



ENGINE DRIVEN WELDER DSP 500 YS

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

- D.C. Arc welding source
- Electronic regulation of welding current and arc force
- Specific welding programs for cellulose electrodes
- Double welding range
- Digital Ammeter/voltmeter welding
- A.C. generator, single-phase and three-phase also available while welding
- Engine control digital module
- Central lifting eye
- Wide access for easy maintenance
- 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.



water cooled



diesel



electric starter

ENGINE 1500 RPM

4 STROKE, DIRECT INJECTION, NATURAL ASPIRATED

Model	YANMAR 4TNV88
* Stand-By net power	18 kW (24.5 hp)
* PRP net power	16.4 kW (22.3 hp)
* COP net power	/
Cylinders / Displacement	4/ 2.19 lit
Bore / Stroke	88 / 90 (mm)
Compression ratio	20 : 1
BMEP (Brake Mean Effective Pressure : LTP - PRP)	/
Speed governor type	Mechanical
FUEL CONSUMPTION	
110 % (Stand-by power)	5 lit./h
100 % to PRP	4.5 lit./h
75 % to PRP	3.4 lit./h
50 % to PRP	2.6 lit./h
COOLING SYSTEM	
Total system cap. - only engine	7 lit. - 2.7 lit.
Fan air flow	50 m ³ /min.
LUBRICATION SYSTEM	
Total oil system capacity	/
Oil capacity in sump	3.4 lit. (min) - 7.4 lit. (max)
Oil consumption at full load	/

* Output powers according to ISO 3046-1

EXHAUST SYSTEM

Maximum exhaust gas flow	/
Max. exhaust gas temp.	520 °C
Maximum back pressure	9.8 kPa (0.1 bar)
External diameter exhaust pipe	/

ELECTRICAL SYSTEM

Starter motor power	1.4 kW
Battery charging alternator cap.	40 A
Cold start	- 15 °C
With cold start aid	/

AIR FILTER

Combustion air flow	1.48 m ³ /min.
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HEAT REJECTED AT FULL LOAD

To exhaust system	/
To water and oil	/
Radiated to room	/
To charge cooler	/

WELDING AND GENERATION

DSP 500 YS

C.C. WELDING (CONSTANT CURRENT)

SMAW (STICK)/ GTAW (TIG) CC MODE	
Current range	20A ÷ 500A
Type of regulation	Continue on 2 Step 20A ÷ 250A / 20A ÷ 500A
Duty cycle	500A - 60% / 450A - 100%
Open circuit voltage	62 Vdc (65 Vdc peak)

C.V. WELDING (CONSTANT VOLTAGE)

GMAW (MIG)/ FCAW (FLUX CORED) CV MODE	
Welding voltage	16V ÷ 40V
Type of regulation	continuous
Duty cycle	500A - 60% / 450A - 100%

SIMULTANEOUS LOAD CHARACTERISTIC

WELDING CURRENT	≥ 400A	300A	200A	100A	0A
POW. IN THREE PHASE 400V	0 kVA	4 kVA	8 kVA	16 kVA	16 kVA
POW. IN SINGLE PHASE 230V	0 kVA	3 kVA	7 kVA	10 kVA	10 kVA
POW. IN SINGLE PHASE 115V	0 kVA	3 kVA	5 kVA	5 kVA	5 kVA

GENERAL SPECIFICATIONS

Fuel tank capacity	60 l
Fuel consumption (welding 60%)	3.15 l/h
Running time (welding 60%)	19 h
IP protection degree	IP 23

Guaranteed acoustic power LwA (pressure LpA)	94.5 dB(A) (69.5 dB(A) @ 7 m)
Measured acoustic power LwA (pressure LpA)	96 dB(A) (71 dB(A) @ 7 m)
Max. ambient temperature	40 °C

A.C. GENERATION

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

Insulation class	H
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GENERAZIONE AUSILIARIA

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

OUTPUT 2	
Type of source	Monofase
Frequency	50 Hz
Apparent Power (Active Power)	10kVA / kW
Cos φ	0.8 / 1
Voltage	230 V
Current	43.5 A

OUTPUT 3	
Type of source	Monofase
Frequency	50 Hz
Apparent Power (Active Power)	5kVA / kW
Cos φ	1
Voltage	110 V
Current	45.5 A

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



CONTROL PANEL

DSP 500 YS

ENGINE

- Controller RGK420SA
- Engine protector thermal circuit breaker: 1x30A
- Engine protector thermal circuit breaker: 1x5A
- Siren
- Emergency stop button

FEATURES CONTROLLER RGK420SA	
Operating Mode	<ul style="list-style-type: none"> • MAN - REMOTE
Display	<ul style="list-style-type: none"> • Graphic back-light LCD display • Buttons: START ▼ - ▲ • Key
Measures generator	<ul style="list-style-type: none"> • Voltage L1-L2 / L2-L3 / L3-L1 - N-L1/N-L2/N-L3 • Frequency Hz
Measures engine	<ul style="list-style-type: none"> • Fuel level • rpm meter • Hours meter • Battery voltage
Protections generator	<ul style="list-style-type: none"> • Overvoltage • Undervoltage • Overfrequency • Underfrequency
Protections engine	<ul style="list-style-type: none"> • Overspeed • Underspeed • High temperature shutdown • Low oil pressure shutdown • Low fuel level warning • Low fuel level shutdown • Battery voltage • Battery flat • Battery charge alternator failure • Arresto d'emergenza / Emergency stop • Mancato avviamento / Start failure • Mancato arresto / Stop failure • Manutenzione / Maintenance
Features	<ul style="list-style-type: none"> • Operator interface via symbols, codes and texts • Setpoints adjustable via controller buttons or PC • Remote Start and Stop • Configurable inputs and outputs • Operation temperature : -30°C -+70°C • NFC interface for wireless programming

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 IP67 CEE
 - 1x 230V 32A 2P+T IP67 CEE
 - 1x 230V 16A 2P+T IP67 CEE
 - N°2 output terminals 200A (for 48V)
- Earth terminal (PE)

WEIGHT - DIMENSIONS ACCESSORIES

DSP 500 YS

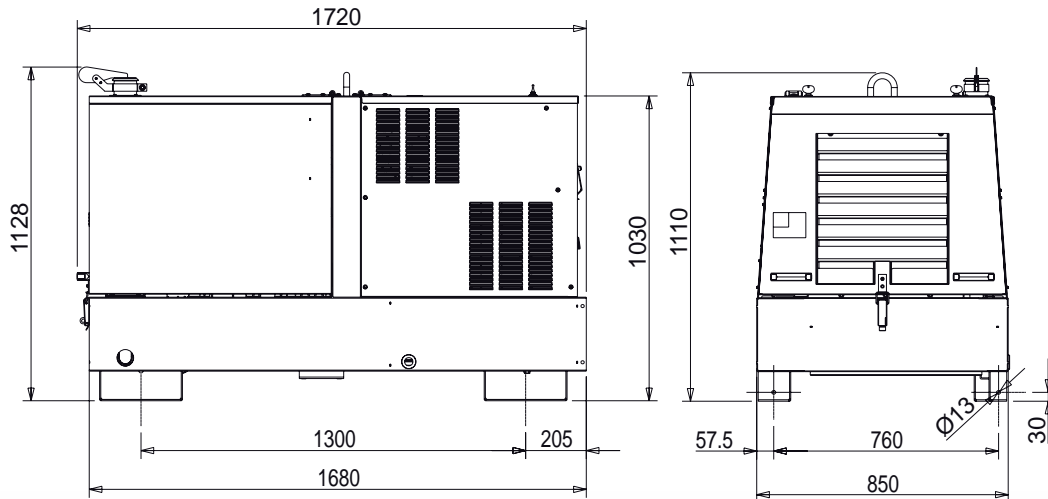


DRY WEIGHT:
• 720 Kg

The welding machine pictured may include optional accessories.



DIMENSION PICTURE



⊕ OPTIONS ON REQUEST

- Remote control RC2
- Remote control RC1 (with polarity change)
- 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
- Locking Fuel Cap

☀ VERSION ON REQUEST

- Version : 400V/230V
 - 1x400V 32A 3P+N+T IP67 CEE
 - 1x230V 32A 2P+T IP67 CEE
 - 1x230V 16A 2P+T IP67 CEE
 - 1x230V 16A 2P+T SCHUKO
- 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 (only with EVO instrument panel)
- V.R.D. function
- Gauges - water temperature and oil pressure
- 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.

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