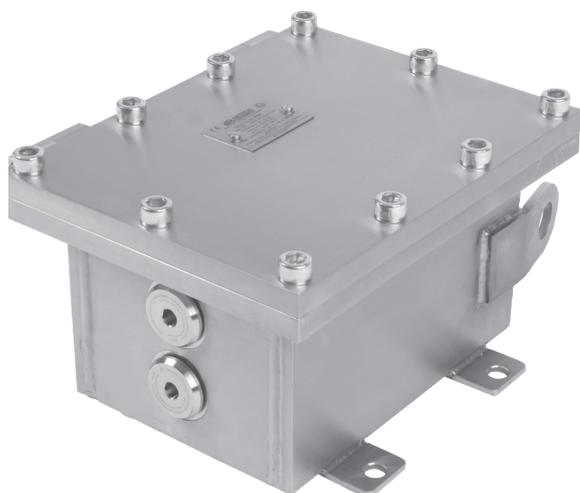


# Installation, Operation, Maintenance: NAUTILUS RANGE



## Marking

 II 2 G D  
Ex e IIC T5 Gb  
Ex tb IIIC T100°C Db  
Ta = -50°C to +55°C

 II 2 G D  
Ex ib IIC T5 Gb  
Ex tb IIIC T100°C Db  
Ta = -50°C to +55°C

 II 1 G D  
Ex ia IIC T5 Ga  
Ex ta IIIC T100°C Da  
Ta = -50°C to +55°C

### NOTE:

*This product is subject to special conditions and these are noted in the above numbered certificate which should be read and understood prior to installation or maintenance. All cable, cable entry devices and terminals used must be suitable for the minimum ambient temperature expected and the maximum operational temperature expected.*

## Installation

- 1) Using the mounting dimensions data provided, either in the product catalogue data sheets or on the drawings supplied (as part of the project documentation) mark out the positions for the mounting holes on the surface where installation is required.
- 2) Drill the mounting holes for appropriate fixing studs or bolts.
- 3) The Nautilus is extremely heavy and most sizes will require mechanical assistance for mounting. Generally, lifting lugs or eyelets are provided. Lift the enclosure into position using such assistance as may be necessary to avoid injury and fit the mounting studs or bolts. To aid fitting mounting studs, it will be helpful to partially fit studs, prior to fully tightening.
- 4) The enclosure may contain metric or NPT cable entries and this information will be included in the delivery documentation. Install and secure suitably certified cable glands in accordance with the manufacturers instructions. Any unused entries must have a suitably certified stopping plug fitted. Cable glands and stopping plugs must be fitted with an IP washer providing a minimum level of protection of IP64.
- 5) Pull the cables into the box leaving trailing leads of a length specified by site practice or the site engineer and secure any cable armour in accordance with site practice.
- 6) Where slotted trunking has been supplied (solid trunking is not permitted) ensure that it is suitable for the proposed T classification of the final certified product. Trunking may be mounted in any orientation in the box, vertically, horizontally or diagonally.
- 7) When laying cables into trunking; No more than 50% of the trunking internal area shall be occupied by conductors, when instrumentation currents of 1A or less are carried.
  - When cables with current of 1A or less are fitted, no more than 50% of the trunking internal area may be occupied. All cabling used must be capable of carrying a minimum of 3A.
  - When cables with current of 1A or less are fitted, no more than 25% of the trunking internal area shall be occupied by conductors, these shall be de-rated to a maximum of 4A /mm<sup>2</sup>. All cabling used must be capable of carrying a minimum of 10% higher current than the rating required.

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8) Terminate the cables in the terminals provided in accordance with the requirements of BS EN 60079-14. Consideration must be given to any use limitations or special conditions detailed on the certificates for the terminals fitted.

9) Secure the lid by closing the lid and tightening the lid fixing screws first ensuring that the 'o' ring gasket is fitted correctly. Ensure that mating face of lid and threads of lid securing screws are suitably greased prior to fitting.

**NOTE:** *If the terminals provided with the enclosure are changed either in type or in quantity the terminal box certification may become invalid. Advice from ABTECH is recommended before any changes are made.*

## Earthing/Grounding

10) All Nautilus range enclosures are provided with an internal and external earthing/grounding facility. This must be connected to the appropriate earth bonding circuit before electrical power is connected to the contents of the enclosure.

## Operation

11) The lid must be secured using all the lid screws provided in order to maintain the IP rating.

12) No attempt must be made to remove the enclosure lid whilst electrical power is connected to the contents of the enclosure.

13) The earthing/grounding facility must be connected to the earth bonding circuit at all times when electrical power is connected to the enclosure.

## Maintenance

14) Routine maintenance is likely to be a requirement of local Health and Safety legislation. The laws of the applicable country must be considered and maintenance checks carried out accordingly.

15) Additional checks that are advisable to ensure the efficiency of ABTECH Nautilus range enclosures are:-

Activity	Frequency
1 Check that the lid seal is not damaged and is in place	Each time the enclosure is opened
2 Check that all lid fixing screws are in place and secured	Each time the enclosure is opened
3 Check that the mounting bolts are tight and free of corrosion	Every 3 years
4 Check the security of all cable glands and entry devices	Every 3 years
5 Check the enclosure for damage	Every 3 years
6 Check that all screw clamp terminals are secure	As manufacturers recommendations

## Chemical attack

The Abtech Nautilus range enclosures are available in stainless steel of various grades. The following additional material are also used :-

- Silicone rubber
- Brass

Stainless steel enclosures are not painted except to customer specifications.

Consideration should be given to the environment in which these enclosures are to be used to determine the suitability of these materials to withstand any corrosive agents that may be present.



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## **Static hazard**

Nautilus range enclosures do not present a hazard from static electricity.

## **Vibration**

Nautilus range terminal boxes are designed for use in areas subject to normal industrial levels of vibration. They are not designed for use in areas subject to intentional or extreme conditions of vibration or shock.

## **Protection From Foreseeable Faults**

Circuits connected in the enclosure must be externally protected using suitable circuit interruption devices to prevent overloading. Provided the enclosure is correctly installed, there should be no foreseeable faults.