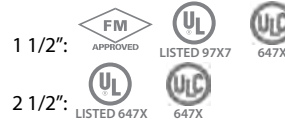




Approvals: A7A



Approvals: A7B

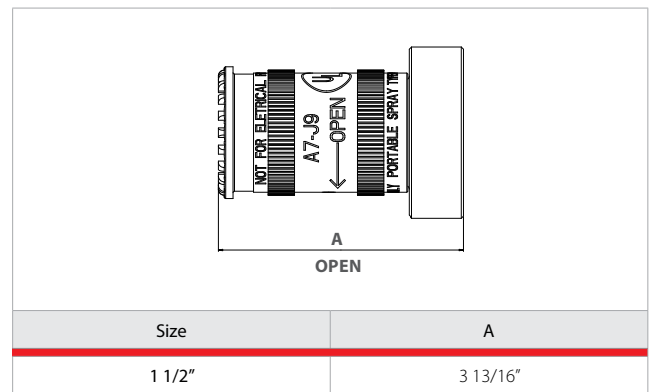


Approvals: A7BP

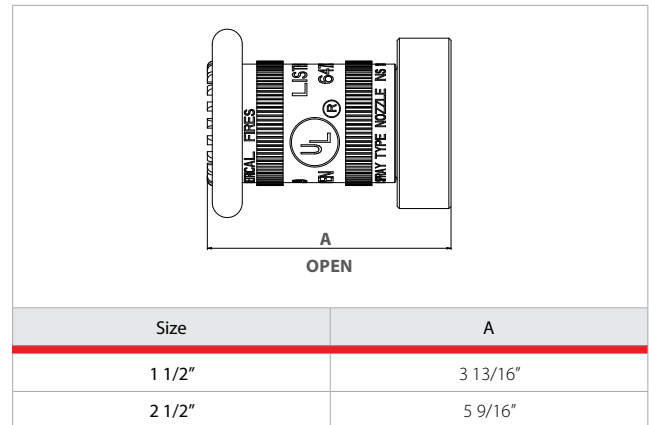


Dimensions

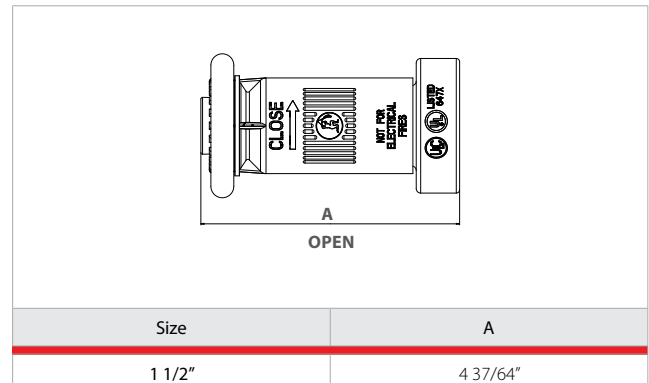
A7A – ADJUSTABLE FOG NOZZLE



A7B – ADJUSTABLE FOG NOZZLE WITH RUBBER BUMPER



A7BP – PLASTIC ADJUSTABLE FOG NOZZLE WITH RUBBER BUMPER



Description

A fog nozzle is a firefighting hose spray nozzle that breaks its stream into small droplets. Fog nozzles play an important part in firefighting tactics due to their versatility. By doing so, its stream achieves a greater surface area, and thus a greater rate of heat absorption, which, when compared to that of a smoothbore nozzle, speeds its transformation into the steam that smothers the fire by displacing its oxygen.

Versions and product codes

Series	Size	Type	Finishing
A7A	1 1/2"	Hose thread	Rough Brass Polished Brass Rough Chrome
A7B	1 1/2"	Hose thread	Rough Brass Rough Chrome
	2 1/2"		
A7BP	1 1/2"	Hose thread	Plastic

Technical data

- Rated pressure: 100 PSI (6,89 bar)

Materials: A7A

- Body: forged brass CuZn40Pb2 in accordance with European Standard EN 12165 CW617N, similar to American Standard ASTM B124 C37700
- Yield stress of the material in the shape of bar: 360 MPa
- Stress for permanent distortion R(0.2): 138 MPa
- Elongation: 10 %

Materials: A7B

- Body: forged brass CuZn40Pb2 in accordance with European Standard EN 12165 CW617N, similar to American Standard ASTM B124 C37700
- Yield stress of the material in the shape of bar: 360 MPa
- Stress for permanent distortion R(0.2): 138 MPa
- Elongation: 10 %

Materials: A7BP

- Body: polycarbonate



Product specifications

A7A 1 1/2"

Forged Brass Nozzle with adjustment from full fog to shut-off, with main feature as following:

- 1 1/2" hose thread
- Rated pressure 100 psi
- FM approved, UL & ULC listed

A7B 1 1/2"

Forged Brass Nozzle with adjustment from full fog to shut-off with rubber bumper, with main feature as following:

- 1 1/2" and 2 1/2" hose thread
- Rated pressure 100 psi
- FM approved, UL & ULC listed

A7B 2 1/2"

Forged Brass Nozzle with adjustment from full fog to shut-off with rubber bumper, with main feature as following:

- 1 1/2" and 2 1/2" hose thread
- Rated pressure 100 psi
- UL & ULC listed

A7BP 1 1/2"

Plastic Nozzle in ABS with adjustment from full fog to shut-off with rubber bumper, with main feature as following:

- 1 1/2" hose thread
- Rated pressure 100 psi
- FM approved, UL & ULC listed

Additional information

For additional information please check the website www.giacomini.com or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
This pamphlet is merely for information purposes. Giacomini S.p.A. retains the right to make modifications for technical or commercial reasons, without prior notice, to the items described in this pamphlet. The information described in this technical pamphlet does not exempt the user from following carefully the existing regulations and norms on good workmanship.
Giacomini S.p.A. Via per Alzo, 39 - 28017 San Maurizio d'Opaglio (NO) Italy

Swing Check Valve

FIG. F0311-300

Specifications

- Meet or exceed the requirements of AWWA C508 standard.
- Gravity Operated, Swing Check Design.
- Inspection or replacement all parts without removing the valve from the line.
- Bosses on both sides of the body for connecting by-passes if required.
- Drain plug at the bottom under the inlet end for attaching a drain valve if required.
- Excellent Flow Characteristics.
- Superior design featuring exceptionally low pressure losses at high flow rates.
- Bolted Cover.
- Rubber Disc Facing and Bronze Seat Ring.
- Flanged Connections are Drilled per ASME B16.1 Class 125.
- Rated Working Pressure 300 psi.
- UL 312/ULC Listed and FM 1210 Approved.
- GOST Certified.

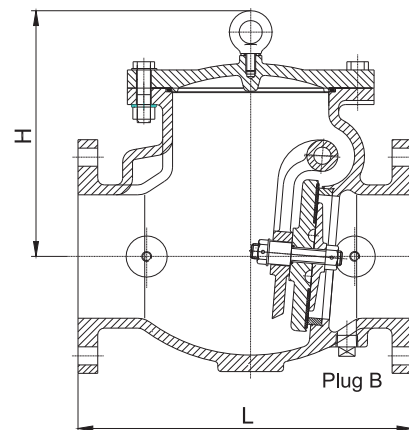
Corrosion Protection

- Fusion Bonded Coating Interior and Exterior meet or exceed all applicable of AWWA C550 Standard.

Material Specification

Part	Material	ASTM Specification
Body	Ductile Iron	A536 Grade 65-45-12
Cover	Ductile Iron	A536 Grade 65-45-12
Body Seat Ring	Bronze	B62 C83600
Disc Seat Ring	Rubber	D2000 EPDM
Seat Ring Holder	Ductile Iron	A536 Grade 65-45-12
Disc	Ductile Iron	A536 Grade 65-45-12
Body/Cover O-ring	Rubber	D2000 NBR
Clapper Arm	Ductile Iron	A536 Grade 65-45-12
Hinge Pin	Stainless Steel	A276 Type 304
Hinge Pin Plug	Stainless Steel	A276 Type 304
Plug Washer	Red Copper	
Body/Cover Fasteners	Carbon steel	A307 Grade B
Disc Seat Bolt/Nut	Stainless Steel	A276 Type 304
Eyebolt	Carbon steel	A307 Grade B

Schematic



Options

- Flanged End Types: ASME B16.42 Class 150 or EN1092 - PN10/16.
- Fasteners: Stainless Steel, A2-70 / A4-70.
- 304SS Plug B optional.

Main Dimensions (mm/inch)

Size	2	2.5	3	4	5	6	8	10	12
L	203/8.0	254/10.0	279/11.0	330/13.0	356/14.0	406/16.0	495/19.5	559/22.0	660/26.0
H	132/5.2	145/5.7	152/6.0	175/6.9	295/11.6	300/11.8	357/14.1	401/15.8	465/18.3

Notes

- 5" and above sizes valve are with eyebolt for lifting.
- Designs, materials and specifications shown are subject to change without notice due to the continuous development of our products.

Grooved Resilient Swing Check Valve (H84X), UL/FM/LPCB Approved

0C3073.7



H84X

NSF/ANSI 61 NSF/ANSI 372

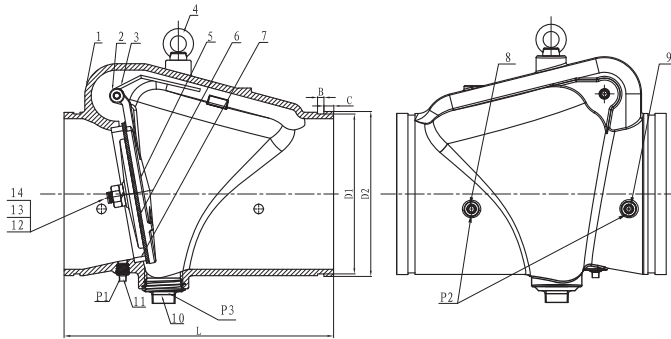
- Connection Ends: Groove to AWWA C606
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0°C- 100°C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550 or painting upon request

0C3073.7



H84XF4

NSF/ANSI 61 NSF/ANSI 372



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Hinge Pin	AISI 420	
3	Spring	AISI 304	AISI 316
4	Eye Bolt	Carbon Steel Zinc Plated	
5	Disc	DN50-100 AISI 304 DN150-300 ASTM A536, 65-45-12	AISI 304
6	Disc Sealing Ring	EPDM	
7	Seat Ring	ASTM B62 C83600 (Pressed Fit)	AISI 304, AISI 316 Pressed Fit or Threaded
8	Plug	Malleable Iron Galvanized	Bronze ASTM B584
9	Plug	Malleable Iron Galvanized	Bronze ASTM B584
10	Plug	Malleable Iron Galvanized	Bronze ASTM B584
11	Plug	Malleable Iron Galvanized	Bronze ASTM B584
12	Bolt	AISI 304	AISI 316
13	Washer	AISI 304	AISI 316
14	Nut	AISI 304	AISI 316

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN		Dimensions(mm)									
Inch	mm	L	D1	D2	B	C	P1	P3		P2	
								Standard	Optional		
2"	50	171	57.15	60.3	7.93	15.88	1/2-14NPT	1/2-14NPT	1-11.5NPT	3/8-18NPT	
2.5"	65	184	69.09	73	7.93	15.88	1/2-14NPT	1/2-14NPT	1 1/4-11.5NPT	3/8-18NPT	
3"	80	197	84.94	88.9	7.93	15.88	1/2-14NPT	1/2-14NPT	1 1/4-11.5NPT	3/8-18NPT	
4"	100	210	110.08	114.3	9.53	15.88	1/2-14NPT	1/2-14NPT	2-11.5NPT	1/2-14NPT	
5"	125	248	137.03	141.3	9.53	15.88	1/2-14NPT	1/2-14NPT	2-11.5NPT	1/2-14NPT	
6"	150	324	163.96	168.3	9.53	15.88	1/2-14NPT	1/2-14NPT	2-11.5NPT	1/2-14NPT	
8"	200	371	214.4	219.1	11.13	19.05	1/2-14NPT	1/2-14NPT	2-11.5NPT	1/2-14NPT	
10"	250	457	268.28	273	12.7	19.05	1/2-14NPT	1/2-14NPT	2-11.5NPT	1/2-14NPT	
12"	300	535	318.29	323.9	12.7	19.05	1/2-14NPT	1/2-14NPT	2-11.5NPT	1/2-14NPT	

Shotgun Riser Check Valve, Grooved Ends

FIG. F3322 FIG. F3322B

Specifications

- Meet or exceed the requirements of UL 312 and FM 1210 standard.
 - Spring loaded for fast closure.
 - It is used in wet pipe fire protection systems, as well as the pre-action systems where not need a mechanical alarm.
 - Drain plug at the bottom under the inlet end for attaching a drain valve.
 - Excellent flow characteristics.
 - Superior design featuring exceptionally low pressure losses at high flow rates.
 - Rubber disc facing and bronze seat ring.
 - Grooved connections are cut in accordance with AWWA C606 or other standard groove specifications for steel pipe.
- UL 312/ULC listed and FM 1210 approved.

Working Pressure and Temperature

- 350 psi rated @ 0°C to 87°C

Schematic

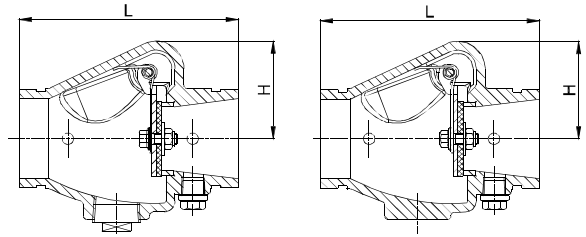


FIG. F3322

FIG. F3322B

Corrosion Protection

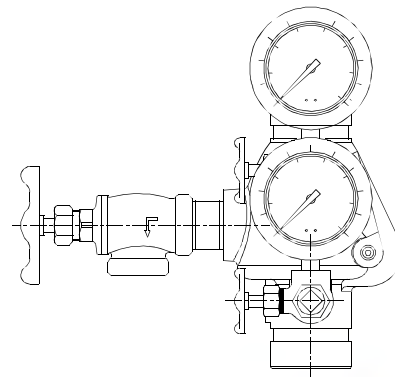
- Fusion bonded coating interior and exterior meet or exceed all applicable of AWWA C550 standard.

Options

- Check valves only.
- F3322 with or without Trim.

Material Specifications

Part	Material	ASTM Specification
Body	Ductile Iron	A536 Grade 65-45-12
Body Seat Ring	Bronze	B62 C83600
Disc	Stainless Steel	A351 Grade CF8
Disc Facing	Rubber	D2000 EPDM
Spring	Stainless Steel	A276 Grade 302
Hinge Pin	Stainless Steel	A276 Grade 304
Disc Facing Bolt/Nut	Stainless Steel	A276 Grade 304
Angle Drain Valve	Bronze	B148 C95500
3-Way Valves	Bronze	B148 C95500
Nipples	Stainless Steel	A276 Grade 304
Air/Water Gauges	Assembly	



Main Dimensions (mm/inch)

Size	1.25	1.5	2	2.5	3	4	6	8
L	160/6.3	160/6.3	170/6.7	183/7.2	198/7.8	218/8.6	270/10.62	325/12.8
H	65/2.5	65/2.5	75/3	80/3.13	90/3.5	102/4	127/5	160/6.3

Notes

- 1.25, 1.5 FM/UL pending.
- Designs, materials and specifications shown are subject to change without notice due to the continuous development of our products.

Y-Type Strainer, Flanged Ends

FIG. F0511-175

Specification

- Meet or exceed the requirements of UL 321 standard.
 - NPT or BSPT blowoff outlet on cover (blowoff outlets are furnished with plugs).
 - Recessed seat in body assure accurate screen alignment.
 - Round holes with 60 degrees staggered.
 - Excellent flow characteristics and low pressure losses at high flow rates.
 - Connection Ends: ASME B16.1 Class 125 or EN1092-2 PN10/16.
-
- UL 321/ULC listed.
 - GOST certificated.

Working Pressure and Temperature

- 175 psi @ 0 °C to 120 °C.

Corrosion Protection

- Fusion bonded coating interior and exterior meet or exceed all applicable of AWWA C550 standard.

Options

- Spray painted.

Material Specification

Part	Material	ASTM Specification
Body	Cast Iron	A126 Class B
Cover	Cast Iron	A126 Class B
Screen	Stainless Steel	A276 Grade 304
Body/Cover Gasket	PTFE / Graphite	Commercial
Body/Cover Bolts	Carbon Steel	A307 Grade B
Plug	Malleable Iron	A47 Grade 22010

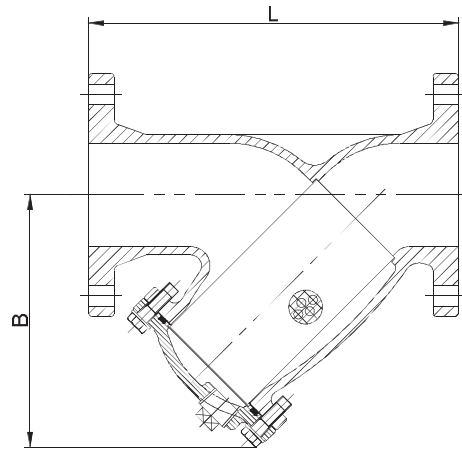
Standard Screens(mm/inch)

Size	Hole Diameter	Free Flow Area Opening
2.5"	3.0/0.12	53.60%
3" to 5"	4.3/0.17	55.43%
6" to 10"	6.0/0.24	63.00%
12"	6.3/0.25	40.70%

Main Dimensions (mm/inch)

Size	2.5	3	4	5	6	8	10	12
L	273/10.75	295/11.63	352/13.88	416/16.38	470/18.50	543/21.38	660/26.00	770/30.31
B	140/5.50	203/8.00	240/9.50	290/11.50	305/12.00	410/16.00	480/19.00	560/22.00
Plug Size	1"	1"	1"	1-1/4"	1-1/2"	1-1/2"	2"	2"

Schematic



Notes

• Designs, materials and specifications shown are subject to change without notice due to the continuous development of our products.

Fire Hydrant Wet-Barrel, 250PSI FIG · F1311-250

Specifications

- Manufactured in accordance with AWWA C503 Standard
- UL Listed / FM Approved
- (1) 4.5" Pumper Nozzle, (2) 2.5" Hose Nozzles
- Nozzle Threads to NFPA 1963 Standard.
- Flange to ANSI B16.1, Class 125 (6"). Other types available upon request
- Working pressure:
250PSI for FM approval.
200PSI for UL listed.
- Working temperature:
42° F - 180° F
- Corrosion protection:
Interior and exterior is e-coated to a dry film thickness of 0.6 mils minimum, then fusion bonded epoxy powder coated (FBE).

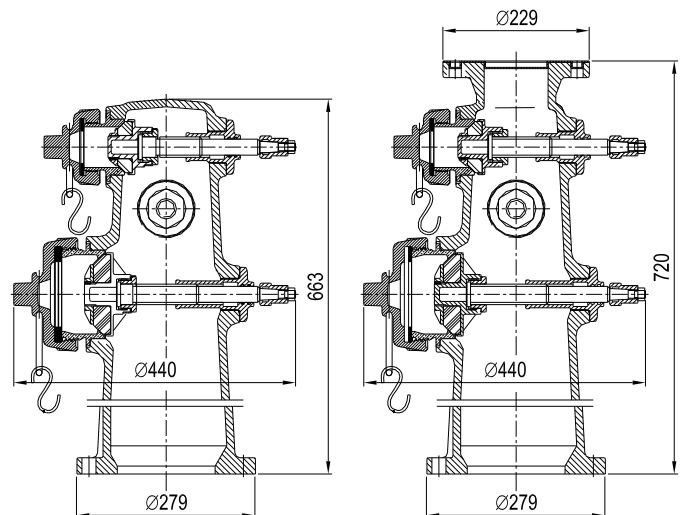
Note:
Design and material are subject to change without notice.

Schematic



Material Specifications

Part Name	Material	ASTM Spec.
Body	Ductile Iron	A536 65-45-12
Pumper Nozzle Cap	Cast Iron	A126 Class B
Pumper Nozzle	Bronze	B62 C83600
Main Valve	Rubber	NBR
Main Valve Holder	Stainless Steel	AISI 304
Hose Nozzle Cap	Cast Iron	A126 Class B
Hose Nozzle	Bronze	B62 C83600
Stem	Stainless Steel	AISI 304
Stem Nut	Bronze	B62 C83600
Operating Nut	Bronze	B62 C83600
O-ring	Rubber	NBR
Pumper Nozzle Gasket	Rubber	NBR
Hose Nozzle Gasket	Rubber	NBR



Pressure Gauges

111.10SP 4"

Specifications

- EN 837-1 & ASME B40.100.
- Accuracy class.
- ±3/2/3% of span (ASME B40.100 Grade B).

Working Pressure

- 0/80 psi, retard to 250 psi (air).
- 0/300 psi (water).

Working Temperature

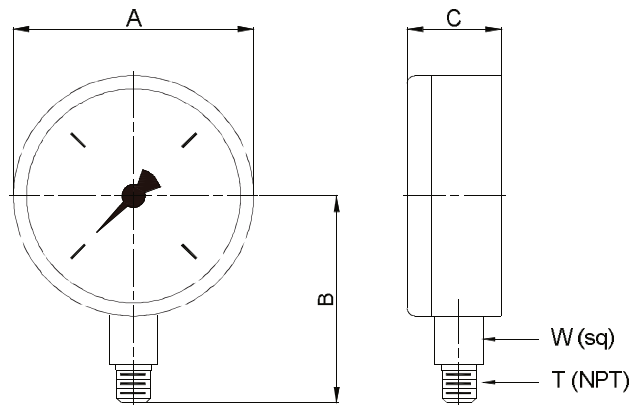
- Ambient: -40°F to 140°F (-40°C to 60°C).
- Media: 140°F (+60°C) maximum.

Material Specifications

- Bourdon tube
Material: copper alloy
C-type
- Pressure connection
Material: copper alloy
1/4"NPT lower mount (LM)
- Movement
Copper alloy
- Dial
White aluminum with stop pin; black and red lettering.
- Pointer
Black aluminum
- Case
Black polycarbonate
- Window
Snap-in clear polycarbonate
- Approvals
UL listed (UL-393)
FM approved
- Temperature error
Additional error when temperature changes from reference temperature of 68°F(20°C)+0.4% for every 18°F(10°C) rising or falling. Percentage of span.



- Fire sprinkles systems
- Suitable for all media that will not obstruct the pressure system or attack copper alloy parts
- UL-listed (UL-393), United States and Canada
- Factory Mutual (FM) Approved
- Reliable and economical



Main Dimensions (mm/inch)

Size	A	B	C	T	W
4	100/4.0	71/2.79	30/1.18	1/4"	14/0.55

Notes

- **Designs, materials and specifications shown are subject to change without notice due to the continuous development of our products.**

MONITOR - VAJRA 331 (CAST BRONZE)



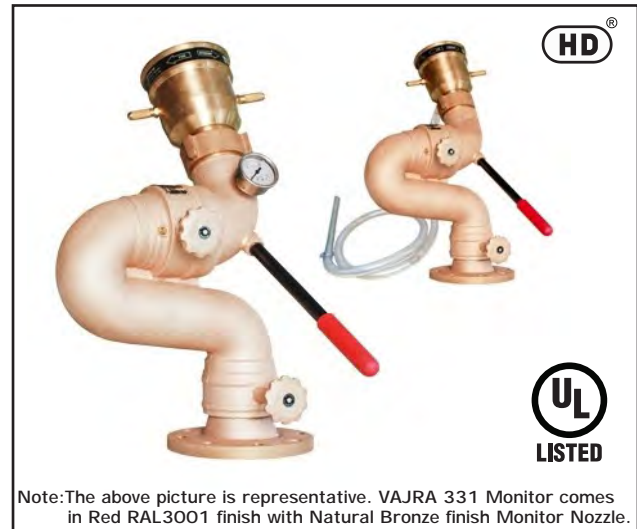
TECHNICAL DATA

MONITOR	VAJRA 331
NOZZLE	VARSHA HF 40U-500 VARSHA HF 40U-750 VARSHA 40U-500 VARSHA 40U-750 VARSHA 40U-1000
NOMINAL SIZE	3 Inch (80 MM)
MAX. SERVICE PRESSURE	14 Bar (200 PSI) UL Listed for 175 PSI
MAXIMUM FLOW	1000 GPM (3800 LPM) Refer Table I for flow
FACTORY HYDROSTATIC TEST PRESSURE	28 Bar (400 PSI)
SWIVEL JOINT	Bronze to IS:318/ASTM B 62 with double row of Stainless Steel Ball Bearing and Grease Fittings
NOZZLE THRUST REACTION IN Kg.	Flow in LPM X $\sqrt{\text{Pressure}}$ in Kg./sq.cm. X 0.0228
INLET CONNECTION	3" (80 NB) or 4" (100 NB) Flange to ANSI B16.5 #150,FF
OUTLET CONNECTION	3" BSP (M) or 3" NH
MONITOR ELEVATION	90 Deg. above horizontal & 45 Deg. below horizontal
MONITOR ROTATION	360 Deg. continuous
MONITOR MOVEMENT	Manual
APPROVAL	UL Listed
FINISH	Red RAL 3001 for Monitor, Natural finish for Nozzle
WEIGHT (Approx)	33Kg -Monitor without nozzle 9.2Kg - Nozzle VARSHA 40U 12.7Kg-Nozzle VARSHA HF40U
PRESSURE GAUGE	Optional, at outlet
ORDERING INFORMATION	Specify Monitor & Nozzle Model

DESCRIPTION

The Monitor Model VAJRA-331 is durable manual controlled monitor for fixed installation as well as trailer mounted unit. The monitor is generally used for protection of flammable liquid storage tanks, loading racks, dykes marine and many other Industrial application.

The Monitor possesses several design features that provides ease of operation, minimum maintenance and resistance to corrosive environments.



The monitor has cast bronze 3 inch (80MM) water way. The vertical and horizontal rotation is through corrosion resistant bronze swiveling joint with double row of stainless steel ball bearing. Both vertical and horizontal movements are controlled by handle with twist lock. VAJRA 331 is UL Listed with VARSHA HF40U Nozzle (with pickup tube) and VARSHA 40U Nozzle (without pickup tube).

The monitor has large flow capability and can be manually operated by a single fire fighter. The design ensures to prevent jet reaction forces from affecting the horizontal and vertical position of the monitor. The monitor has the ability for 360 deg. continuous horizontal rotation and angle of elevation is from 90 deg. above horizontal to 65 deg. below horizontal. When used on oscillation unit the angle of elevation will be - 40° to +80° manual adjustable.

The water vanes in discharge tube reduces turbulence and friction loss, thus increasing the nozzle performance to achieve greater range. To ensure desired performance, friction loss through monitor must be considered while selecting the nozzle and flow through the monitor with reference to available base pressure at inlet of the monitor. For flow and jet reach data, refer monitor nozzle data sheet.

NOTE:

1. Any intermediate range (UP + DN)^o between UP ≤ 90° and DN ≤ 65° can be provided as per requirement of the customer.
2. The vertical lock needs one turn for lock & unlock. Excessive rotation of knob should not be carried out.
3. Pressure Gauge is optional supply and should not be considered for friction loss measurement.
4. For details of VARSHA 40U, refer Data Sheet No. HD 280 and for VARSHA HF40U refer Data Sheet No. HD 281.

INSTALLATION, TESTING AND MAINTENANCE

The monitor must be installed and operated carefully by a trained person, having good knowledge of equipment. Before assembly of the monitor to the supply piping, thoroughly flush the piping with water to avoid sand, residue, welding slag or other debris hindering the proper functioning of the monitor.

After few initial successful tests, an authorized person must be trained to perform the inspection and testing of the monitor.

The monitor should be ready for use. To achieve this condition, scheduled inspection and maintenance operation should be performed and it must be recorded in the maintenance register book indicating the requirement or recommendation. The recommended maintenance, procedure must be followed as given in the manual and also as per the local authority having jurisdiction.

It is recommended to carry out weekly physical inspection of the monitor. The inspection should verify that no damage has taken place to any component and the monitor is ready for use.

Carry out functional test every month for the flow, regular rotation in horizontal and vertical plane for the entire operating range to observe any leakage.

Periodic proper greasing through grease nipple provided on bearing, worm wheel and worm shaft must be ensured. Use water resistant low friction synthetic grease. Lubrication is required for smooth operation.

Each monitor must be operated with full flow in accordance to the guidelines of the organisation having local jurisdiction.

The owner is responsible for maintaining the equipment in proper operating condition.

CAUTION

A trained personnel for fire fighting must use the monitor. Appropriate guidance & training must be given to reduce the risk or injury.

The nozzle must be fixed to the monitor carefully.

The piping must be able to with stand the horizontal reaction force. Serious injury to personnel and equipment can result from improper installation.

When installing monitor it is critical that flange bolts be tightened uniformly to prevent cocking of the monitor relative to the flange or valve.

Before flowing water from monitor, check that all personnel are out of stream path and stream direction will not cause avoidable property damage.

Application of water or foam on an electric appliance can cause serious injury.

The water supply to monitor must be increased / decreased gradually to prevent possible water hammer occurrence.

Do not try to over-tighten/ over-loosen Monitor lock.

TABLE-I

Nozzle Model	Type	*Flow at 100 PSI in GPM	Straight Stream Range in Meters
VARSHA 40U-500	D	500	60
VARSHA 40U-750	D	750	61.5
VARSHA 40U-1000	D	1000	65
VARSHA HF40U-500	C	500	46
VARSHA HF40U-750	C	750	54

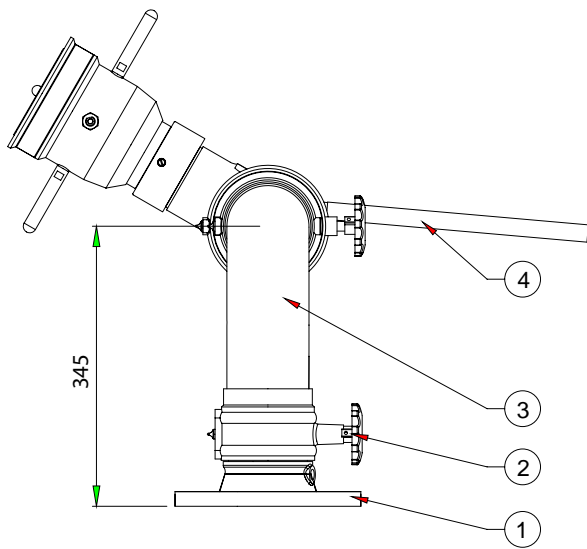
* The straight stream jet reach is at 100 PSI Monitor inlet pressure.

TYPE - D is Non Self-Inducting, non self Aspirating nozzle used for premix solution.

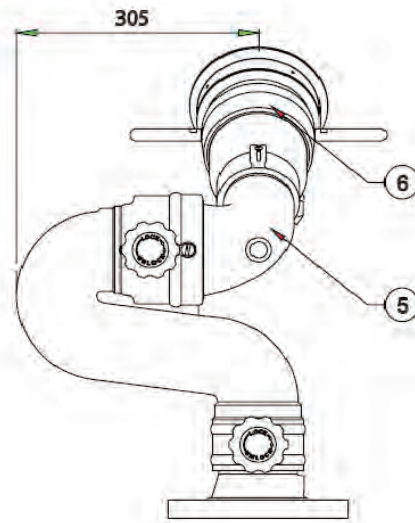
TYPE - C is Self-Inducting, non self Aspirating nozzle used with listed foam, AFFF3%.

NOTE:

- (i) Refer UL Listing for foam concentrate specifications.
- (ii) Performance data are for reach based at =30 nozzle elevation in still air condition.
- (iii) For details refer the nozzle catalogue.
- (iv) Flow and reach data are with HD VAJRA 331 Monitor, with nozzle and monitor inlet pressure.



ELEVATION



SIDE VIEW

*Monitor Nozzle also available with pick-up tube.

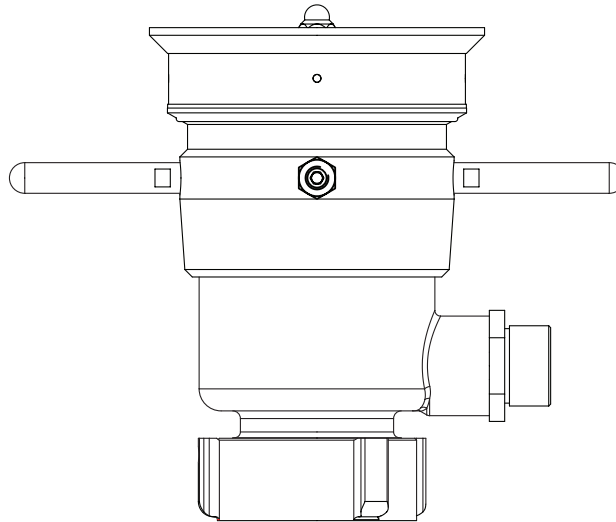
PART LIST

SR NO	DESCRIPTION	MATERIAL SPECIFICATION
1	BASE FLANGE	BRONZE IS:318/ASTM B62
2	LOCK	STAINLESS STEEL CF8
3	ELBOW	BRONZE IS:318/ASTM B62
4	HANDLE	CARBON STEEL
5	OUTLET ELBOW	BRONZE IS:318/ASTM B62
6	NOZZLE	BRONZE

Note :

- 1) Monitor inlet flange standard size 80 NB (3") or 100NB (4") to ANSI B16.5, 150#FF.
- 2) All dimensions in mm and are approximate.
- 3) For VARSHA HF 40U pickup tube is 3 meters long and Brass Ball Valve is optional.
- 4) UL Listed with VARSHA 40U Nozzle.
AFFF foam to be used as pre-mix solution for Flow 500, 750 and 1000 GPM at 100 PSI.
- 5) UL Listed with Self Inducting VARSHA HF40U Nozzle. Flow 500,750 GPM at 100 PSI.
- 6) Pressure gauge is optional supply.

VARSHA HF40U



Note :

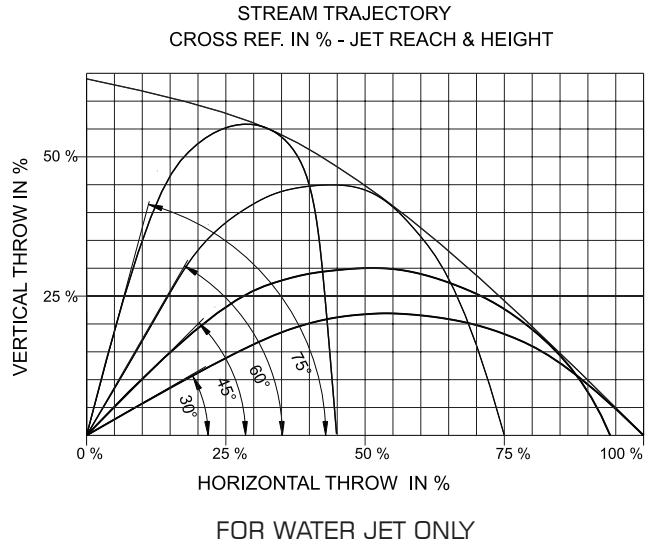
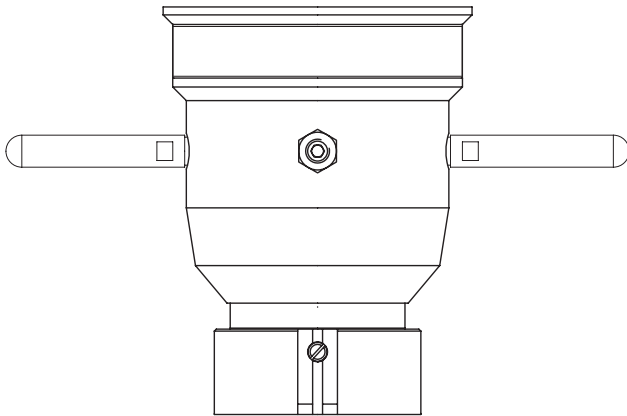
- Nozzle is self-inducting with pickup tube.
- Foam shut off valve is optional.
- Refer to HD 281 catalogue (VARSHA HF40U) for more information.

PERFORMANCE DATA

SET FLOW RATE LPM (GPM)	FOAM CONCENTRATE INDUCTION RATE	PRESSURE KG/CM.SQ. (PSI)	ACTUAL FLOW RATE LPM (GPM)	STRAIGHT STREAM FOAM RANGE METERS (FEET)
1900 (500) VARSHA HF40U-500	3%	5.6 (80) 7.0 (100) 8.4 (120)	1700 (450) 1900 (500) 2081 (550)	39.0 (128) 46.0 (151) 47.0 (154)
2850 (750) VARSHA HF40U-500	3%	5.6 (80) 7.0 (100) 8.4 (120)	2550 (673) 2850 (750) 3122 (825)	48.0 (157) 54.0 (177) 54.5 (179)

PERFORMANCE DATA FOR FOAM STREAM RANGE ARE BASED AT 30 DEG. NOZZLE ELEVATION IN STILL AIR CONDITION. THE REACH IS FOR FOAM, WHEN USED AS WATER THE WATER REACH WILL INCREASE BY ABOUT 10 to 15%. THE ABOVE NOZZLE DATA IS WITH HD MONITOR INLET PRESSURE.

VARSHA 40U



Note :

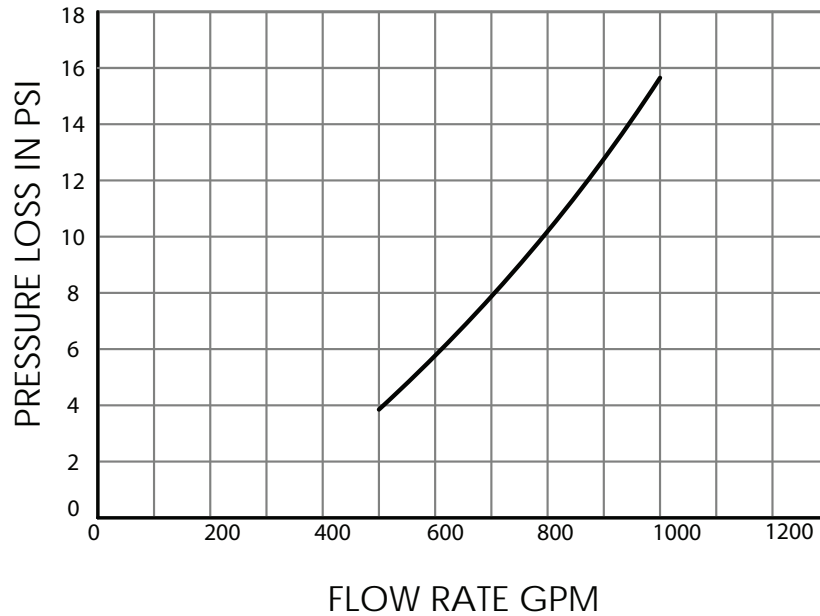
- Nozzle is self-inducting without pickup tube.
- For water or premix foam solution.
- Refer to HD 280 catalogue (VARSHA 40U) for more information.

PERFORMANCE DATA

SET FLOW RATE LPM (GPM)	PRESSURE KG/CM.SQ. (PSI)	ACTUAL FLOW RATE LPM (GPM)	STRAIGHT STREAM WATER RANGE IN METERS (FEET)
1900 (500) VARSHA 40U-500	5.6 (80) 7.0 (100) 8.4 (120)	1700 (450) 1900 (500) 2080 (550)	57 (187) 61 (200) 63 (207)
2850 (750) VARSHA 40U-750	5.6 (80) 7.0 (100) 8.4 (120)	2550 (674) 2850 (750) 3120 (825)	61 (200) 63 (207) 64 (210)
3785 (1000) VARSHA 40U-1000	5.6 (80) 7.0 (100) 8.4 (120)	3385 (895) 3785 (1000) 4150 (1095)	63 (207) 65 (213) 66 (216)

PERFORMANCE DATA IS BASED AT 30 DEG. NOZZLE ELEVATION IN STILL AIR CONDITION AND WITH HD MONITOR. THE JET STREAM IS NOT IN OSCILLATING CONDITION. FOAM STREAM JET REACH WITH PREMIX WATER FOAM SOLUTION SHALL BE SIGNIFICANTLY LOWER THAN WATER JET REACH. THE ABOVE NOZZLE DATA IS WITH HD MONITOR INLET PRESSURE.

FRICTION LOSS THROUGH MONITOR



LIMITED WARRANTY

HD FIRE PROTECT PVT. LTD. hereby referred to as HD FIRE warrants to the original purchaser of the fire protection products manufactured by HD FIRE and to any other person to whom such equipment is transferred, that such products will be free from defect in material and workmanship under normal use and care, for two (2) years from the date of shipment by HD FIRE. Products or Components supplied or used by HD FIRE, but manufactured by others, are warranted only to the extent of the manufacturer's warranty. No warranty is given for product or components which have been subject to misuse, improper installation, corrosion, unauthorized repair, alteration or un-maintained. HD FIRE shall not be responsible for system design errors or improper installation or inaccurate or incomplete information supplied by buyer or buyer's representatives. HD FIRE will repair or replace defective material free of charge, which is returned to our factory, transportation charge prepaid, provided after our inspection the material is found to have been defective at the time of initial shipment from our works. HD FIRE shall not be liable for any incidental or consequential loss, damage or expense arising directly or indirectly from the use of the product including damages for injury to person, damages to property and penalties resulting from any products and components manufactured by HD FIRE. HD FIRE shall not be liable for any damages or labour charges or expense in making repair or adjustment to the product. HD FIRE shall not be liable for any damages or charges sustained in the adaptation or use of its engineering data & services. In no event shall HD Fire's product liability exceed an amount equal to the sale price. The foregoing warranty is exclusive and in lieu of all other warranties and representation whether expressed, implied, oral or written, including but not limited to, any implied warranties or merchantability or fitness for a particular purpose. All such other warranties and representations are hereby cancelled.

NOTICE :

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The information provided by us is to the best of our knowledge and belief, and consist of general guidelines only. Site handling and installation control is not in our scope. Hence we give no guarantee for result and take no liability for damages, loss or penalties whatsoever, resulting from our suggestion, information, recommendation or damages due to our product.

Product development is a continuous programme of HD FIRE PROTECT PVT. LTD. and hence the right to modify any specification without prior notice is reserved with the company.



HD FIRE PROTECT PVT. LTD.
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MONITOR - M311

(CARBON STEEL, HOT DIP GALVANIZED)



TECHNICAL DATA

MODEL	M311
NOMINAL SIZE	3 inch (80 mm)
MAX. SERVICE PRESSURE	175 psi (12 bar)
MAXIMUM FLOW	800 gpm (3030 lpm)
FACTORY HYDROSTATIC TEST PRESSURE	400 psi (27.6 bar)
SWIVEL JOINT	Bronze to IS 318 / ASTM B62 with double row of Stainless Steel Ball Bearing and Grease Fittings
NOZZLE THRUST REACTION IN KG	Flow in lpm X $\sqrt{\text{pressure}}$ in kg/sq.cm X 0.0228
INLET CONNECTION	3" or 4" (80NB or 100NB) Flange to ANSI B16.5#150, R.F.
OUTLET CONNECTION	3" BSP (M)
MONITOR ELEVATION	90 deg. above horizontal & 45 deg. below horizontal
MONITOR ROTATION	360 deg. continuous
MONITOR MOVEMENT	Handle with twist lock
FINISH	Red to RAL 3001
WEIGHT (Approx)	35 kg
ORDERING INFORMATION	Specify Monitor Model and Inlet Flange Size
APPROVAL	FM Approved



MONITOR OPERATION

The monitor has large flow capability and can be manually operated by a single fire fighter. It is a fixed flow monitor and the flow is set as per client requirement. The monitor design ensures to prevent jet reaction forces from effecting the horizontal and the vertical position of the monitor. The monitor has the ability for 360 deg. continuous horizontal rotation and angle of elevation +90 deg. above horizontal and -45 deg. below horizontal. The movement is made by holding the handle and position can be locked by setting the twist lockdown nuts.

The water vanes in discharge tube reduces the turbulence and friction loss, thus increasing the nozzle performance to achieve greater range. To ensure desired performance, the friction, loss through monitor must be considered while selecting the nozzle and the flow through the monitor with reference to available base pressure at inlet of the monitor.

The monitor's nozzle is of particular importance when using monitor for firefighting as it is the monitor nozzle that shapes the discharge jet. It has fog and jet angle which is user adjustable between wide fog and straight stream. The spinning teeth in the nozzle change the discharge pattern from jet to fog.

For flow and jet reach data refer monitor nozzle data sheet.

DESCRIPTION

The Monitor Model-M311 is durable manual controlled monitor for fixed installation as well as trailer mounted unit. The monitor is generally used for protection of flammable liquid storage tanks, loading racks, dykes marine and many other Industrial application.

The monitor possess several design features that provides ease of operation, minimum maintenance and resistance to normally destructive environments. The monitor is used with aspirating, non-aspirating and water nozzles with flow range upto 800 gpm (3030 lpm).

The monitor has welded carbon steel 3 inch (80 mm) waterway. All steel parts are hot dip galvanized and epoxy painted for excellent corrosion resistant. The vertical and horizontal rotation is through corrosion resistant swiveling joints with double row of stainless steel ball bearing. Both vertical and horizontal movements are controlled by handle and twist lock.

INSTALLATION, TESTING AND MAINTENANCE

The monitor must be installed and operated carefully by a trained person, having good knowledge of the equipment. Before assembly of the monitor to the supply piping, thoroughly flush the piping with water to avoid sand, residue, welding slag or other debris hindering the proper functioning of the monitor.

After few initial successful tests, an authorized person must be trained to perform the inspection and testing of the monitor.

The monitor should be ready for use. To achieve this condition, scheduled inspection and maintenance operation should be performed and it must be recorded in the maintenance register book indicating the requirement or recommendation. The recommended maintenance, procedure must be followed as given in the manual and also as per the local authority having jurisdiction.

It is recommended to carry out weekly physical inspection of the monitor. The inspection should verify that no damage has taken place to any component and the monitor is ready for use.

Carry out functional test every month for the flow, regular rotation in horizontal and vertical plane for the entire operating range to observe any leakage.

Periodic proper greasing through grease nipple provided on bearing, worm wheel and worm shaft must be ensured. Use water resistant low friction synthetic grease. Lubrication is required for smooth operation.

Each monitor must be operated with the full flow in accordance to the guidelines of the organisation having local jurisdiction.

The owner is responsible for maintaining the equipment in proper operating condition.

CAUTION

A trained personnel for fire fighting must use the monitor. Appropriate guidance & training must be given to reduce the risk or injury.

The nozzle must be fixed to the monitor carefully, The flange bolts must be tightened uniformly.

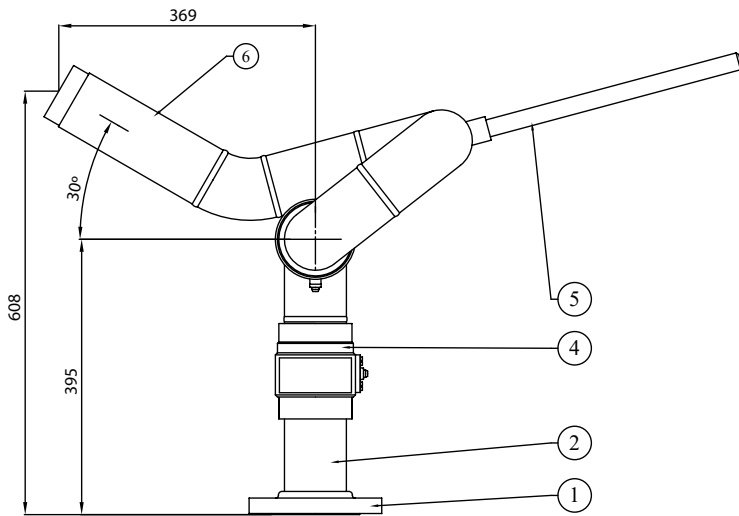
The piping must be able to with stand the horizontal reaction force. Serious injury to personnel and equipment can result from improper installation.

When installing monitor it is very essential that flange bolts be tightened uniformly to prevent cocking of the monitor relative to the flange or valve.

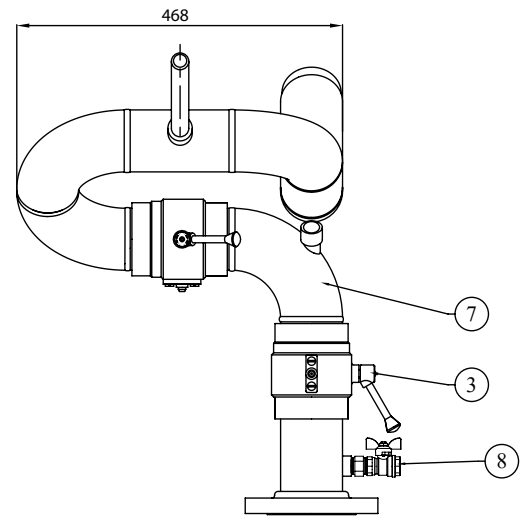
Before flowing water from monitor, check that all personnel are out of stream path and stream direction will not cause avoidable property damage.

Application of water or foam on an electric appliance can cause serious injury.

The water supply to monitor must be increased / decreased gradually to prevent possible water hammer occurrence.



ELEVATION



SIDE VIEW

PART LIST

SR.NO	DESCRIPTION	MATERIAL SPECIFICATION
1	BASE FLANGE	ASTM A105
2	INLET PIPE	ASTM A106 WPB SCH40
3	LOCK V & H	BRONZE
4	SWIVEL JOINT	BRONZE IS:318/ ASTM B62
5	HANDLE	STEEL
6	BARREL PIPE	ASTM A106 SCH40
7	ELBOW	ASTM A234 WPB SCH40
8	BALL VALVE	BRASS

Note :

- 1) Monitor inlet flange standard size is 80NB (3") to ANSI B16.5, 150# is standard supply, Other sizes like 100NB (4") are optional.
- 2) All dimensions in mm and are approximate.
- 3) As the Monitor is hot dip galvanized, flange will be RF without serration.

LIMITED WARRANTY

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Waterflow Detector Size 2"-8"

FIG-F6001

Specifications

- Equipped with tamper resistant screws to prevent unauthorized entry.
- Two synchronized switches are enclosed in a durable terminal block. Terminals are easy to read and wire.
- Built-In mechanical time delay feature; minimizing the risk of false alarms due to pressure surges or air trapped in the system.
- Offers excellent performance during riser vibrations caused by large in-rushes of water.
- Designed and built for accuracy and repeatability.
- Flow sensitivity range: 4-10 GPM(15-38LPM).
- Contact rating: 8A@250VAC, 3A@24VDC, 2.5A@ 30VDC.
- UL/ULC Listed, FM Approved.
- COST Certified.

Working Pressure

- 450 PSI

Working Temperature

- 0-68°C

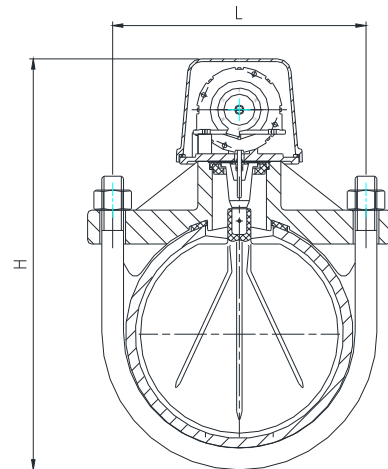
Corrosion Protection

- Fusion Bonded Epoxy Coated Interior and Exterior or Enamel Spray Paint, Interior and Exterior.

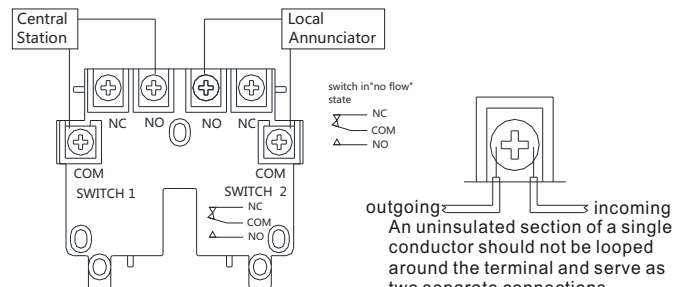
Dimensions

Size	DN 65		DN 80	
	/mm	/inch	/mm	/inch
L	92	3.62	104	4.09
H	200	7.87	220	8.66
Nominal Pipe Size OD	73	2.87	88.9	3.50
Pipe Wall Thickness	3.05-5.16	0.12-0.20	3.05-5.49	0.12-0.22
Size	DN 100		DN 125	
	/mm	/inch	/mm	/inch
L	133	5.24	160	6.30
H	245	9.65	270	10.63
Nominal Pipe Size OD	114.3	4.50	141.3	5.56
Pipe Wall Thickness	3.05-6.02	0.12-0.24	3.40-6.55	0.13-0.26
Size	DN 150		DN 200	
	/mm	/inch	/mm	/inch
L	187	7.36	239	9.41
H	300	11.8	350	13.78
Nominal Pipe Size OD	168.3	6.63	219.1	8.63
Pipe Wall Thickness	3.40-7.11	0.13-0.28	3.76-8.18	0.15-0.32

Schematic



Typical Connections



The designs, materials and specifications shown are subject to change without notice due to the continuous development of our products.



A99

Description

Leader liner ¼ turn ball type WYE valve fitting with one connection that has female threads and two connections that have male threads, used to divide one hose line into two lines.

Versions and product codes

Series	Size	Type	Finishing
A99	2 1/2" x 1 1/2"	Female hose thread inlet x Male hose thread outlets	Chrome plated and red painted brass

Technical data

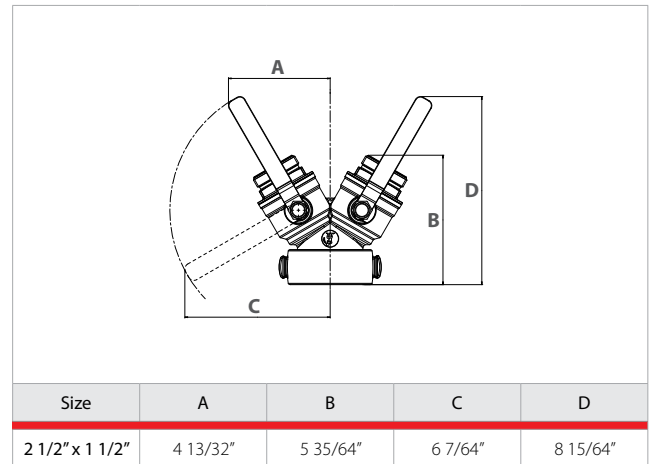
- Rated pressure: 300 PSI (20,6 bar)

Materials

- Main body: cast brass CuZn37Pb2Ni1AlFe-B in accordance with European Standard UNI EN1982-2000 CB753S, corresponding to American Standard ASTM B30 C85700
 - Tensile strength of the material in the shape of bar: min. 300 MPa
 - Stress for permanent distortion R(0.2): min. 150 MPa
 - Elongation: min. 15 %
- Ball valves body and ball: forged brass CuZn40Pb2 in accordance with European Standard EN 12165 CW617N, corresponding to American Standard ASTM B124 C37700
 - Yield stress of the material in the shape of bar: 360 MPa
 - Stress for permanent distortion R(0.2): 138 MPa
 - Elongation: 10 %
- Swivel: forged brass CuZn40Pb2 in accordance with European Standard EN 12165 CW617N, corresponding to American Standard ASTM B124 C37700
 - Yield stress of the material in the shape of bar: 360 MPa
 - Stress for permanent distortion R(0.2): 138 MPa
 - Elongation: 10 %

Dimensions

A99 – HOSE THREAD SWIVEL INLET (F) x TWO STRAIGHT HOSE THREAD OUTLETS (M)

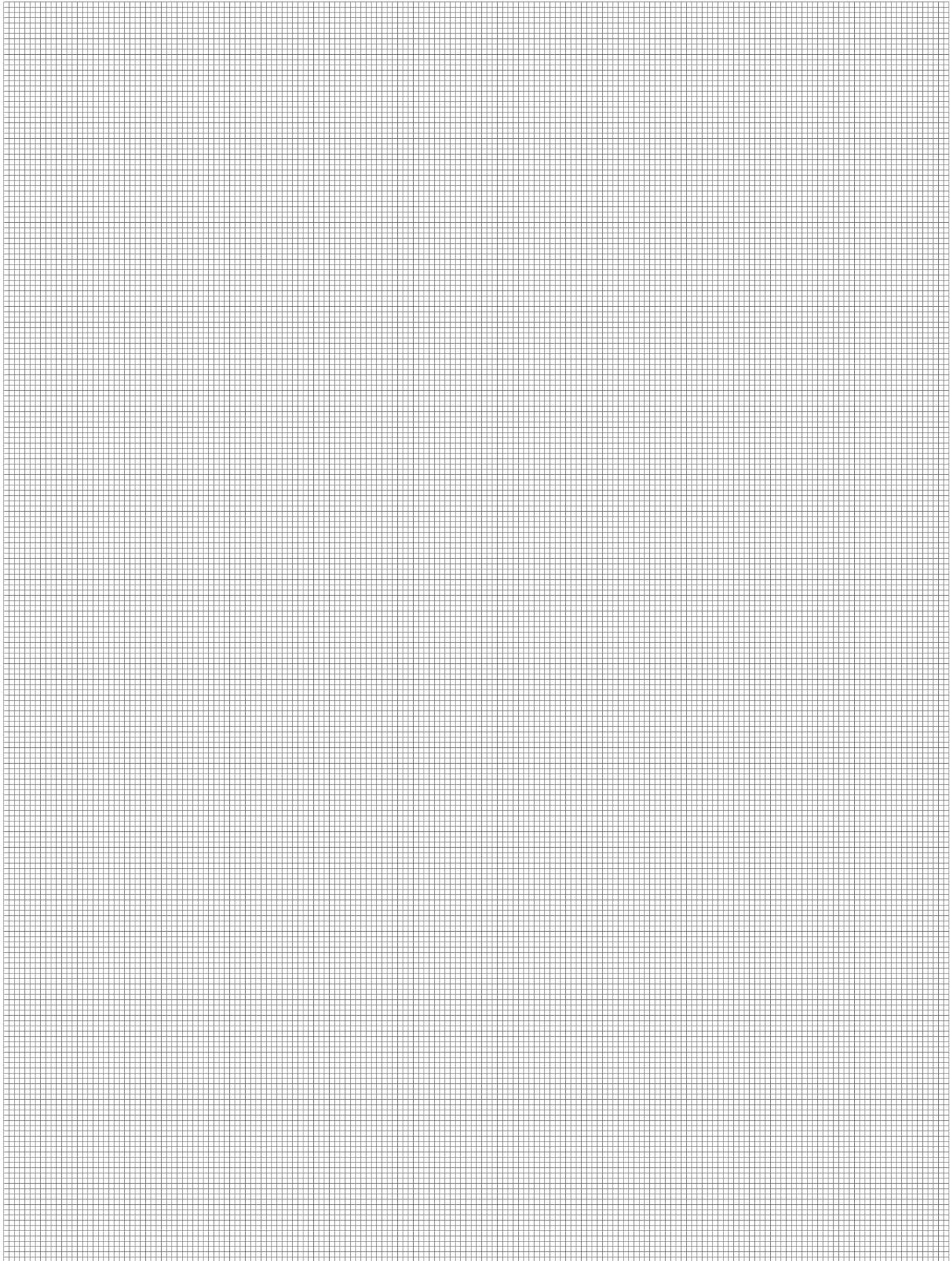


Product specifications

A99

Leader liner ¼ turn ball type WYE valve, providing two hose connections, with main feature as following:

- chrome plated forged brass swivel
- red painted cast brass main body
- red painted forged brass valves bodies
- chrome plated forged brass male connections
- 2 1/2" hose thread swivel inlet
- two 1-1/2" hose thread outlets
- rated pressure 300 psi



Additional information

For additional information please check the website www.giacomini.com or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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A101

A102

Description

Concealed auxiliary inlet connection with 500 GPM minimum inlet capacity to supplement Fire Protection water supply.

Cast brass two-way inlet body with double drop clappers; the A102 inlet connection body can serve as bottom or top feed by changing clappers.

Use

The Fire Department Concealed Connection is an important component in most sprinkler and standpipe systems.

When a sprinkler system activates, the fire department connects hose lines from a pumper truck to the fire department connection.

This connection allows the fire department to supplement the fire protection system in the event of a fire.

Versions and product codes

Series	Size	Type	Finishing
A101 BACK OUTLET	4" x 2 1/2"	Two hose threaded inlets (F) X NPT outlet (F)	Rough brass
	4" x 3"		
	6" x 2 1/2"		
A102 BOTTOM TOP OUTLET	4" x 2 1/2"	Two hose threaded inlets (F) X NPT outlet (F)	Rough brass
	4" x 3"		
	6" x 2 1/2"		

Technical data

- Maximum rated pressure: 300 PSI (20,6 bar)

Materials

- Body: casted brass CuZn37Pb2Ni1AlFe-B in accordance with European Standard UNI EN1982-2000 CB753S, corresponding to American Standard ASTM B30 C85700
- Tensile strength of the material in the shape of bar: min. 300 MPa
- Stress for permanent distortion R(0.2): min. 150 MPa
- Elongation: min. 15 %

Approvals for A101



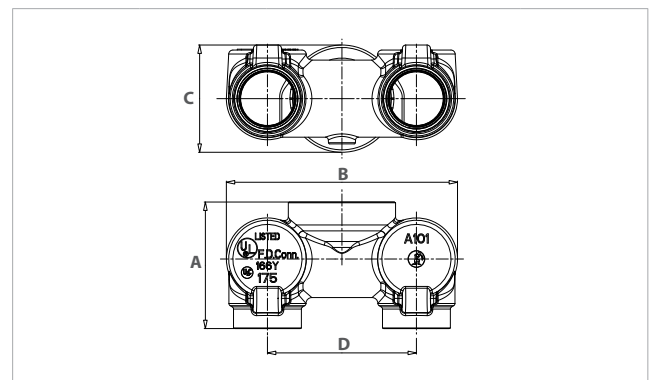
Approvals for A102



6" x 2 1/2": -

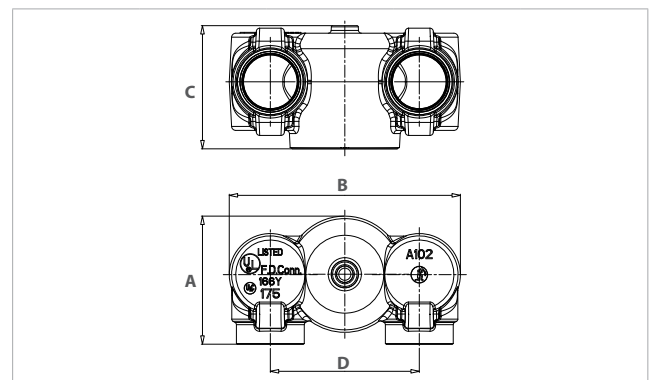
Dimensions

A101 – TWO HOSE THREAD INLETS (F) x NPT OUTLET (F) BACK



Size	A	B	C	D
4" x 2 1/2"	5 61/64"	10 55/64"	3 3/64"	7"
4" x 3"	6 31/64"	12 1/16"	5 19/64"	7 5/8"
6" x 2 1/2"	8 19/64"	11 31/64"	7 3/32"	7 5/8"

A102 – TWO HOSE THREAD INLETS (F) x NPT OUTLET (F) BOTTOM-TOP



Size	A	B	C	D
4" x 2 1/2"	6 1/64"	10 55/64"	5 25/32"	7"
4" x 3"	6 1/2"	12 1/16"	6 9/32"	7 5/8"
6" x 2 1/2"	8 39/64"	12 15/32"	6 21/64"	7 5/8"



Product specifications

A101 4" x 2 1/2"

Fire Department Inlet Connection, two f-way female inlet body with female outlet, back connection, double back clappers with main feature as following:

- Casted brass
- 4" female NPT outlet
- 2 1/2" female NPT inlets
- Minimum inlet capacity 500 GPM
- Rated pressure 175 psi
- UL ULC listed

A101 4" x 3"

Fire Department Inlet Connection, two f-way female inlet body with female outlet, back connection, double back clappers with main feature as following:

- Casted brass
- 4" female NPT outlet
- 3" female NPT inlets
- Minimum inlet capacity 500 GPM
- FM listed Rated pressure 300 psi
- UL listed Rated pressure 175 psi

A101 6" x 2 1/2"

Fire Department Inlet Connection, two f-way female inlet body with female outlet, back connection, double back clappers with main feature as following:

- Casted brass
- 4" female NPT outlet
- 2 1/2" female NPT inlets
- Minimum inlet capacity 500 GPM
- Rated pressure 175 psi
- UL listed

A102 4" x 2 1/2"

Fire Department Inlet Connection, two f-way female inlet body with female outlet, bottom-top connection, double back clappers with main feature as following:

- Casted brass
- 4" female NPT outlet
- 2 1/2" female NPT inlets
- Minimum inlet capacity 500 GPM
- Rated pressure 175 psi
- UL ULC listed

A102 4" x 3"

Fire Department Inlet Connection, two f-way female inlet body with female outlet, bottom-top connection, double back clappers with main feature as following:

- Casted brass
- 4" female NPT outlet
- 3" female NPT inlets
- Minimum inlet capacity 500 GPM
- FM listed Rated pressure 300 psi
- UL listed Rated pressure 175 psi

A102 6" x 2 1/2"

Fire Department Inlet Connection, two f-way female inlet body with female outlet, bottom-top connection, double back clappers with main feature as following:

- Casted brass
- 4" female NPT outlet
- 2 1/2" female NPT inlets
- Minimum inlet capacity 500 GPM
- Rated pressure 175 psi

Additional information

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A95

A96

Descripción

Conexión siamesa de dos vías utilizada como conexión de entrada auxiliar proveyendo un caudal mínimo de 500 GPM para el suministro suplementario de agua para el Sistema contra incendio.

La clapeta oscilatoria provee un paso de agua completo. Su diseño expuesto permite un método económico para cumplir los requerimientos de entrada del departamento de bomberos. Estas conexiones comúnmente son instaladas en el costado de los edificios (A95), pero también puede ser colocada de forma remota al edificio (A96).

Estas son conocidas como conexiones para el departamento de bomberos de "banqueta" o "independientes". El estándar NFPA 13 requiere que la conexión para el departamento de bomberos este ubicada en la calle al lado de los edificios, pero hay situaciones en las cuales esta localización no es práctica (como en grandes centros comerciales) lo que permite que se adopte la solución de la A96.

Versiónes y códigos de producto

Serie	Medida	Marcaje	Tipo	Acabado
A95	4" x 2 1/2"	"AUTO SPKR"	Entrada rosca giratoria de dos accesos x salida recta NPT con clapeta sencilla	Latón áspero
A96	4" x 2 1/2"	"AUTO SPKR"	Entrada rosca giratoria de dos accesos x salida recta NPT con clapeta sencilla	Latón áspero

Datos Técnicos

- Presión nominal: 300 PSI (20,6 bar)

Materiales: A95 y A96

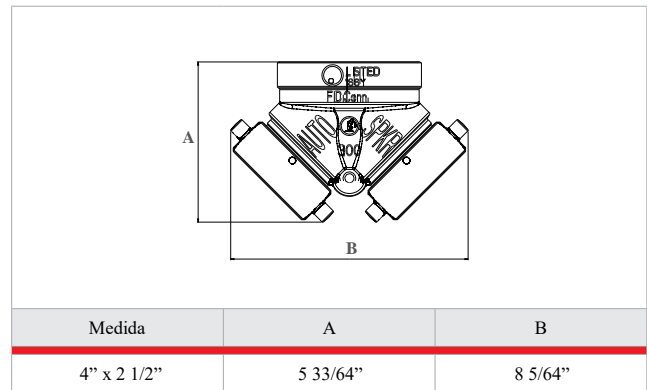
- Cuerpo: bronce fundido CuZn37Pb2Ni1AlFe-B en concordancia con UNI EN 1982-2000 B753S, similar a ASTM B30 C85700
 - Resistencia a la tensión del material: min. 300 MPa
 - Esfuerzo para deformación permanente R(0.2): min. 150 MPa
 - Elongación: min. 15 %
- Clapeta y rosca giratoria: latón forjado CuZn40Pb2 en concordancia con EN 12165 CW617N, similar a ASTM B124 C37700
 - Límite elástico del material: 360 MPa
 - Esfuerzo para deformación permanente R(0.2): 138 MPa
 - Elongación: 10 %

Aprobaciones: A95 y A96

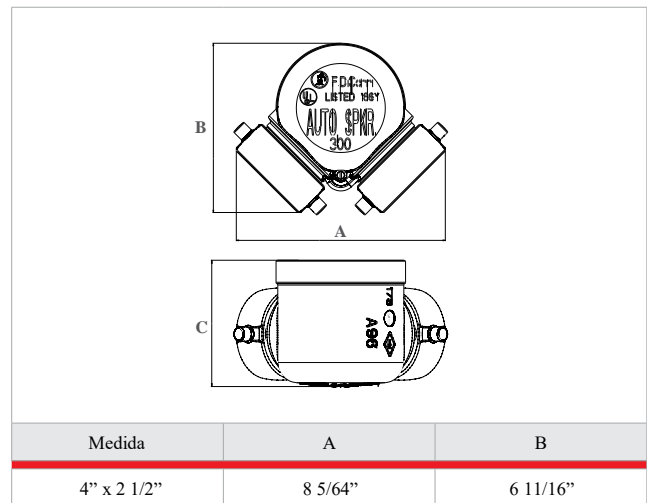


Dimensiones

A95-DOS ENTRADAS GIRATORIAS P/MANGUERA X SALIDA NPT RECTA



A96-DOS ENTRADAS GIRATORIAS P/MANGUERA X SALIDA NPT ANGULAR



Product specifications

A95

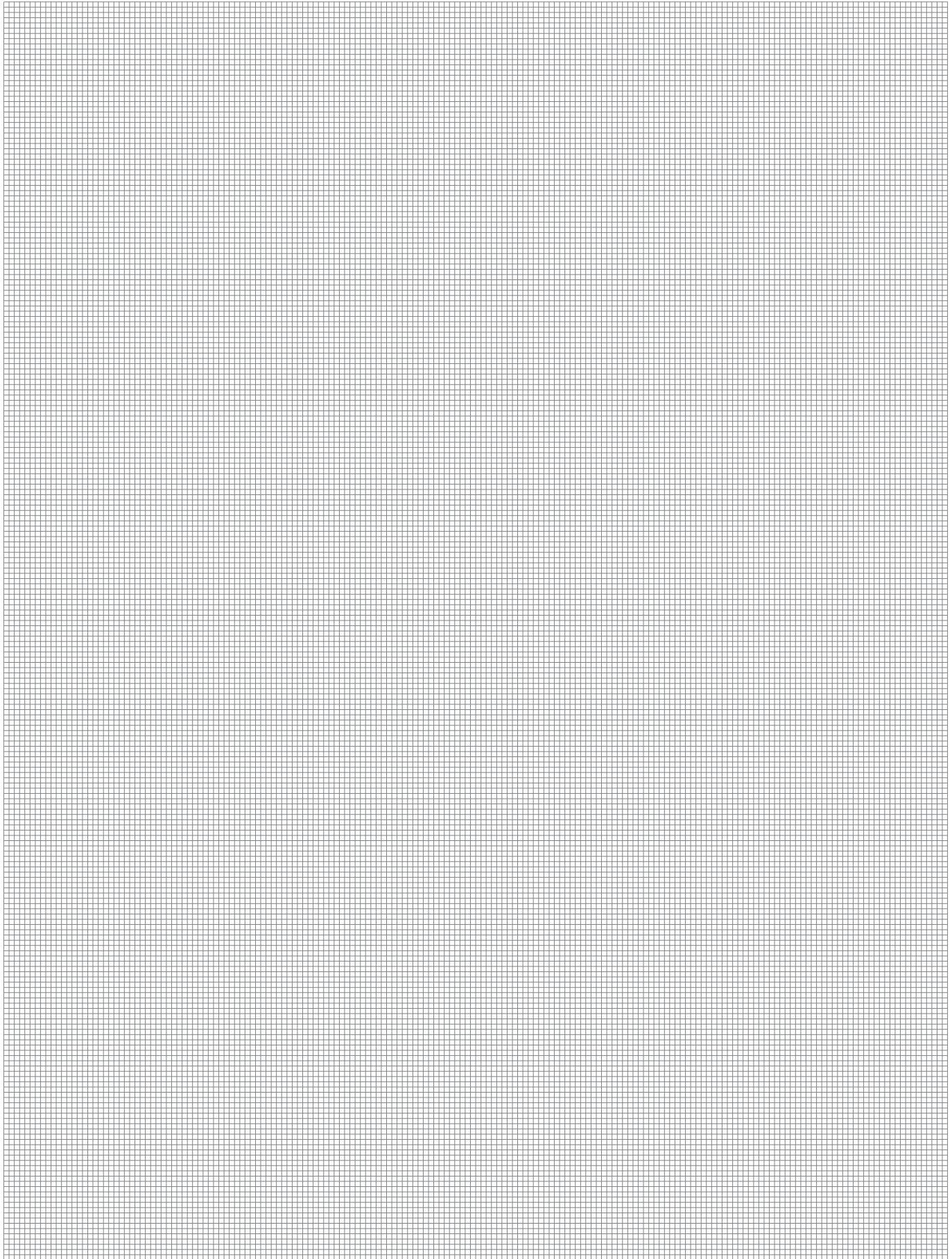
Conexión expuesta de entrada para el departamento de bomberos, cuerpo de entrada con dos vías con clapeta oscilatoria antirretorno y roscas giratorias; conexión de salida recta NPT:

- cuerpo de bronce fundido
- clapeta de latón forjado
- roscas giratorias de latón forjado
- entrada con rosca giratoria de 2 1/2" con dos agarraderas
- salida recta NPT de 4"
- presión nominal de 300 psi
- Aprobación FM y listada UL

A96

Conexión expuesta de entrada para el departamento de bomberos, cuerpo de entrada con dos vías con clapeta oscilatoria antirretorno y roscas giratorias; conexión de salida angular NPT:

- cuerpo de bronce fundido
- clapeta de latón forjado
- roscas giratorias de latón forjado
- entrada con rosca giratoria de 2 1/2" con dos agarraderas
- salida angular NPT de 4"
- presión nominal de 300 psi
- aprobación FM y listada UL



Additional information

For additional information please check the website www.giacomini.com or contact the technical service: '+39 0322 923372 6 +39 0322 923255 *
consulenza.prodotti@giacomini.com

This pamphlet is merely for information purposes. Giacomini S.p.A. retains the right to make modifications for technical or commercial reasons, without prior notice, to the items described in this pamphlet. The information described in this technical pamphlet does not exempt the user from following carefully the existing regulations and norms on good workmanship.

Deluge Valve

FIG. 9266

Specifications

- Installed both vertically and horizontal orientation.
- For use in dry pipe (automatic sprinkler) fire protection systems.
- Use for electrical signal trigger system and pipeline connection diagram system, manual-reset.
- High-pressure, high-flow deluge systems.
- Excellent flow characteristics.
- Superior design featuring exceptionally low pressure losses at high flow rates.
- Automatic or local manual emergency actuation.
- Hazardous-flammable and explosion classified area fire suppression.
- Low to negligible lifelong maintenance costs to no wetted metallic and mechanical moving parts design.
- Onshore & Offshore, Naval, Industrial, Commercial & Residential fire suppression.
- Multiple end type: Groove by Groove, Flange by Flange, Flange by Groove.
- Flanged connections are drilled per EN1092 -PN10/16 or ANSI B16.1 Class 125.
- Grooved connections are cut in accordance with standard groove specifications for steel pipe.
- UL 260 listed.
- GOST certificated.

Working Pressure and Temperature

- 20 to 300 psi @ 0°C to 87°C.

Corrosion Protection

- Fusion bonded coating interior and exterior meet or exceed all applicable of AWWA C550 standard.

Options

- Multiple end type : Groove by Groove, Flange by Flange, Flange by Groove.

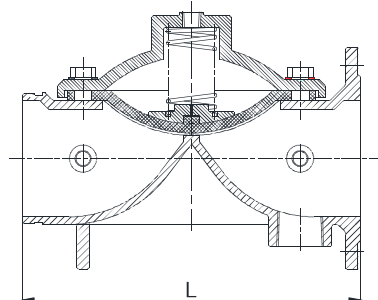
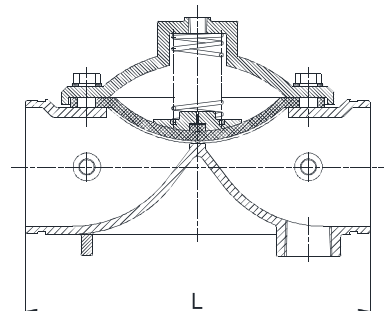
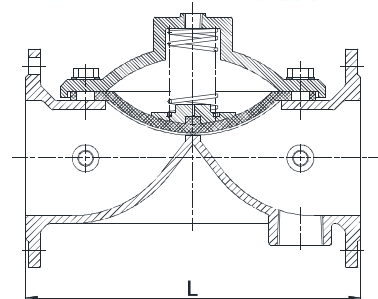
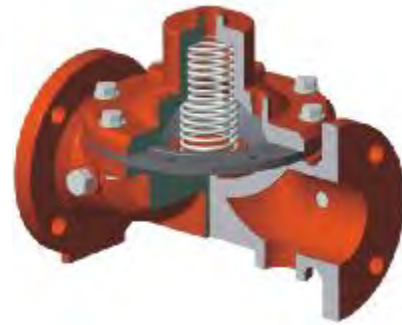
Material Specification

Part	Material	ASTM Specification
Body	Ductile Iron	A536 Grade 65-45-12
Cover	Ductile Iron	A536 Grade 65-45-12
Diaphragm	Rubber	D2000 NBR
Bonnet Bolts and Nuts	Carbon Steel, Zinc plated	A307 Garde B
Spring	Stainless Steel	A276 Grade 302
Drip Valve	Brass	B16 C36000
Water Relay	Brass	B16 C36000
1/2" Ball Valves	Brass	B16 C36000
1/2" Check Valves	Brass	B16 C36000
1/2" Strainer	Brass	B16 C36000
Drain Valve	Brass	B16 C36000
Manual emergency valve	Brass	B16 C36000
Nipple	Malleable Iron	A47 Grade 22010
Pipe	Stainless Steel	A276 Grade 304
Solenoid Valve	Assembly	
Pressure Gauge	Assembly	

Notes

• Designs, materials and specifications shown are subject to change without notice due to the continuous development of our products.

Schematic



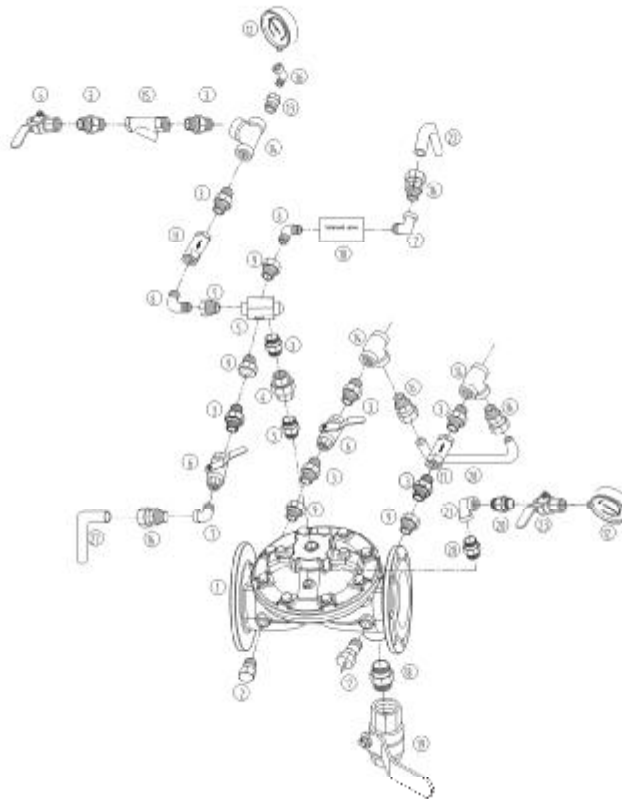
Main Dimensions (mm/inch)

Size	2	2.5	3	4	5
L	233(9)	290(11.5)	310(12.2)	356(14)	370(14.5)
Size	6	8	10	12	
L	436(17.2)	530(20.8)	636(25)	835(32.8)	

Deluge Valve

FIG. 9266

Schematic



Notes

• **Designs, materials and specifications shown are subject to change without notice due to the continuous development of our products.**

Grooved Butterfly Valve with Tamper Switch (XD381X), UL/FM/VdS Approved

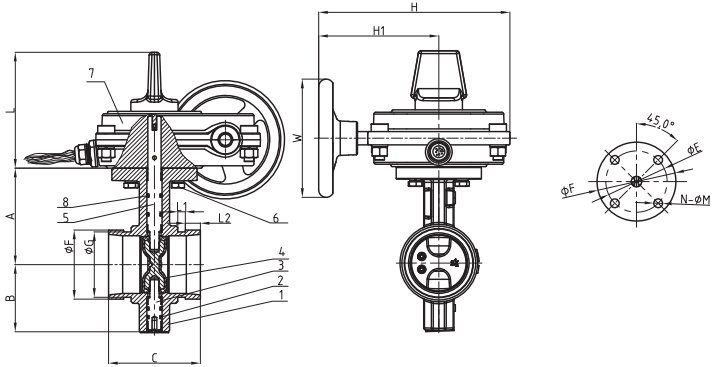
00C3073.7



XD381X

RoHS NSF/ANSI 61 NSF/ANSI 372

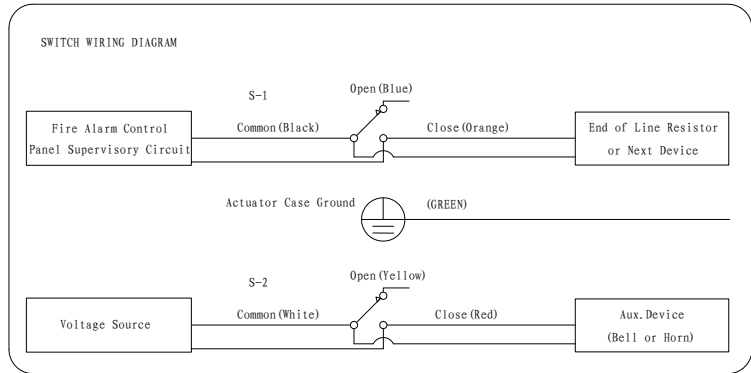
- Design Standard: MSS SP-67
- Connection Ends: Groove to AWWA C606
- Top Flange Standard: ISO 5211
- Working Pressure: 300PSI
175PSI, 200PSI and 250PSI available upon request
- Temperature Range: 0°C - 100°C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Body	ASTM A536,65-45-12	
2	O-Ring	NBR	EPDM
3	Stub Shaft	AISI 431	
4	Disc	ASTM A536,65-45-12+EPDM	ASTM A536,65-45-12+NBR
5	Drive Shaft	AISI 431	
6	Hex Nut	Carbon Steel Zinc plated	
7	Signal Gearbox	Body:ASTM A536,65-45-12	
8	O-Ring	NBR	EPDM

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.



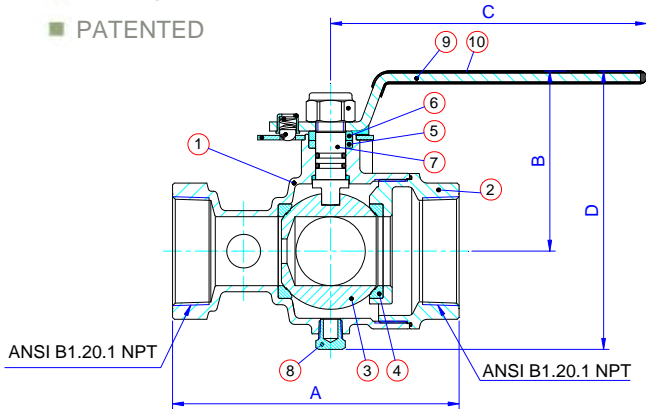
DN		Dimensions(mm)														
Inch	mm	A	B	C	F	G	L	L1	L2	H1	H	W	ϕE	ϕF	N-ϕM	ISO5211
2"	50	89	65	81	60.3	57.15	122.5	7.93	15.88	127	202.2	125	70	90	4-ϕ10	F07
2.5"	65	102	71	97	73.0	69.09	122.5	7.93	15.88	127	202.2	125	70	90	4-ϕ10	F07
3"	80	109	81	97	88.9	84.94	122.5	7.93	15.88	127	202.2	125	70	90	4-ϕ10	F07
4"	100	128	95	116	114.3	110.08	122.5	9.53	15.88	127	202.2	125	70	90	4-ϕ10	F07
5"	125	141	111	148	141.3	137.03	122.5	9.53	15.88	127	202.2	125	70	90	4-ϕ10	F07
6"	150	153	133	148	168.3	163.96	122.5	9.53	15.88	139.5	215	225	70	90	4-ϕ10	F07
8"	200	184	164	133	219.1	214.40	122.5	11.10	19.05	198.5	274	225	102	125	4-ϕ12	F10
10"	250	216	196	159	273.1	268.28	122.5	12.70	19.05	198.5	274	225	102	125	4-ϕ12	F10
12"	300	254	226	165	323.9	318.29	132.0	12.70	19.05	198.5	293.5	225	102	125	4-ϕ12	F10

Note: Valve must not be installed with disc in full open position. Disc must be partly closed so that no part is protruding beyond end of valve body.

YS-H61

FIRE PROTECTION THREADED TEST AND DRAIN VALVE

- Working Pressure: 300 PSI/ CWP
- PATENTED



DIMENSIONS (MM)

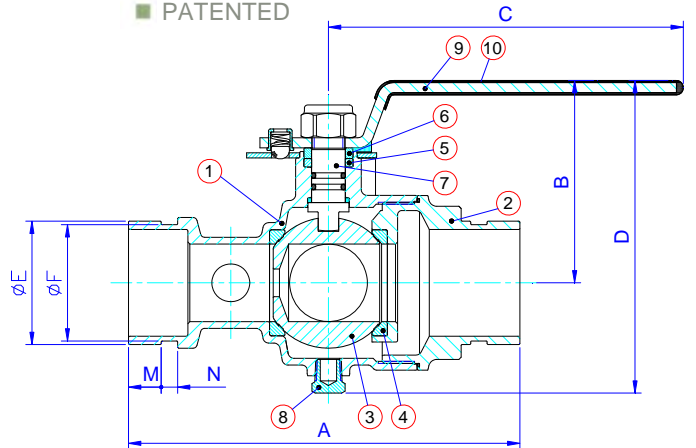
SIZE	A±2	B±2	C±2	D±3	k
1"	128.2	68.5	130.5	112	K7/16"/ K1/2"
1-1/4"	128.2	68.5	130.5	112	K7/16"/ K1/2"
1-1/2"	157.2	99.1	174	154	K7/16"/ K1/2"/ K3/4"/ K25
2"	157.2	99.1	174	154	K7/16"/ K1/2"/ K3/4"/ K25

- We reserve the right to modify the design /specifications without previous notice for better quality.
- 我方有權隨時變更設計/規格，以便提供品質優良的產品。

YS-H62

FIRE PROTECTION GROOVED TEST AND DRAIN VALVE

- Working Pressure: 300 PSI/ CWP
- Cut Groove Dimension To AWWA C606-06
- PATENTED



MATERIAL LIST

NO.	PART NAME	MATERIAL ASTM	QTY
1	BODY	BRASS C85700	1
2	END PIECE	BRASS C85700	1
3	BALL	BRASS	1
4	SEAT	TFM	2
5	GLAND PACKING	TFM	1
6	GLAND	BRASS	1
7	STEM	BRASS	1
8	DRAIN PLUG	BRASS	1
9	LEVER	STEEL	1
10	LEVER GRIP	PVC VINYL	1

DIMENSIONS (MM)

SIZE	A±2	B±2	C±2	D±3	φE	φF _{-0.38}	M±0.76	N±0.76	k
1-1/4"	161.6	68.5	130.5	112	42.4±0.41	38.99	15.88	7.95	K7/16"/ K1/2"
1-1/2"	190.9	99.1	174	154	48.3±0.48	45.09	15.88	7.95	K7/16"/ K1/2"/ K3/4"/ K25
2"	190.9	99.1	174	154	60.3±0.61	57.15	15.88	7.95	K7/16"/ K1/2"/ K3/4"/ K25

- We reserve the right to modify the design /specifications without previous notice for better quality.
- 我方有權隨時變更設計/規格，以便提供品質優良的產品。



Model ZW209FP

Fire Protection Pressure Reducing Valve

Application

The Zurn Wilkins Model ZW209FP Pilot Operated Pressure Reducing Valve is designed specifically for Fire Suppression Systems to reduce high inlet pressures to a safe and stable outlet pressure. The pilot assembly reacts to changes in downstream pressure allowing the main valve to modulate between the closed and open position ensuring a constant downstream set pressure. Once the downstream pressure reaches the pilot setting, the main valve will seal shut preventing damage downstream. Pressure regulation is not dependent upon flow rate, resulting in minimal pressure loss through the valve. In addition the Model ZW209FP comes standard with red epoxy coating internally and externally for corrosion protection, as well as isolation valves and pressure gauges for quick and easy maintenance or repair. The Zurn Wilkins Model ZW209FP is available in both globe and angle pattern bodies.

Approvals

- UL and C-UL Listed (1-1/4" thru 10")



Materials

Main Valve Body	Ductile Iron ASTM A536
Main Valve Cover	Ductile Iron ASTM A536
Disc Guide	Stainless Steel
Seat	Stainless Steel
Disc	Buna-N Rubber
Diaphragm	Nylon Reinforced Buna-N
Stem	Stainless Steel
Spring	Stainless Steel

Standard Features

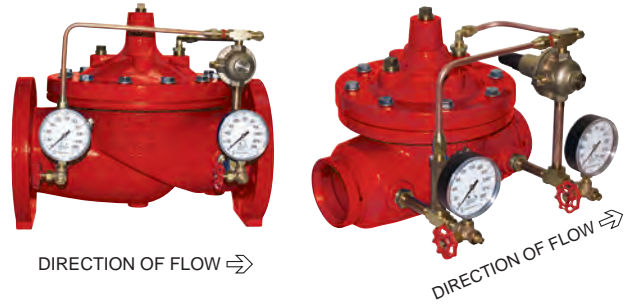
- "Wye" Type Strainer
- Inlet and Outlet Pressure Gauges (UL/FM)
- 3-Way Gauge Isolation Valves
- Red Epoxy Coated, FDA Approved
- Copper Tubing and Brass Fittings

Sizes

Globe and Angle Style Body:	
Flanged ends	<input type="checkbox"/> 1 1/2" thru 10"
Grooved ends	<input type="checkbox"/> 1 1/2" thru 10"
Threaded ends	<input type="checkbox"/> 1 1/4" thru 3"
Temperature Rating:	<input type="checkbox"/> Water 33°F to 140°F
Pilot Spring Range:	<input type="checkbox"/> 50-165 psi Residual Pressure (155 psi Max 10")

Standards And Pressure Ratings

	Standards Compliance	UL Pressure Ratings
Main Body	ANSI/AWWA C530	
Flanged	CLASS 150 - ANSI B16.42	250 psi
	CLASS 300 - ANSI B16.42	300 psi
Grooved	IPS - AWWA C606	300 psi
Threaded	NPT - ANSI B1.20.1	300 psi



Options

(Add suffix letters to ZW209FP)

Function

- C - 40XL Hydraulic Check

Body

- A - Angle Style Body

Connections

- G - Grooved Ends (inlet rating 300 psi)
- TH - NPT threaded (inlet rating 300 psi)
- Y - ANSI Class 300 Flanged (inlet rating 300 psi)
- X - ANSI Class 150 Flanged (inlet rating 250 psi)

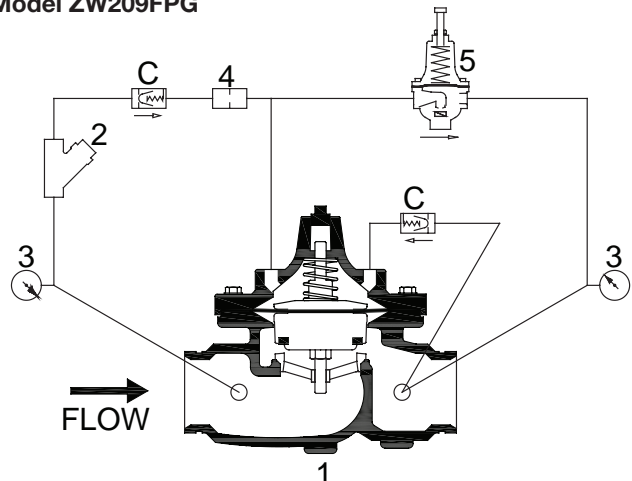
Pilot System

- SP - All Stainless Steel Pilotry (replaces all brass fittings, pilot valve and copper tubing)
- RV - Pilot on Reverse Side

Schematic Diagram

Item	Description of Standard Features
1.	Main Valve
2.	SXL "Wye" Type Strainer
3.	Pressure Gauge
4.	Restriction Fitting
5.	PV-PRD Pressure Reducing Control
C.	40XL Hydraulic Check

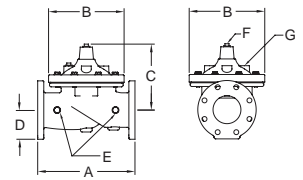
Model ZW209FPG



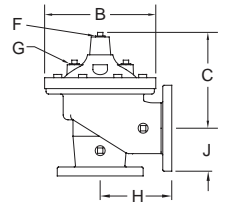
Refer to www.zurn.com for updated information.

Globe and Angle Main Valve Dimensions

DIM	FULL PORT	VALVE SIZE INCHES (mm)								
		1 1/4 (32)	1 1/2(38)	2 (50)	2 1/2 (65)	3 (80)	4 (100)	6 (150)	8 (200)	10 (250)
A	Threaded	7 1/4	7 1/4	9 7/16	11	2 1/2				
	Class 150 Flange		8 1/2	9 3/8	11	12	15	20	25 3/8	29 3/4
	Class 300 Flange		9	10	11 5/8	13 1/4	15 5/8	21	26 7/16	31 1/8
	Grooved		8 1/2	9	11	12 1/2	15	20	25 3/8	29 3/4
B	Diameter	5 5/8	5 5/8	6 3/4	8	9 3/16	11 11/16	15 3/4	20 1/8	23 11/16
C	Max.	5 3/4	5 3/4	6 3/16	7 3/8	8	10 3/16	12 5/16	15 9/16	17 5/8
D	Threaded/Grooved	1 3/8	1 3/8	1 3/4	2 1/8	2 9/16	3 7/16	5	5	5 13/16
	Class 150 Flange		2 1/2	3	3 1/2	3 3/4	4 1/2	5 1/2	6 3/4	8
	Class 300 Flange		3	3 1/4	3 3/4	4 1/8	5	6 1/4	7 1/2	8 3/4
E	NPT Body Tap	3/8	3/8	3/8	1/2	1/2	3/4	3/4	1	1
F	NPT Cvr. Plug Tap	1/2	1/2	1/2	1/2	1/2	3/4	3/4	1	1
G	NPT Cover Tap	3/8	3/8	3/8	1/2	1/2	3/4	3/4	1	1
H	Threaded	3 1/4	3 1/4	4 3/4	5 1/2	6 1/4				
	Class 150 Flange		4	4 3/4	5 1/2	6	7 1/2	10	12 11/16	14 7/8
	Class 300 Flange		4 1/4	5	6	6 7/16	8	10 1/2	13 1/4	15 9/16
	Grooved		4 7/16	4 3/4	5 1/2	6	7 1/2	10	12 11/16	14 7/8
J	Threaded	1 15/16	1 15/16	3 1/4	4	4 1/2				
	Class 150 Flange		4	3 1/4	4	4	5	6	8	8 5/8
	Class 300 Flange		4 1/4	3 1/2	4 5/16	4 7/16	5 1/6	6 1/2	8 1/2	9 5/16
	Grooved		3 3/16	3 1/4	4	4 1/4	5	6	8	8 5/8
Valve Stem Internal Thread		10-32	10-32	10-32	10-32	1/4-20	1/4-20	1/4-20	3/8-16	3/8-16
Stem Travel (in)		7/16	7/16	3/4	7/8	1	1 3/16	1 3/4	2 3/8	2 13/16
Approx. Wt. (lbs)		22	26	36	55	70	130	240	440	720



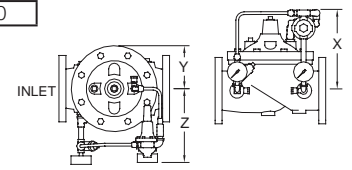
Globe Style Body



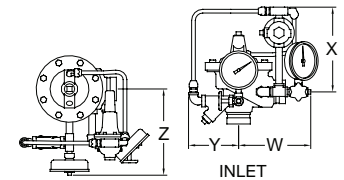
Angle Style Body

Pilot System Dimensions

PILOT SYSTEM DIMENSIONS			VALVE SIZE INCHES (mm)								
	DIM		1-1/4 (32)	1-1/2 (40)	2" (50)	2-1/2" (65)	3" (80)	4" (100)	6" (150)	8" (200)	10" (250)
Full Port Body	X	Max. (inches)	8 1/2	8 1/2	8 1/2	8 1/2	9 1/2	12	13	14	15 3/4
	Y	Max. (inches)	4	4	3 1/2	4	4 1/2	6	8	10	12
	Z	Max. (inches)	8 1/2	8 1/2	9	9	9 1/2	10	11 1/2	13	14 1/2
Angle Body	W	Max. (inches)	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	7 1/2	10	13	15
	X	Max. (inches)	8 1/2	8 1/2	8 1/2	8 1/2	9 1/2	12	13	14	17 1/2
	Y	Max. (inches)	5	5	5	5	5	5 13/16	7 7/8	10	12
	Z	Max. (inches)	9	9	9 1/2	9 1/2	10	10 1/2	12	13 1/2	15



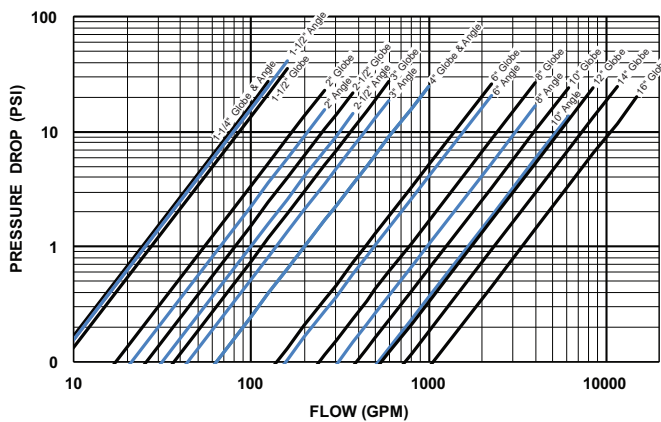
Globe Pilot System Dimensions



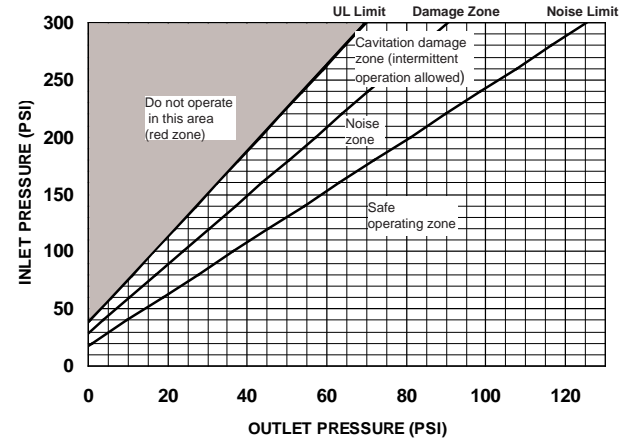
Angle Pilot System Dimensions

Flow Characteristics

BODY MINIMUM FRICTION LOSS



PRESSURE REDUCTION LIMIT



See Instruction Sheet at www.zurn.com for more setting information.

* Notes for Body Minimum Friction Loss Chart:

Minimum inlet pressure is 10 psi higher than set point or the additional body friction loss at intended flow, whichever is higher. (friction loss may be important at flows above 20 ft/s)

Example: A 6" valve intended to flow 2000 GPM at 150 psi has a friction loss of 20 psi at 2000 GPM. The minimum inlet pressure would be 150 + 20 = 170 psi. When inlet pressure is below set point, the outlet pressure will be the pressure at the inlet minus the friction loss.

Valve Size	NPS (inches)	1 1/4	1 1/2	2	2 1/2	3	4	6	8	10
	DN (mm)	32	38	50	65	80	100	150	200	250
Min Flow Rate to set Valve* (GPM)		15	15	100	35	60	100	220	400	600
Min Flow Rate (GPM)		1	1	1	2	2	4	10	15	35
Max Flow Rate (GPM)		125	160	250	375	600	1000	2250	4000	6000

Flow calculations are based on flow through schedule 40 Pipe. Maximum continuous flow is approximately 20 ft./sec (6.1 meters/sec). Maximum intermittent flow is 25 ft./sec (7.6 meters/sec). The actual capacity is limited by available differential pressure.

Operation

The Model ZW209FP utilizes a pressure reducing pilot valve that installs on the discharge side of the control circuitry. The pilot is a direct acting, normally open, spring loaded, diaphragm actuated valve. The operation of the ZW209FP begins with accurately sizing the valve, then fine tuning the control circuit by adjusting the pilot spring to the desired downstream pressure. Inlet pressure is piped to the inlet port of the pressure reducing pilot. A sensing line runs internally from the discharge side of the pilot to its lower control chamber under the diaphragm. Thus, downstream pressure exceeding the preset acts to close the pilot while the adjustable spring seeks to keep it open. The result is a modulating action in the pilot that is transmitted to the cover of the main valve. This creates a mirror modulation of the diaphragm assembly in the main valve. Downstream pressure is maintained within narrow limits regardless of changing flow rates or varying inlet pressures.

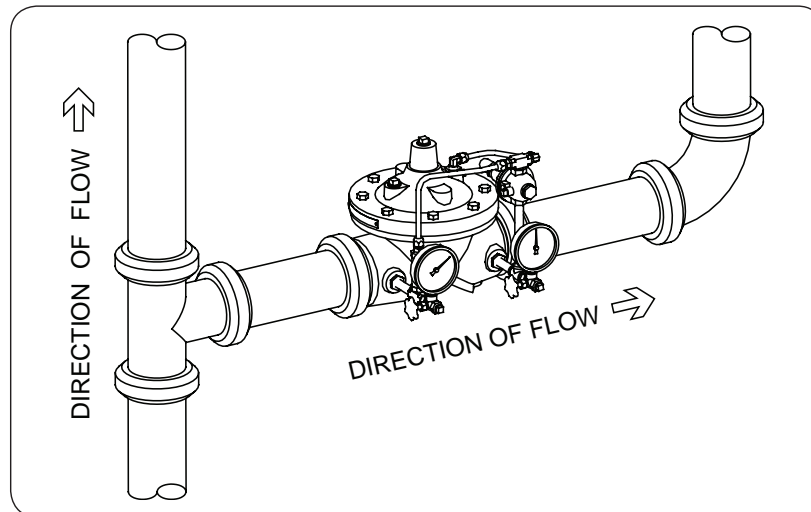
Typical Installation

The upstream and downstream pressure gauges are required by Underwriters Laboratories® (UL). Also a relief valve of not less than 1/2" in size MUST be installed on the downstream side of the pressure control valve. Adequate drainage for the relief valve discharge must be provided.

UI Installation Specification Requirements

UL installation specifications require the valve to be installed in accordance with the standard for installation of sprinkler systems, NFPA 13, or the standard for installation of standpipes and hose systems, NFPA 14. The valve is to be inspected, tested and maintained in accordance with the standard for the Inspection, Testing and Maintenance of Water-Based Fire Protection Systems, NFPA 25.

Typical Installation



Specifications

The Pressure Reducing Valve shall be a diaphragm actuated, pilot controlled. The main valve body shall be Ductile Iron ASTM A 536. The stem of the basic valve shall be guided top and bottom. The diaphragm shall not be used as a seating surface. All internal and external ferrous surfaces shall be coated with a high quality, fusion epoxy coating. The pilot control shall consist of a two-way, normally open, direct acting, adjustable spring loaded, diaphragm actuated pressure reducing pilot. The pilot control shall be field adjustable from 50 psi to 165 psi. The Pressure Reducing Valve shall be a ZURN WILKINS Model ZW209FP.

Job Name _____ Contractor _____

Job Location _____ Engineer _____



Model Z3004

Pressure-Tru™ Floor Control Valve

Application

The Pressure-Tru™ Z3004 Series Pressure Reducing Valve is listed as a floor control valve, an indicating valve, and a check valve in automatic sprinkler systems as well as a standpipe valve for CLASS I and CLASS III systems. Regulates pressure under both flow and no-flow conditions. Can be adjusted and set at the factory or set in the field without draining the standpipe riser and fire sprinkler system.

Standards Compliance

- UL® Listed
- C-UL® Listed
- City of Los Angeles Approved
- NYC MEA 37-95-E
- SS option - California State Fire Marshall Listed

Material

Main valve body	Cast bronze ASTM B 584
Stem	Silicon bronze ASTM B 584
Flange	Navy "G" bronze ASTM B 584
Elastomers	Buna Nitrile (FDA approved) EPDM (FDA approved)
Springs	Chrome silicon, ASTM A 401 powder coated

Features

Sizes: 2 1/2"

Maximum inlet pressure	400 psi
End connections (FNPT)	ANSI B1.20.1
	(Grooved) AWWA C606
Factory or Field Set	
Tapped and plugged inlet and outlet for pressure gauge.	



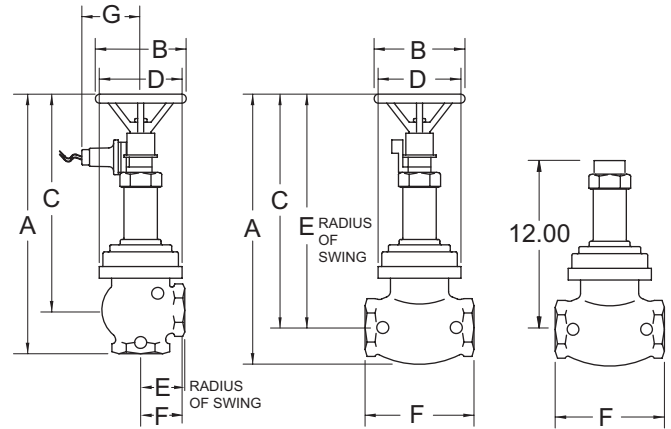
Z3004GMSA

Z3004SS

Options

(Suffixes can be combined)

- angle type valve
- IL - in-line (globe type) valve
- G - Grooved inlet / outlet connections
- MSA - with monitor switch adapter
- SS - with integral supervisory switch contact rating of 3 amps at 125VAC and a tamper-resistant cover
- CAP - with capped bonnet, no handwheel assembly
- CH - with chrome finish



Z3004SS

Z3004ILMSA

Z3004ILCAP

Dimensions & Weights (do not include pkg.)

MODEL	DIMENSIONS (approximate)																			
	A OPEN		A CLOSED		B		C OPEN		C CLOSED		D		E		F		G		WEIGHT	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs	kg
Z3004	18 3/8	467	17 1/2	445	6 1/4	159	15 5/8	397	14 3/4	375	5 3/4	146	3 1/2	89	3 1/16	78	N/A	N/A	30	13.6
Z3004SS	18 3/8	467	17 1/2	445	6 1/4	159	15 5/8	397	14 3/4	375	5 3/4	146	3 1/2	89	3 1/16	78	4 3/16	106	30	13.6
Z3004IL	19	483	18 1/8	460	6 1/4	159	16 9/16	421	15 3/4	400	5 3/4	146	16	406	7 1/2	191	N/A	N/A	34	15.4
Z3004G	18 3/4	480	18	460	6 1/4	159	16	410	15 1/4	390	5 3/4	146	3 1/2	89	3 3/16	81	N/A	N/A	30	13.6
Z3004ILG	19	483	18 1/2	470	6 1/4	159	16 9/16	421	15 3/4	400	5 3/4	146	16	406	8 3/4	222	N/A	N/A	34	15.2

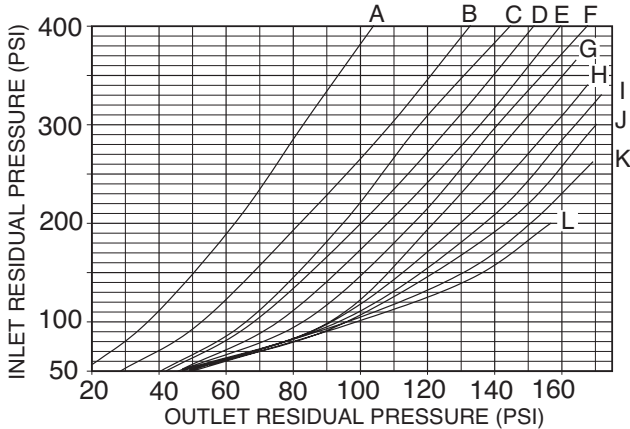
Residual Pressure Charts

For Pressure-Tru™ 2 1/2" Angle Valves

Models: Z3000, Z3004, Z3005, Z3000G & Z3004G

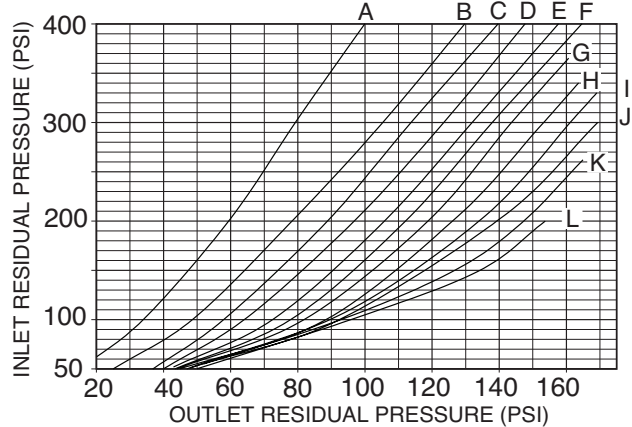
Z3000 SERIES ANGLE BODY

50GPM



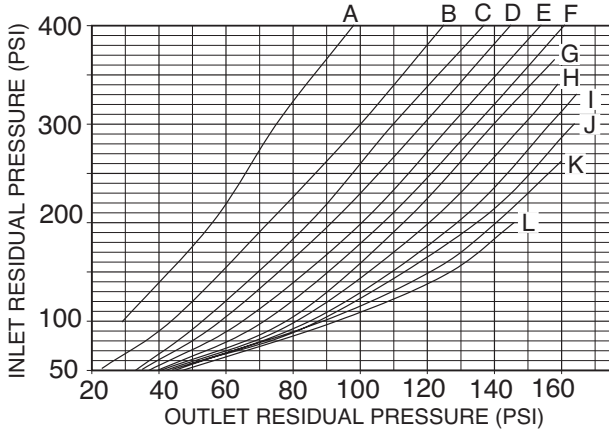
Z3000 SERIES ANGLE BODY

100GPM



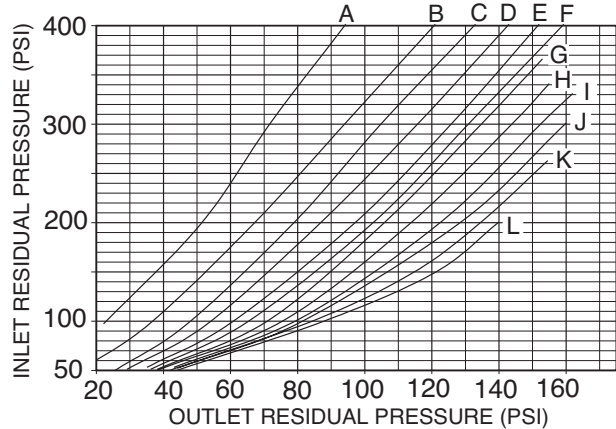
Z3000 SERIES ANGLE BODY

150GPM



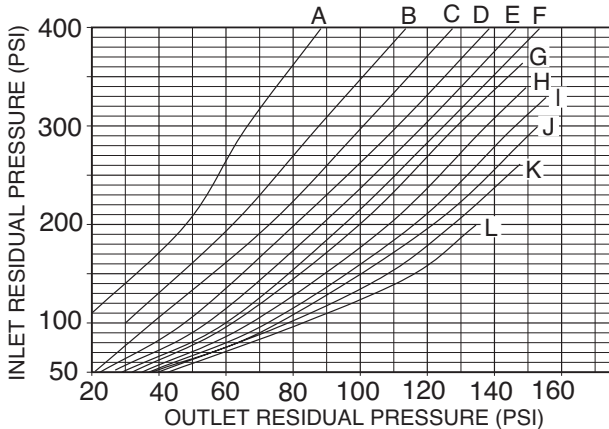
Z3000 SERIES ANGLE BODY

200GPM



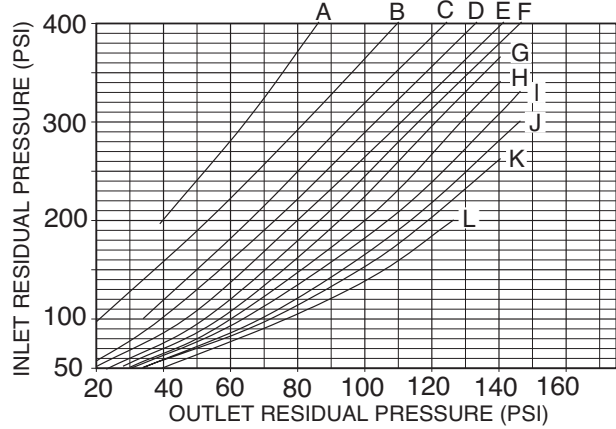
Z3000 SERIES ANGLE BODY

250GPM



Z3000 SERIES ANGLE BODY

300GPM



"A" DIMENSION SETTINGS (inches)

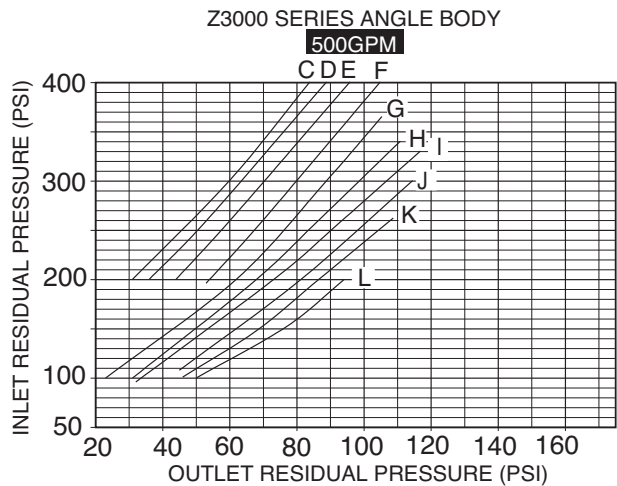
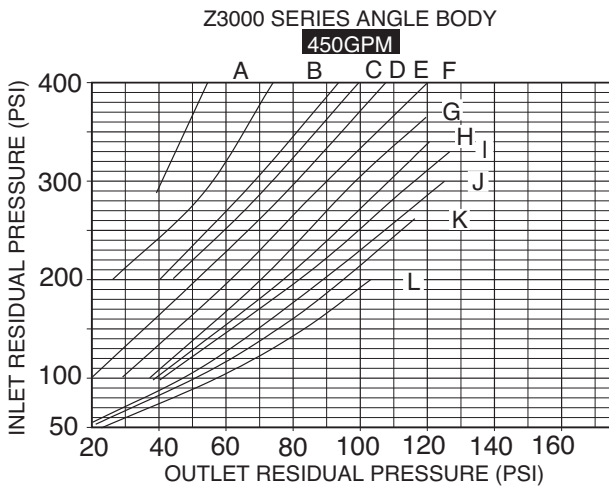
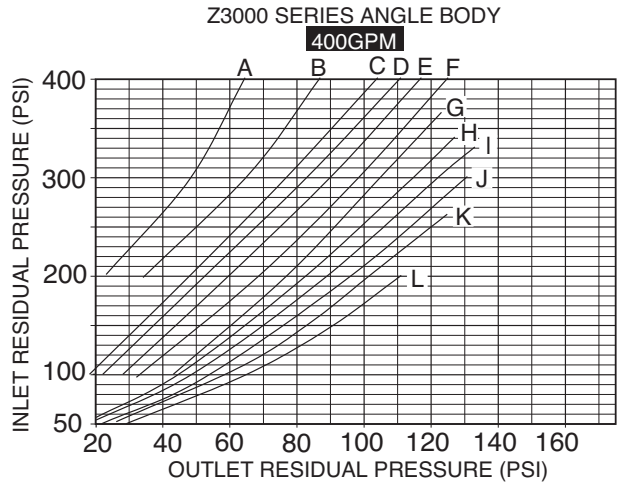
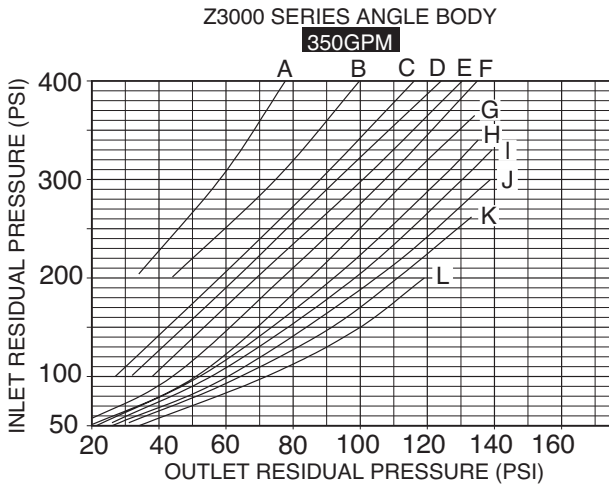
A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy= ± 5 PSIG

Residual Pressure Charts

For Pressure-Tru™ 2 1/2" Angle Valves

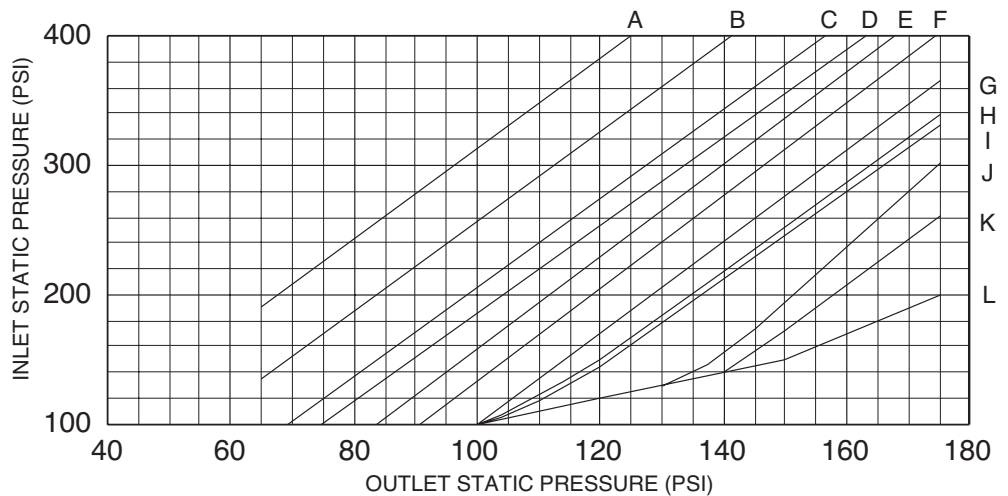
Models: Z3000, Z3004, Z3005, Z3000G & Z3004G



STATIC PRESSURE CHART

For Pressure-Tru™
Angle and In-line Valves
(2-1/2" Inlet and Outlet)

MODELS:
Z3000, Z3004 & Z3005
(All)



"A" DIMENSION SETTINGS (inches)											
A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy= ± 5 PSIG

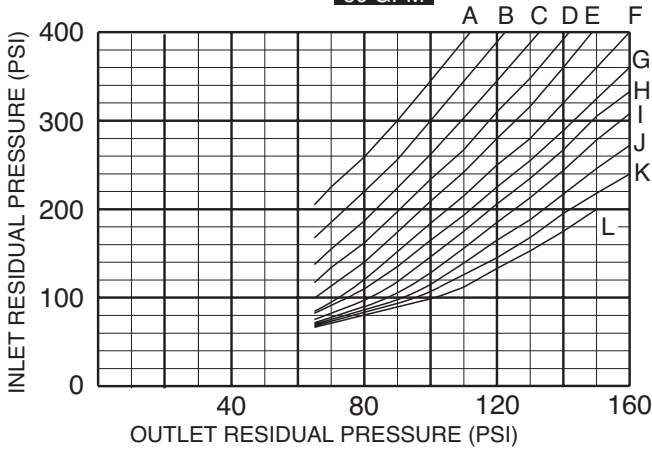
Residual Pressure Charts

For Pressure-Tru™ 2 1/2" In-line Valves

Models: Z3000IL, Z3004IL & Z3005IL

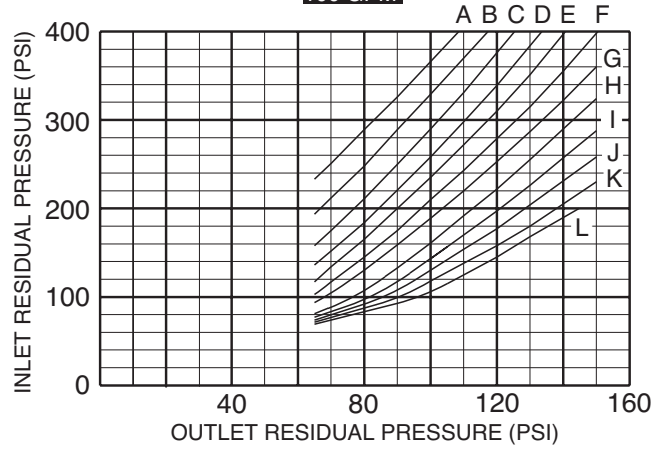
Z3000 SERIES INLINE BODY

50 GPM



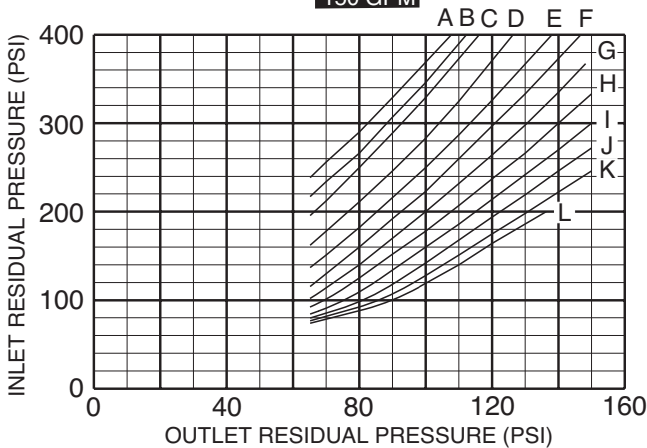
Z3000 SERIES INLINE BODY

100 GPM



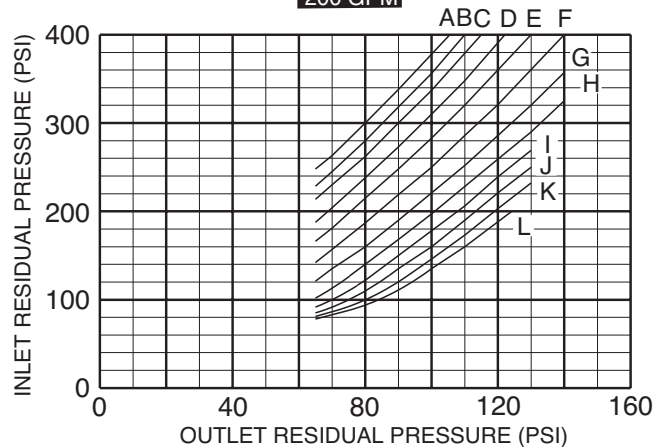
Z3000 SERIES INLINE BODY

150 GPM



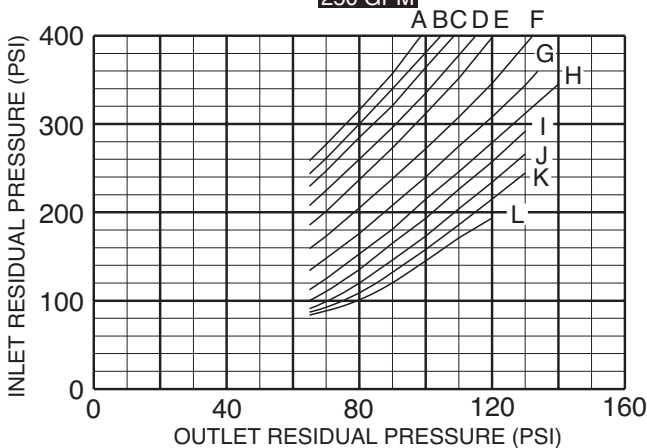
Z3000 SERIES INLINE BODY

200 GPM



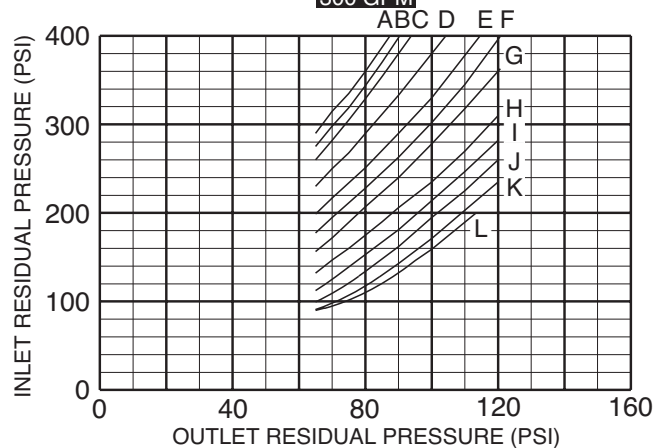
Z3000 SERIES INLINE BODY

250 GPM



Z3000 SERIES INLINE BODY

300 GPM



"A" DIMENSION SETTINGS (inches)

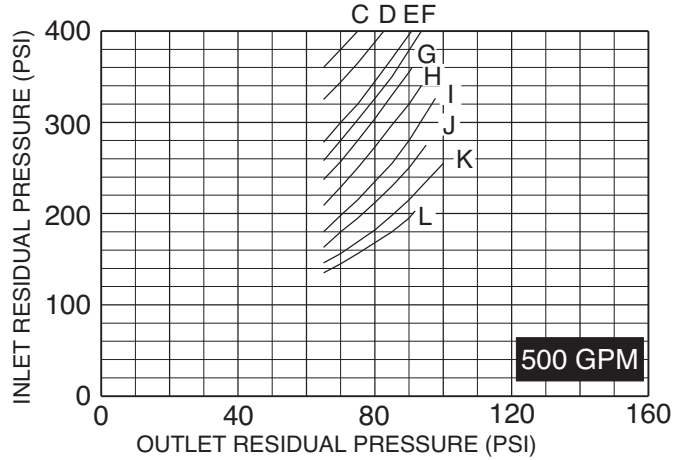
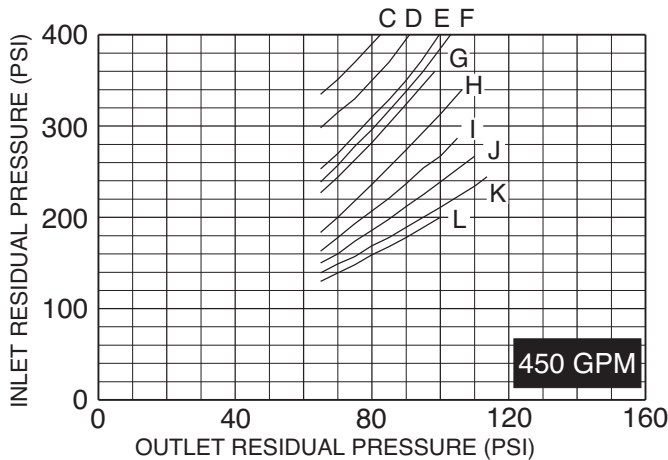
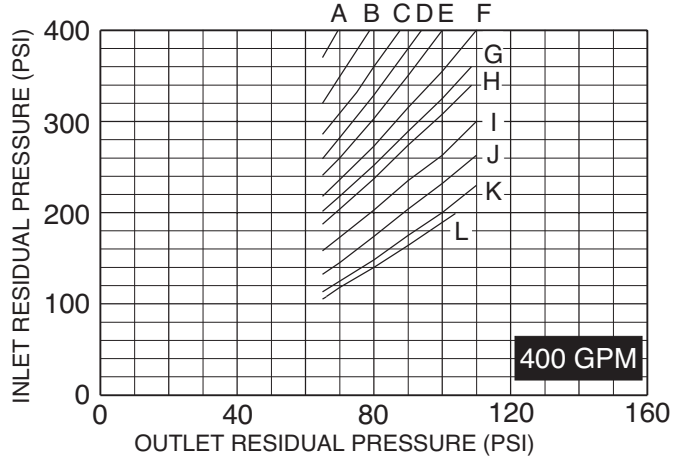
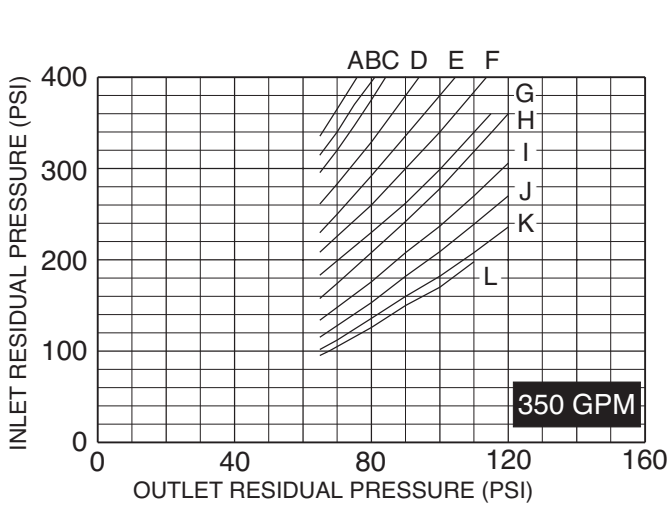
A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy= ± 5 PSIG

Residual Pressure Charts

For Pressure-Tru™ 2 1/2" In-line Valves

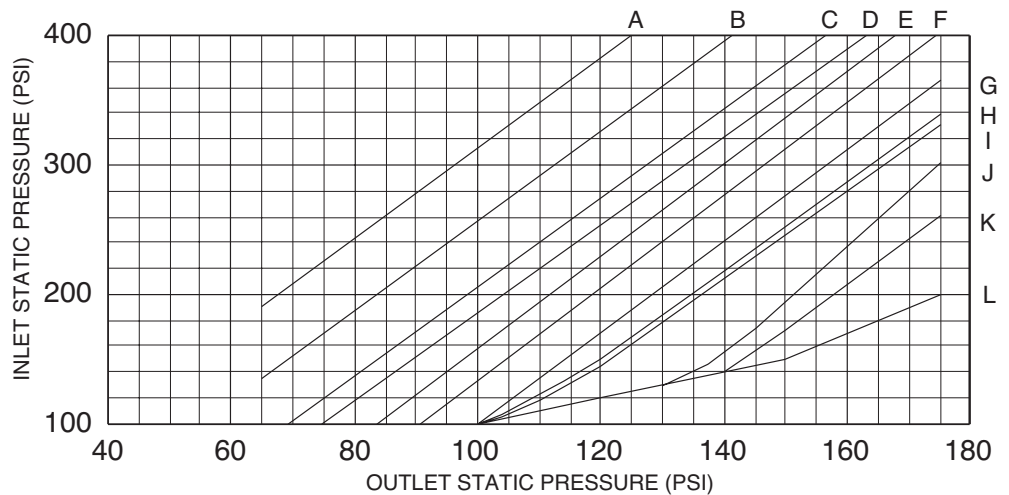
Models: Z3000IL, Z3004IL & Z3005IL



STATIC PRESSURE CHART

For Pressure-Tru™
Angle and In-line Valves
(2-1/2" Inlet and Outlet)

MODELS:
Z3000, Z3004 & Z3005
(All)



"A" DIMENSION SETTINGS (inches)											
A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

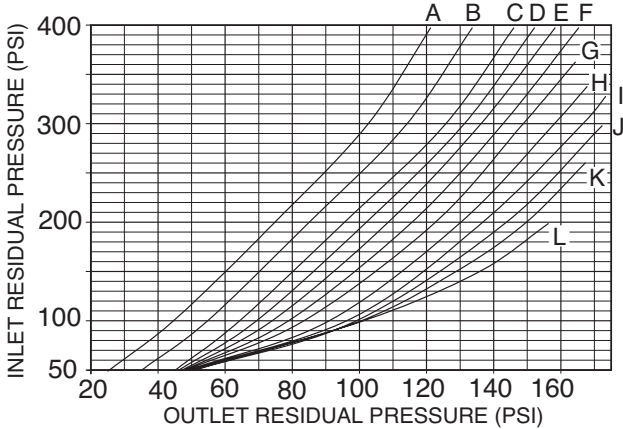
Note: Curve accuracy = ± 5 PSIG

Residual Pressure Charts

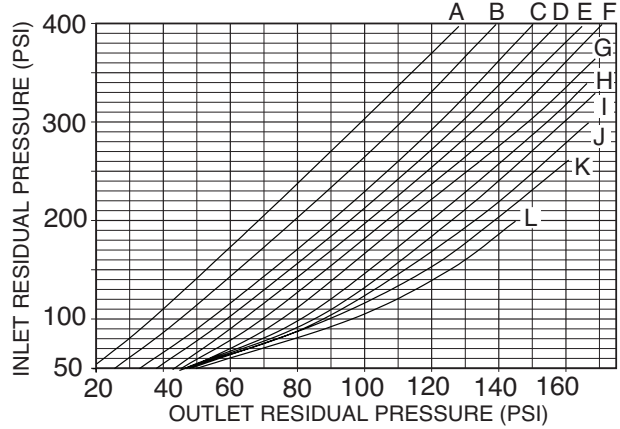
For Pressure-Tru™ 2 1/2" In-line Grooved Valves

Models: Z3000ILG & Z3004ILG

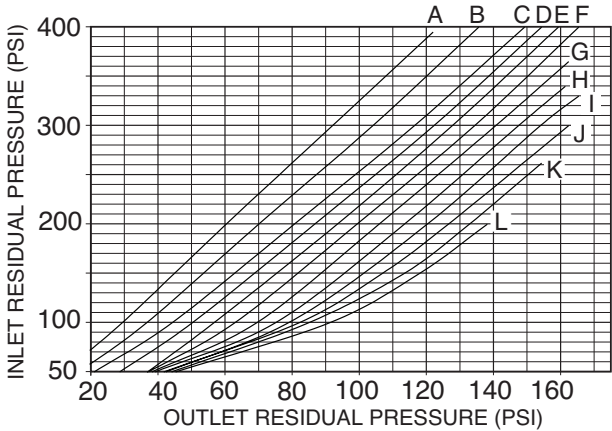
Z3000 SERIES INLINE BODY GROOVED
50GPM



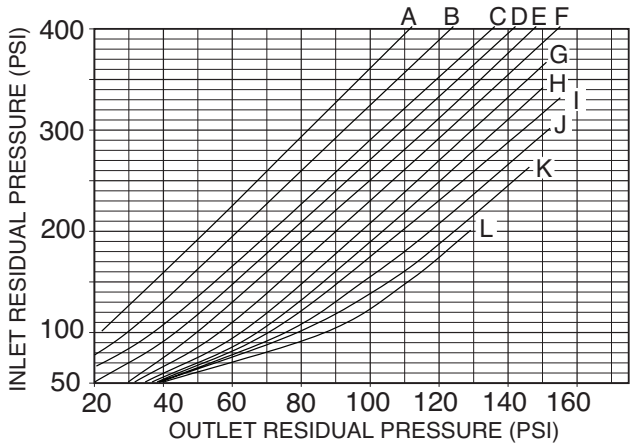
Z3000 SERIES INLINE BODY GROOVED
100GPM



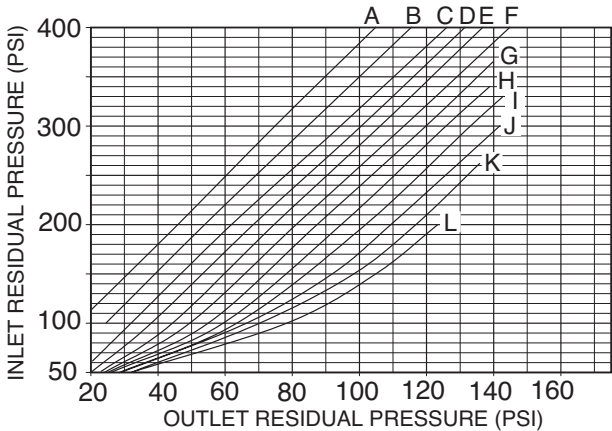
Z3000 SERIES INLINE BODY GROOVED
150GPM



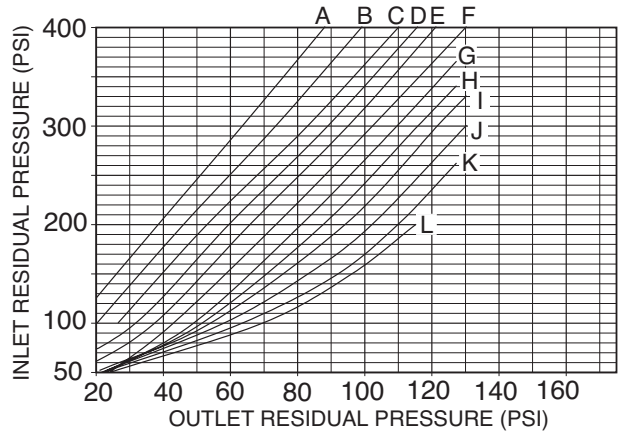
Z3000 SERIES INLINE BODY GROOVED
200GPM



Z3000 SERIES INLINE BODY GROOVED
250GPM



Z3000 SERIES INLINE BODY GROOVED
300GPM



"A" DIMENSION SETTINGS (inches)

A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy = ± 5 PSIG

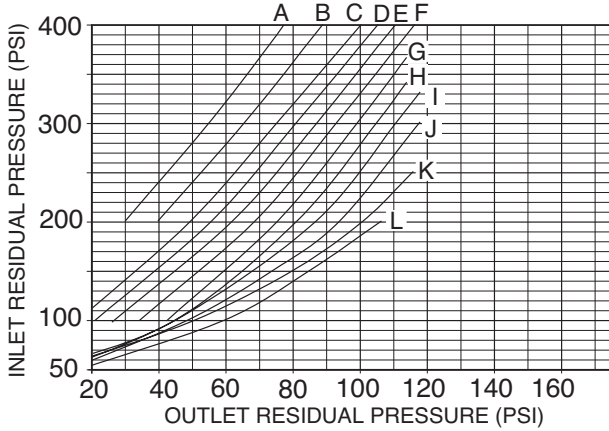
Residual Pressure Charts

For Pressure-Tru™ 2 1/2" In-line Grooved Valves

Models: Z3000ILG & Z3004ILG

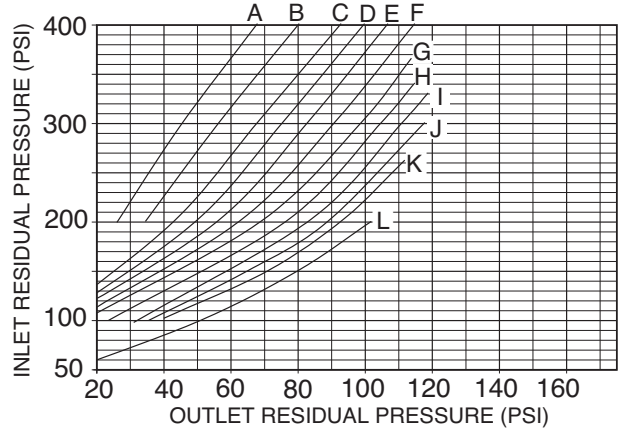
Z3000 SERIES INLINE BODY GROOVED

350GPM



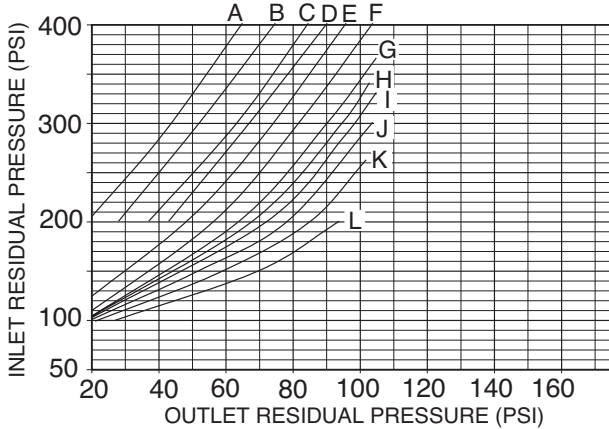
Z3000 SERIES INLINE BODY GROOVED

400GPM



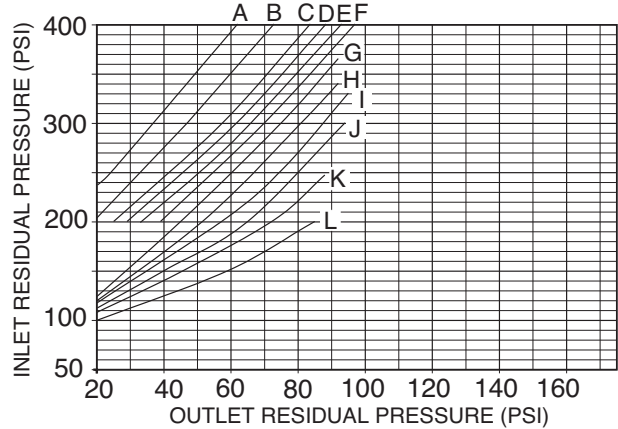
Z3000 SERIES INLINE BODY GROOVED

450GPM



Z3000 SERIES INLINE BODY GROOVED

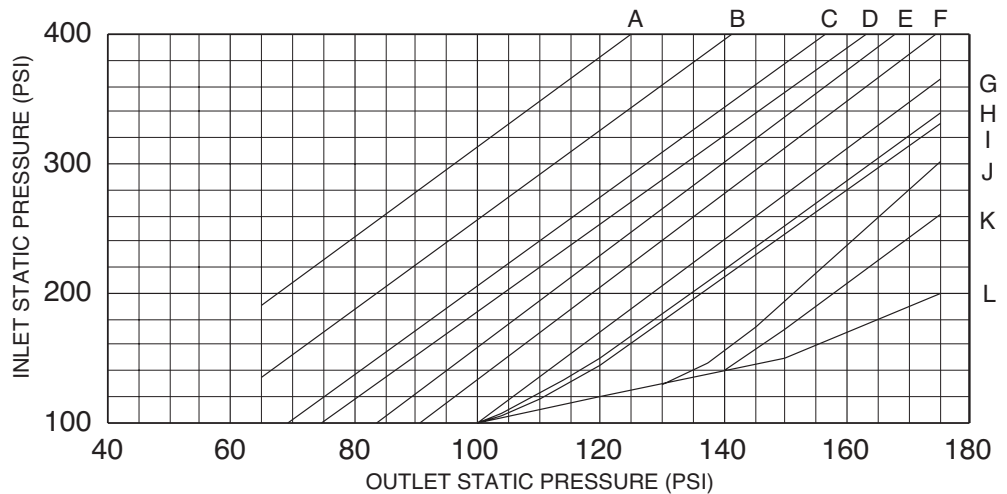
500GPM



STATIC PRESSURE CHART

For Pressure-Tru™
Angle and In-line Valves
(2-1/2" Inlet and Outlet)

MODELS:
Z3000, Z3004 & Z3005
(All)



"A" DIMENSION SETTINGS (inches)

A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy = ± 5 PSIG



Model Z3000 & Z3005

Pressure-Tru™ Fire Hose Valve

Application

The Pressure-Tru™ Z3000 and Z3005 Series Pressure Reducing Valve is listed as a standpipe valve for individual hose stations in CLASS I and CLASS III systems. Regulates pressure under both FLOW and NO-FLOW conditions. Can be adjusted and set at the factory or set in the field without draining the standpipe riser.

Standards Compliance

- UL® Listed
- C-UL® Listed
- City of Los Angeles Approved
- NYC MEA 37-95-E

Material

Main valve body	Cast bronze ASTM B 584
Stem	Silicon bronze ASTM B 584
Flange	Navy "G" bronze ASTM B 584
Elastomers	Buna Nitrile (FDA approved) EPDM (FDA approved)
Springs	Chrome silicon, ASTM A 313 powder coated

Features

Sizes: 2 1/2"

Maximum inlet pressure	400 psi
Inlet connection (Z3000)	FNPT or Groove
Inlet connection (Z3005)	FNPT
Outlet connection (Z3000)	Male hose
Outlet connection (Z3005)	FNPT
Factory or Field Set	
Tapped and plugged inlet and outlet for pressure gauge.	



Z3000 C/C



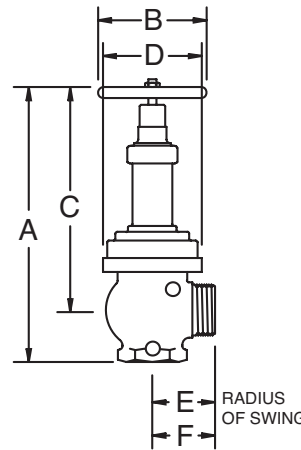
Z3005

Options

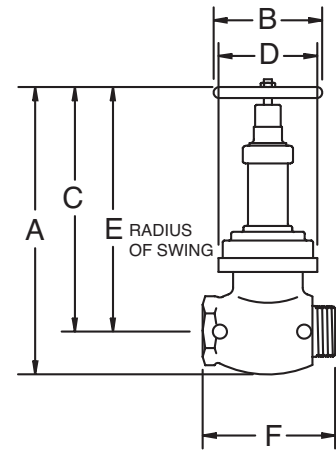
(Suffixes can be combined)

- Z3000 - angle type valve
- IL - in-line (globe type) valve
- G - with grooved inlet
- SF - with San Francisco hose thread (3")
- ST - with special hose thread
- C/C - with cap and chain
- CH - with chrome finish

- Z3005 - female NPT inlet and outlet angle valve
- IL - female NPT inlet and outlet in-line valve
- CH - with chrome finish



Z3000



Z3000IL

Dimensions & Weights (do not include pkg.)

MODEL	DIMENSIONS (approximate)																	
	A OPEN		A CLOSED		B		C OPEN		C CLOSED		D		E		F		WEIGHT	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs	kg
Z3000	16 3/4	425	15 7/8	403	6 1/4	159	14	354	13 1/8	334	5 3/4	146	3 1/2	89	3 3/16	81	28	12.7
Z3000IL	17 3/8	441	16 1/2	419	6 1/4	159	14 15/16	379	14 1/6	357	5 3/4	146	14 1/16	357	7 1/2	191	30	13.6
Z3000G	17 3/16	437	16 5/16	414	6 1/4	159	14	354	13 1/8	334	5 3/4	146	3 1/2	89	3 3/16	81	29	13.6
Z3000ILG	17 3/8	441	16 1/2	419	6 1/4	159	14 15/16	379	14 1/16	357	5 3/4	146	14 1/16	357	8 3/4	222	30	13.6
Z3005	16 3/4	425	15 7/8	403	6 1/4	159	14	354	13 1/8	334	5 3/4	146	3 1/2	89	3 1/16	78	29	13.2
Z3005IL	17 3/8	441	16 1/2	419	6 1/4	159	14 15/16	379	14 1/16	357	5 3/4	146	14 1/16	357	7 1/2	191	30	13.6
Z3005SF	16 3/4	425	15 7/8	403	6 1/4	159	14	354	13 1/8	334	5 3/4	146	14 5/16	364	3 15/16	100	28.5	12.9

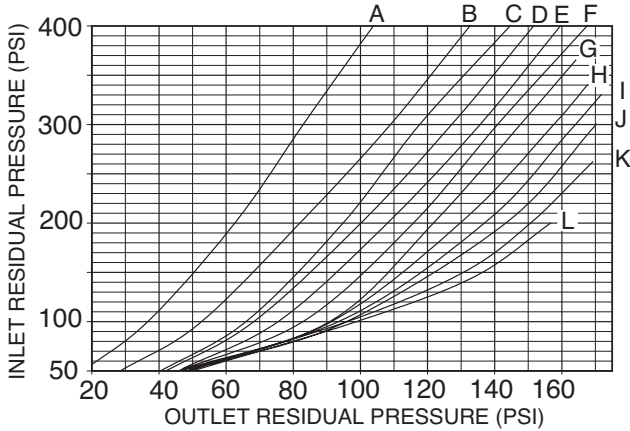
Residual Pressure Charts

For Pressure-Tru™ 2 1/2" Angle Valves

Models: Z3000, Z3004, Z3005, Z3000G & Z3004G

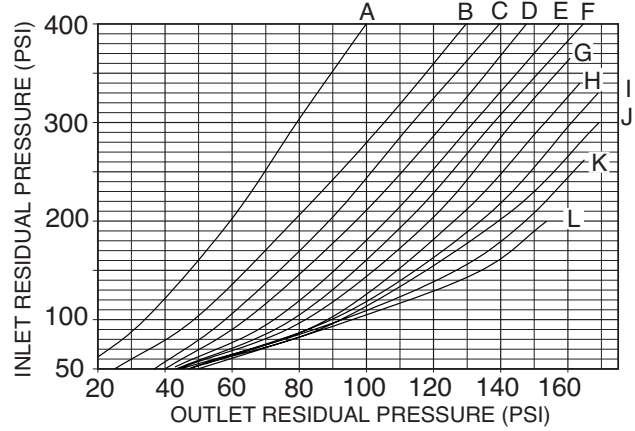
Z3000 SERIES ANGLE BODY

50GPM



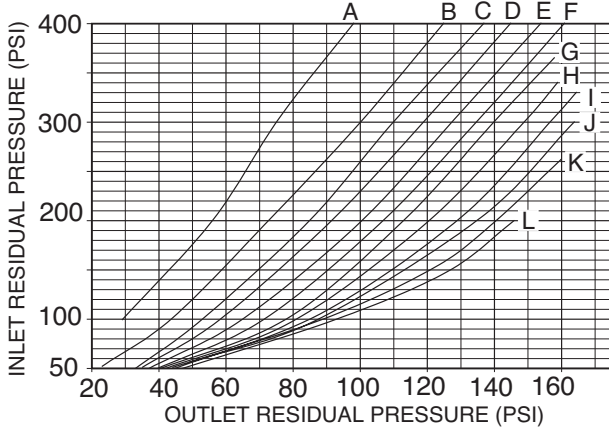
Z3000 SERIES ANGLE BODY

100GPM



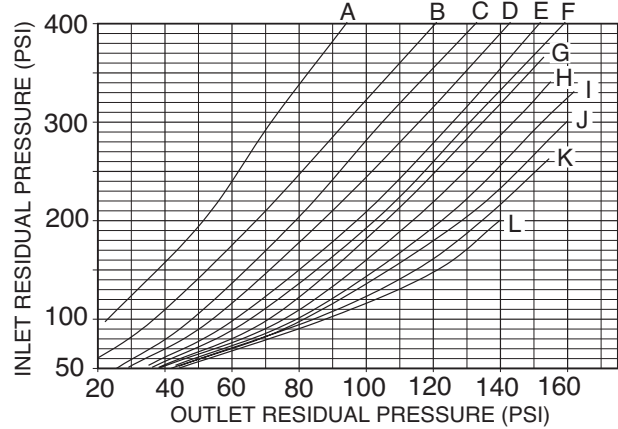
Z3000 SERIES ANGLE BODY

150GPM



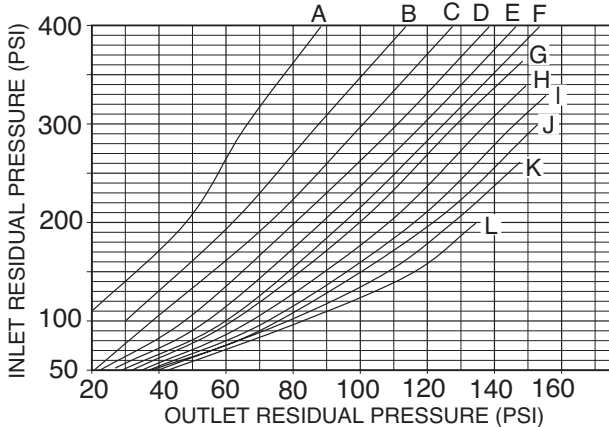
Z3000 SERIES ANGLE BODY

200GPM



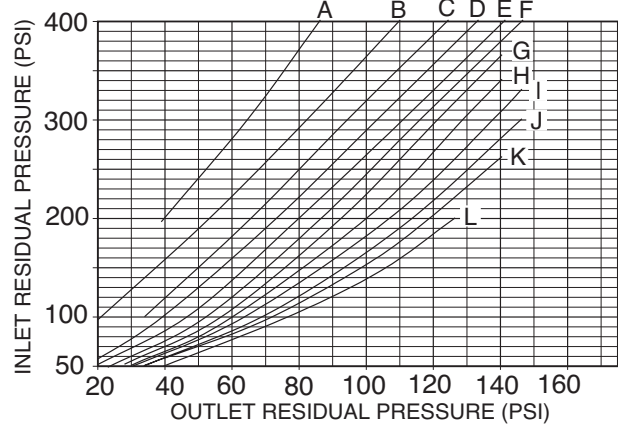
Z3000 SERIES ANGLE BODY

250GPM



Z3000 SERIES ANGLE BODY

300GPM



"A" DIMENSION SETTINGS (inches)

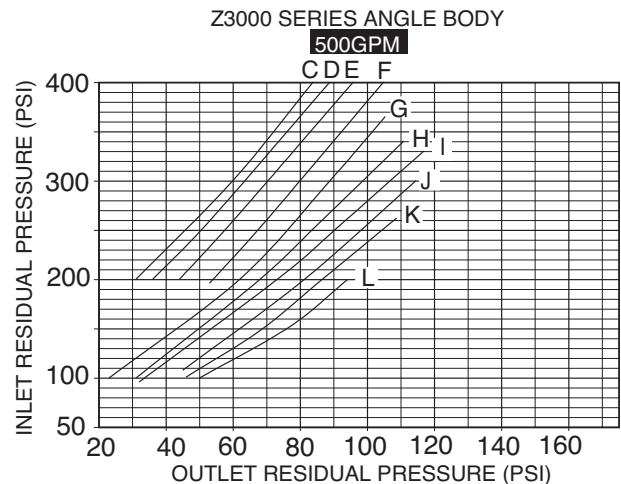
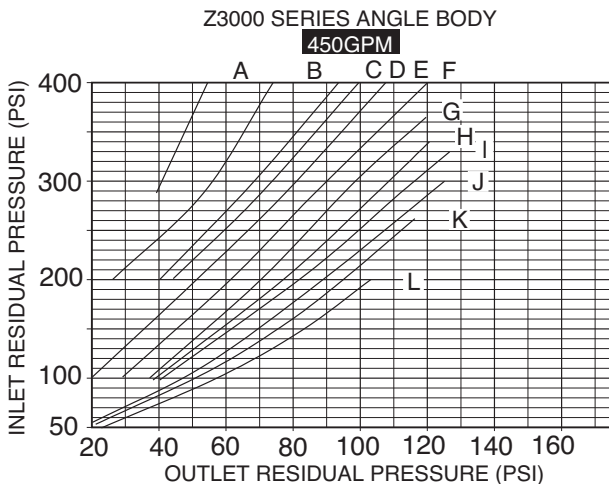
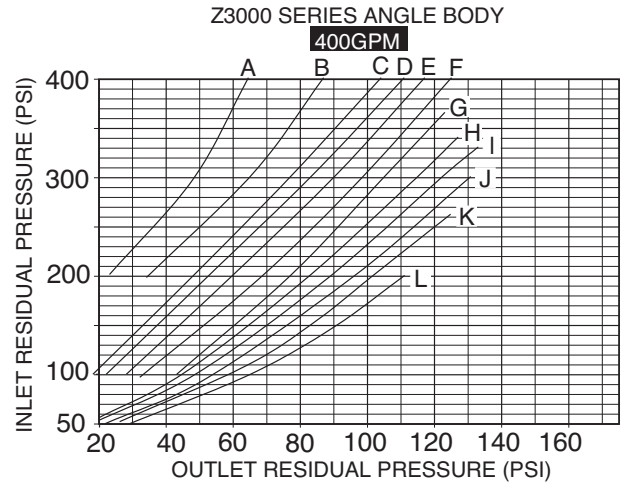
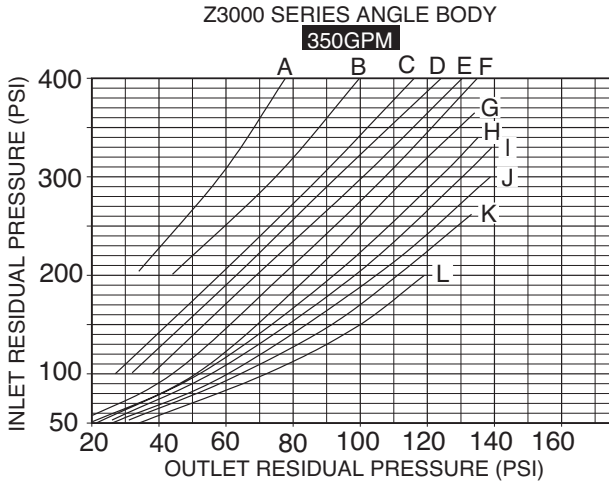
A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy = ± 5 PSIG

Residual Pressure Charts

For Pressure-Tru™ 2 1/2" Angle Valves

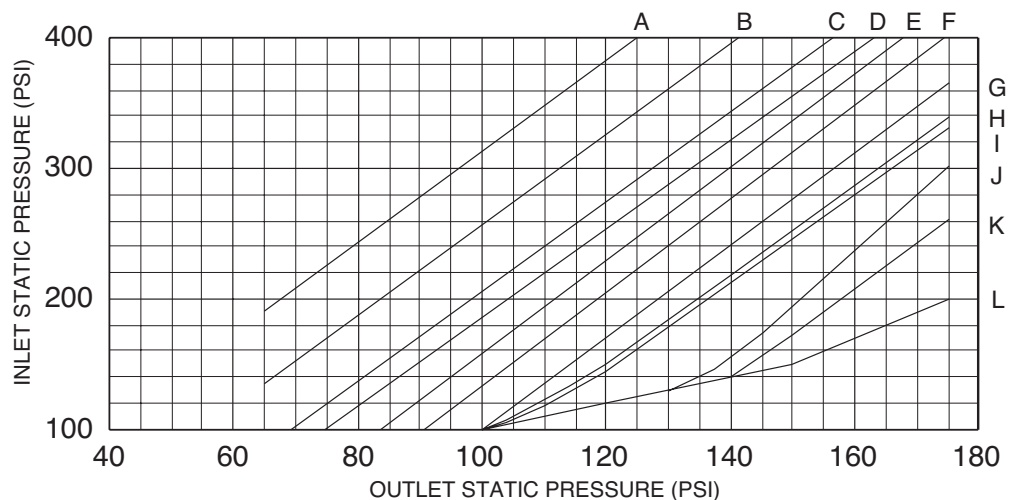
Models: Z3000, Z3004, Z3005, Z3000G & Z3004G



STATIC PRESSURE CHART

For Pressure-Tru™
Angle and In-line Valves
(2-1/2" Inlet and Outlet)

MODELS:
Z3000, Z3004 & Z3005
(All)



"A" DIMENSION SETTINGS (inches)

A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy = ± 5 PSIG

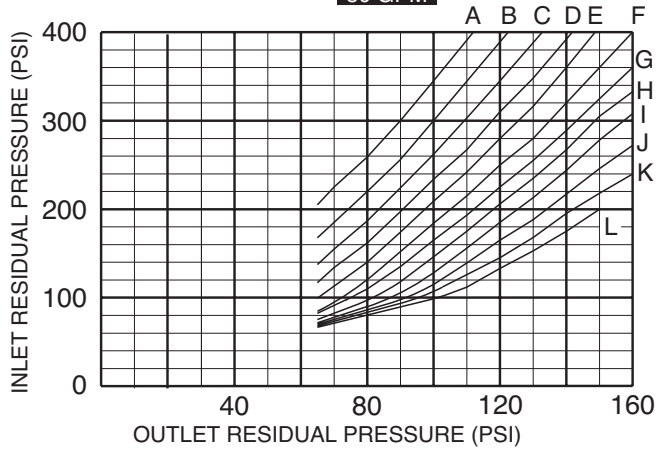
Residual Pressure Charts

For Pressure-Tru™ 2 1/2" In-line Valves

Models: Z3000IL, Z3004IL & Z3005IL

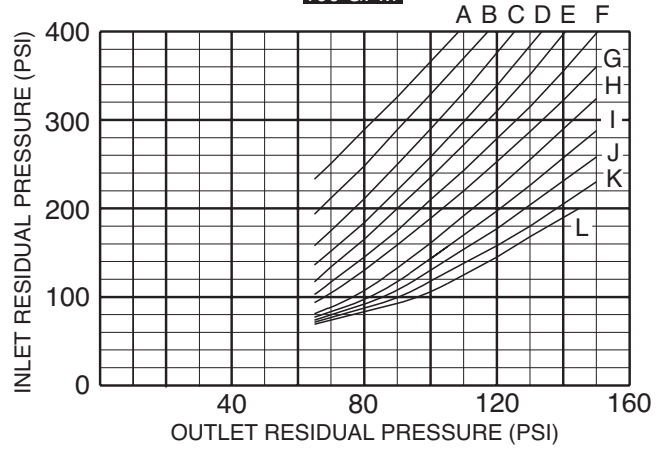
Z3000 SERIES INLINE BODY

50 GPM



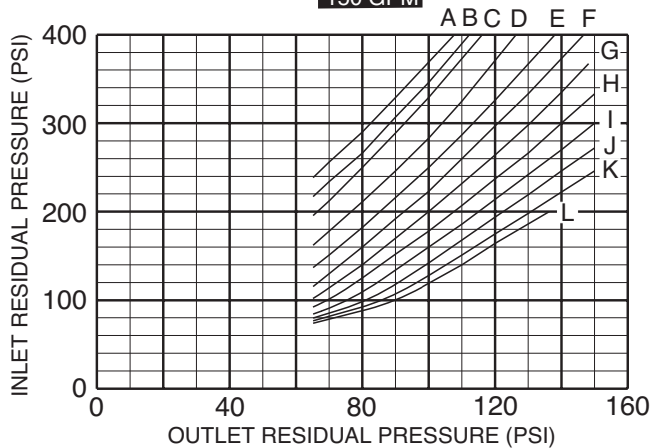
Z3000 SERIES INLINE BODY

100 GPM



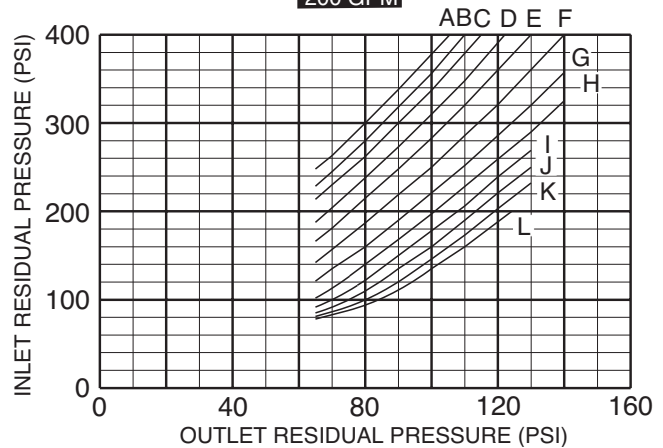
Z3000 SERIES INLINE BODY

150 GPM



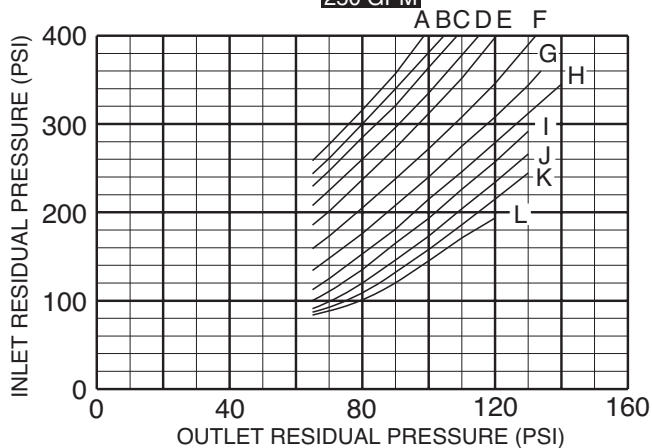
Z3000 SERIES INLINE BODY

200 GPM



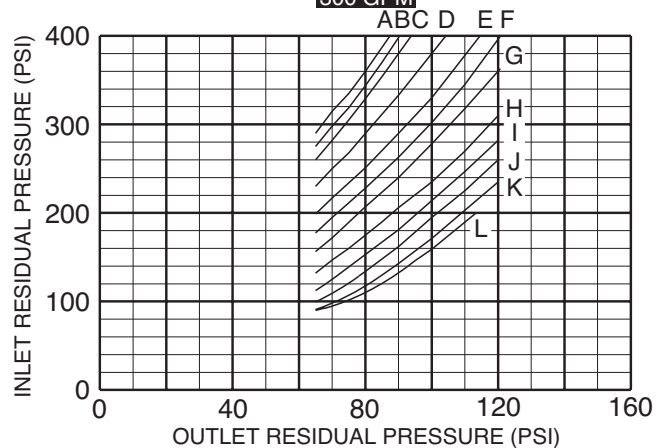
Z3000 SERIES INLINE BODY

250 GPM



Z3000 SERIES INLINE BODY

300 GPM



"A" DIMENSION SETTINGS (inches)

A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy= ± 5 PSIG

Zurn Industries, LLC | Wilkins

1747 Commerce Way, Paso Robles, CA U.S.A. 93446 Ph. 855-663-9876, Fax 805-238-5766

In Canada | Zurn Industries Limited

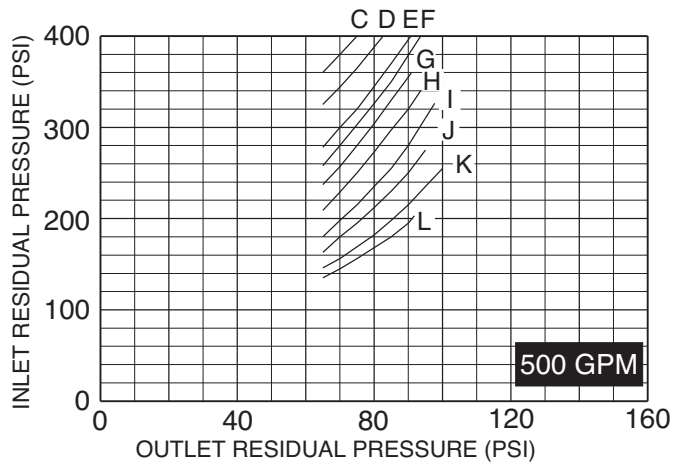
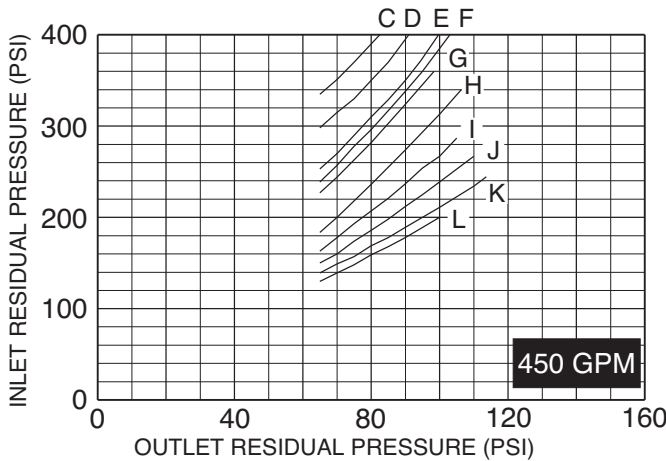
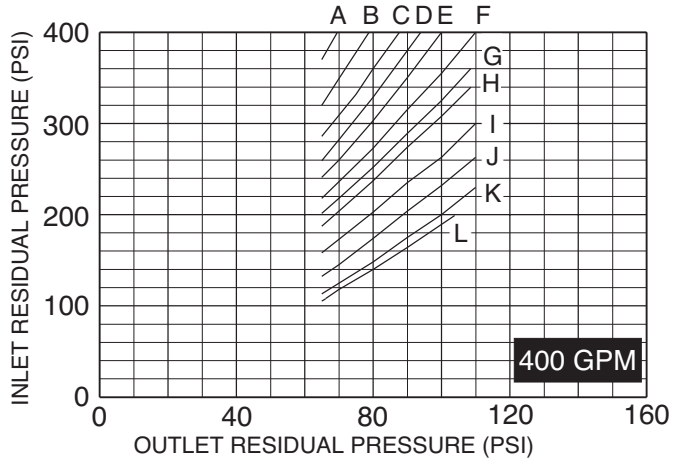
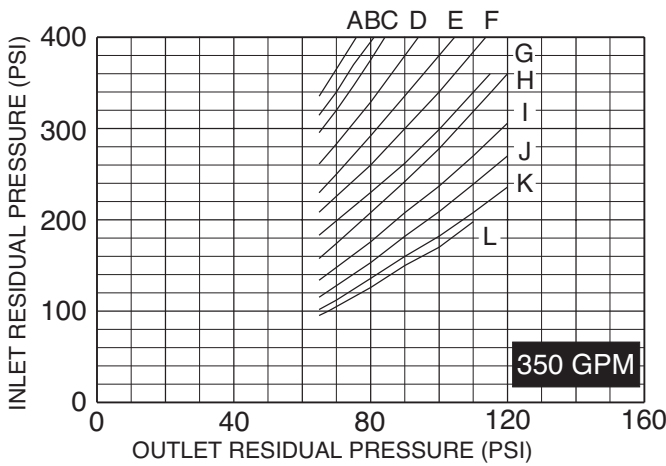
7900 Goreway Drive, Unit 10, Brampton, Ontario L6T 5W6, 877-892-5216

www.zurn.com

Residual Pressure Charts

For Pressure-Tru™ 2 1/2" In-line Valves

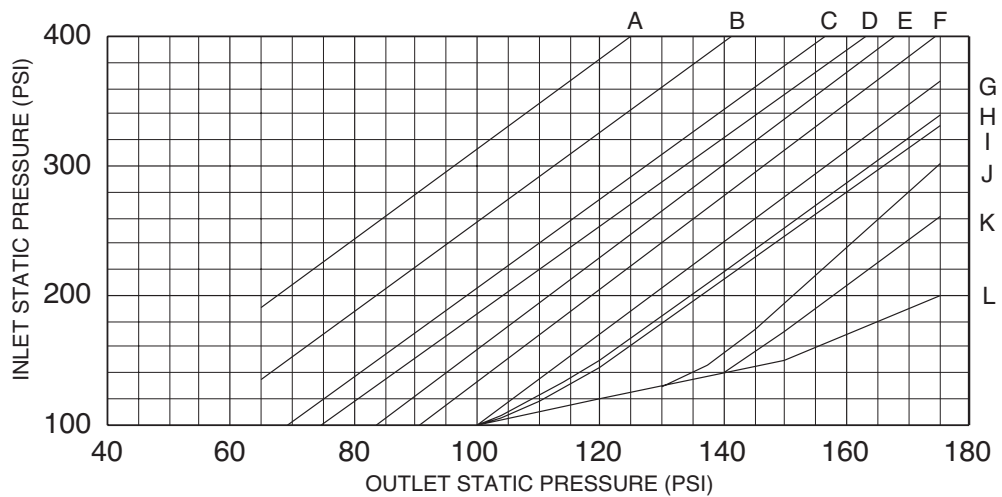
Models: Z3000IL, Z3004IL & Z3005IL



STATIC PRESSURE CHART

For Pressure-Tru™
Angle and In-line Valves
(2-1/2" Inlet and Outlet)

MODELS:
Z3000, Z3004 & Z3005
(All)



"A" DIMENSION SETTINGS (inches)

A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy = ± 5 PSIG

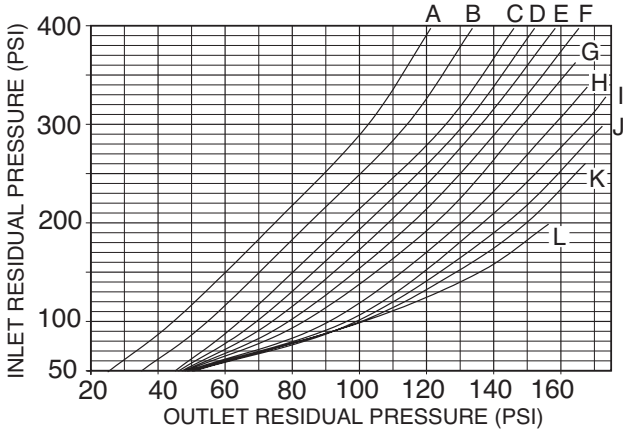
Residual Pressure Charts

For Pressure-Tru™ 2 1/2" In-line Grooved Valves

Models: Z3000ILG & Z3004ILG

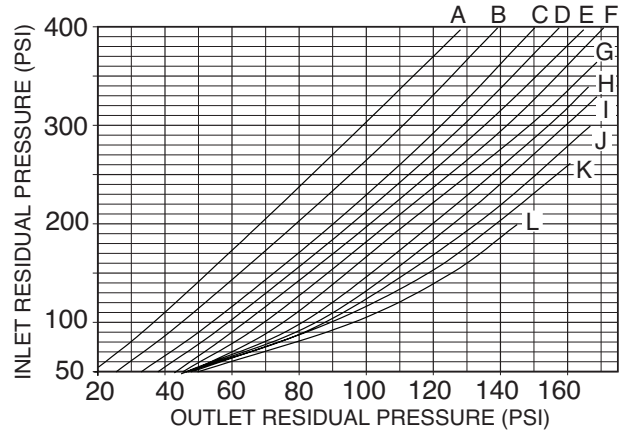
Z3000 SERIES INLINE BODY GROOVED

50GPM



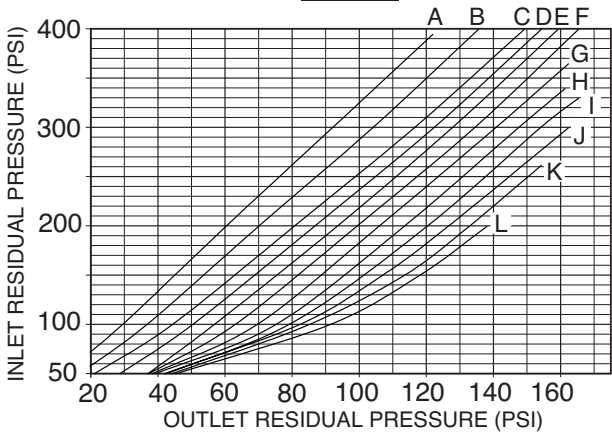
Z3000 SERIES INLINE BODY GROOVED

100GPM



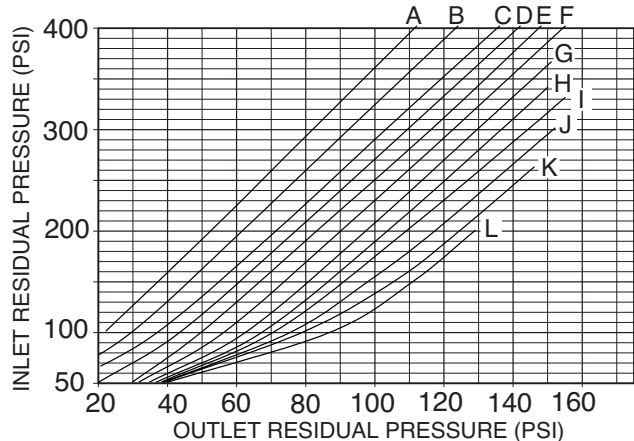
Z3000 SERIES INLINE BODY GROOVED

150GPM



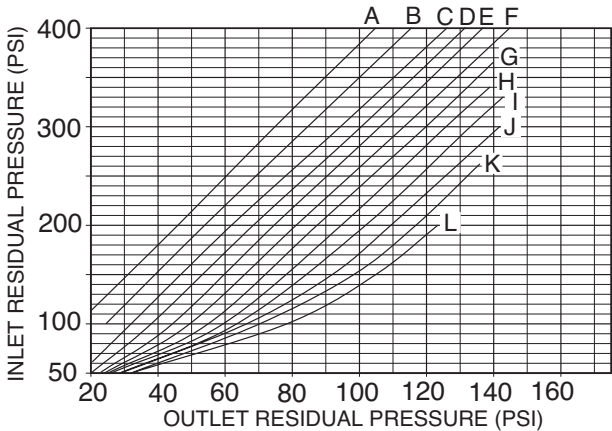
Z3000 SERIES INLINE BODY GROOVED

200GPM



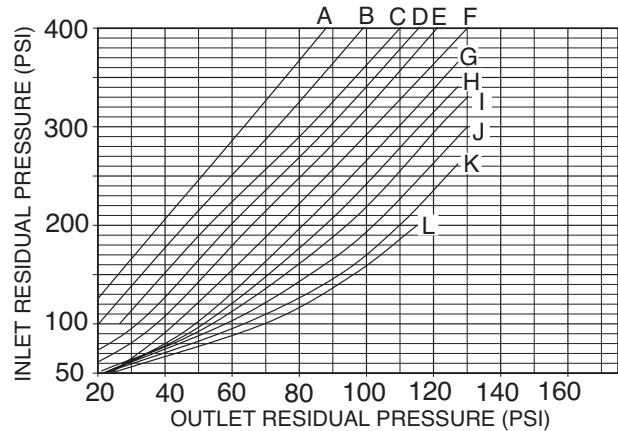
Z3000 SERIES INLINE BODY GROOVED

250GPM



Z3000 SERIES INLINE BODY GROOVED

300GPM



"A" DIMENSION SETTINGS (inches)

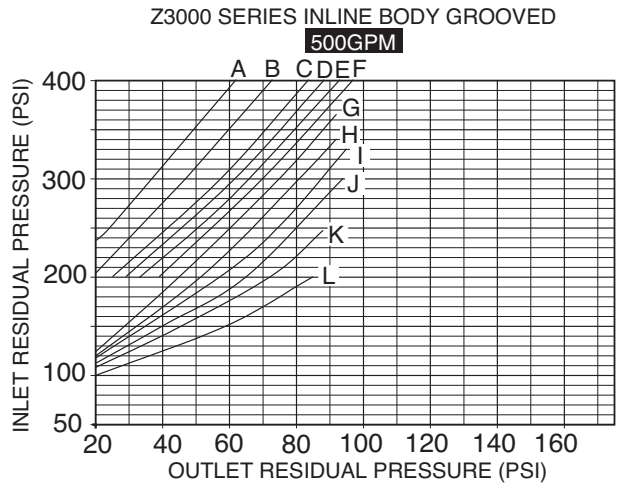
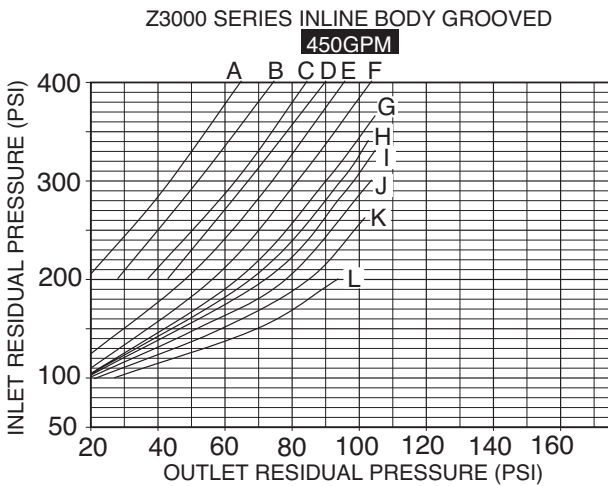
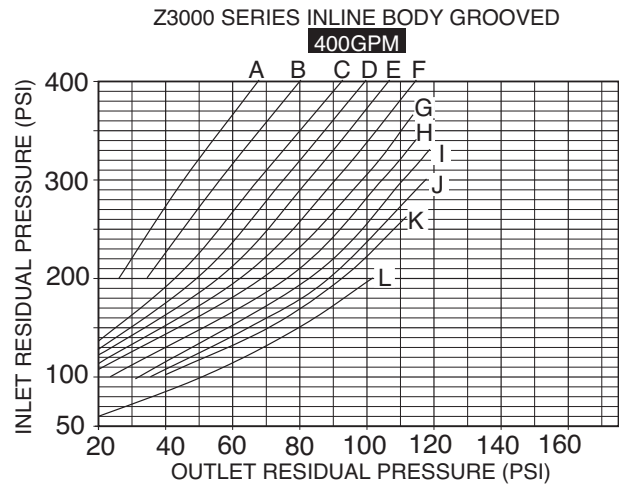
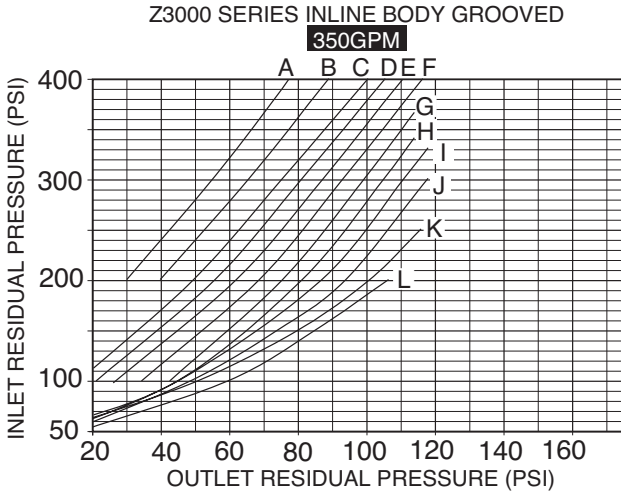
A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy = ± 5 PSIG

Residual Pressure Charts

For Pressure-Tru™ 2 1/2" In-line Grooved Valves

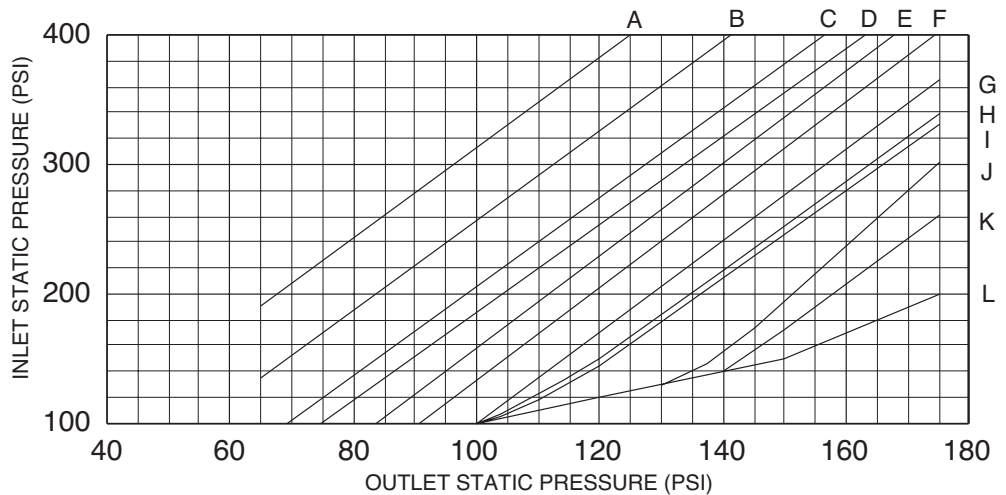
Models: Z3000ILG & Z3004ILG



STATIC PRESSURE CHART

For Pressure-Tru™
Angle and In-line Valves
(2-1/2" Inlet and Outlet)

MODELS:
Z3000, Z3004 & Z3005
(All)



"A" DIMENSION SETTINGS (inches)

A	B	C	D	E	F	G	H	I	J	K	L
3/8	1/2	5/8	11/16	3/4	13/16	7/8	15/16	1	1-1/16	1-1/8	1-3/16

Note: Curve accuracy = ± 5 PSIG



Model ZW4000

Pressure-Tru™ Fire Hose Valve

Application

The Pressure-Tru™ ZW4000 Series Pressure Reducing Valve is listed as a standpipe valve for individual hose stations in CLASS I and CLASS III systems. Regulates pressure under both FLOW and NO-FLOW conditions.

Standards Compliance

- UL® Listed
- C-UL® Listed
- NYC MEA 325-06-E
- City of Los Angeles Approved

Material

Castings/internals Cast bronze ASTM B 584
Elastomers Buna Nitrile (FDA approved)
EPDM (FDA approved)



ZW4000



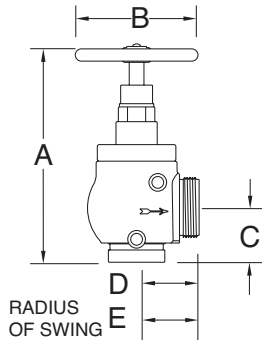
ZW4000G

Features

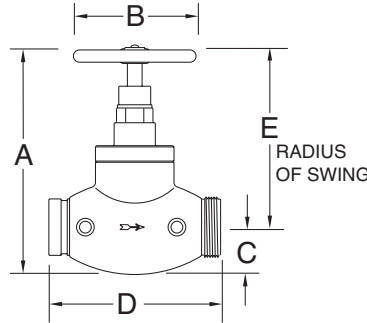
Sizes: 2 1/2"
Maximum inlet pressure 400 psi
Inlet connection: (FNPT) or ANSI B1.20.1
(Grooved) AWWA C606
Outlet connection: Male Hose (NH) NFPA 1963
Factory Set
Tapped and plugged inlet and outlet for pressure gauge.

Options

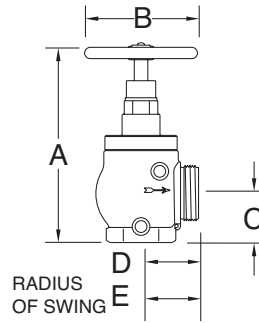
- (Suffixes can be combined)
- ZW4000 - angle type valve
 - IL - in-line (globe type) valve
 - G - with grooved inlet connection
 - SF - with San Francisco hose thread (3")
 - ST - with specified hose thread
 - CC - with cap and chain
 - CH - with chrome finish



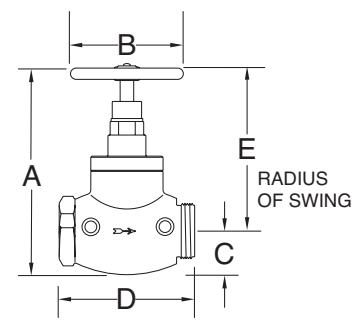
ZW4000G



ZW4000ILG



ZW4000



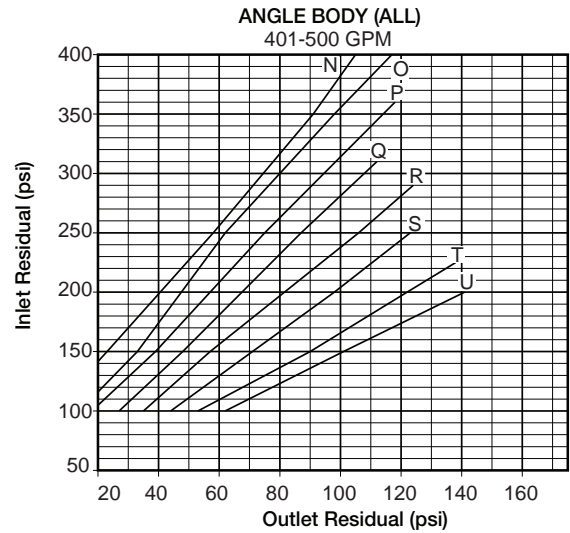
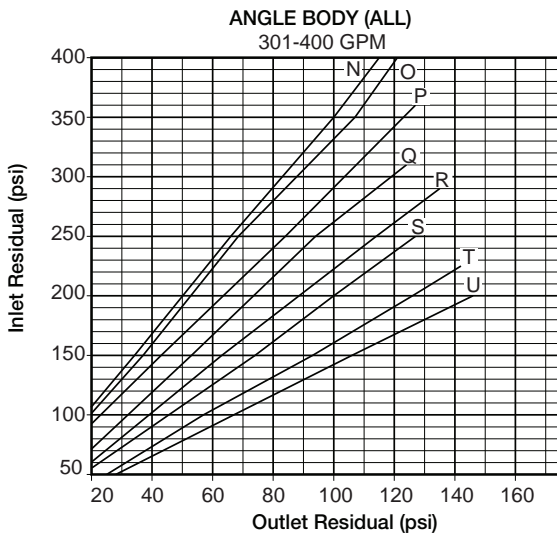
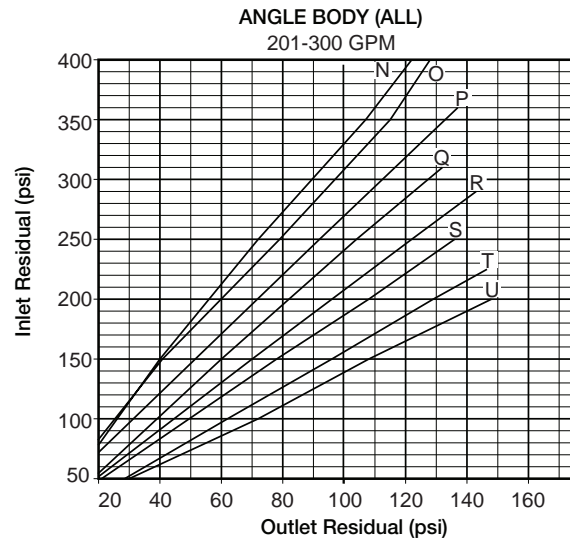
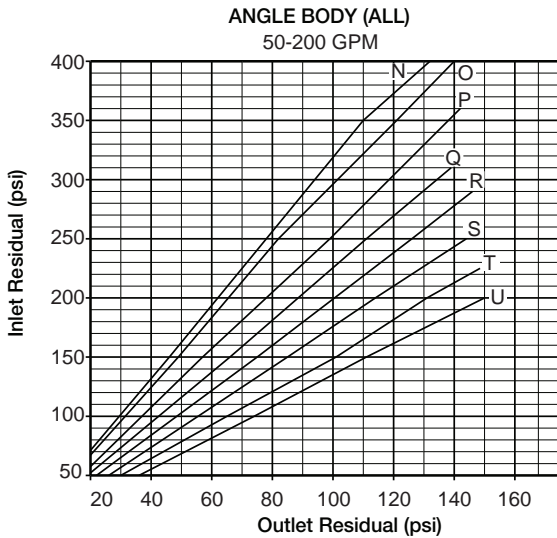
ZW4000IL

Dimensions & Weights (do not include pkg.)

MODEL	DIMENSIONS (approximate)													WEIGHT	
	A OPEN		A CLOSED		B		C		D		E				
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs	kg	
ZW4000	10 7/8	276	10	254	6 1/4	159	2 3/4	70	3 3/16	81	3 1/2	89	19	8.6	
ZW4000IL	11 1/2	292	10 1/2	267	6 1/4	159	2 3/8	60	7 1/2	191	8 3/16	208	23	10.4	
ZW4000G	11 5/16	287	10 7/16	265	6 1/4	159	3 5/16	84	3 3/16	81	3 1/2	89	18	8.1	
ZW4000ILG	11 1/2	292	10 1/2	267	6 1/4	159	2 3/8	60	8 3/4	222	8 3/16	208	23	10.4	
ZW4000SF	10 7/8	276	10	254	6 1/4	159	2 3/4	70	3 15/16	100	3 1/2	89	19	8.6	

Residual Pressure Charts

For Pressure-Tru® 2 1/2" Models: ZW4000, ZW4000G, ZW4004 & ZW4004G



Choosing The Correct Settings

In designing a sprinkler system, a minimum of 20 psi pressure differential (the difference between the inlet static pressure and the valve outlet set static pressure) is recommended to assure a well regulated and efficient system. In choosing the correct setting for the Pressure-Tru® valve, refer to the Residual Pressure Charts, Static Pressure Chart and the following procedures:

1. Determine the demand in gallons per minute required downstream of the valve.
2. Determine the standpipe residual or "flow pressure" at the valve inlet.
3. Locate the appropriate flow chart based on GPM required and body style.
4. Locate the inlet residual pressure on the vertical axis of the chart and draw a horizontal line from this pressure across the chart.
5. Locate the desired valve outlet residual pressure on the horizontal axis of the chart and draw a vertical line from this pressure.
6. The curve nearest the intersection of the two lines drawn is the appropriate type for the valve.
7. To determine the static outlet pressure, locate the static chart. Determine the valve inlet static pressure shown on the vertical axis and draw a horizontal line from that pressure to the appropriate curve determined above, then draw a vertical line down to the horizontal axis and read the static outlet pressure.

Maximum Rated Inlet Pressure

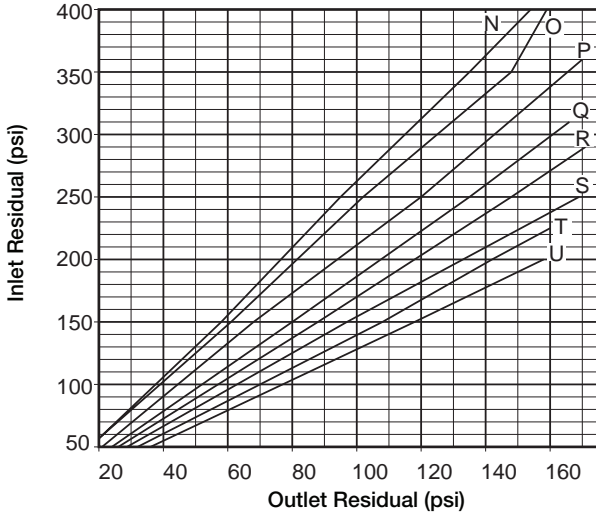
Maximum inlet pressure, to assure a maximum outlet pressure of 175 psi. Inlet side of valves can be safely tested up to 400 PSI during system hydrostatic leak test.

Bonnet Type	Max Inlet Pressure psi (kpa)
N	400 (2750)
O	400 (2750)
P	360 (2475)
Q	310 (2125)
R	290 (2000)
S	250 (1725)
T	225 (1550)
U	200 (1375)

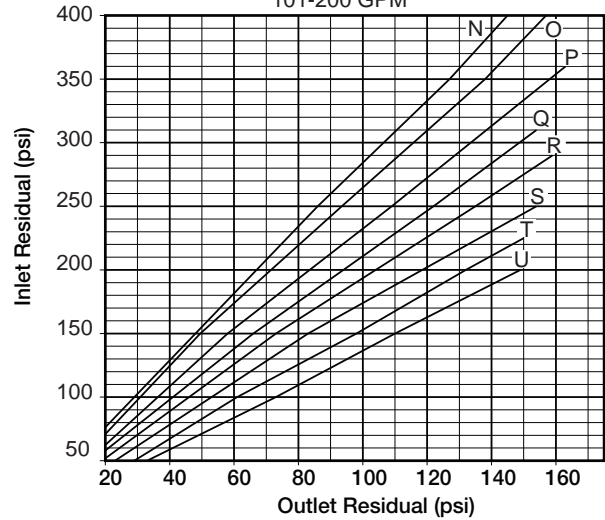
Residual Pressure Charts

For Pressure-Tru® 2 1/2" Models: ZW4000IL & ZW4004IL

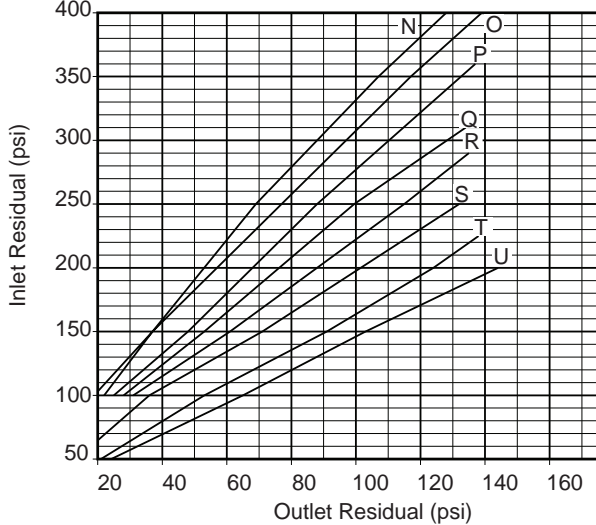
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50-100 GPM



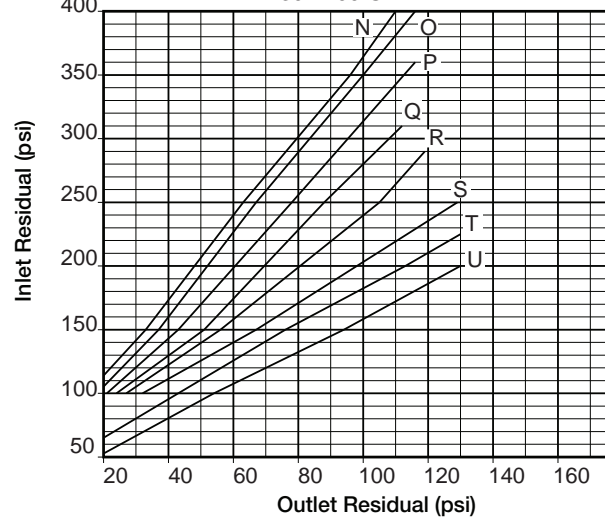
INLINE BODY (NPT)
101-200 GPM



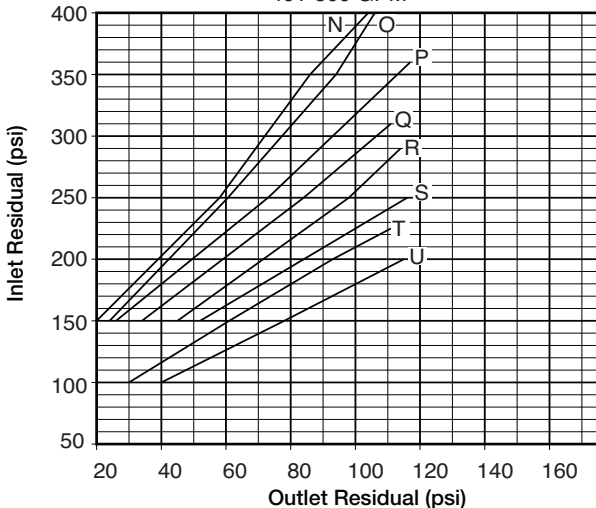
INLINE BODY (NPT)
201-300 GPM



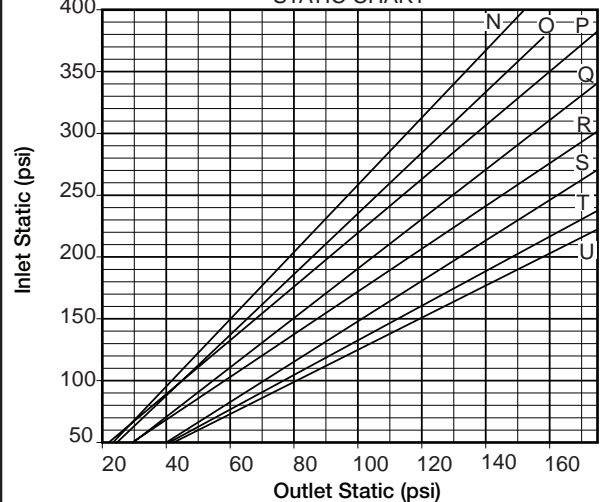
INLINE BODY (NPT)
301-400 GPM



INLINE BODY (NPT)
401-500 GPM



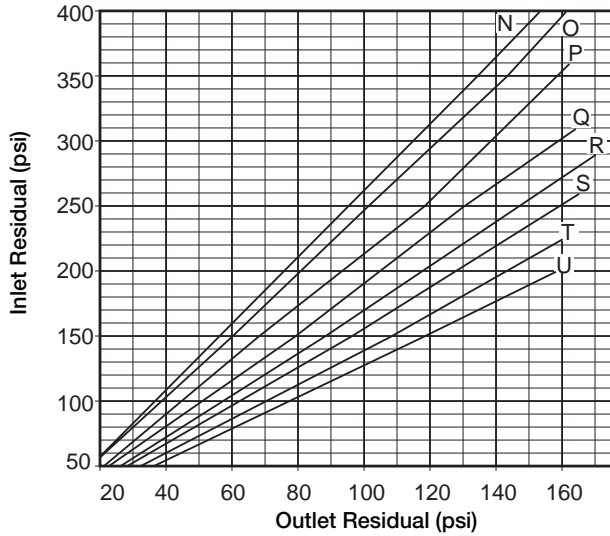
ANGLE & INLINE BODIES (ALL)
STATIC CHART



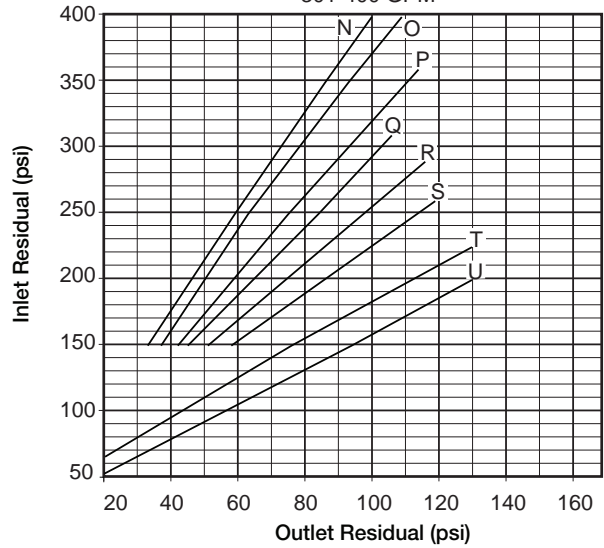
Residual Pressure Charts

For Pressure-Tru® 2 1/2" Models: ZW4000ILG & ZW4004ILG

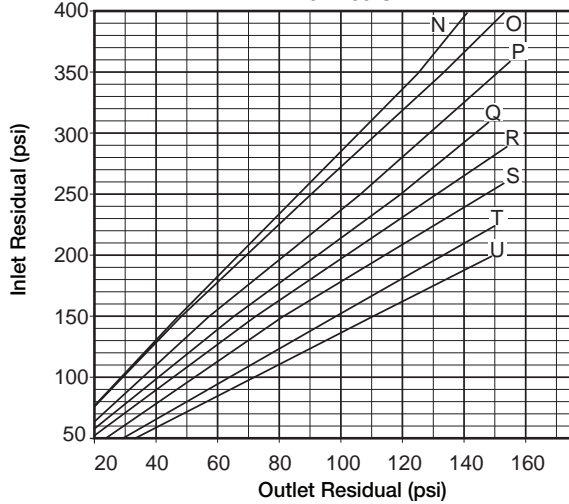
INLINE BODY (GROOVED)
50-100 GPM



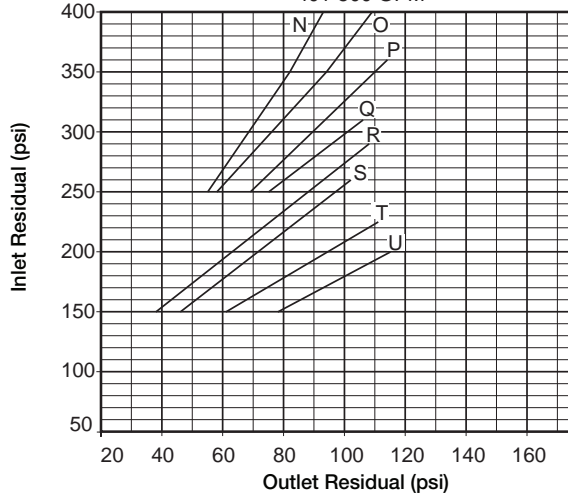
INLINE BODY (GROOVED)
301-400 GPM



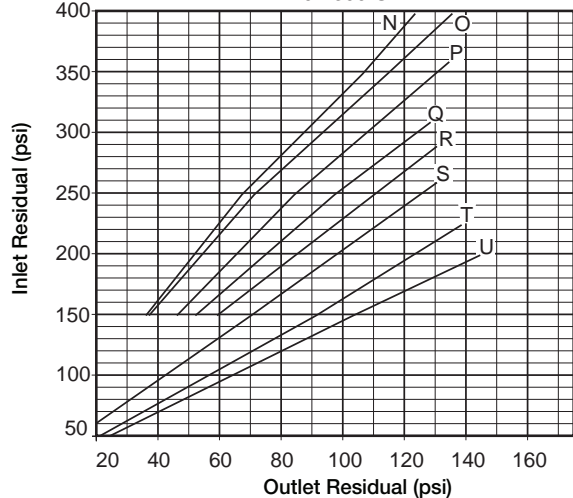
INLINE BODY (GROOVED)
101-200 GPM



INLINE BODY (GROOVED)
401-500 GPM



INLINE BODY (GROOVED)
201-300 GPM



Proper performance is dependent upon licensed, qualified personnel performing regular, periodic testing according to ZURN WILKINS' specifications and prevailing governmental & industry standards and codes and upon following these installation instructions. Failure to do so releases ZURN WILKINS of any liability that it might otherwise have with respect to that device. Such failure could also result in an improperly functioning device.