

# R SERIES TRANSFORMER BREATHERS



## Product Description

The 'R' Series Transformer Breathers are manufactured from UV stabilised polycarbonate and are available in three different sizes. The clear polycarbonate body allows for clear visibility of the desiccant charge and enables users to check desiccant condition with ease.

The unit is mounted from a 1/2" female pipe thread connection at the top of the breather. This connection point is also used for filling and emptying the desiccant within the breather. Two-way, low pressure valves are fitted in the base of the breather to ensure that the atmospheric air enters the desiccant when a negative pressure differential occurs within the equipment being protected.

These units are filled with Envirogel, Orange to Green colour changing silica gel, which visually show when the unit needs replacing or refilling. The units can also be supplied with thread adaptors and different fill materials if required.

To cater to different requirements, the R series comes in different sizes - R, R1, and R2. The R3 Breather is made up of two R1 Breathers, fully saturating one breather before the other. This model gives handlers more time allowance as they will only need to replace the desiccants when both breathers are fully saturated with moisture.

## Industries Served

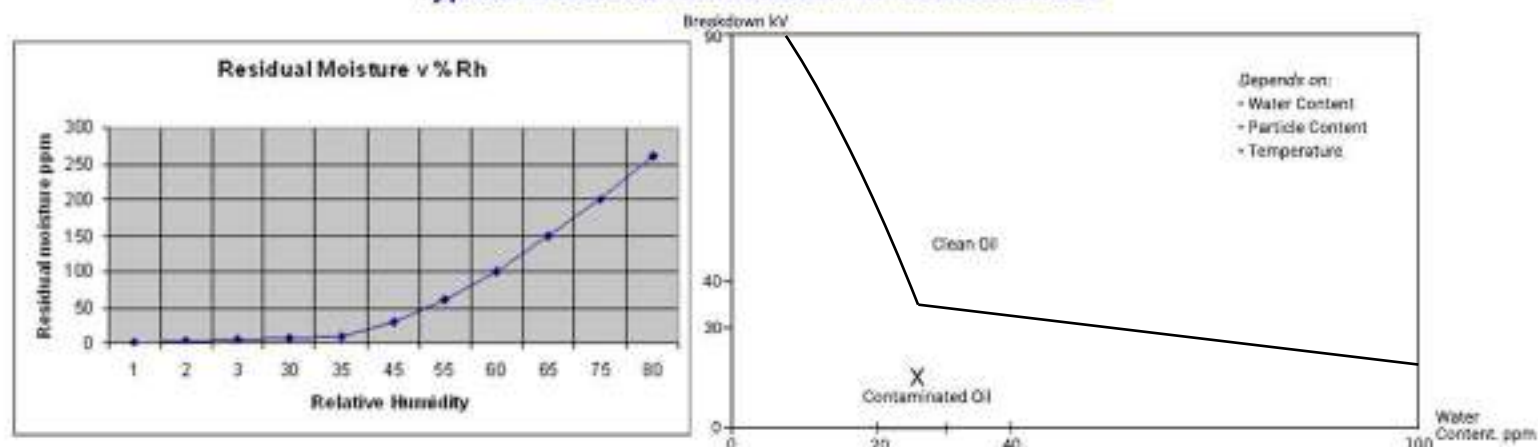
- Power & Refinery



**STREAM PEAK INTERNATIONAL PTE LTD**  
Tel: +65 6610 7921 | Fax: +65 6862 2520  
Email: [enquiry@streampeak.com.sg](mailto:enquiry@streampeak.com.sg)

*Valuing Relationships, Protecting Goods*  
Address: 26 Tuas South Street 3, S(638026)  
Website: [www.streampeak.com.sg](http://www.streampeak.com.sg)

## Typical Electrical Breakdown in Transformers



## Selection Guide

| Type | Max. Oil Contents (Litres) | Approximate Transformer Rating (MVA) | Max. Air Space Volume (Litres) | Approximate Daily Breathing Rate (Litres) | Max. Air Volume Before Recharge (Litres) | Estimated Effective Cycle Time (Days) |
|------|----------------------------|--------------------------------------|--------------------------------|---|--|---------------------------------------|
| R    | 1,500                      | <1.25                                | 230                            | 15  | 6,000                                    | 400                                   |
| R1   | 3,000                      | 3                                    | 500                            | 30  | 12,000                                   | 400                                   |
| R2   | 4,750                      | 6                                    | 1,100                          | 55  | 20,000                                   | 400                                   |
| V    | 11,350                     | 9                                    | 2,400                          | 140                                       | 45,450                                   | 320                                   |
| W    | 22,700                     | 30                                   | 4,800                          | 280                                       | 90,900                                   | 320                                   |
| X    | 34,050                     | 60                                   | 7,250                          | 420                                       | 136,500                                  | 320                                   |
| Y    | 45,450                     | 100                                  | 9,685                          | 570                                       | 181,800                                  | 320                                   |
| Z    | 68,150                     | 180                                  | 14,500                         | 840                                       | 272,700                                  | 320                                   |
| YY   | 90,900                     | 240                                  | 19,370                         | 1,140                                     | 363,600                                  | 320                                   |
| ZZ   | 136,360                    | 500                                  | 29,000                         | 1,680                                     | 545,400                                  | 320                                   |
| YYY  | 136,360                    | 500                                  | 29,055                         | 1,700                                     | 545,400                                  | 320                                   |
| ZZZ  | 204,550                    | 750                                  | 38,750                         | 2,280                                     | 818,100                                  | 360                                   |

## FAQs

**Q: Can I fit a Transformer Breather, which has a larger ENVIROGEL capacity than my existing Transformer Breather?**

**A:** Yes, for example you can use a Size R1 Transformer Breather to replace an R type which will drastically increase the time between ENVIROGEL maintenance.

**Q: What is the recommended method for disposing of used ENVIROGEL?**

**A:** We suggest that dispose it at a registered landfill site in accordance with local authority regulations.

**Q: Are there any specific safety considerations when handling Transformer Breathers and ENVIROGEL?**

**A:** We recommend to take suitable precautions, such as using an approved respiratory mask, when handling ENVIROGEL.

**Q: How can I reactive saturated ENVIROGEL?**

**A:** Following the safety procedures for handling ENVIROGEL. Heating the ENVIROGEL for 3-4 hours at 95°C will recover 95% of the adsorption capacity.



**STREAM PEAK INTERNATIONAL PTE LTD**  
 Tel: +65 6610 7921 | Fax: +65 6862 2520  
 Email: enquiry@streampeak.com.sg

*Valuing Relationships, Protecting Goods*  
 Address: 26 Tuas South Street 3, S(638026)  
 Website: www.streampeak.com.sg

## Key Features

- High-performance plastic or metal construction
- Simple installation
- ISO9001/2008 design approved
- Suitable for 1250 kVA to 750 mVA Transformers
- Low dusting beaded ENVIROGEL adsorbent
- Up to 25% adsorption capacity
- Definitive colour change saturation indication
- IP65 rating
- Operating temperature range  $-50^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$
- Vandal proof
- Weather resistant
- All round visual saturation indicator



## Product Specifications

| Size | Max. Oil Contents | Weight of Desiccant | Overall Length | Overall Diameter |
|------|-------------------|---------------------|----------------|------------------|
| R    | 1500 Litres       | 0.60 Kg             | 158mm          | 108mm            |
| R1   | 3000 Litres       | 1.20 Kg             | 250mm          | 108mm            |
| R2   | 4750 Litres       | 1.90 Kg             | 352mm          | 108mm            |

## Related Products



Silica Gel



Mark 7 Transformer Breather



Pipeline Dryers



Adaptors



**STREAM PEAK INTERNATIONAL PTE LTD**  
Tel: +65 6610 7921 | Fax: +65 6862 2520  
Email: [enquiry@streampeak.com.sg](mailto:enquiry@streampeak.com.sg)

*Valuing Relationships, Protecting Goods*  
Address: 26 Tuas South Street 3, S(638026)  
Website: [www.streampeak.com.sg](http://www.streampeak.com.sg)

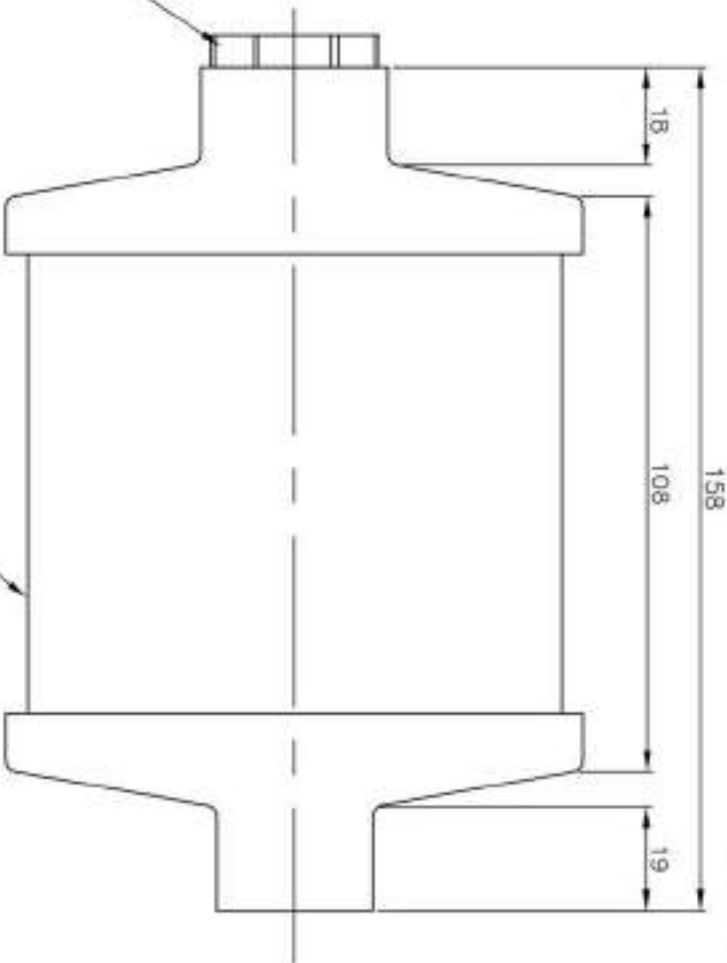
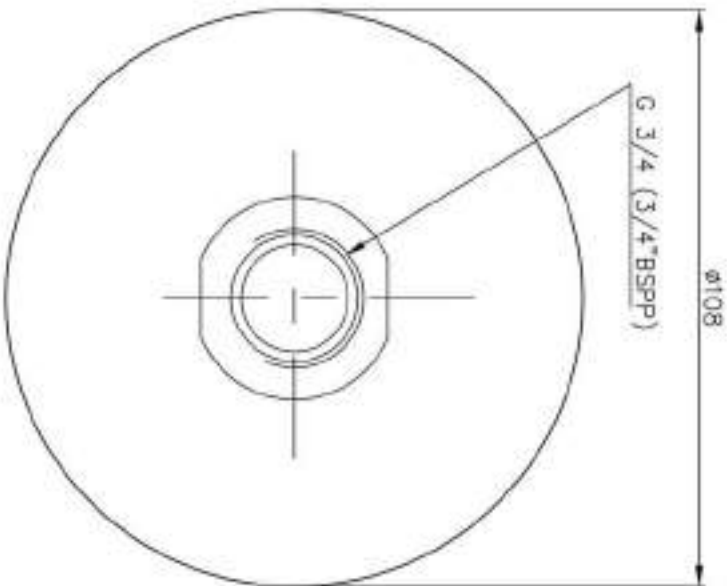
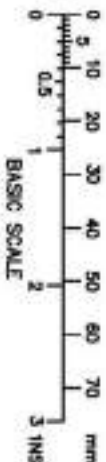


THIS DRAWING IS THE PROPERTY OF BROWNELL LTD, AND MAY NOT BE COPIED OR REPRODUCED WITHOUT THEIR PRIOR WRITTEN PERMISSION

DRG No  
BL/D6586 INST

USED ON

THIRD ANGLE PROJECTION  
REMOVE ALL SHARP EDGES UNLESS SPECIFIED  
DO NOT SCALE - ASK



DISPOSABLE PROTECTIVE  
PLUG

CLEAR POLYCARBONATE BODY FILLED WITH  
INDICATING BEADED SILICA GEL DESICCANT

MATERIAL  
GLASS COATED &  
UV STABILIZED  
POLYCARBONATE  
END CAPS

PROTECTIVE FINISH

TOLERANCES  
± 2

DIMENSIONS IN IN/MM  
SURFACE ROUGHNESS  
SCALE (ORIGINAL) 1:1

BROWNELL Ltd. LONDON NW10 7XF

TITLE  
VALVED TRANSFORMER  
BREATHING (SIZE 'R')

DRAWING NUMBER

BL/D6586 INST

RED DOT=ORIGINAL  
BLACK DOT=COPY

DRAWN  
PK

CHECKED

REDRAWN 6.27.9 7 08-09-08  
CHANGE MOD No ISSUE DATE

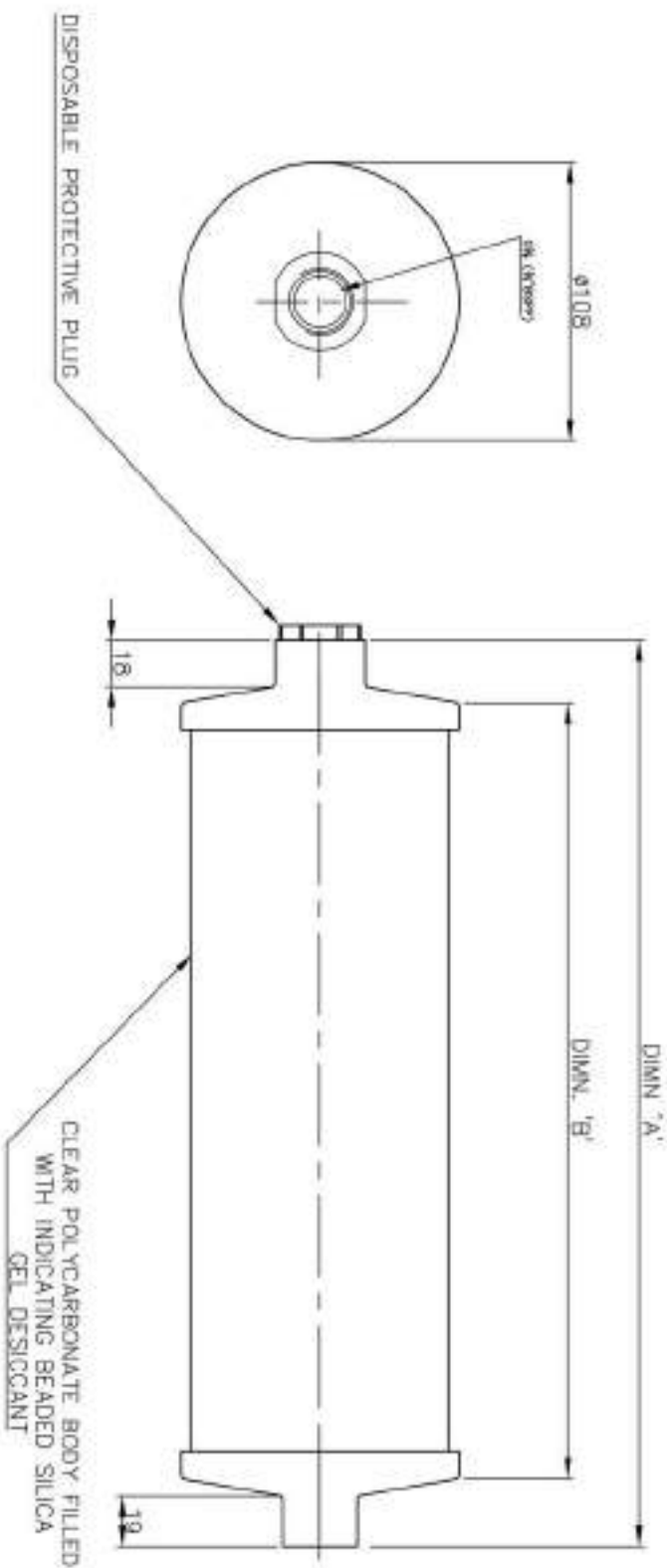
THIS DRAWING IS THE PROPERTY OF BROWNELL LTD, AND MAY NOT BE COPIED OR REPRODUCED WITHOUT THEIR PRIOR WRITTEN PERMISSION

DRG No  
BL/D6942/01-02 INST  
USED ON \_\_\_\_\_

REMOVE ALL SHARP EDGES UNLESS SPECIFIED

### THIRD ANGLE PROJECTION

DO NOT SCALE - ASK



| DRG. No.    | SIZE | DMN. 'A' | DMNL. 'B' |
|-------------|------|----------|-----------|
| BL/D6942/01 | R1   | 250      | 200       |
| BL/D6942/02 | R2   | 352      | 302       |

|                  |        |         |          |
|------------------|--------|---------|----------|
| REDRAWN          | 5279   | 5       | 08-09-08 |
| CHANGE           | MOD No | ISSUE   | DATE     |
| RED DOT-ORIGINAL | DRAWN  | CHECKED |          |
| BLACK DOT-COPY   | PK     |         |          |

|          |   |
|----------|---|
| EST. WT. | — |
|----------|---|

### PROTECTIVE FINISH

### TOLERANCES

42

**SURFACE TEXTURE**

DIMENSIONS IN mm/inch

SCALE (ORIGINAL)

**BROWNELL Ltd. LONDON NW10 7XF**

THE VALVED TRANSFORMER BREATHER

(SIZE R1 &amp; R2)

DRAFTING NUMBER

BL/D6942/01-02 INST

DRG No

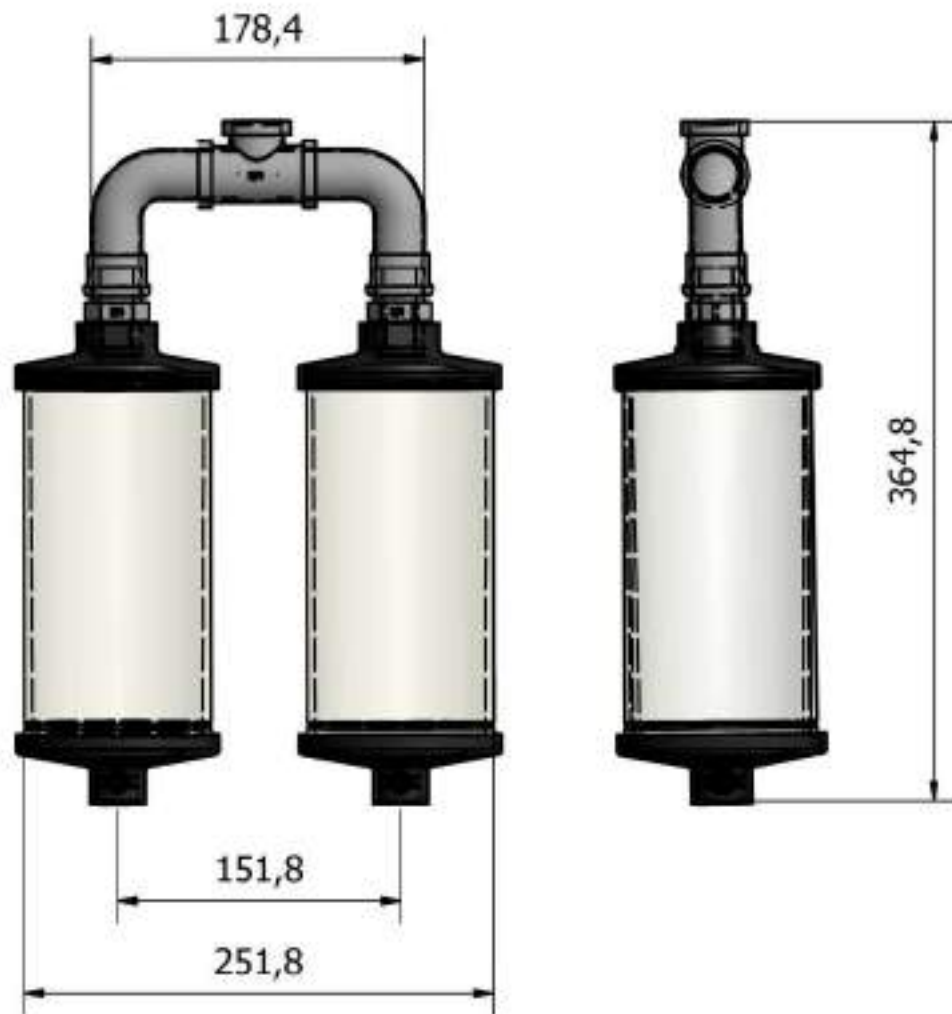
BL/D11937

REMOVE ALL SHARP EDGES  
UNLESS SPECIFIED

DO NOT SCALE - ASK

USED ON

-----



THIS DESIGN IS THE PROPERTY OF BROWNELL  
LTD, AND MAY NOT BE COPIED OR REPRODUCED  
WITHOUT THEIR PRIOR WRITTEN PERMISSION

|  |   |                              |              |             |             |
|--|---|------------------------------|--------------|-------------|-------------|
| MATERIAL<br>-----  | PROTECTIVE FINISH<br>-----              |                              |              |             |             |
|  |   |                              |              |             |             |
|  |   |                              |              |             |             |
|  |   | ORIGINAL                     |              | 1           | 19/12/14    |
| EST. WT. -----   | THIRD ANGLE PROJECTION                  | CHANGE                       | MOD No       | ISSUE       | DATE        |
| DIMS IN mm   | TOLERANCES : UNLESS<br>OTHERWISE STATED | SURFACE TEXTURE              | ANGULAR DIMS |             | LINEAR DIMS |
| SCALE -----  |   | -----                        | -----        |             | -----       |
|  RED DOT = ORIGINAL<br>BLACK DOT = COPY | <b>BROWNELL LTD</b><br>LONDON NW10 7XF  |                              |              | DRAWN<br>RB | CHECKED     |
| TITLE<br><br>DOUBLE R1 MANIFOLD  |   | DRAWING No.<br><br>BL/D11937 |              |             |             |