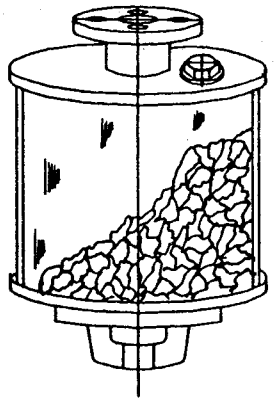
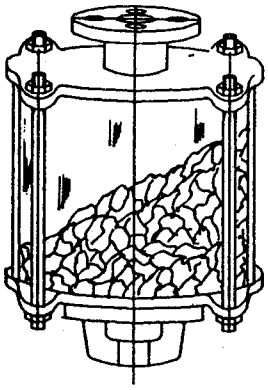
SILICA GEL BREATHER

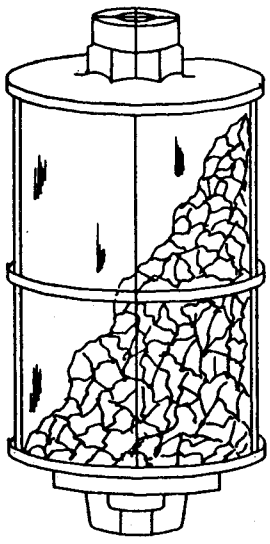
Clear View Design, Based on DIN Std. 42567.
Gel Cylinder : SAN Moulded, Transparent, Seamless.
End Covers : Aluminium Die Cast/ABS Moulded,
Gel Contents : 0.12 Kg. to 10 Kg. Capacity.



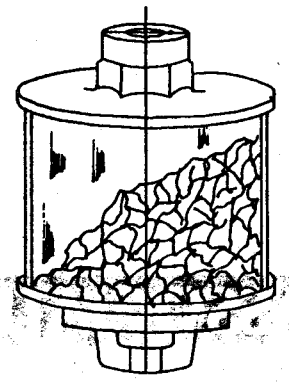
STYLE 1



STYLE 2



STYLE 3



STYLE 4

OPERATION & WORKING :

When Transformer is loaded or unloaded, the oil temperature inside the Transformer tank rises or falls, Accordingly, the air volume inside the tank changes, by either sucking in or pushing out the air. This phenomenon is called 'Breathing' of the Transformer,
The air which is being sucked in contains foreign impurities and/or humidity which changes dielectric strength of Transformer oil, Hence, it is necessary that, the air entering into the Transformer is free form moisture & foreign impurities.

The Breather is connected to an outlet pipe of the conservator vessel and the air which is being sucked by Transformer is made to pass through the Silica Gel Breather to dehumidify the air and to remove foreign impurities. The Silica Gel which is filled in the Breather is in form of hard blue crystals, which has considerable absorption power for moisture. When, it gets saturated with moisture, it changes it's colour to pinkish white. For proper dehumidification of air, it is absolutely necessary that this charge of Silica Gel is re-conditioned from pinkish white to deep blue by heating it to a temperature of 200 ° C in oven.
The air, which is passed through gel is first made to pass through the oil compartment of the Breather. This oil removes all foreign impurities from air which enters the gel compartment.
Hence, Oil sealed type Silica Gel Breather will keep the oil properties constant, thereby ensuring proper working and hence longer life of the Transformer.

ADVANTAGES OF CLEAR VIEW DESIGN OVER WINDOW TYPE :

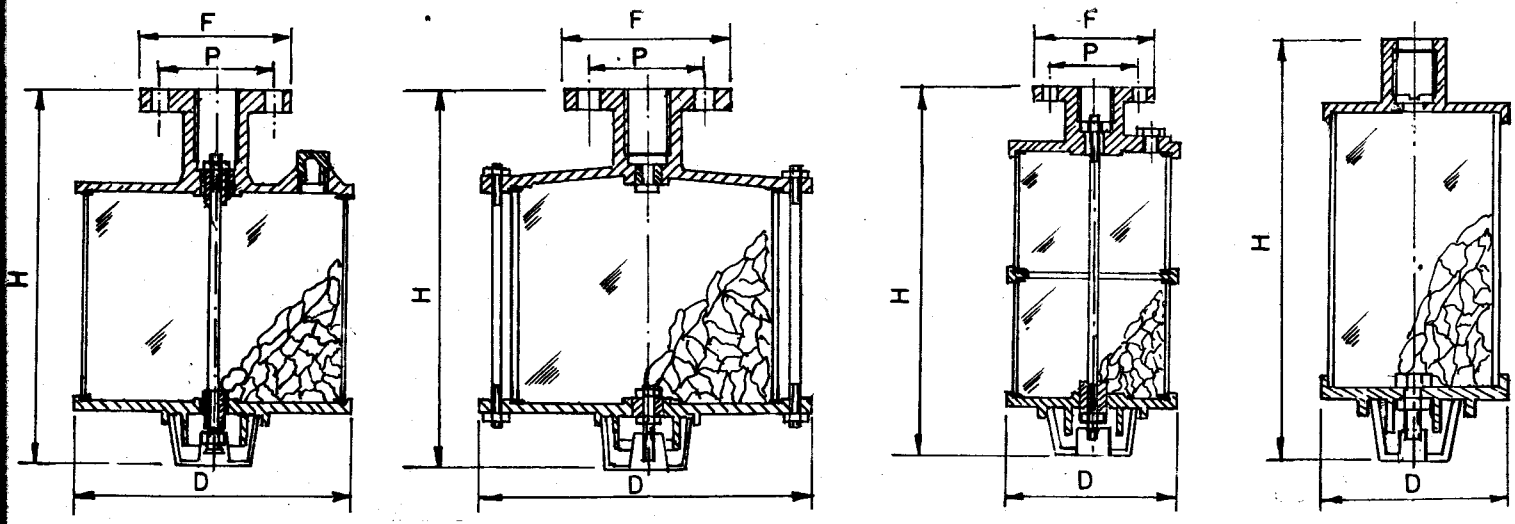
1) Because of excellent visibility of entire mass of Silica Gel (Due to transparent compartment) change in colour of gel in any part of the mass is clearly visible, even from a distance, as against very very poor visibility in window type-design.
2) The entire oil cup is also transparent. Hence, change in the level of oil as well as any sedimentation in oil is clearly visible as against almost invisibility in Window type.
3) The overall weight of the Breather is much lighter than the conventional Window type Breathers.

INSTALLATION & MAINTENANCE :

The Breather is connected to Transformer by either threaded or flanged joint Before putting the Breather into service, remove the Oil Cup and fill it up with fresh Transformer oil upto the line marked on Cup. Remove the seals on the air holes of the Cup and fit the Cup to the Breather. The Breather is now ready for installation.

As the colour of the Silica Gel change to pinkish white after prolong use, it needs recharging. For this, detach Breather from the Transformer. Detach the Oil Cup and remove the Gel Plug or threaded washer by unscrewing.

Take out the Silica Gel and heat it in oven upto 200 °C, until the colour of gel changes to deep blue. Refill the Gel in the Breather, fit Oil Cup and Gel Plug / Threaded washer. The Breather is ready for reuse. Please ensure that, plastic container is not heated alongwith the gel in oven.
The gel content or the size of the Breather is determined by the volume of air passing through the Breather, the oil content of the Transformer and atmospheric conditions at the place of installation. Hence, the Transformer Manufacturer or the ultimate user should decide the size of Breather that would suit his Transformer. However, for rough guidance, we give overleaf the recommended size of Breather for various Transformer ratings alongwith the corresponding oil content.



STYLE 1 **STYLE 2** **STYLE 3** **STYLE 4**

Style 1 : Aluminium End Covers, Single Cylinder joined with one center stud.
Style 2 : Aluminium End Covers, Single Cylinder, joined with 3/4 numbers side studs.
Style 3 : Aluminium End Covers, 2/3 Cylinders (each 500 gms. capacity) joined with one center stud.
Style 4 : ABS (Engineering Plastic) End Covers, Single Cylinder, sealed design.
Style 5 : ABS (Engineering Plastic) End Covers, 2/3 Cylinders, (of 500 gms. capacity), sealed design
T - Threaded TF - Threaded & Flanged

Model	Style	Silica Gel Content Kg	Transformer Rating KVA	Oil Content Litres	Pipe Connection Threads B.S.P.	Max. Height H MM	Max. Dia D MM	Hole PCD P MM	Hole Dia/Nos. d MM	Flange Dia F MM
DTO (DTO-SG)	4	0.12	200	300	1/2" T	125	85	-	-	-
DTO-1 (DTO-B)	4	0.25	300	450	1/2" T	180	85	-	-	-
DTO-2 (MPO)	4	0.50	500	750	1/2" OR 3/4" T	170	130	-	-	-
DTO-3 (HPO-A)	3/5	1,00	2000	1400	1/2", 3/4",1" T OR TF	280 (T) 315 (TF)	136	58	11 Dia 4 Nos.	80
DTO4 (HPO-B)	3/5	1.50	5000	3000	3/4" OR 1" T OR TF	365 (T) 400 (TF)	136	58	11 Dia 4 Nos.	80
DTO-5 (HPO-C)	1	3,00	7000	7500	1" TF	300	215	83	15 Dia 4 Nos.	115
DTO-6 (HPO-D)	1	4,00	10000	15000	1" TF	365	215	83	15 Dia 4 Nos.	115
DTO-7	1	6,00	15000	21000	1" TF	480	215	83	15 Dia 4 Nos.	115
DTO-8	2	8,00	20000	27000	1" TF	670	263	83	15 Dia 4 Nos	115
DTO-9	2	10.0	25000	32000	1" TF	790	263	83	15 Dia 4 Nos.	115

Note : *Our policy is of continuous improvement of product quality, product actually supplied therefore may differ slightly than that illustrated in this publication.*

Manufactured in India by :

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