

*Kingsley*

# SAFETY AND CONTROL DEVICES FOR STORAGE TANKS



\* FLAME ARRESTERS \* BREATHER VALVES \* EMERGENCY VENTS

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**Kingsley Engineering Services**

# BREATHER VALVES

Breather Valve helps in breathing of the storage, In and Out. These are mainly designed to prevent (1) Vapour losses (2) Evaporation (3) Over pressure and (4) Storage buckling, negative pressure (Vacuum).

We manufacture Breather Valves to suit chemical conditions, Temperature and Blanketing systems. In case of over pressure, due to high IN flow to the storage, pressure inside is balanced to normal. While withdrawing the liquid, from the storage creates vacuum inside the storage. As we know that vacuum is such a negative pressure, which can hold the liquid from drawing Out or buckle the vessel. In both the cases Breather Valves play very important role in the total system.

Breather Valves are designed in reference to API 2000. Spring loaded pallets can also be furnished. In case the vapour of the stored fluid could be cause of pollution, flanged unit can convoy through inlet & outlet tubes, these vapour in a safety zone.



COMBINATION OF  
FLAME ARRESTER & BREATHER VALVE



BREATHER VALVE

- Body Material** : Aluminum LM6/ Cast steel ASTMA216GrWCB/ Cast steel ASTMA351 Gr Cf8/ PTFE lined
- Trim MOC** : CS/SS304/SS316 / PTFE Coated
- Pallet / Lift** : Fiber glass cloth backed with Neoprene Rubber.
- Weather hood** : Cast Al/ FRP mould/ CS
- Venting Screen** : SS wire mesh/ perforated sheet.
- Nut Bolts** : M.S. Zinc plated /ASTMA 193Gr B7/B8 ASTMA 154Gr2/24/8/8A/ss304&316
- Sizes** : 25NB to 150 NB and above sizes will be manufactured on request.  
PP BREATHER VALVES ARE ALSO AVAILABLE WITH PTFE TRIM FOR HIGHLY CORROSIVE STORAGE.



# FLAME ARRESTERS

FLAME ARRESTER are safety devices mounted on the chemical storage line & ducts carrying flammable liquids, vapours & gases.

These are designed to prevent fire penetration explosions & detonations in tank installation of any kind. The Flame Arrester could be "IN LINE" or "END OF LINE" & classified as Explosion proof or detonation proof. The internal element is made of metal sheet, the gas is allowed to pass along with the element which prevent fire entering in process on the event of external fire Flame BANK is so designed that pressure drop is negligible with reference to API 2000.

Temperature sensors may be install in order to detect flames & to initiate counter measures to extinguish to fire. To Assist your requirement the details such as fluid / gas vapours contains Tank size / capacity in litre pumping rate in & out from the storage tank to be specified.



**IN LINE FLAME ARRESTER**  
WITH BOTH END FLANGED



**END OF LINE FLAME ARRESTER**  
WITH ONE END FLANGED AND TOP HOOD COVERED.

<b>Body Material</b>	: Aluminum LM6/ Cast steel ASTMA216GrWCB/ Cast steel ASTMA351 GrCF8
<b>Bank shell</b>	: CS/SS304/SS316
<b>Bank Element</b>	: SS304/SS316
<b>Gasket</b>	: CAF
<b>Nut Bolts</b>	: M.S. Zinc plated /ASTMA 193Gr B7/B8 ASTMA 154Gr2/24/8/8A
<b>Sizes Available</b>	: 15 NB to 300 NB and above sizes will be manufactured on request.