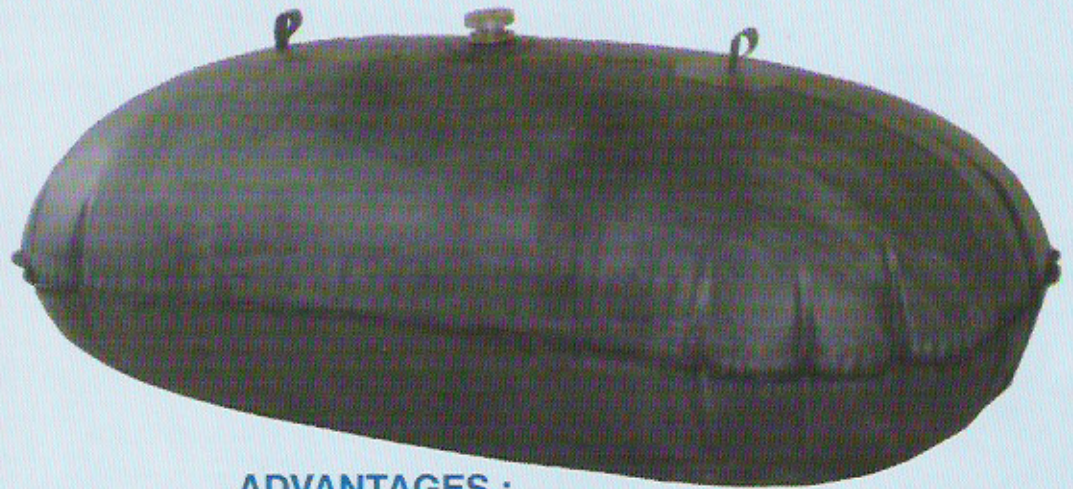


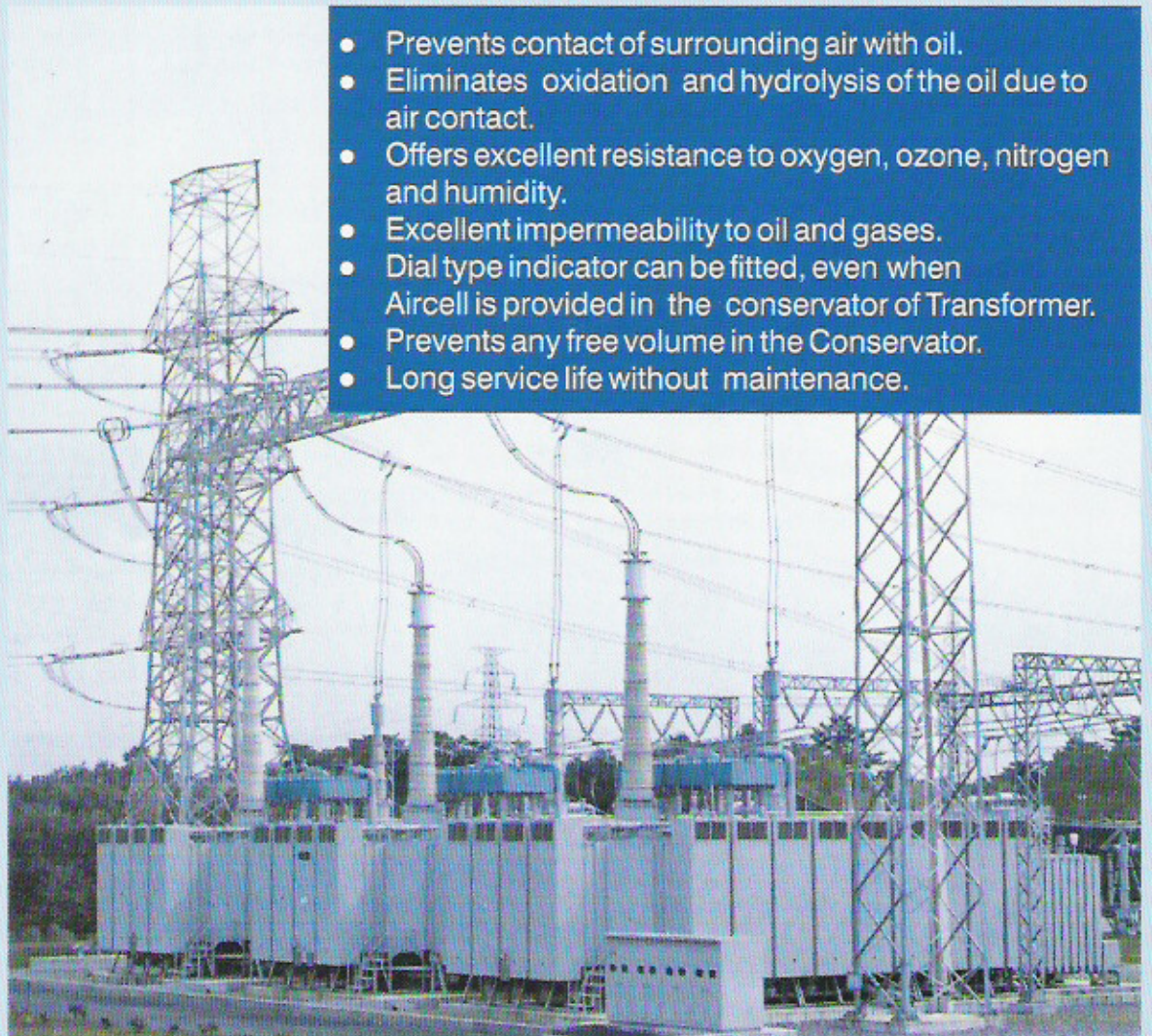
AIRCELL

FOR OIL FILLED TRANSFORMERS

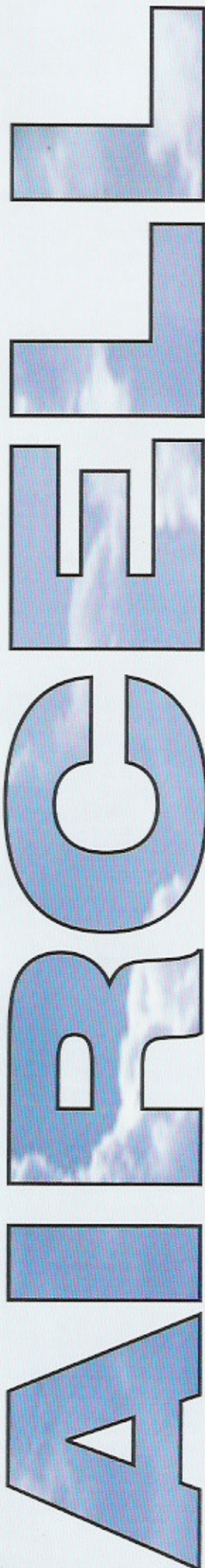


ADVANTAGES :

- Prevents contact of surrounding air with oil.
- Eliminates oxidation and hydrolysis of the oil due to air contact.
- Offers excellent resistance to oxygen, ozone, nitrogen and humidity.
- Excellent impermeability to oil and gases.
- Dial type indicator can be fitted, even when Aircell is provided in the conservator of Transformer.
- Prevents any free volume in the Conservator.
- Long service life without maintenance.



Unirub
Techno India Pvt. Ltd.



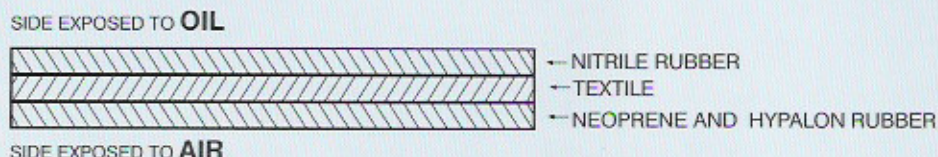
DESCRIPTION & WORKING :

An Aircell is a sealed envelop made out of highly resistant polyamide fabric coated with synthetic elastomers. The Aircell hangs in conservator. It is held in position by connecting flange and two straps on either side. Please see illustrative figures.

When oil level in conservator increases, Aircell gets deflated there by expelling air out and when oil level drops, Aircell inflats and allows air to come in. Thus Aircell breathes without allowing outside air to get in contact with transformer oil. There are many advantages due to introduction of Aircell in conservator. They are listed on Page - 1.

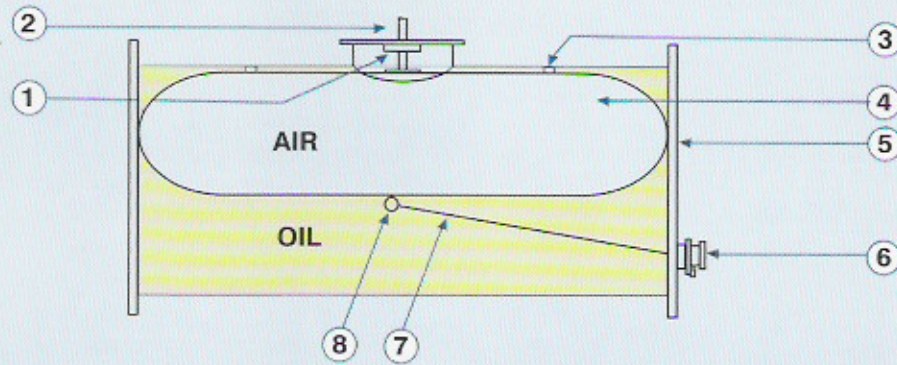
PACKING : Each Aircell is suitably packed in corrugated paper box.

FIG. 1 MATERIAL CROSS SECTION :



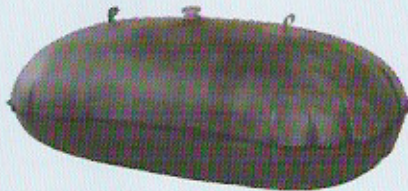
CHARACTERISTICS OF THE MATERIAL OF CONSTRUCTION

Characteristics	Requirement	Reference Standard
Mass of the Surface	1170 gms/m ²	IS 7016 (1)
Coating - Inside - Outside	Neoprene and Hypalon Nitrile	UNR - AC -03
Textile Reinforcement	Polyamide	UNR - AC -03
Resistance to perforation	400 N min	UNR - AC -03
Working temperature range	-20° c, + 100° c	UNR - AC -03
Resistance to Ozone for 96 hr at 40° c with Ozone concentration 200 ± 20pphm	No cracks	IS 3400 (20)
Warp Breaking Strength Weft Breaking Strength Warp elongation at break Weft elongation at break Seam resistance	3 KN min/ 5cm 3 KN min/ 5cm 25% min. 30% min. 3 KN/50 x 50 mm overlap	IS 7016 Pt 2 IS 7016 Pt 2 IS 7016 Pt 2 IS 7016 Pt 2 Unirub Standard
Permeability to air at room temperature	5 x 10 ⁻¹¹ cc/cm ² /cmhg. sec	ASTMD 1434
Permeability to water vapour during the oil phase at 70° c.	Impermeable to water Vapour	UNR - AC - 03
Resistance of the rubber when in contact with the oil After immersion for 7 days at 100° c of Tr. Oil After immersion for 30 days at 100° c of Tr. Oil	Swelling rate % Test Values - +10 max. +12 max.	IS 3400 (6) IS 3400 (6)
Variation of the shore hardness of the rubber when in contact with Tr. Oil at 100° c, After immersion for 7 days After immersion for 30 days	Test Values - ±3 max. +5 max.	IS 3400 (2)
Test on transformer oil Sludge content Acidity	0.05% max. 0.10 max. Mg Koh/gm	IS 1448 pt 2 IS 12177
Resistance of the metallic accessories	No discolouration.	BS 903 pt A 37

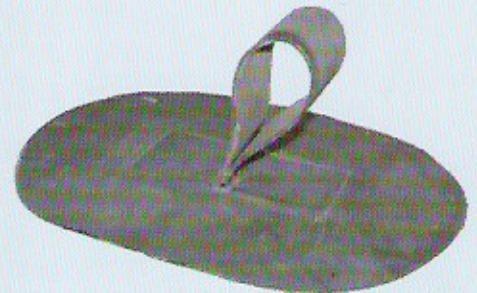
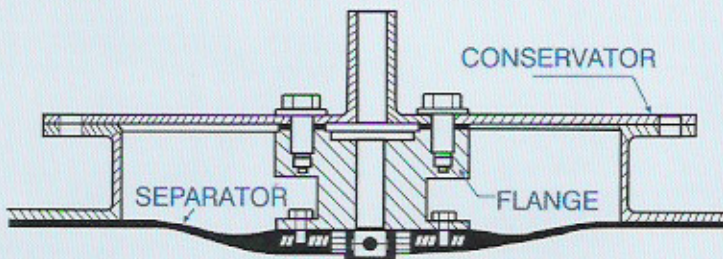
FIG. 2**CYLINDRICAL CONSERVATOR APPLICATION**

1. Connecting Flange
2. Pipe Connecting to Breather
3. Straps
4. Aircell
5. Conservator
6. Oil Level Indicator
7. Float Arm
8. Float

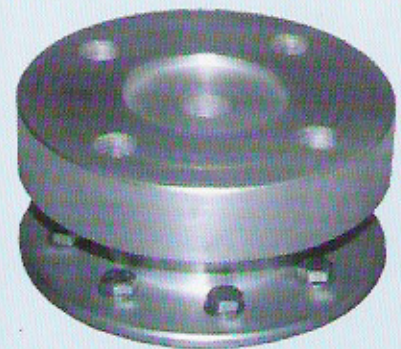
Note : Items 2,5,6,7,8 are not supplied by us.

FIG. 3**AIRCELL :**

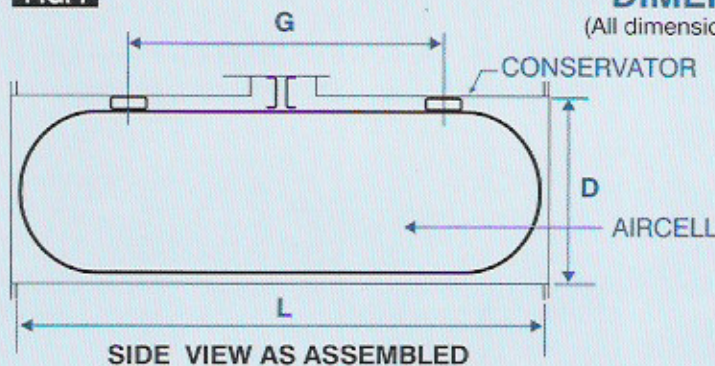
Please ask for Drg. : UTI/P3/001 in which all details of Aircell are given

FIG. 4**STRAP :****FIG. 5****FLANGE ASSEMBLY :**

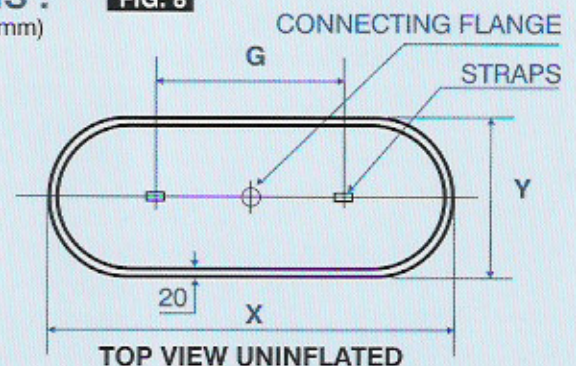
The flange is fitted to the vulcanised insert. This insert is fully embedded by vulcanising into the separator material thus ensuring that the unit is fully sealed.

FIG. 6**CONNECTING FLANGE :****FIG. 7****DIMENSIONS :**

(All dimensions are in mm)



- L = Inside Length of Conservator.
D = Inside Diameter of Conservator.

FIG. 8

- X = Length of Flat Aircell.
Y = Width of Flat Aircell.
G = Distance between Straps.

HOW TO ORDER :

- Your requirement can be specified by
1. Giving dimensions of conservator L & D
or by
 2. Giving dimensions X, Y, G (See Formula)

$$\text{Formula : } Y = \frac{3.142 \times D}{2} + 40 \text{ mm, } X = L - D + Y, \text{ } G = X - Y - 200$$

Example : For Conservator of 700 dia x 2000 long
Values will be X = 2440, Y = 1140, G = 1100