



AV21-F



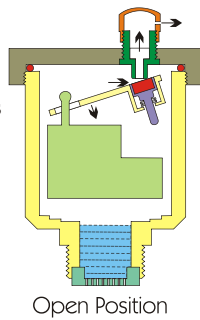
AV21-T
Transparent

TYPICAL APPLICATION :

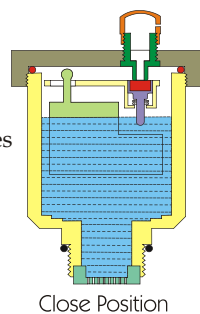
AV21 is used to continuously remove air that traps inside water pipeline. Effective air removal helps to reduce operating noise caused by trapped air in the system; helps to extend system component life and prevents pressure build up due to air and saves on energy.

OPERATION :

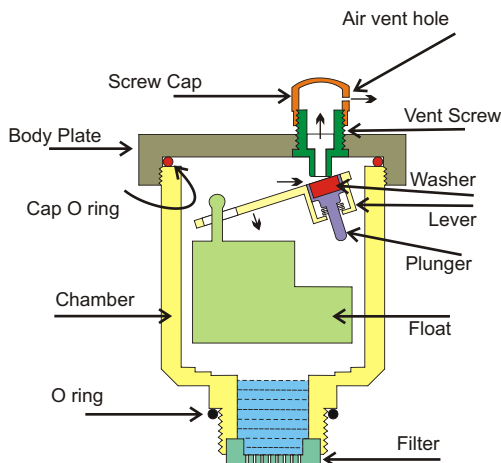
AV21's opening & closing is determined by the float movement (up-down). When there is air in the AV21's chamber, weight of float acts on the lever which is integral with the plunger, thus causing it to move down. In such situation the rubber seat is free and allows the air to be vented outside



When filling the system with water, the air which is entrapped is pushed outside via the Vent Screw. When water reaches the AV21's chamber the float moves up due to its buoyancy. Consequently the lever moves with plunger to press rubber seat against the Vent Screw, thus ensuring tight sealing of the system..



KNOW YOUR AV21



TECHNICAL DATA :

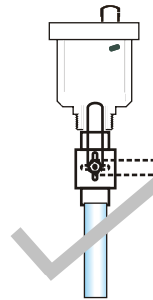
Medium	: Water & non aggressive liquids		
Max. Inlet Pressure	: 10 kg/cm ²		
End Connection	: Male BSP Threaded		
Size	: 15mm (1/2"), 20mm (3/4")		
Models	AV21-F	AV21-T	
Normal Operating Temp.	80°C	45°C	
Max. Occasional Temp.	90°C	60°C	
Material of Construction			
Chamber	Brass	Plastic	
Body Plate	Brass	Brass	
Float & Internals	: Plastic / S.S. / Brass / Rubber		
Width - W (in mm)	46	53	
Height - H (in mm)	66	66	

INSTALLATION :

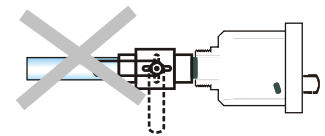
1.) The installation of the AV21 is important for its proper operation. AV21 must be installed at:

- The system high points in the vertical position with the inlet down.
- At all other points where there is risk of air building up.

CAUTION: - INSTALL AV21 IN VERTICAL LINE ONLY WITH SCREW CAP FACING UP. AV21 WILL NOT OPERATE IN ANY OTHER POSITION.

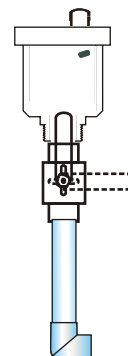


Correct

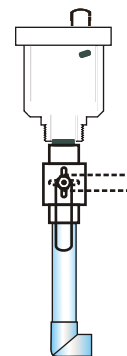


Incorrect

2.) Though Air Vent valves can be installed on pipe directly it is ideal to provide a Ball Valve before it for ease of servicing (Use O-ring or Teflon tape on threads for sealing). The AV21 can be threaded into Ball Valve directly. It is preferable that Ball Valve handle is facing downwards (not upwards) when it is in open position. Otherwise the AV21's chamber may sometimes block the free movement of handle.



Not Ideal



Ideal

User's Guide for the AV21-F & AV21-T

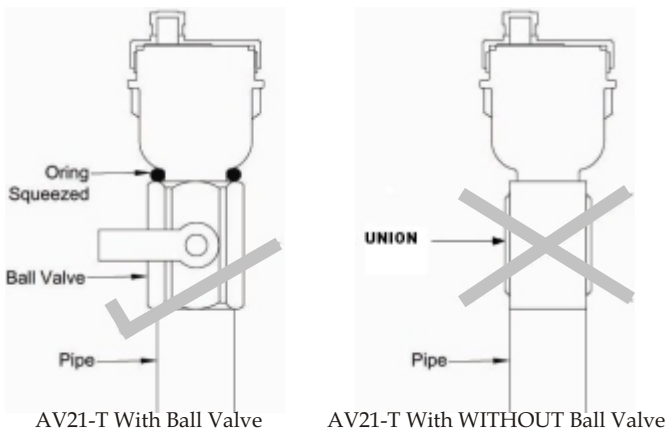
3.) After installation, in order to allow perfect air venting, unscrew the Protective Screw Cap (Black) by at least two turns. (It is to be tightened only as an emergency measure to stop leakage of water in case of malfunction.)

CAUTION: - DO NOT REMOVE SCREW CAP AS IT PROTECTS THE VALVE OPENING FROM EXTERNAL; DUST & BIRD DROPPINGS.

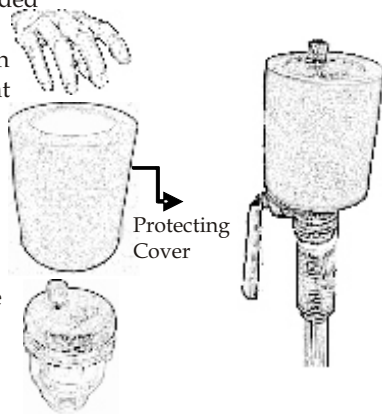
SPECIAL CARE TO BE TAKEN FOR AV21-T MODEL :

4.) AV21-T should not to be fitted directly on pipe. It must be fitted with **Ball Valve only**. The AV 21T should be **hand tightened** only on to the Ball Valve till O-ring provided at bottom side (above threads) is compressed to give leak-free seal. **AV21-T should not be tightened with spanner.**

CAUTION : DO NOT APPLY TEFLON, THREAD SEALANT OR ANY PIPE COMPOUND/ CHEMICALS AT THREADING OF AV21-T FOR INSTALLATION.



5.) Protecting Cover provided should be placed on AV21-T from top as shown in fig. This is to ensure that moss/algae do not grow on the transparent body due to sunlight.



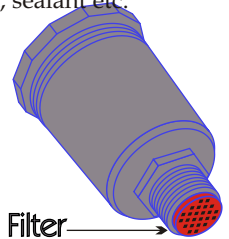
6.) Protect AV21-T from paint, thread sealing paste to retain its transparency.

TROUBLESHOOTING :

A) It seems that air is not escaping out.

In case of AV21-T (Transparent) it is easy to see if Air Vent is working. If water is seen in the chamber it means Air is not there. However if there is no water level in it OR if water level cannot be checked as in case of non-transparent model AV21-F then:-

- 1) Ensure the AV21 is in vertical position with Screw Cap facing to sky.
- 2) Ensure that Ball valve/s installed in the line before AV21 is / are in open position.
- 3) Ensure that Screw Cap is not fully tightened and that hole on side of Screw Cap is not blocked by paint, sealant etc.
- 4) If all above are OK then remove AV21 and check whether filter* (at base) is choked with any sand, dirt, mud etc. If so, clean filter with running water & reinstall AV21. While removing and reinstalling the AV21, ensure that O ring (for AV21-T) or teflon tape (for AV21-F) is used properly for sealing on thread.



5) If problem still persists then open the AV21 and check the internals for any mud, fine sand etc. especially near washer and ensure that no dirt is blocked inside the hole on Vent Screw. Clean it by inserting a small wire through the hole without damaging the washer (the end of a 'U' clip used for paper is ideal for this).

6) If all above is OK, ensure that design of piping especially w.r.t. to positioning of Air Vent is correct. Air Vent should be provided where air is likely to flow and accumulate - Usually the terminal points of pipe on upper side. Remember that AV21 does not suck the air out. It only facilitates discharge of air which collects in it.

B) Water is leaking from the top. i.e. Screw Cap.

- 1) Check points A1, A2, A4, A5 as explained before.
- 2) Check if washer or other internals have been damaged due to scales or wear and tear. If so, the AV21 needs to be replaced with a new one.
- 3) Until the valve is repaired/serviced, tighten the black colored Screw Cap fully to stop water.

CAUTION : THIS IS ONLY AN EMERGENCY MEASURE. ONCE THE SCREW CAP IS TIGHTENED IT ALSO MEANS THAT AIR WILL NOT BE ALLOWED TO VENT OUT.