




# ENGINE DRIVEN WELDER CS 350 KSX CC/CV

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)



## FEATURES

- Arc welding source in D.C. welding
- High frequency welding current and voltage control
- A.C. generator, single-phase and three-phase
- Aux power also available while welding
- EP7 engine protection
- MOSA Power optimiser
- Large tank (38 l)
- Bunded base
- Emergency stop button
- Meets EC directives for noise and safety

## DEFINITIONS

**SMAW:** Coated electrode welding is an arc welding with protected metal.

**GMAW:** welding is an arc process with metal under gas protection.

**FCAW (FLUX CORED):** The process with cored wires is very similar to MIG / MAG welding. Continuous wire is not full but consists in a metal strip that wraps a powders core (flow).

**GTAW:** is a welding process that uses a tungsten electrode that cannot melt.



## ENGINE 3000 RPM

4 STROKE, DIRECT INJECTION, NATURAL ASPIRATED	
Model	KOHLER KD 477/2
* Stand-By net power	14 kWm (19 hp)
* PRP net power	/
* COP net power	/
Cylinders / Displacement	2 / 954 cm <sup>3</sup> (0.954 lt.)
Bore / Stroke	90 / 75 (mm)
Compression ratio	19 : 1
BMEP (Brake Mean Effective Pressure : LTP - PRP)	/
Speed governor type	Mechanical
<b>FUEL CONSUMPTION</b>	
110 % (Stand-by power)	4.1 lt./h
100 % to PRP	3.7 lt./h
75 % to PRP	2.8 lt./h
50 % to PRP	1.8 lt./h
<b>COOLING SYSTEM</b>	
Total system cap. - only engine	/
Fan air flow	13.3 m <sup>3</sup> /min.
<b>LUBRICATION SYSTEM</b>	
Total oil system capacity	/
Oil capacity in sump	3 lt.
Oil consumption at full load	< 0.011 kg./h

<b>EXHAUST SYSTEM</b>	
Maximum exhaust gas flow	3.48 m <sup>3</sup> /min.
Max. exhaust gas temp.	600 °C
Maximum back pressure	6.7 kPa (0.067 bar)
External diameter exhaust pipe	/
<b>ELECTRICAL SYSTEM</b>	
Starter motor power	1.8 kW
Battery charging alternator cap.	25 A
Cold start	/
With cold start aid	- 15°C 1000 rpm / - 8°C 3000 rpm
<b>AIR FILTER</b>	
Combustion air flow	1.26 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	/

\* Output powers according to ISO 3046-1

# WELDING AND GENERATION

## C.C. WELDING (CONSTANT CURRENT)

SMAW (STICK)/ GTAW (TIG) CC MODE	
Current range	20A ÷ 350A
Type of regulation	/
Duty cycle	350A/35%   300A/60%   250A/100%
Open circuit voltage	66 Vcc
Arc Force Regulation	Si

## C.V. WELDING (CONSTANT VOLTAGE)

GMAW (MIG)/ FCAW (FLUX CORED) CV MODE	
Welding current	/
Type of regulation	14V - 44V
Service	300A/60%   250A/100%
Duty Cycle	66 Vcc

## GENERAL SPECIFICATIONS

Fuel tank capacity	38 l
Starter Battery	/
Fuel consumption (welding 60%)	2.5 l/h
Running time (welding 60%)	15.2 h
IP protection degree	IP 23

Guaranteed acoustic power LwA (pressure LpA)	94 dB(A) (69 dB(A) @ 7 m)
Measured acoustic power LwA (pressure LpA)	95 dB(A) (70 dB(A) @ 7 m)
Max. ambient temperature	/

## A.C. GENERATION

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

Insulation class	H
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## GENERAZIONE AUSILIARIA

OUTPUT 1	
Type of source	Three-phase
Frequency	50 Hz
Apparent Power (Active Power)	10kVA (8kW)
Cos φ	0.9
Voltage	400V
Current	14.4 A

OUTPUT 2	
Type of source	Single-phase
Frequency	50 Hz
Apparent Power (Active Power)	2.5kVA (2kW)
Cos φ	0.9
Voltage	110V
Current	22.7 A

OUTPUT 3	
Type of source	Single-phase
Frequency	50 Hz
Apparent Power (Active Power)	5kVA (5kW)
Cos φ	0.9
Voltage	230V
Current	21.7 A

OUTPUT 4	
Type of source	Single-phase
Frequency	50 Hz
Apparent Power (Active Power)	5kVA (5kW)
Cos φ	0.9
Voltage	48V
Current	104 A

The use of the Auxiliary Generation is recommended for tools related to welding (wheels, electric hammers, lights, etc ...)

## SIMULTANEOUS LOAD CHARACTERISTIC

WELDING CURRENT	0	50	100	150	200	250	300	350
POW. IN THREE PHASE 400V	8.0	8.0	7.0	5.5	3.5	2.0	0	0
POW. IN SINGLE PHASE 230V	4.0	4.0	4.0	4.0	3.5	2.0	0	0

# CONTROL PANEL

## ENGINE

- EP7 controller
- Thermal circuit breaker for motor protection: 1x30A
- Thermal cut-out for motor protection: 1x5A
- Hour counter
- Fuel level
- Autoidle switch

### FEATURES CONTROLLER EP7

#### Caratteristiche

- Engine start and stop key
- Low oil pressure shutdown
- Low oil level shutdown
- Fuel reserve stop
- Battery charge alarm
- Signaling LEDs

## WELDING

- WAC control panel:
  - CC-CV welding mode switch
  - Welding current / voltage adjustment knob
  - Welding arc adjustment knob
  - Remote control connection connector. Automatic "local / remote" switching on insertion of the connector. 10 POLES
  - ArcForce switch
  - VRD / VRD LED
- Welding outlet sockets: 1 x Welding (+) 400A  
1 x Welding (-) 400A



## GENERATION

- Differential switch (400V / 230V)
- Thermal breakers for socket protection
- Voltmeter
- Earth terminal (PE)

## SOCKET COMBINATIONS AVAILABLE

	VERSIONS			
	400V/230V/48V	400V/230V	400V/230V/110V	400V/250V AUSTRALIA
1x400V 32A 3P+N+T CEE	•	•	•	
1x230V 32A 2P+T CEE	•	•		
1x230V 16A 2P+T CEE		•	•	
1x230V 16A 2P+T SCHUKO		•		
1x110V 32A 2P+T CEE			•	
1x110V 16A 2P+T CEE			•	
1x48V	•			
1x400V 32A 3P+N+T AUS IP66				•
2x230V 15A 2P+T AUS IP66				•



# WEIGHT - DIMENSIONS ACCESSORIES

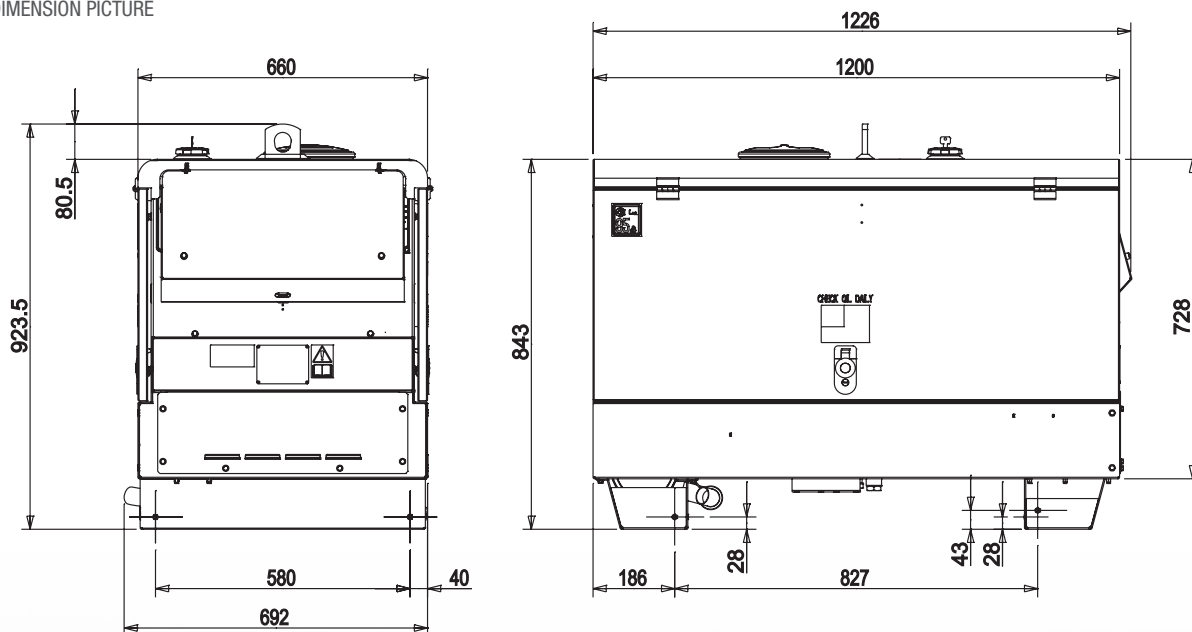


**DRY WEIGHT:**  
• 345 Kg

The welding machine pictured may include optional accessories.



**DIMENSION PICTURE**



## OPTIONS ON REQUEST

- WF4 wire-feeder
- Remote control RC2
- Remote control extension cord (30m)
- Welding cables: K400 (20+15m, 50mm<sup>2</sup>)
- Welding kit (mask gloves, etc.)
- Earthing kit
- Trolley CTM 330
- Site tow CTL330
- Road trailer CTV4



## VERSION ON REQUEST

• /



## OPTIONS FACTORY INSTALLED

- Auto-Idle
- Disabling VRD function

## 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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