

Quality Engineered Thermoplastic Valves & Controls

for corrosive & ultra-pure liquids

- Valves
- Actuators
- Gauge Guards
- Sight Glasses
- Metering Pumps



- PVC
- Corzan™ CPVC
- Polypropylene
- PTFE
- Kynar® PVDF



PLAST-[®]-MATIC
VALVES, INC.

Made in USA

PRESSURE RELIEF, BY-PASS, & ANTI-SIPHON VALVES *also known as Backpressure Regulators*

Series "RVDT" PTFE DIAPHRAGM



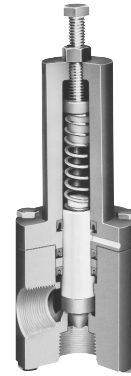
PTFE diaphragm provides the ultimate in corrosion resistance, contamination-free sealing and all-around versatility. No wetted elastomers. Patented Fail Dry® safety feature. For water, highly aggressive and ultra-pure liquid applications. PVC, CPVC, Polypropylene, PVDF (Kynar®), PTFE. Sizes: 1/4" to 2".

Series "TRVDT" THREE-WAY VALVE



Third port offers piping convenience for bypass applications. PTFE diaphragm provides the ultimate in corrosion resistance and contamination-free sealing. No wetted elastomers. Patented Fail Dry® safety feature. For highly aggressive and ultra-pure liquid applications. PVC, CPVC, Polypropylene, PVDF (Kynar®), PTFE. Sizes: 1/2" to 1".

Series "RVT" and "RVD" ANGLE PATTERN



Prevent over pressures, maintain back pressures or automatic by-pass in vessels and piping. Series RVDM (not shown) in-line pattern has a frictionless rolling diaphragm design for sensitive operation. Series RVT is an angle-pattern design. Settings from 5 to 100 PSI. Fail Dry®, 1/2" to 2". Series RVD angle pattern diaphragm design (*not shown*) 1/8" to 1/2" NPT, 50 to 150 PSI. Series RVTX offered in 3" NPT.

PRESSURE REGULATING VALVES

Series "PRH" and Series "PRHM" PRESSURE REGULATORS



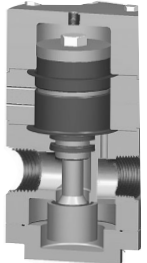
Accurately reduce and regulate steady or varying inlet pressures and maintain a constant predetermined maximum outlet set pressure. Recognized as the industry's top performer for maximum flow with minimal drop-off from set pressure. Regulator setting from 5 to 125 PSI; some size/material combinations have less range. Sizes 1/4" to 3" in most materials; 4" available in PVC and PVDF.



Series "PRD" DIFFERENTIAL REGULATORS

Regulates pressure differential across filters, instruments, etc. to ensure that pressure going into the protected segment of the system does not exceed the output pressure. This valve minimizes pressure drop and improves performance while protecting the filters or instruments from overpressure. Sizes 1/4" to 3" in PVC, Natural Polypro, other materials on request.

Series "PRA" AIR LOADED PRESSURE REGULATOR Series "PRS" PRESSURE STABILIZER

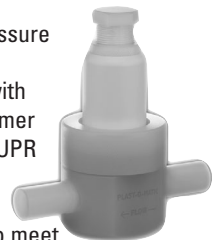


Outperforms spring loaded regulators through improved response to pressure changes; pressure is maintained without sacrificing flow. Incorporates the patented Fail Dry® safety feature. Regulator settings from 5 to 125 PSI. Sizes 1/4" to 3". Used with the patented Stabilizer® Series PRS, the PRA will perform with virtually zero drop off from set pressure. Performance rivals exotic control valves but at much lower costs.



Series "PRH-U" and "UPR" ULTRA-PURE REGULATORS

The ultimate high purity pressure regulators. PRH-U features machined Kynar 740 body with metal ion-free EPDM elastomer and non-rising adjustment. UPR has convoluted TFM diaphragm and no external fasteners and is designed to meet



SEMI F-57 specifications. PRH-U regulator setting from 10 to 125 PSI, sizes 1/4" to 3". UPR setting from 5 to 100 PSI, sizes 1/4" to 2". Both PRH-U and UPR include choice of spigot types. Also includes proprietary POM pre-assembly cleaning, 16 hour cold/hot rinse, and final Class 100 clean and double-bag procedure.

CHECK VALVES & VACUUM BREAKERS

Series "CKM" DIAPHRAGM CHECK VALVES & Series "CKS" SELF-CLOSING CHECK VALVES



Leak-proof check valves prevent reverse flow of water, extremely corrosive and ultra-pure liquids. Self-sealing designs allow mounting in any position. Unique molded diaphragm in sizes 1/2", 3/4" and 1"; self-guided poppet in 1 1/2", 2", 3" and 4". Both styles

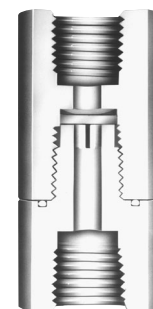
are normally-closed – no reverse pressure required. They operate silently, and seat in the same location every time. PVC, CPVC, Polypro, PVDF.

Series "VBM" and "VBS" VACUUM BREAKERS



Protective vacuum breakers eliminate unwanted siphonage or collapsing of storage tanks. Sensitive molded diaphragm offers normally closed operation and will respond to a minimum of vacuum; however, they are not recommended for protection of thin-wall tanks. Sizes 1/2", 3/4" and 1" NPT. New Series VBS features normally-closed design, higher capacity in sizes 1 1/2", 2", 3" and 4" NPT.

Series "CK" and "CKD" SPECIAL PURPOSE DIAPHRAGM CHECK VALVES



Series CK is a machined PTFE valve that features the same normally-closed diaphragm design as Series CKM, available in 3/4" and 1" sizes. Series CKD is a normally-open diaphragm check valve that is ideal for ultra-low pressure or flow, requires .5 PSI to close. Sizes 1/4" and 1/2" in PVC, Natural Polypro, PTFE and PVDF.

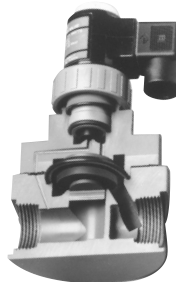
SOLENOID VALVES

Series "EAST" COMPACT, DIRECT OPERATING



This compact, direct-acting design provides a cost effective solution for high pressure rated applications, where space is limited. Patented Fail-Dry® safety design. For virtually all type solutions: acids, caustics, solvents, chlorine solutions and ultra-pure liquids. 2,000,000 cycle life. Sizes 1/4" and 1/2". Cv of 0.5 with 3/16" orifice; 0.8 with 1/4" orifice. PVC, CPVC, Natural Polypro, PVDF.

Series "PS" PILOT OPERATED



High pressure, high flow capability. Pilot-operated design requires 5 PSI differential across the valve. Rated for inlet pressures 5 to 140 PSI, back-pressures to 70 PSI. Cv's from 5.2 to 80. Patented Fail-Dry® safety design. PTFE bellows barrier type seal. For all type solutions. Sizes 1/2" to 3". PVC, CPVC, Natural Polypro, PVDF.

Series "EASMT" and "EASYMT" DIRECT OPERATING PTFE BELLOWS



Direct-acting valve for severe service applications with virtually all solutions (acids, caustic, etc.). Unique "Bellows" design provides dynamic barrier seal, prevents leaking of emissions. 2,000,000 cycle life. Fail-Dry® safety design. Sizes 1/4" to 1". Cv from 1.1 to 4.7, orifice from 3/8" to 11/16". PVC, CPVC, Glass-filled Polypro, PVDF.



W24 coil uses 75% less energy; features lighted, "Cool-DIN" connector.

NORMALLY-OPEN SOLENOID VALVES Series "EASY-NO"

Normally-open, direct-acting Series EASY-NO closes when energized. Designed for applications that must have continued flow in the event of a power failure. Suitable for pressure, drain or vacuum service with pressures to 70 PSI.



3-Way Solenoid Valves also available; see Diverter Valve Section.

BALL VALVES

TRUE-BLUE™ Series "MBV" TRUE UNION MANUAL BALL VALVES



This engineered valve offers bubble-tight sealing and easy turning with perfectly machined, polished smooth ball. Designed with trunnion to keep ball centered, reinforced shaft to eliminate breakage and dual seals to insure reliability. PTFE seats are back-loaded with O-rings for reduced

torque and longer seat life. Every valve is built ready to accept actuation in just minutes with no special tools or changes, and they are built for long cycle life. PVC, CPVC, PP, and PVDF; 3-way Series TMBV available in PVC and CPVC Sizes: 1/2" through 4"; NPT, IPS, BSP, Metric Socket.

Series "ABV" and "ABR" 2-WAY and Series "TABV" and "TABR" 3-WAY AIR TO AIR or SPRING RETURN PNEUMATIC ACTUATED BALL VALVES



Rugged engineered thermoplastic construction – ideal for corrosive atmospheres. Compact, lightweight assembly for reduced piping stress. Simple attachment to True Blue™ Ball Valve body mounting lugs. Manual override standard on most models. Spring Return options. Limit Stops and Limit Switches available. ABV sizes for 1/2" to 3", Rack and Pinion ABR for sizes 1/4" to 4".

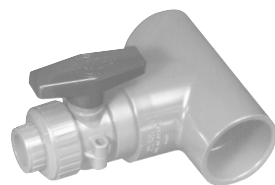


Series "EBVA" 2-WAY and Series "TEBVA" 3-WAY ELECTRICALLY ACTUATED BALL VALVES

Multi-voltage actuator with auto-voltage sensing, choice of AC or DC. Thermal, condensation, and over-torque protected, heavy-duty motor with 5.5 second cycle time on smaller sizes. Designed to meet IP65 weatherproof standards. Rugged all plastic construction – ideal for corrosive atmospheres. Compact design with manual override, position and status lights standard.

Simple attachment to the valve body mounting lugs. Available with fail-safe and 4-20 mA or 0-10 VDC digital control options. Two actuator sizes for the valve range of 1/2" through 4".

Series "LMBV" LATERAL REDUCING BALL VALVES



Revolutionary ball valve adapter eliminates weakness inherent to lateral drops; installs easily into the tee without additional fittings. Also an ideal replacement for costly zero dead-leg valves. 1/2" to 2" Ball Valves sizes. 3/4" to 3" tee adapters standard;

other sizes consult factory. Available in PVC, CPVC, PVDF and natural polypropylene, socket or butt fusion.



Series "ZC" CONTROL BALL VALVES with CUSTOMIZABLE FLOW

Manual or electrically actuated ball valve with smooth flow control. The specially cut ZC ball can be used with the 4-20 mA (0-10 VDC) Series EBVA Actuator to provide precise control when selected with a standard V-Ball angle; even linear flow with Patent Pending "Batwing" design. Custom cuts available to meet the exact flow needs for virtually any application. Offered 1/2" through 4" in PVC, CPVC, Natural Polypro and PVDF.

GAUGE GUARDS, INSTRUMENTATION & CONTROL



Series "GGG" CHEMICAL GAUGE GUARDS Series "GGME" MINIATURE DIAPHRAGM SEAL

Choice of PTFE or Viton barrier seal protects instruments from corrosion and clogging while maintaining high accuracy. Unique steel hex gauge connection (not wetted) eliminates breakage. Available with or without 2 1/2" stainless steel pressure or vacuum gauges. Inlet 1/2". Gauge connection 1/4" or 1/2". Compact diaphragm seal Series GGME also for pressure or vacuum.

Series "GGMU" ULTRA PURE GAUGE GUARDS



Unique in-line design eliminates "dead leg" that can harbor bacterial growth and contamination. Unpigmented thermoplastic material; FKM or metal ion-free EPDM. Special flexible elastomer spool separates system liquid from gauge fill liquid and assures accurate reading. Adaptable to existing piping systems. Sizes: 1/2" to 2".

Series "SWT" PRESSURE SWITCHES



Used to signal equipment when pressure in a piping system either rises or falls to a set pressure; adjusts easily with adjusting screw. Maximum operating pressure of 150 psi. Features NEMA 4X design, patented Fail-Dry® safety vent, PTFE diaphragm (no wetted elastomers), and all-plastic grip. Snap-action 16 Amp/3 terminal switch is standard; 25 Amp and low deadband 3 Amp switches optional. All are UL recognized and CSA approved. PVC with 1/2" NPT connection.

Series "PT-SS" TRIDICATORS



All-in-one pressure and temperature gauge with extra low-profile probe. Suitable for applications that can withstand wetted metal. Steel case and stainless steel connection; available in 2 1/2" or 3" gauge face.

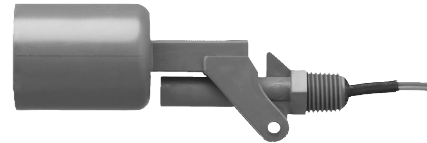
FLOW SWITCHES



Pre-set Series FS is available with flow rate range from .7 - 25 GPM. Switches offered from 5 VDC to 240 VAC. Adjustable Series FSA offers flow rate range from 8 - 1900 GPM, designed for pipe size 1" through 10". FSA permits continuous adjustment during operation; SPDT 15 amp switching capacity model or Dry Computer/PLC Interface model. Both FS & FSA have ±10% accuracy with 5% repeatability. Offered in PVC or CPVC with no wetted metals.

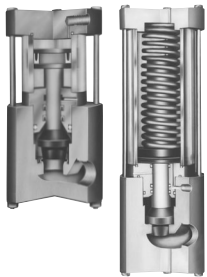
LEVEL SWITCHES

Series LLS with pivot pin design features 1 1/4" x 1/4" x 1/2" reducer bushing for through wall mounting. SPST reed switch for 120/240 VAC 50 Watt power or optional DC dry circuit for computer/PLC interface. PVC or CPVC body materials; no wetted metals or elastomers.



SHUT-OFF VALVES

Series "BAT", "BLT" and "BST" SHUTOFF VALVES AUTOMATIC, AIR OPERATED



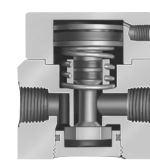
2-way globe-type shutoff valves feature PTFE shaft design, Fail Dry® design and clear acrylic air cylinder shows valve position, all standard. Ultra heavy-duty valves with decades of proven rugged performance. Series BAT is double-acting air to open, air to close. Series BLT uses the liquid process pressure to open, air to close. Series BST is air x spring, normally closed or normally open. Sizes 1/2" through 2".

Series "BSDA" AIR OPERATED PTFE DIAPHRAGM VALVE



Long cycle life and compact design. Excellent for water, ultra-high purity or highly corrosive liquids. PTFE diaphragm with no wetted elastomers. Million-cycle design. Connections can be female socket, female threads, spigots, or flare. Patented Fail Dry® safety feature. Smooth internal cavities to avoid deadleg. 1/8" NPT air connection. Standard is normally closed spring return. Sizes 1/2" to 2" in PVC.

HIGH PRESSURE Series "BSR" COMPACT AIR-OPERATED SHUTOFF VALVES



BSR air-operated valves are normally-closed, ideal for purity and corrosive applications. Features low friction design bubble-tight seal, no wetted metals. 1/2" and 3/4" sizes. Cv 2.5 and 5.0; 150 PSI max; vacuum service available.

Series "HSA" PINCH VALVES



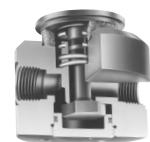
Air-operated valves "pinch" sleeve to shut off flow; ideal when slurries or particulate might prevent bubble-tight closure in a regular seat and seal design. HSA is an inline design that closes a Patent Pending articulated sleeve molded of EPDMh2, 1/2" to 1" connections of PVC, CPVC, natural polypro or PVDF.

Series "IDA" QUICK DUMP VALVE



Drain mounted for rapid vortex emptying of a sink or tank. IDA is available double-acting air by air or normally-closed spring return design. High capacity design provides up to twice the flow rate of typical dump valves; remains bubble-tight with up to 25" of head. Sizes 4", 5" and 6" in PVDF, polypro or PVC.

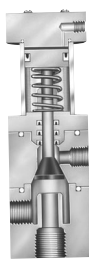
Series "MFR" MANUAL SELF-CLOSING VALVES



Normally-closed MFR palm or foot operated valves are the answer for applications where hand or hands must be kept free for other functions. Automatic spring-return closes valve bubble-tight seal. Low-friction design; no wetted metals. 1/2" and 3/4" sizes. Cv 2.5 and 5.0; 150 PSI max; vacuum service available.

DIVERTER & MULTIPORT VALVES

Series "F" & "BFS" AIR-OPERATED DIVERTER



3-way globe-type diverter or sampling valves feature balanced shaft, Fail Dry® design and clear acrylic air cylinder shows valve position, all standard. Ultra heavy-duty valves with decades of proven

rugged performance. BFS 1/2" sizes PVC or natural polypro; F is 3/4" through 2" in PVC.

Series "TUCA" AIR OPERATED COMPACT DIVERTER



3-way diverter or sampling valve can also be used to combine 2 inlets into 1 outlet. Includes Fail Dry® warning vent. Sizes 1/4" and 1/2" in PVC, Natural Polypro, PTFE or PVDF.

Series "THP" 3-WAY SOLENOID VALVES



Direct-acting Series THP is a multi-purpose valve suitable for inlet and backpressures to 100 PSI; it can function as a three-way, normally-open, or normally-closed valve. THP is available in 1/4" and 1/2" sizes in PVC.

FLOW & LEVEL INDICATORS

Series "GX" and "GY" SIGHT GLASS FLOW INDICATORS



For safe, positive indication of flow and clarity of corrosive or ultra-pure liquids. Available with vinyl streamers to help detect flow. Series "GX" has only an acrylic cylinder wall for economy. Series "GY" has an acrylic outer cylinder protecting a Pyrex inner cylinder. Sizes 1/2" to 3" NPT.

Series "GYW" WAFER SIGHT GLASSES



Offers safe and positive indication of flow or clarity of corrosive or ultra-pure liquids in larger piping systems. Double wall construction. Fits between standard companion flanges. Sizes 1 1/2" to 8" pipe.



Series "GL" LEVEL INDICATORS

Quick visual verification of tank level. GL has acrylic exterior with Pyrex® inner cylinder suitable for harsh chemicals and high purity applications. Lengths from 1 to 4 feet, PVC, natural polypro or PTFE connections in 1/2" or 3/4" NPT.

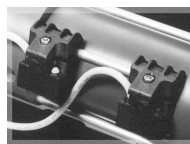
FILLING / METERING



Series "VPA" DUAL CYLINDER, AIR OPERATED FILLING AND METERING PUMPS

Self-priming pumps deliver exact quantities of highly corrosive liquids. Features Fail Dry® design. Pneumatically operated, with adjustable discharge rates. Capacities of 7, 10, 32 and 128 oz. per stroke. Other capacities available on request.

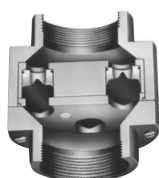
Series "RS" PROXIMITY SENSOR



AC or DC Reed switch with indicator lights designed for use with VPA metering pump. CSA listed and NEMA-6 wash down compatible.

CONSTANT FLOW VALVES

Series "FC" FLOW CONTROLS



Automatic, tamper-proof valves maintain a constant flow regardless of inlet pressure changes between 15 and 100 PSI. No metal in contact with liquid. Maintains pre-determined flow rates from 1/4 to 120 GPM. Sizes 1/4" to 3".

PIPING CONNECTIONS



FACTORY INSTALLED

Depending on the product, a variety of optional and custom connections are available in most sizes and materials.

- Spigots – Metric or IPS
- Sockets
- Flanges
- Flare
- BSP / JIS / DIN
- Custom
- True Union

AIR & GAS VENTING VALVES



Series "ARV" AIR RELEASE VALVES

For high-capacity venting of gas at system start-up. Unique self-guided poppet assures minimal emission of system liquid and seals more reliably than ball-type designs. Closes at 0 PSI as long as liquid is present; bubble-tight seal at 10-15 PSI. PVC and CPVC in 1/2" through 4" NPT connections.



Series "DGV" CONTINUOUS DEGASSING VALVE

To vent trace amounts of gas as it occurs during system operation. Polypropylene float closes valve as liquid rises, opens when float chamber fills with gas. No internal or external metal components; ideal for aggressive environment. Maximum operating pressure 100 PSI. PVC, CPVC, Natural Polypropylene or PVDF body materials with 1/2" NPT connection; 1/8" NPT vent port.

CUSTOM ENGINEERED PRODUCTS

Series "PCWS" and "PCWR" STICKS

Rugged, reinforced assemblies for process cooling water applications condense valves, gauges, flow meters and connectors into compact "sticks" that are virtually indestructible and drastically reduce installation costs. PCWS supply side features pressure regulator and pressure gauge; PCWR return side features flowmeter and throttling valve. Customizable with any combination of valves and connections.



"K" and "Q" VALVES

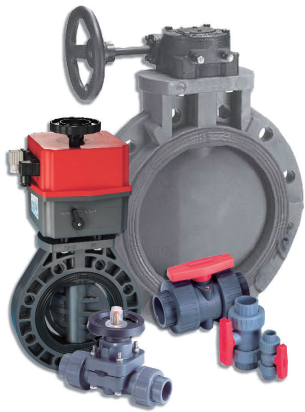


In addition to our line of standard products, Plast-O-Matic is called upon to provide customized valves and controls for our customers. Illustrated are various examples of these specialized thermoplastic units which have been designed, engineered and manufactured to provide solutions for specialized applications. Request Special Product Program information.

FAIL-DRY® CONCEPT

Fail Dry® is a Plast-O-Matic patented design safety feature describing the unique concept of having a vented chamber separating two sealed sections of a valve or pump. In the event of lower (primary) seal failure, an upper (secondary) seal will continue to keep the operating media dry. Only controls with the patented Fail Dry® feature offer this unique protection. Fail Dry® permits a valve or pump to remain functioning after a primary seal failure, thereby keeping the process cycle or system operating until maintenance can be scheduled. This avoids costly emergency shut-downs.

BLUE STANDARD IMPORTED VALVES



- BALL VALVES
- BUTTERFLY VALVES
- WEIR-TYPE DIAPHRAGM VALVES

The Blue Standard line is Plast-O-Matic Valves' solution for price sensitive thermoplastic valve requirements. If you currently

specify imported or mass-produced plastic valves for water, corrosive or high purity applications, Blue Standard provides the same quality and performance levels, with the advantage of Plast-O-Matic technical services, testing and support.

BODY & SEAL MATERIALS

STANDARD BODY MATERIALS

Most Plast-O-Matic products are available in Grade 1, Type 1 Geon® PVC, Corzan® CPVC, Kynar® PVDF, and Natural Unpigmented Polypropylene. Most products are also offered in PTFE, while molded products are available in Glass-filled Polypropylene and Halar® ECTFE. Other thermoplastics available, please consult factory.

SEAL MATERIALS

Elastomer seals include EPDM, FKM Viton®, FFKM, Aflas. Thermoplastic seals include PFA, TFM, and PTFE. Special and custom materials, including Kalrez®, Chemraz®, and custom formulations are quoted on request. Plast-O-Matic also offers a number of proprietary elastomers, including f99® for 99% sulfuric applications, EPDMh2® for pinch valve applications, and others.



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