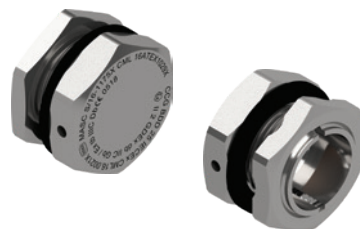


# BREATHER DRAIN PLUG

Ex db, Ex eb, Ex tb

for General Industrial and Hazardous Area Installations



## Features and Benefits

- Enables equipment to breathe whilst maintaining relevant protection levels.
- Drains water from equipment that is susceptible to moisture collection whilst maintaining relevant protection levels.
- No limitations on the volume of enclosures.
- The Exe version is supplied with a castellated nut or optional serrated gasket with standard locknut for high vibration applications.
- Precision manufactured from high quality brass (Marine Grade Electroless Nickel Plated™) available in stainless steel 316/316L on request.
- Supplied with thread sealing gasket as standard.

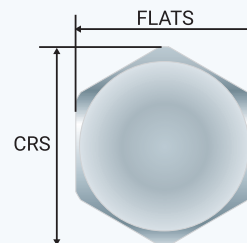
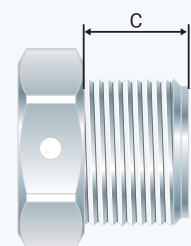


## Technical Data

|           |                                                                                                                                                         |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type:     | Breather Drain Plugs for Ex d and Ex e applications                                                                                                     |
| Material: | Body / Plug<br>Sinter<br>Gasket                                                                                                                         |
|           | Brass (Marine Grade Electroless Nickel Plated™), Stainless Steel 316/316L<br>Bronze or stainless steel<br>Standard HDPE, Nylon 66 or Extreme Temp. PTFE |
| Note:     | The installer should ensure that the materials are suitable for the installation environment                                                            |

## Standards and Certifications

|                              |                                                                                                                                                                                                                                                                                        |                    |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| Equipment Protection Levels: | IECEx/INMETRO: (BD***E) Ex eb I Mb / Ex eb IIC Gb / Ex tb IIIC Db<br>(BD***D) Ex db I Mb / Ex db IIC Gb / Ex tb IIIC Db<br>ATEX/UKEX: (BD***E) Ex I M2 Ex eb I Mb / Ex II 2 G D Ex eb IIC Gb / Ex tb IIIC Db<br>(BD***D) Ex I M2 Ex db I Mb / Ex II 2 G D Ex db IIC Gb / Ex tb IIIC Db |                    |
| Conformance:                 | Standard:                                                                                                                                                                                                                                                                              | Certificate:       |
| IECEx                        | IEC 60079 Part 0, 1, 7, 15, 31                                                                                                                                                                                                                                                         | IECEx CML16.0021X  |
| ATEX                         | EN 60079 Part 0, 1, 7, 31                                                                                                                                                                                                                                                              | CML 16ATEX1029X    |
| UKEX                         | BS EN 60079 Part 0, 1, 7, 31                                                                                                                                                                                                                                                           | CML 21UKEX1018X    |
| INMETRO (Brazil)             | ABNT NBR IEC 60079 Part 0, 1, 7, 31                                                                                                                                                                                                                                                    | TÜV 16.1857X-001   |
| SANS                         | SANS/IEC 60079 Part 0, 1, 7, 15, 31                                                                                                                                                                                                                                                    | MASC MS/23-9594    |
| IP66 - BD***E                | IEC 60529                                                                                                                                                                                                                                                                              | IECEx CML 16.0021X |
| IP6X - BD***D                | IEC 60529                                                                                                                                                                                                                                                                              | IECEx CML 16.0021X |
| Marine ABS                   | IEC 60079 Part 0, 1, 7, 15, 31, IEC 60529                                                                                                                                                                                                                                              | ABS 25-0164964-PDA |
| DNV                          | IEC 60079 Part 0, 1, 7, IEC 60529                                                                                                                                                                                                                                                      | TAE0000010         |



## Conditions for Safe Use - X

- The breather drain plugs shall be used with the supplied thread sealing gaskets and the installer shall ensure that the surface of the enclosure against which the thread sealing gasket seals is in good condition.
- The breather drain plugs must be installed at the bottom of the equipment.
- When used in Ex db applications, the breather drain plugs shall not be used with any form of entry device.
- The service temperature ranges shall not be exceeded as per Table 1.
- For Group I applications, the Breather/Drains shall only be installed in locations where the risk of mechanical impact is low

Table 1

| Breather / Drain          | Service Temp.   |
|---------------------------|-----------------|
| BD***D (All arrangements) | -60°C to +95°C  |
| BD***E (HDPE gasket)      | -60°C to +95°C  |
| BD***E (Nylon gasket)     | -60°C to +100°C |
| BD***E (PTFE gasket)      | -60°C to +160°C |

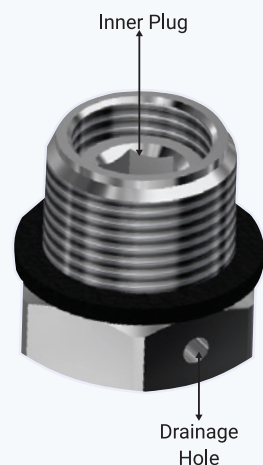
| Product Code | Protection Level | Entry Thread |                    | Hexagonal Detail |                | Installation Torque Value Nm |
|--------------|------------------|--------------|--------------------|------------------|----------------|------------------------------|
|              |                  | Type         | Minimum Length 'C' | Maximum 'Flats'  | Maximum 'Crns' |                              |
| BDM12E       | Exe              | M12x1.5      | 12.0               | 18.0             | 20.3           | 21.0                         |
| BDM16E       | Exe              | M16x1.5      | 12.0               | 22.0             | 24.8           | 21.0                         |
| BDM20E       | Exe              | M20x1.5      | 12.0               | 24.0             | 27.0           | 21.0                         |
| BDM25E       | Exe              | M25x1.5      | 12.0               | 32.0             | 36.0           | 30.0                         |
| BDN12E       | Exe              | ½ NPT        | 15.0               | 24.0             | 27.0           | 21.0                         |
| BDN34E       | Exe              | ¾ NPT        | 15.0               | 32.0             | 36.0           | 30.0                         |
| BDM20D       | Exd              | M20x1.5      | 15.0               | 24.0             | 27.0           | 21.0                         |
| BDM25D       | Exd              | M25x1.5      | 15.0               | 32.0             | 36.0           | 30.0                         |
| BDN12D       | Exd              | ½ NPT        | 15.0               | 24.0             | 27.0           | 21.0                         |
| BDN34D       | Exd              | ¾ NPT        | 15.0               | 32.0             | 36.0           | 30.0                         |

All dimensions except NPT are in mm. Larger thread sizes are available.

CCG reserves the right to make alterations to the technical data, dimensions, designs and products available without notice. The illustrations cannot be considered binding. Please contact CCG for assistance. BREATHER-PL110826

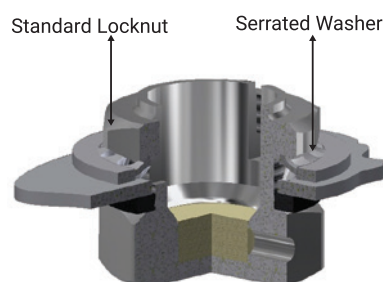
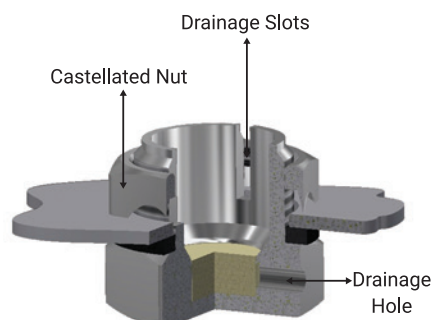
## Ex d, Ex tb, BREATHER / DRAIN PLUG

1. Ensure that the inner plug is fully tightened into the breather/ drain body.
2. The Ex d breather drain plug must be fitted to an appropriate threaded entry at the bottom of the equipment.
3. Tighten to torque as shown in the table below (metric threads). NPT versions should be tightened 'wrench tight'.
4. If the entry thread is NPT then appropriate thread sealing means may be used.



## Ex e, Ex tb, BREATHER / DRAIN PLUG

1. The Ex e breather drain plug must be fitted to the bottom of the equipment. It can be screwed into a threaded entry or secured in a clearance hole using the castellated nut supplied.
2. In high vibration applications the Ex e breather drain plug may optionally be secured using a serrated washer and standard locknut.
3. Tighten locknuts to secure the breather/drain. Note that the Ex e breather drain has slots cut in its threads to assist draining. Excessive tightening of the locknut may cause thread distortion.



| Product Code | Protection Level | Entry Thread |                    | Hexagonal Detail |                | Installation Torque Value Nm |
|--------------|------------------|--------------|--------------------|------------------|----------------|------------------------------|
|              |                  | Type         | Minimum Length 'C' | Maximum 'Flats'  | Maximum 'Crns' |                              |
| BDM12E       | Exe              | M12x1.5      | 12.0               | 18.0             | 20.3           | 21.0                         |
| BDM16E       | Exe              | M16x1.5      | 12.0               | 22.0             | 24.8           | 21.0                         |
| BDM20E       | Exe              | M20x1.5      | 12.0               | 24.0             | 27.0           | 21.0                         |
| BDM25E       | Exe              | M25x1.5      | 12.0               | 32.0             | 36.0           | 30.0                         |
| BDN12E       | Exe              | ½ NPT        | 15.0               | 24.0             | 27.0           | 21.0                         |
| BDN34E       | Exe              | ¾ NPT        | 15.0               | 32.0             | 36.0           | 30.0                         |
| BDM20D       | Exd              | M20x1.5      | 15.0               | 24.0             | 27.0           | 21.0                         |
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| BDN12D       | Exd              | ½ NPT        | 15.0               | 24.0             | 27.0           | 21.0                         |
| BDN34D       | Exd              | ¾ NPT        | 15.0               | 32.0             | 36.0           | 30.0                         |

All dimensions except NPT are in mm. Larger thread sizes are available.