



Max-Arc 361 Single Phase Compact MIG Welder 360 Amps



CAUTION BEFORE INSTALLING OR OPERATING THIS MACHINE ENSURE ALL INSTRUCTIONS AND WARNINGS HAVE BEEN READ AND UNDERSTOOD.

INSTRUCTION MANUAL



Description

These are a high-quality heavy duty British designed & made range of MIG welding machines for industrial applications.

They are designed to give excellent welding performance on a wide range of materials, the machines benefit from a good selection of voltage steps to suit all welding applications.

The machines are all robustly constructed with quality components used throughout to give a long trouble-free life.

All models are fitted with a high quality 2 roll or 4 roll drive feed mechanism for accurate & positive feeding of the welding wire.

These models are fitted with the following functions, torch trigger latching (4T) this allows the operator to weld without needing to keep a finger on the torch switch, burn back control (set up inside the machine) this ensures that the wire finishes in the correct position (not sticking to the work or to the welding tip).

Technical Specifications

Specification 3 phase 400v	Model 263	313	363	423
Amps range	35-260	35-310	40-360	40-420
Volt steps	12	16	16	32
Duty c (35% B range) or 60%	235A	300A	350A	400A
Input fuse slow type	16A	16A	16/32A	25/32A
Specification 1 phase 230v	Model 261	281	311	361
Amps range	35-260	35-280	40-310	40-360
Volt steps	12	16	16	24
Duty c (35% B range) or 60%	235A	280A	300A	350A
Input fuse slow type	25/32A	32A	32/40A	50A

Safety

Before using make sure all operators are familiar with the welding process and have had appropriate training relating to the risks involved.

The Health and Safety Executive publish documents regarding this such as ISBN 0 7176 0704 6 (Electrical safety in arc welding), and many others.

When welding or cutting in an environment with increased risk of electric shock extra precautions must be observed. Typical conditions with increased risk of electric shock are working in wet or damp conditions, working inside vessels, working in cramped conditions, and exposed to conductive parts, etc. DO NOT TAKE ANY RISKS

This machine is designed for use indoors and must not be used in the rain or a wet environment.



Declaration of conformity

261-423 range of industrial compact MIG welding machines

This equipment is manufactured to comply with 93/68/EEC, BS EN 60974-1
This equipment is manufactured to comply with 89/336/EEC, BS EN 50199

The equipment is CE marked
Date 3/01/2006

Pre installation & EMC information

The installer of this equipment must assess the area before installing.

It is the user's responsibility to ensure that if any electromagnetic disturbances are detected to resolve this before continuing.

As with other welding machines it is preferable to use this machine as far away as possible from sensitive electrical or electronic equipment such as computers, telecomm equipment, safety critical equipment, transmitters and receiving equipment etc.

There is a risk to sensitive equipment from radiated or conducted emissions from this machine. This machine is designed for use in industrial premises, when used in other environments there could be potential difficulties with electromagnetic interference with other equipment.

Consideration must be also given to other premises as the emissions may not be limited to the installed premises.

The following are methods to reduce emissions.

- 1) Keep all welding cables short close together and at ground level.
- 2) Equipotential bonding of metal components in the work area and bonding of the work piece can be considered however there are electrical safety implications for the operator with increased risk of shock if the electrode is touched; therefore, it is important the operator is aware and adequately protected from contacting the work and the electrode. **Before bonding the area and work piece consult an experienced electrician.**
- 3) This equipment must be properly maintained and all screws holding the sides etc kept in place.
- 4) Sometimes it may be necessary to fit additional mains input filters or even screen the cables and / or work area. This will involve consulting an experienced engineer.

Electrical Installation

This machine must be installed & connected to the electricity supply by a competent professional person
Do not connect this machine to any voltage other than that marked on the rear of the machine which is normally 230V or 400V

Connect the input flex to a suitable supply. Make sure this supply voltage matches the voltage model of the machine & is correctly wired, single phase models may have two black wires & earth in this case it is not important which one is the live or neutral, three phase models normally have 3 black wires, again it is not important which one goes to which phase. **Always ensure the green/yellow wire is connected to the earth terminal**

If in any doubt consult a qualified electrician.



Fitting the welding wire & torch

Always use good quality clean rust-free wire.

Firstly, check that the size of wire to be used matches the size of groove in the wire feed roller, if not the roller can be removed & changed around as there are a choice of two grooves in this roller.

Fit the wire reel onto the spool holder & secure with the red plastic nut, make sure that the end of the wire is perfectly straight, then push the tension lever to a side & carefully guide the wire through the guide and into the groove of the roller and push the wire so it appears out at the front of the machine a few centimeters, place the wire tensioning arm back into position & set the pressure at around half way on the black pressure device. The welding torch can now be fitted to the Euro type fitting on the front.

Welding return earth

This connects to the socket on the lower right-hand side of the front panel. A good welding earth is essential for correct operation.

Gas

The hose at the rear should connect to a gas regulator suitable for the welding process and the pressure and flow set to give good coverage of the welding arc, too little gas flow will result in porosity & a dirty weld, too much and the arc can become unstable and harsh. The gas normally used for MIG welding is argon & CO₂ mix, 100% CO₂ can be used but it will result in a cold & harsh welding arc. **Consult your gas supplier for the correct type for MIG welding. For safety reasons never try to connect any gas other than that designed for MIG welding & always use the correct type of gas regulator.**

Welding with this machine

This machine is designed to be used by operators who have knowledge of welding it is strongly recommended that inexperienced operators are trained before using this machine.

It is not practical to try and explain how to weld in this manual.

DO NOT TAKE ANY RISKS

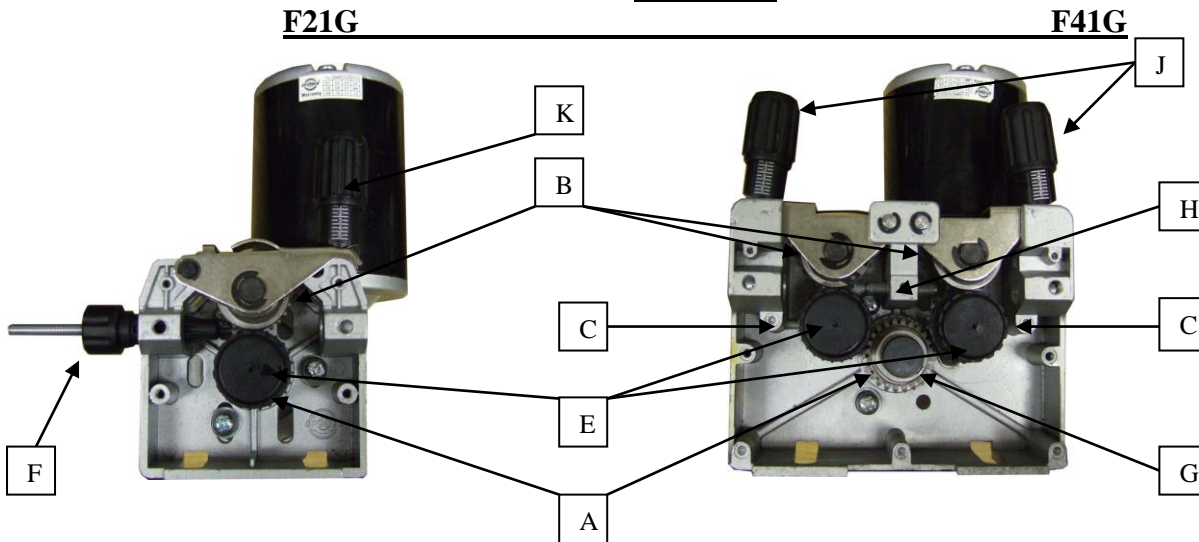
MAINTENANCE

The operator should carry out daily checks of all cables and connections etc; any faults must be reported to a competent person and the machine taken out of service until repaired.

It is necessary for a comprehensive service inspection and test to be carried out at regular intervals by a competent person and documented. This should be no less than every six months and sooner in harsh operating conditions.

If the machine is correctly maintained this machine should give a long trouble-free life.

Parts list



Wire drive spares for 21G & 41G wire feed systems

Description	Part number	pcs/21G feeder	pcs/41G feeder
Roller 0.6-0.8mm V groove for hard wire	FECV0608	1	2
Roller 0.8-1.0mm V groove for hard wire	FECV0810	1	2
Roller 1.0-1.2mm V groove for hard wire	FECV1012	1	2
Roller 1.2-1.6mm V groove for hard wire	FECV1216	1	2
Roller 1.0-1.2mm U groove for soft wire	FECU1012	1	2
Roller 1.2-1.6mm V groove for soft wire	FECU1216	1	2
Roller 1.0-1.6mm Knurled for flux cored	FECK1016	1	2
Roller 1.6-2.4mm Knurled for flux cored	FECK1624	1	2
A) Main drive gear for motor shaft	FECX1001	1	1
B) Pressure roller & gear complete	FECX1002	1	2
C) Idle gears for rollers F41G only	FECX1003		2
D) Axles for idle gears F41G only	FECX1004		2
E) Plastic roller retaining cap	FECX1005	1	2
F) Plastic inlet guide with liner	FECX1006	1	1
G) Main drive gear retaining screw F41G	FECX1007		1
H) Intermediate guide F41G only	FECX1008		1
I) Brass outlet guide tube (up to 1.6mm wire)	EUR0006	1	1
J) Pressure device F41G only	FECX1009		2
K) Pressure device F21G only	FECX1010	1	

The above spares do not fit other variations of feed unit such as F2, F2G, F4, F4G, although the rollers are compatible with F40, F40G, F20, F20G

Please check exact model of wire feed unit before ordering spares