

Zeromag ZM100A De-Magnetizer



Monitors and corrects magnetic fields to cure arc blow

Features of the Zeromag

- **Portable low cost weld preparation demagnetism**
- **Cancels magnetism to prevent arc blow**
- **Uses DIVERSE Magmeter technology**
- **Reduces or eliminates weld repairs caused by magnetic arc blow**
- **Compact rugged construction**
- **Can be used in conjunction with preheat**
- **Rapidly deployed and simple to operate**

An Overview

ZEROMAG measures and neutralizes magnetic fields which may be present in the weld preparation region of mating steel components.

The demagnetisation process can be performed manually or automatically and ZEROMAG is suitable for manual or automated welding processes.

DIVERSE demagnetisers are compact, ruggedly constructed units for use in typical welding site environments. Hyperbaric versions are available on special quotation. Simple and rapid to deploy, ZEROMAG will greatly assist productivity, reducing welding times while minimising weld repairs and downtime associated with magnetic arc blow.

Optional Features

- *Air cooled probe*
- *Hyperbaric version for sub sea habitats*
- *Can be built into automated welding installations*

Applications

- *Tube to tube weld preparation demagnetisation*
- *Linear seam weld demagnetisation*
- *Use with TIG, MIG, MMA and Sub-arc processes*

About the Zeromag

The Zeromag system finds its key application in arc welding. Magnetic fields may cause arc instability, and at worst can cause magnetic arc blow. The fields can be caused by induction of the earth's magnetic field in large structures and pipes. Alternatively, the steel may be magnetised at manufacture or by the use of magnetic clamps or magnetic pipe pigs.



The demagnetising field is generated by introducing a controlled current in loops of cable around the steel object to be welded. The Zeromag automatic system tests the effect of the de-magnetising arrangement and sets the polarity of the control system so that the field can be reduced to zero throughout the welding operation.

Specification

Magnetic field reduction:	Reduced to <10 Gauss
Measurement range:	0 to 1800 Gauss, resolution 10 Gauss (Higher fields have sign retained)
Magnetic Probe Size:	20mm x 100mm. Encased in aluminium
Current Output range:	0A to +/-100A max, constant current
Output voltage range:	0V to 15V
Demagnetisation time:	3 seconds typical
Manual Control:	-100A to +100A continuously variable
Auto Control:	Auto-tracking and nulling of magnetic field
Input Power:	90V - 265V ac 48 - 62Hz
Temperature - operating:	0C to 35C
- storage:	-20C to 50C
Humidity:	Non-condensing
Weight:	20Kg
Dimensions WxLxH:	520 x 200 x 550mm
Housing:	Built into a carrying case to enable it to be used on site
Case:	19" portable rack, 4U
Demagnetism cable:	50 m supplied. Additional 50m lengths available
EMC:	CE approved for emissions and immunity standards

About Arc Blow

Arc blow occurs when welding is attempted in the presence of a magnetic field. Some processes are more prone to arc blow than others, but TIG welding is particularly sensitive. Disruption of the welding arc generally occurs in a magnetic field of 20 gauss. Arc blow can be expected with magnetic fields of 40 gauss.

DIVERSE

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Ordering Options

Zeromag De-Magnetiser
 Air cooled probe

ZM100A
 ZM100A-P