Equipment & Tooling



BUTT FUSION

Hy-Ram has more than 30 years' experience in designing and manufacturing Butt Fusion machines.

Our knowledge and understanding of our clients' exacting requirements has culminated in our latest range of leading edge machines.

Available for either purchase or hire, the WeldMaster range brings together the very latest in Butt Fusion technology and is available in Fully Automatic (CNC), Semi-Automatic and Manual versions.

Hy-Ram WeldMaster Butt Fusion Machine Range

WeldMaster Machine Range









WeldMaster Butt Fusion Machines: Range 63 – 400mm diameter

Hy-Ram has designed and manufactured high quality Butt Fusion Equipment for the world-wide market since the early 1980's. Our latest WeldMaster range takes the Fully Automatic machine to the next level in terms of control, quality, connectivity, usability and smart technological features.

The WeldMaster brings together a range of machines packed with practical mechanical design and technologically advanced software features... all accessible from an intuitive new full-colour 7" TFT touchscreen interface.

The machines offers the user simplistic operation whilst the functionality of the software automatically enables and records a host of smart features and information... accessible only if you need them!

We continue with our design of the Controller, Chassis, Trimmer and Hotplate being separate 'modular' units providing maximum flexibility and a machine best equipped for either in-trench or out of trench welding.

The range maintains the normal durability and reliability synonymous with Hy-Ram machines for over 30 years... the WeldMaster will continue our tradition in order for both sales and hire customers to take advantage!

Key features

- Integrated RFID reader monitoring training status and Operator
- O Touchscreen 7" TFT Intuitive User Interface
- Menu driven data entry plus touchscreen 'QWERTY' Keypad
- Bluetooth Connectivity
- USB Connectivity
- Embedded GPS for precise weld location stored with each joint record
- o 'Scroll-back' On-screen review of all joint data
- Simple Text and Animated Graphic representation of 'Next-step' in welding cycle
- o Internal Memory for in excess of 1 million Joint Records
- Bespoke Joint Data Analysis Software
- O Programmed with UK and International Welding Standards
- Programmed for differing Plastic Materials
- O Automatic 'Dummy' Weld Cycle
- Early Warning Error Messages
- O Diagnostics software Graphically driven for simplicity
- O Calibration software Graphically driven for simplicity
- O Customisable for Owner's Logo on 'start-up' screen
- Ocustomisable for welding of non-standard or 'special' pipe
- Option for barcode Reader
- Options for different International languages
- Configurable for 'Pupping' / Welding of PE Fittings



WeldMaster Machine Range

	WeldMaster Butt Fusion Equipment 8 8							
Model Designation	BFM180		BFM250		BFM315		BFM400	
Diameter range (mm)	63 - 180		63 - 250		90 - 315		160 - 400	
Product Code	903-000033	903-000034	903-000035	903-000036	903-000037	903-000038	903-000039	903-000040
Nominal Input Voltage (V)	110	220	110	220	110	220	110	220
Input Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Generator Rating (KVA)	3.5	3.5	4.0	4.0	6.0	6.0	7.0	7.0





WeldMaster Controller / Power Unit





Controller / Power Unit

- o 7" TFT Touch screen Colour display
- Automatic recognition of size of Chassis connected
- Pipe Options automatically limited to range of size of Chassis
- Interchangeability of Controller / Power Unit with any size machine
- Integrated ambient temperature measurement and compensation
- Static and dynamic drag detection
- O Powerful 100 Bar maximum operating pressure
- Pipe slippage and early clamp removal detection
- 1 million+ memory storage with multiple download options
- o 'Traditional' and safe 'twist to release' EM Stop
- O Bespoke joint data analysis software
- Ocompact and lightweight unit with convenient carrying handles
- Ouick Release hydraulic hose connections
- O Durable 'Military' electrical connections
- O Durable Lid to protect Fascia

- Hy-Ram derived 'centreline' acting hydraulic cylinders
- Removable carrying Cradle for 'tight' operating conditions
- Lever operated tightening of Top Clamps for faster clamping
- O Can be converted on site for welding fittings
- O Central Linkage to ensure Centre Block symmetry

- Ouick Dwell time, rapid Hotplate retraction and symmetrical pull-off
- Easily replaceable PTFE Hotplate Faces
- Automatic 'power-off' whilst Trimmer is in operation to minimise Generator
- Quick release fasteners
- O Trimmer / Hotplate Stand

- O Automatic start from within joint cycle
- Automatic Trim and Feathering cycle for smooth pipe ends
- Integrated Micro-switch to prevent inadvertent use when off of Chassis
- Optimised Trimmer Blade geometry
- Quick release fasteners
- O Trimmer / Hotplate Stand



WeldMaster Bespoke Joint Data Analysis Software

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Equipment & Tooling



WeldMaster Machine Range

Optional Thermal Printer





Liners available to suit ALL pipe diameters



Optional Barcode



Reader

Options Liners

- O Thermal Printer
- USB Memory Device
- O Barcode Reader
- Smartphone Apps

Ancillary Products

- Welding Shelters (p24)
- Generators (p21)
- Pipe Support Rollers (p24)
- External Debeaders (p22)
- Internal Debeaders (p23)
- Bead Gauges (p24)

Standards

- o GIS/PL2-3:2015
- o WIS 4-32-08: 2002
- o ISO12176-1:2012
- o ISO12176-3 Operator Badge (with Barcode Reader fitted)
- O ISO12176-4 Traceability Coding (with Barcode Reader fitted)





Power Pack for Semi-Auto Option

Other Machine options available

- Manual
- Semi-Automatic

In the case of Semi-Automatic machines, there is an option of a Data-logging unit which will continuously monitor and record time, pressure and temperature throughout the jointing process. These jointing parameters are stored in memory for subsequent data-download.



BDI - Bead Diagnostic Instrument

Bead gauges for checking final bead width (see p24)



BDI - Quality Control for Butt Fusion The BDI (Bead Diagnostic Instrument) is a unique onsite tool that gives you a clear and quick result on the quality of your butt fusion welds without the need

The BDI (bead diagnostics instrument) is the only tool to test the integrity of the majority of the bead in a non-destructive manner.

Unlike the industry recognised 'bend back test', the BDI tests up to 95% of the entire bead length ensuring a controlled and recorded test is carried out which can be replicated perfectly time after time.

Reasons to adopt BDI on your pipelines:

- BDI can be fully integrated into the butt fusion welding process or stand-alone - it's up to you
- o It is simple to use

for destructive testing.

- Oup to 95% of the bead length is tested
- O Bead and split length are recorded
- o Immediate test results are available after every weld
- All results are captured and documented in real time on a secure server
- Failed joint alerts can be sent to supervisors

Product code	Description	
189-000045	BDI Unit	RH