC-103

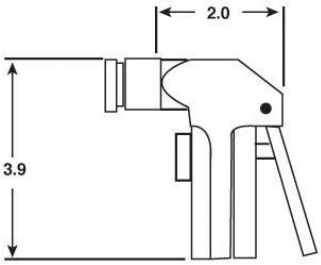

RC-105


RC-106

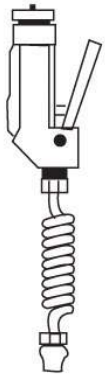




Nitro-1



Nitro-2



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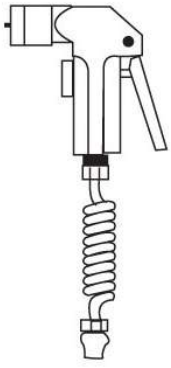


Nitro-4

NITROGEN / DRYING GUNS

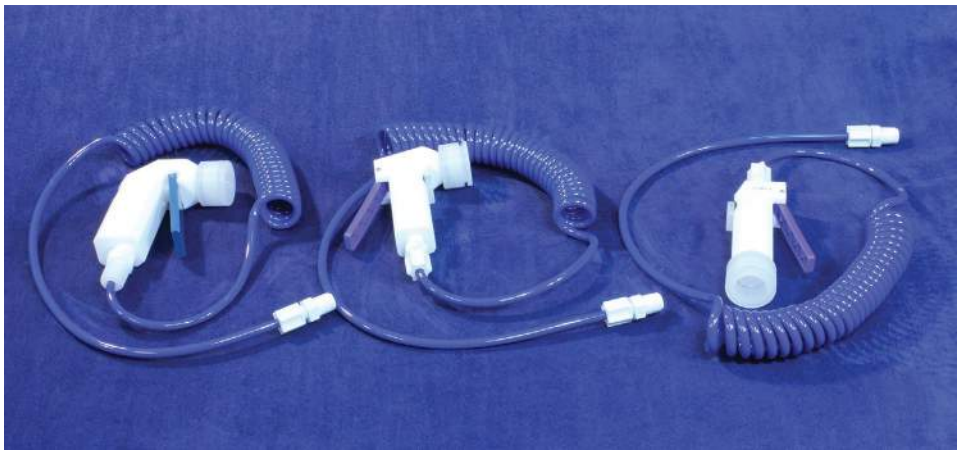
(Max. operating pressure 75 PSI) (Media Temperature Range: 40ºF – 130ºF)

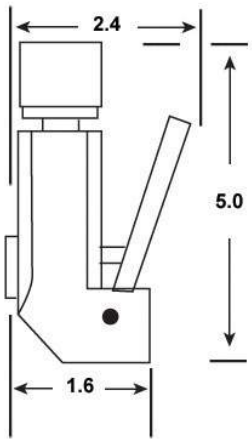
Part No.	Description
Nitro-1	Standard nitrogen hand spray with 1/4” FNPT inlet thread, filter housing with disposable filter.
Nitro-2	Same as Nitro 1 only using a standard spray gun body configuration.

NOTE: ADD -FT FOR FRONT TRIGGER OPTION (NITRO-2 ONLY)

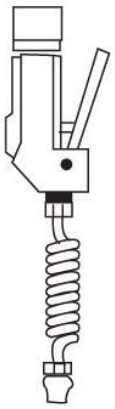
Source Part No.	Gun	Hose Assy.	Fitting	Fitting
NITRO-3	NITRO-1	C4-PU	J44	J44
NITRO-3T	NITRO-1	C4-FEP	MC-F-44	MC-F-44
NITRO-4	NITRO-2	C4-PU	J44	J44
NITRO-4T	NITRO-2	C4-FEP	MC-F-44	MC-F-44

NOTE: ADD -FT FOR FRONT TRIGGER OPTION (NITRO-4 AND NITRO-4T ONLY)





EW-101



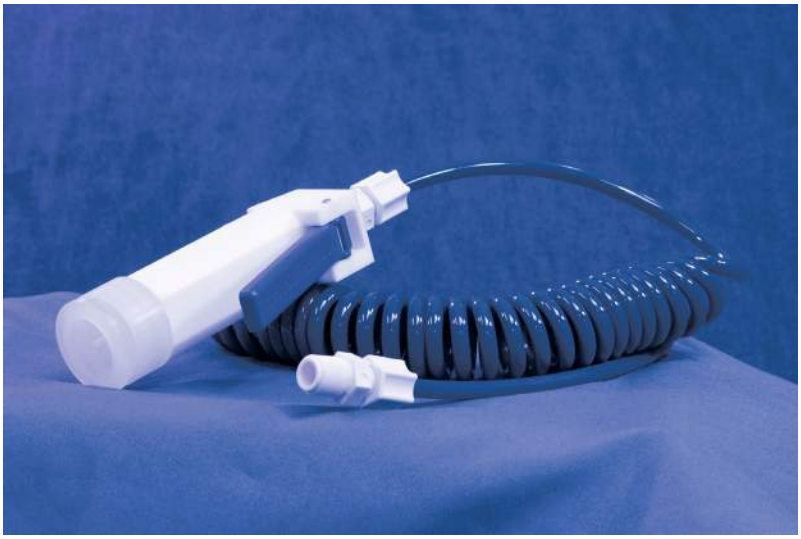
EW-30X

EYE WASH

(Max. operating pressure 75 PSI) (Media Temperature Range: 60ºF – 100ºF)

Part No.	Description
EW-101	Standard eye wash with 1/4” FNPT inlet thread.

Assemblies Part No.	Gun	Hose Assy.	Intercon. Fitting	Source Fitting
EW-304	EW-101	C6-PU	J64	J64
EW-306	EW-101	C6-PU	J64	J66
EW-308	EW-101	C6-PU	J64	J68



LIQUID DISPENSING GUNS

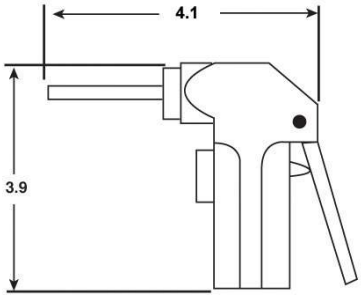
(Max. operating pressure 75 PSI)
(Media Temperature Range: 40ºF – 130ºF)

Standard dispense gun with isolated spring, flow rate 1 GPM. Available in choice of O-ring material: Ethylene Propylene (EP), for use with solvents; Viton (VT), for use with most acids; Kalrez (KA), for use with highly aggressive fluids. To order dispense gun with the correct O-ring, replace "XX" in the DG part number; with the applicable suffix (EP, VT or KA).

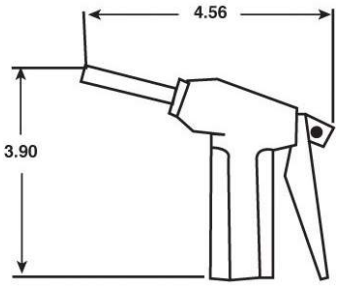
Part No.	Description
DG-504-XX	Standard dispense gun with 1/4" FNPT inlet thread.
DG-506-XX	Standard dispense gun with 3/8" FNPT inlet thread.
DG-508-XX	Standard dispense gun with 1/2" FNPT inlet thread.
DG-800-XX	High flow dispense gun. Features the same isolated spring design, but has a flow rate of 3 GPM. 1/2" FNPT inlet thread.

NOTE: ADD -FT FOR FRONT TRIGGER OPTION (DG-50X-XX ONLY)

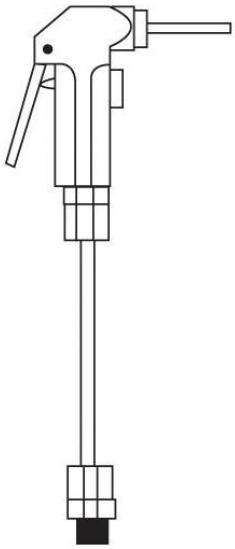
Assemblies Part No.	Gun	Hose	Intercon. Fitting	Source Fitting
DG-605-XX	DG-508-XX	308	MC-F-88	MC-F-88
DG-606-XX	DG-508-XX	C6-PU	J68	J68
DG-607-XX	DG-506-XX	C6-PU	J66	J66
DG-905-XX	DG-800-XX	308	MC-F-88	MC-F-88
DG-906-XX	DG-800-XX	C6-PU	J68	J68



DG-50X-XX



DG-800



DG-605

Part No.	Reference Description of Assemblies and Spare Parts
304	1/8” ID x 1/4” OD x 8’ Long Bendable PTFE Tubing
306	1/4” ID x 3/8” OD x 8’ Long Bendable PTFE Tubing
308	3/8” ID x 1/2” OD x 8’ Long Bendable PTFE Tubing
C4-FEP	1/4” OD FEP Coiled Tubing
C4-FEP-MCF44	C4-FEP Tubing with PTFE Fittings at both ends
C6-FEP	3/8” OD FEP Coiled Tubing
C6-FEP-MCF66	C6-FEP Tubing with PTFE Fittings at both ends
C8-FEP	1/2” OD FEP Coiled Tubing
C8-FEP-MCF88	C8-FEP Tubing with PTFE Fittings at both ends
C4-PU	1/4” OD Blue Polyurethane Coiled Hose
C4-PU-J44	C4-PU Hose with Polypro Fittings at both ends
C6-PU	3/8” OD Blue Polyurethane Coiled Hose
C6-PU-J66	C6-PU Hose with Polypro Fittings at both ends
C8-PU	1/2” OD Blue Polyurethane Coiled Hose
C8-PU-J88	C8-PU Hose with Polypro Fittings at both ends
C4-PFA	1/4” OD PFA Coiled Tubing
C4-PFA-MCF44	C4-PFA Tubing with PTFE Fittings at both ends
C6-PFA	3/8” OD PFA Coiled Tubing
C6-PFA-MCF66	C6-PFA Tubing with PTFE Fittings at both ends
C8-PFA	1/2” OD PFA Coiled Tubing
C8-PFA-MCF88	C8-PFA Tubing with PTFE Fittings at both ends
RC-3	308 Tubing with PTFE fittings and PTFE recirculating tube
RC-5	C6-FEP Tubing with PTFE fittings and PTFE recirculating tube
RC-7	C6-FEP Tubing with PTFE recirculating tube
RC-9	PTFE source fitting for recirculating spray gun.

Part No.	Reference Description of Assemblies and Spare Parts
J44	JACO Male Connector - Polypropylene. 1/4” Tube x 1/4” MNPT.
J64	JACO Male Connector - Polypropylene. 3/8” Tube x 1/4” MNPT.
J66	JACO Male Connector - Polypropylene. 3/8” Tube x 3/8” MNPT.
J68	JACO Male Connector - Polypropylene. 3/8” Tube x 1/2” MNPT.
J88	JACO Male Connector - Polypropylene. 1/2” Tube x 1/2” MNPT.
MC-F-44	IPS Male Connector - PTFE. 1/4” Tube x 1/4” MNPT.
MC-F-66	IPS Male Connector - PTFE. 3/8” Tube x 3/8” MNPT.
MC-F-88	IPS Male Connector - PTFE. 1/2” Tube x 1/2” MNPT.
900	Nitrogen filter housing.
901	Nitrogen filter retaining ring.
902	Nitrogen filter O-ring.
N2F-10 N2F-50 N2F-100	Disposable nitrogen filters. Each filter is composed of a 25mm diameter .45micron PTFE – copolymer filter element sandwiched between and supported-by two pieces of molded acrylic plastic. Available in quantities of 10, 50, or 100.
EW-AHA	Eye Wash Aerated Head Assembly. Polypropylene construction complete with screens.

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Spray Devices with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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Solenoid Valve

IPS

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Miniature Solenoid Valves

BECO manufacturing TEQCOM

Our **IPS Miniature Solenoid Valves** offer precision performance under extreme conditions. Offered as 2-Way and 3-Way Valves with six internal body configurations and three seat sealing methods, our IPS Miniature Solenoid Valves are suitable for a wide range of ultra clean to highly corrosive media applications.

Our all virgin PTFE wetted surface design is ideally suited for semiconductor, pharmaceutical, bio-medical and chemical process applications. Configurable with a PTFE Hard Seat, FKM-Viton O-Ring Seat or FFKM-Kalrez O-Ring Seat the IPS Miniature Series Solenoid Valve line provides unsurpassed chemical compatibility with a wide range of flow media. The all wetted PTFE body, valve stem and one piece diaphragm maintain a material inert boundary for ultra clean applications.

HIGHLIGHTS:

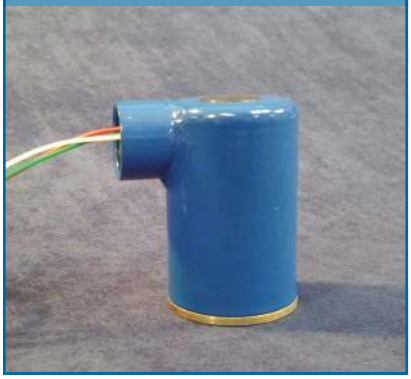
- PTFE design optimized for ultra clean and chemical compatibility.
- Configurations available for various DC & AC voltages.
- Fast, accurate and repeatable coil response time from proven technology.
- Continuous Duty Cycle Rated at controlled ambient temperatures.
- Valve seat and diaphragm designed for positive flushing and bubble-tight shut off.
- Non porous diaphragm configured to completely isolate solenoid coil from media.
- 100% coil driven – does not require energizing pressure or vacuum to operate.
- O-ring seat configurations for vacuum and complex media applications.
- Designed for aggressive media and elevated temperature.

General Valve Parameters	
1/8 Orifice Cv (2-Way / 3-Way)	0.35 / 0.18
1/4 Orifice Cv (2-Way / 3-Way)	0.70 / 0.45
3/8 Orifice Cv (2-Way / 3-Way)	0.90 / 0.60
Common Port Vacuum in-Hg (max)	25
Media Temperature (range)	0 - 100°C / 32 - 212°F
Ambient Temperature (range)	0 - 60°C / 32 - 140°F
Wattage Range: High Watt Coil (std)	10 -13 W
Wattage Range: Low Watt Coil	5 - 6 W
Voltage Tolerance	+/-10%
Coil Lead Length (3 Wire) (Red is Hot / White is Neutral / Green is Ground)	24”

RoHS Compliant

Maximum Port Pressure Rating (psi)	O-Ring Seat 3-Way		PTFE Seat 3-Way	
	Lo-Watt	Hi-Watt	Lo-Watt	Hi-Watt
Common Port	40	60	40	60
Normally Closed Port	30	35	20	30
Normally Open Port	40	60	40	60
	2-Way NC		2-Way NC	
	Lo-Watt	Hi-Watt	Lo-Watt	Hi-Watt
Inlet Port	40	60	40	60
Outlet Port	30	35	20	30
	2-Way NO		2-Way NO	
	Lo-Watt	Hi-Watt	Lo-Watt	Hi-Watt
Inlet Port	40	60	40	60
Outlet Port	40	60	40	60

Conduit Connector Coil available. *Call Customer Service.*



Other Options Available on Request:

- Valves with special port connections such as combinations of pipe, tube and flared ends.
- Extra long wire leads (36” or 48”).
- Valves without mounting studs or valves with 4 mounting studs (2 are standard).
- Manifolded valve assemblies.

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Solenoid Valves: ORDERING FORMAT

M 6 6 2C 1A F S – H T – 132 – AP

Valve Series

See chart below

Valve Configuration
2C = 2 Way Normally Closed
2O = 2 Way Normally Open
3W = 3 Way

Coil Voltage
1A = 115 VAC
2A = 230 VAC
3A = 24 VAC
1D = 12 VDC
2D = 24 VDC
4D = 20 VDC
5D = 105 VDC

Body Shape
R = Round
S = Square (Required for Tube Ends and Flared)

Port Selection
F = Female NPT (S or R body)
T = Tube Ends (S body only)
FF = Flared Ends (S body only)

Coil Wattage
H = Hi Watt (10-13 Watts)
L = Lo Watt (5-6 Watts)

Valve Seat
V = Viton
K = Kalrez
T = Teflon

See Below 3-Way Valve Only

Auxiliary Plate (optional see below)

Consult Factory For Custom Configurations.

Porting w/ Max Orifice

PIPE	
22	1/8” FNPT & 0.125” Orifice
44	1/4” FNPT & 0.250” Orifice
66	3/8” FNPT & 0.375” Orifice
86	1/2” FNPT & 0.375” Orifice
TUBE	
21	1/8” TUBE & 0.063” Orifice
43	1/4” TUBE & 0.188” Orifice
65	3/8” TUBE & 0.313” Orifice
86	1/2” TUBE & 0.375” Orifice
FLARE	
42	1/4” FLARE & 0.125” Orifice
64	3/8” FLARE & 0.250” Orifice
86	1/2” FLARE & 0.375” Orifice

Port Arrangements

The port orientation can be arranged in six possible patterns on our 3-Way Solenoid Valves. Please select one of the six arrangements.

Looking Down at the Top of the Coil		
STD NC NO 132 C	NO NC 123 C	C NC 213 NO
C NO 231 NC	NC C 312 NO	NO C 321 NC

STD = 132 is our standard Port Arrangement.

Auxiliary Plate (“AP”): For highly corrosive or caustic gas applications, such as Chlorine Gas, our Auxiliary Plate Option (“-AP”) give an extra line of protection. The valve is configured with an auxiliary plate between the upper diaphragm and solenoid coil. The AP (Auxiliary Plate) is O-Ring sealed on the Stem of the diaphragm and supported at the outer body-to-coil interface.

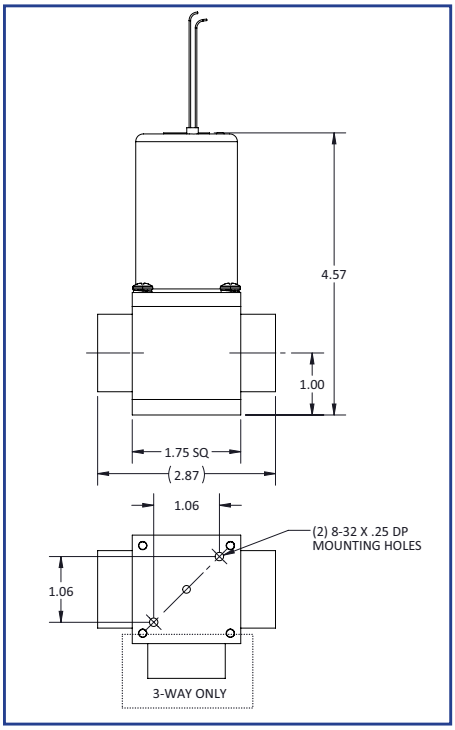
Miniature Solenoid Valve

3/8” 3-Way FNPT

1/8” 2-Way FNPT
(Round Body)

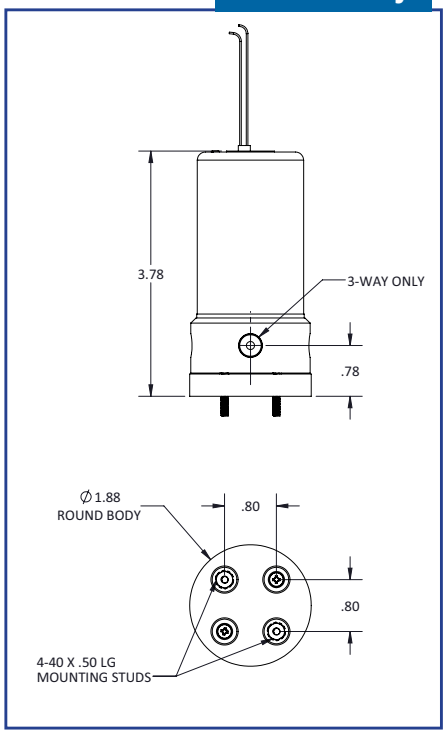
1/8” 2-Way FNPT

Typical for 3/8” and 1/2” Models

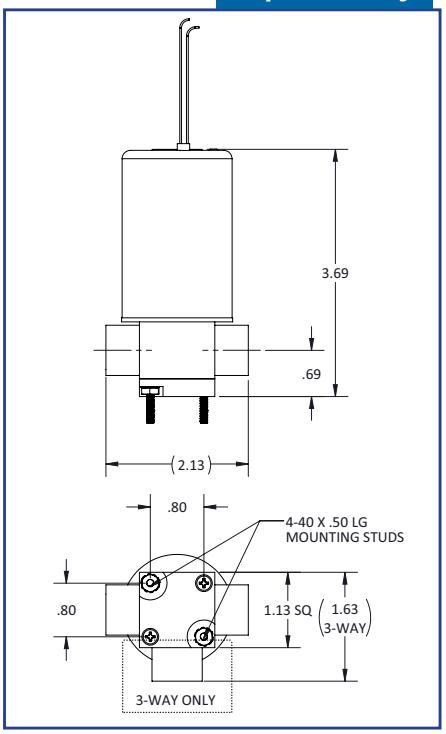


Typical for 1/8” and 1/4” Models

Round Body



Square Body



IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

130308

Pneumatic Valves

IPS

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Miniature Pneumatic Diaphragm Valves

BECO manufacturing TEQCOM

Our **IPS Miniature Pneumatic Diaphragm Valves** offer precision performance under extreme conditions. Offered as 2-Way and 3-Way Valves with six internal body configurations and three valve seat sealing methods, our IPS Miniature Pneumatic Diaphragm Valves are suitable for a wide range of ultra clean to highly corrosive media applications. Our all virgin PTFE wetted surface design is ideally suited for semiconductor, pharmaceutical, bio-medical and chemical process applications. Configurable with a PTFE Hard Seat, FKM-Viton O-Ring Seat or FFKM-Kalrez O-Ring Seat the IPS MTV series valve line provides unsurpassed chemical compatibility with a wide range of flow media. The all wetted PTFE body, valve stem and one piece diaphragm maintain a material inert boundary for ultra clean applications.

HIGHLIGHTS:

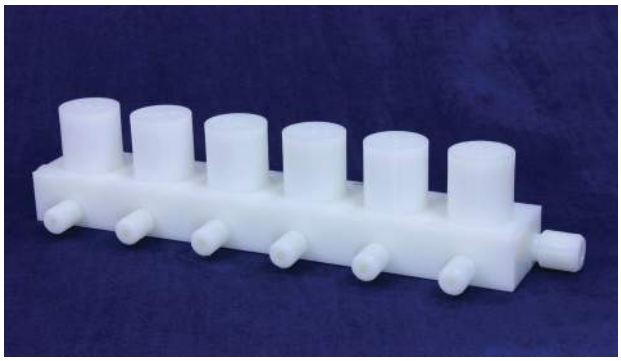
- PTFE design optimized for ultra clean and chemical compatibility.
- Lightweight pneumatic actuator with compact valve design.
- Pneumatic Actuator available in standard Polypro or Hi Temp Configuration.
- The PTFE diaphragm completely isolates the media from the actuator.
- 100% pneumatic driven – does not require power only supply air.
- O-ring seat configurations for vacuum and complex media applications.
- Designed for aggressive media and elevated temperature.

General Valve Parameters	
1/8” Orifice Cv (2-Way / 3-Way)	0.35 / 0.18
1/4” Orifice Cv (2-Way / 3-Way)	0.70 / 0.45
3/8” Orifice Cv (2-Way / 3-Way)	0.90 / 0.60
Common Port Vacuum in-Hg (max)	25
Actuator Pressure (range)	40 - 60 psi
Media Temperature (range)	0 - 100ºC / 32 – 212ºF
Ambient Temperature (range)	0 - 70ºC / 32 – 140ºF

Maximum Port Pressure Rating	3-Way
Common Port	60 psi
Normally Closed Port	30 psi
Normally Open Port	60 psi
	2-Way NC
Inlet Port	60 psi
Outlet Port	30 psi
	2-Way NO
Inlet Port	60 psi
Outlet Port	60 psi

Other Options Available on Request:

- Valves with special port connections such as combinations of pipe, tube and flared ends.
- Valves without mounting studs or valves with 4 mounting studs (2 are standard).
- Manifolded valve assemblies.



Miniature Pneumatic Diaphragm Valves: ORDERING FORMAT

MTV - 2 2 2C F R - T - 123 - AP

Port & Orifice Size
See Chart Below

Valve Configuration
2C = 2-Way Normally Closed
2O = 2-Way Normally Open
3W = 3-Way

Port Selection
F = Female NPT (S or R body)
T = Tube Ends (S body only)
FF = Flared Ends (S body only)

Auxiliary Plate
(optional see below)

3-Way Valve Only
(see below)

Valve Seat
T = PTFE
V = Viton
K = Kalrez

Body Shape
R = Round
S = Square (Required for Tube Ends and Flared)

Consult Factory For Custom Configurations.

Porting w/ Max Orifice

PIPE	
22	1/8” FNPT & 0.125” Orifice
44	1/4” FNPT & 0.250” Orifice
66	3/8” FNPT & 0.375” Orifice
86	1/2” FNPT & 0.375” Orifice
TUBE	
21	1/8” TUBE & 0.063” Orifice
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FLARE	
42	1/4” FLARE & 0.125” Orifice
64	3/8” FLARE & 0.250” Orifice
86	1/2” FLARE & 0.375” Orifice

Port Arrangements

The port orientation can be arranged in six possible patterns on our 3-Way Valves. Please select one of the six arrangements.

Looking Down at the Top of the Coil

STD NC NO 132 C	NO NC 123 C	C NC 213 NO
C NO 231 NC	NC C 312 NO	NO C 321 NC

STD = 132 is our standard Port Arrangement.

Auxiliary Plate (“AP”): For highly corrosive or caustic gas applications, such as Chlorine Gas, our Auxiliary Plate Option (“-AP”) give an extra line of protection. The valve is configured with an auxiliary plate between the upper diaphragm and pneumatic actuator. The AP (Auxiliary Plate) is O-Ring sealed on the Stem of the diaphragm and supported at the outer body-to-actuator interface.

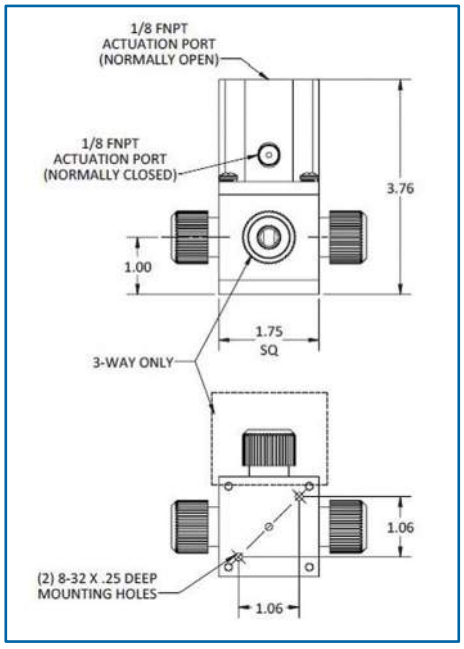
Miniature Pneumatic Diaphragm Valve

3/8” 3-Way FNPT

1/4” 3-Way Tube

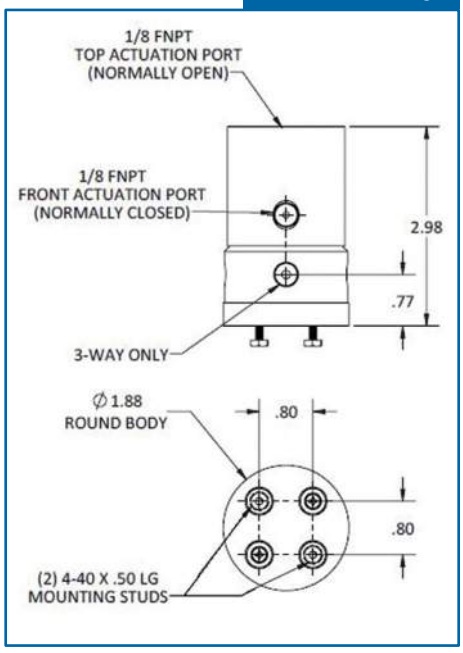
1/4” 2-Way FNPT

Typical for 3/8” and 1/2” Models

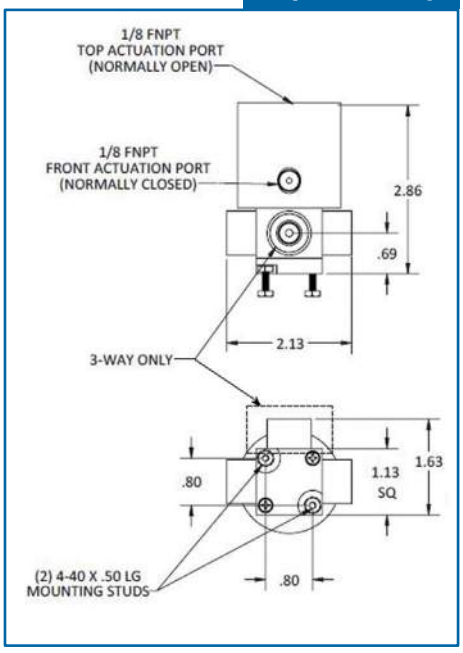


Typical for 1/8” and 1/4” Models

Round Body



Square Body



IPS Product Notes:

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Teflon® Pneumatic Valves

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BECO manufacturing

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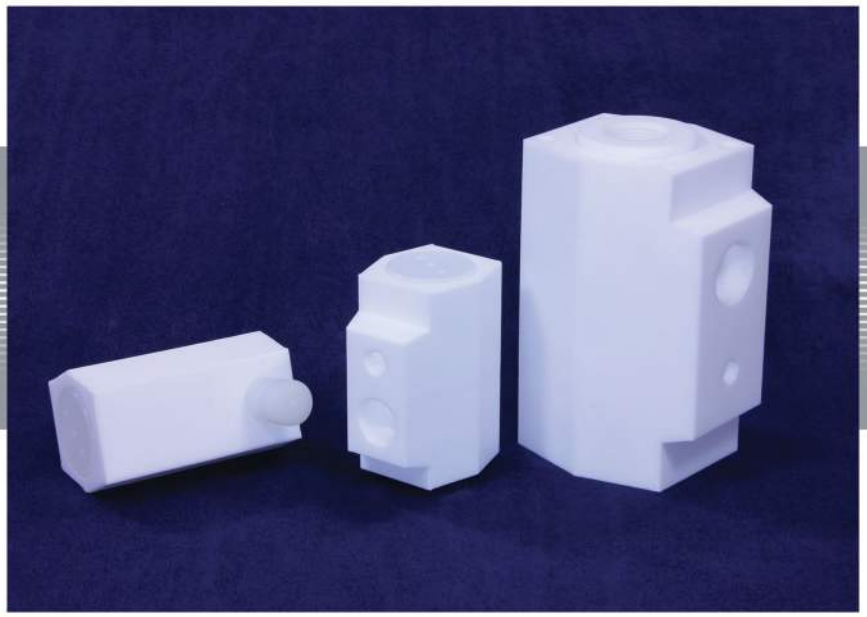


Our **IPS Teflon® Pneumatic Valve** (TP Valve) features an all PTFE wetted surface design. The design is ideally suited for harsh chemical and corrosive media and environments.

Polytetrafluoroethylene (PTFE), commonly known by its popular E.I. DuPont trade name Teflon®, is well suited to clean room and deionized water applications.

Features

- One Piece PTFE Body
- Optimum Anti-Corrosion Design
- Ideal for Hi-Temp Applications
- Complete Media Isolation

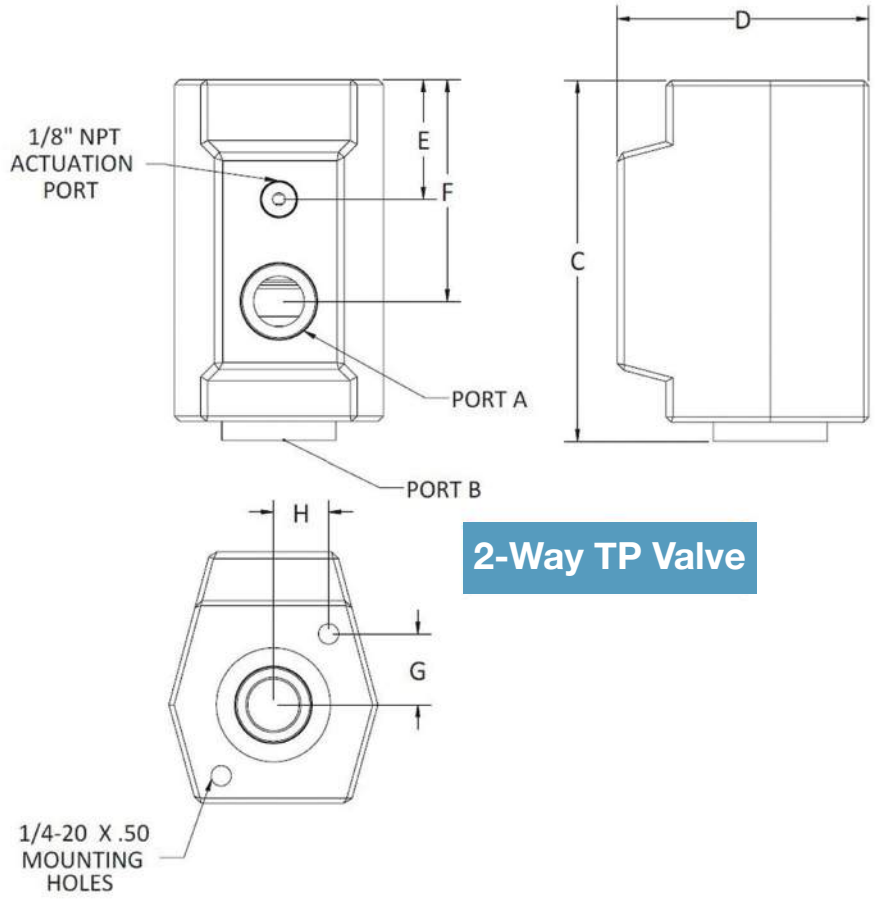
Materials of Construction

Body.....PTFE
Bellows/Poppet.....PTFE
Backing Plate.....PTFE
Piston.....PVDF
Cap.....Polypropylene
Spring.....Stainless Steel

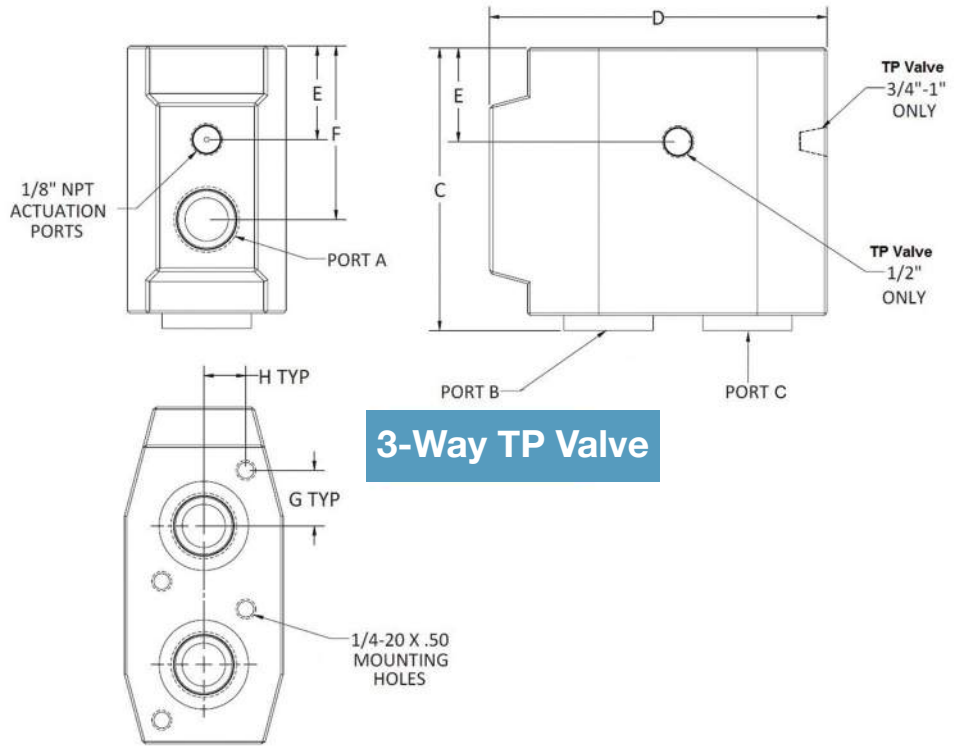
Specifications

Size	1/2" Orfice	3/4" Orfice	1" Orfice
C_V	2.2	2.8	7.5
Max Pressure[2]			
Port A	75 psi	50 psi	50 psi
Port B & C	45 psi	10 psi	10 psi
Actuator Pressure-psi min/max	50 / 80	50 / 80	50 / 80
Max Media Temperature[2]	300° F	300° F	300° F

1. Specifications applicable for both normally open and normally closed configurations.
2. See Pressure vs. Temperature graph for full range.
3. Port C reference for 3-Way only.



2-Way TP Valve

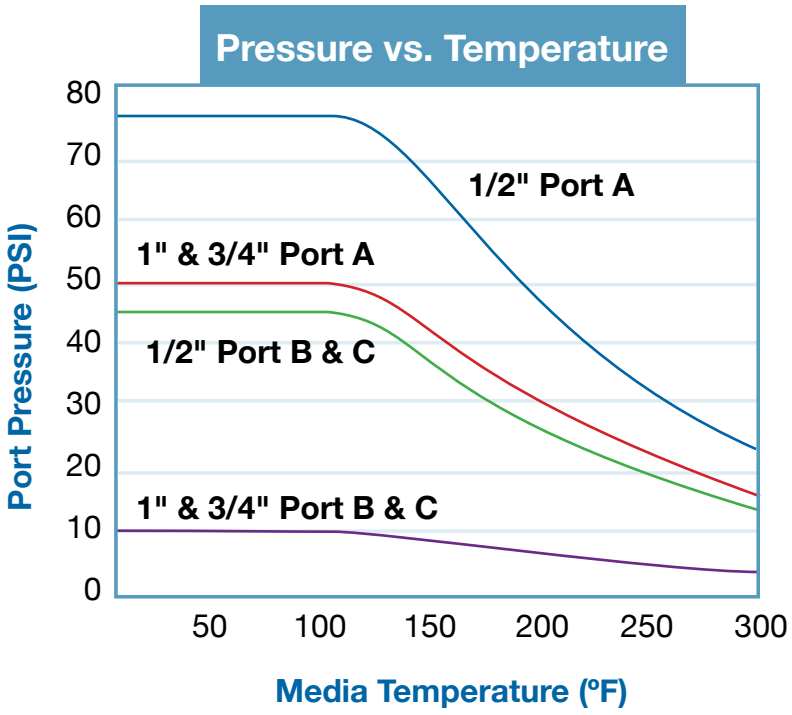


3-Way TP Valve

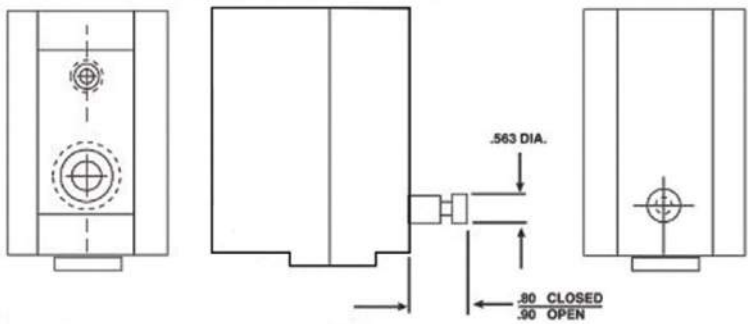
Style	Port A	Port B Port C	C	D	E	F	G	H
2 Way	1/2"	1/2"	3.56	2.48	1.18	2.19	0.70	0.54
2 Way	3/4"	3/4"	5.60	3.53	1.93	3.64	1.21	0.85
2 Way	1.0"	1.0"	5.60	3.53	1.93	3.64	1.21	0.85
3 Way	1/2"	1/2"	3.56	4.25	1.18	2.19	0.70	0.54
3 Way	3/4"	3/4"	5.60	6.00	1.93	3.64	1.21	0.85
3 Way	1.0"	1.0"	5.60	6.00	1.93	3.64	1.21	0.85

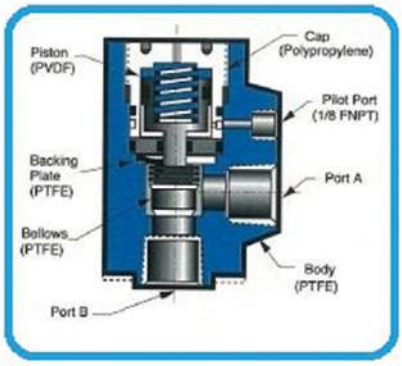
Application Uses:

- Chemical Neutralization
- Chemical Delivery
- DI Water Rinse
- Wafer Etching
- Acid Parts Cleaning
- Phosphoric Acid Nitride Removal
- Sulfuric Peroxide Stripping
- Potassium Hydroxide Etching



AB Option





This style TP Valve offer a continuous metered flow path to reduce the potential of chemical and bacteria build-up. Currently only offered in our 2-Way Normally Closed Port Configuration, the "AB" Option adds a metering screw and bleed bypass across the valve seat. This controlled flow rate maintains a continuous system flow which reduces chemistry and bacteria build-up in both the valve gallery and associated plumbing.

Teflon Pneumatic Valve: ORDERING FORMAT

TP — 2W 8 P — XX RC

Teflon Pneumatic

Ways
2W = 2-Way
3W = 3-Way

Port & Orifice Size
8 = 1/2"
12 = 3/4"
16 = 1"

Port Connection
P = Female Pipe (FNPT)

Flow Options
Restrictive Flow Options are only available for 2Way Valves
RC = Restricted Closure
RO = Restricted Open
RB = Restricted Both (RO + RC)
AB = Anti-Bacteria Feature

Port Configuration
For 2-Way:
C = 2Way Normally Closed
O = 2Way Normally Open
For 3-Way:
CC = Port B Closed & Port C Closed
CO = Port B Closed & Port C Open
OO = Port B Open & Port C Open
OC = Port B Open & Port C Closed

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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international polymer solutions

Suckback Valves

BECO manufacturing

TEQCOM

Our IPS Suckback Valves are ideal for acid, solvent, photoresist solutions and other process dispensed chemistries. The IPS Suckback Valve will pull a vacuum and prevent excessive dripping from the dispensing nozzle.

The IPS Suckback Valve is constructed of an"all wetted" PTFE media flow path.

Our 104168 Suckback Valve incorporates the suckback feature in a Normally Closed pneumatic valve.

When air pressure is removed from the valve actuator, an internal diaphragm is pushed upward which forms a vacuum in the valve body.

While the valve is closing, the vacuum sucks back the final droplets of process media. Thereafter, the valve completely closes and seals the media flow path.

An additional unique feature of the 104168 Suckback Valve is a Vacuum Adjustment Knob which allows the user to set the vacuum level.

Specifications:	
Actuator Pressure (min/max)	45 / 60 psi
Maximum Media Pressure	30 psi
Maximum Media Temperature	185ºF / 85ºC
Maximum Ambient Temperature	140ºF / 60ºC

Suckback Valves: ORDERING FORMAT

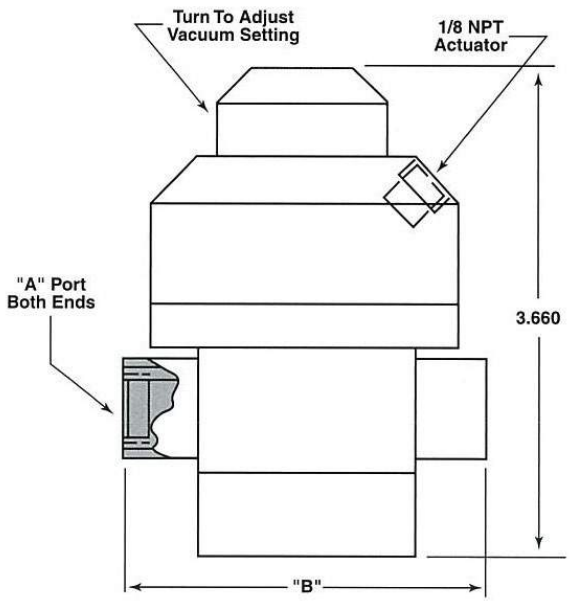
SBV – 104168 – 2 – F

Suckback Valve

Special SBV
combined NC Valve with suck back feature
All orifices are 1/8"

Port Style
F = FNPT
M = MNPT
T = Tube-Compression
FF = Fractional Flared

Port Size
2 = 1/8"
4 = 1/4"
6 = 3/8"



SBV Port Size & Style	104168 ("B")
1/8" FNPT	2.75
1/8" MNPT	2.75
1/8" Tube	2.39
1/4" FNPT	2.75
1/4" MNPT	2.75
1/4" Tube	2.75
1/4" Flared	3.63
3/8" FNPT	2.75
3/8" MNPT	2.75
3/8" Tube	2.63
3/8" Flared	3.63

IPS Product Notes:

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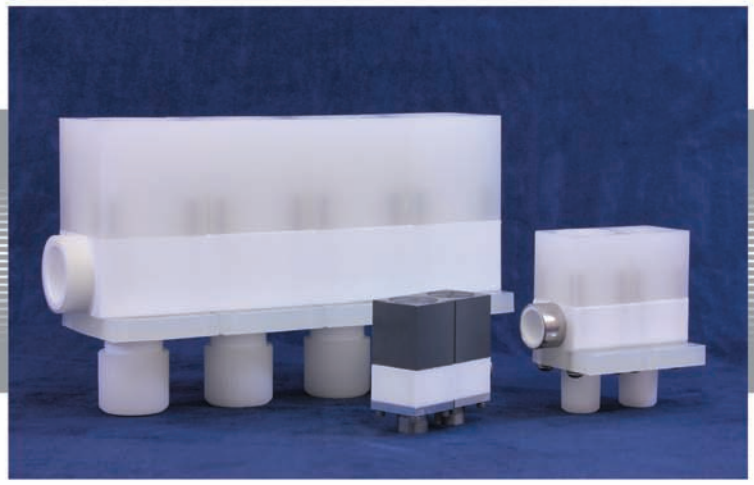
Chemical Resistant Valves

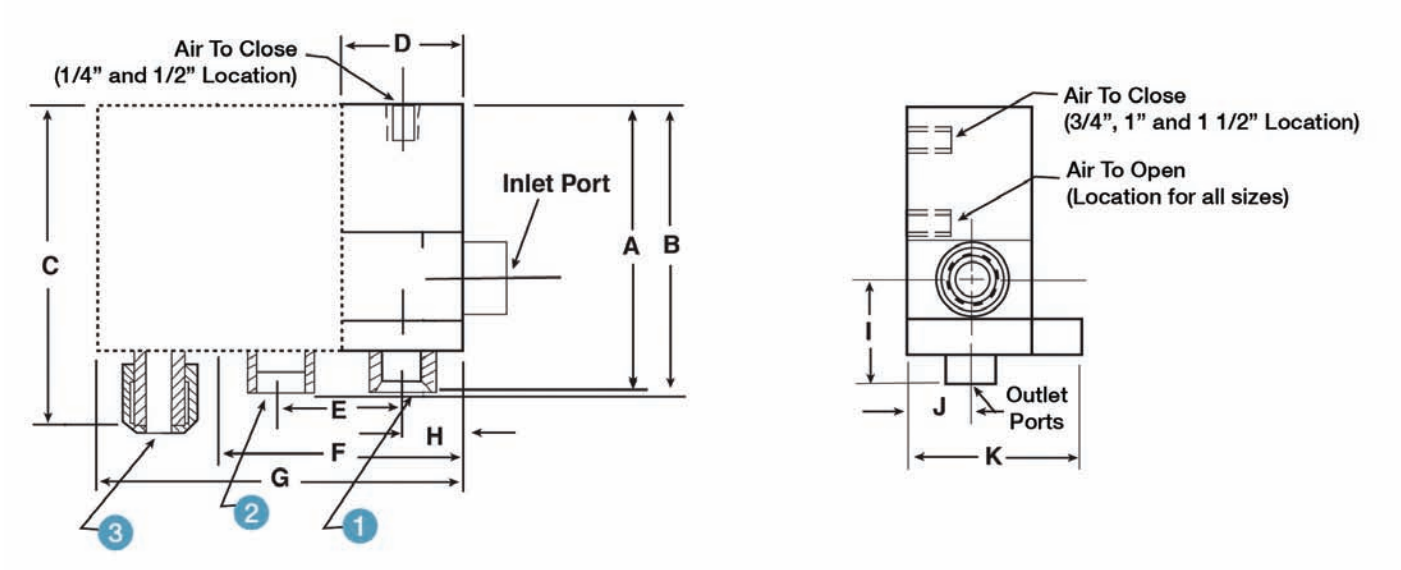
Chemical Resistant (CR) Valves offer chemical and corrosion control through a complete fluoroplastic design and construction. All wetted surfaces are manufactured from virgin PTFE. Pneumatic Actuator, Base and Bands are constructed from PVC (standard). The polymer components selected for our IPS CR Valve line are specifically suited for use with ultrapure water, deionized water, solvents, chemicals and liquid flowing biomatter. Our PTFE Bellows-style valve stem and PTFE valve seat help ensure the valve self-flushes a wide variety of flowing media. Special custom configurations are available on request. These include: manifold valve assemblies with multiple ports and high ambient temperature pneumatic actuators.



Size	¼"	½"	¾"	1"	1 ½"
Cv	0.8	2.8	7.5	13.5	30.0
Flow Rate (GPM @ 60 psi)	4.6	10.7	23	42	94
Max Pressure					
Inlet Port-psi	60	60	60	60	60
Outlet Port-psi	60	50	30	20	10
Actuator Pressure (Min/Max)	40 / 60	40 / 60	50 / 70	50 / 70	40 / 60
Max Media Temperature	240°F	240°F	240°F	240°F	240°F
Max Ambient Temperature	140°F	140°F	140°F	140°F	140°F
Wetted Surfaces	PTFE	PTFE	PTFE	PTFE	PTFE
Actuator / Base / Bands	PVC	PVC	PVC	PVC	PVC
Actuator Port *(see sketch)*	10-32 UNF	1/8"FNPT	1/8"FNPT	1/8"FNPT	1/8"FNPT
Inlet Port (FNPT)	1/4"	1/2"	3/4"	1"	1 1/2"
Outlet Port (FNPT, Tube or Flare)	1/4"	1/2"	3/4"	1"	1 1/2"

BECO manufacturing

TEQCOM



Size	A	B	C	D	E	F	G	H	I	J	K
¼"	3.00	3.00	3.20	1.50	1.50	3.00	4.50	0.75	1.27	0.75	1.50
½"	3.77	4.10	3.95	1.75	1.81	3.56	5.37	0.88	1.38	0.88	2.44
¾"	5.75	5.75	5.88	2.75	2.81	5.56	8.37	1.38	2.25	1.38	3.50
1"	5.75	5.75	5.88	2.75	2.81	5.56	8.37	1.38	2.25	1.38	3.50
1 ½"	6.75	n/a	n/a	3.50	n/a	n/a	n/a	1.75	2.48	1.75	4.50

Chemical Resistant Valves: ORDERING FORMAT

CR – PVC – 4W 8 P O C C

Chemical Resistant

Actuator Material
PVC = Polyvinyl Chloride (ambient T = 140°F)
POL = Polypropylene (ambient T = 160°F)
PVDF = Polyvinylidene Fluoride (ambient T = 230°F)
PEEK = Polyetheretherketone (ambient T = 230°F)
PFA = Perfluoroalkoxy (ambient T = 260°F)

Valve Configuration
2W = 2 Way
3W = 3 Way
4W = 4 Way

Size
4 = ¼"
8 = ½"
12 = ¾"
16 = 1"
24 = 1 ½"

Port Connection
P = FNPT
T = Tube
F = Flare

Port 1 { C = Normally Closed, O = Normally Open }

Port 2 { C = Normally Closed, O = Normally Open }

Port 3 { C = Normally Closed, O = Normally Open }

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call our IPS Factory for special applications. We can manufacture our CR Valves in multiple port distribution manifolds with a common inlet port and up to 14 outlet ports.
3. Upon request, alternate material selection from those listed will allow for expanding temperature ratings.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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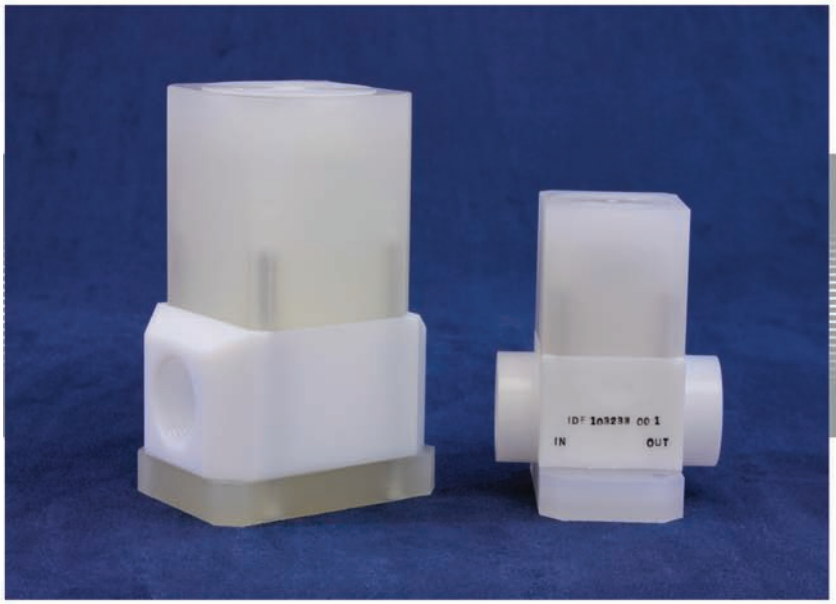
Inline Diaphragm Valves

Our Inline Diaphragm Valves (IDF) features an all wetted PTFE flow path with a diaphragm design for ultra pure service. Common applications include DI Water, Acid Drain, and Source Chemistry flow shutoff.

- The IDF valve is offered in a two-way closed configuration.
- All PTFE wetted flow path
- Long life diaphragm design
- Inline flow path reducing cavity corners & dead spots
- The anti-bacteria (AB) configuration is designated by adding -AB onto the suffix of the model number.

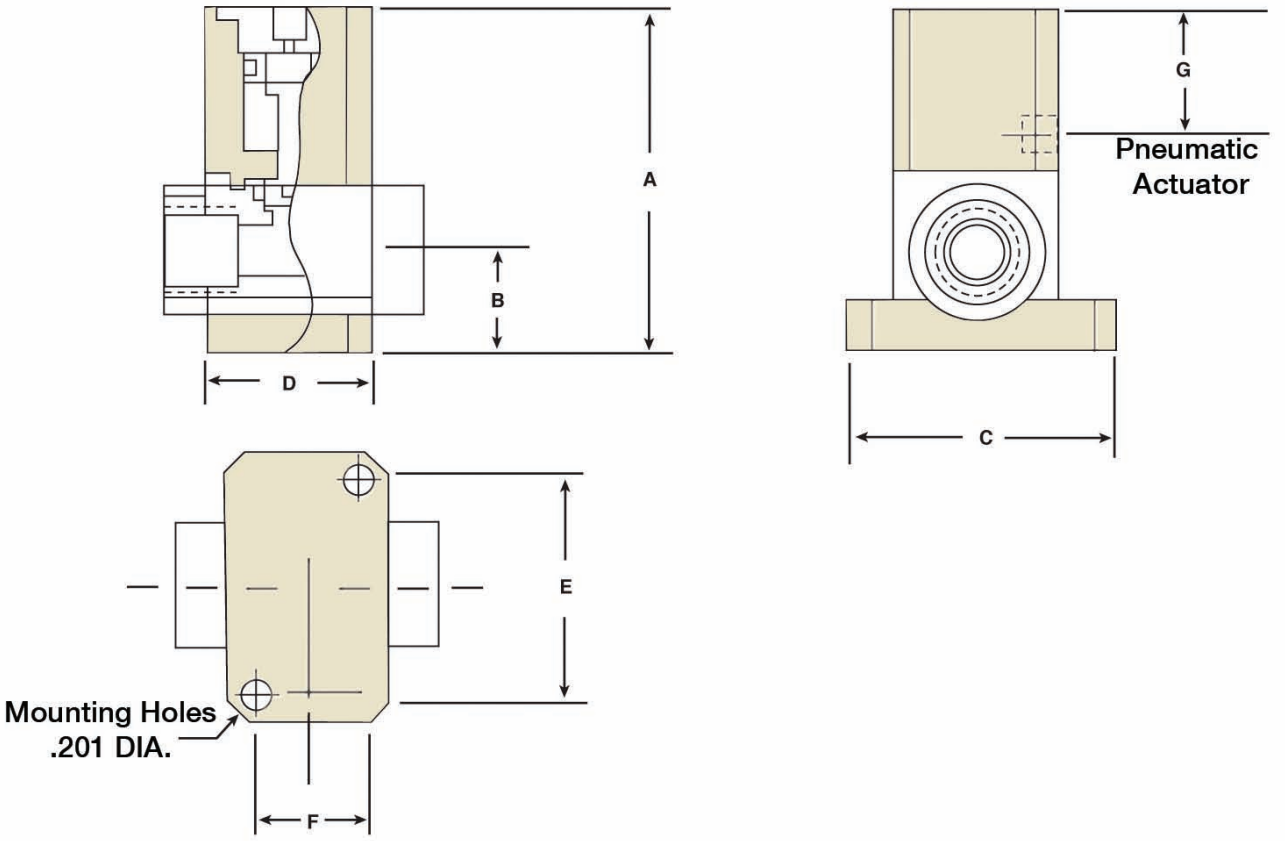
The AB Option (not shown) significantly reduces the potential of bacteria buildup and maintain a consistent flow via an independent mechanism. This control mechanism will allow for precise adjustments and a cleaner cavity.

Custom porting & material configurations are available on request (such as; high ambient temperature actuators, sanitary connections and inline filters).



Specifications

Size	1/2"	3/4"
Cv	2.8	7.5
Max Pressure		
Inlet Port	60 psi	60 psi
Outlet Port	40 psi	40 psi
Actuator Pressure (min./max.)	60 / 80 psi	60 / 80 psi
Max. Media Temperature	300°F	300°F
Max. Ambient Temperature	140°F	140°F
Wetted Surfaces	PTFE	PTFE
Pneumatic Surfaces	Polypropylene	Polypropylene
Inlet Port	1/2"	3/4"
Outlet Port	1/2"	3/4"
Actuator Port	1/8"	1/8"
AB Option: Anti-Bacteria Valve Stem	PVDF	PVDF
AB Option: Adjustment Bleed	0 - .75 GPM	0 - 2.5 GPM



Size	A	B	C	D	E	F	G
1/2"	3.38	1.00	2.75	1.75	2.25	1.125	1.275
3/4"	4.50	1.25	3.25	2.30	2.80	1.225	1.625

Inline Diaphragm Valves: ORDERING FORMAT

IDF – 103233 – 001 – AB

Inline Diaphragm Valve

Port Size
103233 = 1/2"
103188 = 3/4"

End Connection
001 = FNPT
002 = Tube
003 = Flare

Anti-Bacteria (option)

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications.
3. Upon request, alternate material selection from those listed will allow for expanding temperature ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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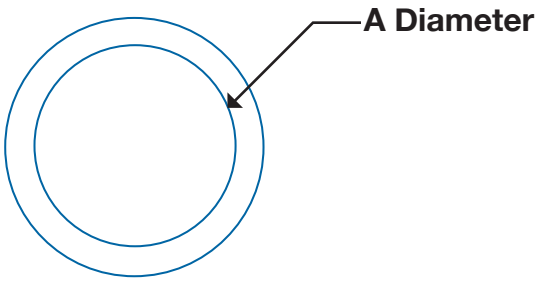
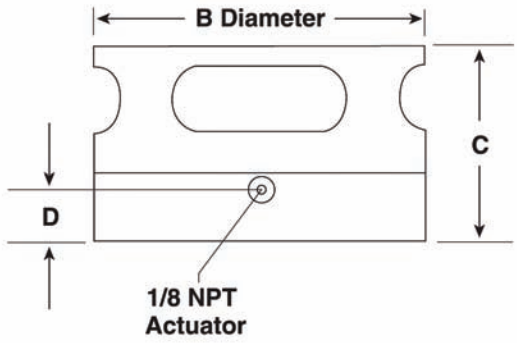
Quick Dump Valves

Our Quick Dump ("QD") Valves are designed to rapidly drain process tanks. Constructed from high-purity polymers, which are selected to meet your applications needs, our Quick Dump Valves are available in Polypropylene (POL), Polyvinylidene Fluoride (PVDF), Perfluoroalkoxy (PFA) or Polyvinyl Choride (PVC). These valves are designed to be welded directly to the underside (bottom) of tanks. Our Quick Dump Valves are available configured with either O-Ring Seats or Domed Hard Seats. The Domed Hard Seat design prevents ponding/puddling of media on the valve piston and allows for a slight trickle of fluid. This plunger-style valve is very compact, while still configured with optional Air-to-Open/Spring-to-Close or Air-to-Open/Air-to-Close actuation.

Quick Dump Configuration	2"	4"	6"
Actuation Pressure – PSI (Min / Max)	60 / 70	45 / 55	15 / 20
Media Temperature			
Polypropylene – °F (Min / Max)	30 / 160	30 / 160	30 / 160
PVDF – °F (Min / Max)	20 / 230	20 / 230	20 / 230
PFA – °F (Min / Max)	20 / 300	20 / 300	20 / 300
PVC – °F (Min / Max)	30 / 140	30 / 140	30 / 140
Approximate Dump Rate (GPM @ 1ft Head)	30	60	180





Size	Seat	Base	A	B	C	D
2"	O-Ring	104520	2"	3"	3.0"	.78"
2"	Hard	104521	2"	3"	3.0"	.78"
4"	O-Ring	103809	4"	5"	3.0"	.80"
4"	Hard	103952	4"	5"	3.0"	.80"
4" (high flow)	O-Ring	104602	4"	5"	4.0"	1.5"
4" (high flow)	Hard	104683	4"	5"	4.0"	1.5"
6"	O-Ring	103951	6"	7.5"	6.6"	2.5"
6"	Hard	104162	6"	7.5"	6.6"	2.5"

Quick Dump Valves: ORDERING FORMAT

O-Ring Seat

QD – 103809 – POL – E – 1

Quick Dump

Base Number
104520 = 2"
103809 = 4"
104602 = 4" *high flow*
103951 = 6"

Material of Construction
POL = Polypropylene
PVDF = Polyvinylidene Fluoride
PFA = Perfluoroalkoxy
PVC = Polyvinyl Choride

Seat & Body O-Ring Type
E = Ethylene Propylene
V = ASTM D1418 FKM (Viton eq.)
K = ASTM D1418 FFKM (Kalrez eq.)

Configuration
1 = Air Open/Spring Close
2 = Air Open/Air Close

Hard Seat

QD – 103952 – POL – E – 1

Quick Dump

Base Number
104521 = 2"
103952 = 4"
104683 = 4" *high flow*
104162 = 6"

Material of Construction
POL = Polypropylene
PVDF = Polyvinylidene Fluoride
PFA = Perfluoroalkoxy
PVC = Polyvinyl Choride

Body O-Ring Type
E = Ethylene Propylene
V = ASTM D1418 FKM (Viton eq.)
K = ASTM D1418 FFKM (Kalrez eq.)

Configuration
1 = Air Open/Spring Close
2 = Air Open/Air Close

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our QD Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperature ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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Drain Valve

BECO manufacturing

TEQCOM

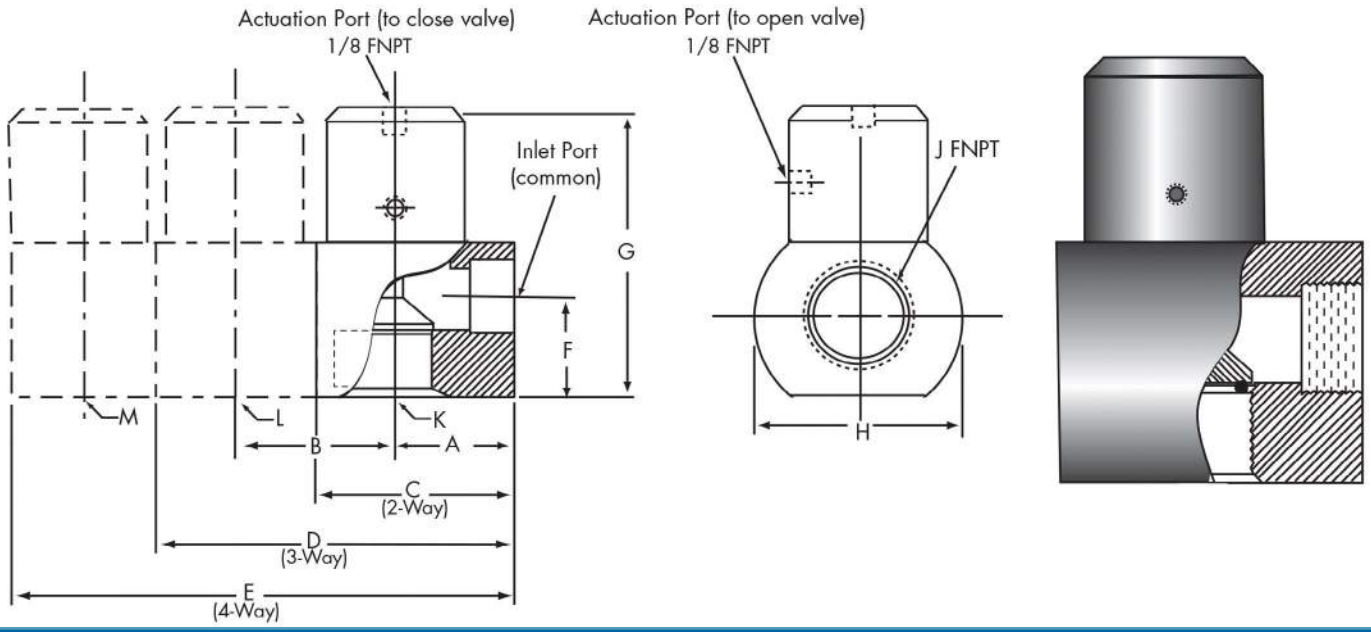
IPS Drain Valve (DV) series is a large orifice valve capable of handling large volumes of corrosive fluids via an all non-metallic wetted surface. For cost efficiency this valve is fabricated from PVC or Polypropylene. However, it is available in PVDF or PTFE, with Kalrez O-rings.

This valve is also available in 2, 3 and 4 way configurations with each port operating independently. The "DV" can be operated either by air to open/air to close or by spring return. Either operating method can be specified in the ordering format. Custom configurations available.

Applications

Primarily used for quick draining and filling of process tanks which contain mild solutions or DI water. For hard to handle media the "DV" valve, machined from PVDF or PTFE, is the perfect solution.

Specifications:	
Inlet Media Pressure	20 psi
Media Temperature	
PVC	140ºF/60ºC
Polypropylene	160ºF/70ºC
PVDF	212ºF/100ºC
PTFE	320ºF/160ºC
Actuation Pressure	45 - 60 psi
O-Ring Material	Ethylene Propylene (standard) Viton or Kalrez® FFKM equiv.



ORIFICE	A	B	C	D	E	F	G	H Dia	J FNPT	K FNPT Port 1	L FNPT Port 2	M FNPT Port 3
3/4"	2.16	2.56	3.50	6.07	8.63	1.79	5.50	4.00	3/4"	3/4"	3/4"	3/4"
1"	2.16	2.56	3.50	6.07	8.63	1.79	5.50	4.00	1"	1"	1"	1"
1.5"	2.31	3.07	3.88	6.88	9.88	1.97	6.06	4.00	1.5"	1.5"	1.5"	1.5"
2"	3.00	3.50	4.81	8.31	11.81	2.28	6.88	5.00	2"	2"	2"	2"

Drain Valve: ORDERING FORMAT

DV 2 – PVC – 16 – C – EP

Drain Valve

Valve Configuration
2 = 2 Way
3 = 3 Way
4 = 4 Way

Material of Construction
PVC = Polyvinyl Chloride
POL = Polypropylene
PVDF = Polyvinylidene Fluoride
PTFE = Polytetrafluoroethylene

Port & Orifice Size
12 = 3/4"
16 = 1"
24 = 1 1/2"
32 = 2"

O-Ring Type
EP = Ethylene Propylene
VT = Viton
KA = Kalrez® FFKM equiv.

Porting Configuration
C = Spring to Close, Air to Open
O = Spring to Open, Air to Close
A = Air to open, Air to Close

4-WAY example:
COA = (C=Port 1, O=Port 2, A=Port 3) shown upper left corner
3-WAY example:
CO = (C=Port 1, O=Port 2) shown upper left corner

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
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Multi Purpose Valve

BECO manufacturing

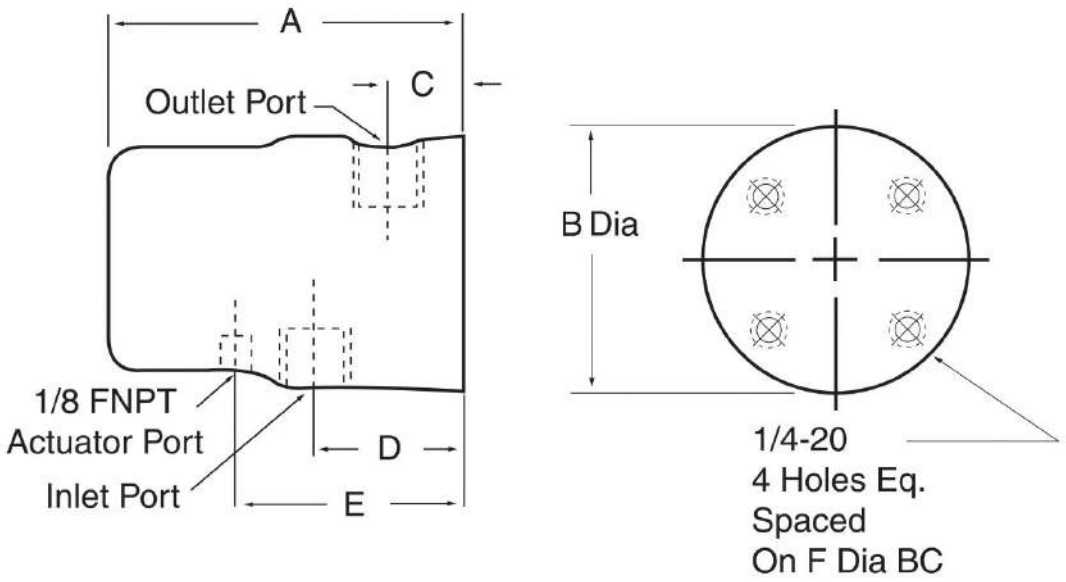
TEQCOM

IPS Multi Purpose Valve (MP) Body is manufactured in three material choices: PVC, Polypropylene, or PVDF depending on the individual application. The PVDF configuration is ideal for anti-corrosion and elevated temperature applications as well as making an excellent acid drain valve.

The PVC, Poly, and PVDF configurations are the choice for wet bench manufacturers and semiconductor facilities where ultra pure DI Water is required.

The IPS unique bellows-stem design completely isolates the pneumatic actuator from the fluid media.

Size	1/2" Orifice	3/4" Orifice	1" Orifice
Cv	2.8	7.5	13.5
Max Pressure			
Inlet Port-psi	75	60	60
Outlet Port-psi	45	10	10
Actuator Pressure-psi (min/max)	40/80	40/80	40/80
Max Media Temperature			
PVC	140ºF	120ºF	120ºF
Poly	160ºF	140ºF	140ºF
PVDF	212ºF	175ºF	175ºF
Max Ambient Temperature			
PVC	140ºF	120ºF	120ºF
Poly	160ºF	140ºF	140ºF
PVDF	212ºF	175ºF	175ºF



Size	Inlet Port	Outlet Port	A	B	C	D	E	F
1/2"	1/2" FNPT	1/2" FNPT	3.40	2.75	0.650	1.337	2.345	2.00
3/4"	3/4" FNPT	3/4" FNPT	4.85	4.00	1.000	2.160	3.465	3.00
1"	1" FNPT	1" FNPT	4.85	4.00	1.000	2.160	3.465	3.00

Multi Purpose Valve: ORDERING FORMAT

MP – PVC – 88P – C – RC

Multi Purpose Valve

Material of Construction
PVC = Polyvinyl Chloride
POL = Polypropylene
PVDF = Polyvinylidene Fluoride

Port & Orifice Size
88 = 1/2"
1212 = 3/4"
1616 = 1"

Optional Flow Path
RC = Restricted Closure
RO = Restricted Opening
RB = Restricted Both
AB = Anti-Bacteria (Bypass)

Porting Configuration
C = Normally Closed
O = Normally Open

Port Connection
P = FNPT
S = Socket
FF = Flared

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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Water Valve

BECO manufacturing

TEQCOM

IPS Water Valve (WV) is manufactured in three material choices: PVC, Polypropylene, or PVDF. The valve has a spring return and is pneumatically actuated to open or close depending upon the model.

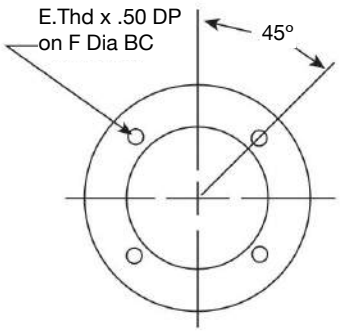
The valve is compact and comes with four tapped holes on the base for ease of mounting.

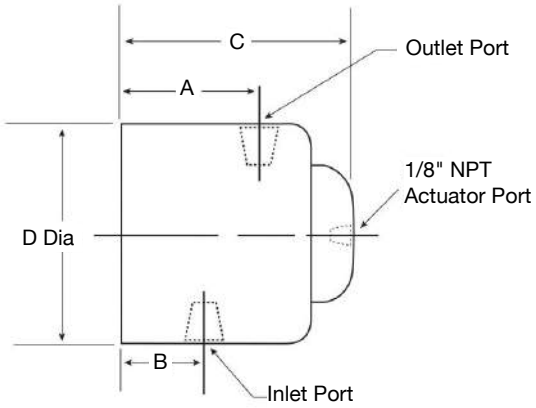
Applications

The IPS Water Valve is primarily used for purified water applications, DI water applications and controlled process tank applications. The Polypropylene and PVDF configurations of this valve can be used for numerous mild chemical applications. These include rinsing, blending, and other pneumatically controlled process applications. Call IPS Customer Service for assistances with your chemistry and environmental conditions.

Specifications

Size	1/4" Orifice	1/2" Orifice	3/4" Orifice	1" Orifice
Cv	0.8	2.8	7.5	13.5
Max Pressure Inlet	80 psi	80 psi	60 psi	60 psi
Max Media Temperature				
PVC		140ºF / 60ºC		
Poly		160ºF / 70ºC		
PVDF		212ºF / 100ºC		
Actuator Pressure (min/max)		35 / 70 psi		





Size	A	B	C	D Dia	E Thd	F Dia
1/4"	1.520	1.000	2.440	2.25	1/4" - 20 UNC-2B	1.81
1/2"	1.690	.955	2.780	2.75	1/4" - 20 UNC-2B	2.00
1/2"	1.146	1.146	2.250	2.75	1/4" - 20 UNC-2B	2.00
3/4"	2.280	1.330	3.660	3.00	1/4" - 20 UNC-2B	2.50
1"	3.825	1.685	4.425	4.00	1/4" - 20 UNC-2B	3.44

= Low Profile (in line) water valve

Water Valve: ORDERING FORMAT

WV — PVC — 44P — NC — EP — AST*

Water Valve

Material of Construction
PVC = Polyvinyl Chloride
POL = Polypropylene
PVDF = Polyvinylidene Fluoride

Port & Orifice Size
44 = 1/4" 1212 = 3/4"
88 = 1/2" 1616 = 1"

O-Ring Type
EP = Ethylene Propylene
VT = Viton
KA = Kalrez

Valve Configuration
NC = Normally Closed
NO = Normally Open

Port Type
P = FNPT
S = Socket
FF = Flared

IWC	PVC	2C8	EP
INLINE (Low Profile) WATER VALVE	Materials of Construction PVC = Polyvinyl Chloride POL = Polypropylene PVDF = Polyvinylidine Fluoride	Valve Configuration 1/2" 2 Way Normally Closed	O-Ring Type EP = Ethylene Propylene VT = Viton KA = Kalrez

***Optional Flow Path:**
AST = Reduce bacterial buildup with an Adjustment Screw Top-side. The adjustment screw, installed at the top of valve, prevents complete closure thereby allowing a controlled drip. Ideal for DI Water applications.
ASB = Create a metering effect with an Adjustment Screw Bottom-side. The adjustment screw, installed at the bottom of the valve, meters the orifice opening.
ATB = Combine both optional features into one valve (AST + ASB) with Adjustment Screws Top-side & Bottom-side for both controlled drip and orifice metering.

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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DI Water Valve

IPS DI Water Valves are perfect 2-Way valvest for wet bench manufactures or any semiconductor facility where ultra pure water is required.

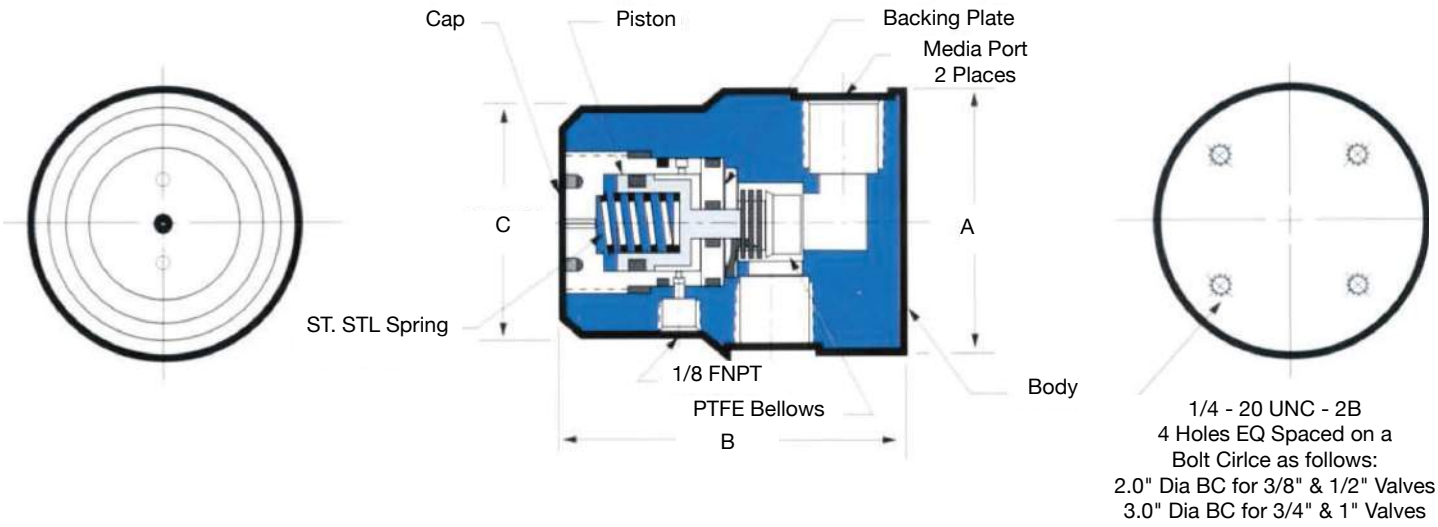
Wetted Path is free of...

- Lubricants
- Elastomers
- Springs

Our IPS DI Valve materials of construction include three options for the Body, Piston and Cap Assembly: PVC, Polypropylene or PVDF. For the highest level of chemical inertness and overall fluid handling performance all three configurations include 100% Virgin PTFE for the Bellows and Backing Plate construction.

O-Ring Seal options include EP or Viton. All DI Valve come standard with high performance Stainless Steel actuation springs.

DI Valve Specifications	PVC Model	Polypro Model	PVDF Model
Valve Type	2-Way NO or NC	2-Way NO or NC	2-Way NO or NC
Port & Orifices Available	3/8", 1/2", 3/4" & 1"	3/8", 1/2", 3/4" & 1"	3/8", 1/2", 3/4" & 1"
Fluid Max Pressure (psi) @ 70ºF	75 psi	75 psi	75 psi
Media Backpressure (psi) @ 70ºF	30 psi	30 psi	30 psi
Fluid Temperature Range	38ºF to 140ºF	38ºF to 160ºF	38ºF to 200ºF
Ambient Temperature Range	38ºF to 140ºF	38ºF to 140ºF	38ºF to 140ºF
Acuation Pressure (psi)	40 psi to 80 psi	40 psi to 80 psi	40 psi to 80 psi



Port & Orifice	Cv Factor	Dim "A"	Dim "B"	Dim "C"
3/8"	2.1	2.75	3.56	2.38
1/2"	2.8	2.75	3.56	2.38
3/4"	7.5	4.00	6.13	3.31
1"	13.5	4.00	6.13	3.31

DI Water Valve: ORDERING FORMAT

DI PVC — 66P — O — REC

D.I. Water Valve

Material of Construction
PVC = Polyvinyl Chloride
POL = Polypropylene
PVDF = Polyvinylidene Fluoride

Port & Orifice Size
66 = 3/8"
88 = 1/2"
1212 = 3/4"
1616 = 1"

Optional Flow Path
MA = Micro Adjust (standard screw drive adjust)
MAH = Micro Adjust Knob/Hand turn adjust
REC = Restricted Closed
REB = Restricted Both
REO = Restricted Open

Valve Configuration
O = Normally Open
C = Normally Closed

End Connection
P = FNPT
S = Socket Weld

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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H20 - Pneumatic & Foot Operated Valves

Our **H20 Valves** are manufactured from corrosion resistant materials such as PVC, Polypropylene and PVDF. Each model is a spring return air actuated design where the spring is isolated from the flowstream by a diaphragm to prevent media contamination.

The **Polypropylene** configurations are ideal for DI water service.

The **PVDF** models with Kalrez® O-rings are used for harsh chemical applications.

Options

Foot Valve
Manual Foot actuated style is available. To order add "FV" to the suffx of part number.

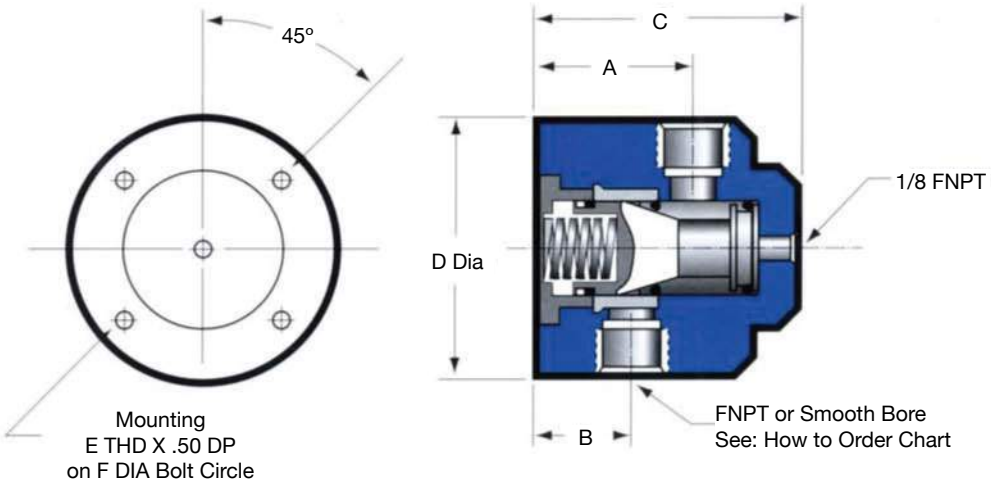
Anti-Bacterial
An Adjusting Screw is installed at the top of valve. Clockwise screw rotation prevents complete valve closure thereby allowing a controlled drip. To order add "REC" to suffix of part number.

Meter Effect
An Adjusting Screw is installed at the valve base. Clockwise rotation will decrease the orifice opening. Used to meter the fluid flow. To order add "REB" to suffix of part number.

Max Media Pressure	
1/4", 1/2" size	80 PSI
3/4", 1" size	60 PSI

Max Media Temperature	
PVC	140°F / 60°C
Polypropylene	160°F / 70°C
PVDF	212°F / 100°C

Acuation Pressure
Range
35 - 75 PSI



Orifice Size	A	B	C	D DIA	E THD	F DIA
1/4"	1.625	1.125	2.56	2.00	8-32 UNC-2B	1.75 DIA BC
1/2"	1.690	0.985	2.78	2.75	1/4-20 UNC-2B	2.00 DIA BC
3/4"	2.280	1.330	3.66	3.00	1/4-20 UNC-2B	2.50 DIA BC
1"	3.250	1.950	4.88	4.00	1/4-20 UNC-2B	3.44 DIA BC

HOW TO ORDER

TA – PVC – 44P NC – EP – REC

Material
PVC = Polyvinyl Chloride
POL = Polypropylene
PVDF = Polyvinylidene Fluoride

Port Size
44 = 1/4"
66 = 3/8"
88 = 1/2"
1212 = 3/4"
1616 = 1"

Port Type
P = FNPT
S = Socket Weld
FF = Flared

Valve Configuration
NC = Normally Closed
NO = Normally Open

O-Ring Material Type
EP = Ethylene Propylene
VT = Viton
KA = Kalrez®

Optional Flow Path
REC = Restricted Closed
REB = Restricted Both (Metering Effect)

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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Manual Valves

IPS

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PTFE Ball Valve

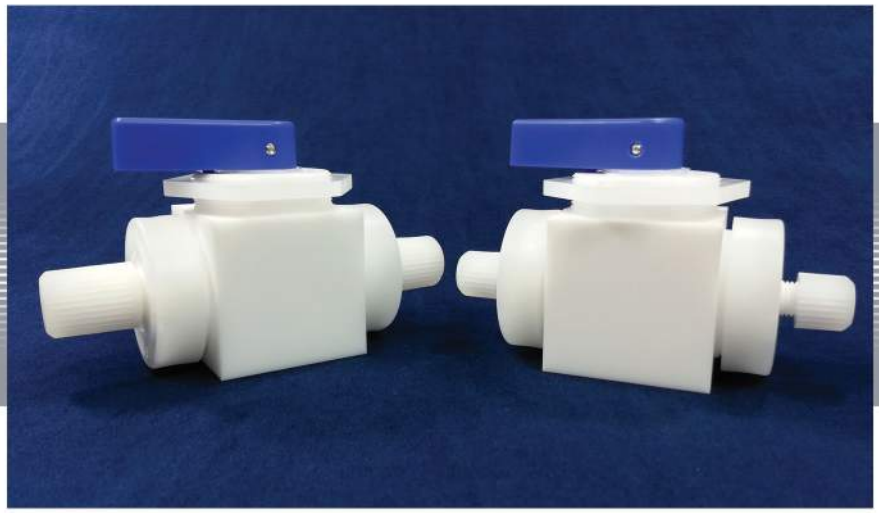
Our **IPS Ball Valve** features an all PTFE wetted surface design. The design is ideally suited for harsh chemical and corrosive media and environments.

Polytetrafluoroethylene (PTFE), commonly known by its popular E.I. DuPont trade name TEFLON®, is also well suited to clean room and deionized water applications.

The body, stem, ball and ports are constructed from PTFE. For standard applications, external non wetted components are constructed from Natural PVDF and Polypropylene.

Contact IPS for special applications, including high ambient temperatures and corrosive atmospheres.

Metric sizes are available upon request.

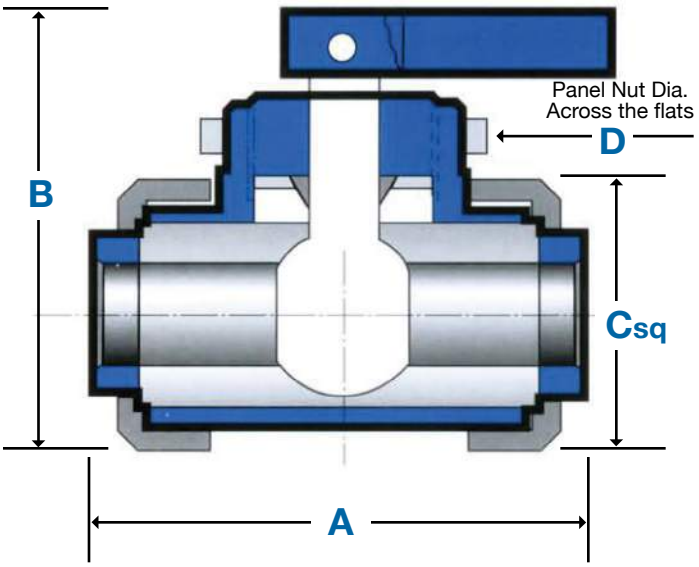


Features:

- PTFE construction for media wetted surfaces.
- Reliable low torque manual operation.
- Quarter Turn with Positive Stops.
- Design accommodates partial open position for metered flow.
- All models can be specified panel mounted (-PM).
- All models can be specified high ambient temperature (-HT)

Specification:

Standard Port Configurations	1/4 • 3/8" • 1/2" • 3/4" • 1"
Connection Types	Female NPT • Tube • Flared
Media Operating Pressure	120 psi max • 25 in Hg vacuum
Media Operating Temperature	320°F (160°C) max • 32°F (0°C) min
Ambient Temperature	150°F (65°C) max • 32°F (0°C) min



Product Configuration	A	B	C	D
1/4" FNPT	3.24	3.18	2.00	2.00
1/4" Tube	4.00	3.18	2.00	2.00
1/4" Flare	5.24	3.18	2.00	2.00
3/8" FNPT	3.24	3.18	2.00	2.00
3/8" Tube	4.00	3.18	2.00	2.00
3/8" Flare	5.24	3.18	2.00	2.00
1/2" FNPT	3.24	3.18	2.00	2.00
1/2" Tube	4.24	3.18	2.00	2.00
1/2" Flare	5.44	3.18	2.00	2.00
3/4" FNPT	4.14	4.06	2.75	2.75
3/4" Tube	5.38	4.06	2.75	2.75
3/4" Flare	6.64	4.06	2.75	2.75
1" FNPT	4.14	4.06	2.75	2.75
1" Flare	7.12	4.06	2.75	2.75

PTFE Ball Valves: ORDERING FORMAT

BV – x – x – PM – HT

Ball Valve

Port Size
44 = 1/4"
66 = 3/8"
88 = 1/2"
1212 = 3/4"
1616 = 1.0"

High Ambient Temp (option)
Temperatures up to 240°F

Panel Mount (option)

End Connections
P = FNPT
T = Tube
F = Flared

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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PTFE Stopcocks

Stopcock Valves are precision machined devices that function in much the same way as a ball valve. When the handle points in the direction of flow, the valve is fully open; when the handle points perpendicular to the direction of flow, the valve is fully closed; and at the 45° position the valve is halfway open and thereby has a metering effect on the media flow.

The IPS Stopcock features an all PTFE wetted surface design. The design is ideally suited for harsh chemical and corrosive media and environments. Polytetrafluoroethylene (PTFE), commonly known by its popular E.I. DuPont trade name TEFLON®, is also well suited to clean room and deionized water applications.

The body, stem and ports are constructed from PTFE. For standard applications, external non wetted components are constructed from Polypropylene. All configurations are optionally available as Panel Mounted and/or High Ambient Temperature models.

Stopcock Specifications

Media Pressure	60 psi
Media temperature	110° C / 230° F
Ambient temperature	65° C / 150° F
Sealing	Bubble Tight
All Wetted Surfaces	Virgin PTFE

Call IPS for:

- Metric Tube End options
- Male Pipe End options
- Sanitary Connection options

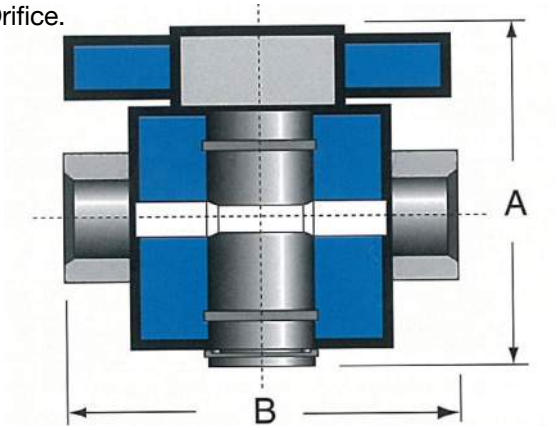
BECO manufacturing

TEQCOM

Stopcock Valve: ORDERING FORMAT

- Stem Type must be specified for all 3-Way Stopcock Valves (-3T or -3L).
- 4-Way Stopcock Valves are available. Please call IPS to properly configure your selection.
- The valve flow orifice is governed by your port end connections (FNPT, Tube or Flared) unless requested otherwise. Please call IPS to configure a restrictive Valve Stem Orifice.

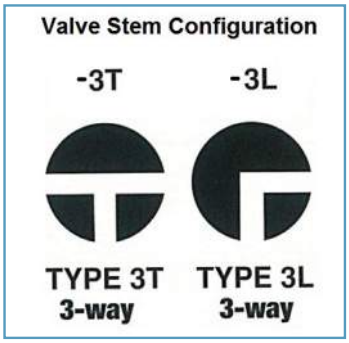
Part No.	Body Style	Connection
SC-200	2-way	1/16" Tube
SC-201	3-way	1/16" Tube
SC-400	2-way	1/8" FNPT
SC-401	3-way	1/8" FNPT
SC-403	2-way	1/8" Tube
SC-404	3-way	1/8" Tube
SC-409	2-way	1/4" FNPT
SC-410	3-way	1/4" FNPT
SC-412	2-way	1/4" Tube
SC-413	3-way	1/4" Tube
SC-500	2-way	1/4" FNPT
SC-501	3-way	1/4" FNPT
SC-503	2-way	1/4" Tube
SC-504	3-way	1/4" Tube
SC-506	2-way	1/4" Flared
SC-507	3-way	1/4" Flared
SC-600	2-way	3/8" FNPT
SC-601	3-way	3/8" FNPT
SC-609	2-way	3/8" Tube
SC-610	3-way	3/8" Tube
SC-612	2-way	3/8" Flared
SC-613	3-way	3/8" Flared
SC-700	2-way	1/2" FNPT
SC-701	3-way	1/2" FNPT
SC-709	2-way	1/2" Tube
SC-710	3-way	1/2" Tube
SC-712	2-way	1/2" Flared
SC-713	3-way	1/2" Flared
SC-800	2-way	3/4" FNPT
SC-801	3-way	3/4" FNPT
SC-809	2-way	3/4" Tube
SC-810	3-way	3/4" Tube
SC-812	2-way	3/4" Flared
SC-813	3-way	3/4" Flared



Basic Dimensions

Series	Dim A	Dim B	Dim C	Dim D
200	1.4	1.5	1.0	1.2
400	1.7	1.9	1.0	1.6
500	1.9	2.3	1.2	2.0
600	2.0	2.4	1.2	2.1
700	3.5	3.8	1.5	3.5
800	3.5	3.8	2.3	3.5

- For Panel Mount add 1" to the above Dim A values.
- Dim C is the width of the 2-Way valve body.
- Dim D is the width of the 3-Way valve body & 3rd port.
- For Flared Connections add ~3/8" per port.



Example Part No.:
SC-501-3T
SC-501-3L-P
SC-501-3T-P-HT

Options:

- Add "-P" to the end of the Part Number to specify a Panel Mount configuration.
- Add "-HT" to the end of the Part Number for high ambient temperature conditions. This is only required for room temperatures above 140°F. The external non wetted components are changed to PVDF.

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
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Metering Valve

BECO manufacturing

TEQCOM

IPS Metering Valve (MV) use a tapered plug-stem to give a fine adjustment to the flow in addition to a full, open, or positive shutoff postition.

Our Metering Valves come in two configurations: Straight Flow Pattern (standard) and Angled Flow Pattern (special). IPS Metering Valves are considered low pressure valves.

The PTFE all-wetted surface design works equally well with ultra clean DI water and harsh chemical media. As with all Metering Valves, we recommend filtering the media prior to entering the valve.

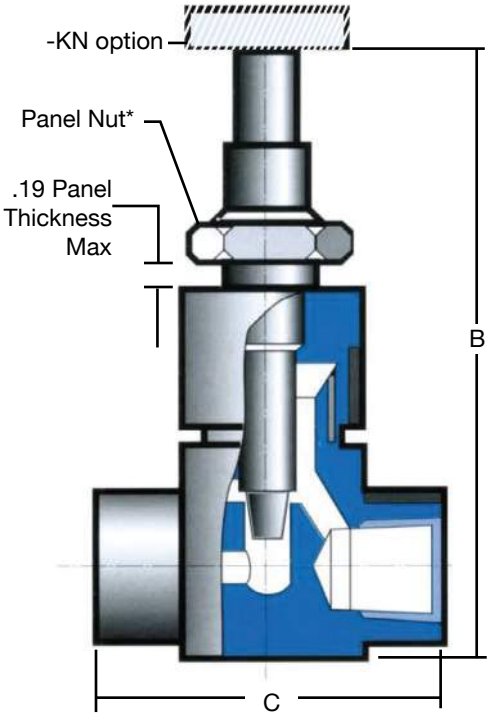
Specifications:

Media Pressure	25 in HG to 60 psi maximum
Media Temperature	-30ºC (-22ºF) to 110ºC (230ºF)
Ambient Temperature	-18ºC (0ºF) to 80ºC (176ºF)

Metering Valve Flow Characteristics:

Metering Valve Orifice	Maximum Flow H2O (gpm)	Maximum Flow Air (scfm)	Turns Full Open Valve
0.094” Orifice	0.67	3.90	5 ±1
0.125” Orifice	1.37	8.10	5 ±1
0.188” Orifice	2.73	14.03	10 ±1
0.250” Orifice	2.90	15.19	10 ±1
0.313” Orifice	9.77	52.04	10 ± 1
0.375” Orifice	11.33	61.52	10 ±1
0.438” Orifice	20.33	106.88	10 ±1
0.500” Orifice	22.19	112.76	10 ±1

H2O & Air Flow based on nominal 70°F DI Water & Shop Air at 50 psi



*Stem Style Adjustment Knob supplied with the panel mount version. This is the standard Metering Valve configuration.

-KN Option is a large Diameter Knob. The unit is not panel mountable. See photo for difference.

Metering Valve: ORDERING FORMAT

MV – 22 P – A – KN

- **MV** — **Metering Valve**
- **22** — **Port & Orifice Size**
- **P** — **Port Configuration**
  - P = Pipe Female NPT
  - T = Tube
  - FF = Fractional Flared
  - M = Pipe Male NPT
- **A** — **Orientation**
  - A = Straight Flow Pattern
  - B = Angled Flow Pattern
- **KN** — **Optional Large Diameter Knob**

Porting w/ Max Orifice

		Straight		Angled	
PIPE		**B**	**C**	**B**	**C**
22	1/8” FNPT & 0.125” Orifice	3.04	1.50	3.42	1.13
44	1/4” FNPT & 0.250” Orifice	3.16	2.00	3.60	1.44
66	3/8” FNPT & 0.375” Orifice	4.79	2.75	5.35	2.19
88	1/2” FNPT & 0.500” Orifice	5.04	3.13	5.79	2.38
TUBE		**B**	**C**	**B**	**C**
21	1/8” TUBE & 0.094” Orifice	3.04	1.50	3.42	1.13
43	1/4” TUBE & 0.188” Orifice	3.16	2.00	3.60	1.44
65	3/8” TUBE & 0.313” Orifice	4.79	2.75	5.35	2.19
87	1/2” TUBE & 0.436” Orifice	5.04	2.75	5.79	2.19
FLARE		**B**	**C**	**B**	**C**
42	1/4” FLARE & 0.125” Orifice	3.16	2.88	4.04	1.88
64	3/8” FLARE & 0.250” Orifice	5.22	3.62	5.79	2.62
86	1/2” FLARE & 0.375” Orifice	5.22	3.82	6.14	2.72

If you do not find your configuration available please call the IPS factory

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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Precision Plug Valve

The **IPS Precision Plug Valve (PPV)** is a precision machined manual valve manufactured from 100% virgin PTFE (all wetted surfaces) and PVDF Stem Nut. The PTFE body and stem perform equally well with harsh chemicals and ultra clean DI water.

The basic construction is a single through orifice with a tapered body that matches the tapered plug for positive shut-off.

Various orifice and port sizes are available as standard items. Other sizes and configurations are available on request.

Our Precision Plug Valve are supplied in two configurations:

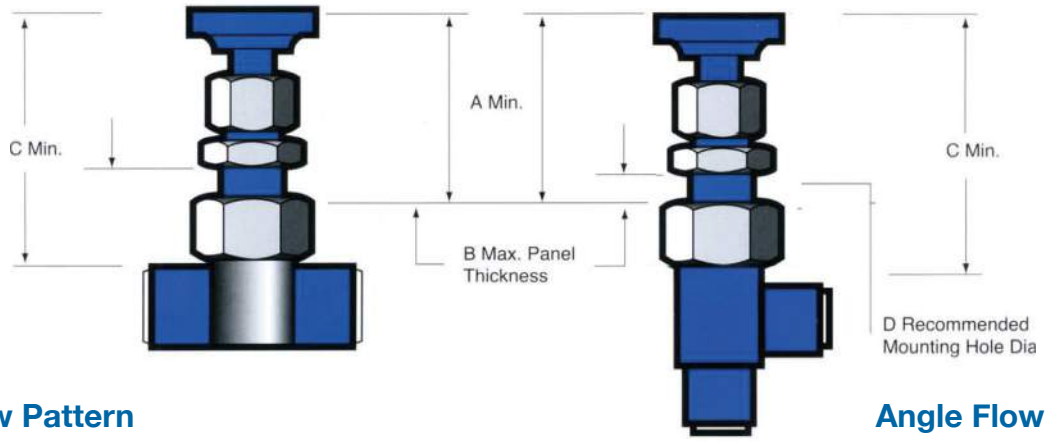
- Straight Flow Pattern ("A" = standard)
- Angled Flow Pattern ("B" = special)

Specification:

Operating Pressure	0 – 60 psi	
Temperature Range	Line Media:	-55°C to + 100°C (-67°F to + 212°F)
	Ambient:	-55°C to + 71°C (-67°F to + 160°F)
Leak Rating	Bubble Tight	

PPV DIMENSIONS

PPV Port Size	A	B	C	D
1/8 & 1/4	2.13"	0.19"	2.75"	0.75"
3/8 & 1/2	2.19"	0.31"	2.88"	0.81"



Straight Flow Pattern
("A" = standard)

Angle Flow Pattern
("B" = special)

Precision Plug Valve: ORDERING FORMAT

PPV – X X X – X

Porting w/ Max Orifice

PIPE	
22	1/8" FNPT & 0.125" Orifice
44	1/4" FNPT & 0.250" Orifice
66	3/8" FNPT & 0.375" Orifice
88	1/2" FNPT & 0.500" Orifice
TUBE	
21	1/8" TUBE & 0.063" Orifice
43	1/4" TUBE & 0.188" Orifice
65	3/8" TUBE & 0.313" Orifice
87	1/2" TUBE & 0.436" Orifice
FLARE	
42	1/4" FLARE & 0.125" Orifice
64	3/8" FLARE & 0.250" Orifice
86	1/2" FLARE & 0.375" Orifice

Model Designation
A - Straight Pattern Valve
B - Angle Body Valve

End Connections
P = FNPT
T = Tube
FF = Fractional Flared

Orifice (in)	GPM H2O at 22°C	Air CFM at 20 psi
0.063	1.0	4.2
0.125	1.6	7.1
0.188	2.1	9.2
0.250	2.6	9.3
0.313	3.0	11.1
0.375	3.4	12.8

PPV valves have a 6 (+/-1) Manual Turn Range

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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Other Flow Devices

IPS
international polymer solutions

Check Valves

BECO manufacturing

TEQCOM

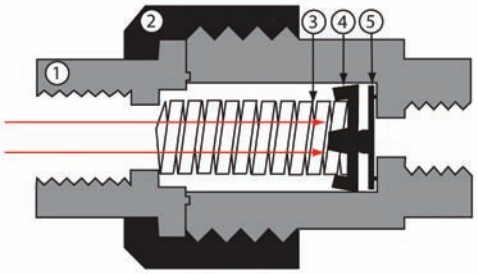
Our **IPS Check Valve** feature all PTFE wetted surfaces for excellent performance in all high purity applications. Our PTFE design resists chemical corrosion and other elements within a harsh process environments.

IPS Check Valves are commonly found as backflow preventers in clean processes. They are a simple and ideal device where directional flow control is a must.

Depending on the check valve size selected and cracking pressure, some external non-wetted components may include Polypropylene or PVDF. The special internal control spring for 3 psi to 6 psi (nominal 5 psi) cracking pressure is machined virgin PTFE. Whereas, for higher cracking pressures the spring construction is doubled Teflon Coated Stainless Steel precision ground.

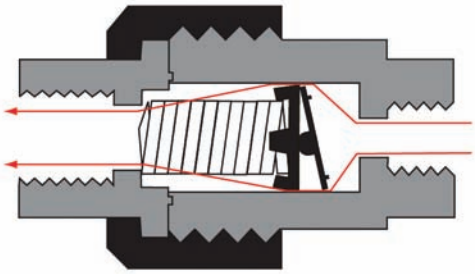
Please contact us with your special application requirements. Special PEEK, PVDF and Polypro configurations are available upon request.

Stop Flow



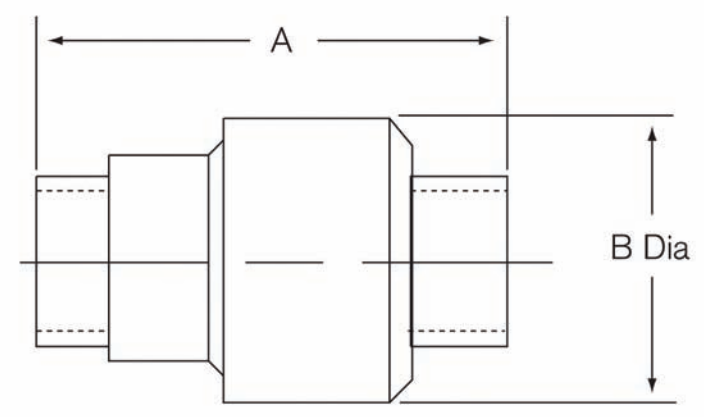
1. Body
2. Nut
3. Spring
4. Diffuser
5. Poppet

Through Flow



Specifications

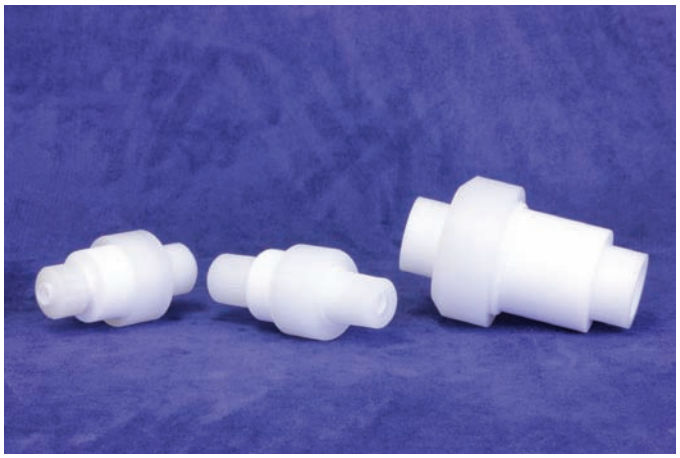
	- 05	- 10	- 20
Cracking Pressure	3 psi to 6 psi	7 psi to 13 psi	17 psi to 23 psi
Max Operating Pressure	50 psi	50 psi	50 psi
Media Temperature	230° F / 110° C	230° F / 110° C	230° F / 110° C
Ambient Temperature	140° F / 60° C	140° F / 60° C	140° F / 60° C



Custom configurations are available

Inlet & Outlet Port Size	A*	B
2	2.13	1.25
4	2.49	1.25
6	2.75	1.75
8	3.13	1.75
12	4.40	2.75
16	4.95	2.75

*Tube and Flare ends slightly longer



Check Valve: ORDERING FORMAT

*Orifice Size cannot be larger than Inlet & Outlet Port Size

CV – 2 – 2 – P – 05

Check Valve

Orifice Size*
2 = 1/8"
4 = 1/4"
6 = 3/8"
8 = 1/2"
12 = 3/4"
16 = 1"

Inlet & Outlet Size
2 = 1/8"
4 = 1/4"
6 = 3/8"
8 = 1/2"
12 = 3/4"
16 = 1"

End Connection
P = FNPT
T = Tube
F = Flared
M = MNPT

Cracking Pressure
05 = 3 psi to 6 psi
10 = 7 psi to 13 psi
20 = 17 psi to 23 psi

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications.
3. Upon request, alternate material selection from those listed will allow for expanding temperature ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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Dilution Drain Valves

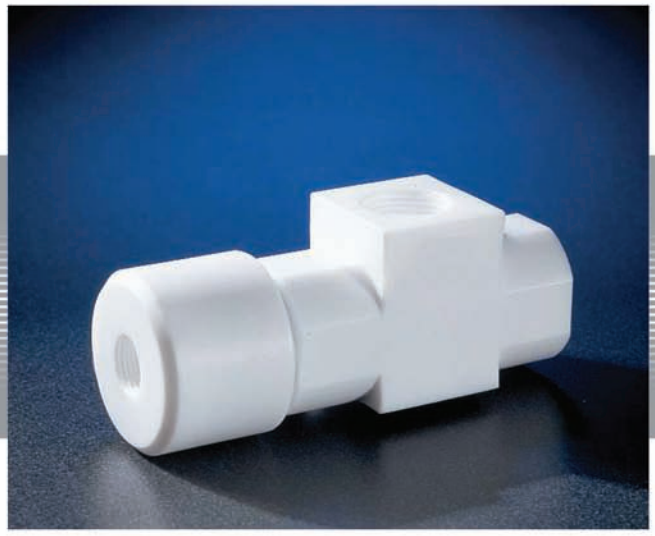
BECO manufacturing TEQCOM

The **Dilution Drain Valve** is ideal for cooling and diluting solutions while draining. The valve is designed to shut off the drain automatically if the water flow is interrupted. The DDV fits tanks with 3/8", 1/2" and 3/4" main drain ports.

Features:

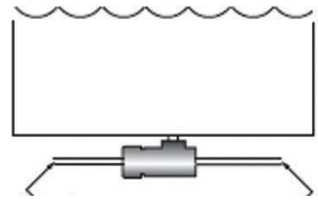
- With a focus on high purity applications, our PTFE and PVDF all wetted surface designs resist chemical corrosion and other harsh process environments.
- Configured for easy facility hookup which only requires water pressure. Dilution Water Pressure Range: 30 psi to 90 psi.
- The Fail Safe design will close the valve when dilution water is interrupted.
- The Main Drain Port is protected from chips and debris with a screened Baffle Plate.
- Media Operating Temperature Range is 32°F to 280°F (0°C to 140°C).

Note: High dilution rates will cause slow drain rates.



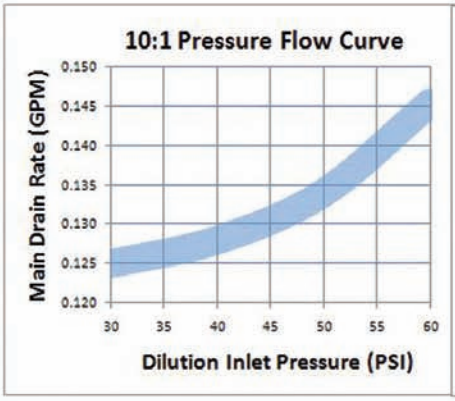
Applications

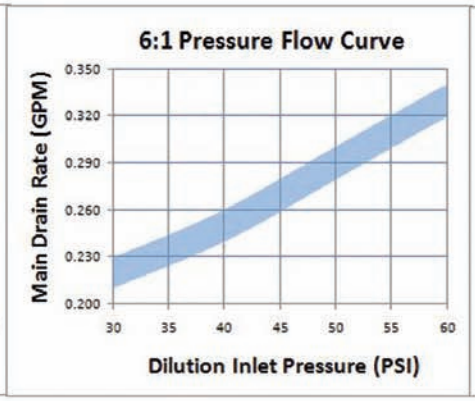
Used to drain a tank while diluting and cooling the discharge.

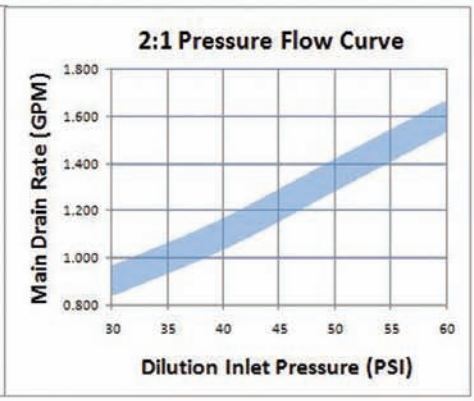


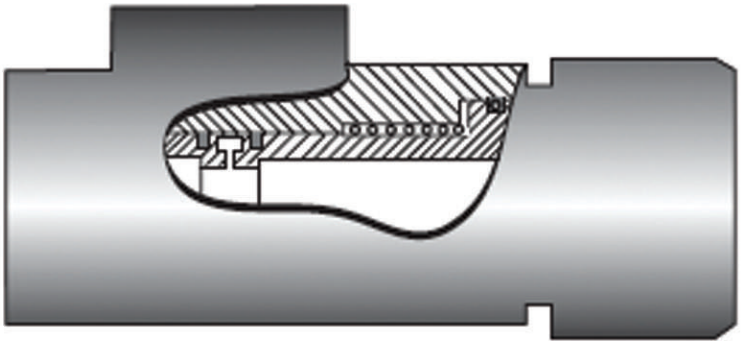
How does it work?

- When water pressure is activated, a unique spool valve design moves forward and aspirates the tank dry.
- When water pressure is deactivated, a PTFE coated isolated return spring automatically shuts off the valve.

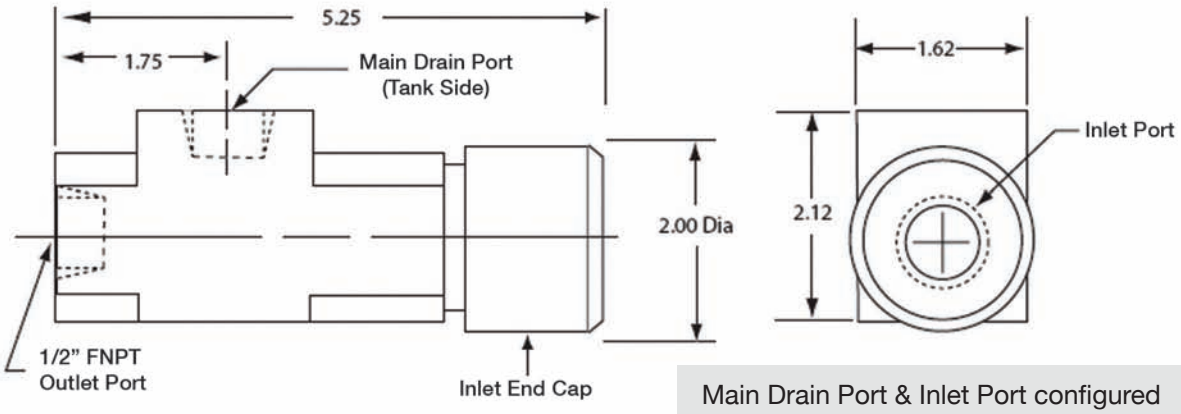








Please contact us with your special application requirements. PEEK, PVDF & Polypro configurations are available on request.



Main Drain Port & Inlet Port configured to match (*see below*)

Dilution Drain Valves: ORDERING FORMAT

DDV – 02 – 06 – V – T

Dilution Drain Valve	Dilution Ratio	Main Drain & Inlet Port	O-Ring Type	Body Material
	02 = 2:1 06 = 6:1 10 = 10:1	06 = 3/8" FNPT 08 = 1/2" FNPT 12 = 3/4" FNPT	V = ASTM D1418 FKM (Viton eq.) K = ASTM D1418 FFKM (Kalrez eq.)	T = PTFE (std) P = PVDF

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our DDV Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperature ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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Diverter Valve

BECO manufacturing

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IPS Diverter Valve (DVTR) is designed to pneumatically actuate and divert fluid flow from one flow path to a second. Our DVTR Valve functions as a shuttle valve to divert DI Water or Hazardous Chemicals to a separate drain or reclaim flow path. The large orifice flow path of the DVTR Valve allows for rapid dumping of reservoirs and tanks. The PTFE Coated Spring is isolated from the fluid media.

- Corrosion Resistant
- Maximum Flow
- Minimum Restriction

Choose:

Valve Material

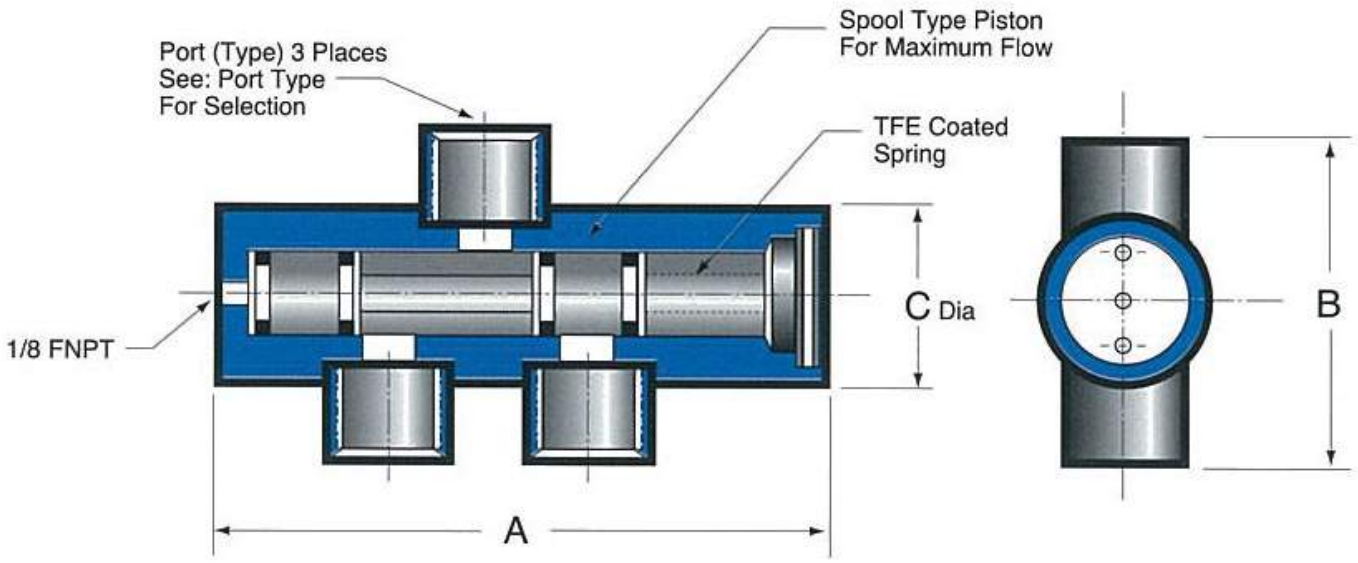
- PVC
- Polypropylene
- PVDF (Polyvinylidene Fluoride)

O-ring material

- Viton
- Ethylene Propylene
- Kalrez FFKM equiv.

DVTR valves are available with Socket Ends (ideal for welding) or FNPT ends.

Specifications:		
Air Actuation Pressure		40 - 60 psi
Media Pressure		10 - 70 psi
Temperature Rating	PVC Polypropylene PVDF	40°C 50°C 120°C



PORT & ORIFICE Nominal Dim (inch)	A Dimension (inch)	B Dimension (inch)	C Dia Dimension (inch)	Socket Weld Option "W" (inch)
1/2	7.1	3.3	2.0	0.840 (sch 80)
3/4	7.1	3.3	2.0	1.050 (sch 80)
1	7.1	4.0	2.0	1.315 (sch 80)

Diverter Valve: ORDERING FORMAT

DVTR XXX XX X – XX

Diverter Valves

Material
PVC = Polyvinyl Chloride
POL = Polypropylene
PVDF = Polyvinylidene Fluoride

Port & Orifice Size
8 = 1/2"
12 = 3/4"
16 = 1"

End Connection
P = Female NPT
W = Weld (Socket)

O-Ring Type
EP = Ethylene Propylene
VT = Viton
KA = Kalrez FFKM equiv.

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
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Pressure Relief Valve

BECO manufacturing

TEQCOM

Our **IPS Pressure Relief Valve (PRV)** is constructed with a 100% pure PTFE Valve Body and Valve Plug. The single O-Ring design allows user selection of EP, Viton or Kalrez (FFKM eq.) depending on the flowing media.

The IPS PRV is factory configured for a 10 psi to 90 psi pressure range.

The relief valve is fully adjustable within this range by simply adjusting the upper Socket Hex Adjustment Screw and locking in place with the associated locking nut.

Our IPS Pressure Relief Valve is configured with three Upper Housing and Lower Base options: Polyvinylidene Fluoride (“PVDF”), Polypropylene (“PP”) or Anodized Aluminum (“AA”) as shown.

Applications

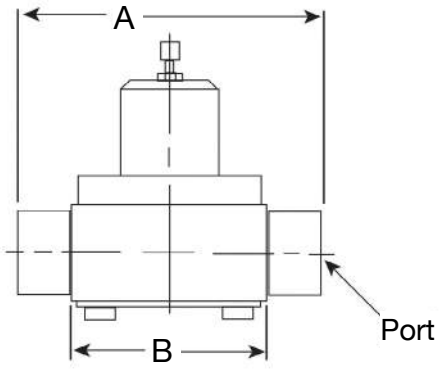
- Pump Pressure Relief
- Expansion Container Pressure Relief
- Flow Channel Pressure Relief
- Safety Relief from water hammer
- System protection for individual low pressure component in circuit

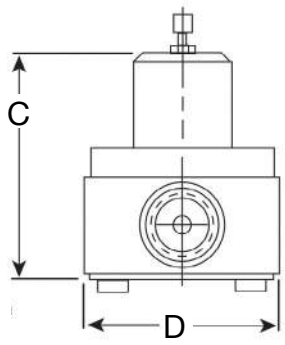
Features:

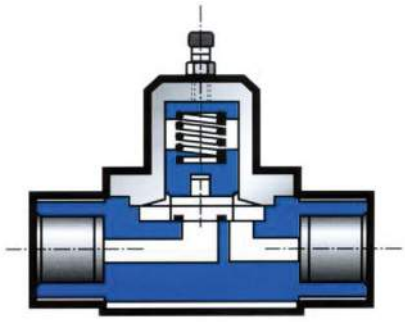
- All Wetted High-Purity Flow Path
- Ideal for Harsh Chemicals
- Fully Adjustable within a 80 psi selected range
- Teflon Coated Spring is isolated from media

Call Factory with Special Requests

Temperature Range	
Ambient	
AA	0°C - 150°C
PVDF	0°C - 120°C
PP	0°C - 60°C
Media	
AA	0°C - 150°C
PVDF	0°C - 120°C
PP	0°C - 60°C







PORT	A	B	C	D
1/4" Pipe	2.87	1.75	2.38	1.75
1/4" Tube	2.75	1.75	2.38	1.75
1/4" Flared	3.75	1.75	2.38	1.75
3/8" Pipe	2.87	1.75	2.38	1.75
3/8" Tube	2.75	1.75	2.38	1.75
3/8" Flared	3.75	1.75	2.38	1.75
1/2" Pipe	3.25	1.75	2.56	1.75
1/2" Tube	2.87	1.75	2.56	1.75
1/2" Flared	3.95	1.75	2.56	1.75

Pressure Relief Valve: ORDERING FORMAT

PRV – 4 4 P – EP – AA

Porting w/ Max Orifice

PIPE	
44	1/4” FNPT & 0.250” Orifice
66	3/8” FNPT & 0.375” Orifice
86	1/2” FNPT & 0.375” Orifice
TUBE	
43	1/4” TUBE & 0.188” Orifice
65	3/8” TUBE & 0.313” Orifice
86	1/2” TUBE & 0.375” Orifice
FLARE	
42	1/4” FLARE & 0.125” Orifice
64	3/8” FLARE & 0.250” Orifice
86	1/2” FLARE & 0.375” Orifice

Upper Housing & Base Plate
AA = Anodized Aluminum
PP = Polypropylene
PVDF = Polyvinylidene Fluoride

O-Ring Type
EP = Ethylene Propylene
KA = Kalrez (FFKM eq.)
VT = Viton

Port Connection
P = FNPT
T = Tube
FF = Flared

Sanitary End and Male NPT Connections are available as special orders

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
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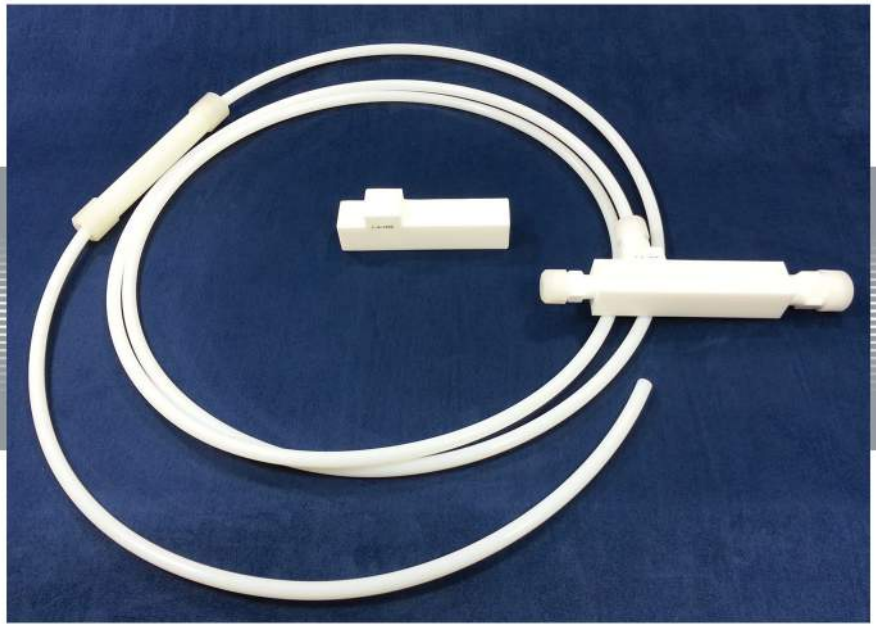
PTFE Aspirators

BECO manufacturing

TEQCOM

The **IPS PTFE Air & Liquid Aspirators** are manufactured from virgin PTFE (Teflon® - E.I. Dupont) and are designed for efficient and rapid siphoning of hard to handle chemicals.



Our IPS Air Aspirator uses clean dry shop air (CDA) or Nitrogen to initiate and sustain a natural or forced siphon. Applications include the draining and mixing of containment vessels and the removal of saturated waste chemistry. Air Aspirators are also used where recovery recirculation is desired in process chemistries.

Our IPS Liquid Aspirators use common city water or DI Water to aspirate and dilute harsh chemical baths. One common application is the dilution siphoning of Sulfuric Acid (H_2SO_4) used for chemical cleaning and etching.

Air & Liquid Aspirators are sold as standalone siphoning bodies or as Aspirator Kits. Kits include 8 feet of PTFE Tubing and Compression Fittings. Our CHK Kit includes a special PTFE check valve mounted on the siphon port to prevent possible back flow.

Essentially, an IPS Aspirator is a low cost 100% PTFE Venturi vacuum pump.

General Specification:	
Pressure Rating	10 - 60 psi
Temperature Rating	
Ambient	32°F - 160°F (0°C - 72°C)
Media	0°F - 260°F (-18°C - 127°C)

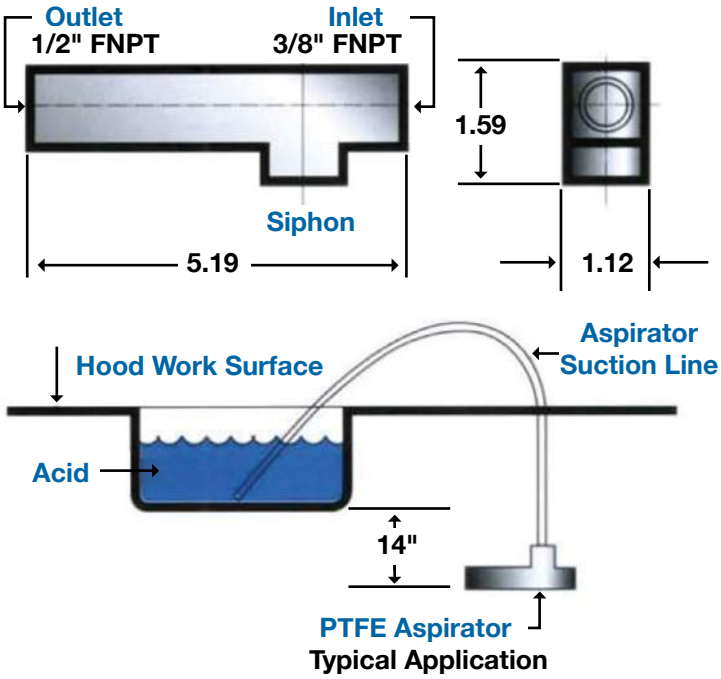
Performance Specification:

Inlet Pressure	Air 3/8" Suction	Air 1/2" Suction	Liq. 3/8" Suction	Liq. 1/2" Suction
50 psi	6.3	7.2	13.0	13.3
40 psi	5.3	5.8	11.3	11.5
30 psi	4.0	4.5	8.9	8.9
20 psi	3.0	3.0	6.4	6.5
10 psi	1.5	1.5	3.8	3.8

Value represented in inches of Mercury

PERFORMANCE RECOMMENDATIONS:

- The Minimum Pressure to initiate a siphon is 5 psi. This pressure is a function of the fluid viscosity and ambient conditions.
- The 1/2" Aspirator will siphon with a slightly greater vacuum compared to the 3/8" Aspirator.
- Overall performance will vary based on the viscoity of the media being siphoned.
- Air Aspirators must be mounted at least 14" below the suction point (siphon point). Liquid Aspirators can be mounted level with the suction/siphon point.
- For continuous flow applications, it is best to actuate an Air Aspirator with 30 to 50 psi of CDA for 10 to 15 seconds then turn off the air supply and allow the Air Aspirator to work by pure suction (siphoning action only).
- Back pressure on the Outlet Port will decrease the ability of the Aspirators to create a proper siphon.



Typical Application

PTFE Aspirator: ORDERING FORMAT

xx – A – 18 x 6 – xxx

Aspirator Type

A = Air (aspirator body only)
KA = Air Kit ((see description below))
L = Liquid (aspirator body only)
KL = Liquid Kit ((see description below))

Siphon Port Size (FNPT)

6 = 3/8" Siphon with a 3/8" Inlet & 1/2" Outlet
8 = 1/2" Siphon with a 3/8" Inlet & 1/2" Outlet

Additional Options for Kit

CHK = Kit with Check Valve
PRO = Kit with Poly Fittings

DESCRIPTION OF ASPIRATOR KITS:

Standard Kit includes: Aspirator Body & Handle, 8 ft of PTFE Tubing and 3 PTFE Compression Fittings for Inlet, Outlet & Siphon Ports (one each).

Check Valve Kit includes: Aspirator Body & Handle, 8 ft of PTFE Tubing, 2 PTFE Compression Fittings for Inlet & Outlet, and PTFE Check Valve mounted on Siphon Port.

Poly Fitting Kit includes: Aspirator Body & Handle, 8 ft of PTFE Tubing, 2 Poly Compression Fittings for Inlet & Outlet, and PTFE Compression Fitting for Siphon Port.

Spare Part No.	Accessory Description
AH-1	Handle - 3/8" Suction Port
AH-2	Handle - 1/2" Suction Port

OPTIONAL LIQUID ASPIRATOR DILUTION ORIFICE PLATE:

Add to end of Part No.	PTFE Orifice Plate at Siphon Port
-02	(2 - 3): 1 Dilution Orifice
-05	(4 - 6): 1 Dilution Orifice
-10	(8-12): 1 Dilution Orifice

These Dilution Ratios are approximate. Field results will vary with fluid viscosity, tempatures, orientation of the Liquid Aspirator device. The addition of an orifice plate decreases the siphoning rate.

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications.
3. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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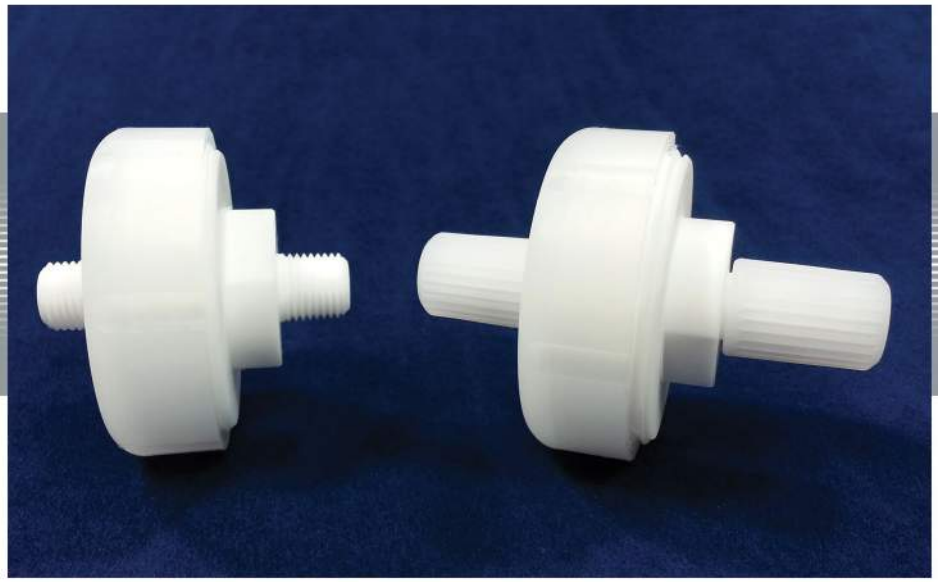
Teflon Disc Filter

BECO manufacturing

TEQCOM



The **IPS Teflon Disc Filter (TDF)** has been designed to fulfill the special requirements of inline microfiltration for sensitive medias. All contact surfaces are constructed so that nothing but PTFE comes into contact with the media being filtered. The Disc Filter utilizes replaceable Zitex™ filter elements which form a continuous mat of PTFE fibers. These fibers are fused together to form a screen-like membrane structure. The resultant membrane is hydrophobic and hence aqueous suspensions must be filtered at high rates to overcome surface tension. Because of the non-stick characteristics of PTFE, the natural lubricity of all wetted surfaces, and the easy replacement of filter elements, entrapped contaminates may be easily removed.

Specifications:	
Pressure Rating	0 - 60 psi
Temperature Rating	
Ambient	32ºF - 160ºF (0ºC - 72ºC)
Media	0ºF - 260ºF (-18ºC - 127ºC)

PTFE Zitex Disc Filter	Size	Nominal Pore (MICRONS)
Ultra Fine Zitex PTFE Disc Filter	47mm	1.5
Fine Zitex PTFE Disc Filter	47mm	4.5
Medium Zitex PTFE Disc Filter	47mm	15
Course Zitex PTFE Disc Filter	47mm	25

P/N	DESCRIPTION	INLET/OUTLET
TDF-47-XXX-4T	Filter Assembly 47mm (1.85)	1/4 Tube
TDF-47-XXX-4FP	Filter Assembly 47mm (1.85)	1/4 FNPT
TDF-47-XXX-4MP	Filter Assembly 47mm (1.85)	1/4 MNPT
TDF-47-XXX-4FF	Filter Assembly 47mm (1.85)	1/4 Flared

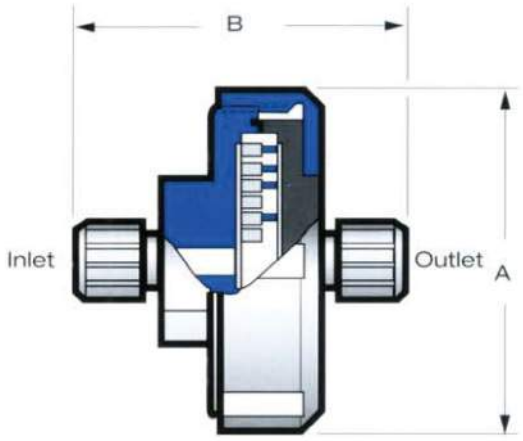
NOTE: "-XXX" REPRESENTS THE LAST 3 DIGITS OF THE FILTER MEMBRANE PART NUMBER.

EXAMPLE: FOR 1/4 FNPT ASSEMBLY WITH FM104 MEMBRANE. THE P/N IS: TDF-47-104-4FP

Pore Density	IPS NO.	Max. Function Pore Size (microns)	Nominal Thickness		Flow Rates			Initiation Pressure for Water		Ethanol Bubble Point		Approx. Pore Vol.
					Water		Air					
			mils	mils	A	B	secs	lbs/in²	kg/cm²	lbs/in²	atm	%
Ultra Fine	G110	1 - 2	8.0	.20	20 - 30	80 - 120	5 - 6	5.5 - 6.5	.37 - .43	1.0 - 1.4	0.06 - 0.09	40
Fine	G108	3 - 5	6.0	.15	30 - 50	120 - 200	4 - 5	3.5 - 4.5	.23 - .30	0.8 - 1.2	0.05 - 0.08	45
Medium	A145	10 - 20	4.5	.13	30 - 80	120 - 320	1.50 - 2.50	.90 - 1.80	.06 - .13	.40 - .70	.027 - .048	65
Course	A135	20 - 30	5.0	.13	110 - 155	440 - 620	.40 - .70	.60 - 1.20	.04 - .08	.25 - .40	.017 - .027	65

(1) A = Gallons/minute/ft² @13.5 PSI, B = Ml/minute/cm² @70 cmHg.
(2) Time required for 100cc to pass through 1 square inch @ △ P=0.176 psi (Gurley test).
(3) Pressure differential necessary to overcome hydrophonic and internal resistance.

SIZE	A	B
4T	2.50	2.51
4FP	2.50	2.32
4MP	2.50	2.32
4FF	2.50	3.51



Zitex™ is the registered trademark of Saint-Gobain.

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Disc Filters with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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PTFE Gauge Isolator

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BECO manufacturing

TEQCOM

Our **IPS PTFE Body Gauge Isolator** protects (Isolates) a pressure gauge or other pressure sensor from the effects of corrosives aggressive media and prevents contamination of ultra-pure liquids.

The Gauge Isolator consists of an All-PTFE body, containing a close tolerance machined cavity and a PTFE diaphragm. The upper portion of the cavity is filled with a solution, such as glycerin, silicone or DI water.

Media pressure applied to the bottom side of the PTFE diaphragm is transmitted through the solution filled cavity to the gauge, providing accurate readings while isolating the gauge from the media. Gauge fluctuation is minimized by the combination of the diaphragm design and the solution filling the upper portion of the Gauge Isolator.

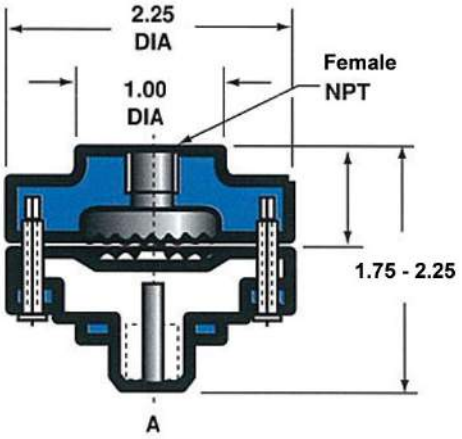
Features:

- All PTFE Wetted Parts
- Corrosion-Resistant
- Highly Sensitive
- Chemically Inert
- Supplied with or without Gauge
- User specified upper body material

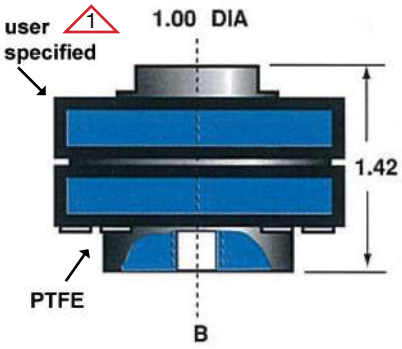
- Call IPS with your special application. We can custom fit most any Pressure Transducer to our Gauge Isolator.

Specification:

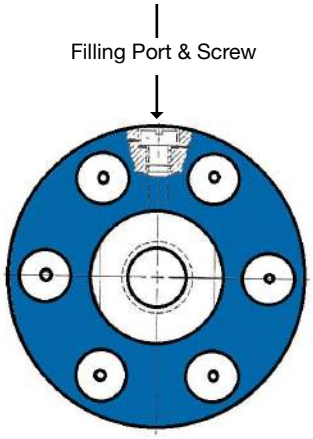
Sensitivity	2" Hg	1 psi
Diaphragm Displacement	0.5 ml	0.017 oz
Internal Fill Volume	4.0 ml	0.135 oz
Ambient Temperature (for Glycerin & DI Water fill)	4°C to 93°C	40°F to 200°F
Ambient Temperature (for Silicon & Glycol)	-10°C to 110°C	15°F to 230°F
Maximum Media Temperature	-30°C to 160°C	-22°F to 320°F
Maximum Operating Pressure (see installed gauge for rating)	6.89 bar	100 psi



TYPICAL MALE
SYSTEM PORT



TYPICAL FEMALE
SYSTEM PORT



Gauge Isolator: ORDERING FORMAT

GI – POL – 4 4 – DI – 100

Only to be used when ordering an Isolator with Gauge

Gauge Mounting 1
POL = Polypropylene
PVDF = Polyvinylidenefluoride
PVC = Polyvinylchloride
TFM = Dyneon-1600 Enhanced PTFE
PEEK = Polyetheretherketone

Gauge Port & Mounting Orifice

Gauge Type (psi)
Top Mounted:
03C = 0 to 30 psi Copper Alloy (113.13)
06C = 0 to 60 psi Copper Alloy (612.20)
06S = 0 to 60 psi Stainless Steel (131.11)
01C = 0 to 100 psi Copper Alloy (111.11)
01S = 0 to 100 psi Stainless Steel (232.30)
Center Back Mounted:
01CBM = 0 to 100 psi (111.12)

Fluid Designator
S = Silicon
G = Glycerin
DI = DI Water
E = Ethylene Glycol

REF	@ Media Port	@ Gauge Port	See Figure
4 4	1/4" FNPT	1/4" FNPT	B
4 2	1/4" FNPT	1/8" FNPT	B
2 4	1/8" FNPT	1/4" FNPT	B
2 2	1/8" FNPT	1/8" FNPT	B
4M 4	1/4" MNPT	1/4" FNPT	A
4M 2	1/4" MNPT	1/8" FNPT	A
2M 4	1/8" MNPT	1/4" FNPT	A
2M 2	1/8" MNPT	1/8" FNPT	A

Our standard gauges will be WIKA unless requested otherwise.

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Gauge Isolators with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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Custom Fabrication

IPS

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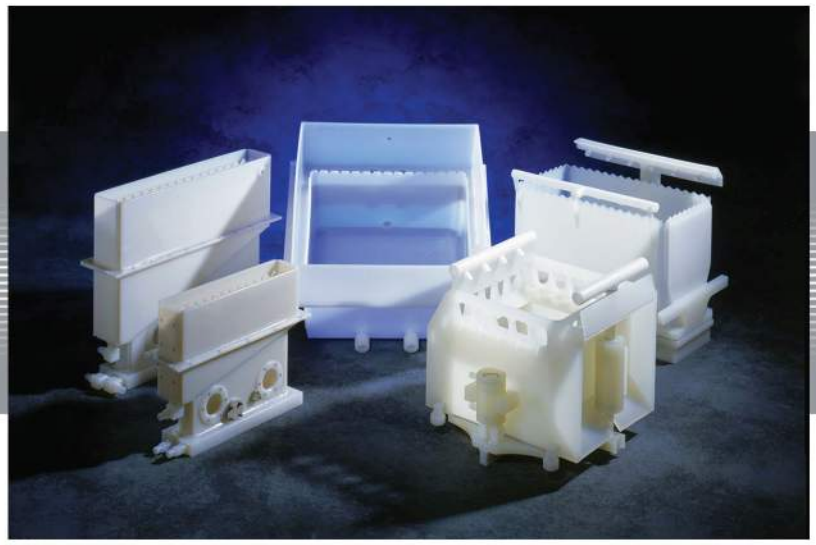
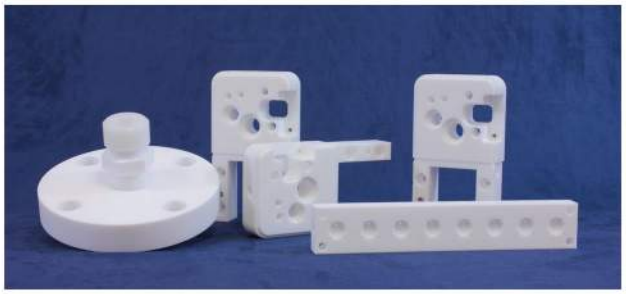
Plastic Fabrication

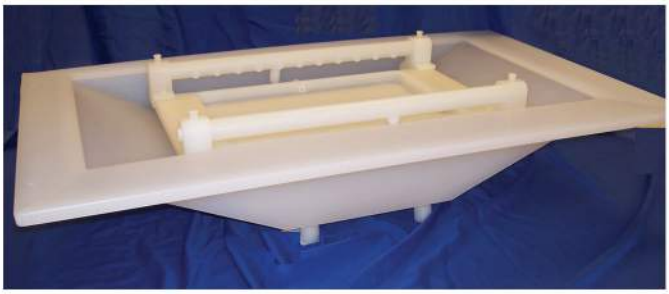
BECO manufacturing

TEQCOM



- High Purity Plastic Fabrication
- 25 years plastic fabrication experience
- Full Plastic Machine Shop with CNC Capabilities
- Large process facility for plastic machining, routing and welding
- Engineering Support – Solidworks, MasterCAM, CFD and FEA Capabilities
- In house turnkey design or contract fabrication building to customer specifications
- *Projects:* Tanks, Cabinets, Enclosures, Benches, Plenums, and other High Purity plastic products
- *We stock:* PTFE, PFA, TFM, PVDF, Halar, Acrylic, Polypropylene, polycarbonate, PVC and many other materials





IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us with your special applications.
3. Alternate materials from those listed on the front page are available.

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Air Cylinder

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Air Cylinders

BECO manufacturing

TEQCOM

IPS Air Cylinders are frequently used where splash-back or fumes from highly aggressive chemicals are prime considerations. Often used near corrosive chemicals these PVC, Polypropylene and PVDF cylinders are just the right answer for providing strength, durability and reliability in your severe service actuation application.

Our air cylinders are available in strokes from 1 – 18 inches and have standard easy-to-use mounting and optional position sensors. We are also happy to discuss customizing air cylinders to fit your individual needs.

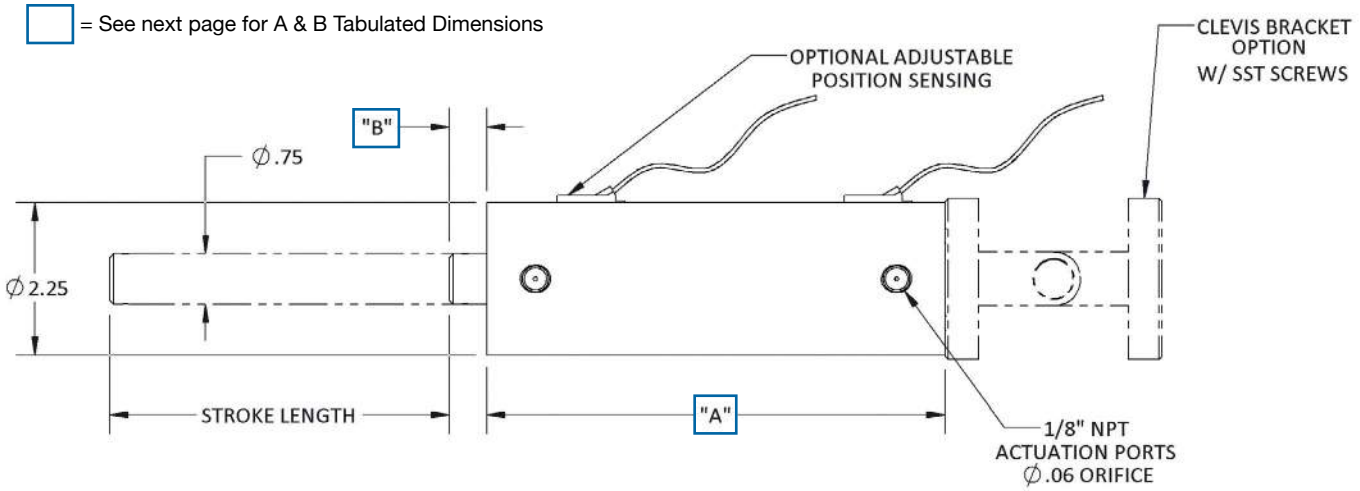
Applications

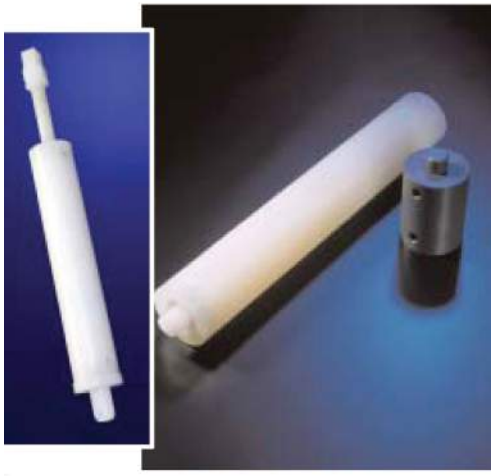
- Remote pneumatic controlled actuation for opening and closing doors and drawers
- Actuating drains and vents
- Continuous repositioning of process loads

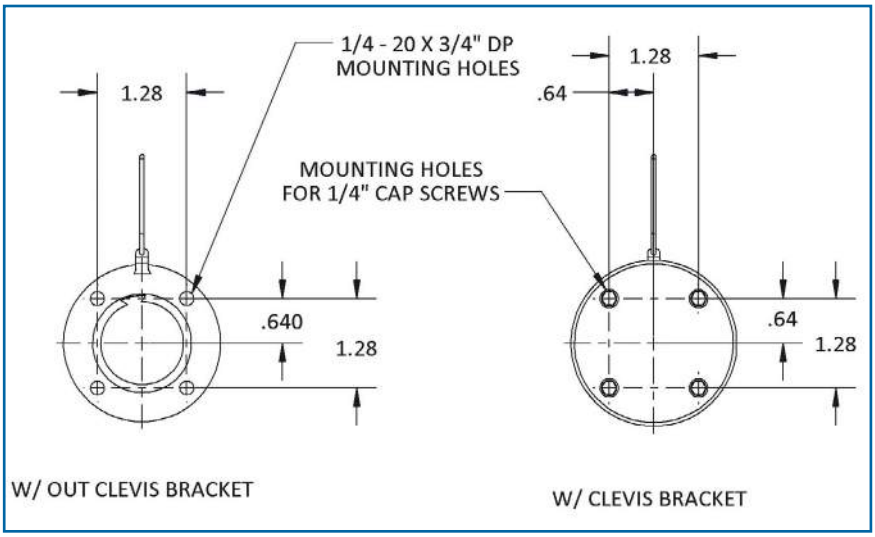
Specifications

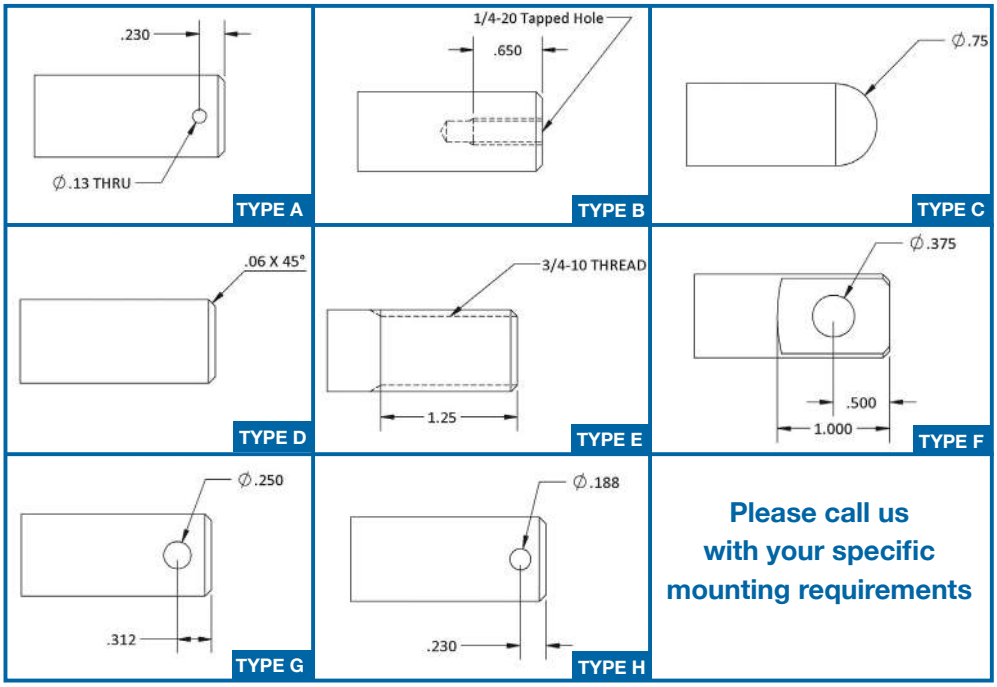
Cylinder Bore	1.25"	
Port Connections	1/8 FNPT	
Acutuator Pressure Inlet	Min.	Max.
1" - 18"	20 psi	60 psi
Ambient Temperature		
PVC	140° F / 60° C	
Polypropylene	160° F / 70° C	
PVDF	212° F / 100° C	

= See next page for A & B Tabulated Dimensions

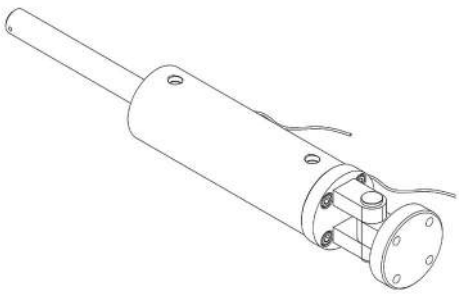








Please call us with your specific mounting requirements



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STROKE LENGTH	"A"
1"	2.75
2"	3.75
3"	4.75
4"	5.75
5"	6.75
6"	7.75
7"	8.75
8"	9.75
9"	10.75
10"	11.75
11"	12.75
12"	13.75
13"	14.75
14"	15.75
15"	16.75
16"	17.75
17"	18.75
18"	19.75

ROD TYPE	"B"
A	.55
B	.55
C	.55
D	.55
E	1.3
F	1.3
G	.55
H	.55

Call IPS for:

- Special end & trunnion mounting configurations
- Special porting & manifold configurations
- Applications requiring larger bore cylinders

Air Cylinders: ORDERING FORMAT

AC – PVDF – 08 VT EP C PS CB

Air Cylinder

Materials of Construction
POL = Natural Polypro
PVDF = Polyvinylidene Fluoride
PVC = Polyvinyl Chloride

STROKE LENGTH
01 = 1"
02 = 2"
03 = 3"
04 = 4"
05 = 5"
06 = 6"
07 = 7"
08 = 8"
09 = 9"
10 = 10"
11 = 11"
12 = 12"
13 = 13"
14 = 14"
15 = 15"
16 = 16"
17 = 17"
18 = 18"

EXPOSED O-RINGS
EP = EPDM
VT = VITON
KA = FFKM (KALREZ EQUIVALENT)

INTERNAL O-RINGS
EP = EPDM
VT = VITON
KA = FFKM (KALREZ EQUIVALENT)

ROD STYLE
A = 1/8" THRU HOLE
B = 1/4 - 20 FEMALE THREAD
C = SPHERICAL END
D = NONE
E = 3/4 - 10 X 1.25 THREAD
F = CLEVIS TANG
G = 1/4" THRU HOLE
H = 3/16" THRU HOLE

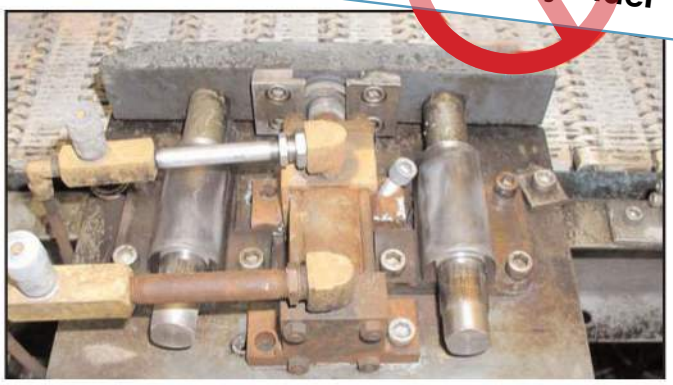
POSITION SENSING (optional)
BLANK = NONE
PS = REED SWITCH

CLEVIS BRACKET (optional)
BLANK = NONE
CB = TAIL END
CLEVIS BRACKET

Plastic is Better!

Plastic Air Cylinder

Metal Air Cylinder

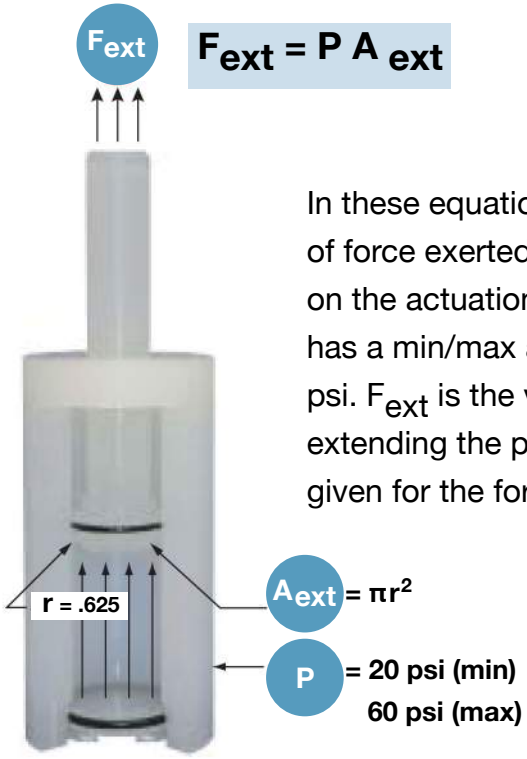


High Quality Plastic Air Cylinder

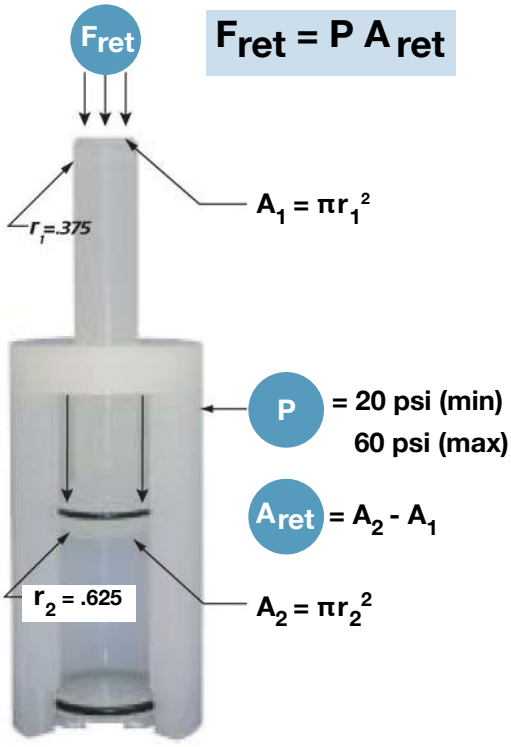
Our High Purity Plastic Air Cylinders are corrosion resistant, durable and light weight.

Please call us to discuss customizing our air cylinders to fit your individual specification.

Plastic air cylinders are the logical next step for your harsh process environment.



In these equations, F equals the amount of force exerted by the piston depending on the actuation pressure. The Air Cylinder has a min/max actuation pressure of 20-60 psi. F_{ext} is the variable given for the force extending the piston. F_{ret} is the variable given for the force retracting the piston.



IPS Product Notes:

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2. Call us for special applications. We can manufacture our Air Cylinders with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperaturet ratings or other performance characteristics.
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