



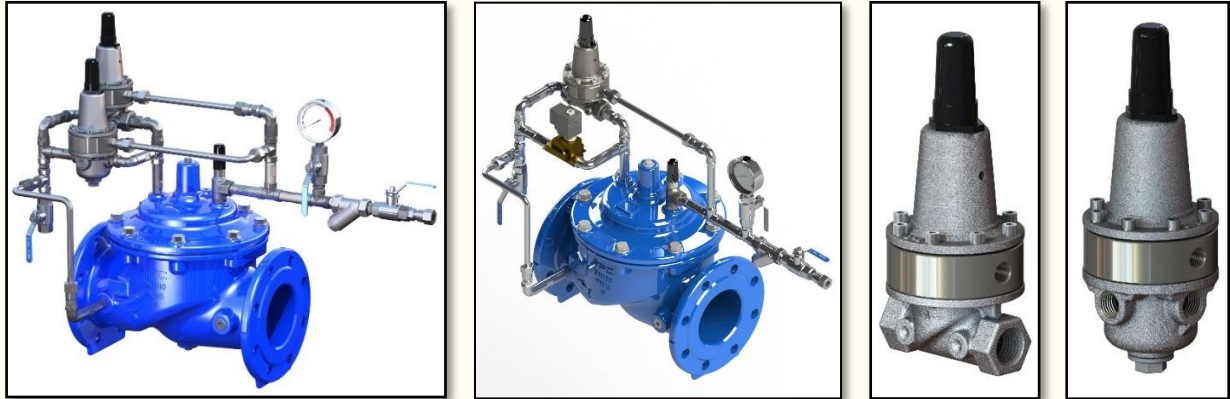
Alpine Flowtech

Control Valves, Sewage Air Valves, Controllers, Pressure, Flow, Level & Leakage Management.

Unit No. 1, B Wing, Swarajya Complex, Rajlaxmi Compound, Opp. Bewakoof Textile Factory Outlet, Kasheli, Kalher, Tal. Bhiwandi, Dist. Thane Pin 421302. Contact: 8850001856/9867025324/8978558585.

Email: alpineflowtech@gmail.com. GSTIN - 27ABOFA0019J1ZI

ALPINE/AFC – SURGE ANTICIPATING AND RELIEF VALVE



Alpine brand, Straight Body, Double Flanged, Pilot operated, Surge Anticipating and Relief Valve for water hammer anticipation and prevention. The valve starts to open when power failure occurs in pump system and helps in relieving the returning water into atmosphere/back to suction tank/river until the surge phenomenon is fully dissipated. During normal pumping, this valve relieves any excess pressure above the setting pressure. The best part of the valve is the Low-Pressure pilot, that senses a stopped pump and activates the valve to open so that the returning water column at a very high velocity is sensed and the energy is released out from the pipeline. The Valve thus can be termed as Infrastructure Saviour and an insurance to the pipeline at a very economical cost. The valve is installed on a tee-off (Branch) on the pure water/raw water pipeline as a by-pass valve generally close to the pump house.

ADVANTAGES & FEATURES:

- θ Fully mechanical with an option to actuate by a Normally Closed (NC) solenoid.
- θ Useful during upsurge/high surge and positive pressure.
- θ Very economical compared to Surge Vessels, Bladder tanks
- θ Sized as per $1/3^{\text{rd}}$ or $1/4$ of the design flow or pipe diameter
- θ Activates at Low as well as high Pressure
- θ Easy to install and maintain
- θ Can be operated at very low static head by replacing the low-pressure pilot with a NC solenoid valve.
- θ The valve actuation speed can be controlled by a needle valve.

ADD-ON Features

- The valve can be serviced in line
- Tight shut off & Globe design for superior linear characteristics.
- Sizes available 50 mm to 800 mm. Temperature rating – 10 Deg.C to 80 Deg.C
- Meets standard BS EN 1074-5, ISO 5208, BS EN 12266-1, BS EN 558-1, BS EN 1092-2.



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MATERIALS OF CONSTRUCTION:

1. Body, Bonnet, Disc Holder, Diaphragm upper plate in DI Grade GJS/SGI 500/7/GGG 50
2. Double guided Shaft/Stem in AISI SS 304/optional in SS 316 for balanced stroke & control
3. Body seat and retainer in AISI SS 304/optional in SS 316
4. High Performance Diaphragm in reinforced nylon fabric EPDM/NBR-food grade. WRAS approved.
5. Resilient seat and O rings in EPDM/NBR
6. Spring – AISI SS 304/optional in SS 316
7. Bushing in Brass – CZ 122
8. Hex Bolt, Washer, Nut in A2 AISI SS:304, corrosion resistant.
9. Tubings, Plugs and connecting fittings in rigid AISI SS 304
10. Extra tapping plugs for SCADA modifications and adding other features/pressure gauge.
11. Strainer, Needle Valves for speed control, Ball Valves for isolation in AISI SS 304.
12. Low Pressure Pilot MoC SS 304 / NC Solenoid Valve for low static head.
13. Pressure Relief Pilot MoC SS 304
14. Fusion bonded epoxy coating with a minimum 250-micron coating. WRAS approved.
15. PN 10, 16, 25 pressure rating and flange drilling options.
16. Optional Accessories: Air Vent Valve, Emergency Valve opening barrel with ball valve. NC Solenoid.
17. Direct Membrane sealing Valve option also available upto 150 mm for optimizing the cost of Rural Water Supply Projects.

Surge Analysis & Recommendations

It is recommended to do a proper surge analysis and fix the location of this valve. In addition to this valve, Air release cum Vacuum Breaker/Surge suppressing Air Valves must be installed at the designated locations suggested in the surge analysis report. If the static head is less than 40 meters, then a NC Solenoid needs to be fitted in place of low surge pilot. In such case, a special surge anticipating panel with UPS system will be needed to actuate the valve during power failure.

Basic data required for sizing the Surge Anticipating Valve

Pipe diameter	Pipe MOC, internally lined/unlined
Rising main total design flow	Length of the pipeline
Pump Working head and Static head	Water quality - Pure/River/Lake with TDS
Rising main Pumping hours	Type of NRV and closing time