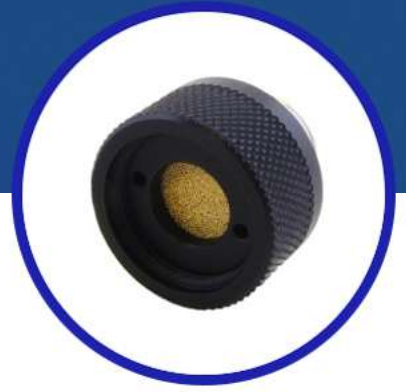


IMMERSION PROOF BREATHERS



Product Description

Immersion Proof Breathers allow an enclosure to "breathe" (transfer air in and out) but will withstand driving rain, sand, pollen, total immersion, dust and airborne contaminants. The breathers can pass high flow rates of air which results from rapid variations in pressure, caused by temperature or altitude changes. If a controlled environment within an equipment is required, A humidity adsorber can be fitted in most immersion breathers. These adsorbers are filled with desiccants to prevent humidity damage and condensation.

M5 Thread Immersion Proof Breather

This is a small Immersion Proof Breather with an M5 thread. The head has two slots to help with fitting. The unit is rated to IP67 and so can be submerged in 1 meter of water for a minimum of 30 minutes.

M8 Thread Immersion Proof Breather

This small compact Immersion Breather which can also be supplied with a desiccator as M8 Thread Immersion Proof Breather Desiccator. The body has a Diamond Knurl finish to aid fitting. The unit is rated to IP67 and so can be submerged in 1 meter of water for a minimum of 30 minutes. A Sintered Brass element acts as a filter and mechanical guard to protect the hydrophobic membrane.

Brass M8 Thread Immersion Breather

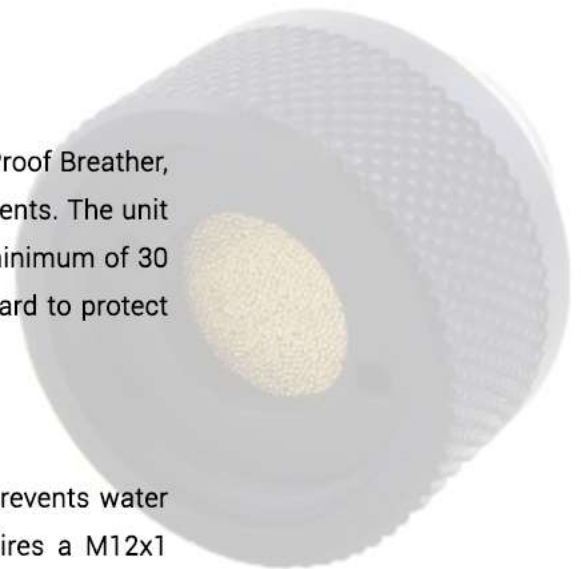
This immersion breather is a Brass version of M8 Thread Immersion Proof Breather, this means the unit is non-sparking and useful for explosive environments. The unit is rated to IP67 and so can be submerged in 1 meter of water for a minimum of 30 minutes. A Sintered Brass element acts as a filter and mechanical guard to protect the hydrophobic membrane.

Plastic M12x1.0 Thread Immersion Proof Breather

This immersion proof breather maintains pressure equalisation and prevents water ingress in equipment subject to use in harsh environments. It requires a M12x1 threaded fixing hole and is supplied with a O-ring. It is IP65,67 & IP69K rated

Industries Served

- Aerospace
- Electronics
- Engineering
- Power & Refinery



Polycarbonate M16 Thread Immersion Proof Breather

This immersion proof breather maintains pressure equalisation and prevents water ingress in equipment subject to use in harsh environments. It requires a 17mm diameter fixing hole and is supplied with a O-ring and back nut for fitting. It is IP67 rated so withstands immersion up to 1 metre for 15 minutes, providing differential between the head and the water does not exceed 15°C and has a flow rate off 150cc/min (approx).

M20 Thread Aluminium Immersion Proof Breather

This is an IP67 rated Immersion Proof Breather and it is designed to be used in tandem with M16 Thread Aluminium Breather Desiccator. When used together, any moist air passing through the Breather is adsorbed by the Molecular Sieve Desiccant. The unit has a filtered inlet to help protect the membrane from damage

M16 Thread Immersion Proof Breather

This is one of the largest Immersion Proof Breathers offer by Stream Peak. The head surface has a Diamond Knurl to help fitting. The unit is rated to IP67 and so can be submerged in 1 meter of water for a minimum of 30 minutes. A Sintered Brass element acts as a filter and mechanical guard to protect the hydrophobic membrane.

M16 Thread Aluminium Breather Desiccator

This is an Breather Desiccator and designed to be used in tandem with M20 Thread Aluminium Immersion Proof Breather. When used together any moist air passing through the Breather is adsorbed by the Molecular Sieve Desiccant. The unit has a filtered inlet and outlet to reduce dust ingress

Low profile M8 Thread Immersion Proof Breather

This is a small compact Immersion Breather which can also be supplied with a desiccator as M8 Thread Immersion Proof Breather Desiccator. The body has a Diamond Knurl finish to aid fitting. The unit is rated to IP67 and so can be submerged in 1 meter of water for a minimum of 30 minutes. A Sintered Brass element acts as a filter and mechanical guard to protect the hydrophobic membrane.



Models Available

M5 Thread Immersion Proof Breather



M8 Thread Immersion Proof Breather



Brass M8 Thread Immersion Breather



Polycarbonate M16 Thread Immersion Proof Breather



M20 Thread Aluminium Immersion Proof Breather



M16 Thread Immersion Proof Breather



M16 Thread Aluminium Breather Desiccator



Plastic M12x1.0 Thread Immersion Proof Breather



M12 x 1.5 Thread Aluminium immersion Proof Breather



Low profile M8 Thread Immersion Proof Breather



Key Features

- Air transfer "in & out"
- Threaded or lock nut mounted option
- Immersion protection to 5m
- Immersion time period up to 24hrs
- Constant pressure equalization
- Solvent and oil resistant
- Temperature range from - 40°C to +125°C
- High filtration efficiency
- Choice of housing materials
- Easy installation
- IP 67 rating



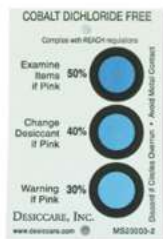
Product Applications

- Computer Keyboards
- Meteorological Instruments
- IP Enclosures
- Gearboxes and Transmissions
- Handheld Terminals
- Battery Housings
- Azimuth Sealed Applications
- Hose Down Protection

Related Products



Silica Gel



Humidity Indicator Card

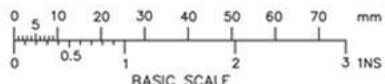


Vent Breathers



Immersible Breather Desiccators





REMOVE ALL SHARP EDGES UNLESS SPECIFIED

DO NOT SCALE - ASK

USED ON

NOTES.

1. PERFORMANCE CHARACTERISTICS:-

THE MICROPHONE BREATHER SHALL MEET THE FOLLOWING PRESSURE LIMITS AT A FLOWRATE OF 30cc/min

NOMINAL 5.75 INCHES WATER GAUGE @ 20cc/min

MINIMUM 4.25 INCHES WATER GAUGE @ 30cc/min

MAXIMUM 7.75 INCHES WATER GAUGE @ 40cc/min

2. ENVIRONMENTAL CHARACTERISTICS :-

THE MICROPHONE BREATHER SHALL MEET ITS PERFORMANCE SPECIFICATION WHEN SUITABLY MOUNTED, DURING EXPOSURE TO THE FOLLOWING ENVIRONMENTAL LIMITS

2.1 TEMPERATURE RANGE:- - 40 ° CENTIGRADE TO +85° CENTIGRADE

2.2 HUMIDITY:- ZERO TO 100% RELATIVE HUMIDITY

2.3 VIBRATION:- DEF STAN 00-35 PART 3/1 ISSUE 1, CHAPTER 2-10 TEST M1 PARA 5.2.4 (a) i, RANDOM 20-500Hz, AMPLITUDE 0.5gn/Hz, 3 HOURS IN EACH OF TWO PLANES

2.4 BUMP:- DEF STAN 07-55 PART 2 SECTION 1/1 TEST A5, 2000 BUMPS, PULSE DURATION 6ms, PEAK ACCELERATION 40gn

3. CHEMICAL AND BIOLOGICAL AGENTS:-

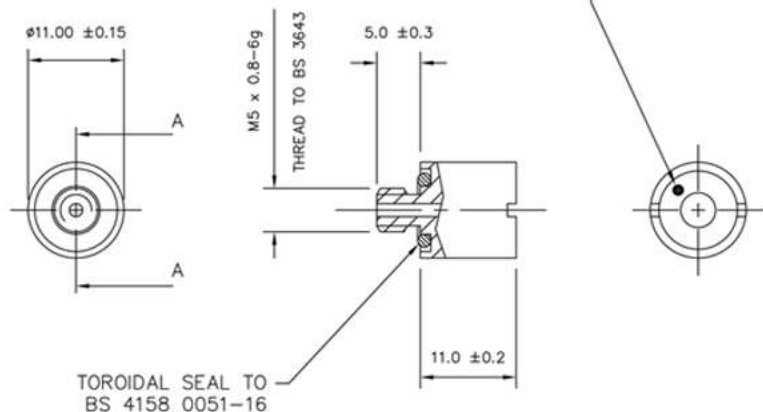
THE BREATHER ELEMENT SHALL BE MANUFACTURED FROM MATERIALS SUITABLE FOR WITHSTANDING CHEMICAL AND BIOLOGICAL CONTAMINATION, INCLUDING SEA SALT SPRAY, ORGANIC FLUIDS AND VAPOURS AND SPECIFICALLY ALCOHOL SOLVENTS AND CONCENTRATED BLEACH SOLUTIONS USED FOR DECONTAMINATION WASHERS AND CLEANING OPERATIONS.

FOR GUIDANCE, DEF STAN 00-50 ISSUE 1, "GUIDE TO CHEMICAL ENVIRONMENTAL CONTAMINANTS AND CORROSION AFFECTING THE DESIGN OF MILITARY MATERIAL", IS APPLICABLE.

IT IS NOT INTENDED TO SUBJECT BREATHERS TO CHEMICAL AND BIOLOGICAL TESTING, BUT TO ENSURE THE CORRECT SELECTION OF MATERIALS USED IN ITS CONSTRUCTION.

4. IMMERSION:- DEF STAN 07-55 PART 2, SECTION 4/1, TEST D5, SEVERITY "A".
0.15 meters, DURATION 2 HOURS.

PAINTED RED SPOT ADDED TO INDICATE THAT THE REVISED WATERPROOF MEMBRANE MATERIAL HAS BEEN FITTED



SCRAP SECTION AA

	6147	3	13-03-05
	6067	2	25-11-03
		1	4/10/00
CHANGE	MOD No	ISSUE	DATE

MATERIAL	PROTECTIVE FINISH
ALUMINIUM ALLOY	ANODISE TO DEF STAN 03-26 COATING THICKNESS 25um COLOUR BLACK

TOLERANCES	±0.5
DIMENSIONS IN in/mm	mm
SURFACE ROUGHNESS	
SCALE (ORIGINAL)	2:1

CONTRACTOR	BROWNELL Ltd. LONDON NW10
TITLE	IMMERSION PROOF BREATHER HEAD

RED DOT=ORIGINAL BLACK DOT=COPY

CUSTOMER'S REF	DRAWN	CHECKED
	PGD	

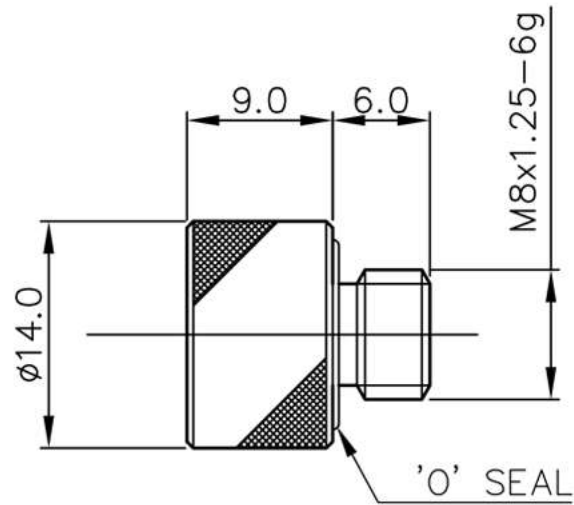
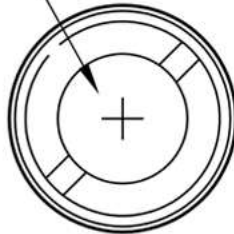
EST. WT.

DRAWING NUMBER	BL/D8816 INST
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DRG No
BL/D6693 INST
USED ON

THIRD ANGLE PROJECTION

BREATHER INLET



NOTES :-

- 1) BREATHER WILL WITHSTAND IMMERSION IN WATER TO A DEPTH OF 1 METRE FOR 30 MINUTES WITHOUT ANY WATER INGRESS – MAXIMUM TEMPERATURE DIFFERENCE BETWEEN WATER & BREATHER : 15°C
- 2) CONFORMS TO DEF STAN 44-2 WHERE APPLICABLE.
- 3) NOMINAL FLOW RATE DATE :-
 100cc per min @ 5 inches water guage (0.18 psi)
 500cc per min @ 18 inches water guage (0.64 psi)
 1000cc per min @ 23 inches water guage (0.82 psi)

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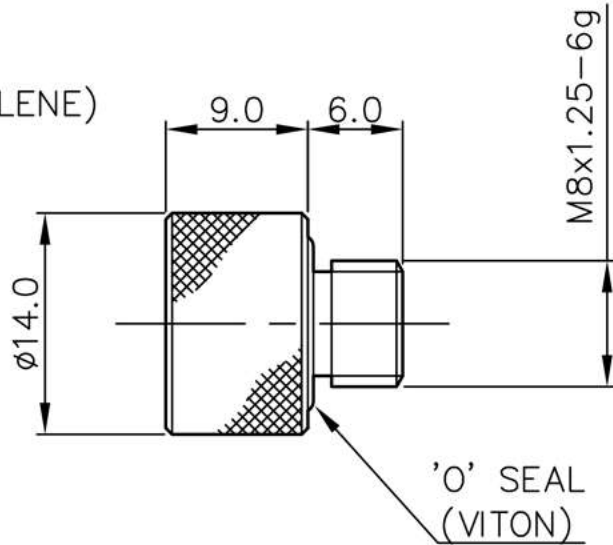
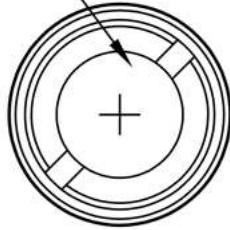
MATERIAL	PROTECTIVE FINISH				
ALUMINIUM ALLOY	ANODISED & DYED BLACK				
		REDRAWN	6275	2	25-06-08
EST. WT. _____	SURFACE ROUGHNESS _____	CHANGE	MOD No	ISSUE	DATE
DIMS IN mm	_____	TOLERANCES 0 = ±0.5			
SCALE 2:1	_____	0.0 = ±0.25			
		0.00 = ±0.05			
RED DOT = ORIGINAL BLACK DOT = COPY	BROWNELL LTD LONDON NW10 7XF	DRAWN	CHECKED		
		PK			
TITLE IMMERSIBLE BREATHER HEAD		DRAWING No. BL/D6693 INST			

DRG No
BL/D9660 INST

THIRD ANGLE PROJECTION

USED ON _____

BREATHER INLET
(SINTERED POLYETHYLENE)





NOTES :-

- 1) TEMPERATURE RANGE -30°C $+80^{\circ}\text{C}$ (OPERATING).
- 2) CONFORMS TO DEF STAN 44-2 WHERE APPLICABLE.
- 3) IP64
- 4) FLOWRATE : 5 litres/min @ 1.0 p.s.i.
- 5) CONTAINS TWO 20μ SINTERED FILTER DISKS

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MATERIAL BRASS (NON-SPARKING)	PROTECTIVE FINISH NICKEL PLATED				
			6228	3	29-03-07
			6226	2	22-03-07
		ORIGINAL		1	08-03-05
EST. WT. _____	SURFACE ROUGHNESS _____	CHANGE	MOD No	ISSUE	DATE
DIMS IN MM _____	_____	TOLERANCES ± 0.5			
SCALE 2:1	_____				
 RED DOT = ORIGINAL  BLACK DOT = COPY	BROWNELL LTD LONDON NW10 7XF		DRAWN	CHECKED	
			PK		
TITLE BREATHER HEAD			DRAWING No. BL/D9660 INST		

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DRG. No.

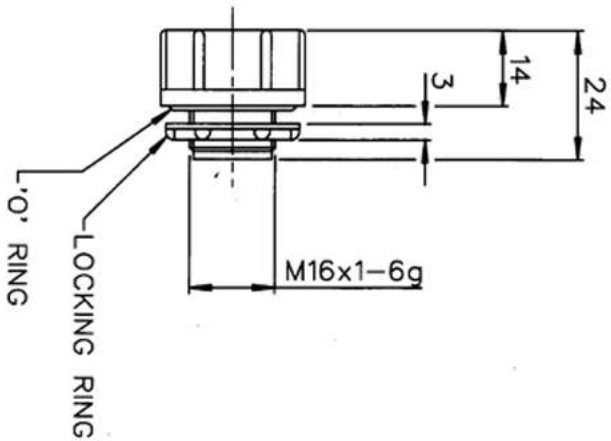
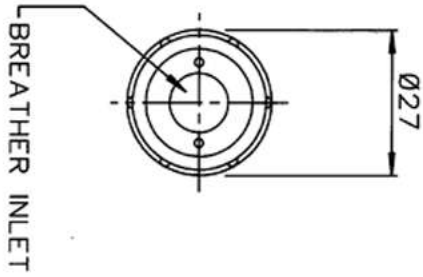
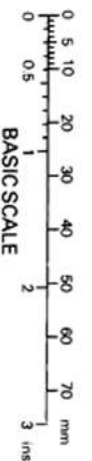
BL/D 6343 INST

USED ON

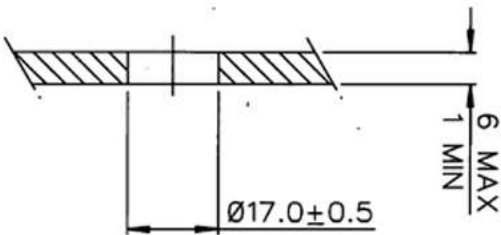
REMOVE ALL SHARP EDGES UNLESS SPECIFIED.

THIRD ANGLE PROJECTION

DO NOT SCALE - ASK.



PANEL MOUNTING
DETAIL



MATERIAL

BLACK
POLYCARBONATE

PROTECTIVE
TREATMENT

NATURAL

TOLERANCES
UNLESS
STATED

± 0.5

DIMMS. IN ~~mm~~ /m.m.

SCALE (ORIGINAL) 1 : 1

BROWNELL LTD. LONDON, N.W.10.

TITLE

IMMERSION PROOF BREATHER

CHANGE	MOD. No.	ISSUE	DATE
REDRAWN	5164	2	10/12/97
		1	12/12/93

CUSTOMERS REF.

DRAWN
CHECKED

DRAWING No.
BL/D 6343 INST

EST. WT. —

WAC:278

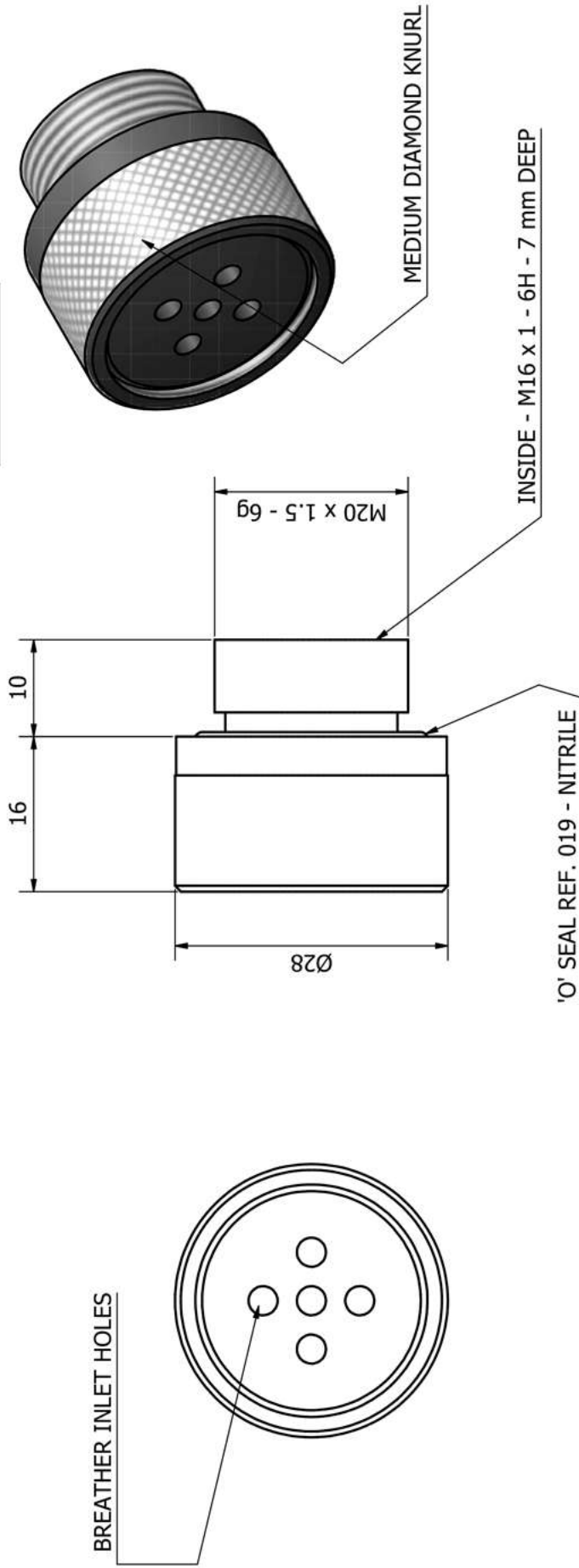
DRG No
BL/D5243 INST
USED ON -----

REMOVE ALL SHARP EDGES UNLESS SPECIFIED

THIRD ANGLE PROJECTION

DO NOT SCALE - ASK

ISOMETRIC



NOTES:

1. CONFORMS TO DEF. STAN 44-2 & 66-14 WHERE APPLICABLE.
2. BREATHER WILL WITHSTAND IMMERSION IN WATER TO A DEPTH OF 1 METRE FOR 30 MINUTES WITHOUT ANY WATER INGRESS. MAXIMUM TEMPERATURE DIFFERENCE BETWEEN WATER AND BREATHER: 15° C.
3. INTERNAL THREAD M16x1 TO SUIT BREATHER DESICCATOR PART No. BL/D5244.

4. FLOW RATES (NOMINAL):
- | | | |
|-----------|----|------------|
| 10cc/MIN | AT | 3.5 mm Wg |
| 50cc/MIN | AT | 11.0 mm Wg |
| 100cc/MIN | AT | 18.5 mm Wg |
| 150cc/MIN | AT | 29.0 mm Wg |

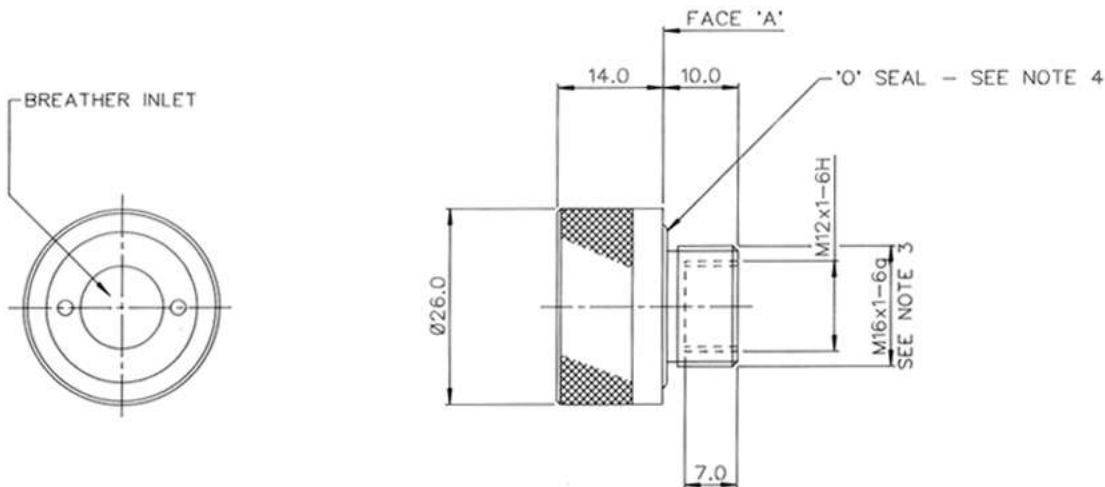
MATERIAL ALUMINIUM ALLOY		PROTECTIVE FINISH ANODISED BLUE - BLACK		UNLESS OTHERWISE STATED	ANGULAR DIMS $\pm 0.5^\circ$	LINEAR DIMS ± 0.5	BROWNELL Ltd. LONDON NW10 7XF		RED DOT=ORIGINAL BLACK DOT=COPY	DRAWN AM	CHECKED
EST. WT. -----		SCALE (ORIGINAL) 2:1		SURFACE ROUGHNESS DIMENSIONS IN in/mm		TITLE IMMERSIBLE BREATHER HEAD		DRAWING NUMBER BL/D5243 INST			
								CHANGE		DATE	
								MOD No		ISSUE	
								ORIGINAL		1	
								PICTORIAL CHANGE		2	
								REDRAWN		3	
								04/04/11		04/04/11	
								3697		06/07/89	
								6439		04/04/11	

DRG No
BL/D 5248/01-02 INST
USED ON

THIRD ANGLE PROJECTION

REMOVE ALL BURRS & SHARP EDGES

DO NOT SCALE - ASK



NOTES

- CONFORMS TO DEF STAN 44-2 & 66-14 WHERE APPLICABLE.
- BREATHER WILL WITHSTAND IMMERSION IN WATER TO A DEPTH OF 1 METRE FOR 15 MINUTES WITHOUT ANY WATER INGRESS - MAXIMUM TEMPERATURE DIFFERENCE BETWEEN WATER & BREATHER: 15 °C.
- THE INTERNAL 3.0 DIA HOLE, 'O' SEAL RECESS, FACE 'A' AND M16x1 MOUNTING THREAD ARE ALOCHROMED FOR R.F. SCREENING CONTINUITY. (THE INTERNAL 3.0 DIA HOLE ALLOWS THE REQUIRED LEVEL OF R.F. SCREENING TO BE ACHIEVED).
- PART No. BL/D5248/01 IS SUPPLIED WITHOUT 'O' SEAL.
PART No. BL/D5248/02 IS SUPPLIED WITH FLUOROSILICONE 'O' SEAL, SIZE 0181-16.

DRG No	NSN
BL/D5248/01	
BL/D5248/02	7025-99-930-6055

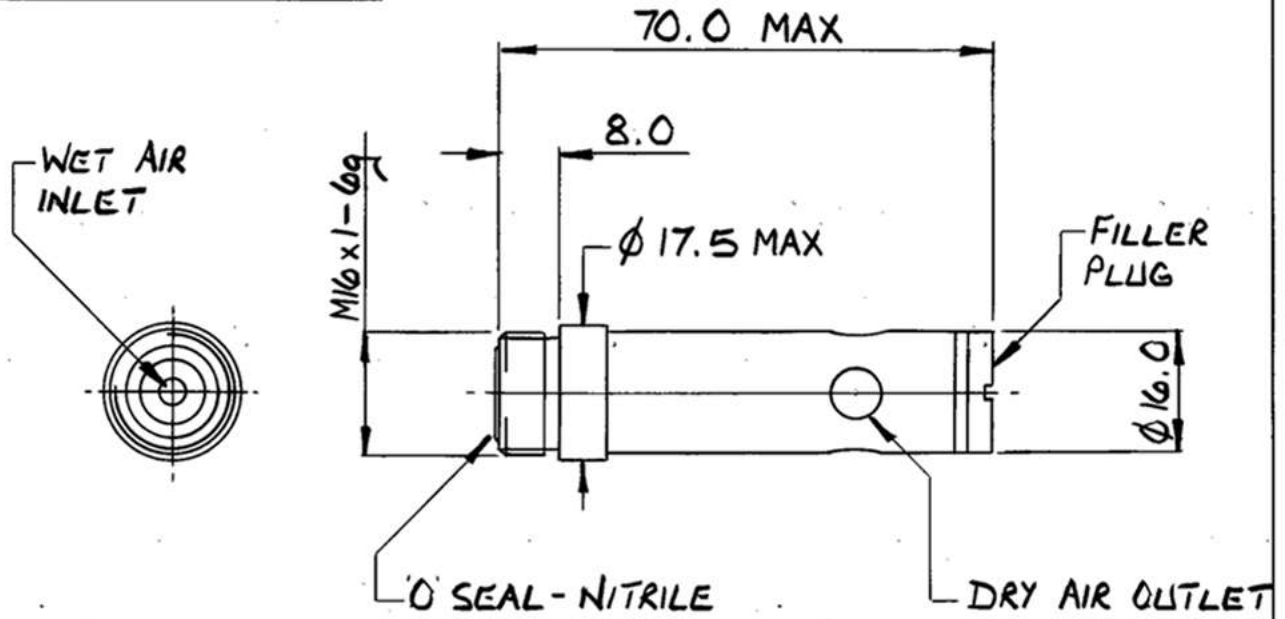
ANODIC COLOUR CHANGED	5870	F	17/12/01
REDRAWN	4207	E	3/2/93
CHANGE	MOD No	ISSUE	DATE

MATERIAL	PROTECTIVE FINISH	TOLERANCES UNLESS STATED	±0.5	BROWNELL LIMITED LONDON NW10	CUSTOMER REF.	DRAWN	CHECKED
ALUM ALLOY	ANODISED BLACK SEE NOTE 3	DIMNS IN mm /mm		TITLE	DRAWING No	LJ	R
EST. WT. —		SCALE (ORIGINAL) 2 : 1		IMMERSIBLE BREATHER HEAD (R.F. SCREENED)	BL/D 5248/01-02 INST		

DRG. No.
BL/D 5244 INST

USED ON

THIRD ANGLE
PROJECTION



NOTES

1. CONTAINS APPROX. 6 gms MOLECULAR SIEVES DESICCANT GRADE 4A, 1-3mm BEAD. SPEC. TS10273.
2. EXTERNAL THREAD M16 x 1 TO SUIT IMMERSIBLE BREATHER HEAD BL/D 5243.
3. CONFORMS TO DEF. STAN. 44-2 WHERE APPLICABLE.
4. REFILL PT. NO. BL/D 2807/14.

MATERIAL ALUM. ALLOY	PROTECTIVE FINISH ANODISED				
EST. WT. —		CHANGE	MOD. No.	ISSUE	DATE
DIMNS IN mm	SURFACE ROUGH	TOLERANCES ±0.5			
SCALE —					
BROWNELL LIMITED LONDON N.W.10			DRAWN JK	CHKD. JA	
SUB CONT. —		SUB CONT. DRG. REF. —			
TITLE DESICCANT CONTAINER DEHUMIDIFIER (BREATHER TUBE)		DRAWING No. BL/D 5244 INST			

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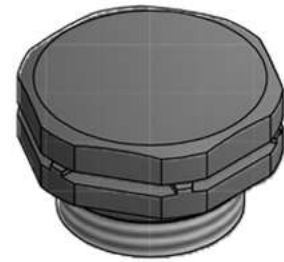
DRG No

BL/D11534 INST

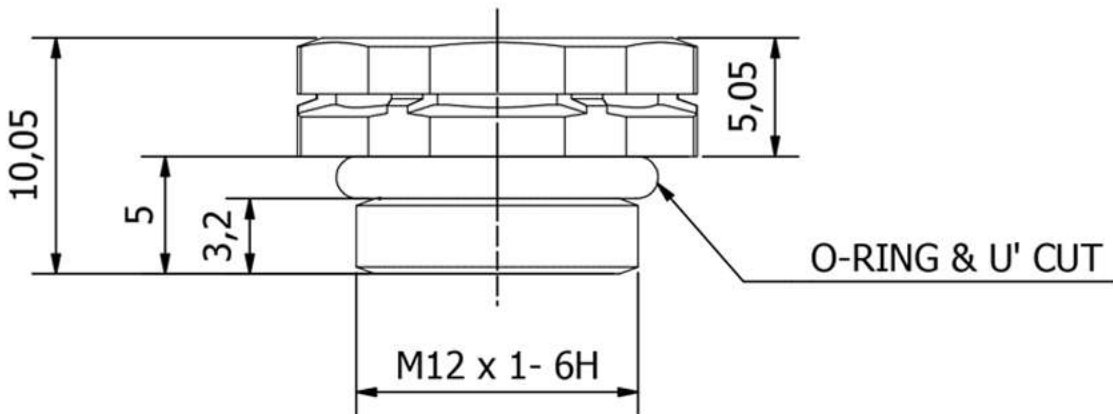
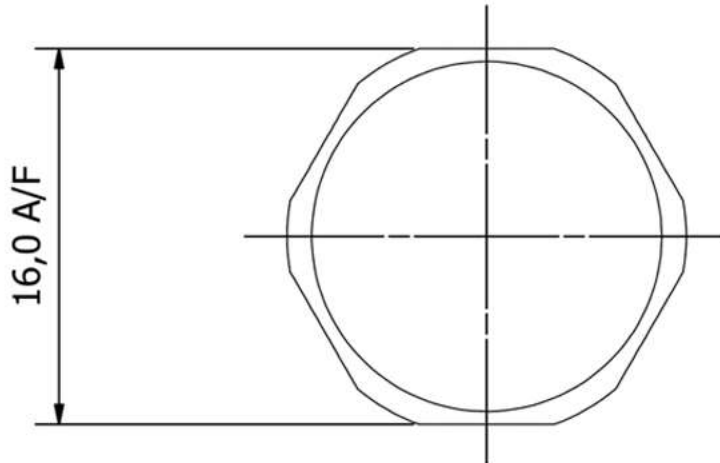
USED ON _____

REMOVE ALL SHARP EDGES
UNLESS SPECIFIED

DO NOT SCALE - ASK



ISOMETRIC VIEW
SCALE 2:1



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MATERIAL PLASTIC	PROTECTIVE FINISH DYED BLACK SMOOTH FINISH				
			6545	2	09.09.13
EST. WT. _____		THIRD ANGLE PROJECTION	CHANGE	MOD No	ISSUE
DIMS IN mm	TOLERANCES UNLESS OTHERWISE STATED	SURFACE TEXTURE	ANGULAR DIMS	LINEAR DIMS	
SCALE 3:1		3.2 μm(N8)	± 0.5°	0 = ±0.5 0.0 = ±0.25 0.00 = ±0.05	
RED DOT = ORIGINAL BLACK DOT = COPY	BROWNELL LTD LONDON NW10 7XF		DRAWN	CHECKED	
			AA		

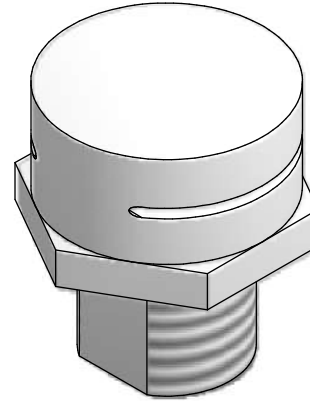
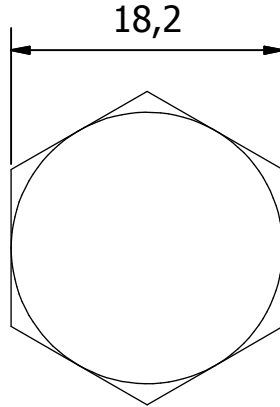
TITLE	DRAWING No.
BREATHER HEAD	BL/D11534 INST

DRG No
BL/D11640 INST

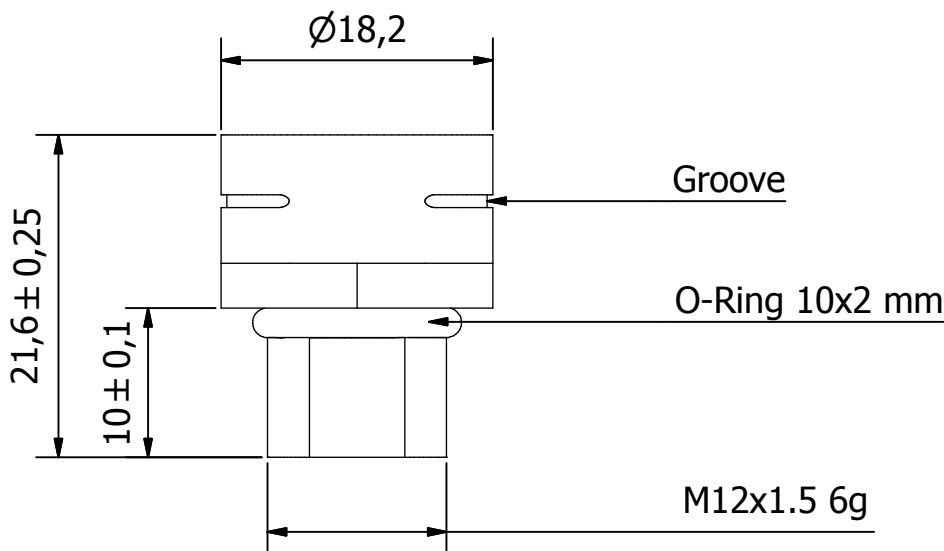
REMOVE ALL SHARP EDGES
UNLESS SPECIFIED

DO NOT SCALE - ASK

USED ON



(2:1)



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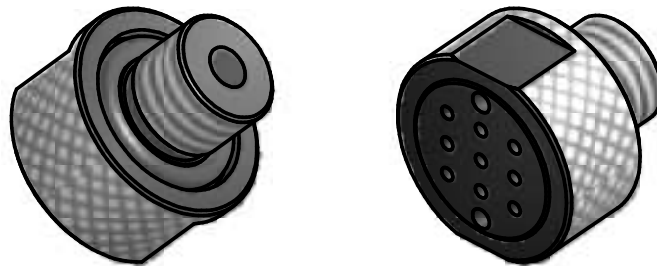
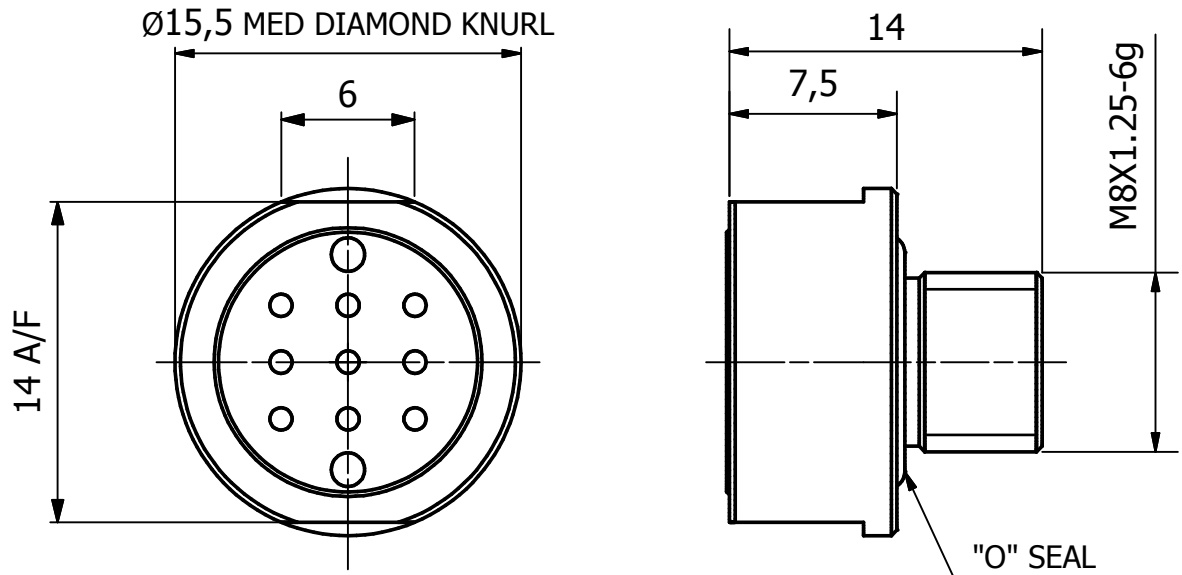
MATERIAL ALUMINIUM ZINC ALLOY	PROTECTIVE FINISH NICKEL COPPER				
		ORIGINAL		1	22/08/13
EST. WT.	THIRD ANGLE PROJECTION	CHANGE	MOD No	ISSUE	DATE
DIMS IN mm	TOLERANCES UNLESS OTHERWISE STATED	SURFACE TEXTURE	ANGULAR DIMS	LINEAR DIMS	
SCALE 2:1		3.2 µ m(N8)	± 0.5°	0 = ±0.5 0.0 = ±0.25 0.00 = ±0.05	
RED DOT = ORIGINAL BLACK DOT = COPY	BROWNELL LTD LONDON NW10 7XF		DRAWN AA	CHECKED	
TITLE IMMERSION BREATHER		DRAWING No. BL/D11640 INST			

DRG No
BLD10693 INST

REMOVE ALL SHARP EDGES
UNLESS SPECIFIED


DO NOT SCALE - ASK

USED ON



ISOMETRIC (2 : 1)

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MATERIAL	PROTECTIVE FINISH				
ALUMINIUM ALLOY	ANODISED TO DEF STAN 03-25 & DYED BLACK				
EST. WT.	THIRD ANGLE PROJECTION	CHANGE	MOD No	ISSUE	DATE
DIMS IN mm	SURFACE TEXTURE	TOLERANCES : UNLESS OTHERWISE STATED			
SCALE 3:1					
 RED DOT = ORIGINAL BLACK DOT = COPY	BROWNELL LTD LONDON NW10 7XF	DRAWN JB	CHECKED		
TITLE IMMERSION BREATHER		DRAWING No. BLD10693 INST			