

Cold Environments

In winter, condensate inside the drain housing can freeze. If this happens, the ball float and housing can be damaged and the drain will not operate.

A heater is recommended in cold environments. Not using a heater in freezing temperatures will void the warranty.



110 V Heater Single Phase

220 V Heater Single Phase

Heater Installation

Install the heater in the lower side of the inlet, as shown below.

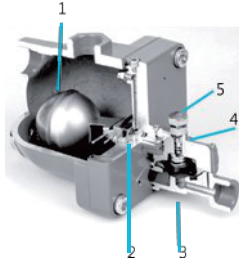


Warning:

After installation use gloves to protect your hands from hot temperature when handling the heater.

Service Kits

- 1 - Ball Float Kit
- 2 - Air Chamber Kit
- 3 - Diaphragm Kit
- 4 - Discharge Kit
- 5 - Test Button Kit
- O-Ring Kit (not pictured)



Warranty

Midwest Control warrants the ACT[®] Zero Air Loss Drain valve to be free from functional defects in material and workmanship for a period of 18 months from date of shipment or twelve months from date of installation, whichever occurs first. Within said period Midwest Control will repair or replace any part which is proven to be defective in either material or workmanship.

Troubleshooting

Problem	Cause	Solution
No Condensate Draining	No pressure	Check compressed air line for pressure
	No condensate present	Re-install and check balance line
	Air lines may be clogged	Clean and check lines
	Worn parts	Replace as needed
Leaks Continuously	Pilot line may be clogged	Clean pilot line
	Worn parts	Replace as needed

Technical Data

Model No	Inlet	Outlet	A	B	C	Wt.(lbs.)	Temp (F)
ACT-1500	1/2"	3/8"	7.55	3.22	4.03	2.43	32°F - 140°F
ACT-2000	3/4"	1/2"	8.73	4.80	4.96	4.45	32°F - 140°F

Model No	Drain Discharge Rate (Normal/Peak)	Max Hp
ACT-1500	101.4 oz/hr (Normal) / 507 oz/hr (Peak)	350 Hp
ACT-2000	202.8 oz/hr (Normal) / 1,014 oz/hr (Peak)	700 Hp

- Use the model number with the "C" suffix when ordering for oil free or oil less compressor applications.
- Use the model number with the "S" suffix when ordering the view window for the ACT-1500

Available Pressure Settings

Model No	Part Suffix	Pressure Setting
ACT-1500L/ACT-1500LC	L	11.6 - 43.5 psi
ACT-2000L/ACT-2000LC		
ACT-1500N/ACT-1500NC	N	43.5 - 145 psi
ACT-2000N/ACT-2000NC		
ACT-1500H/ACT-1500HC	H	145 - 230 psi
ACT-2000H/ACT-2000HC		
ACT-1500Q/ACT-1500QC	Q	87 - 175 psi
ACT-2000Q/ACT-2000QC		

ACT[®] Zero Air Loss Drain

For Compressed Air Systems

INSTALLATION GUIDE

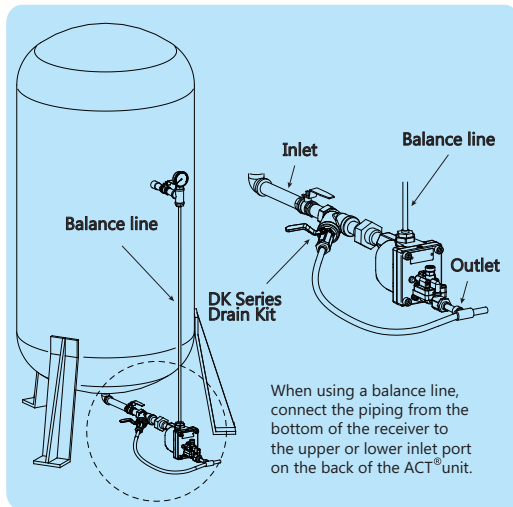
Please Read Prior to Installation

If you have any questions, please contact
Midwest Control at
1-800-304-5599

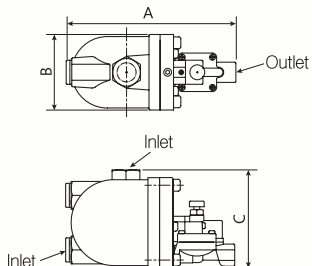


Recommended Installation with a Balance Line

Install a balance line (1/4" tubing or larger) to at least the center line of the vessel and down to the top inlet port of the drain. The balance line can be integrated into the gauge port with the use of a fitting. We recommend an isolation valve be installed on the top inlet port of the drain for maintenance ease. If the balance line is not installed properly the ACT® Zero Air Loss Drain will only work when the test button is manually activated.

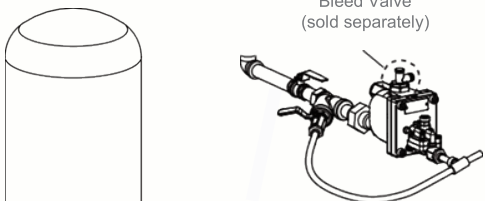


Diagram



Installation with a Bleed Valve

A bleed valve can be used when a balance line is not available. Install the bleed valve on the inlet port located on the top of the drain. Adjust the bleed valve until 3 to 5 bubbles per second are visible.



Note: When using a bleed valve, connect the piping from the bottom of the receiver to the lower port on the back of the ACT® drain. For outdoor installation where freezing may occur, install the piping from the bottom of the receiver to the top port on the back of the ACT® drain and the heater in the lower port.

Installation Accessories



Bleed Valves
ACT-1525-50 for 1/2" Inlet
ACT-1525-75 for 3/4" Inlet

It is highly recommended to install a Y-Strainer to prevent clogging and damage of the diaphragm, along with an isolation valve for ease of service.



The DK Drain Kit accessory includes all the components needed to prevent build-up of pipe scale and sludge from entering the drain and provides an easy solution for preventative maintenance.

DK-5038 for the ACT® -1500 Series
DK-7550 for the ACT® -2000 Series

Visit www.Midwest-Control.com for complete details

Vertical Inlet Applications

The ACT® Zero Air Loss Drain can be mounted directly under the condensation source, without a balance line providing the piping does not use elbows or pipe bends.

This configuration is typically used for filters, separators, and drip legs.



CAUTION:

Each condensate source should have a separate drain. Do not pipe condensation sources in parallel.

CAUTION:

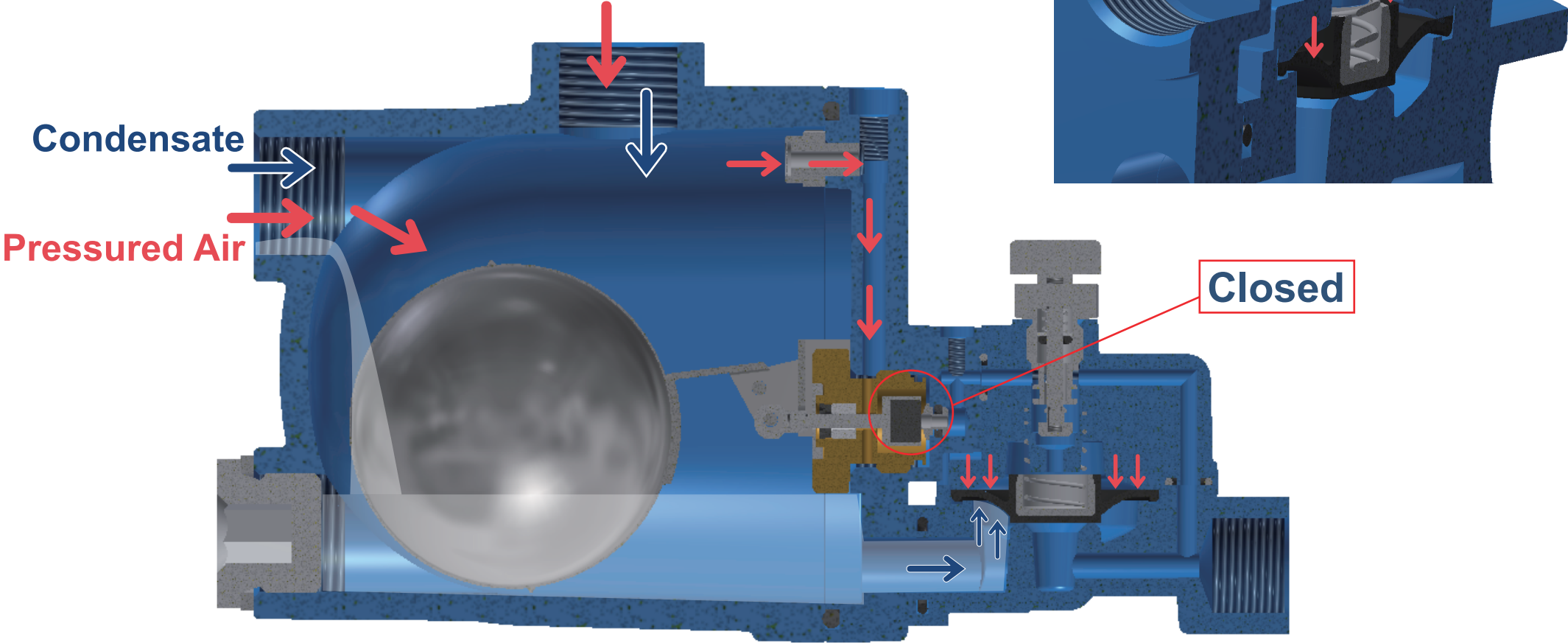
The ACT® Zero Air Loss Drain should always be installed in a horizontal position.

CAUTION:

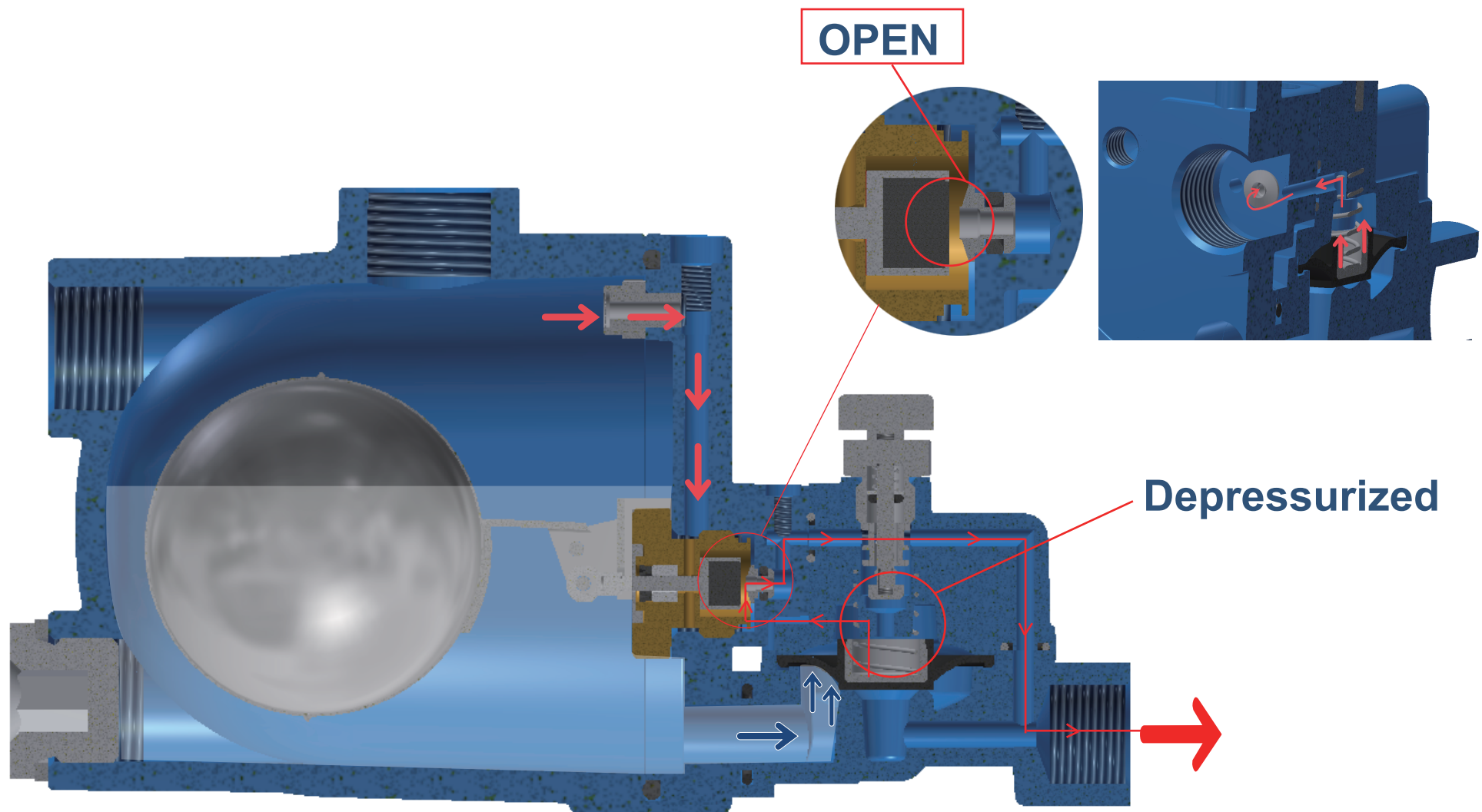
There is always pressure in the ACT® Drain reservoir. Prior to conducting maintenance, isolate the drain, then press the test button to release the pressure from the drain.



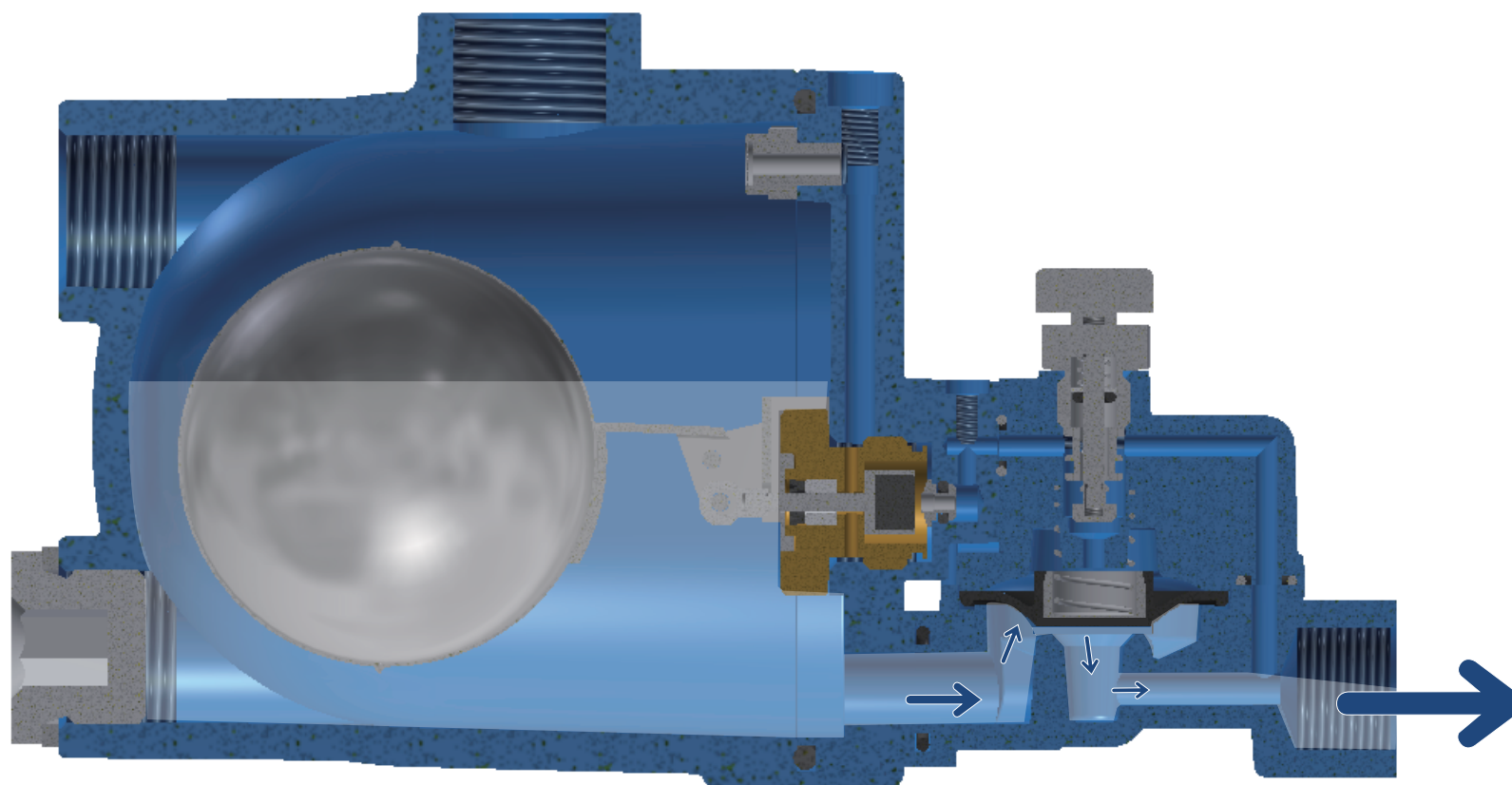
① Installed



② Condensate “IN”

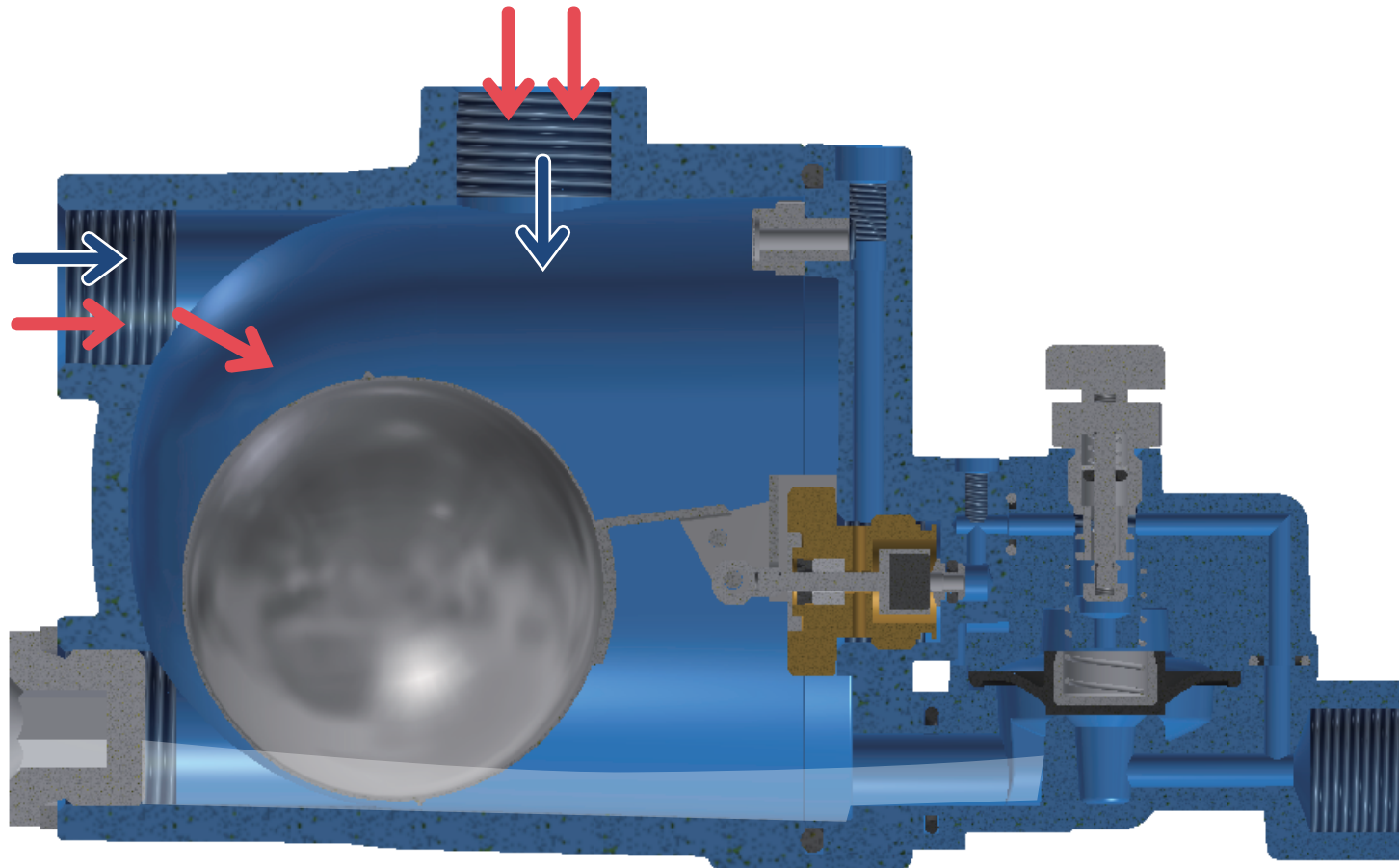


③ Open



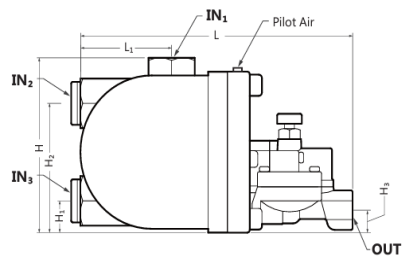
Condensate out

④ Closed

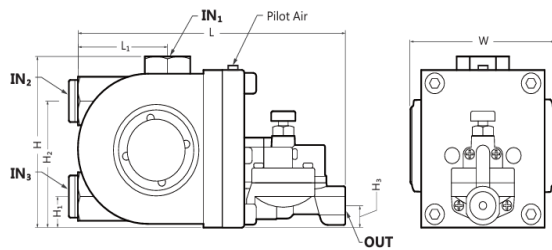


ACT Zero Loss Condensate Drains

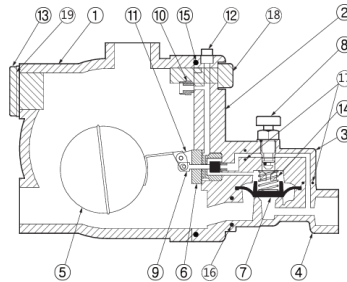
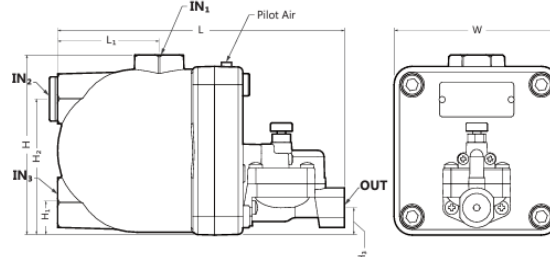
ACT-1500 SERIES



ACT-1500QS



ACT-2000 SERIES



No Electricity Required for Operation
Ideal for Portable and Hazardous Applications
Available in 4 Pressure Ranges
Maximum Pressure 230 psi
Maximum Temperature 140 F
Manual Test Button - Allows Drain to Be Tested at Any Time
Compact Design - Can Be Installed in Tight Areas
Patented Design

ACT-1500X Designed for Lubricated Compressor Applications Up to 350 Hp
*ACT-1500XC Designed for Oil-Less and Oil-Free Compressor Applications Up to 350 Hp
ACT-1500QS **w/ Window** Designed for Lubricated Compressor Applications Up to 350 Hp

ACT-2000X Designed for Lubricated Compressor Applications Up to 1000 Hp
*ACT-2000XC Designed for Oil-Less and Oil-Free Compressor Applications Up to 1000 H

Part No.	Inlet	Outlet	PSI	L (in)	L1 (in)	H (in)	H1 (in)	H2 (in)	H3 (in)	W (in)	Wt. (lbs)
ACT-1500L	1/2"	3/8"	11.6-43.5	6.97	2.36	4.17	0.74	3.07	0.55	3.22	2.42
ACT-1500N	1/2"	3/8"	43.5-145	6.97	2.36	4.17	0.74	3.07	0.55	3.22	2.42
ACT-1500Q	1/2"	3/8"	87-175	6.97	2.36	4.17	0.74	3.07	0.55	3.22	2.42
ACT-1500H	1/2"	3/8"	145-230	6.97	2.36	4.17	0.74	3.07	0.55	3.22	2.42
ACT-1500LC*	1/2"	3/8"	11.6-43.5	6.97	2.36	4.17	0.74	3.07	0.55	3.22	2.42
ACT-1500NC*	1/2"	3/8"	43.5-145	6.97	2.36	4.17	0.74	3.07	0.55	3.22	2.42
ACT-1500QC*	1/2"	3/8"	87-175	6.97	2.36	4.17	0.74	3.07	0.55	3.22	2.42
ACT-1500HC*	1/2"	3/8"	145-230	6.97	2.36	4.17	0.74	3.07	0.55	3.22	2.42
ACT-1500QS	1/2"	3/8"	87-175	6.97	2.36	4.17	0.74	3.07	0.55	3.74	2.64

Weights Are $\pm$ 3%

Part No.	Inlet	Outlet	PSI	L (in)	L1 (in)	H (in)	H1 (in)	H2 (in)	H3 (in)	W (in)	Wt. (lbs)
ACT-2000L	3/4"	1/2"	11.6-43.5	8.34	2.95	5.11	0.91	3.89	0.78	4.80	5.07
ACT-2000N	3/4"	1/2"	43.5-145	8.34	2.95	5.11	0.91	3.89	0.78	4.80	5.07
ACT-2000Q	3/4"	1/2"	87-175	8.34	2.95	5.11	0.91	3.89	0.78	4.80	5.07
ACT-2000H	3/4"	1/2"	145-230	8.34	2.95	5.11	0.91	3.89	0.78	4.80	5.07
ACT-2000LC*	3/4"	1/2"	11.6-43.5	8.34	2.95	5.11	0.91	3.89	0.78	4.80	5.07
ACT-2000NC*	3/4"	1/2"	43.5-145	8.34	2.95	5.11	0.91	3.89	0.78	4.80	5.07
ACT-2000QC*	3/4"	1/2"	87-175	8.34	2.95	5.11	0.91	3.89	0.78	4.80	5.07
ACT-2000HC*	3/4"	1/2"	145-230	8.34	2.95	5.11	0.91	3.89	0.78	4.80	5.07

Weights Are $\pm$ 3%

Part No.	Description	Material
1	Housing	AC4C-T6
2	Housing Plate	AC4C-T6
3	Upper Discharge	AC4C-T6
4	Lower Discharge	AC4C-T6
5	Ball-Float	SUS304
6	Air Chamber	Bronze
7	Diaphragm	NBR/Viton
8	Test Key	Bronze
9	Needle Valve	SUS304
10	Mesh Filter	Bronze
11	Air Chamber	SUS304
12	Pilot Air Bolt	SUS304
13	Housing Plug	Bronze
14	Diaphragm Spring	SUS304
15	Housing O-Ring	NBR
16	Discharge Body O-Ring	NBR
17	Upper Discharge O-Ring	NBR
18	Hosing Bolt	SUS304
19	Housing Plug Gasket	PE



WARNING: This product can expose you to chemicals, including lead, which is known to the State of California to cause cancer and reproductive harm. For more information go to www.P65Warnings.CA.gov

Drawing Date: 11/1/2024
Rev Level-Date:

ACT Zero Air Loss Condensate Drains

Fully automatic. No timer to set. No electricity needed. As the condensate level builds the drain will automatically open and expel the water without losing valuable compressed air. Ideal for use on all compressed air components including air receivers, filters, dryers, separators and drip legs. Available in 2 sizes for air compressors up to 350 Hp and 1000 Hp.

- No Electricity Required for Operation
- Ideal for Portable and Hazardous Applications
- Available in 4 Pressure Ranges
- 5mm Orifice ACT-1500 Series
- 7mm Orifice on ACT-2000 Series
- Maximum Temperature: 140° F
- Manual Test Button
- Patented Design
- 1-Year Warranty



ACT1500/2000



ACT1500 (Lubricated) w/View Window

Pressure Range (psi)	Lubricated Air Compressors UP to 350 Hp 1/2" Inlet x 3/8" Outlet	Lubricated Air Compressors UP to 350 Hp 1/2" Inlet x 3/8" Outlet w/View Window	Oil-Less and Oil-Free Compressors UP to 350 Hp 1/2" Inlet x 3/8" Outlet	Lubricated Air Compressors Up to 1000 Hp 3/4" Inlet x 1/2" Outlet	Oil-Less and Oil-Free Compressors Up to 1000 Hp 3/4" Inlet x 1/2" Outlet
	Part No.	Part No.	Part No.	Part No.	Part No.
11.6 - 43.5	ACT-1500L	ACT-1500LS	ACT-1500LC	ACT-2000L	ACT-2000LC
43.5 - 145	ACT-1500N	ACT-1500NS	ACT-1500NC	ACT-2000N	ACT-2000NC
87 - 175	ACT-1500Q	ACT-1500QS	ACT-1500QC	ACT-2000Q	ACT-2000QC
145 - 230	ACT-1500H	ACT-1500HS	ACT-1500HC	ACT-2000H	ACT-2000HC

Drain Accessories



Y-Strainer Kit

Heavy-duty, brass ball valve strainer w/50 mesh stainless steel screen with isolation ball valve

Connection Size	Part No.
1/2"	DKI-ST15
3/4"	DKI-ST20



Self Cleaning Y-Strainer Kit for the ACT and Other Drains

Includes inlet and outlet shut off valves, Y-Strainer hose and misc. fittings

Connection Size	Part No.
1/2" x 3/8"	DK-5038
1/2" x 1/2"	DK-5050
3/4" x 1/2"	DK-7550



Bleed Valves for ACT Drains

Use in place of a balance line

Connection Size	Part No.
1/2" MPT	ACT-1525-50
3/4" MPT	ACT-1525-75



Heaters with Automatic Sensor for ACT Drains

A heater is recommended when the ambient temperature is below 32° F

Voltage	Part No.
110V-60-1	ACT-H110V
220V-60-1	ACT-H220V

Notes

1. The use of a ball valve strainer is required on the ACT drains for removal of debris, pipe scale and sludge, allowing the drain to operate more reliably
2. The ACT-1500 series has a 1/2" FPT inlet and a 3/8" FPT outlet
3. The ACT-2000 series has a 3/4" FPT inlet and a 1/2" FPT outlet
4. ACT-1500QS has a Sight Glass View Window