

# ENGINE DRIVEN WELDER

## TS 255 EVO

The images are for reference

### WELDING PROCESS



SMAW Shielded Metal Arc welding (STICK)



Gas Tungsten Arc Welding (TIG)



### FEATURES

- D.C. Arc welding source
- Electronic regulation of welding current and arc force
- Welding control panel "EVO CONTROL"
- A.C. generator, single-phase and three-phase also available while welding
- Engine control digital module
- Bunded base
- Base plate with forklift pockets
- Canopy with large opening to allow easy maintenance (replacement of air, oil, fuel filters)
- Large fuel tank
- Fuel level sensor
- External plugs for oil and water drainage
- Emergency stop button
- Central lifting eye
- Wide access for easy maintenance
- Meets EC/UE directives



water cooled



diesel



electric starter

### DEFINITIONS

#### EVO CONTROL



Welding current regulation  
Welding arc regulation  
Welding scale selection

#### EVO INSTRUMENT



Welding current regulation  
Welding arc regulation  
Welding scale selection  
Digital ammeter - welding current  
Digital voltmeter - welding voltage

## ENGINE 3000 RPM

4 STROKE, NATURAL ASPIRATED	
Model	KOHLER KDW702
Stand-By net power	10.3 kW (14 hp)
PRP net power	9.3 kW (12.6 hp)
COP net power	/
Cylinders / Displacement	2 / 686 cm <sup>3</sup> (0.686 lt.)
Bore / Stroke	75 / 77,6 (mm)
Compression ratio	22.8 :1
BMEP (Brake Mean Effective Pressure : LTP - PRP)	/
Speed governor type	Mechanical
<b>FUEL CONSUMPTION</b>	
110 % (Stand-by power)	3.9 lt./h
100 % to PRP	3.4 lt./h
75 % to PRP	2.6 lt./h
50 % to PRP	1.9 lt./h
<b>COOLING SYSTEM</b>	
Total system cap. - only engine	lt - 1.1 lt
Fan air flow	72 m <sup>3</sup> /min.
<b>LUBRICATION SYSTEM</b>	
Total oil system capacity	/
Oil capacity in sump	1.6 lt
Oil consumption at full load	/

EXHAUST SYSTEM	
Maximum exhaust gas flow	2.2 m <sup>3</sup> /min.
Max. exhaust gas temp.	540 °C
Maximum back pressure	6000 kPa (0.06 bar)
External diameter exhaust pipe	/
<b>ELECTRICAL SYSTEM</b>	
12 Vdc	
Starter motor power	1.6 kW
Battery charging alternator cap.	40 A
Cold start	- 15 °C
With cold start aid	/
<b>AIR FILTER</b>	
Dry	
Combustion air flow	1.02 m <sup>3</sup> /min.
<b>HEAT REJECTED AT FULL LOAD</b>	
To exhaust system	/
To water and oil	/
Radiated to room	/
To charge cooler	/

# WELDING AND GENERATION

## C.C. WELDING

CONSTANT CURRENT	
Current range	20A ÷ 250A
Type of regulation	Continue 20A ÷ 250A
Duty cycle	200A @ 28V / 100% (Stick) 250A @ 20V / 100% (Tig)
Open circuit voltage	66 Vcc (68 Vcc peak)
Arc force control	Yes

## SIMULTANEOUS LOAD CHARACTERISTIC

WELDING CURRENT	≥ 130A	100A	75A	50A	0A
POW. IN THREE PHASE 400V	0 kVA	1.2 kW	3.5 kW	5 kW	8 kW
POW. IN SINGLE PHASE 230V	0 kVA	1 kW	2.5 kW	3 kW	5 kW
POW. IN SINGLE PHASE 110V	0 kVA	1 kW	2 kW	2.5 kW	2.5 kW

## ALTERNATOR

Fuel tank capacity	38 l
Starter battery	12 Vdc -37Ah / 330A CCA(EN)
Fuel consumption (welding 60%)	/
Running time (welding 60%)	11 h
IP protection degree	IP 23

Guaranteed acoustic power LwA (pressure LpA)	94 dB(A) (70 dB(A) @ 7 m)
Measured acoustic power LwA (pressure LpA)	95 dB(A) (70 dB(A) @ 7 m)
Max. ambient temperature	40 °C

## A.C. GENERATION

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

Insulation class	H
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## AUXILIARY GENERATION

OUTPUT 1	
Type of source	3-phase
Frequency	50Hz
Power kVA (Power kW) Max	8 kVA (6.4kW)
Cos φ	0.8
Voltage	400V
Current	11.5 A

OUTPUT 3	
Type of source	1-phase
Frequency	50Hz
Power kVA (Power kW) Max	2.5 kVA/kW
Cos φ	0.8/1
Voltage	110V CTE
Current	22.7A

OUTPUT 2	
Type of source	1-phase
Frequency	50Hz
Power kVA (Power kW) Max	5kVA kVA/kW
Cos φ	0.8/1
Voltage	230V
Current	21.7A

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

# CONTROL PANEL

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

## WELDING

- Continuous control of the welding current from 20A to 300A
- Welding range switch
- Continuous control of the arc force
- Connection of remote control with automatic "local / remote" switch at the insertion of the plug
- Welding output sockets:
  - 1x Welding (+) 400A
  - 1x Welding (-) 400A
- **EVO INSTRUMENT:**
  - 2x Display - 4 Digit
  - Set the welding current
  - Current and voltage Measurement during the welding process
  - VRD ON/OFF switch (only with EVO Instrument panel)
  - Connector for connection to Box PL400



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

- ELCB-GFI (Ground Fault Interruptor) (400V/230V)
- Circuit breaker for 230V sockets
- Thermal circuit breakers for sockets: 1x 16A for socket 230V 16A 2P+T CEE
- 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)

## GENERATION (VERS. 400V/230V/110V CTE)

- ELCB-GFI (Ground Fault Interruptor) (400V/230V)
- Circuit breaker for 230V sockets
- Circuit breaker for 110V sockets
- Thermal circuit breakers for sockets: 1x 16A for socket 110V 16A 2P+T CEE
- Output sockets : 1x 400V 32A 3P+N+T CEE
  - 1x 230V 32A 2P+T CEE
  - 1x 110V 32A 2P+T CEE
  - 1x 110V 16A 2P+T CEE
- Earth terminal (PE)

## GENERATION (VERS. AUS)

- ELCB-GFI (Ground Fault Interruptor) (400V/230V)
- Circuit breaker for 230V sockets
- Output sockets : 1x 400V 32A 3P+N+T IP67 AUS
  - 1x 230V 32A 2P+T IP67 AUS
  - 1x 230V 15A 2P+T IP67 AUS
- Earth terminal (PE)



# WEIGHT - DIMENSIONS ACCESSORIES

TS 255 EVO

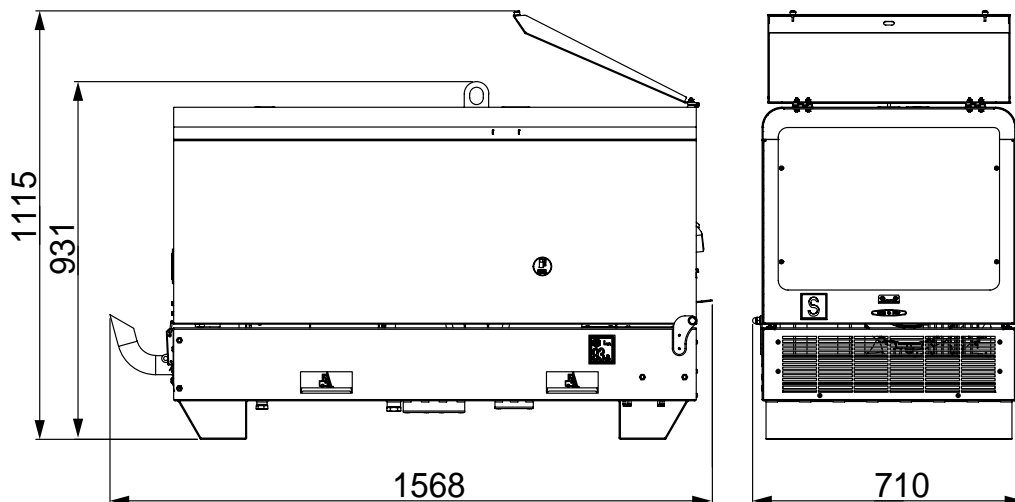


DRY WEIGHT:  
• 390 Kg

The welding machine pictured may include optional accessories.



DIMENSION PICTURE



## OPTIONS ON REQUEST

- Remote control RC2
- Remote control RCE PL - (Remote control for polarity change)
- Remote control extension cord (30m)
- Box PL 400 - External polarity change - max. 400A (only with EVO INSTRUMENT panel)
- Welding cables K500 (20+15 m, 50 mm<sup>2</sup>)
- Welding kit (mask gloves, etc.)
- Trolley CTM255
- Site tow CTL255
- Road tow running gear CTV4
- Earthing kit



## VERSION ON REQUEST

- Version : 400V/230V/110V CTE
  - 1x400V 32A 3P+N+T CEE
  - 1x230V 32A 2P+T CEE
  - 1x110V 32A 2P+T CEE
  - 1x110V 16A 2P+T CEE
- Australia version:
  - 1x 400V 32A 3P+N+T IP67 AUS
  - 1x 230V 32A 2P+T IP67 AUS
  - 1x 230V 15A 2P+T IP67 AUS



## OPTIONS FACTORY INSTALLED

- EVO Instrument panel
- Gauges - water temperature and oil pressure
- Main battery switch

## GENERAL INFORMATION

EC Directives and Standards Compliance  
 2006/42 / EC (Machinery 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.

Specifications subject to change without notice. For further information please contact the sales department.

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