BREATHERS & DRYERS: TANK VENT DRYERS

The first line of defense against lubricant contamination & fluid storage protection

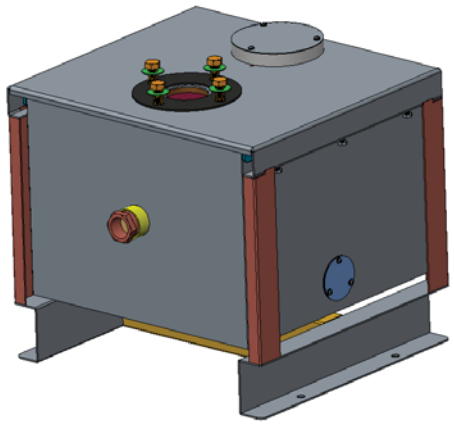
Many fluids, chemicals, fuels, lubricants, semi-solids, and powders are seriously affected by moisture and other contaminants. Many of these materials which are affected are often stored in tanks or reservoirs which are either located in the open and vented to atmosphere or are located in the process area.

Fluid contaminants, such as moisture and dirt, will be ingress into the tank whenever material is drawn out of the tank by operational demand, thermal breathing, or barometric pressure changes. Moisture in the form of water vapor is the prime source of contamination. It will cause simple dilution of acids, an increase in the corrosivity of oils and other fluids, fungal or biological growths, or the lowering of electical resistance of transformer oils and similar materials.

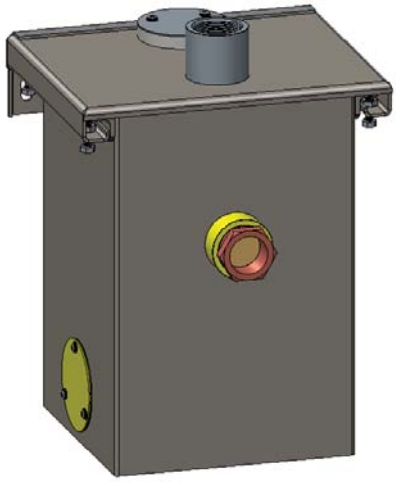
Many applications use vent pipes, filter caps, or turn down pipes to protect contaminants from entering their tank or reservoirs. These solutions will filter particulates but do not filter the #1 contaminant of fluids, water. To protect your storage tank or reservoir from water AND contaminants a tank vent dryer should be used.

Tank vent dryers serve as your first line of defense againt moisture contamination. Tank vent dryers can be remotely floor mounted or wall mounted and are connected to the air vent on a tank or reservoir. Once connected to a tank, incoming air is drawn through the tank vent dryer where it flows through our high efficiency ZEOLITE desiccant and moisture is adsorbed down to less than 100 PPM moisture.

Once the tank becomes fully saturated, the visual sight window on our TVDs will give a visual color indication that it should be replaced. Once the desiccant is replaced the unit is ready to back into operation.



Model 730 - Floor Mounted Style

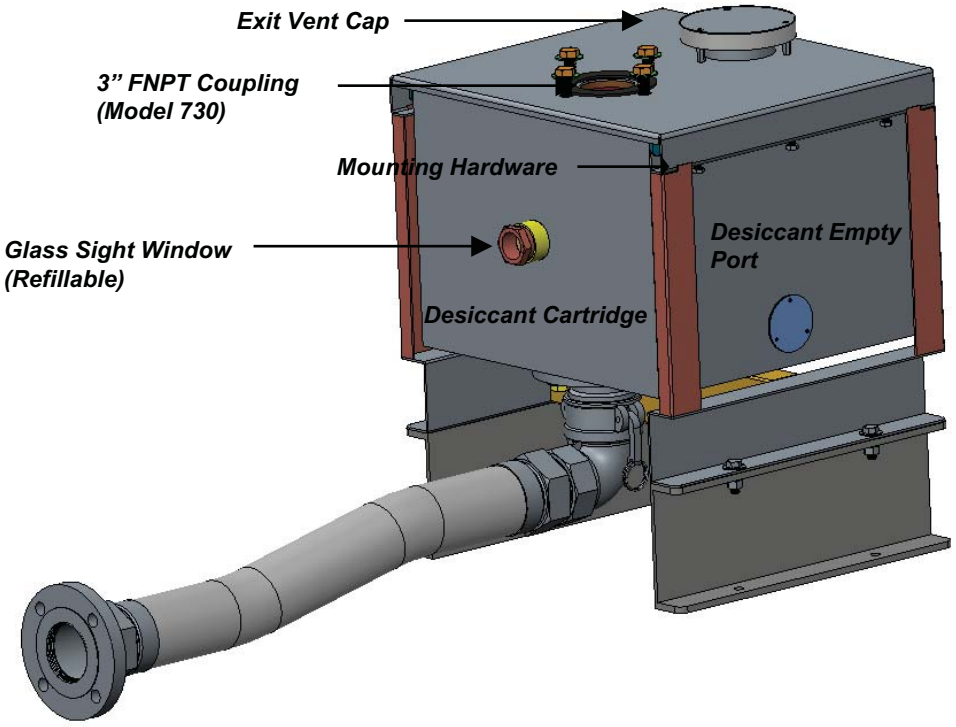


Model 715 - Wall Mounted Style

QUICK FACT:
500 PPM (Parts Per Million) = 0.05% = 50cc of water in 1,000 liters of fluid

BREATHERS & DRYERS: TANK VENT DRYERS

Tank Vent Dryers



Common Tank Contents

- Sulfuric Acid
- Acetic Acid
- Lube Oils
- Polyalcohols
- Biodiesel
- Transformer Oils
- Glycerol
- Polyethers

Advantages

- Eliminate corrosion
- Eliminate fungal or biological activity
- Protect against high humidity and water condensation
- Protect against fluid contamination, dilution, and sedimentation
- Maintain ISO cleanliness codes
- Extend life of hydraulic, lubrication, and process fluids
- Extend MTBF and reduce O&M costs

Features & Performance

1. ZEOLITE adsorbent

- ZEOLITE adsorbent provides up to 28% by weight adsorption and provides clean dry air less than 100 PPM. ZEOLITE also maintains performance in high temperature environments, unlike Silica Gel.

2. Valved Controlled Airflow

- All tank vent dryers use a series of flapper valves to control the inflow and outflow of air. This maximizes the desiccant performance and prevents desiccant contamination during exhale from tanks or reservoirs.

3. Robust Stainless Steel Construction

- All Tank Vent Dryers are made of 316 stainless steel to withstand the elements and environment for decades. Viton O-Rings are also used for very harsh applications.

4. Color Indication

- When maximum adsorption is reached, the blue indicating ZEOLITE beads will turn from blue to beige, to indicate that a replacement is required.

5. Easy to install & use

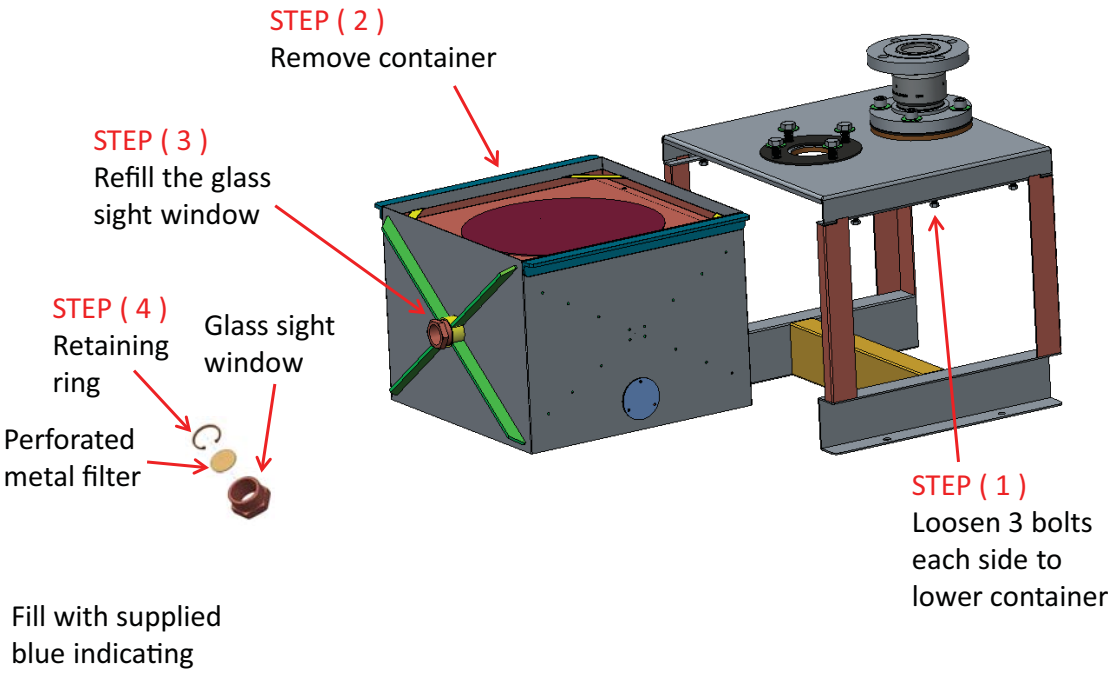
- Tank vent dryers are easy to install and can either be wall or floor mounted. Floor mounted models feature a desiccant tray or lever which allows for easy desiccant replacements in the field

Technical Info:

Model		710	715	730
Maximum filling or emptying rate	m^3/hr	28.9	62.9	250
	liter/min	480	1048	4163
	c.f.m.	17	37	147
	galls/min	206	230	916
Maximum fluid capacity related to desiccant content	m^3	55	125	500
	liters	55000	125000	500000
	ft^3	1975	4431	17658
	gallons	12297	27593	109972
Replacement desiccant data	wt. of charge	10.75 kg	20 kg	67 kg
	wt. of desiccant	5.6 kg	12.5 kg	50 kg

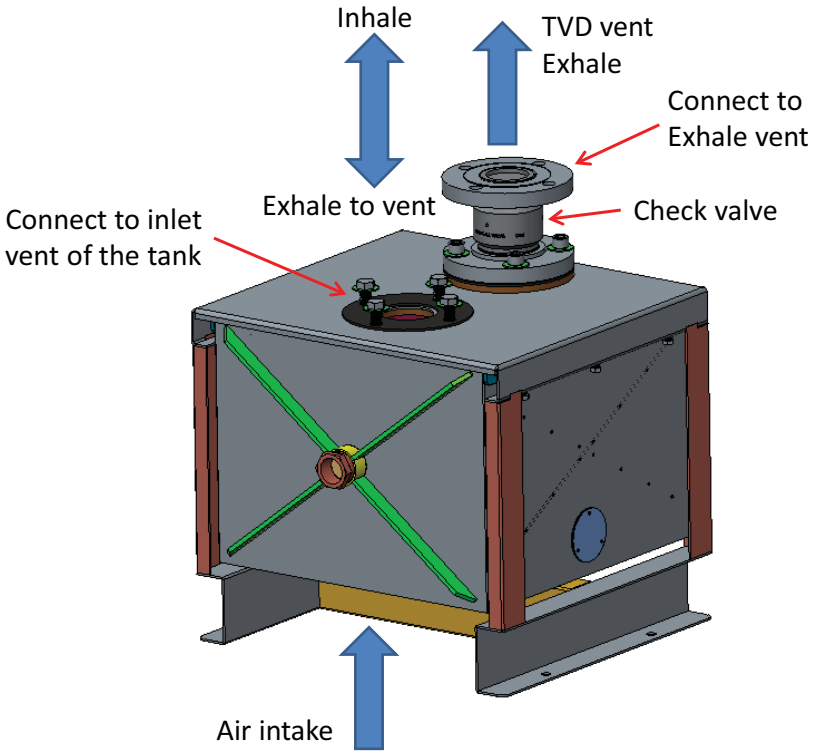
Maintenance Procedure

Model 730 TVD - 1DT74200-V1-MS-CV

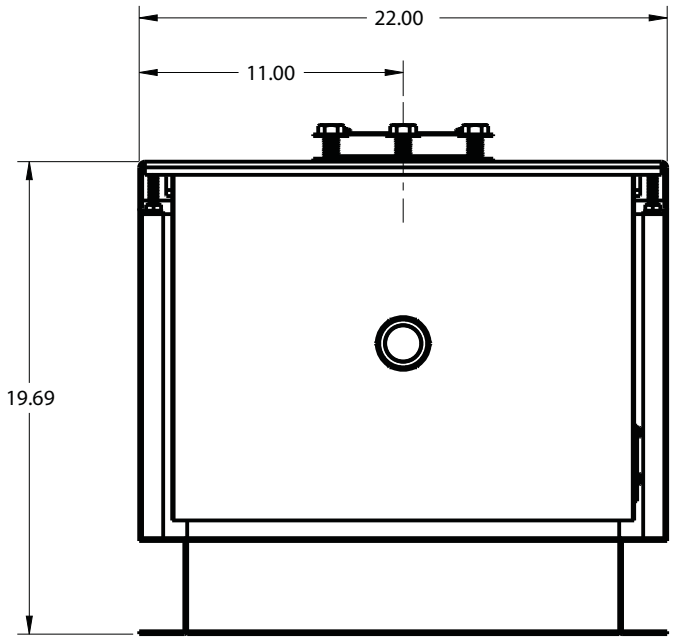


Installation Procedure

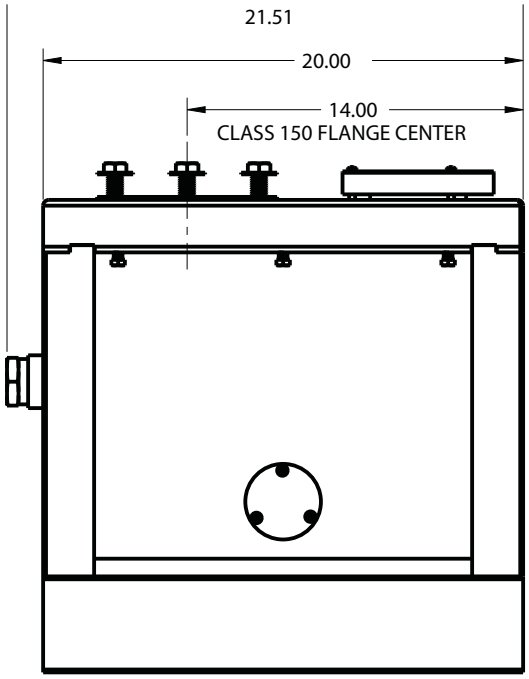
Model 730 TVD - 1DT74200-V1-MS-CV



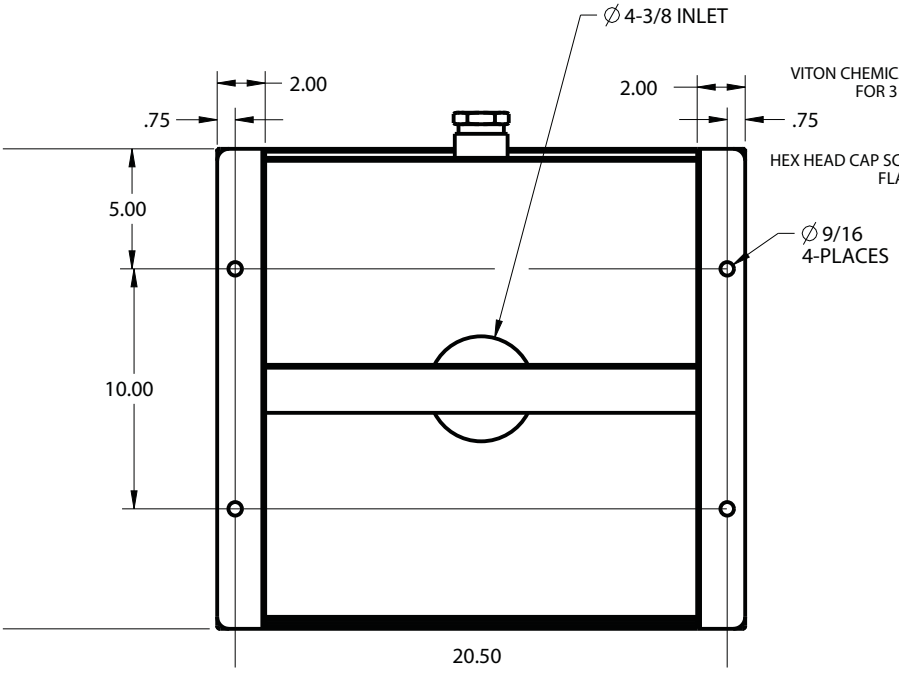
Dimensional Info - Model 730 Floor Mounted



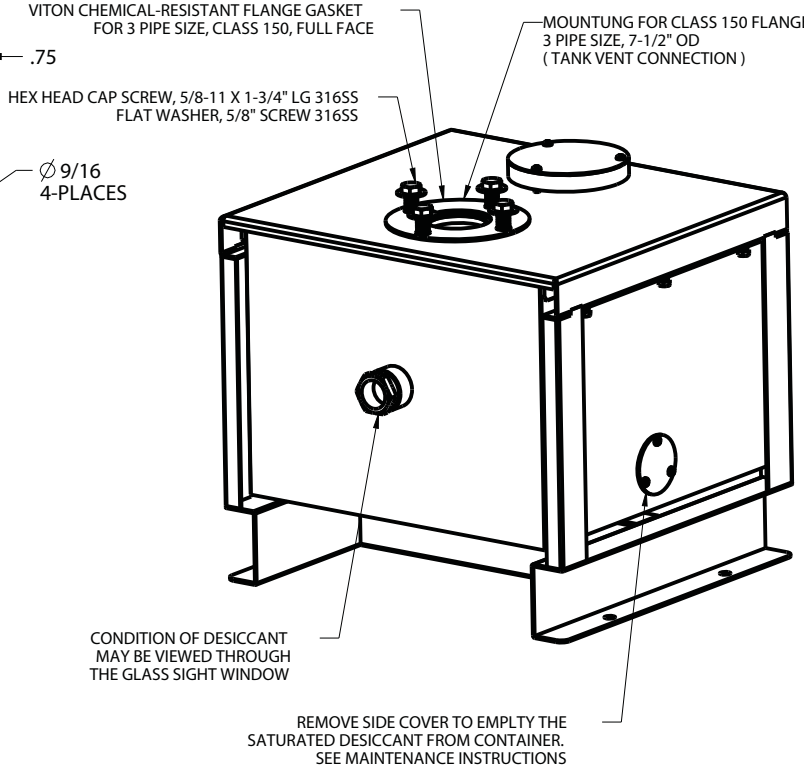
FRONT VIEW



SIDE VIEW



BOTTOM VIEW
MOUNTING HOLE LOCATION

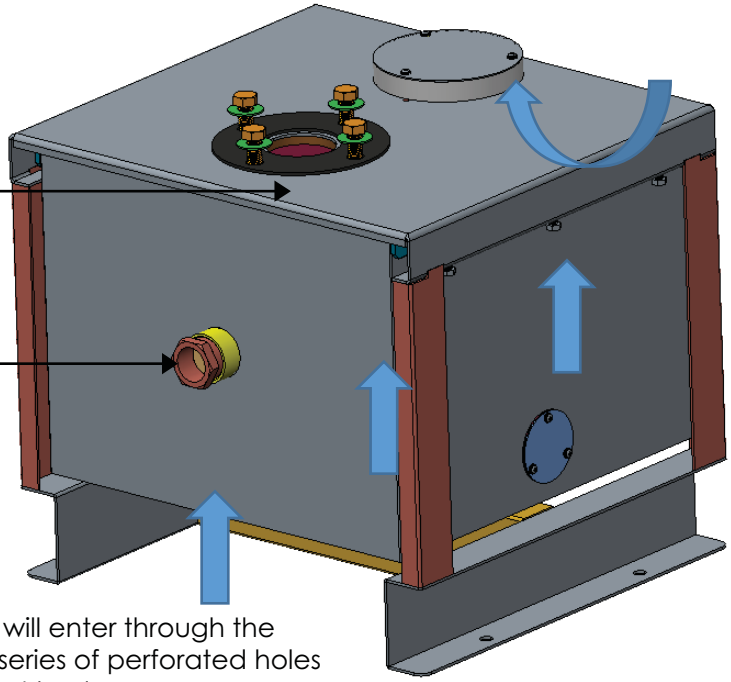


How do they work?

Inhale Cycle - Model 730 TVD - 1DT74220

3a. The now DRY air will lift a viton flapper valve and flow up and out the tank vent pipe into the equipment being protected.

2b. A glass sight window provides visual indication to the user when the desiccant needs to be replaced. The desiccant will change from blue to beige as it becomes saturated with water.



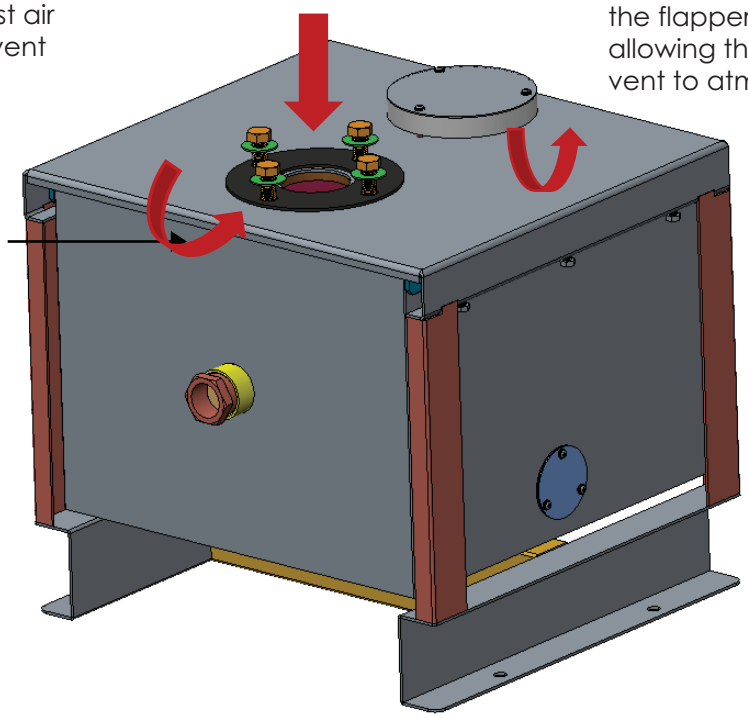
2a. As the air flows up through the desiccant the moisture is adsorbed.

1a. Wet atmospheric air will enter through the base of the dryer thru a series of perforated holes and flow up the desiccant bed

Exhale Cycle - Model 730 TVD - 1DT74600

1a. During exhale, exhaust air will flow down thetank's vent pipe.

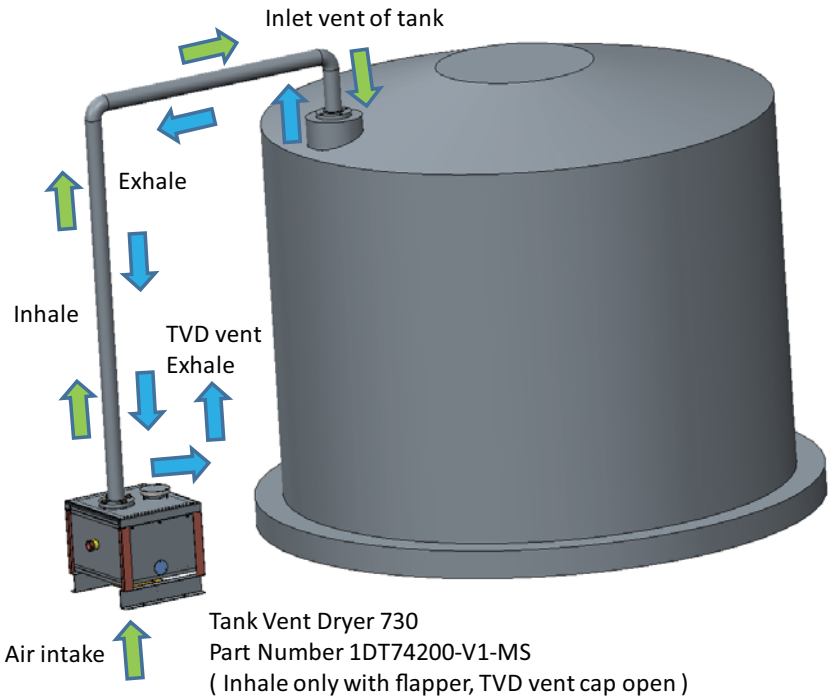
2a. As the exhaust air enters the dryer, the air will hit a viton flapper valve, preventing the air from flowing back into the desiccant bed, thus preserving the life of the desiccant.



3a. Lastly, the exhaust air will then lift the flapper valveunder the vent cap, allowing the air to exit and vent to atmosphere.

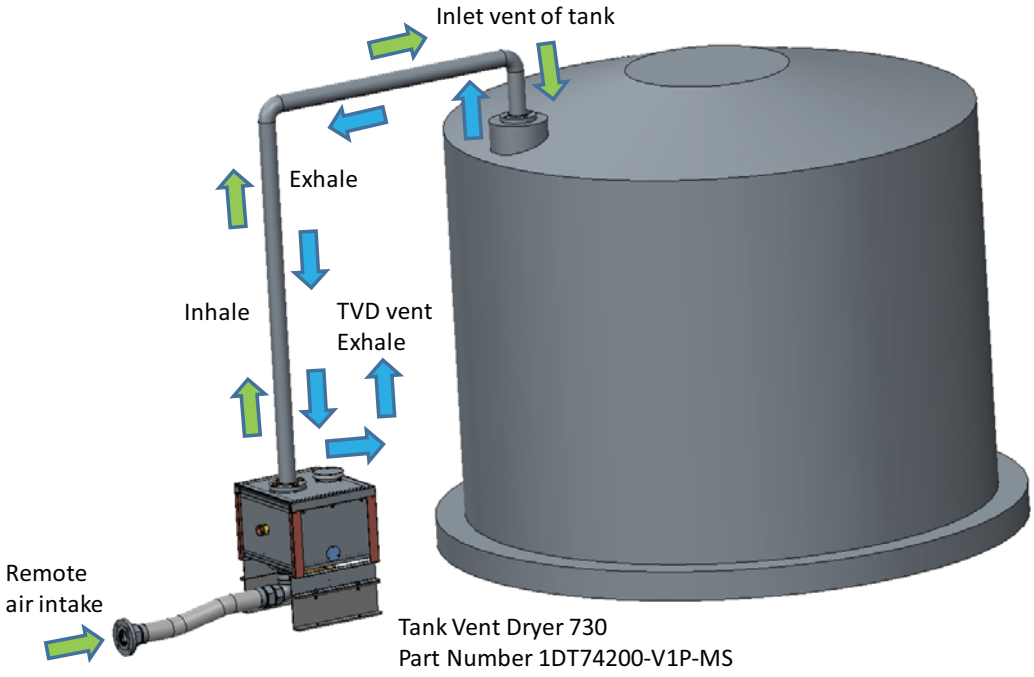
How do they work?

Version 1 - Model 730 - PN: 1DT74200-V1-MS



Tank Vent Dryer 730
Part Number 1DT74200-V1-MS
(Inhale only with flapper, TVD vent cap open)

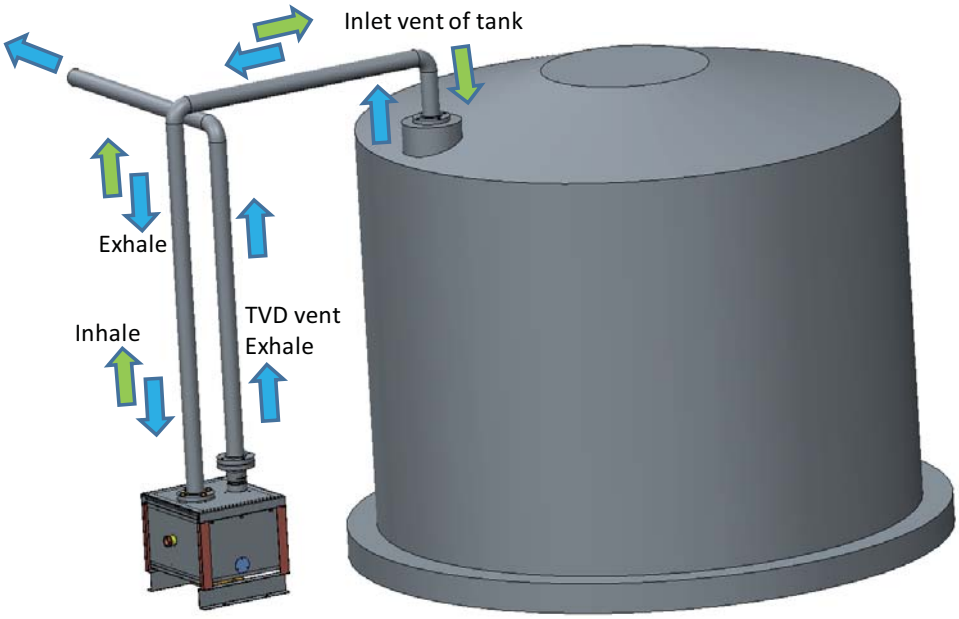
Version 1 w/ plumbing - Model 730 - PN: 1DT74200-V1P-MS



Tank Vent Dryer 730
Part Number 1DT74200-V1P-MS
(Inhale only with flapper, TVD vent cap open, with plumbing)

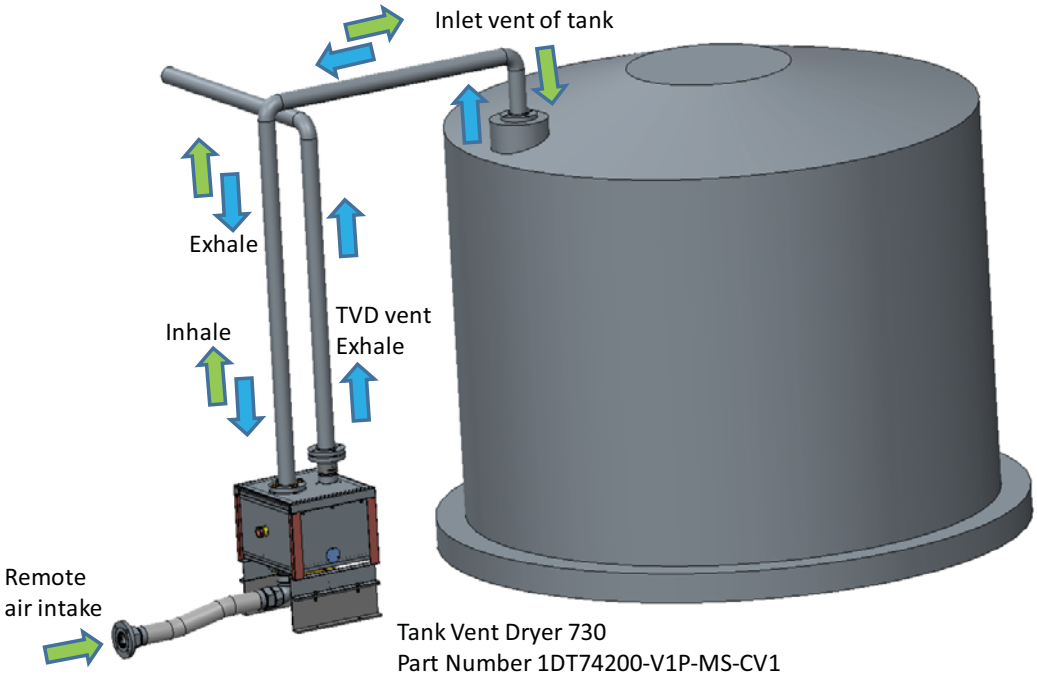
How do they work?

Version 1 w/ check valve - Model 730 - PN: 1DT74200-V1-MS-CV1



Tank Vent Dryer 730
Part Number 1DT74200-V1-MS-CV1
(Inhale only with flapper, vent check valve)

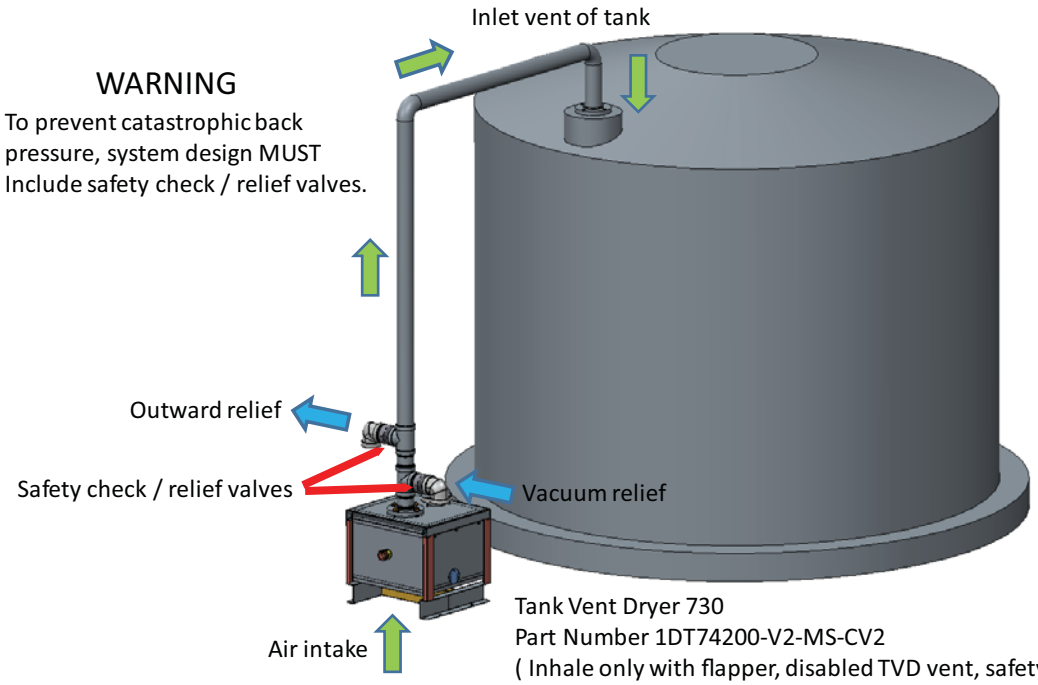
Version 1 w/ plumbing & check valve - Model 730 - PN: 1DT74200-V1P-MS-CV1



Tank Vent Dryer 730
Part Number 1DT74200-V1P-MS-CV1
(Inhale only with flapper, vent check valve, with plumbing)

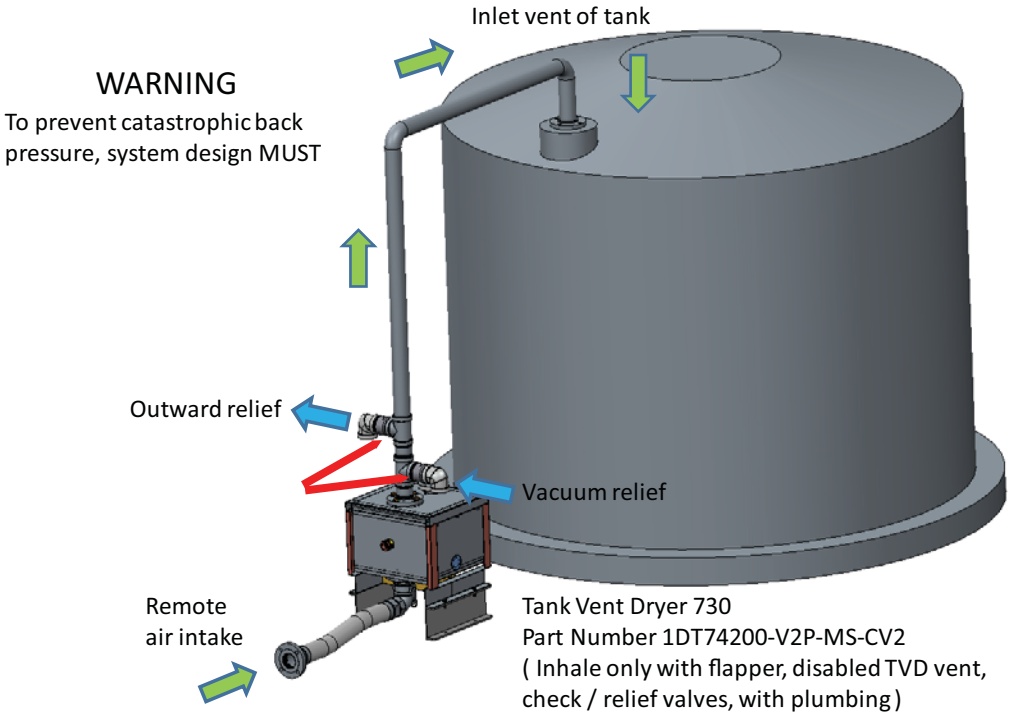
How do they work?

Version 2 (inhale Only) w/ safety & check valves, disabled vent - Model 730 - PN: 1DT74200-V2-MS-CV2



Tank Vent Dryer 730
Part Number 1DT74200-V2-MS-CV2
(Inhale only with flapper, disabled TVD vent, safety check / relief valves)

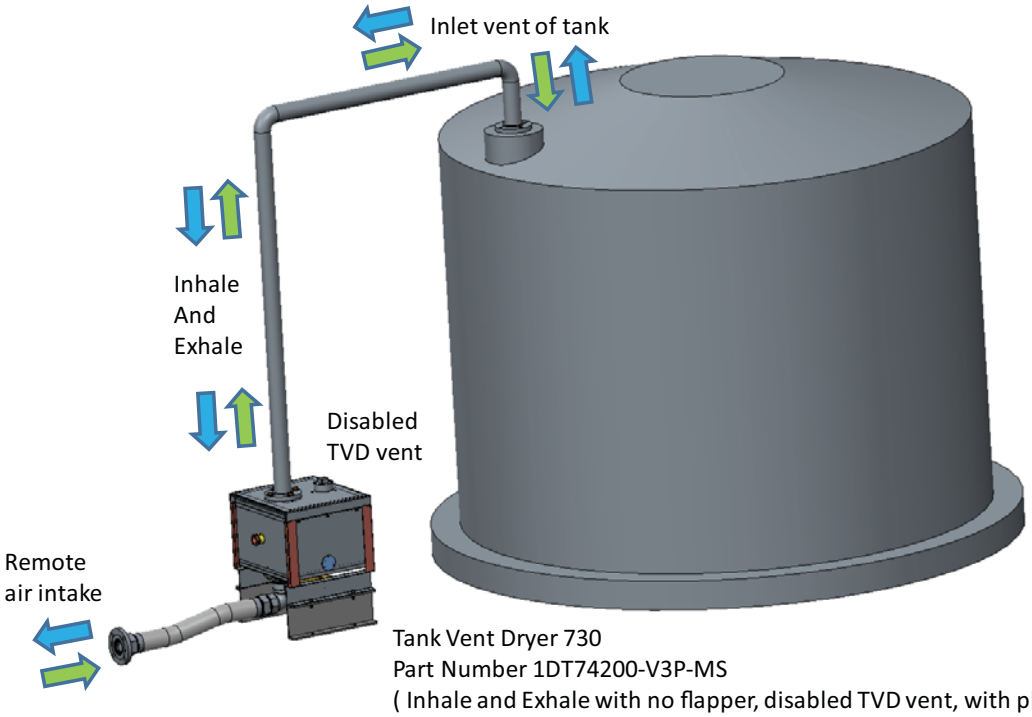
Version 2 (Inhale Only) w/ plumbing, safety & relief valve, disabled vent - Model 730 - PN: 1DT74200-V2P-MS-CV2



Tank Vent Dryer 730
Part Number 1DT74200-V2P-MS-CV2
(Inhale only with flapper, disabled TVD vent, check / relief valves, with plumbing)

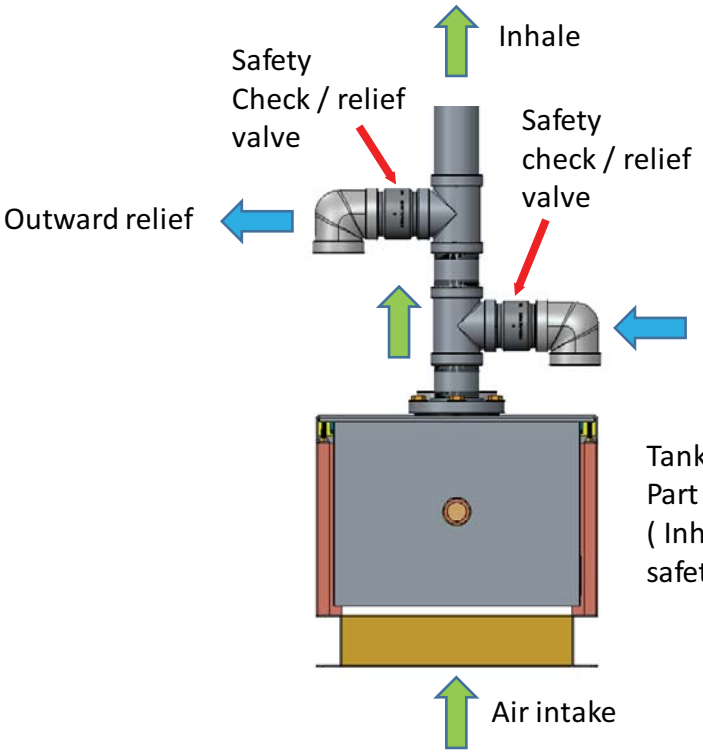
How do they work?

Version 3 (inhale & Exhale) w/ plumbing, disabled vent - Model 730 - PN: 1DT74200-V3P-MS



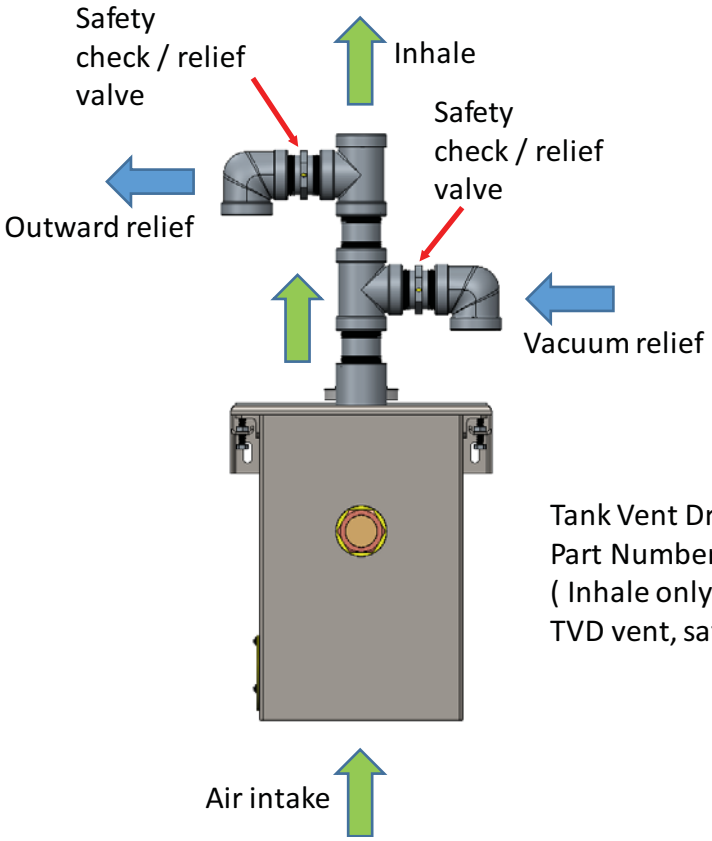
Tank Vent Dryer 730
Part Number 1DT74200-V3P-MS
(Inhale and Exhale with no flapper, disabled TVD vent, with plumbing)

Optional safety & check valves



WARNING - Safety check/relief valves MUST be installed in flow orientation shown

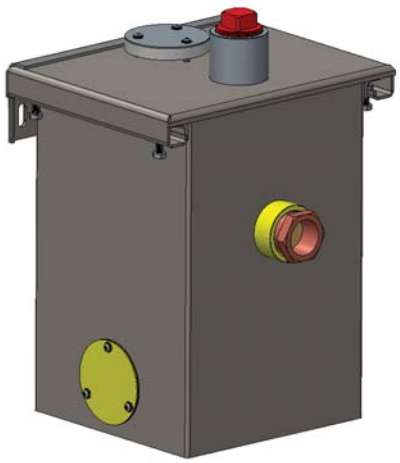
Tank Vent Dryer 730
Part Number 1DT74200-V2-MS-CV2
(Inhale only with flapper, disabled TVD vent, safety check / relief valves).



Tank Vent Dryer 715
Part Number 1DT74600-V2-MS-CV1
(Inhale only with flapper, disabled TVD vent, safety check / relief valves)

Tank Vent Dryer Ordering - Part Number Selector

Tank Vent Dryer - Model 715



Example Part Number: 1DT74200-V1-MS-CV

Part Number	Version	Media Selection	Check Valve
1DT74200	-V1	-MS	-CV

Choose part number

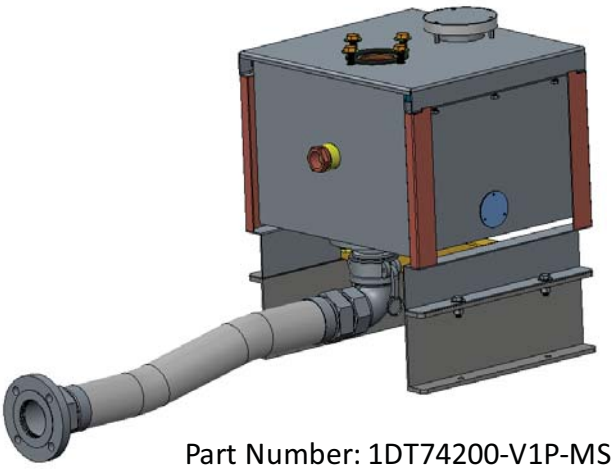
Part Number	Product Description
1DT74200	Model 730 Tank Vent Dryer, Floor Mounted, Refillable
1DT74600	Model 715 Tank Vent Dryer, Wall Mounted, Refillable

Choose version number

Version	Description
-V1	Inhale only w/ flapper, TVD vent cap open
-V1P	Inhale only w/ flapper, TVD vent cap open, w/ plumbing
-V2	Inhale only w/ flapper, disabled TVD vent
-V2P	Inhale only w/ flapper, disabled TVD vent, w/ plumbing
-V3	Inhale & exhale only w/o flapper, disabled TVD vent, w/ plumbing
-V4	Exhale w/o flapper, w/ check valve, disabled TVD vent
-V4P	Exhale w/o flapper, w/ check valve, disabled TVD vent, w/ plumbing

-V2 only to be used in parallel system 1DT75500. In order to prevent catastrophic back pressure, system design MUST include safety check / relief valves.

Tank Vent Dryer - Model 730



Part Number: 1DT74200-V1P-MS

WARNING

-V2 and –V2P only to be used in parallel system 1DT75700 in order to prevent catastrophic back pressure, system design MUST include safety check/relief valves

Choose media selection

Media Selection	
-MS	Molecular Sieve
-AC	Activated Carbon

Choose valve selection

Valve Selection	
-CV1	Check Valve
-CV2	Safety Check/Relief Valve (2 Required)

MODEL — MEDIA SELECTION

PART NUMBER EXAMPLE: 1DT74200-V2-MS-CV1-CV2

TANK VENT DRYER SELECTION — VALVE OPTION