

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:

- Geon® PVC and Corzan® CPVC body materials in 1/4", 1/2", 3/4", 1", 1 1/2", 2" and 3" sizes.
- Natural Polypropylene and Kynar® PVDF body materials in 1/4" - 2" sizes.
- 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" 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 400 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.



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" on 3" valve.

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 (not wetted) is PVC. Springs (not in wetted area) are zinc-plated steel, external fasteners are stainless steel. Lock nut and adjusting screw are stainless steel on 2" sizes. Options available on quantity or special orders.

The standard valves are precision machined with female NPT connections. The 1/2" sizes in Geon PVC, Corzan CPVC, Natural Polypro & Kynar PVDF, as well as 1" sizes in Geon PVC, Natural Polypro & Kynar PVDF are molded with a choice of FNPT or socket connections. Spigot connections & flare fittings are also available on 1/4" - 1". Connections can be provided with male threads, sockets, etc. 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.

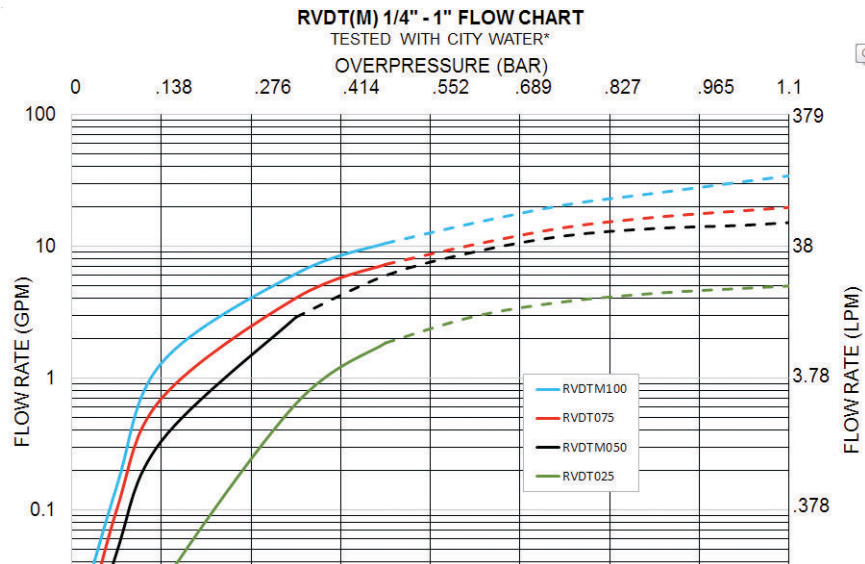
3" BODY STYLE

Offered in PVC or CPVC, the heavy duty 3" size is 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.

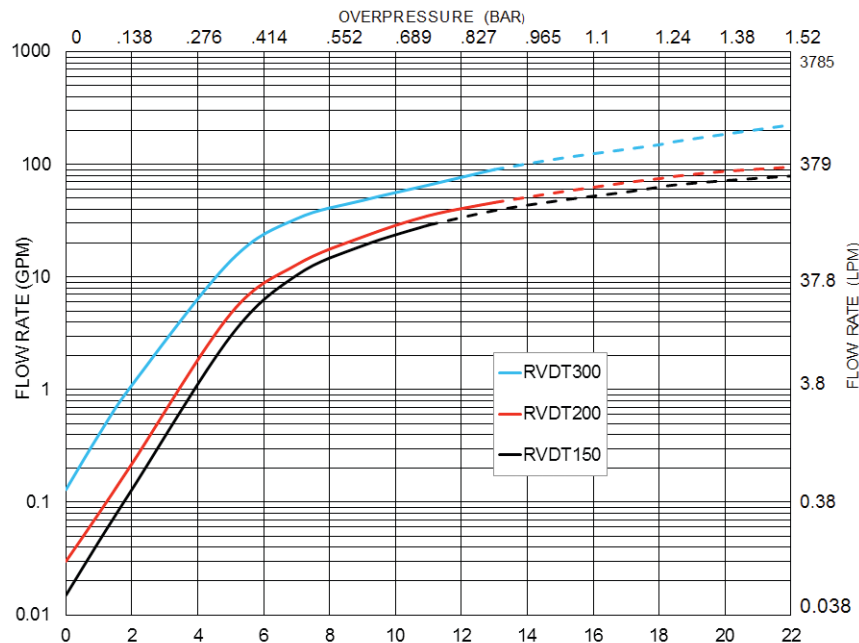
Each of the 3" RVDT valves are precision machined then compression fabricated and assembled by hand, and individually tested under pressure. The design facilitates connections in NPT, socket, BSP, JIS, DIN, and custom fittings.

PIPE SIZE	PVC	CPVC	Natural Polypro	PTFE	PVDF	Stainless Steel
1/4"	RVDT025T-PV	RVDT025T-CP	RVDT025T-PP	RVDT025T-TF	RVDT025T-PF	
1/2"	RVDTM050T-PV	RVDTM050T-CP	RVDTM050T-PF	RVDT050T-TF	RVDTM050T-PF	RVDT050T-SS
3/4"	RVDT075T-PV	RVDT075T-CP	RVDT075T-PF	RVDT075T-TF	RVDT075T-PF	RVDT075T-SS
1"	RVDTM100T-PV	RVDTM100T-CP	RVDTM100T-PF	RVDT100T-TF	RVDTM100T-PF	RVDT100T-SS
1 1/2"	RVDT150T-PV	RVDT150T-CP	RVDT150T-PF	Consult Factory	RVDT150T-PF	
2"	RVDT200T-PV	RVDT200T-CP	RVDT200T-PF	Consult Factory	RVDT200T-PF	
3"	RVDT300T-PV	RVDT300T-CP				

RVDT(M) 1/4" - 1" FLOW CHART TESTED WITH CITY WATER*



RVDT 1-1/2", 2", & 3" FLOW CHART TESTED WITH CITY WATER*



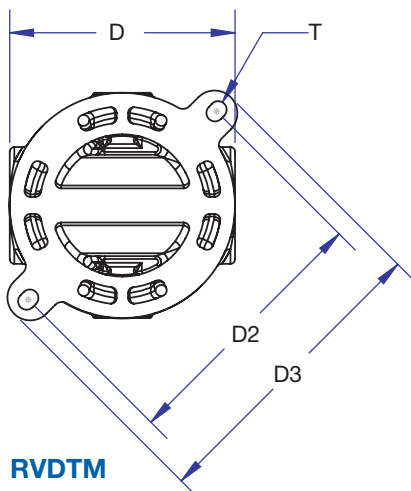
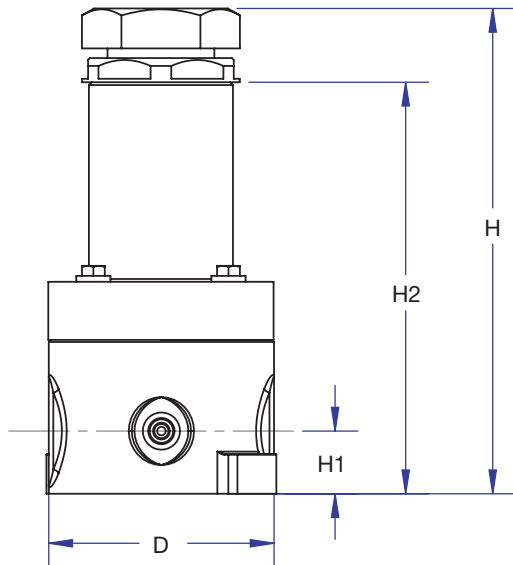
* Tested under laboratory conditions; your results may vary. Solid lines represent recommended flow range for that pipe size.

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	-	-	-	-	-	-

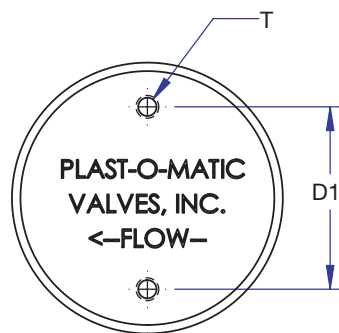
MODEL	PIPE SIZE	H		H1		H2		T
		IN.	MM.	IN.	MM.	IN.	MM.	THREAD SIZE/HOLE SIZE
RVDT025	¼"	6.15	156.2	0.47	11.9	4.77	121.2	#8-32
RVDT(M)050	½"	5.83	148.0	0.69	17.4	4.35	110.4	38-32/#8 THRU HOLE
RVDT075	¾"	8.98	228.1	0.78	19.8	6.17	156.7	1/4" - 20
RVDT(M)100	1"	11.38	289.1	1.19	30.2	8.38	212.9	1/4"-20 / 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



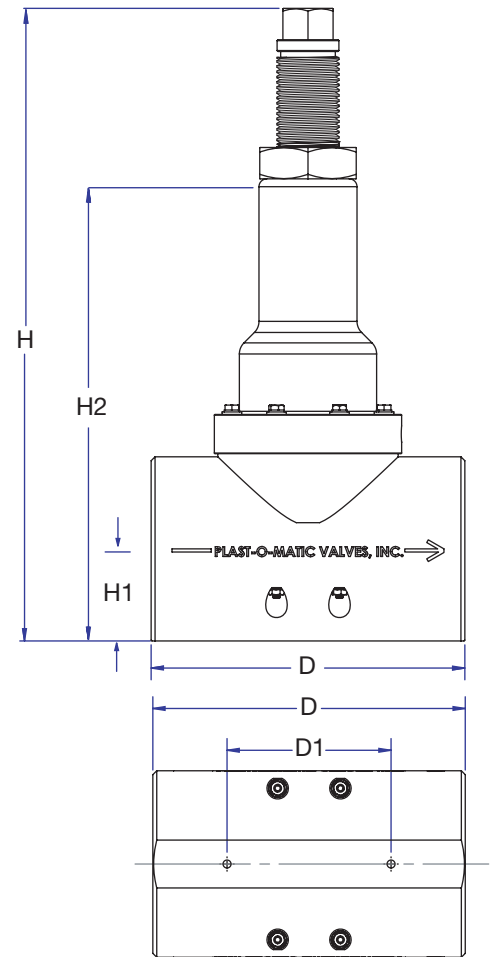
3" BODY STYLE



RVDTM



RVDT



RVDT300