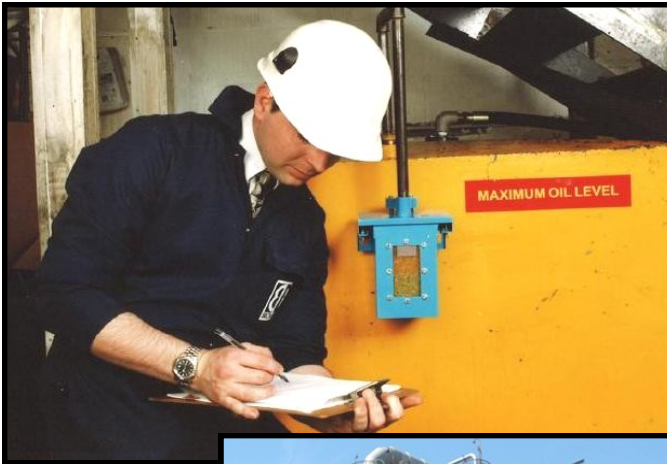


Tank Vent Dryers



Protection against:

- ◆ High humidity
- ◆ Water condensation
- ◆ Fluid contamination
- ◆ Sedimentation
- ◆ Viscosity Loss
- ◆ Product Dilution

Key Features

- Quick and easy to install
- Visual colour change indication
- IP 65 rating
- Available in mild or stainless steel
- ISO9001/2000 design approved
- Polycarbonate or glass sight window
- Easy ENVIROGEL replacement
- Floor and wall mounting
- Refillable
- ATEX Directive 94/9/EC approved



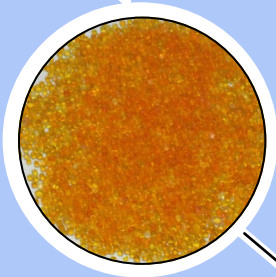
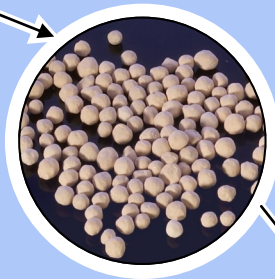
The range of BROWNELL Tank Vent Dryers

Adsorbents

Typical adsorbents used are:

Molecular Sieves

Silica Gel



- Up to 30% by weight of water adsorption
- Colour change when saturated
- High dust attrition resistance
- Can be reactivated for re-use by heating

Typical materials which can be readily protected:

- Acetic Acid
- Brake Fluid
- Glycerol
- Polyalcohols
- Polyethers
- Acid and Oil Vapours
- Sulphuric Acid
- Transformer Oils
- Heat Transfer Fluids
- Printing Inks

- Up to 20% by weight of water adsorption
- Very low dewpoints
- High adsorption efficiency at high temperatures
- Available with selective adsorbing ability

Tank Vent Dryers in operation

Many fluids, semi-solids and powders are seriously affected by moisture and other contaminants. Materials which are affected are stored in tanks which are either located in the open and vented to atmosphere or are located in the process area.

Fluid Contaminants

The ingress of these contaminants occurs whenever material is drawn from the tank by:

- Operational demand
- Thermal breathing
- Barometric pressure



Moisture, in the form of water vapour 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 activity in materials such as glycerol, or the lowering of electrical resistance of transformer oils and similar materials.

TECH TIP

ENVIROGEL adsorbs 15% of its own weight of water.
1kg of ENVIROGEL adsorbs 150g of water

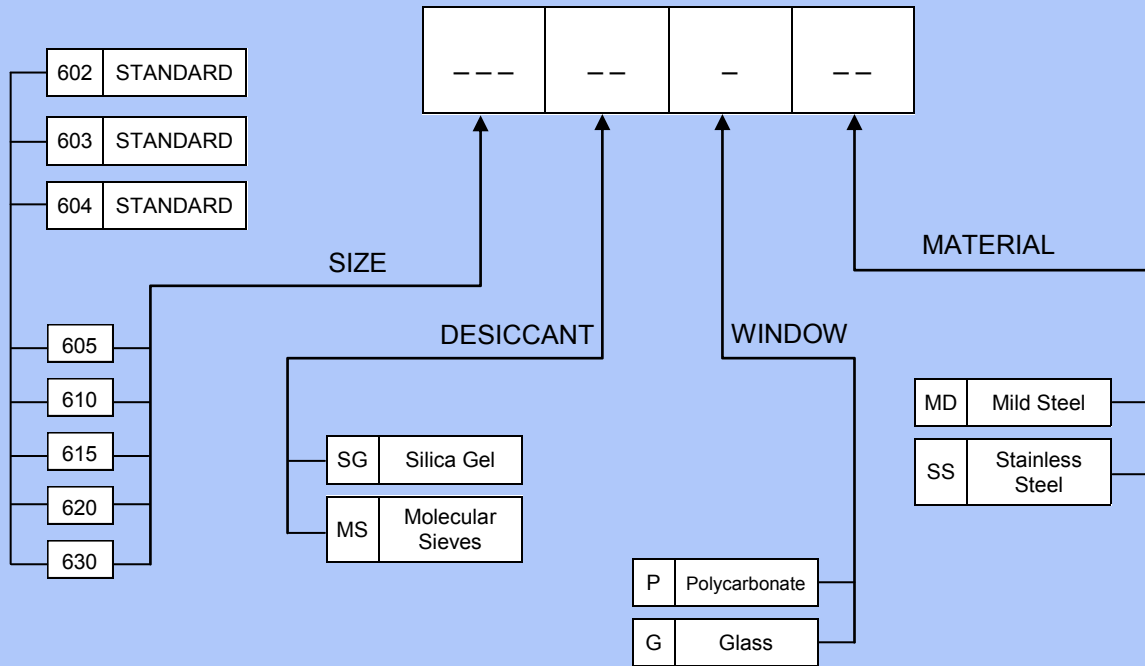


615 Tank Vent Dryer installed with over pressure relief valve protection

The following properties can be affected by contamination:

- *Viscosity*
- *Stability*
- *Polymer breakdown*
- *Heat Transfer*
- *Freezing Temperature*
- *Sludge*
- *Increased Corrosivity*
- *Fluid Dilution*

Order Code and Specification



An example of an order code:
 If you would like to order 610 Tank Vent Dryer in stainless steel with glass sight window filled with silica gel, your order code will look like this:

6 1 0 S G G S S

MODEL		602	603	604	605	610	615	620	630
Maximum Filling or Emptying Rate	m ³ /hr	8.4	10.7	13.8	24.6	28.9	62.9	114	250
	litres/min	150	200	250	410	480	1048	1897	4163
	c.f.m.	5.3	7	8.8	14.5	17	37	67	147
	imp. galls/min	33.3	44.4	55.5	90	206	230	417	916
Maximum Fluid Capacity Related to Desiccant Content	m ³	0.5	1.5	3	9	55	125	225	500
	litres	500	1500	3000	9000	55000	125000	225000	500000
	ft ³	17.6	53	106	318	1975	4431	7930	17658
	imp. galls	111	333	666	1981	12297	27593	49387	109972
Replacement Desiccant Charge Data	wt. of spare charge	N/A	N/A	N/A	3.30kg	10.75kg	20.00kg	35.00kg	67.00kg
	wt. of desiccant	0.6kg	1.2kg	1.9kg	1.40kg	5.60kg	12.50kg	22.40kg	50.00kg

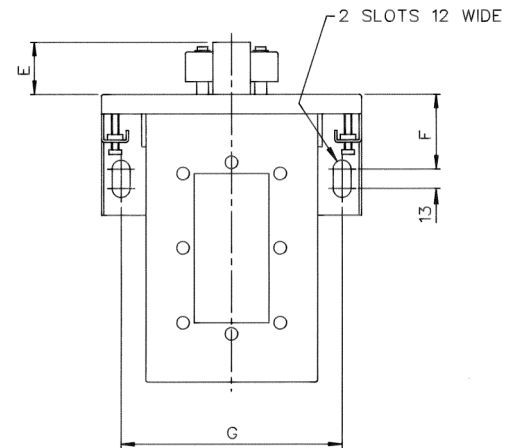
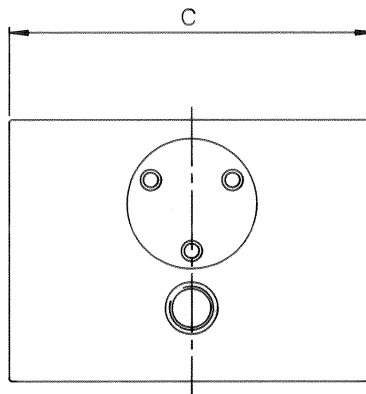
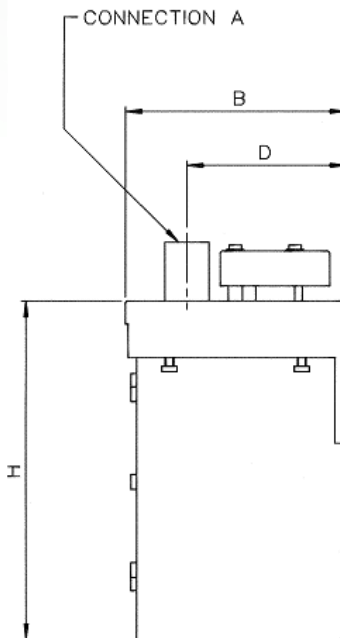
The maximum flow rate will give a pressure drop of approximately 3" water gauge

Dimensional Information



Wall Mounted Models

MODEL		605	610	615
A (Flange)	in	0.5	1.0	1.5
B	mm	125	171	256
C	mm	174	220	305
D	mm	90	125	190
E	mm	35	45	48
F	mm	50	50	50
G	mm	146	194	260
H	mm	193	381	381
Weight	kg	4.1	11.5	23.0



Floor Mounted Models

MODEL		620	630
A (Flange)	in	2	3
B	mm	340	508
C	mm	400	560
D	mm	250	355
E	mm	60	-
J	mm	30	30
K	mm	250	254
L	mm	360	520
M	mm	495	495
Weight	kg	55.0	101.0



Stainless Steel Tank Vent Dryers

Brownell has introduced a new range of tank vent dryers in high grade stainless steel to compliment their existing aluminium, steel and plastic versions. The dryers and adsorbents prevent valuable fluid materials from being contaminated by harmful moisture condensation.



- High grade stainless steel
- Glass sight window
- Visual colour change indication
- Chemical resistant seals
- Refillable
- ATEX Directive 94/9/EC approved

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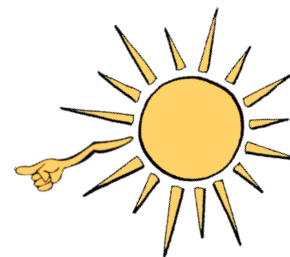
Tank Vent Dryers reduce the relative humidity in a tank to less than 10%Rh

Brownell's stainless steel tank vent dryers are suitable for use in aggressive and hostile environments such as the North Sea, and are designed for use with storage tanks containing corrosive fluids such as acid and alkalis. Typical locations would include chemical sites, plant works and processing installations.



Wall mounted 610 Tank Vent Dryer

Installing Tank Vent Dryers

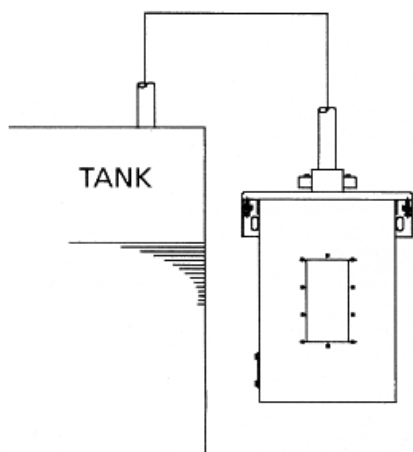


- TANK VENT DRYERS should be positioned out of the direct rays of the sun and on the shaded side of the tank.
- The three smaller models are suitable for wall mounting and the larger two are intended for floor mounting.
- Floor mounted models should be positioned so that the atmospheric air intake cannot be blocked with debris.
- Please contact our technical staff for details of pipe work and non-return valve arrangement for removal units handling volatile contaminants.

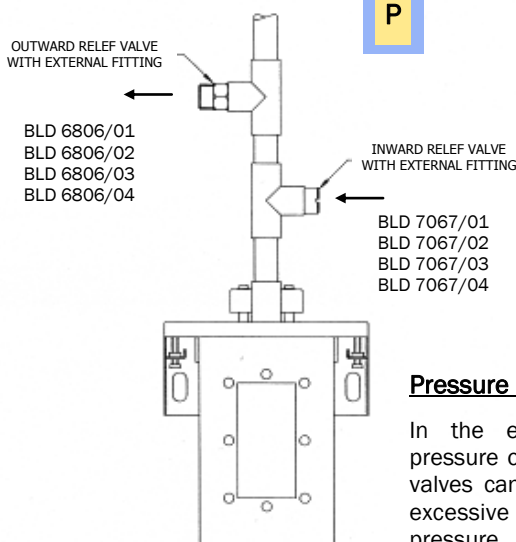
TECH TIP

500ppm = 0.05% = 50cc of water in 1000 litres of fluid

Pipe work & Valve Arrangements



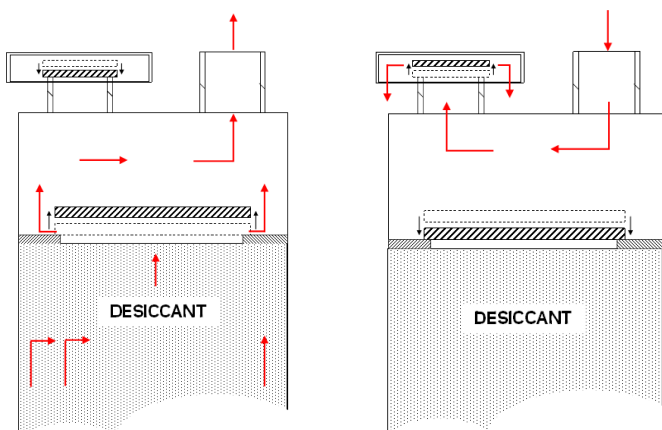
CONVENTIONAL MOUNTING FOR NON VOLATILE FLUIDS



Pressure Relief Valve Protection

In the event of an excessive pressure or vacuum pressure relief valves can be installed to prevent excessive positive or negative pressure.

Unit Directional Flow



DRYING MODE

VENTING MODE

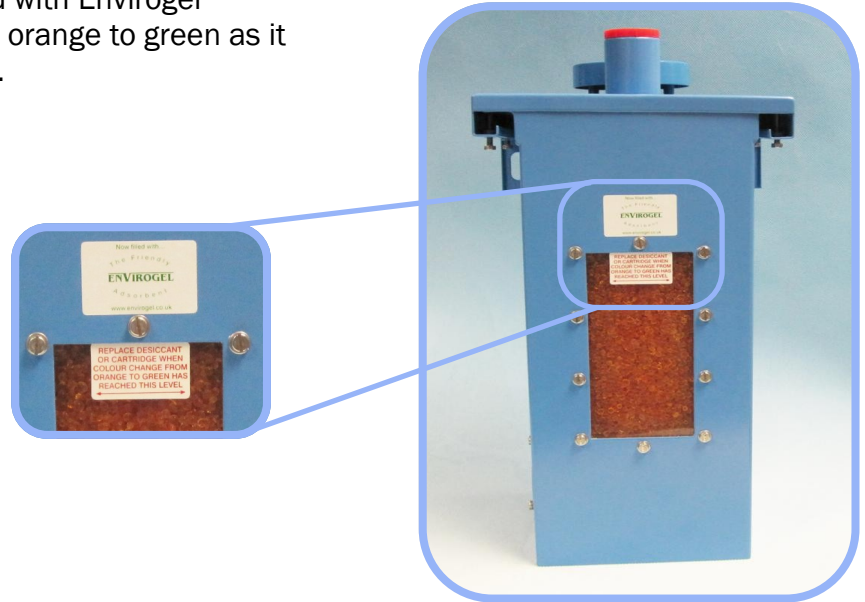


When the desiccant is saturated the desiccant holder can be removed for reactivation or refilling. The mounted bracket is retained in position for rapid cartridge replacement.

ENVIROGEL DESICCANT

BROWNELL Tank Vent Dryers are filled with Envirogel Desiccant, which changes colour from orange to green as it becomes saturated with water vapour.

Brownell Tank Vent Dryers are designed to enable the easy and quick replacement of the desiccant charge. When the colour change from orange to green has reached the level indicated on the label, charge should be replaced.



ENVIROGEL refills	
Part No	Description
REF602	Refill for 602
REF603	Refill for 603
REF604	Refill for 604
REF605	Refill for 605
REF610	Refill for 610
REF615	Refill for 615
REF620	Refill for 620
REF630	Refill for 630



All refills are packed for a 24 month shelf life and are supplied with resealable covers and lids.



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