



M-040

M-040 METAIR COMBINATION AIR VALVE FOR WATER METER PROTECTION

Description

The new A.R.I M-040 combination air valve is designed to prevent problems caused by discontinuous or erratic water supply:

- Erroneous water metering.
- Damage to the spinning components of the water meter.
- Vibrations and water hammer in the pipeline and water meter.

Applicatins

The presence of air in a pressurized piping system may cause both metering inaccuracies and damage to the water meter. The METAIR M-040 is used to improve metering accuracy and meter protection.

Operation

When municipal water supply is discontinuous or erratic, water drains from higher sections of the distribution system, accumulating in lower sections. Air replaces the receding water, accumulating in these higher sections.

Upon renewal of the water supply, water refills the pipeline, displacing the air, forcing air through the water meter, spinning the impeller and gears very rapidly. Air flowing through the meter causes damage to its internal mechanism and inflates its readings.

The M-040 A.R.I combination air valve prevents air from passing through the water meter by releasing accumulated air from the pipeline to the atmosphere. As water arrives, it buoys the float, sealing the outlet to the atmosphere, while the check valve opens, allowing water passage to the water meter.

MAIN FEATURES

- Combination Air Valve with three functions of operation: Discharges air at high flow rates while the pipeline is filled with water. Admits air into the pipeline at high flow rates during system drainage and water column separation. Continuously releases entrapped air that accumulates in the pipeline when the system is under pressure.
- Working range: 0.2 - 10 bar / 3 -150 psi
- Connections: Threaded 1/2" BSPT or NPT
- Temp. : Up to 60° C ,140° f
- Materials: The air valve is made of corrosive resistant materials.
- Integral shut-off valve: An innovative built- in shut off valve in the valve cap enables the isolation of the air valve orifice with no interference with water flow in the pipe.
- Drainage System: Optional drainage outlet or screen outlet.
- Integral air trapping N.R. valve.

Advantages and Benefits

- Light and small.
- Dynamic Design allows high velocity air discharge, preventing premature closing.
- Dramatically reduces obstruction by debris, by it's self-cleaning mechanism.
- Enables relatively large automatic air release orifice.
- No maintenance.
- Spring loaded check valve opens at 0.25 bar water pressure in the direction of the water meter. The check valve assures effective air trapping and prevents water drainage from the water meter.
- Kinetic air discharge and intake and Automatic air release.
- Brass base for durability and continuous electrical conductivity.
- User-friendly integral orifice shutoff valve.

Valve Selection

- BSPT or NPT 1/2" thread.
- Option: One-Way - Air discharge only.

Insallation and Maintenance Instuctions

- The M-040 Metair will be installed in-line, upstream (before) the water meter, between the meter's isolating valve and the meter, and as close as possible to the water meter.
- The Metair must be installed with the check valve base horizontal and the air valve body vertically upright.
- The M-040 Metair is virtually maintenance free and is a long-life, one-use disposable air valve.
- In case of leakage through the air valve orifice, the Metair can be shut-off by means of the rotating cover shut-off mechanism.

Project (tender) Specifications

- The combination air valve, specially designed for water meter protection application, will discharge air from the pipeline at pipe filling, and will continue releasing accumulated air at system operation under pressure.
- The air valve will, also, provide vacuum protection by admitting air into the pipeline at pipe drainage, at pipe burst and at water column separation while preventing back flow through the water.
- The air valve will be an in-line air valve with an integral, built-in, mechanical air trapping system.
- The air valve will include an integral, built-in check valve, affecting only a minimal head loss.
- The air valve will include an integral, built in, orifice shut-off

