

# MOSA

*Switch the power on*

## ENGINE DRIVEN WELDERS



MOOSEA

THE SPECIALIST IN QUALITY  
WITH SOLUTION THAT MAKE  
A DIFFERENT

SINCE  
1963

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# PROUDLY “MADE IN ITALY”

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For more than 60 years, MOSA has been focusing on the performance and reliability of its products. Experience and commitment to innovation has positioned MOSA as a world reference in the design and construction of machines that fulfil the requirements of power generation and welding: comprising generators, engine driven welders and lighting towers.



The ISO 9001 certified process utilised by MOSA uses the most advanced technology and personnel with specialised expertise in all phases of the process that, starting from design, extend to the selection of raw materials and supplies, to the production of the various components and their assembly, as well as the strict tests and functional testing of the finished product; all of which represent the traditional characteristics of “Made in Italy”.



# THE RANGE



**COMPACT WELDERS**



**DIGITAL WELDERS DSP**



**POWER WELDERS**



**TS EVO / TS EVO MULTI4**

# RANGE

# COMPACT WELDERS

## “POWER OPTIMIZER” SYSTEM

Designed by MOSA, the system prevents the engine from overloading when it works near maximum power.

PROFESSIONAL

# BATTERY

DRIVEN WELDER



### AUTO IDLE

The presence of an auto idle economizer introduces the concept of “power on demand”, allowing both fuel savings and reduced engine wear.

### HANDLE

The handle above the machine allows a better grip for transport.

### STRONG STRUCTURE

Machine has a steel structure with motor and alternator assembled on vibration dampers to reduce noise and increase service life.



## E-WELD 150



Engine	battery
Current range, continuous	20A @ 20.8V-150A @ 26V (Stick)   20A @ 10.8V-150A @ 16V (Tig)
Duty cycle	150A @ 26V 100% (Stick)   150A @ 16V 100% (Tig)
Open circuit voltage	72 Vcc
Capacity	Batteria
Pressure LpA	ND
Three-phase power	ND
Single-phase power	ND



## MAGIC WELD 150



Engine	Honda GX200	MOSA M225
Current range, continuous	20 A / 20.8 V - 150 A / 20 V	
Duty cycle IEC Rating	130 A / 25.2 V @ 60% 80 A / 23.2 V @ 100%	140A / 25,4V @ 60% 100A /24 V @ 100%
Open circuit voltage	67 V	
Tank capacity	3.1 l	
Pressure LpA	74 dB(A) @ 7 m	
Three-phase power	/	
Single-phase power	/	



## MAGIC WELD 200

50/60Hz



Engine	Honda GX270
Current range, continuous	20 A / 20.8 V - 200 A / 24 V
Duty cycle IEC Rating	175 A / 27 V @ 100%
Open circuit voltage	70 V
Tank capacity	5.1 l
Pressure LpA	74 dB(A) @ 7 m
Three-phase power	/
Single-phase power	3 kVA / 230 V / 13 A



## MAGIC WELD 200 YDE

50/60Hz



Engine	Yanmar L70V
Current range, continuous	20 A / 20.8 V - 200 A / 20 V
Duty cycle IEC Rating	155 A / 26.2 V - 100%
Open circuit voltage	70 V
Tank capacity	3.3 l
Pressure LpA	78 dB(A) @ 7 m
Three-phase power	/
Single-phase power	3.3 kVA / 230 V / 14.3 A



## MAGIC WELD 230 YDE

50/60Hz



Engine	YANMAR L100W
Current range, continuous	20 A / 20.8 V - 230 A / 22 V
Duty cycle IEC Rating	190 A / 27.6 V @ 60%   175 A / 27 V @ 100%
Open circuit voltage	70 V
Tank capacity	3.3 l
Pressure LpA	78 dB(A) @ 7 m
Three-phase power	/
Single-phase power	3.3 kVA / 230 V / 14.3 A



## MAGIC WELD 250

50/60Hz



Engine	Honda GX 390
Current range, continuous	20 A / 20.8 V - 250 A / 25 V
Duty cycle IEC Rating	220 A / 28.8V @ 35%   200 A / 28 V @ 60%   175 A / 27 V @ 100%
Open circuit voltage	70 V
Tank capacity	6.1 l
Pressure LpA	74 dB(A) @ 7 m
Three-phase power	/
Single-phase power	3.3 kVA / 230 V / 14.3 A





**TS 200 BS/CF**



<b>Engine</b>	Honda GX390
<b>Current range, continuous</b>	20 ÷ 100 A / 90 ÷ 190 A
<b>Duty cycle</b>	190 A - 35%   160 A - 60%   120 A - 100%
<b>Open circuit voltage</b>	98 V
<b>Tank capacity</b>	6.1 l
<b>Pressure LpA</b>	73 dB(A) @ 7 m
<b>Three-phase power</b>	6 kVA / 400 V / 8.7 A
<b>Single-phase power</b>	5 kVA / 230 V / 21.7 A



**TS 200 BS/EL P**



<b>Engine</b>	Honda GX390
<b>Current range, continuous</b>	20 ÷ 170 A
<b>Duty cycle</b>	170 A - 60%   140 A - 100%
<b>Open circuit voltage</b>	65 V
<b>Tank capacity</b>	2.1 l
<b>Pressure LpA</b>	73 dB(A) @ 7 m
<b>Three-phase power</b>	6 kVA / 400 V / 8.7 A
<b>Single-phase power</b>	5 kVA / 230 V / 21.7 A



**TS 200 DES/EL**



<b>Engine</b>	Yanmar L 100 V
<b>Current range, continuous</b>	20 ÷ 170 A
<b>Duty cycle</b>	170 A - 60%   130 A - 100%
<b>Open circuit voltage</b>	65 V
<b>Tank capacity</b>	5.5 l
<b>Pressure LpA</b>	74 dB(A) @ 7 m
<b>Three-phase power</b>	6 kVA / 400 V / 8.7 A
<b>Single-phase power</b>	5 kVA / 230 V / 21.7 A



**TS 200 DES/CF**



<b>Engine</b>	Yanmar L 100 V
<b>Current range, continuous</b>	20 ÷ 100 A / 90 ÷ 190 A
<b>Duty cycle</b>	190 A - 35%   160 A - 60%   120 A - 100%
<b>Open circuit voltage</b>	98 V
<b>Tank capacity</b>	5.5 l
<b>Pressure LpA</b>	74 dB(A) @ 7 m
<b>Three-phase power</b>	6 kVA / 400 V / 8.7 A
<b>Single-phase power</b>	5 kVA / 230 V / 21.7 A

# RANGE

## POWER WELDERS



### ENGINE PROTECTION

The devices the protection of the engine in case of low oil pressure or engine high temperature or low fuel level. The system consists of an electronic PCB, and of an engine stop device,



### SAFETY LOCK

The recessed control panel is lockable and houses the sockets and machine.



### WIDE ACCESS TO THE ENGINE

Lifting door for easy maintenance (replacing air, oil and fuel filters).



## CS 230 YSX



Engine	YANMAR L 100 V
Current range, continuous	20 ÷ 210 A
Duty cycle	210 A 60%   180 A 100%
Open circuit voltage	68 V
Tank capacity	23 l
Pressure LpA	66.2 dB(A) @ 7 m
Three-phase power	6 kVA / 400 V / 8.7 A
Single-phase power	5 kVA / 230 V / 21.7 A



## TS 350 YSX



Engine	YANMAR 3 TNV 80
Current range, continuous	20 ÷ 350 A
Duty cycle	350 A - 35%   320 A - 60%   270 A - 100%
Open circuit voltage	78 V
Tank capacity	60 l
Pressure LpA	69.5 dB(A) @ 7 m
Three-phase power	12 kVA / 400 V / 17.3 A
Single-phase power	7 kVA / 230 V / 30.4 A



## TS 400 PS



Engine	PERKINS 404A-22G1
Current range, continuous	20 ÷ 400 A
Duty cycle	400 A - 60%   350 A - 100%
Open circuit voltage	70 V
Tank capacity	60 l
Pressure LpA	66 dB(A) @ 7 m
Three-phase power	16 kVA / 400 V / 23.1 A
Single-phase power	12 kVA / 230 V / 52.2 A



## TS 400 YS



Engine	YANMAR 4TNV88
Current range, continuous	20A ÷ 400A
Duty cycle	400A - 60%   350A - 100%
Open circuit voltage	72 Vcc (77.5 Vcc peak)
Tank capacity	60 l
Pressure LpA	69 dB(A) @ 7 m
Three-phase power	16 kVA / 400 V / 23.1 A
Single-phase power	10 kVA / 230 V / 43.5 A



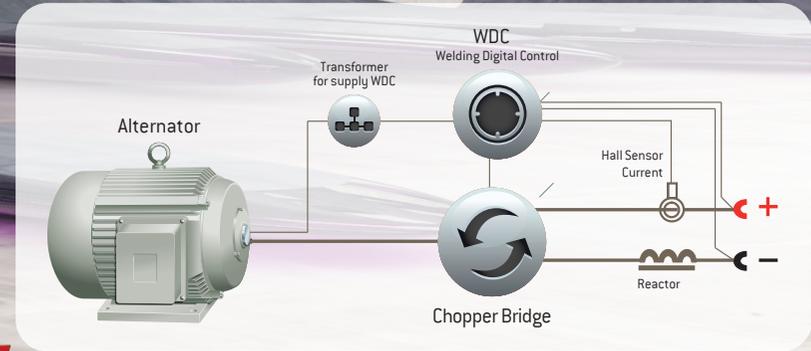
## TS 500 PS



Engine	PERKINS 404A-22G1
Current range, continuous	20A ÷ 200A   20A ÷ 500A
Duty cycle	500A 35%   450A 60%   400A 100%
Open circuit voltage	70 Vcc
Tank capacity	60 l
Pressure LpA	69 dB(A) @ 7 m
Three-phase power	16kVA (12.8kW) / 400 V / 23.1 A
Single-phase power	12kVA (9.6kW) / 230 V / 52.2 A



The acronym DSP, which is referred to this line of MOSA welders, stands for "Digital Signal Processor", and identifies the fact that the regulation of the welding parameters is performed by means of a digital technique. More precisely, in the DSP controller reside the programs which perform the regulation of the different welding processes supported. The implementation of the control is accomplished by a power converter of the "Chopper" type (Chopper System), which operates at high frequency (20 kHz). The high frequency conversion allows to obtain superior welding performances in comparison with more conventional techniques at low frequency.



# RANGE DIGITAL WELDERS DSP

## FEATURES

Via a rotary selector you can choose between 5 different welding programs:

1. **LIFT ARC TIG** - This program performs a TIG welding with a "Lift Arc" start. With this feature the arc is started simply by touching the piece, without scratch.
2. **STICK (3 PROGRAMS)** - They are specific for the electrode welding (CC), being characterized by three different arc force levels with increasing short circuit current from 1 to 3.
3. **MIG MAG** - It is dedicated to WIRE welding, WITH GAS or FLUX CORED. This welding process is performed at constant voltage (CV)..



Welding DSP Voltmeter/Ammeter  
& VRD indicator light

The front panel of the DSP control unit is provided with a military type circular connector which can be connected to a MOSA remote control unit or wire feeder, for MIG MAG. When plugging an external connector the control is automatically switched from the front panel knob to the knob on the remote unit. All the machines of this series are equipped with digital meters to monitor the welding current and voltage.

control panel  
digital



The software of the control unit, depending on the version of welder on which it is installed, can handle various functions, including:

- a) **Power Optimizer** - A function that prevents overloading of the engine during welding
- b) **VRD** - (Voltage Reduction Device) a function that reduces the open circuit voltage to a safe value when not welding
- c) **Reverse polarity** - In the models where this function is present, a switch on the panel commands the contactor which implements the polarity reversal



## DSP 500 PS



<b>Engine</b>	PERKINS 404D-22G
<b>Current range, continuous</b>	10A ÷ 500A
<b>Duty cycle</b>	500A 35%   450 A 60%   400A 100%
<b>Open circuit voltage</b>	62 Vcc
<b>Tank capacity</b>	60 l
<b>Pressure LpA</b>	68.5 dB(A) @ 7m
<b>Three-phase power</b>	16 kVA (12.8kW) / 400 V / 23.1 A
<b>Single-phase power</b>	12kVA (9.6kW) / 230 V / 52.2 A



## DSP 500 YS



<b>Engine</b>	YANMAR 4TNV88
<b>Current range, continuous</b>	20A ÷ 500A
<b>Duty cycle</b>	500A - 60%   450A - 100%
<b>Open circuit voltage</b>	62 Vcc (65 Vcc peak)
<b>Tank capacity</b>	60 l
<b>Pressure LpA</b>	69 dB(A) @ 7 m
<b>Three-phase power</b>	16 kVA / 400 V / 23.1 A
<b>Single-phase power</b>	10 kVA / 230 V / 43.5 A



## DSP 600 PS



<b>Engine</b>	PERKINS 1103A - 33G1
<b>Current range, continuous</b>	10A ÷ 600A
<b>Duty cycle</b>	600A 35%   550 A 60%   500A 100%
<b>Open circuit voltage</b>	60 Vcc
<b>Tank capacity</b>	65 l
<b>Pressure LpA</b>	69 dB(A) @ 7 m
<b>Three-phase power</b>	30 kVA / 400 V / 43.3 A
<b>Single-phase power</b>	15 kVA / 230 V / 65.2 A



## DSP 2x400 PS



<b>Engine</b>	PERKINS 1103A - 33TG1
<b>Current range, continuous</b>	2x10 ÷ 400 A (STICK-TIG)
<b>Duty cycle</b>	2x400 A 35%   2x360 A 60%   2x330 A 100%
<b>Open circuit voltage</b>	68 Vcc
<b>Tank capacity</b>	102 l
<b>Pressure LpA</b>	64 dB(A) @ 7 m
<b>Three-phase power</b>	40 kVA (30kW) / 400 V / 57.8 A
<b>Single-phase power</b>	20 kVA/kW / 230 V / 87 A



## DSP 2x400 YS



<b>Engine</b>	YANMAR 4TNV98T
<b>Current range, continuous</b>	2x10A/20.4V - 2x400A/36V (STICK) / 2x10A/10.4V - 2x400A/26V (TIG)
<b>Duty cycle</b>	2x400A/36V @ 35%   2x360A/34.5V @ 60%   2x330A/33V @ 100% (STICK)
<b>Open circuit voltage</b>	68 Vcc / Vdc
<b>Tank capacity</b>	102 l
<b>Pressure LpA</b>	67 dB(A) @ 7 m
<b>Three-phase power</b>	40 kVA (30kW) / 400 V / 57.8 A
<b>Single-phase power</b>	20 kVA/kW / 230 V / 87 A



# RANGE TS EVO / TS EVO MULTI4®

## WORLD CLASS ENGINES

Water diesel engines from global manufacturers have been chosen to power the engine driven welding models of the new TS-EVO and TS EVO MULTI4 series, guaranteeing their performance and reliability together with world-wide spares support.

## TS EVO

Designed for professional use, the TS EVO range is available with power ranging from 300 to 600 Amperes, in 5 different models.

Powered by water-cooled diesel engines from leading international brands, they allow manual metal arc welding in Direct Current or scratch start DC TIG welding, ensuring high quality results.

## TS EVO MULTI4®

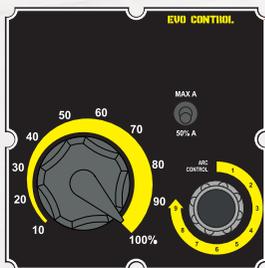
The engine driven welders of the TS EVO MULTI4 range are multi-process machines that allow you to choose the most suitable welding mode according to the specific requirement with the certainty of always achieving the highest quality results.

They are available in 5 different models with welding outputs ranging from 300 to 500 Amps. There is also a 2x280 Amp dual-operator model, a versatile model which allows operation of the machine for use with one or two welding operators.

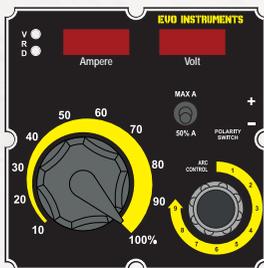
All the machines in the TS EVO MULTI4 range are powered by water diesel engines from leading international brands.



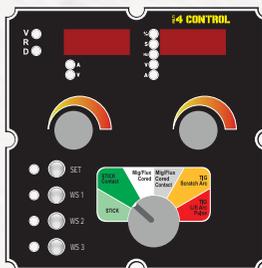
EVO CONTROL



EVO INSTRUMENT



MULTI4 CONTROL



## LARGE FUEL TANK, LONG RUN CAPABILITY

The engine driven welders of the TS EVO and TS EVO MULTI4 series are equipped with a large fuel tank, which guarantees long run capability.

## ORIGINAL MOSA THREEPHASE ASYNCHRONOUS ALTERNATORS

The engine driven welders of the TS EVO and TS EVO MULTI4 series use original MOSA three-phase asynchronous alternators. A component renowned for its durable reliability in all conditions.

## MACHINE PARAMETERS AND ENGINE DIGITAL CONTROL

A digital module inserted in the control panel allows easy viewing of major engine functions (start up, shutdown, engine alarms, fuel level, battery voltage, etc.) together with AC generating values (frequency and three-phase or single-phase voltage).



**THE RANGE OF PROFESSIONAL ENGINE DRIVEN WELDERS TS EVO - TS EVO MULTI4 FULFILS THE MOST DIVERSE WELDING APPLICATION REQUIREMENTS, THANKS TO THE MANY CONFIGURATIONS.**

## OPTIMISATION OF THE COOLING SYSTEM

A carefully considered and accurate design allowed the optimization of the cooling flows inside the machine, with the result of guaranteed performances in the most prohibitive climatic conditions.

## MODERN AND FUNCTIONAL DESIGN

- Rounded edges deflect sand, dust, and water from the canopy.
- The compact dimensions without protrusions assist favour stacking and transport.
- The large pockets in the base, allow for smooth handling with a forklift.
- The lifting point is part of the structure and mounted on the cover of the machine.
- The exhaust pipe, which can be placed on the cover, is adjustable and removable.
- Accessibility for maintenance within the machine is ensured by two fully opening side panels.





## TS 275 EVO



<b>Engine</b>	KOHLER KDW702
<b>Current range, continuous</b>	20A / 20.8V ÷ 270A / 21V (Stick)   20A / 10.8V ÷ 270A / 20.8V (Tig)
<b>Duty cycle</b>	200A / 28V @ 100% - 230A / 29.2V @ 60% (Stick)   200A / 18V @ 100% - 230A / 19.2V @ 60% - 270A / 20.8V @ 35% (Tig)
<b>Open circuit voltage</b>	66 Vcc (68 Vcc peak)
<b>Tank capacity</b>	38 l
<b>Pressure LpA</b>	70 dB(A) @ 7 m
<b>Three-phase power</b>	8 kVA (6.4kW) / 400 V / 11.5 A
<b>Single-phase power</b>	5 kVA/kW / 230 V / 21.7 A



## TS 405 EVO



<b>Engine</b>	KOHLER KDW1003
<b>Current range, continuous</b>	20A / 20.8V ÷ 400A / 20V (Stick)   20A / 10.8V ÷ 400A / 20V (Tig)
<b>Duty cycle</b>	330A @ 33.2V / 60% - 300A @ 32V / 100% (Stick)   380A @ 25.2V / 35% - 330A @ 23.2V / 60% - 300A @ 22V / 100% (Tig)
<b>Open circuit voltage</b>	75 Vcc (79 Vcc peak)
<b>Tank capacity</b>	38 l
<b>Pressure LpA</b>	71 dB(A) @ 7 m
<b>Three-phase power</b>	14 kVA (11.2 kW) / 400 V / 20.2 A
<b>Single-phase power</b>	8 kVA/kW / 230 V / 34.8 A



## TS 275 EVO MULTI4



<b>Engine</b>	KOHLER KDW702
<b>Current range, continuous</b>	20A / 20.8V ÷ 270A / 21V (Stick)   20A / 10.8V ÷ 270A / 20.8V (Tig)
<b>Duty cycle</b>	200A / 28V @ 100% - 230A / 29.2V @ 60% (Stick)   200A / 18V @ 100% - 230A / 19.2V @ 60% - 270A / 20.8V @ 35% (Tig)
<b>Open circuit voltage</b>	66 Vcc (68 Vcc peak)
<b>Tank capacity</b>	38 l
<b>Pressure LpA</b>	70 dB(A) @ 7 m
<b>Three-phase power</b>	8 kVA (6.4kW) / 400 V / 11.5 A
<b>Single-phase power</b>	5 kVA/kW / 230 V / 21.7 A



## TS 405 EVO MULTI4



<b>Engine</b>	KOHLER KDW1003
<b>Current range, continuous</b>	20A / 20.8V ÷ 400A / 20V (Stick)   20A / 10.8V ÷ 400A / 20V (Tig)
<b>Duty cycle</b>	330A @ 33.2V / 60% - 300A @ 32V / 100% (Stick)   380A @ 25.2V / 35% - 330A @ 23.2V / 60% - 300A @ 22V / 100% (Tig)
<b>Open circuit voltage</b>	75 Vcc (79 Vcc peak)
<b>Tank capacity</b>	38 l
<b>Pressure LpA</b>	71 dB(A) @ 7 m
<b>Three-phase power</b>	14 kVA (11.2 kW) / 400 V / 20.2 A
<b>Single-phase power</b>	8 kVA/kW / 230 V / 34.8 A



## TS 2x280 EVO<sup>MULTI4</sup>



<b>Engine</b>	KUBOTA V1505
<b>Current range, continuous</b>	20A ÷ 250A (DUAL)   40A ÷ 500A (SINGLE) (SMAW - GTAW)
<b>Duty cycle</b>	250A - 60% / 230A - 100% (DUAL)   480A - 60% / 440A - 100% (SINGLE) (SMAW - GTAW)
<b>Open circuit voltage</b>	70 Vcc (75 Vcc peak)
<b>Tank capacity</b>	60 l
<b>Pressure LpA</b>	73 dB(A) @ 7 m
<b>Three-phase power</b>	15 kVA (15 kW) / 400 V / 21.6 A
<b>Single-phase power</b>	7 kVA (7 kW) / 230 V / 30.4 A



# MOSA



Viale Europa, 59 - 20047 Cusago (MI) - Italy - Tel. +39 02 903521  
Fax +39 02 90390466 - E-mail: [export@mosa.it](mailto:export@mosa.it) - [www.mosa.it](http://www.mosa.it)