

DRIPLINE COMPONENTS

AIR VENTS OVERVIEW

AIR VENTS ARE USED TO CONTROL THE AIR IN IRRIGATION SYSTEMS FOR PROPER WATERING AND ACCURATE MEASUREMENT FOR FLOW AND WATER METERS

Controlling the air in irrigation systems controls the water flow and the most efficient way to control air is by the proper use of air vents. Both the presence of air and absence of air can cause problems and damage to irrigation systems. Netafim provides air vents to discharge and admit air as required.

Trapped air in pipes impedes water flow and can lower watering uniformity. It can also cause water hammer and damage to pipes and fittings. Air in pipes also produces inaccurate readings for water and flow meters. For reliable and accurate water measurement, flow meters require pipes to be full of water.

The absence of air in pipes can trigger contaminants such as mud and dirt to be drawn into the piping system.

Note: Netafim Techline® HCVXR and CV driplines have built-in check valves with an anti-siphon feature in each emitter that keeps the tubing charged with water. Therefore, air vents are not needed when installing Techline HCVXR and CV and a flow meter is not used. Air vents are also not needed for on-surface installations.

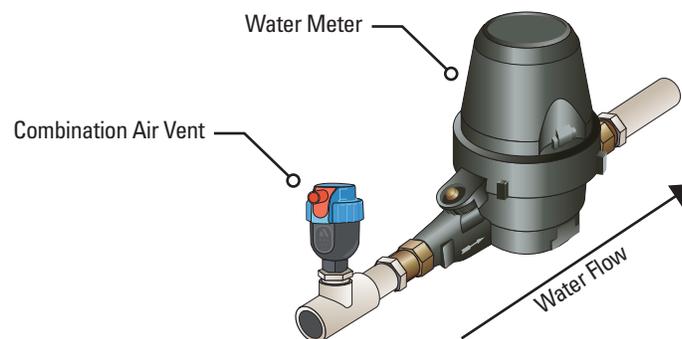
TWO TYPES OF AIR VENTS AVAILABLE:

Air/Vacuum Relief Air Vents

- Install in subsurface systems
- Not required for on-surface systems or when installing Techline HCVXR and CV dripline
- Discharges large volumes of air before a pipe is pressurized and admits large quantities of air when the pipe drains
- Also known as large orifice air vents, vacuum breakers, low pressure air vents, or air relief vents

Combination Air Vents

- Install before water meters or metering valves to ensure there is no air in the line for accurate flow readings
- Performs both functions as an air/vacuum relief vent and automatic air release vent
- Admits and discharges large volumes of air when needed, and releases small volumes of air continuously when the lines are pressurized
- Also known as double acting air vents



DRIPLINE COMPONENTS

AIR/VACUUM RELIEF AIR VENTS

APPLICATIONS

1/2" AIR VENTS

- Install in subsurface systems
- Not required when installing Techline® HCVXR and CV or on-surface installations

3/4", 1" AND 2" AIR VENTS

- Install in subsurface systems
- Not required when installing Techline HCVXR and CV or on-surface installations
- On sloping terrain to prevent collapsing of pipes caused by vacuum when pipe networks drain
- For air discharge during system start-up

SPECIFICATIONS

1/2" AIR VENTS

- Maximum operating pressure: 140 psi

3/4", 1" AND 2" AIR VENTS

- Maximum operating pressure: 150 psi
- Made of corrosion-resistant reinforced UV protected composite materials - no metal parts to rust or corrode, no need for spare parts

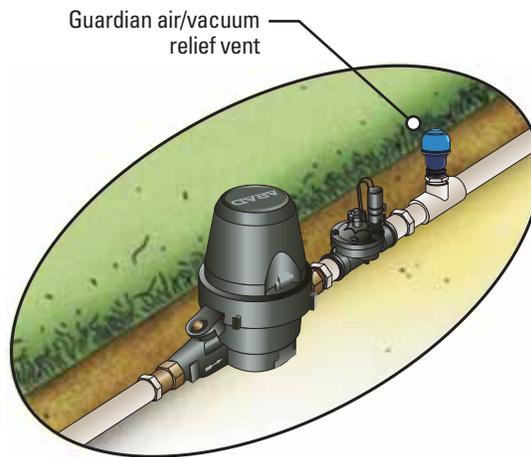


1/2" MPT
Model TLAVRV



GUARDIAN

3/4" MPT **1" MPT**
Model 65ARIA075 Model 65ARIA100



2" FPT
Model 65ARIA2

MPT = Male Pipe Thread
FPT = Female Pipe Thread

COMBINATION AIR VENTS

APPLICATIONS

- For discharge of large volumes of air, along mains and at the end of mainlines
- Place before water meters and automatic metering valves for accurate flow readings
- Place at high points in pipe network or upstream of manifolds

SPECIFICATIONS

MINI

- Continuous acting
- Maximum operating pressure: 150 psi
- Sizes: 1/2" and 3/4" MPT (2.4"w x 4.5"h)

COMBINATION

- Continuous acting
- Maximum operating pressure: 150 psi
- Size: 1" MPT (3.9"w x 5.5"h)

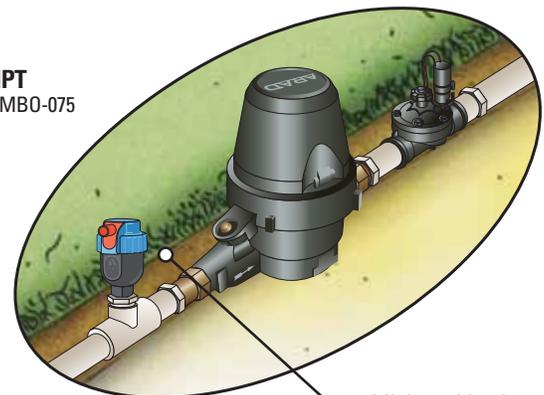


MINI

1/2" MPT **3/4" MPT**
Model AV-COMBO-050 Model AV-COMBO-075



COMBINATION
1" MPT
Model 65ARIB1-150



MPT = Male Pipe Thread

DRIPLINE COMPONENTS

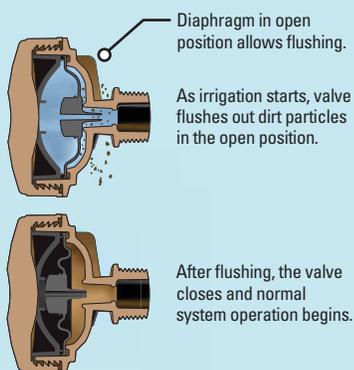
AUTOMATIC FLUSH VALVES

APPLICATIONS

- Drip irrigation systems
- Clean or dirty water

SPECIFICATIONS

- Not required with Techline® HCVXR and CV
- Flushing water volume: approximately 1 gallon per cycle
- Maximum zone flow rate per valve flush: 15 GPM
- Minimum pressure required: 1.5 psi
- Maximum operating pressure: 57 psi



FEATURES & BENEFITS

FLUSHING REDUCES SEDIMENT BUILD-UP

Eliminates clogging. Promotes long-term performance of the drip irrigation system.

AUTOMATIC CLEANING OPERATION

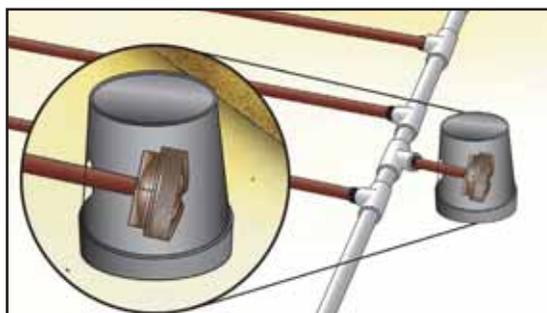
Eliminates periodic manual flushing.

UNIQUE DESIGN REACTS TO FLOW, NOT PRESSURE

Allows operation even at full line pressure.

DISASSEMBLES FOR WINTERIZATION 'BLOWOUT'

Protects your drip system.



AUTOMATIC FLUSH VALVE 1/2" MPT INLET
Model TLO50MFV-1



AUTOMATIC FLUSH VALVE INSERT INLET
Model TLFV-1

MPT = Male Pipe Thread

IN-LINE CHECK VALVE

APPLICATIONS

- Prevents backflow of water and drainage of the system into low areas
- Eliminates the need for system water refill at the beginning of the next irrigation cycle
- For irrigating slopes where draining of the headers and laterals is common
- Designed to hold back up to a 13.4' column of water
- Rule of thumb: Every 1' of water exerts 0.433 psi of pressure at the base of the column. As such, a 100' column of water exerts 43.3 psi at the base.

SPECIFICATIONS

- Flow rate: 0.9 - 4.4 GPM
- Closing pressure: 5.8 psi (13.4 feet column of water)
- Opening pressure: 10.2 psi

FEATURES & BENEFITS

MANUFACTURED FROM DURABLE MATERIALS

For reliable operation.

LARGE INLET OPENING

Reduces headloss.

WIDE FLOW RANGE

For use in a number of applications.



IN-LINE CHECK VALVE 1/2" MPT
Model TLCV050M1-B

FLOW RATE VS. PRESSURE LOSS

FLOW RATE (GPM) VS. PRESSURE LOSS (psi)								
0.5	1	1.5	2	2.5	3	3.5	4	4.5
-	0.22	0.54	0.96	1.55	2.25	2.99	4.04	-

MPT = Male Pipe Thread

DRIPLINE COMPONENTS

OPERATION/PRESSURE INDICATOR STAKES

TECHLINE® HCVXR AND CV MISTER

SPECIFICATIONS

- Fogging rate: less than 2.0 GPH, creating a moistened area approximately 2' outward from nozzle
- Check valve: opens at 22 psi, closes at 10 psi
- Fogging nozzle maximum flow rate: 2.0 GPH @ 60 psi
- Pre-assembled with fogging nozzle, check valve, anchoring stake, tubing and barb connector

FEATURES & BENEFITS

FOGGING NOZZLE EMITS A FINE MIST

Indicates system operation and minimum required system pressure.

CREATES A MOISTENED AREA SURROUNDING THE FOGGER

Showing zone operation.

OPERATION

Techline CV emitters open at 14.5 psi line pressure.
Techline HCVXR emitters open at 21.8 psi line pressure.
Indicator stake's check valve opens and activates the fogging nozzle at 22 psi line pressure.

TECHLINE HCVXR AND CV MISTER
Model 10-CV-01



TECHLINE® DL AND EZ OPERATION FLAG

SPECIFICATIONS

- Down flag position (closed): 4.5 psi or lower
- Halfway flag position (45°): 7 psi
- Upright flag position (90° or open): 10 psi or higher
- Pre-assembled with indicator flag, anchoring stake, tubing and barb connector

FEATURES & BENEFITS

FLAG RAISES TO INDICATE SYSTEM OPERATION

With just a minimum of 10 psi operating pressure.

OPERATION FLAG
Model 10-F-01



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