

# Sewage Air Release Valve - Series 400 & 450

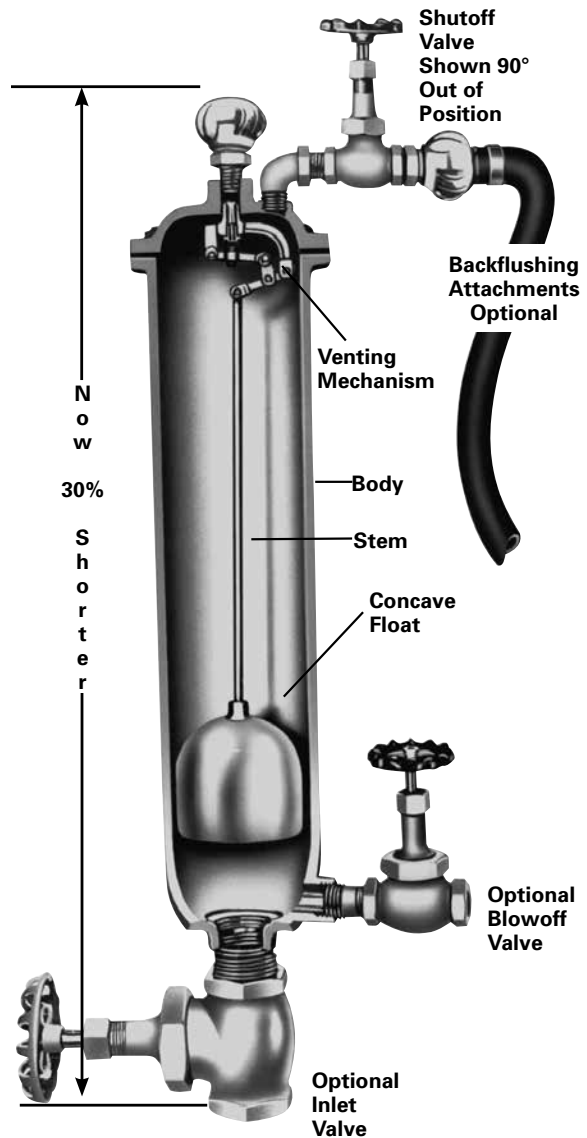
Series 400 and 450 APCO Sewage Air Release Valves are specially designed for use with sewage and waste media.

The concave float, stem and body keep the valve venting mechanism as free from contact with sewage as possible. The float hangs freely in the center of the valve body and responds instantaneously to the fall and rise of the sewage media due to the concave float.

## How It Works

When sewage enters the valve, it rises, forcing air out ahead of it. Then as sewage reaches the concave float, it raises the float and float stem instantly, due to the very sensitive impact zone. This fast action closes the venting mechanism, trapping the remaining air in the valve body. This entrapped air is initially at atmospheric pressure but it's compressed after the venting mechanism closes. The sewage continues rising in the valve, until air and sewage are at the same pressure. The sewage then stops rising, leaving the venting mechanism free from contamination.

Additional gases given off by the sewage rise into the valve body, displacing and lowering the sewage level until the float drops, opening the venting mechanism allowing gases to escape. Sewage again rises to occupy the space vacated by the escaped gas, lifts the float and closes the venting mechanism. This cycle is repeated frequently as air and gas collect in the valve without spillage or spurling, due to the sensitivity of the patented concave float.



# Dimensions and Specifications

## Series 400 & 450 Sewage Air Release Valves

Model	Size		Height		Major Dia.	Operating Pressure psi/kpa	Orifice Dia.*	Venting Capacity CFAM	Weight	
	Inlet	Outlet	Valve	w/Attach.					Plain	w/Attach.
400	2" NPT 50	.5" NPT 13	17.5" 445	23.5" 597	7.5" 191	0-50 0-345	.313" 8	55	41 19	55 25
	3" NPT 80					0-150 0-1034	.25 STD 6	90		
	4" NPT 100					0-300 0-2068	.156" 4	25		
450	2" NPT 50	1" NPT 25	20" 508	26.5" 673	9.5" 241	0-150 0-1034	.5" STD 13	350	85 39	118 54
	3" NPT 80					0-300 0-2068	.438" 11	520		
	4" NPT 100									

Inch      Pounds  
Millimeter      Kilograms

\*Orifice diameter is determined by pressure, not by size.

### Specify APCO With Confidence Sewage Air Release Valve Models 400 & 450

Sewage Air Release Valves shall have an elongated body and be designed to operate (open) while pressurized allowing entrained air in a sewage force main line, sewage pump or waste water system to escape through the air release orifice without spillage or spurting. After entrained air escapes through the air release orifice, the valve orifice shall be closed by a needle mounted on a compound lever mechanism, (energized by a concave float) and prevent media from escaping. The air release orifice will then remain closed until more air accumulates and the opening cycle repeats automatically. The internal compound lever mechanism shall be stainless steel to prevent corrosion. Optional: Inlet and blow off valves, quick disconnect couplings and minimum 5' (1.5m) hose for flushing. Engineer to specify.

The internal linkage shall be fitted with a stem, having a stainless steel concave float threaded onto the opposite end. The concave float shall hang inside the valve body, slightly above the inlet and maintain an air gap between the lever mechanism and the waste media. The valve body and float shall withstand 500 psi (3447kpa) shell test pressure. The valve inlet shall be 2", 3", 4" NPT (50, 80, 100mm) Model 400 or 450. Engineer to specify.

Materials of construction shall be certified the following ASTM specifications:

Body & Cover	Cast Iron	ASTM A126 GR.B
	Ductile Iron	ASTM A536 GR 65-45-12
Internal Linkage, Stem	Stainless Steel	Series T300
Patented Concave Float	Stainless Steel	ASTM A240 T304
Needle	Buna-N	Nitrile Rubber
Exterior Paint	Universal Metal Primer	FDA Approved for Potable Water