



# ENGINE DRIVEN WELDER TS 2X280 EVO MULTI4

The images are for reference

## WELDING PROCESS



SMAW Shielded Metal Arc welding (STICK)



Gas Tungsten Arc Welding (TIG)



PULSED TIG welding



GMAW Gas Metal Arc Welding (MIG)



FCAW Flux Cored Arc Welding (FLUX CORED)



## FEATURES

- Two independent welding stations each of 250A
- Single 500A station
- VRD function
- AC power generator three-phase and single-phase available during the welding phase
- Output sockets with over-current and short-circuit protection
- High sensitivity 30mA differential switch
- Auto-Idle
- Battery disconnect switch
- Emergency button
- Series indicators
- Liquid-tight base
- Central lifting hook
- Large capacity steel tank
- Adjustable exhaust gas outlet
- Wide access for easy maintenance
- Access panel for cleaning and checking the radiator
- External access for filling the radiator



water cooled



diesel



electric starter

## ENGINE 3000 RPM

### 4 STROKE, DIRECT INJECTION

Model	YANMAR - 3TNV88
Stand-by net power	26,8 kW (36,4 hp)
PRP net power	24 kW (32,6 hp)
COP net power	3 / 1642cm <sup>3</sup> (1.642 lt.)
Cylinder / Displacement	88/90 (mm)
Bore / Stroke	19,1 : 1
Compression ratio	/
BMEP (Brake Mean Effective Pressure : LTP - PRP)	/
Speed governor type	Mechanical
<b>FUEL CONSUMPTION</b>	
110 % (Stand-by power)	7,8 l/h
100 % of PRP	7,1 l/h
75 % of PRP	5,3 l/h
50 % of PRP	3,6 l/h
<b>COOLING SYSTEM</b>	
Total system cap. - only engine	6 l / 2 l
Fan air flow	/
<b>LUBRICATION SYSTEM</b>	
Total oil system capacity	6,7
Oil capacity in sump	2,8 l - 6 l
Oil consumption at full load	/
<b>EXHAUST SYSTEM</b>	
Maximum exhaust gas flow	/

Max. exhaust gas temp.	/
Maximum back pressure	12,75 kPa (0,127 bar)
External diameter exhaust pipe	/
<b>ELECTRICAL SYSTEM</b>	
Starter motor power	1,7 kW
Battery charging alternator cap.	40 A
Cold start	-10°C
<b>AIR FILTER</b>	
Combustion air flow	/
<b>HEAT REJECTED AT FULL LOAD</b>	
To exhaust system	/
To water and oil	/
Radiated to room	/
To charge cooler	/



# WELDING

## C.C. WELDING (CONSTANT CURRENT)

STICK - TIG	DUAL	SINGLE
Current range	2x250A / 30V (Stick) 2x250A / 20V (Tig)	500A / 32V (Stick) 425A / 37V (Stick) (IEC rating) 500A / 30V (Tig)
Current regulation range	2x20A/20,8V – 250A/30V (Stick) 2x20A/10,8V – 250A/20V (Tig)	40A/21,6V – 500A/32V (Stick) 40A/21,6V – 425A/37V (Stick-IEC rating) 40A/11,6V – 500A/30V (Tig)
Type of regulation	Continue on 1 Scale	
Duty cycle 60%	2x250A / 30V (Stick) 2x250A / 20V (Tig)	480A / 29,2V (Tig)
Duty cycle 100%	2x230A / 29,2V (Stick) 2x230A / 19,2V (Tig)	425A / 37V (Stick) 440A / 27,6V (Tig)
Open circuit voltage	70 Vcc (75 Vcc peak)	
Reduced open circuit voltage (VRD)	13 Vcc	

## C.V. WELDING (CONSTANT VOLTAGE)

MIG - FLUX CORED	DUAL	SINGLE
Current range	2x250A / 26,5V	500A / 32V 440A / 36V (IEC rating)
Current regulation range	2x20A/15V – 250A/26V	40A/16V – 500A/32V 40A/16V – 440A/36V (IEC rating)
Welding voltage	15 V - 45 V	
Type of regulation	Continue on 1 Scale	
Duty cycle 60%	2x250A / 26,5V	/
Duty cycle 100%	2x230A / 25,5V	40A / 16V - 500A / 32V 40A / 16V - 440A / 36V (IEC rating)

## SIMULTANEOUS LOAD CHARACTERISTIC

WELDING CURRENT	≥ 250A	200A	150A	100A	0A
POW. IN THREE PHASE 400V	0 kVA	6 kVA	11 kVA	15 kVA	15 kVA
POW. IN SINGLE PHASE 230V	0 kVA	4 kVA	7 kVA	7 kVA	7 kVA
POW. IN SINGLE PHASE 115V	0 kVA	4 kVA	5 kVA	5 kVA	5 kVA



## GENERAL SPECIFICATIONS

### ALTERNATOR ASYNCHRONOUS THREE-PHASE, SELF-EXCITED, SELF-REGULATED, BRUSHLESS

Insulation class	H
IP protection degree	IP 23
Fuel tank capacity	60 l

Running time (welding 60%)	13 h
Starter battery	12V - 80Ah / 670A CCA (EN)
Acoustic pressure LpA	75 dB(A) @ 7 m
Max. operating temperature	46°C

## AUXILIARY GENERATION

### OUTPUT 1

Type of source	Three-phase
Frequency	50Hz
Power kVA (Power kW) Max	15 kVA (15 kW)
Cos φ	0.8 ÷ 1
Voltage	400 V
Current	21.6 A

### OUTPUT 2

Type of source	Single-Phase
Frequency	50 Hz
Power kVA (Power kW) Max	7 kVA (7 kW)
Cos φ	0.8 ÷ 1
Voltage	230 V
Current	30.4 A

### OUTPUT 3

Type of source	Single-Phase
Frequency	50Hz
Power kVA (Power kW) Max	5 kVA (5 kW)
Cos φ	0.8 ÷ 1
Voltage	115 V
Current	43.5 A

### OUTPUT 4

Type of source	/
Frequency	/
Power kVA (Power kW) Max	/
Cos φ	/
Voltage	/
Current	/

# CONTROL PANEL

## AUTOMATIC MANUAL CONTROL PANEL

- Controller IntelliNano Plus
- Power switch
- Thermal circuit breakers for protection
- motor: 1x30A - 1 x 16A
- Horn
- Emergency stop button
- Auto-idle switch



INTELINANO PLUS CONTROLLER CHARACTERISTICS	
Operating mode	<ul style="list-style-type: none"> <li>• MAN.- AUTO</li> </ul>
Display	<ul style="list-style-type: none"> <li>• Graphic back-light LCD display 128x64 pixels</li> </ul>
LEDs	<ul style="list-style-type: none"> <li>• Engine operation</li> <li>• AUTO operating mode</li> <li>• Alarm</li> </ul>
Buttons	<ul style="list-style-type: none"> <li>• START button</li> <li>• STOP button</li> <li>• AUTO button</li> <li>• N° 2 buttons for controller programming</li> </ul>
Generator Measures	<ul style="list-style-type: none"> <li>• Voltage : N-L1</li> <li>• Current : I1</li> <li>• Powers : kVA</li> <li>• Frequency</li> </ul>
Engine Measures	<ul style="list-style-type: none"> <li>• Water temperature (optional)</li> <li>• Oil pressure (optional)</li> <li>• Fuel level</li> <li>• Rpm meter</li> <li>• Battery voltage</li> <li>• Maintenance</li> <li>• Hours meter</li> </ul>
Generator Protections	<ul style="list-style-type: none"> <li>• Short circuit</li> <li>• Over-Udervoltage</li> <li>• Over-Uderfrequency</li> <li>• Phase sequence</li> </ul>
Engine Protections	<ul style="list-style-type: none"> <li>• Overspeed</li> <li>• High water temperature warning</li> <li>• Low oil pressure warning</li> <li>• Low fuel level warning</li> <li>• Under battery voltage</li> <li>• Battery charge alternator failure</li> <li>• Start failure</li> <li>• Stop failure</li> <li>• Emergency stop</li> </ul>
AMF functins (Automatic control panel only)	<ul style="list-style-type: none"> <li>• Measure mains voltage : N-L1</li> <li>• Measure mains frequency</li> <li>• Three phase detection</li> <li>• Over-Under mains voltage</li> <li>• Over-Under mains frequency</li> <li>• Phase sequence</li> </ul>
Features	<ul style="list-style-type: none"> <li>• Event log and alarms (10 events)</li> <li>• Operator interface with icons, no text</li> <li>• Remote Start and Stop</li> <li>• Pre-heating</li> <li>• Fully programmable from the panel or from PC</li> <li>• Direct connection to engines with ECU via Can bus J1939</li> <li>• Manual operation (MRS) with remote start</li> <li>• IP65 protection</li> <li>• Operation temperature: -20°C / +70°C</li> </ul>
Communication	<ul style="list-style-type: none"> <li>• Setup USB port</li> <li>• CAN BUS interface (J1939 only)</li> </ul>

# CONTROL PANEL

## WELDING

- Selector for single - double welding station
- Connection of remote control with automatic "local / remote" switch at the insertion of the plug.
- Connection of wire feeder, automatic detection of connection after the insertion of the plug
- Welding output sockets: 2 x Welding (+) 600A  
2 x Welding (-) 600A

## CONTROL PANEL MULTI4

MULTI4 CONTROLLER FEATURES	
Rotary switch for welding process	<ul style="list-style-type: none"> <li>• Stick (SMAW)</li> <li>• Stick contact</li> <li>• Mig/Flux Cored (GMAW)</li> <li>• Mig/Flux Cored contact</li> <li>• Tig lift arc (GTAW)</li> <li>• Tig pulse</li> </ul>
Encoder for current - voltage welding control	
Multifunctional encoder	<ul style="list-style-type: none"> <li>• Arc force control (Stick)</li> <li>• Hot start voltage setting (Mig)</li> <li>• Turn-off time arc control (Tig scratch)</li> <li>• Switching frequency setting (Tig pulsed)</li> </ul>
2x Display (4 Digit)	<ul style="list-style-type: none"> <li>• Current and voltage during the welding process</li> <li>• DISPLAY 1: Set the welding current and the voltage</li> <li>• DISPLAY 2: Settings controlled by the multifunction encoder</li> </ul>
LED VRD	<ul style="list-style-type: none"> <li>• Show if VRD is enabled</li> </ul>
LED AV	<ul style="list-style-type: none"> <li>• Kind of value shown on display 1</li> </ul>
LED % - s - Hz - V- A	<ul style="list-style-type: none"> <li>• Kind of value shown on display 2</li> </ul>
Button SET	<ul style="list-style-type: none"> <li>• Shows and saves the program</li> </ul>
BUTTON WS1 -WS2 -WS3	<ul style="list-style-type: none"> <li>• Recall a welding program saved previously, up to 3 programs can be stored for each welding process</li> </ul>
BUTTON WS3	<ul style="list-style-type: none"> <li>• Access to the secondary parameters for welding</li> </ul>
LED Button	<ul style="list-style-type: none"> <li>• Signal for storing and program recall</li> </ul>



## GENERATION (VERS. 400V / 230V / 115V)

- 30 mA differential switch (400V/230V)
- 30 mA differential switch (115V)
- Thermal circuit breakers for 230V and 115V socket protection
- Output sockets: 1x 400V 32A 3P+N+T CEE IP67  
1x 230V 16A 2P+T CEE IP67  
1x 115V 16A 2P+T CEE IP67
- Earth terminal (PE)

## GENERATION (VERS. AUSTRALIA 400V / 230V)

- 30 mA differential switch
- Magnetothermic switch for 230V sockets
- AUSTRALIAN output sockets: 1 x 400V 32A 3P+N+T CEE IP 66  
2 x 230V 16A 2P+T CEE IP66
- Earth terminal (PE)

# WEIGHT - DIMENSIONS ACCESSORIES

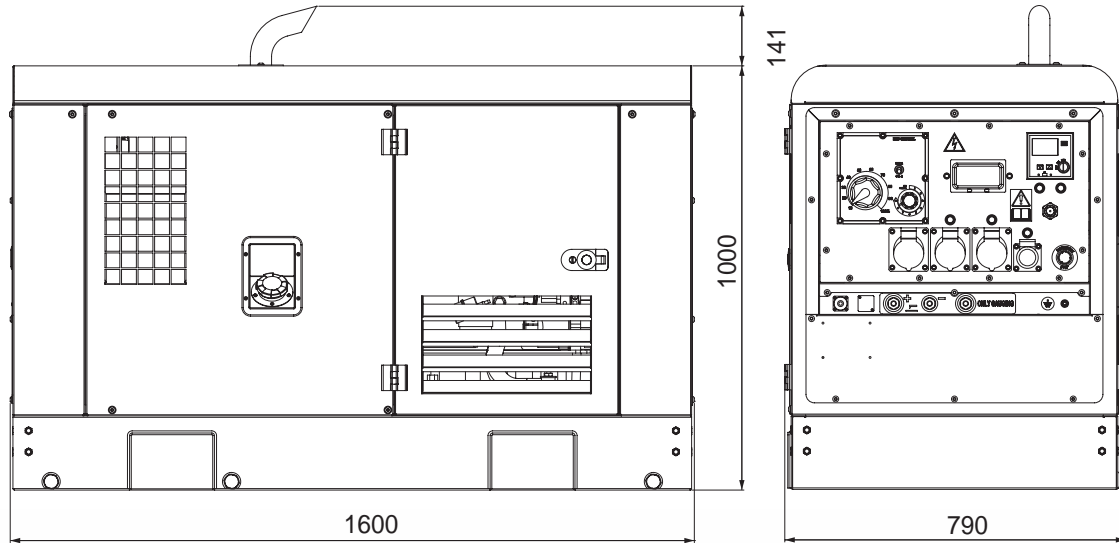


**DRY WEIGHT:**  
• 725 Kg

The welding machine pictured may include optional accessories.



**DIMENSION PICTURE (mm)**



## ⊕ OPTIONS ON REQUEST

- RCE remote control
- Extension cable for remote control (30m)
- WF4 wire feeder
- Welding cables K500 (20+15 m, 50 mm<sup>2</sup>)
- Welding kit (mask, glasses, etc.)
- CTV fast towing trolley
- 2-wheel slow towing trolley
- Slow towing trolley with 4 wheels, 2 steering
- Front cover
- Spark extinguisher
- Earthing kit

## ☀ VERSIONS AVAILABLE

C1PV2023	400/230/115 - EVO MULTI4
C1PV2043	400V/230V - 50Hz (Australia Vers.)

## GENERAL INFORMATION

### COMPLIANCE GENERATING SETS WITH EC DIRECTIVES AND STANDARDS

- 2006/42 / EC (Machinery Directive)
- 2014/35 / UE (Low Voltage Directive)
- 2014/30 / UE (Electromagnetic Compatibility Directive)
- IEC-EN 60974-1 Arc welding equipment - Welding power sources
- IEC-EN 60974-10 Arc welding equipment - Electromagnetic compatibility (EMC) requirements



ISO 9001:2015 - Cert. 0192  
**WARRANTY**

All devices are covered by the manufacturer's warranty.

**Non-contractual document. Specification subject to change without notice.**

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