

ENGINE DRIVEN WELDER DSP 500 PS

The images are for reference

WELDING PROCESS

-  Shielded Metal Arc welding SMAW (STICK)
-  Gas Tungsten Arc Welding GTAW (TIG)
-  Gas Metal Arc Welding GMAW (MIG)
-  Flux Cored Arc Welding FCAW (FLUX CORED)



FEATURES

- High frequency digital control of welding current and voltage
- Specific welding programs for cellulose electrodes
- Double welding range (HALF/FULL - 50% / 100%)
- Aux power also available while welding
- Digital welding ammeter and voltmeter with PRE-SETTING
- Engine protection
- Emergency stop button
- Meets EC directives for noise and safety

DEFINITION

Valid declared powers up to the followings environmental conditions: temperature 25°C, altitude 100 meters above sea level

LTP power: stand-by power: Maximum available power for use with variable loads for a yearly number of hours limited at 500 h. No overload is admitted.

PRP power: continue power with variable loads. Maximum power for use with variable loads for a yearly illimited nubers of hours.

COP power: continuous power with constant load. Maximum power for use with constant loads for a yearly unlimited numbers of hours.



ENGINE 1500 RPM

4 STROKE, DIRECT INJECTION, NATURAL ASPIRATED	
Model	PERKINS - 404A-22G1
* Stand-By net power	20.3 kWm (27.6 hp)
* PRP net power	18.4 kWm (25 hp)
* COP net power	/
Cylinders / Displacement	4/ 2216 cm ³
Bore / Stroke	84 / 100 (mm)
Compression ratio	23.3 : 1
BMEP (Brake Mean Effective Pressure : LTP - PRP)	743.7 kPa – 669.3 kPa
Speed governor type	Mechanical
FUEL CONSUMPTION	
110 % (Stand-by power)	6.1 lt./h
100 % to PRP	5.3 lt./h
75 % to PRP	4 lt./h
50 % to PRP	2.9 lt./h
COOLING SYSTEM	
Total system cap. - only engine	7 lt – 3.6 lt.
Fan air flow	40.2 m ³ /min
LUBRICATION SYSTEM	
Total oil system capacity	10.3 lt
Oil capacity in sump	/
Oil consumption at full load	/

EXHAUST SYSTEM	
Maximum exhaust gas flow	3.94 m ³ /min.
Max. exhaust gas temp.	505 °C
Maximum back pressure	10.2 kPa (0.102 bar)
External diameter exhaust pipe	/
ELECTRICAL SYSTEM	
Starter motor power	2 kW
Battery charging alternator cap.	55 A
Cold start	- 15°C
With cold start aid	/
AIR FILTER	
Combustion air flow	1.45 m ³ /min.
HEAT REJECTED AT FULL LOAD	
To exhaust system	16.6 kW - 944 Btu/min.
To water and oil	19.6 kW - 1114 Btu/min.
Radiated to room	4.4 kW - 250 Btu/min.
To charge cooler	/

* Output powers according to ISO 3046-1

WELDING AND GENERATION

C.C. WELDING (CONSTANT CURRENT)

SMAW (STICK)/ GTAW (TIG) CC MODE	
Current range	10A ÷ 500A
Type of regulation	continues on 2 scales
Duty cycle	500A - 35%, 450 A - 60%, 400A - 100%
Open circuit voltage	62 Vcc

C.V. WELDING (CONSTANT VOLTAGE)

GMAW (MIG)/ FCAW (FLUX CORED) CV MODE	
Welding voltage	16V ÷ 40V
Type of regulation	continues
Duty cycle	450A 60% - 400A 100%

GENERAL SPECIFICATIONS

Fuel tank capacity	60 l
Fuel consumption (welding 60%)	3.8 l/h
Running time (welding 60%)	16 h
IP protection degree	IP 23

Guaranteed acoustic power LwA (pressure LpA)	93.5 LWA (68.5 dB(A) @ 7m)
Measured acoustic power LwA (pressure LpA)	95 LWA (70 dB(A) @ 7m)
Max. ambient temperature	40 °C

A.C. GENERATION

ASYNCHRONOUS ALTERNATOR, SELF-REGULATED, SELF-EXCITED, BRUSHLESS

Insulation class	H
------------------	---

AUXILIARY GENERATION

OUTPUT 1	
Type of source	Trifase
Frequency	50 Hz
Apparent Power (Active Power)	16 kVA (12.8kW)
Cos φ	0.8
Voltage	400 V
Current	23.1 A

OUTPUT 2	
Type of source	Monofase
Frequency	50 Hz
Apparent Power (Active Power)	12kVA (9.6kW)
Cos φ	0.8 / 1
Voltage	230 V
Current	52.2 A

OUTPUT 3	
Type of source	Monofase
Frequency	50 Hz
Apparent Power (Active Power)	6 kVA (6kW)
Cos φ	1
Voltage	110 V
Current	54.5 A

OUTPUT 4	
Type of source	Monofase
Frequency	50 Hz
Apparent Power (Active Power)	5 kVA/kW
Cos φ	1
Voltage	48 V
Current	104 A

SIMULTANEOUS LOAD CHARACTERISTIC

WELDING CURRENT (A)	0	100	150	300	400	500
POW. IN THREE PHASE 400V (kW)	16	14	12	6	3	0



CONTROL PANEL

DSP 500 PS

WELDING

- WDC control panel
 - Rotary switch for welding process
 - STAND-BY
 - TIG CONTACT STARTING ((GTAW - Lift Start)
 - CC STICK ARC FORCE (SMAW)
 - CC STICK CELLULOSE 1 (SMAW)
 - CC STICK CELLULOSE 2 (SMAW)
 - CV-WIRE (GMAW / FCAW)
 - Welding current / voltage adjusting knob
 - Connection of remote control with automatic "local / remote" switch at the insertion of the plug.
 - Welding range switch
 - Polarity reverse switch
 - LED STAND-BY
 - LED ON (Welder ready for use)
 - Thermal protection or fault LED (if on it indicates over-current or fault)
 - Polarity reverse LED (signals command activation)
- Welding current and voltage digital instruments PCB / LED V.R.D.
- Welding output sockets:
 - 1 x Saldatura (+) 600A
 - 1 x Saldatura (-) 600A



GENERATION (VERS. 400V / 230V / 48V)

- Earth leakage circuit breaker
- Circuit breaker for 230V - 32A sockets
- Circuit breaker for 230V - 16A sockets
- Output sockets : 1x 400V 32A 3P+N+T CEE
 - 1x 230V 32A 2P+T CEE
 - 1x 230V 16A 2P+T CEE
 - N°2 output terminals 200A (for 48V)
- Earth terminal (PE)

WEIGHT - DIMENSIONS ACCESSORIES

DSP 500 PS

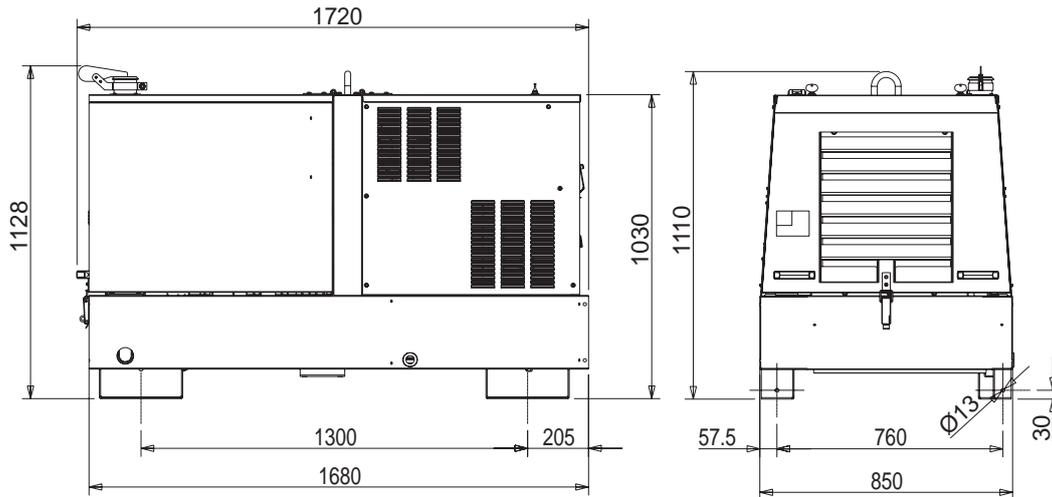


DRY WEIGHT:
• 750 Kg

The welding machine pictured may include optional accessories.



DIMENSION PICTURE



⊕ OPTIONS ON REQUEST

- Remote control RC2
- Remote control extension cord (30m)
- WF4 wire-feeder
- Welding cables K500 (20+15 m, 50 mm²)
- Welding kit (mask gloves, etc.)
- Earthing kit
- Site tow CTL22
- Site tow trailer, 4 wheels, 2 steering wheels, ball joint
- Road tow running gear CTV1/O
- Road tow running gear CTV1/S
- Locking Fuel Cap

⊗ VERSION ON REQUEST

- Version : 400V/230V
 - 1x400V 32A 3P+N+T IP67 CEE
 - 1x230V 32A 2P+T IP67 CEE
 - 2x230V 16A 2P+T IP67 CEE
- Version : 400V/230V/110V CTE
 - 1x400V 16A 3P+N+T IP67 CEE
 - 1x230V 32A 2P+T IP67 CEE
 - 1x110V 32A 2P+T CEE
 - 1x110V 16A 2P+T CEE

Ⓞ OPTIONS FACTORY INSTALLED

- Polarity change
- V.R.D. function
- Chalwyn valve
- Spark arrestor

GENERAL INFORMATION

COMPLIANCE GENERATING SETS WITH EC DIRECTIVES AND STANDARDS

- 2006/42 / EC (Machines Directive)
- 2014/35 / EU (Low Voltage Directive)
- 2014/30 / EU (EMC Directive)
- 2000/14 / EC (Directive Acoustic Emission for machines for use outdoors)
- ISO 8528 (Reciprocating internal combustion engine driven alternating current generating sets)



ISO 9001:2015 - Cert. 0192

WARRANTY

All devices are covered by the manufacturer's warranty.

The company reserves the right to change this specification without notice. For further information please contact the sales department.

© MOSA - Viale Europa, 59 - 20090 Cusago (Milano) - Italy - phone +39-0290352.1 - fax + 39-0290390466 E-mail: info@mosa.it Web site: www.mosa.it

