



Operating Manual

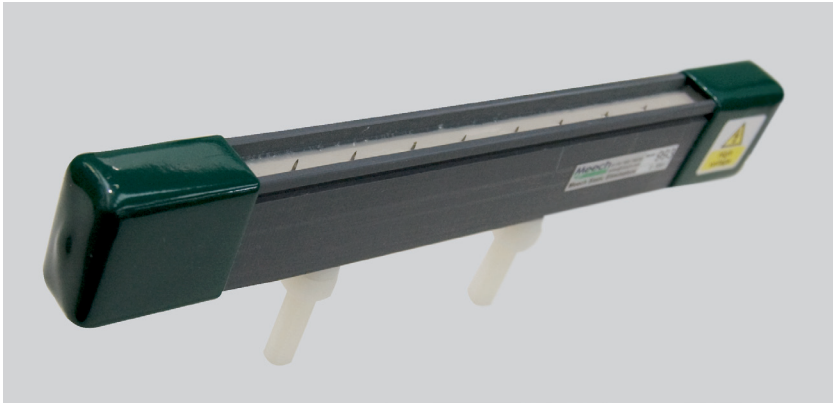
**Model 991R and 993R
Generator Bars**

Contents

Introduction	3
Unpacking and Inspection	4
Operation	5
Installation	6
Installation Caution Notes	7
Technical Specification	8
CE Approval	8
Health and Safety	8
Maintenance	9
Repairs And Warranty	11

Products shown in this document may be covered by one or more patents, patents applied for and/or registered designs and/or trade marks. For further information please refer to our Head Office or visit www.meech.com.

Introduction



Model 991R

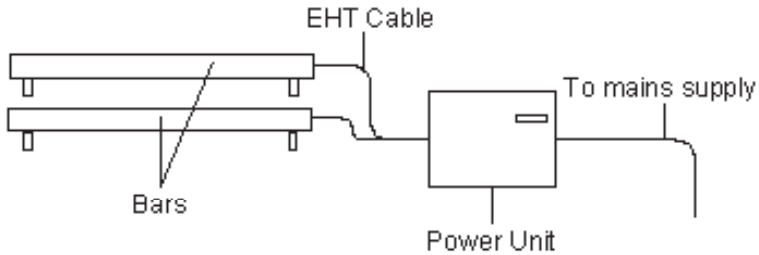
The Model 991R and 993R are high performance Generator Bars for use with the Meech range of 40kV and 20kV high voltage DC power supply. They feature resistively coupled emitter pins rendering them near shockless and providing a controlled delivery of power.

Unpacking and Inspection

Your Generator Bar was carefully packed at the factory in a container designed to protect it from accidental damage. Nevertheless, we recommend careful examination of the carton and contents for any damage. If damage is evident, do not destroy the carton or packing material and immediately notify the carrier of a possible damage claim. Shipping claims must be made by the consignee to the delivering carrier.

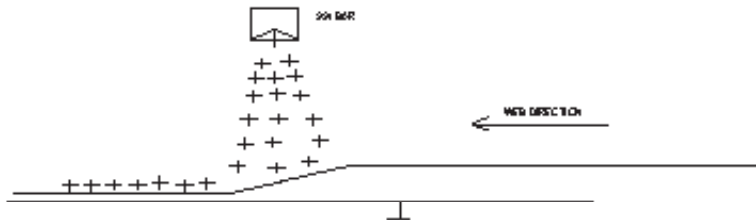
Operation

A typical charging system comprises one or more generator bars connected to a Meech high voltage power supply.



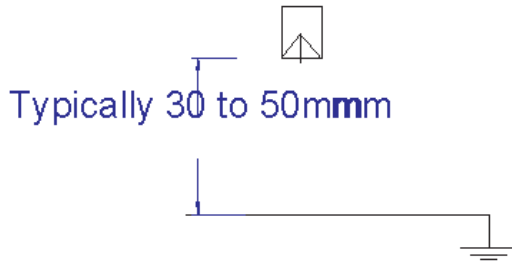
The Power supply converts the primary electricity supply into a high voltage DC output. The generator bars are connected to this output by means of an EHT cable.

The resistively coupled electrodes of the generator bar are energised by the high voltage DC generated by the power supply. The electrodes emit this energy in the form of a Corona Discharge. This electrical discharge creates an ion stream of a single polarity (defined by the type of power supply from which it is operating). Non-conductive materials passing through the ion stream, between the emitters of the bar and a grounded plate, take on the same electrical charge and adhere to the ground plate (see below).

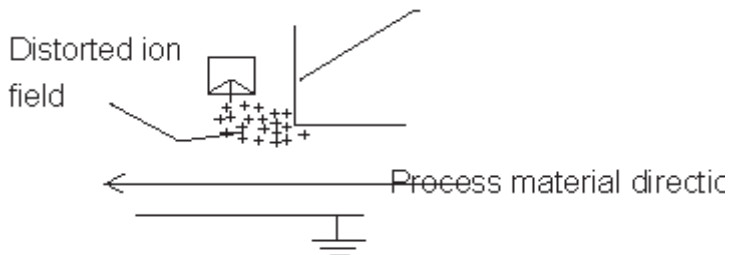


Installation

Correct positioning of the bar is vital for efficient operation. The bar should be positioned directly opposite an earthed point/plate or a bar of opposite polarity. Non-conductive materials passing between the Generator bar and earth, or bar of opposite polarity, will be pinned together. The bar should typically be positioned 30 to 50mm away from the nearest earthed object but this is subject to set up conditions. If the generator 'trips' the bar has been positioned too close to and ground reference.



The bar should be positioned away from any other ground reference point. These may disrupt the ion stream and reduce the effectiveness of the bar and the degree of pinning achieved on the process material.



Installation “ Caution” Notes

Whilst no danger to personnel exists, it is essential that any high voltage ionising equipment makes no contact with water or water based fluids. High voltage electrical equipment should not make contact with water. Should such an event occur, disconnect immediately and return equipment to the manufacturer for inspection.

If the bar is positioned too close to the earth plane, an intense blue haze will be seen between the emitter pin of the bar and the earth plane. This will cause the High Voltage DC power supply to trip and switch off. The bar should be repositioned further away from any earth plane and the High Voltage power supply reset (depress and release the reset button).

The High voltage system must be disconnected from the mains electrical supply before any adjustments to the position of the bar are made.

If the unit continues to trip then consult with the manufacturer.

As this equipment may give an electrical shock if the pins are touched, the following procedure must be followed:

The supply voltage of the power supply must be interlocked with the ON/OFF control of the machine to which the equipment is fitted.

This will ensure that whilst the machine is switched off and thus operatives may gain access to the machine and our equipment there will be no danger of operatives receiving shocks.

It is assumed that normal safety barriers are in place on the machine to ensure that operatives are unable to access the machine and hence our equipment whilst the machine is switched ON.

For permanently connected equipment a readily accessible disconnect device shall be incorporated in the fixed wiring. This disconnect device must have a minimum 3mm contact separation with appropriate current rating. For plugable equipment, the socket outlet shall be installed near the equipment and shall be easily accessible.

Technical Specification

Model 991R

Operating Voltage	:	Up to 40kV D.C.
Operating Current	:	0.5mA (stabilised).
Operating Polarity	:	Either +VE or -VE.
Max Temperature	:	60°C
Weight	:	400g per m approx.
Cable	:	2 metres of HT cable in flexible plastic conduit as standard, longer lengths can be specified when ordering
Construction	:	PVC extrusion, titanium emitter pins.
Dimensions	:	Cross section 40mm x 20mm Suitable
Power Supply	:	Meech Model 990 Types 1, 2 & 3
Mounting	:	Via M5 nylon mounting studs

CE Approval

A CE Declaration of Conformity for this product exists in respect of the Low Voltage Directive:72/23/EEC ("LVD") & Electromagnetic Compatibility Directive: 89/336/EEC ("EMCD")



Health and Safety

Emission of Ozone: Considerably below international standard of 0.1ppm.

Maintenance

Ionisers require periodic cleaning. During normal operation, dirt will build-up on the emitter pins and upon the body of the ioniser. This will cause a reduction in performance.

Typically, weekly cleaning is sufficient. However, equipment used in some heavy contamination areas, such as gravure printing or where plastic fumes are present, may require daily cleaning. Equally, in a Class 100 area, cleaning may only be required on a monthly basis. Advanced systems with performance monitoring, e.g 977cm and 904cm, will alert the operator to the need to clean the equipment before performance drops to an unacceptable level.

Before cleaning, ensure that the equipment is switched off.

Emitter pins can be cleaned very effectively with a brush. A dry toothbrush is ideal.



Ionising bars will need periodic wiping to clean grey deposits from the surface of the bar. A cloth moistened with a small amount of IPA or methylated spirits is recommended.



The Bar Should not be Wash Down.

Repairs And Warranty

Your Generator Bar is warranted by Meech Static Eliminators Ltd to the original purchaser against defects in material and workmanship for one year after purchase. Should any malfunction occur, please return the bar directly to Meech Static Eliminators or your local agent. All products returned to the factory MUST be accompanied by a return authorisation number and must be shipped prepaid. For prompt service, ship the unit to the factory with the return authorisation number shown clearly on the label. Be sure it is well packed in a sturdy carton with shock absorbing material.

Include a note stating the nature of the problem as specifically as possible, and also include instructions for returning the bar to you. We will pay one-way return surface shipping costs on any repairs covered under the warranty.

Field repairs should not be undertaken during the warranty period. Repair attempts by unqualified personnel will invalidate the warranty.



Meech International (UK)

2 Network Point
Range Road, Witney
OX29 0YN, UK

Tel: +44 (0)1993 706700
Fax: +44 (0)1993 776977
email: sales@meech.com

Meech CE

2151 Fót
Széchenyi út. 46
Hungary

Tel: +36 27535075
Fax: +36 27535076
email: ce@meech.com

Meech Static Eliminators USA Inc

2915 Newpark Drive
Norton, OH 44203
USA

Tel: +1 330 564 2000 / 1 800 232 4210
Fax: +1 330 564 2005
email: info@meech.com

Meech Static Eliminators (Shanghai) Co. Ltd

Room 205, Huana Hotel Office Tower
No. 1733 Lianhua Road
Shanghai 201103
China

Tel: +86 400 820 0102
Fax: +86 400 820 0102*201
email: china@meech.com

Meech Elektrostatik SA

Kaiserbaracke 66
B-4780 St.Vith
Belgium

Tel: +32 8086 2983
Fax: +32 8086 2821
email: mesa@meech.com

Meech Shavotech

Shavo House, Survey No.21A / 10 B, Plot No.394
South Main Road, Koregaon Park, PUNE 411 001
India

Tel: 020-26069641/ 26069642,
Fax: 020-26069644
e-mail: india@meech.com