PLAST-O-MATIC®

PRODUCT DATA

PTFE DIAPHRAGM RELIEF, BY-PASS, ANTI-SIPHON AND BACK PRESSURE VALVES

SERIES RVDT & RVDTM



APPLICATIONS:

One valve design functions as an all-purpose backpressure valve in many applications:

- **Relief:** protects systems and equipment from over-pressure/pressure surges.
- **By-Pass:** prevents pumps from "dead heading".
- **Back-Pressure Regulator:** maintains necessary reverse pressure in closed loop systems.
- **Back-Pressure Valve:** enhance pump performance by maintaining backpressure on the pump outlet
- **Anti-Siphon:** used on the outlet of a pump wherever gravity or other downstream conditions may create negative pressure (siphon) and drain a tank. The valve is pre-set to open under pump pressure, but closes bubble-tight when the pump is shut off. Because of the design of the RVDT, this valve actually closes more tightly when unwanted siphon occurs.

PLASTIC BODY MATERIALS & SIZES:

- PVC and CPVC body materials in 1/4" - 4" sizes.
- Natural Polypropylene and Kynar® PVDF body materials in 1/4" - 2", 4" also available in Kynar.
- PTFE body material offered in 1/4" - 1" sizes.
- Relief setting is infinitely adjustable from 5 psi to 125 psi. 5-100 psi on 3" and 4" sizes.
- Maximum inlet pressure is 150 psi.

METAL BODY MATERIALS & SIZES:

- 316L Stainless Steel body offered in 1/2", 3/4", and 1" sizes. For other grades/metals, please consult factory.
- Relief setting is infinitely adjustable from 5 psi to 125 psi.
- Maximum inlet pressure is 150 psi at 75°F. With PVC spring housing, pressure is de-rated accordingly at higher temperatures. Alternate spring housing materials are available; please consult factory.



1/4" - 3" sizes in PVC, CPVC, SS are NSF/ANSI 61 and NSF/ANSI 372 certified

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ISO9001:2015 REGISTERED COMPANY

FEATURES:

- Diaphragm material is PTFE for all sizes and body materials, and is excellent for use with highly aggressive liquids...provides the ultimate in contamination-free sealing.
- Large diaphragm area delivers more sensitivity and less pressure drop under flow conditions.
- Non-leaching feature of fluoropolymer diaphragm makes it ideal for use with ultra-pure water and concentrated etchants, as in the semiconductor industry.
- Non-wetted u-cup seal provides a second isolation of the control spring; design includes patented Fail-Dry vent, a safety feature that provides visual warning of seal malfunction. This permits the valve to continue operation until a scheduled maintenance can be planned thereby avoiding a costly shutdown. Fail-Dry connection is 1/8" FNPT; 1/4" FNPT 3" AND 4" sizes.

MOUNTING:

The 1/2" and 1" sizes in PVC, CPVC, Natural Polypro & Kynar PVDF have integral mounting lugs on the base of the body. All other sizes & materials have threaded mounting holes in the base.

GAUGE PORTS:

The 1/2" and 1" sizes in PVC, CPVC, Natural Polypro & Kynar PVDF have opposing 1/8" NPT gauge ports on the side of the body, on the same plane as the piping connections. The gauge ports are not tapped unless so ordered; incurs small charge. On the standard body, the untapped port has no effect on flow or performance. Gauge ports are not readily available on other sizes or on 1/2" PTFE body; please consult factory for alternatives.

MATERIALS, PIPING CONNECTIONS & QUALITY ASSURANCE:

Materials used in addition to the body include PTFE wetted diaphragm energized by a non-wetted FKM diaphragm. Spring housing (non wetted) is same as body material on 4" size, PVC on all other sizes. Springs (non wetted) are zinc-plated steel; 1½", 2", 3" & 4" springs are polyurethane coated. External fasteners are stainless steel. Lock nut and adjusting screw are stainless steel on 2" size. Adjusting screw is stainless steel on 4" size. Alternate materials available by special order.

Female NPT and schedule 80 sockets available on all sizes. Spigots, flanges, flare fittings and other connections available on most sizes/materials. Please consult our Technical Group for more information, (973) 256-3000. Assembled valves are 100% individually tested (while pressurized) prior to shipment. All operations performed in our plant in Cedar Grove, NJ.

3" AND 4" BODY STYLE

The heavy duty 3" and 4" sizes are visually different from smaller sizes but internally the valve is virtually identical; it provides the same PTFE diaphragm sealing and the highest flow rates in the industry.

Each of the 3" and 4" RVDT valves are precision machined, then fabricated and assembled by hand, and individually tested under pressure. The design facilitates connections in NPT, socket, BSP, JIS, DIN, and custom fittings.

PIPE SIZE	PVC	CPVC	Natural Polypro	PTFE	PVDF	Stainless Steel
¼"	RVDT025T-PV	RVDT025T-CP	RVDT025T-PP	RVDT025T-TF	RVDT025T-PF	*
½"	RVDTM050T-PV	RVDTM050T-CP	RVDTM050T-PP	RVDT050T-TF	RVDTM050T-PF	RVDT050T-SS
¾"	RVDT075T-PV	RVDT075T-CP	RVDT075T-PP	RVDT075T-TF	RVDT075T-PF	RVDT075T-SS
1"	RVDTM100T-PV	RVDTM100T-CP	RVDTM100T-PP	RVDT100T-TF	RVDTM100T-PF	RVDT100T-SS
1½"	RVDT150T-PV	RVDT150T-CP	RVDT150T-PP	*	RVDT150T-PF	*
2"	RVDT200T-PV	RVDT200T-CP	RVDT200T-PP	*	RVDT200T-PF	*
3"	RVDT300T-PV	RVDT300T-CP	*	*	*	*
4"	RVDT400T-PV	RVDT400T-CP	*	*	RVDT400T-PF	*

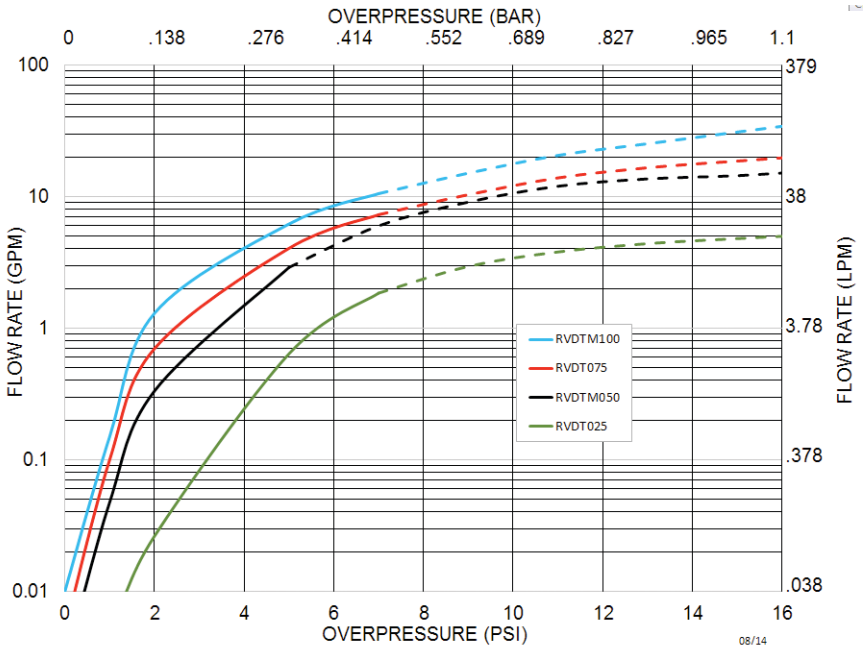
* Consult Factory

Part numbers shown are for threaded connections. For sockets, add an "S" after the second "T" example: RVDT050TS-PV.

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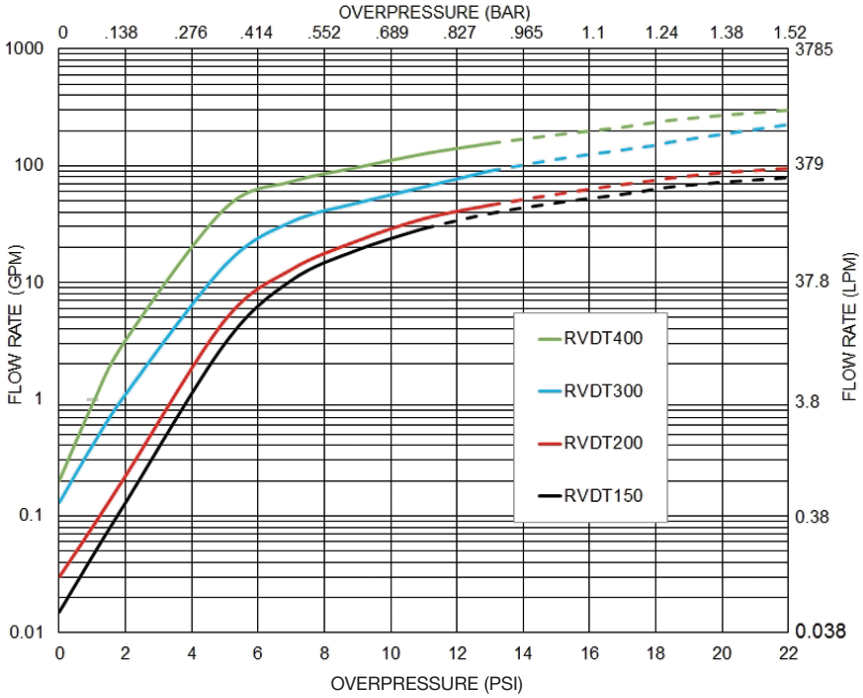
RVDT(M) 1/4" - 1" FLOW CHART

TESTED WITH CITY WATER*



RVDT 1-1/2", 2", 3" & 4" FLOW CHART

TESTED WITH CITY WATER*



* Tested under laboratory conditions; your results may vary. Solid lines represent recommended flow range for that pipe size.

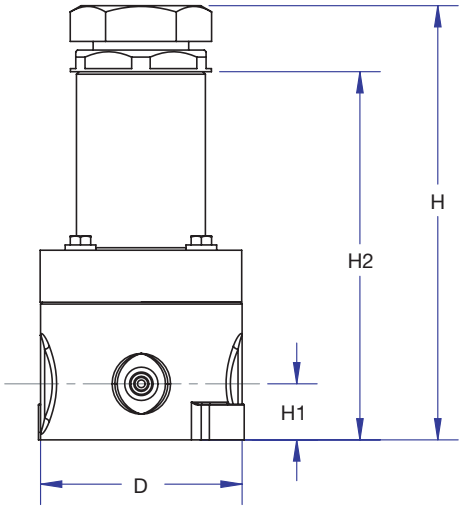
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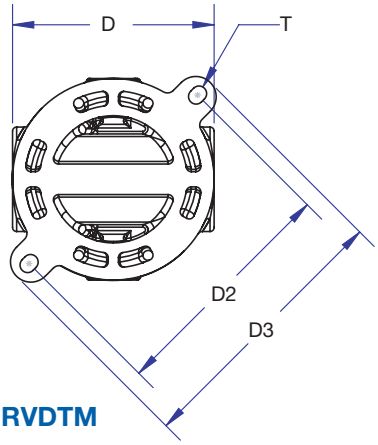
MODEL	PIPE SIZE	D		D1		D2		D3	
		IN.	MM.	IN.	MM.	IN.	MM.	IN.	MM.
RVDT025	¼"	2.00	50.8	1.63	41.4	-	-	-	-
RVDT(M)050	½"	2.50	63.5	1.63	41.4	2.97	75.4	3.36	85.3
RVDT075	¾"	3.00	76.2	2.00	50.8				
RVDT(M)100	1"	3.50	88.9	2.00	50.8	4.10	104.1	4.69	119.1
RVDT150	1½"	5.00	127.0	-	-	-	-	-	-
RVDT200	2"	6.00	152.4	-	-	-	-	-	-
RVDT300	3"	10.0	254.0	5.25	133.0	-	-	-	-
RVDT400	4"	11.5	292.0	5.38	137.0	-	-	-	-

MODEL	PIPE SIZE	H		H1		H2		T
		IN.	MM.	IN.	MM.	IN.	MM.	THREAD SIZE/HOLE SIZE
RVDT025	¼"	6.15	156.2	0.47	11.9	4.77	121.2	#8-32
RVDT(M)050	½"	5.83	148.0	0.69	17.4	4.35	110.4	38-32/#8 THRU HOLE
RVDT075	¾"	8.98	228.1	0.78	19.8	6.17	156.7	1/4" - 20
RVDT(M)100	1"	11.38	289.1	1.19	30.2	8.38	212.9	1/4"-20 / 1/4" CLEARANCE
RVDT150	1½"	12.00	304.8	1.50	38.1	8.50	215.9	1/4" - 20
RVDT200	2"	12.68	322.1	1.75	44.5	9.88	251.0	1/4" - 20
RVDT300	3"	20.2	512.0	2.90	73.0	14.70	374.0	5/16" - 18
RVDT400	4"	15.7	399.0	3.70	94.0	14.90	379.0	3/8" - 16

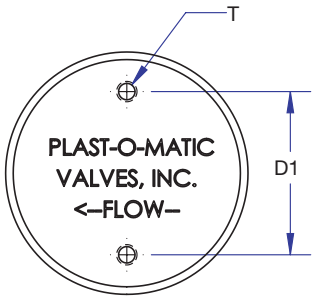


3" & 4" BODY STYLE

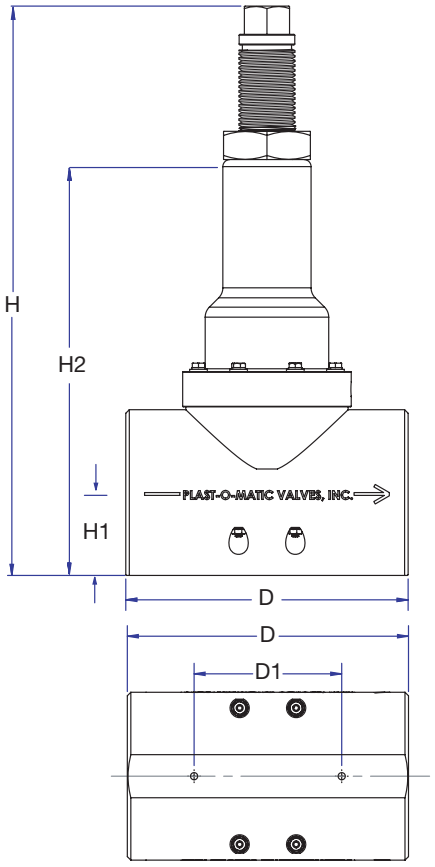




RVDTM



RVDT



RVDT300/400

4" model has non-rising stem

RVDT-1118-C-4