

GYS**S 49**Updated : 08.03.2005Declaration of conformity :

The equipment complies with CEE Directives 83/336 (Electromagnetic compatibility) and 73/23 (low voltage) for the professional use.

The equipment complies with the standard EN 60974-1.

GYSMI 190INSTRUCTION MANUAL

Thank you for choosing our product ! In order to make the most of your equipment, please read very carefully the following :

I / DESCRIPTION

The machine GYSMI 190 is an Inverter welder with a high duty cycle, portable, mono phase, aired, for electrode welding MMA with direct current (DC). It permits to weld every type of electrodes : rutile, basic, stainless steel, cast iron and aluminium.

It disposes also a position for a TIG scratch type welding.

It is delivered with an adapter 32A towards 16A, whose use is limited by the fuse 16A of the electric installation.

II / INDICATORS & MARKING

The power generator is a source with high frequency and rectification

EN 60 974-1

The devise complies with Standard EN60974-1 relating to welding machines.



The welding method is a manual arc with coated electrodes.



Protection against the risks caused by the electrical shock.



The welding current is direct.

U₀ = 80V

Vacuum voltage (there is no welding at the moment) is 80V, measured according to the standard.

10A / 20V - 160A / 26,4V

Restrictions of the current plug with their conventional voltage

X	75 %	100 %
I ₂	160 A	140 A
U ₂	26,4 V	25,6 V

X : Duty cycle of 75% and 100%.

I₂ : corresponding currents.

U₂ : Live conventional voltages.



Single-phase electrical feeding



Voltage of the feeding mains is 50 or 60 Hz

I_{max}=32,8A

Current of the feeding mains

I_{1eff}=28A

Current of the maximum effective feeding.

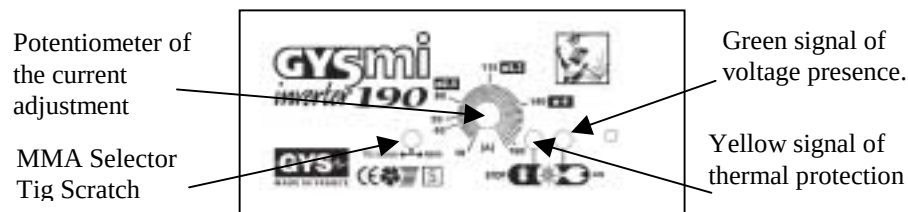
IP23

Mark IP23, protection against the penetration of solid strange bodies diameter ≥ 12,5 mm and against the rain.



Electrical installation protection with a fuse 32A. Utilization of a protection of 16A reduces the duty cycle of the device.

III / CONTROL BOARD OF THE FRONT SCREEN AND ACCESSORIES



The exit connectors are marked with symbols '+' et '-' according to their polarity.

IV / FEEDING – STARTING UP

- To connect the machine to a plug 32A of 230V (50-60 Hz) + earth connection.
- The machine is delivered with an adapter for a plug 16A, its utilization restricts the machine use according to the size of the wall-plug fuse 16A.
- To connect earth clamp and electrode holder of the welding machine according to the given polarities defined by the electrode choice, the polarity of the electrode holder is indicated on the electrode box.
- The machine is activated by the switch interlocking gear situated on the machine back..
- The selection between Tig Scratch and MMA is ensured by the selector button..
- It also has an over-voltage protection which stops the machine once the voltage exceeds 265 V or less than 195 V (+/- 15 %).

V / WELDING

- To observe the classical welding rules.
- Leave the machine connected after welding in order to let it cool off.
- Thermal protection : signal is switched on and the cooling time is about 5 minutes.

Your machine is equipped with 3 specific functions in Inverters : *hot START* allows a super intensity of roughly 25 % in regards to the instructions notice; *Arc force* allows a super intensity of roughly 15% in regards to the notice in order to avoid sticking when electrode enters the bath ; And *anti-sticking* allows you to unstuck easily your electrode without makings it red in case of sticking.

VI / MAINTENANCE

- To disconnect the generator and to wait until the ventilators are stopped. Inside the devise, the voltages and intensity are high and dangerous.
To remove the cap/hood regularly and to take off the dust from the bellows. To check the electrical connexions with an isolated tool.

VII / PROBLEMS

Once you are ready to welding and your machine does not produce the current, please study carefully the possible solutions :

A - 2 signals are switched on : to wait the end of the cooling time. After this, it might be caused by the voltage feeding which is not in the fork 30 V +/- 15 %. Your machine is auto protected, particularly if it works due to the power plant.

B – Local supply circuit signal is switched on : to check the accessories connections, if not, return your machine to After Sales Service for reparations.

If, when you put your hand on the car body, you feel tingling/prickling and your machine still working, it means that you have earthed the device incorrectly: to check extention, plug an installation earthling.

VIII / ADVISE

- To use preferably your machine in a clean environment and, always protected from bad weather and on the plain even surface.
- Do not underestimate the installation weight , do not carry the device over personals' heads or over the things and do not let fall or to put abruptly your machine.
- To protect yourself with a helmet (with a filtering and white glass). The white glass should be placed on the external side exposed to welding, it protects the filtering glass against projections. Arc welding is dangerous for user and its environment.
- To be dressed in special cotton work clothes (blue or jeans).
- It is recommended to work with protection gloves and a fireproof apron.
- To remove the electrode from the electrode holder when you do not use it.
- To dust the bellows regularly after disconnection.
- Do not use the machine for thawing the wiring/mains.

IX / SECURITY

- **Attention : your INVERTER has to be connected to an earth plug/wire. If not, there is an electrocution danger !**

Protect yourself and protect the others. Take precautions against :

- Smokes, fire, burns.
- Arc radiance.
- Rain, water steamer, humidity.
- Electrical shock .
- Inflammable environment and products.
- Staff/Personal using Pacemaker.

This machine was manufactured in compliance with new European directives (C.E.M. and B.T.). It is advised to take the following precautions.

X / INSTALLATION AND UTILIZATION

The user is responsible for the installation and the use of the welding material following the manufacturer's instructions. If the electromagnetic perturbations are detected, it should be the responsibility of the welding machine user to settle the situation with the manufacturer's assistance.

1 Acknowledgement of the environment

Before the welding machine installation, the use should acknowledge the risks of the electromagnetic problems in the environment.

2 Ways to reduce the perturbations

2/1 Feeding mains

It is advisable to connect the welding machine to the mains following our recommendations.

In case of interferences : to filter the feeding, to screen eventually the cable.

2/2 Maintenance of the equipment

The welding machine should not be modified, used strictly according to the regulations and modifications mentioned in our instructions.

2/3 Welding cables

It is advisable that the cables are as short as possible, placed close one to another in the vicinity of the floor or on the floor.