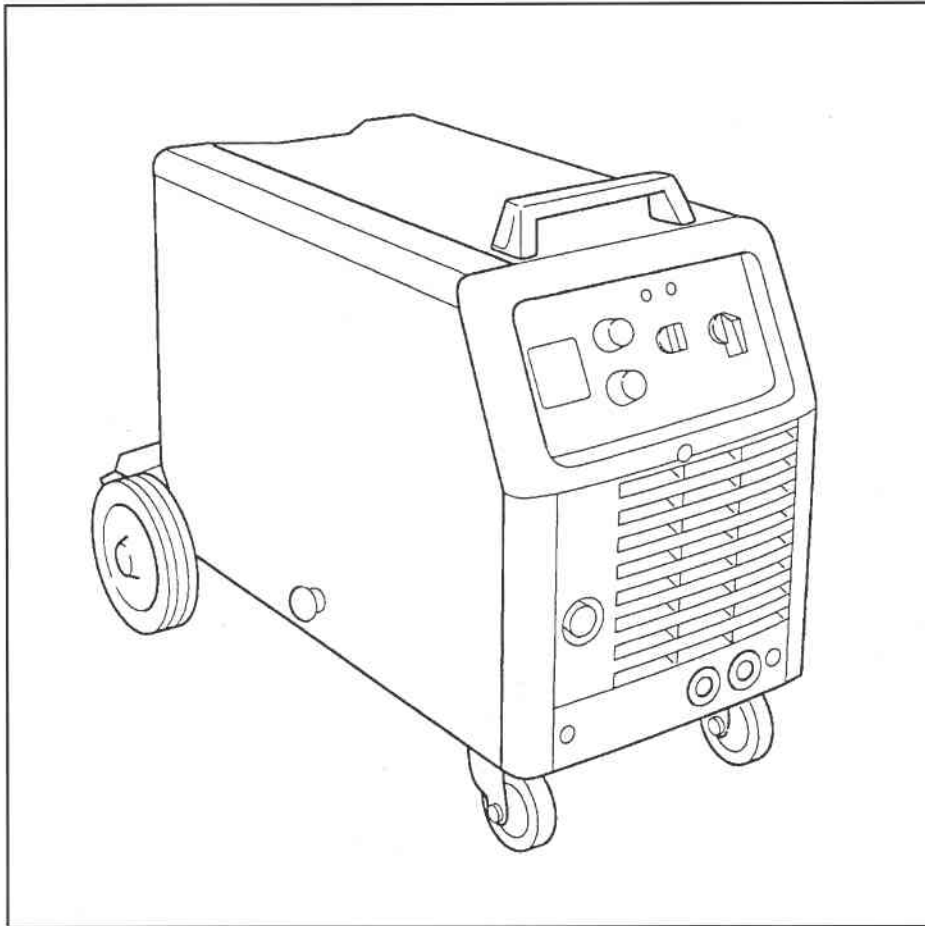


Tradesmig 283/333S



**Please ensure that this
Instruction Manual and Parts List
is made available to the user of
the equipment**



DECLARATION OF CONFORMITY

Murex Welding Products Ltd.

Declare hereby that:

Murex Tradesmig 283/333S Power Sources

Part No.1416111/1416113

Manufactured after 1 st September 2002

- conform with the requirements of Council Directive 73/23/EEC, amended by Council Directive 93/68/EEC, relating to electrical equipment designed for use within certain voltage limits.
- conform with the requirements of Council Directive 89/336/EEC, amended by Council Directive 93/68/EEC, relating to electromagnetic compatibility.
- are manufactured in accordance with EN 60974-1 Safety Requirements for Arc Welding Equipment.
- are manufactured in accordance with EN 50199 Electromagnetic Compatibility for Arc Welding Equipment.

On behalf of Murex Welding Products Ltd.
Hertford Rd
Waltham Cross
Herts. EN8 7RP
England

A handwritten signature in black ink, appearing to read "P. Karlsson".

.....
P.Karlsson
Managing Director.
Esab Welding Equipment AB
August 2002

Manufactured by Esab Welding Equipment AB.

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WARNING



WARNING



This welding equipment has been designed, manufactured and tested to the highest standards to ensure long and trouble free life. However, regular maintenance is an essential part of

keeping the machine operating in a reliable and safe manner and your attention is drawn to any maintenance instructions that are contained in this manual.

In general all welding equipment should be thoroughly inspected, tested and serviced at least annually. More frequent checking will be required when the equipment is heavily used.

Wear and tear, particularly in electro-mechanical and moving components, are gradual processes.

Caught in time, repair costs are small and the benefits in performance reliability and safety are significant.

Left alone they can put the equipment, and you, at risk.

Have this equipment regularly inspected and maintained by an approved service centre.



WARNING



ARC WELDING AND CUTTING CAN BE INJURIOUS TO YOURSELF AND OTHERS. TAKE PRECAUTIONS WHEN WELDING. ASK FOR YOUR EMPLOYER'S SAFETY PRACTICES WHICH SHOULD BE BASED ON MANUFACTURERS' HAZARD DATA.

ELECTRIC SHOCK - Can kill

- Install and earth the welding unit in accordance with applicable standards.
- Do not touch live electrical parts or electrodes with bare skin, wet gloves or wet clothing.
- Insulate yourself from earth and the workpiece.
- Ensure your working stance is safe.

FUMES AND GASES - Can be dangerous to health

- Keep your head out of the fumes.
- Use ventilation, extraction at the arc, or both, to keep fumes and gases from your breathing zone and the general area.

ARC RAYS - Can injure eyes and burn skin.

- Protect your eyes and body. Use the correct welding screen and filter lens and wear protective clothing.
- Protect bystanders with suitable screens or curtains.

FIRE HAZARD

- Sparks (spatter) can cause fire. Make sure therefore that there are no inflammable materials nearby.

NOISE - Excessive noise can damage hearing

- Protect your ears. Use ear defenders or other hearing protection.
- Warn bystanders of the risk.

MALFUNCTION - Call for expert assistance in the event of malfunction.

READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE INSTALLING OR OPERATING.

PROTECT YOURSELF AND OTHERS!

SAFETY

In any arc welding or gouging operation, it is the responsibility of the user to observe certain safety rules to ensure his personal safety and to protect those working near him. Read all safety articles relevant to arc welding published by the WMA. Pay particular attention to any CAUTION or WARNING Notes included in this manual. CAUTION indicates possible equipment damage. WARNING indicates possible hazard to life.



WARNING



The ON/OFF switch on this equipment does not isolate the unit from the mains electrical supply. **AC POWER IS PRESENT ON THE ON/OFF SWITCH TERMINALS.**

The ON/OFF lamp is an indication that the supply is switched on and does not imply that the unit is isolated from the supply. **BEFORE REMOVING THE COVERS FOR MAINTENANCE, ISOLATE THE UNIT FROM THE MAINS ELECTRICAL SUPPLY.**

1. Electrical

- Treat electricity with respect. Even the open circuit voltage of this equipment can be dangerous. Adjustments to the torch or replacement of torch parts should be undertaken with the mains supply isolated from the unit. If damaged torch cables or torch components are found, the unit must be disconnected from the mains and defective parts must be replaced using only Murex spare parts.
- Do not work on live circuits or cables. Disconnect the main power supply before checking the machine or performing any maintenance operation.
- Be sure the case of the welding machine is properly connected to a good electrical earth.
- Have the wiring for the welding machine installed by a qualified electrician. All connections must be made according to specifications in force and to general safety standards.
- Do not stand in water or on damp floors while using an arc welder or cutter. Do not use in the rain.
- Do not operate with worn or poorly connected cables. Inspect all cables frequently for insulation failure, exposed wires and loose connections.
- Do not overload cables or continue to operate with overheating cables. Cables which are too small for the current carried will overheat, causing rapid deterioration of the insulation.
- Pay attention that live parts of the torch do not touch any metal which is connected to the earth cable. Fix an insulated hook to hang the torch on when it is not in use.

2. Ventilation

- Do not weld or cut on containers which have held combustible or flammable materials, or materials which give off flammable or toxic vapours when heated, without proper cleaning.
- Locate the welding/cutting operation far enough from any vapour-type degreaser using trichlorethylene or other chlorinated hydrocarbons as solvents. The ultraviolet light from the arc can decompose these vapours into toxic gases at a considerable distance from the arc, even though the concentration of the gases is low enough to be undetectable by smell.
- Be sure to provide adequate ventilation for removal and dilution of fume and gases. Fume exhaust facilities near the arc, or a ventilated helmet should be used when cutting in confined spaces or on toxic material.

3. Glare

- Never look at the arc without wearing eye protection.
Always use the proper protective clothing, filter glasses, and gloves. Be careful to avoid exposed skin areas. Do not use cracked or defective helmets or shields.
- Never strike an arc when there is someone near who is not protected from the strong light of the arc.
- Warn bystanders who are not aware of the dangers of ultraviolet light.

4. General

- Take care when lifting the unit.
- Ensure that cylinders are secured by chains.
- Locate the unit so that there is adequate air flow to the ventilation louvres.
- Always dress correctly to protect against glare, radiation and spatter.

5. Fire

- Ensure that the correct type of fire extinguisher is available in the welding area.
- Do not weld near flammable materials or liquids, in or near explosive atmospheres, or on pipes carrying explosive gases.

6. Vehicle electrics

- When working on motor vehicles, remove the battery and any circuitry which may be damaged by the arc.
- Whilst welding be aware of the possibility of 'hidden wires' behind panels or bulkheads.

INTRODUCTION

Murex Tradesmig 283S and 333S are 3 phase flat characteristic power sources with inbuilt wire feed units for MIG/MAG welding with solid or cored wire. Tradesmig 283S incorporates a spot weld timer where as the more powerful 333S has a torch switch latching function providing pre and post gas purging. Both units have adjustable burn-back timers.

A polarity reversing facility inside the wire feed compartment enables flux cored wires of both gasless and basic varieties to be run.

WARNING

This product is intended for industrial use. In a domestic environment this product may cause radio interference. It is the users responsibility to take adequate precautions.

TECHNICAL SPECIFICATION: Tm 283S

Standard delivery:

Power source equipped with spot welding function and adjustable burnback time. Integral wire feed mechanism with feed roller for solid wire, diameter 0.8/1.0 mm.

Fitted mains cable 3 m and gas hose.

Includes: Handle, (fitted with 2 screws,) gas cylinder shelf (fitted with 2 screws).

Voltage		400-415 V, 3-50/60 Hz
Permissible load at	100% duty cycle	150 A/22 V
	60 % duty cycle	190 A/24 V
	30 % duty cycle	265 A/27 V
Setting range (DC)		30A/15V-265A/27V
Open circuit voltage		15-38 V
Open circuit power		40 W
Efficiency		0.73
Power factor		0.94
Control voltage		42 V, 50/60 Hz
Dimensions l x w x h mm		770x520x620
Weight		92 kg
Enclosure class		IP 23
Application classification		S

TECHNICAL SPECIFICATION: Tm 333S

Standard delivery:

Power source equipped with switch for 2/4 step trigger action with gas pre-flow and gas post-flow in the 4 step mode and adjustable burnback time.

Integral wire feed mechanism with feed roller for solid wire, diameter 1.0/1.2mm.

Fitted mains cable 5 m and gas hose.

Includes: Handle, (fitted with 2 screws,) gas cylinder shelf (fitted with 2 screws).

Voltage		400-415 V, 3-50/60 Hz
Permissible load at	100% duty cycle	195 A/24 V
	60 % duty cycle	250 A/27 V
	35 % duty cycle	320 A/30 V
Setting range (DC)		40A/16(14)V-320A/30V
Open circuit voltage		16-40 V
Open circuit power		40 W
Efficiency		0.75
Power factor		0.94
Control voltage		42 V, 50/60 Hz
Dimensions l x w x h mm		770x520x620
Weight		112 kg
Enclosure class		IP 23
Application classification		S

Tradesmig 283S and 333S comply with the requirements of EN 60974-1 or BS 638 pt 10.

The IP code indicates the enclosure class, i.e. the degree of protection against penetration by solid objects and water.

Equipment marked IP 23 is designed for in- and outdoor use.

The symbol **S** indicates that the power source is designed for use in areas where there is an increased electrical hazard.

INSTALLATION

Important

- Electrical installation must be carried out by a qualified electrician.
- Site the unit so that the ventilation grilles are clear of obstructions.
- Ensure all flammable materials are removed from the area.
- Ensure the rear wheel/axle assembly is in its rear position when using the cylinder carrier.
- Ensure the gas cylinder retaining strap is installed when mounting the gas cylinder.
- The front panel on/off switch does not isolate the mains electrical supply

Mains supply

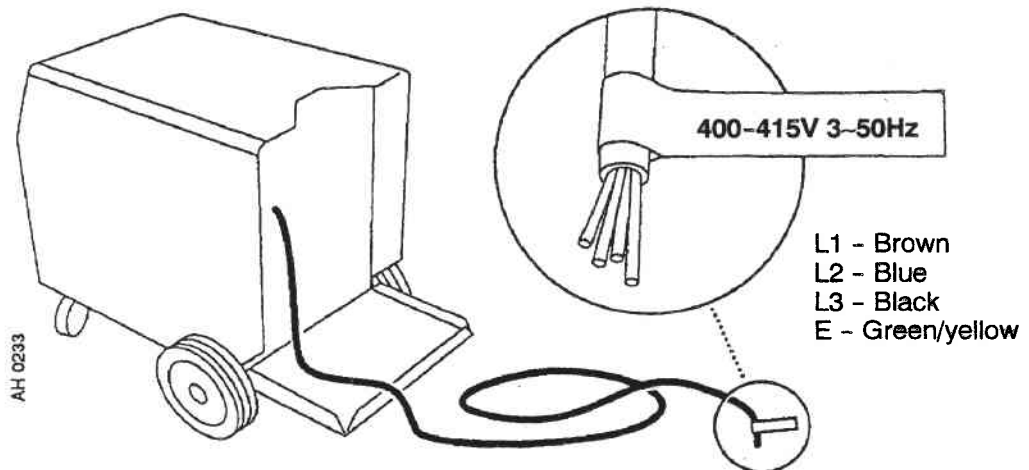
		Tradesmig 283S	Tradesmig 333S
Voltage		400/415 V	400/415 V
Frequency		50/60 Hz	50/60 Hz
Input current at	100% duty	7 A	9 A
	60% duty	10 A	14 A
	35% duty	-	20 A
	30% duty	16 A	-
Recommended primary cable *		4 x 1.5 mm ²	4 x 2.5 mm ²
Recommended primary fuse (slow)		16 A	16 A

* Tradesmig 283S and 333S are supplied with a fitted 5 m primary cable

Electrical installation

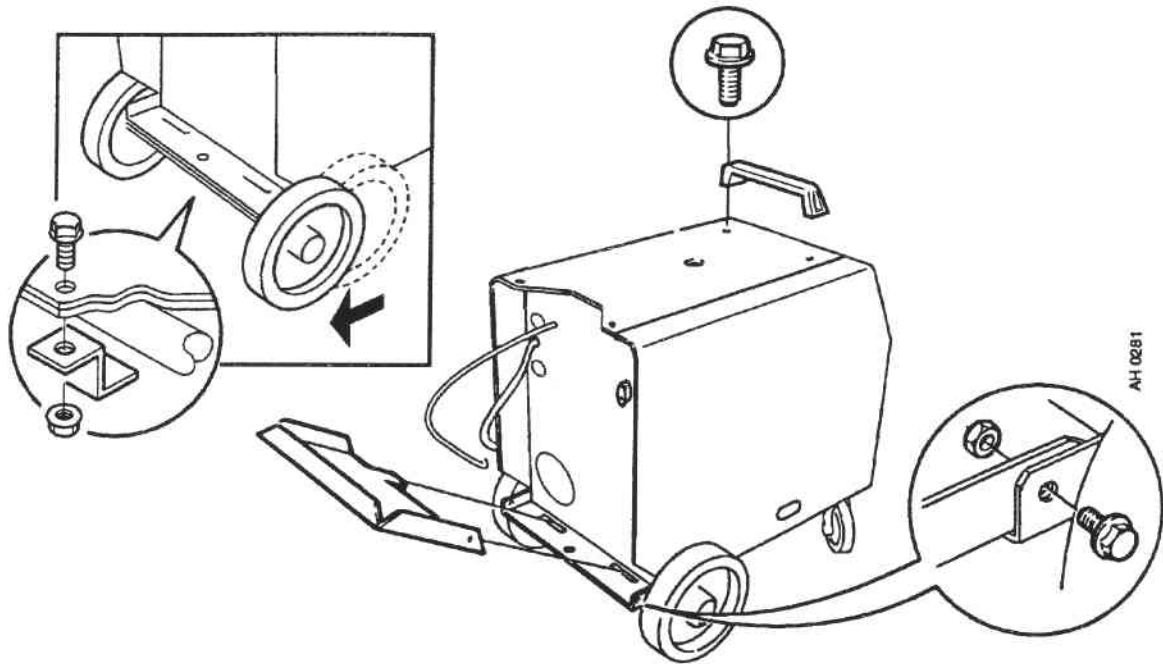


Primary connection

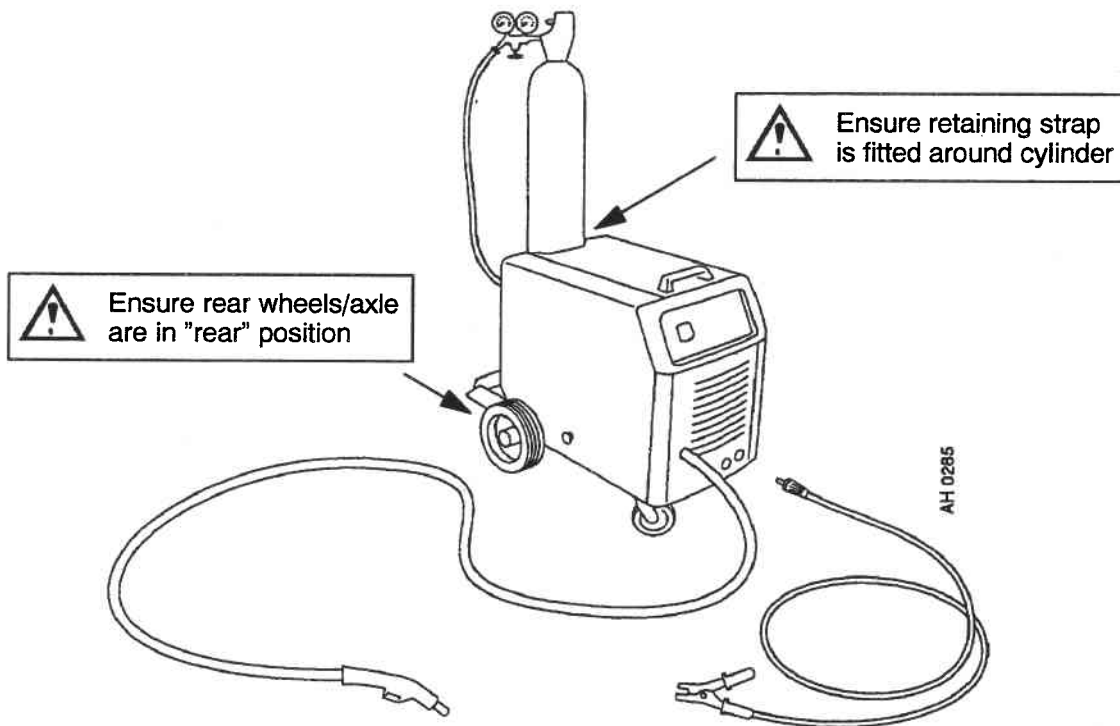


ba14s007

Tradesmig assembly



ba14s003



AH 0285

ba14s008

OPERATION

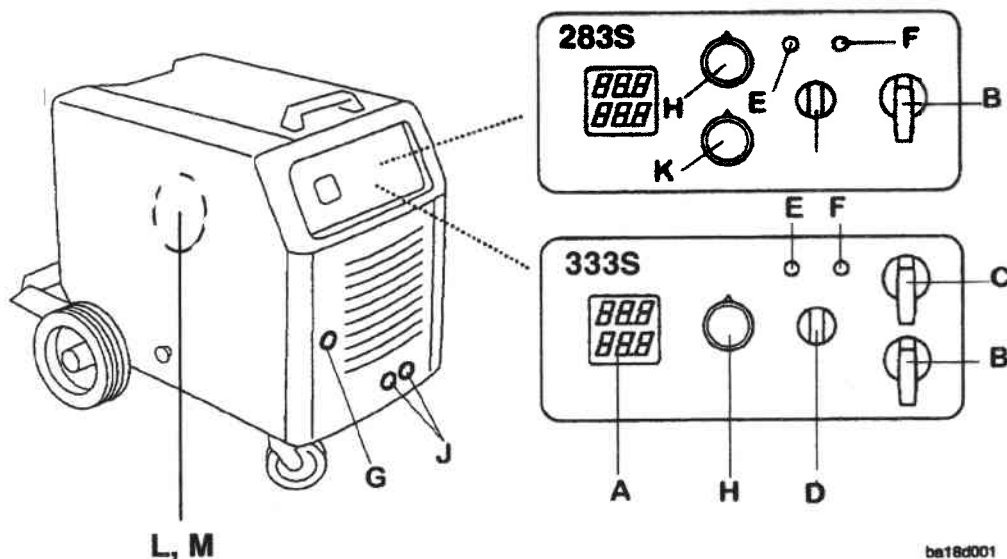
Tradesmig 283S and 333S utilise "switched" primary control providing 10 (283) / 40 (333) welding voltage selections. Two different inductance levels can be selected at the work return connection on the lower front panel. The built-in wire feeder accepts 5, 15 or 18 kg reels/wire baskets and will feed 0.6-1.2 mm diameter wires with the relevant feed rolls.

The polarity of the welding output can be reversed inside the wire feed compartment.

The machines are fan cooled and incorporate thermal overload protection. If the machine is overheated the orange warning light will illuminate and welding output will stop. In this event have the machine switched on with the fan running, resetting is automatic when the unit has cooled. An optional digital volt/ampmeter with built in hold function can be installed in the control panel.

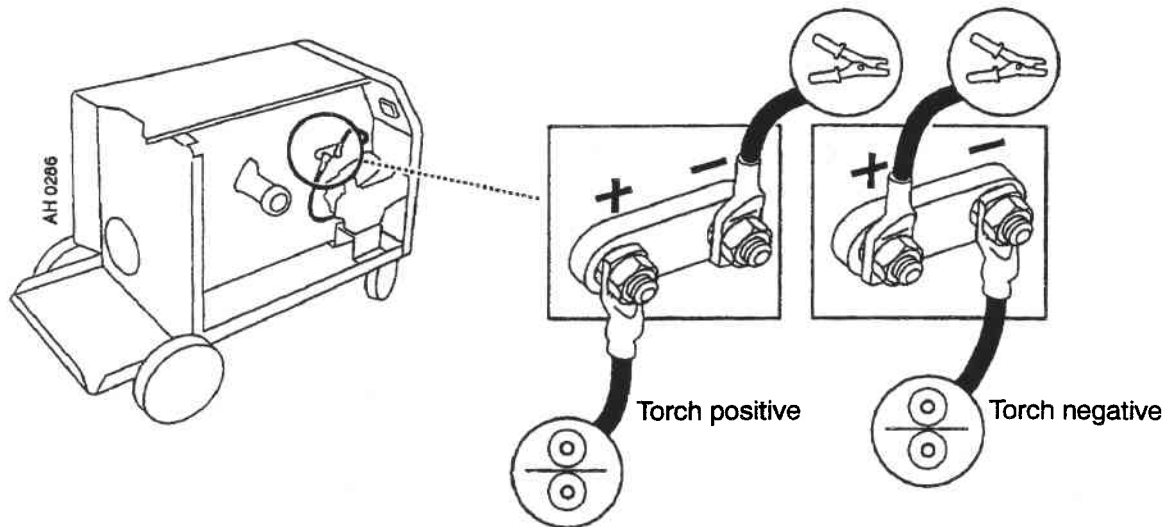
- A - Space for digital meters (optional)
- B - Voltage selector, 10-step (fine)
- C - Voltage selector, 4-step (coarse)
- D - Main switch, on/off
- E - Mains indicator lamp
- F - Thermal overload warning lamp, lights up in case of overheating
- G - Welding torch Euro connection
- H - Wire speed control
- J - Work return connection (2 inductance positions)
- K - Spot welding times
- L - Burnback control (inside wire feed compartment)
- M - 2/4 stroke torch switch selector (inside wire feed compartment)

Controls



ba18d001

Welding polarity selection



ba14s001



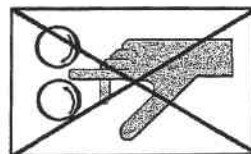
IMPORTANT!

To prevent the reel sliding off the hub: Lock the reel in place by turning the red nut until the wire reel is held securely.



WARNING!

Rotating parts can cause injury, take great care.



MAINTENANCE

Regular maintenance is important for reliable and safe operations.

- **Daily**

- Check all welding and electrical connections and cables for signs of deterioration.

- Check the gas supply, hoses and connectors.

- Check the feed rollers and mechanism, remove any accumulated dust.

- Check the fan is operating normally.

- **At least yearly**

- Disconnect the machine from the mains electrical supply.

- Remove the top and side covers.

- Blow out the inside of the unit with clean, dry compressed air at low pressure.

- Check the security of all wiring, connections and components.

- Refit the covers.

- **Annually**

- Have the unit inspected, serviced and tested by an approved Murex service agent.