Triple Function Air Release Valve
TARV Series

WALTER TARV model Triple Function Air Release Valve is a unique valve. This unique structure allows the dynamic valves to discharge air from the water system in a controlled and gradual manner, preventing slam and local up-surges. When vacuum occurs, the valves fast reaction will draw in large volumes of air into the water system, impeding down-surges and, consequently, all pressure surges in the line. The valves are normally closed when the line is not operating, thus preventing the infiltration of foreign particles and insects into the water system.



Combination air release valve with anti shock device provides 3 functions:

1.Restricted air release during filling of the pipeline.
2.Small air release under pressurized pipeline.
3.Large air intake during draining of the pipeline.

Technical Data	
Size range	DN50-DN300
Pressure range	PN10-16-25-40
Temperature	-10°℃to+130℃
Design	EN 1074-4
Operation	Automatic
Flange drilling	EN 1092-2 ISO 7005-2 Flanged
Coating	Thermoplastic Powder Epoxy
Testing	EN 12266-1
Marking	EN 19
Coating Blue Color	RAL 5005
	RAL 5010
	RAL 5015
	Custom made

Application Range

- Water transmission
- Pump suction line
- Water treatment and distribution systems
- Next to by-pass valve
- For irrigation

Operation Versions

- Full bore design
- Drain port (Optional) for inspection and maintenance
- Mobile block composed of two overlapping cylinders in polypropylene connected by means of a patented air release system in AISI 304
- Anti-hammer solution without having to remove the air valve from the conduct ·

Feature

. Advanced design with simple mechanism, strong float to prevent cracking during sudden water hammer & quick closure.
. Aerokinetic mechanism to resist blow shut under higher air velocity even up to sonic velocity of air.
. For the potential water hammer location or transmission pipeline, we should use anti shock combination air valve to prevent from damage or impact of severe water hammer.
. Anti shock device is installed on top of bonnet, It will slow down the exhausting air flow out during filling to prevent hammer impact, whenever vacuum happen, the device will drop down and let Large air into the pipeline.

Triple Function Air Release Valve
TARV Series

. No arms or levers to prevent vibrating, bending, direct closure of the float.

. Smooth barrel outside of the float, keep float moving in specified guide rail.

. Guide barrel buffer for collision prevention, and drain easy with proper holes around the barrel during vacuum.

. Outside screen will be an option for safety and prevent insects or birds in.

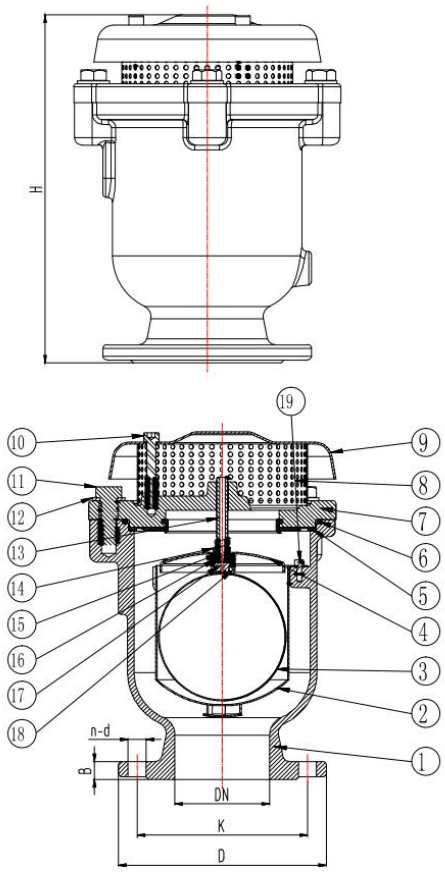
. Fully fusion epoxy coated inside and outside of valve body for long term services.

. Manufacturing standard meets or exceeds BS EN 1074-4, AWWA C512

. Flange drilling and dimension meets BS EN 1092 and BS EN 558 and ANSI flange.

. Both inside & outside are coated with epoxy resin powder.

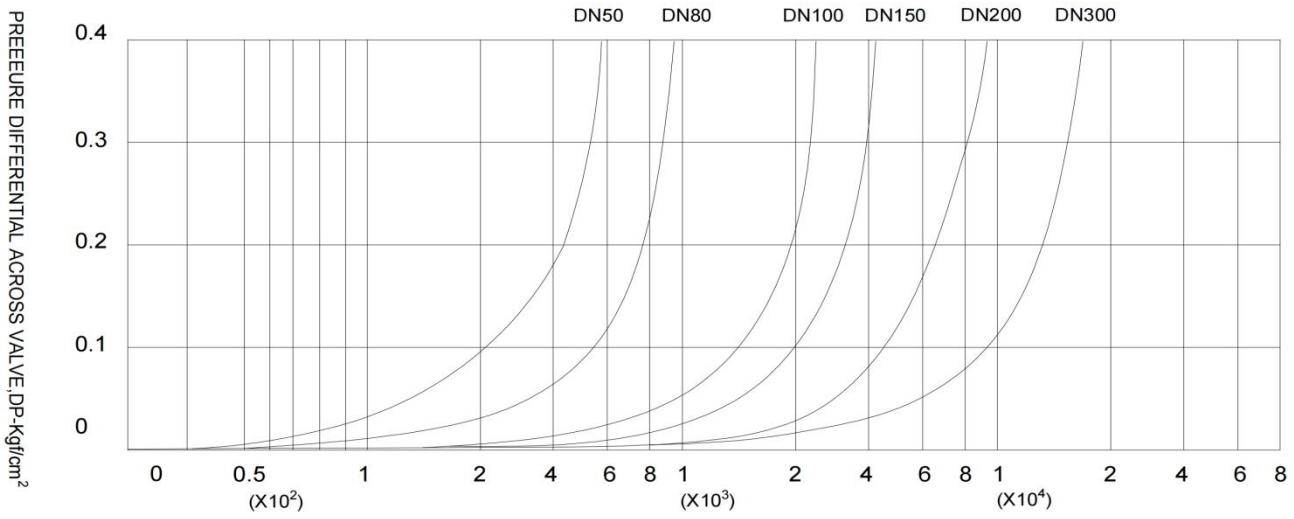
. Hydro-static test pressure for seat: PN x 1.1 , for shell: PN x 1.5 according to EN 12266-1.

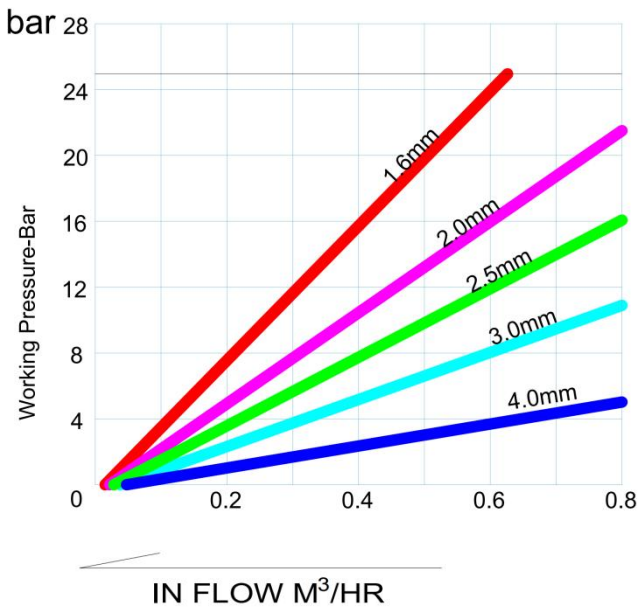


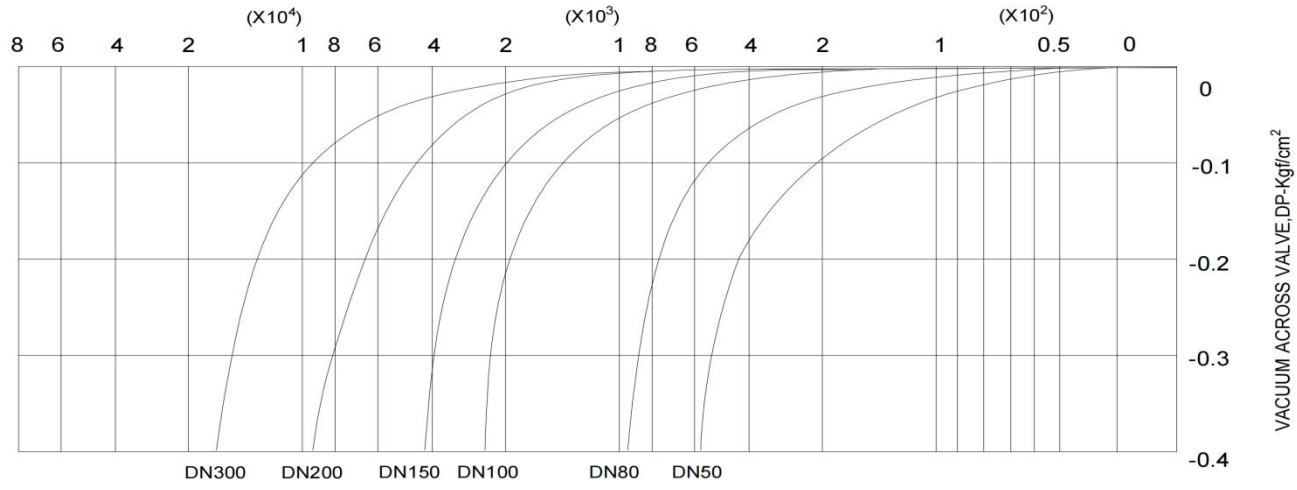
No.	Name	Materials
1	Body	Ductile Iron GGG50
2	Bushing	Stainless Steel AISI 304/316
3	Floating ball	Stainless Steel AISI 304/316
4	Disc	Stainless Steel AISI 304/316
5	Seal ring	NBR
6	O Ring	NBR
7	Bonnet	Ductile Iron GGG50
8	Dustproof screen	Stainless Steel AISI 304/316
9	Dust cover	Stainless Steel AISI 304/316
10	Screw	Stainless Steel AISI 304/316
11	Bolt	Stainless Steel AISI 304/316
12	Flat washer	Stainless Steel AISI 304/316
13	Guide rod	Stainless Steel AISI 304/316
14	Nut	Stainless Steel AISI 304/316
15	0 Ring	NBR
16	Lock nut	Stainless Steel AISI 304/316
17	Sealing plug	SI
18	Sealing sleeve	Stainless Steel AISI 304/316
19	Screw	Stainless Steel AISI 304/316

Dimension (mm)

DN	END FLANGE PN10/16 mm				END FLANGE PN25 mm				Height
	EN1092-2				EN1092-2				
	D	K	n-d	B	D	K	n-d	B	H
50	165	125	4-Φ19	19	165	125	4-Φ19	19	305
65	185	145	4-Φ19	19	185	145	8-Φ19	19	305
80	200	160	8-Φ19	19	200	160	8-Φ19	19	330
100	220	180	8-Φ19	19	235	190	8-Φ23	19	370
150	285	240	8-Φ23	19	300	220	8-Φ28	20	450
200	340	295	8-Φ23/12-Φ23	20	360	310	12-Φ28	22	500


PREEEURE DIFFERENTIAL ACROSS VALVE,DP-Kgf/cm²
DN50
DN80
DN100
DN150
DN200
DN300
0.4
0.3
0.2
0.1
0
0 0.5 1 2 4 6 8 1 2 4 6 8 1 2 4 6 8
(X10²)
(X10³)
(X10⁴)


bar
Working Pressure-Bar
28
24
20
16
12
8
4
0
0.2
0.4
0.6
0.8
1.6mm
2.0mm
2.5mm
3.0mm
4.0mm
IN FLOW M³/HR


(X10⁴)
(X10³)
(X10²)
8 6 4 2 1 8 6 4 2 1 8 6 4 2 1 0.5 0
0
-0.1
-0.2
-0.3
-0.4
VACUUM ACROSS VALVE,DP-Kgf/cm²
DN300
DN200
DN150
DN100
DN80
DN50