

Stopping Plugs – SPA, SPB, SPMH & SPHH Range – INSTALLATION INSTRUCTIONS

Warning

PLEASE STUDY THESE INSTRUCTIONS CAREFULLY BEFORE INSTALLATION. These products should not be used in any application other than those mentioned here or in our Data Sheets, unless Peppers states in writing that the product is suitable for such application. Peppers can take no responsibility for any damage, injury or other consequential loss caused where the products are not installed or used according to these instructions. This leaflet is not intended to advise on the selection of the products. Further guidance can be found in the standards listed below.



Brief Description

The Peppers range of Stopping Plugs are intended for indoor or outdoor use in the appropriate hazardous area locations. Stopping Plugs are designed to blank off an unused entry of an enclosure or housing and maintain the environmental protection of the equipment. They give environmental protection to IP66 or IP68 and are suitable for both mining and surface applications.

Product Approval

Range	Approval Concept	Equipment Group and EPL	IP Protection	CSA Approval	Enclosure Type
SPA SPB	Ex d - Flameproof Ex e – Increased Safety Ex tb – Protected by Enclosure	I Mb / II Gb / III Db	IP66	Class I Div 1 Groups A, B, C & D Class II Div 1 Groups E, F & G Class III	4X
SPMH SPHH	Ex d - Flameproof Ex e – Increased Safety Ex tb – Protected by Enclosure Ex nR – Restricted Breathing ¹	I Mb / II Gb & Gc / III Db	IP66 / 68 ^{2 3}	Class I Div 1 Groups A, B, C & D Class II Div 1 Groups E, F & G Class III	4, 4X, 6, 6P

¹ SPHH Ex nR approval only when fitted with O-Ring seal or sealing washer

² SPHH will maintain IP66 without O-Ring seal or sealing washer

³ IP68 – Products tested to a depth of 100 metres for a period of 7 Days

Installation Guidance

Point	Advice
1	IEC / EN 60079-10 Classification of Hazardous Areas IEC / EN 60079-14 Electrical Installations in hazardous areas (other than mines)
2	Installation should only be carried out by a competent electrician, skilled in cable gland and electrical installations.
3	NO INSTALLATION SHOULD BE CARRIED OUT UNDER LIVE CONDITIONS.
4	Threaded entries: the product can be installed directly into threaded entries and the threads tightened as detailed below
5	Clearance holes: these may be 0.2mm to 0.7mm larger than the major diameter of the male thread. The product should be secured with a lock nut and the threads tightened as detailed below. If required a serrated washer should be used to provide additional securing of the stopping plug.
6	To maintain the Ingress Protection rating of the product, the entry hole must be perpendicular to the surface of the enclosure. The surface should be sufficiently flat and rigid to make both the IP joint, and earth contact where needed. The surface must be clean and dry. For taper threads use thread sealant.
7	Whilst Peppers products with tapered threads have been tested to maintain IP66 without any additional sealant, due to the differing gauging tolerances associated with the use of tapered threads it is recommended to use a non-hardening thread sealant if an IP rating higher than IP54 is required.
8	Aluminium variants may not be used in Group I (Mining) applications

Installation

The thread should be tightened as follows:-

Metal stopping plug with O-ring – hand-tight then a further half-turn using wrench

Metal stopping plug with sealing washer – hand-tight then one flat (one sixth-turn) using wrench

Metal stopping plug without seal – hand-tight then one flat (one sixth-turn) using wrench

Limitations on Usage

Feature	Comment																				
Enclosure entry thread (Ex d)	The female thread in the enclosure must comply with clause 5.3 of EN or IEC 60079-1, as appropriate. Do not damage threads on assembly. Check the number of full turns of thread engaged is at least 5.																				
Unused Ex d Entries	No stopping plug shall be used to plug the female entry of a flameproof 'Exd' adaptor/reducer under live conditions																				
Temperature Limitations	Products are approved for a temperature range at their point of mounting based upon the interface seal as detailed below: -																				
	<table border="1"> <thead> <tr> <th>Seal Material</th> <th>Temperature Range</th> <th>Seal Material</th> <th>Temperature Range</th> </tr> </thead> <tbody> <tr> <td>No Seal</td> <td>-100°C to +400°C</td> <td>Fluorosilicone O-Ring</td> <td>-55° C to +200°C</td> </tr> <tr> <td>Nitrile O-Ring</td> <td>-30°C to +100°C</td> <td>Viton O-Ring</td> <td>-20°C to +180°C</td> </tr> <tr> <td>Neoprene O-Ring</td> <td>-35°C to +95°C</td> <td>EPDM O-Ring</td> <td>-50°C to +110°C</td> </tr> <tr> <td>Silicone O-Ring</td> <td>-60°C to +200°C</td> <td></td> <td></td> </tr> </tbody> </table>	Seal Material	Temperature Range	Seal Material	Temperature Range	No Seal	-100°C to +400°C	Fluorosilicone O-Ring	-55° C to +200°C	Nitrile O-Ring	-30°C to +100°C	Viton O-Ring	-20°C to +180°C	Neoprene O-Ring	-35°C to +95°C	EPDM O-Ring	-50°C to +110°C	Silicone O-Ring	-60°C to +200°C		
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CSA Approval	Stopping Plugs shall not be used in any application where the operating temperature is below -50°C																				

Markings For Methods Of Protection and Gas/Vapour & Dust Apparatus Groups

Ex d I & IIC / Ex e I & IIC / Ex tb IIC / Ex nR IIC

Marking Notes

1) Additional hazardous area certification information may be detailed on the product

Certificate Numbers : (ATEX) SIRA 09ATEX1322X (IEC) IECEx SIR 09.0131X (CSA) 2310046 (GOST-R) POCC GB.ГБ06.В00853
SIRA 09ATEX4323X

ATEX (EU Directive 94/9/EC) Markings: I M2 II 2 GD II 3 GD GOST-R Approval: ExdIU / ExdIICU / ExeIU / ExellU / ExnRIIU

Conditions for Safe Use

- Where Stopping Plugs without sealing rings are installed in protection by enclosure (Ex t) equipment for use in explosive dust atmospheres, they may only be fitted into enclosures offering a minimum of 5 full threads, in accordance with IEC 60079-31:2008 clause 5.1.1
- Whilst Peppers range of Stopping Plugs have been tested and approved to the stated IP protection ratings, the tests were conducted on a representative thread or enclosure having a smooth flat mounting surface. In practice the interface between the stopping plug and associated equipment cannot be defined, therefore it is the user's responsibility to ensure that an appropriate degree of ingress protection (minimum IP54 or IP6X for Ex t applications) is maintained.
- It is the user's responsibility to ensure that the limiting temperature of the seal is not exceeded and that the chemical resistance properties of the seal are suitable for the intended application.