INSTRUCTION MANUAL FOR WIRE FEEDER

IMPORTANT:
READ THIS MANUAL CAREFULLY BEFORE INSTALLING, USING, OR SERVICING THE WIRE FEEDER, WITH SPECIAL NOTICE TO THE CHAPTER ON SAFETY PRECAUTIONS. CONTACT YOUR DISTRIBUTOR IF YOU DO NOT FULLY UNDERSTAND THESE INSTRUCTIONS.

1 INSTALLATION

This machine must be used for welding only.
In any case, it is essential to pay special attention to the chapter on SAFETY PRECAUTIONS.
The symbols next to certain paragraphs indicate points requiring extra attention, practical advice or simple information.
This manual must be kept carefully in a place familiar to everyone involved in using the machine. It must be consulted whenever doubts arise and be kept for the entire lifespan of the machine; it will also be used for ordering replacement parts.

1.1 PLACEMENT

Unpack the wire feeder and place it above the welding machine, using the flexible rotating cylinder provided.

2 DESCRIPTION OF CONTROLS

2.1 CONTROLS ON THE WIRE FEEDER FRONT PANEL

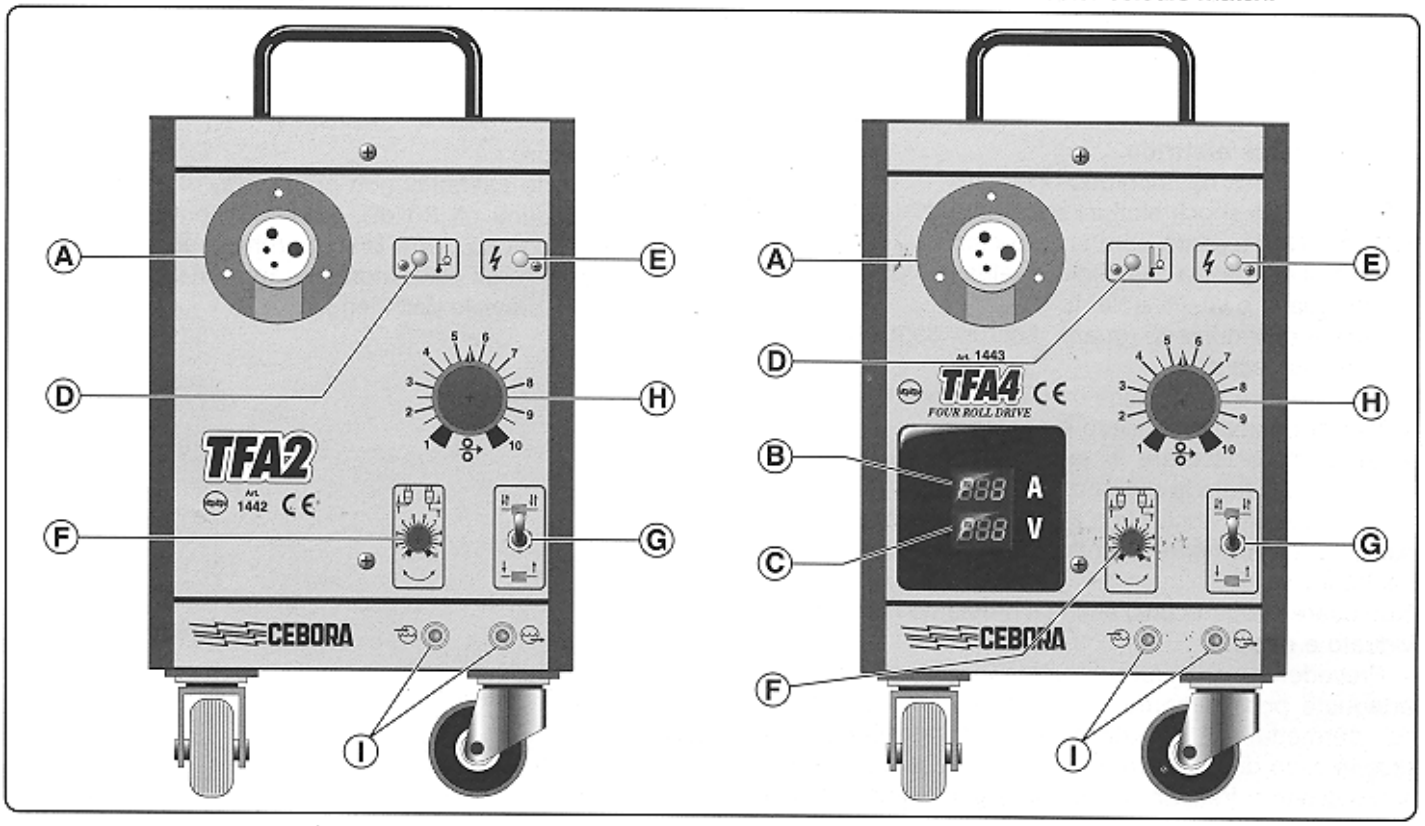
A- Quick connect torch terminal
The welding torch is attached to this terminal.
B /C - Ammeter/Voltmeter (optional, only for TF4S ART. 1443)
The ammeter shows the welding current.
The Voltmerer shows the welding voltage.
N.B. When welding stops, the ammeter and voltmeter continue to show the last reading until welding restarts.
D - Led (yellow color)
This led lights on when:
- that the thermostat has stopped welder operation.
- on machines fitted with a cooling unit, that the pressure switch indicates a low cooling liquid level or that the cooling unit is off.
E - Led (green color)
This led signals that the machine is on.
F - Knob
This knob regulates the length of the wire that sticks out of the torch after welding is finished: "BURN-BACK."
G- Weld function selection switch
This switch selects among the following functions:

 Manual welding cycle (2 step):

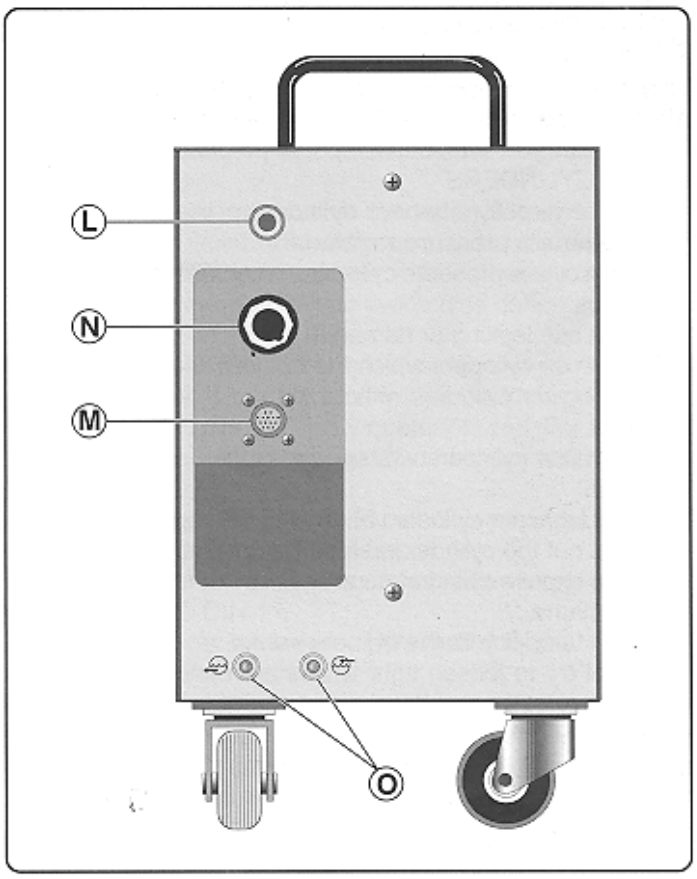
The machine begins welding when the torch trigger is pushed and stops welding when the torch trigger is released.

 Automatic welding cycle (4 step)

The machine begins welding when the torch trigger is pushed. Once welding has begun, however, the torch trigger can be released. To stop welding, the torch trigger must again be pushed and then immediately released. This function is useful when welding for long periods of time because it helps reduce operator hand fatigue due to having to keep the torch trigger constantly pushed during normal manual welding operations.
H- Wire feed speed control.
This knob adjusts the wire feed speed.
I - Quick-fit hose connectors for connection to water hoses of water-cooled torches.
Important: These connectors are colour-coded for safety. Ensure that hose and connector colours match.



2.2 CONTROLS ON THE WIRE FEEDER REAR Panel



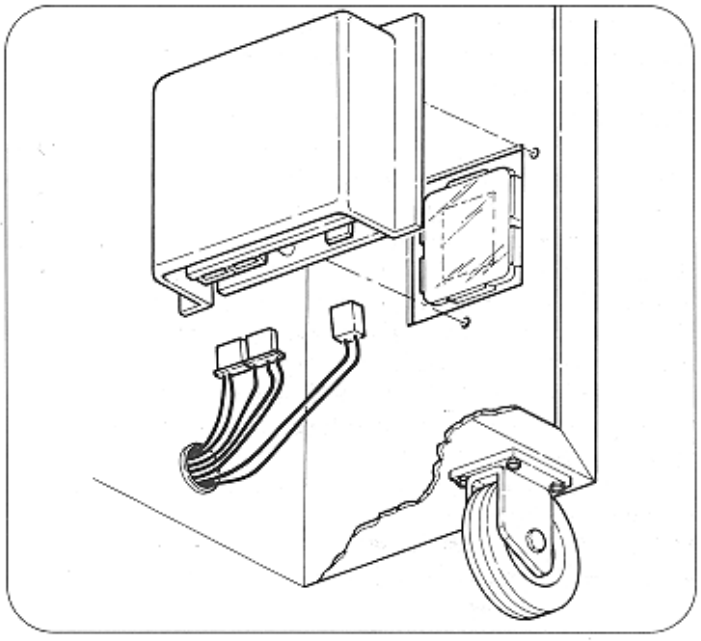
L - Gas hose fitting for extension gas hoses.
M - 6-pin socket connector for 6-pin plug connector
N - Socket for extension power supply plug.
O - Quick-fit hose connectors for connection to extension water hoses.
Important: These connectors are colour-coded for safety. Ensure that hose and connector colours match.

3 START-UP

The machine must be installed by skilled personnel. All connections must be made in compliance with current regulations and in full respect of safety laws (see standards CEI 26-10 and CENELEC HD 427).
The TFA2 and TFA4 wire feeders can be connected to the Cebora power source art. 530 only.
To connect the parts, use the extension Art. 1186/00 (5 mt.), Art. 1186/20 (10 mt.).
Assemble the welding torch on the central adapter (**A**).
Make sure that the wire diameter corresponds to the one indicated on the wire feed roller, and load the wire reel. Make sure that the welding wire passes through the groove in the roller.
Before connecting the generator power cable, make sure that the supply voltage corresponds to that of the welding machine, and that the earth socket functions properly.
Turn on the generator.
Remove the tapered gas nozzle.
Unscrew the contact tip.
Press the torch trigger and release it only when the welding wire comes out.
Welding wire can cause puncture wounds.
Never aim the torch at parts of the body when loading the welding wire.
Screw the contact tip back on, making sure that the hole diameter corresponds to the wire used.
Slide the tapered gas welding nozzle back on.

4 ACCESSORIES

Art. 131 AMMETER + VOLTMETER (FOR Art.1443 only)
Plug the 3 connections coming out from the intermediate panel of the wire feeder 1443 to the Ammeter/Voltmeter and fix it to the front panel, by means of the screws supplied, as shown in the drawing.



Art. 1186 EXTENSION 5 mt.
To connect the generator and wire feeder; this already contains the water cooling pipes for the torch.
Art. 1186/20 EXTENSION 10 mt.
Has the same function and features as Art. 1186 but differs in length.

Art. 1550	TORCH MB 36	mt. 3
Art. 1550.20	TORCH MB 36	mt. 4
Art. 1541	TORCH MB 501/D	mt. 3 cooled
Art. 1541.20	TORCH MB 501/D	mt. 4 cooled
Art. 1333	COOLING UNIT FOR TORCH	

Art. 139 ALUMINIUM KIT

This accessory is appropriate for 3-4 mt. torches.

5 SAFETY PRECAUTIONS

5.1 Fire

- Avoid causing fire because of sparks, slag, hot metal or pieces.
- Make sure that suitable fire-fighting equipment is available close to welding area.
- Remove all flammable and combustible material from the welding area and its surrounding (32 ft minimum).
- Do not weld containers of combustible or flammable material, even when empty. These must be carefully cleaned before being welded.
- Allow the welded material to cool down before touching it or

putting it in contact with combustible or flammable material.
• Do not weld parts with hollow spaces, containing flammables.
• Do not work under conditions with high concentrations of combustible vapours, gases, or flammable dust.
• Always check the work area half an hour after welding so as to make sure that no fire has started.
• Do not keep any combustible material such as lighters or matches in your pockets.

5.2 Burns

• Wear fire-proof clothing all over your body in order to protect your skin against burns caused by ultraviolet radiation given off by the arc, and from weld metal sparks and slag.
• Wear protective clothing-gauntlet gloves designed for use in welding, hat and high safety-toe shoes. Button shirt collar and pocket flaps, and wear cuff-less trousers to avoid entry of sparks and slag.
• Wear helmet with safety goggles and glasses with side shields underneath, appropriate filter lenses or plates (protected by clear cover glass). This is a MUST for welding to protect the eyes from radiant energy and flying metal. Replace cover glass when broken, pitted, or spattered.
• Avoid oil or greasy clothing. A spark may ignite them.
Hot metal such as electrode stubs and workpieces should never be handled without gloves.
• First-aid facilities and a qualified first-aid person should be available for each shift unless medical facilities are close by for immediate treatment of flash burns of the eyes and skin burns.
• Ear plugs should be worn when working on overhead or in a confined space. A hard hat should be worn when others work overhead.
• Flammable hair preparations should not be used by persons intending to weld or cut.

5.3 Fumes


Welding operations give off harmful fumes and metal dusts which may be hazardous to your health, therefore:
• Work in a well-ventilated area.
• Keep your head out of fumes.
• In closed areas, use suitable exhaust fans.
• If ventilation is not enough, use breathing sets approved for this procedure.
• Clean the material to be welded of any solvents or halogen degreasers giving rise to toxic gases. Some chlorine solvents may decompose with the radiation emitted by the arc, and create phosgene gas.
• Do not weld plated metals or those containing lead, graphite, cadmium, zink, chrome, mercury or beryllium, unless you have the proper breathing set.
• The electric arc creates ozone. A long exposure to high concentrations may cause headaches, nasal, throat and eye irritation as well as serious congestions and chest pains.
IMPORTANT: DO NOT USE OXYGEN FOR VENTILATION.
• Gas leaks in a confined space should be avoided. Leaked gas in large quantities can change oxygen concentration dangerously. Do not bring gas cylinders into a confined space.
• DO NOT WELD where solvent vapors can be drawn into the welding atmosphere or where the radiant energy can penetrate to atmospheres containing even minute amounts of trichloroethylene or perchloroethylene.

5.4 Explosions


Do not weld above or near containers under pressure.
• Do not weld in environments containing explosive dusts, gases or vapours.
This welding machine uses inert gases such as CO_2, ARGON, or a mixture of ARGON + CO_2 for the protection of the arc, thus you should take special precautions:

A) CYLINDERS

• Do not directly connect cylinder to the machine gas hose without a pressure regulator.
• Handle or use pressure cylinders in conformity with the existing rules.
• Do not use leaking or damaged cylinders.
• Do not use cylinders which are not well secured.
• Do not carry cylinders without the protection of the installed valve.
• Do not use cylinders whose content has not been clearly identified.
• Never lubricate cylinder valves with oil or grease.
• Do not put the cylinder in electrical contact with the arc.
• Do not expose cylinders to excessive heat, sparks, molten slags or flame.
• Do not tamper with the cylinder valves.
• Do not try to loosen tight valves by means of hammers, keys, or any other object.
• NEVER DEFACE or alter name, number, or other markings on a cylinder. It is illegal and hazardous.
• Do not lift cylinders off the ground by their valves or caps, or by chains, slings or magnets.
• Never try to mix any gases in a cylinder.
• Never refill any cylinder.
• Cylinder fittings should never be modified or exchanged.

B) PRESSURE REGULATORS

• Keep pressure regulators in good condition. Damaged regulators may cause damages or accidents, they should only be repaired by skilled personnel.
• Do not use regulators for gases other than those for which they are manufactured.
• Never use a leaking or damaged regulator.
• Never lubricate regulators with oil or grease.

C) HOSES

• Replace hoses which appear damaged.
• Keep hoses unwound in order to avoid bending.
• Keep the excess hose wound and out of the working area in order to avoid any damage.

5.5 Radiations


Ultra-violet radiation created by the arc may damage your eyes and burn your skin. Therefore:
• Wear proper clothing and helmet.
• Do not use contact lenses!! The intense heat coming from the arc may cause them to stick to the cornea.
• Use masks with grade DIN 10 or DIN 11 safety lenses at the least.
• Protect people in the surrounding welding area.
Remember: the arc may dazzle or damage the eyes. It is considered dangerous up to a distance of 15 meters (50 feet). Never look at the arc with the naked eye.
• Prepare the welding area so as to reduce reflection and transmission of ultra-violet radiation. Paint walls and exposed surfaces in black to reduce reflection, install sheathings or curtains to reduce ultra-violet transmissions.
• Replace mask lenses whenever damaged or broken.

5.6 Electric shock

Electric shock can kill.
All electric shocks are potentially fatal.
- Do not touch live parts.
- Insulate yourself from the piece to be welded and from the ground by wearing insulated gloves and clothing.
- Keep garments (gloves, shoes, hats, clothing) and body dry.
- Do not work in humid or wet areas.
- Avoid touching the piece to be welded.
- Should you work close to or in a dangerous area, use all possible precautions.
- If you should feel even the slightest electric shock sensation, stop welding immediately. Do not use the machine until the problem is identified and solved.
- Always fit an automatic wall switch with adequate power, possibly close to the machine, allowing you to immediately switch the machine off in case of an emergency.
- Frequently inspect the power supply cable.
- Disconnect power supply cable from mains before replacing cables or before removing unit covers.
- Do not use the unit without protection covers.
- Always replace any damaged parts of the unit, with original material.
- Never disconnect unit safety devices.
- Make sure that the power supply line is equipped with an efficient earth plug.
- Any maintenance should only be carried out by qualified personnel aware of the risks due to dangerous voltages necessary for the operation of the unit.

5.7 Pace maker

- Magnetic fields from high currents can affect pacemaker operation. Persons wearing electronic life support equipment (pacemaker) should consult their doctor before going near arc welding, gouging or spot welding operations.

5.8. Caution!

Welding wire can cause puncture wounds.
- Do not press the torch trigger until instructed to do so.
- Do not point the torch toward any part of the body, other people, or any metal when threading welding wire.

5.9. Moving parts can cause injury.

Moving parts, such as fans, can cut fingers and hands and catch loose clothing.
- Keep all doors, panels, covers, and guards closed and securely in place.
- Have only qualified people remove guards or covers for maintenance and troubleshooting as necessary.
- Keep hands, hair, loose clothing, and tools away from moving parts.
- Reinstall panels or guards and close doors when servicing is finished and before starting the machine.

5.10 Noise

These power source alone do not produce noise levels exceeding 80 dB. The welding procedure, however, may produce noise levels in excess of 80 dB, in which case the machine operator must take the necessary safety precautions as prescribed by the national safety regulation.