DOUGHTY

Internally Wired Bars

USER MANUAL

Original Instructions

Internally Wired Bars (IWB's) are designed to support and power items of equipment for the entertainment industry (TV, Film and Theatre) such as specialist luminaires, fog machines and audio equipment etc.

Cautions

- **IWB's ARE FOR INDOOR USE ONLY**
- Fixings should only be attached to a safe structure, using proprietary products, and should not be further than 2m apart.
- This product should only be installed by competent persons, and in such a way as to conform to any local regulations which may prevail.
- The Working Load Limit must be adhered to: 39Kg per linear metre evenly distributed (78Kg total between 2m suspension points), or 39Kg point load between 2 metre suspension points. Greater loads are acceptable with closer fixings - see BS 7906-1 for further information.
- This product **MUST** be adaquately earthed and socket outlets must be protected with a protective over current device, e.g. RCD, fuse, etc.
- It is the responsibility of the installer to ensure the product meets the electrical safety standards which prevail in the territory in which it is fitted.
- The product should be installed/rigged in such a way as to ensure it is secure and not likely to be a safety hazard.
- Ensure no flammable items are placed close to or over the bar or any equipment rigged from it. Particular caution should be exercised when using drapes.
- Ensure the weight load is evenly distributed along the length of the IWB.
- Inspection of the IWB, associated rigging and electrical components should be regularly made by a suitably qualified person.

- Maximum current rating must not be exceeded under any circumstance:

Number of Outlets	Overall Maximum Current
3	45Amps
4+	60Amps

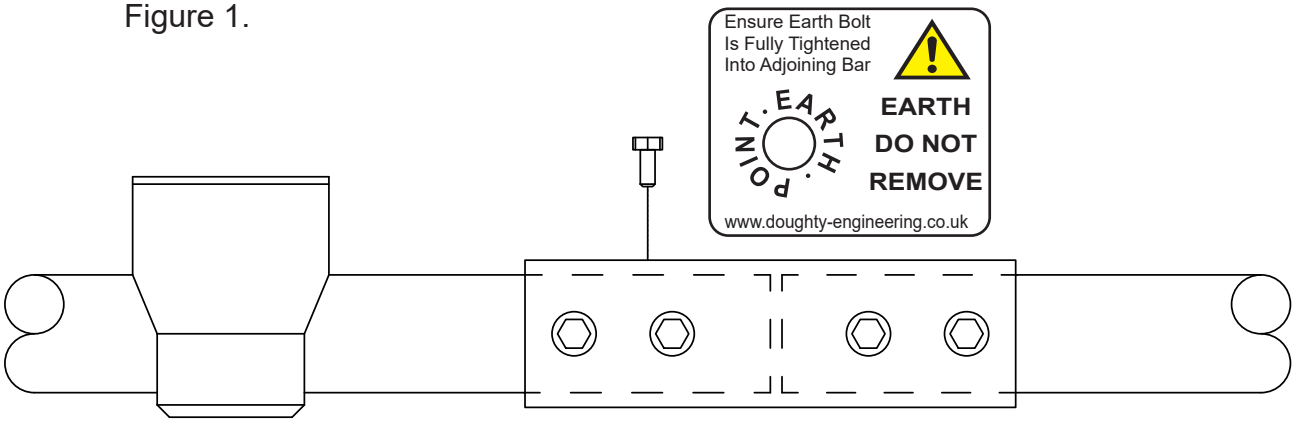
See rating plate for further details

- Electrical phases should not be mixed on IWB's. They should be Single Phase only - DO NOT Cross Patch.
- Caution should be exercised in relation to working at height, risk of electric shock and any other factors which may present a hazard.
- Items connected to this equipment should be secured firmly by appropriately rated proprietary clamps and always protected by a secondary safety bond with a suitable safe working load.
- Items should not be plugged or unplugged while the power is connected.
- Disconnection of Mains power may take place remotely from the IWB and may be via the buildings infrastructure. Ensure you know where this is, how it is operated and that it cannot be inadvertently re-connected while you are rigging.
- Ensure the rigging clamp is fully tightened to the IWB and the item being rigged.
- Ensure that if extension leads are used from other IWB's these are on the same phase as the IWB.

- Fixing type will depend upon the building structure but should always be secure and adequately specified to take both the weight of the IWB and any load to be placed upon it. A safety factor should be considered.
- The working load limit of the IWB will be dependent upon its fixings and the structure they are attached to. If in doubt, consult a structural engineer.
- Doughty Engineering Ltd will not accept responsibility for ascertaining the safe working load of its products that are dependent upon factors outisde of its control.
- Doughty Engineering Ltd recommends the IWB is rigged using M12 threaded rod or quality wire rope and associated fixings. Various primary fixing methods are available dependent upon the structure being fitted to.
- Ensure safety issues are observed and risk assessment/method statements are undertaken.
- Fixings should be arranged to equally distribute the load along the bar and superstructure.
- Lay the Bar out to check fixing positions and orientation of sockets etc.
- If the Bar is made in two or more sections, take care not to damage internal cabling when securing the joiner. Ensure the M6 earthing screw is tightened through the Tube Joiner and into the tapped hole in the adjoining Bar. This will serve to earth the Tube Joiner and into the adjoining Bar in the Tube Joiner. (See Figure 1.)
- Ensure that both sections are of the IWB are close together and that the Tube joiner is centered across the two bars, thus fixing to equal lengths of tube.
- When drilling the cable entry point in the termination box, take care to ensure the electrical components and cable insulation are not damaged by the hole-saw or hot swarf. Make sure that all swarf is cleared from the termination box.
- Fixings should be between 1.5m and 2.0m apart. If necessary, add additional fixings to ensure compliance. (See Figure 2.)

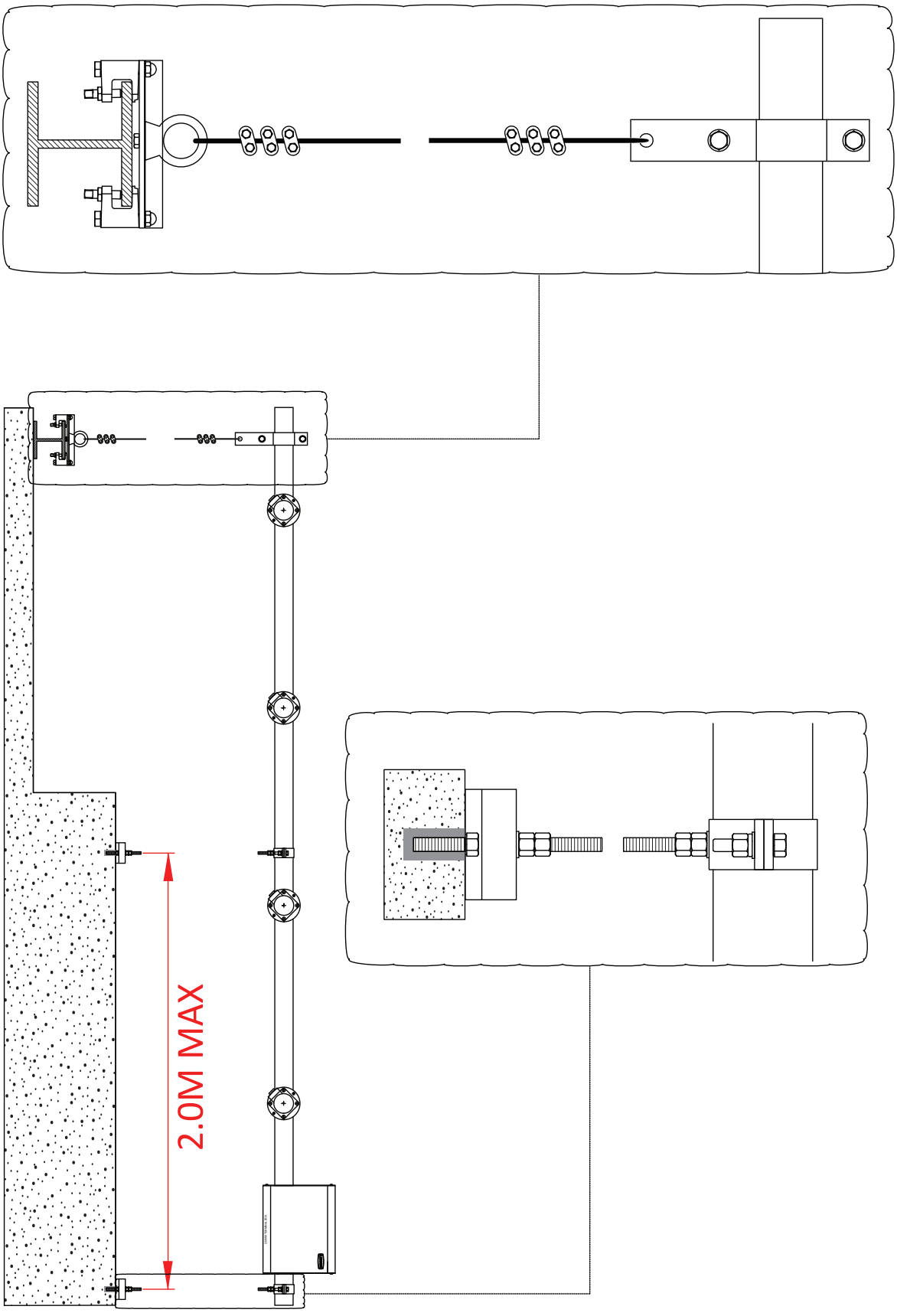
- Fit primary fixings to building structure in accordance with manufacturers instructions. If using a chemical anchor, ensure that it has fully cured before applying a load and that any nuts or bolts are tightened to the required torque setting.
- Load test fixing points to ensure they are capable of taking the specified load - including the safety factor.
- Attach threaded rod or wire rope to primary fixing point, fit universal clamps or wire rope hanging clamps as appropriate and tighten.
- The IWB should now be lifted into place and offered to the fixings. If possible, tie off the Bar whilst fixings are fitted around the aluminium tubing.
- Do not slide or twist the IWB through clamps as this may damage the finish.
- If applicable bring the cable into the termination box via the hole and appropriate gland, and terminate in accordance with local wiring or electrical regulations, taking care to ensure the IWB is earthed.
- Perform appropriate electrical and load tests.

Figure 1.



- The IWB should be inspected by appropriately qualified personnel for both electrical and mechanical integrity at least once a year, more frequently if local regulations require.
- Before a load test, all fixing fasteners should be checked to ensure they are free from damage and are tight.
- Load tests should be carried out under the constraints of any local regulations which prevail.
- The IWB should be kept dry and free from excessive dust build-up.
- To clean, disconnect from the mains and clean with a a dry cloth or brush. DO NOT use water or solvents.
- Sockets and covers should not be interfered with by unqualified personnel.
- If the IWB requires replacement parts or servicing please contact Doughty Engineering Ltd for the details of an approved service agent.
- If the IWB requires dismantling and folding (7 metres or greater) e.g. if relocating, ensure that any exposed cables are adequately protected.

Figure 2.



Fixings should be no further than 2m apart, this provide s maximum UDL = 78Kg between any two fixings
Max point load = 39Kg in any meter - see Cautions on pages 1 & 2.

DOUGHTY Engineering Ltd

EC-DECLARATION OF CONFORMITY

According to the Machinery Directive 2006/42/EEC Annex II

Doughty Engineering Ltd
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Hampshire
BH24 1NZ

Doughty Engineering Ltd hereby certify that the equipment stated below has been designed to comply with all relevant sections of the specifications referenced below and complies with all the applicable Essential Requirements of the EC Directives and amendments and the National Laws and Regulations adopting these Directives.

Description: Internally Wired Bars (IWB's)

Model/s: All Doughty Engineering IWB's within the parameters shown in the table below.

15a Outlets	1 to 18m	3 to 18 mains sockets	With or without Data Sockets	Silver or Black
16a Outlets	1 to 18m	3 to 18 mains sockets	With or without Data Sockets	Silver or Black
15a & 16a Outlets	1 to 18m	3 to 18 mains sockets	With or without Data Sockets	Silver or Black

Are in conformity with the provision of the following EC Directives:

2014/35/EU: Low Voltage Directive

Harmonised Standards applied:

BS EN 60059: Electric current, rated current, electrical equipment, electrical power systems, measuring instruments, electronically operated devices.

BS EN IEC 62368-1: 2024: Audio, Video and similar electronic apparatus – Safety Requirements.

Signed for and behalf of **Doughty Engineering Ltd**

Name **Dan Phillips**

Position **Company Director** being the person responsible appointed by the manufacturer.

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Note: Whilst every effort has been made to ensure that the information contained within this manual is correct, Doughty Engineering does not accept any liability for errors or omissions. Specifications and technical data are intended for guidance purposes only and may vary.