

ENGINE DRIVEN WELDER TS 405 EVO MULTI4

The images are for reference

WELDING PROCESS



SMAW Shielded Metal Arc welding (STICK)



Gas Tungsten Arc Welding (TIG)



GMAW Gas Metal Arc Welding (MIG)



FCAW Flux Cored Arc Welding (FLUX CORED)



Arc Gouging SMAW (STICK)



CARATTERISTICHE

- Multi-process DC arc welder
- "EVO MULTI4" welding control panel
- Digital adjustment of the welding parameters
- Welding arc adjustment and multi-process parameters
- Ammeter and digital welding voltmeter with pre-setting of the welding parameters
- VRD function
- AC power generator three-phase and single-phase available during the welding phase
- Digital engine management and control module
- Bunded base
- Canopy with wide opening to allow easy maintenance (replacement of air, oil, fuel filters)
- Large capacity tank
- Fuel level sensor
- External plugs for oil and water drainage
- Emergency stop button
- Central lifting eye
- Compliant with EC / EU Directives



water cooled



diesel



electric starter

ENGINE 3000 RPM

4 STROKE, NATURAL ASPIRATED	
Model	KOHLER KDW1003
Stand-by net power	17.15 kW (23.3 hp)
PRP net power	15.6 kW (21.2 hp)
COP net power	/
Cylinder / Displacement	3 / 1028 cm ³ (1.028 lt.)
Bore / Stroke	75 / 77.6 (mm)
Compression ratio	22.8 :1
BMEP (Brake Mean Effective Pressure : LTP - PRP)	/
Speed governor type	Mechanical
FUEL CONSUMPTION	
110 % (Stand-by power)	5.4 lt./h
100 % of PRP	4.9 lt./h
75 % of PRP	3.7 lt./h
50 % of PRP	2.7 lt./h
COOLING SYSTEM	
Total system cap. - only engine	/
Fan air flow	93 m ³ /min.
LUBRIFICATION SYSTEM	
Total oil system capacity	2.6 lt.
Oil capacity in sump	2.5 lt
Oil consumption at full load	/

EXHAUST SYSTEM	
Maximum exhaust gas flow	3.2 m ³ /min.
Max. exhaust gas temp.	540 °C
Maximum back pressure	8000 kPa (0.08 bar)
External diameter exhaust pipe	/
ELECTRICAL SYSTEM	
Starter motor power	1.6 kW
Battery charging alternator cap.	40 A
Cold start	- 15 °C
With cold start device	/
AIR FILTER	
Combustion air flow	1.6 m ³ /min.
HEAT REJECTED AT FULL LOAD	
To exhaust system	/
To water and oil	/
Radiated to room	/
To charge cooler	/

WELDING

C.C. WELDING

CONSTANT CURRENT - COATED ELECTRODE SMAW (STICK)	
Current range	20A / 20.8V ÷ 400A / 20V
Type of regulation	Continue on 2 scale 20A ÷ 200A / 20A ÷ 400A
Duty cycle	330A @ 23.2V / 60% 300A @ 32V / 100%
Open circuit voltage	75 Vcc (79 Vcc peak)
Reduced no-load voltage with VRD	< 13 Vcc / Vdc
Arc force control	Yes

C.V. WELDING (CONSTANT VOLTAGE)

SMAW (MIG)	
Current range	40A @ 16 V - 400A @ 20V
Welding voltage	continue 15 V ÷ 45 V
Duty cycle	330A @ 30.5V / 60% (Mig) 300A @ 29V / 100% (Mig)

C.C. WELDING

CONSTANT CURRENT - TUNGSTEN ELECTRODE GTAW (TIG)	
Current range	20A / 10.8V ÷ 400A / 20V
Type of regulation	Continue on 2 scale 20A ÷ 200A / 20A ÷ 400A
Duty cycle	380A@ 25.2V / 35% 330A@ 23.2V / 60% 300A@ 22V / 100%
Open circuit voltage	75 Vcc (79 Vcc peak)
Reduced no-load voltage with VRD	< 13 Vcc / Vdc

SIMULTANEOUS LOAD CHARACTERISTIC

WELDING CURRENT	≥ 200 A	175 A	150 A	125 A	100 A	50 A
POW. IN THREE PHASE 400V cosφ 0.8	0 kVA	2.5 kVA	4 kVA	6 kVA	7.5 kVA	11 kVA
POW. IN SINGLE PHASE 230V cosφ 0.8	0 kVA	2.5 kVA	4 kVA	5 kVA	6 kVA	8 kVA

SIMULTANEOUS LOAD CHARACTERISTIC

WELDING CURRENT	≥ 200 A	175 A	150 A	125 A	100 A	50 A
POW. IN THREE PHASE 400V cosφ 1	0 kW	5 kW	8 kW	10 kW	11 kW	11 kW
POW. IN SINGLE PHASE 230V cosφ 1	0 kW	2.5 kW	4 kW	5 kW	6 kW	8 kW
POW. IN SINGLE PHASE 230V cosφ 1	0 kW	1.5 kW	2 kW	2.5 kW	3 kW	4 kW

GENERAL SPECIFICATIONS

Fuel tank capacity	38 l
Starter battery	12 Vdc -50Ah / 420A CCA(EN)
Fuel consumption (welding 60%)	3.3 l/h
Running time (welding 60%)	11.5 h
IP protection degree	IP 23

Guaranteed acoustic power LwA (pressure LpA)	96 dB(A) (71 dB(A) @ 7 m)
Measured acoustic power LwA (pressure LpA)	94.7 dB(A) (69.7 dB(A) @ 7 m)
Max. ambient temperature	40 °C

A.C. GENERATION

ALTERNATOR ASYNCHRONOUS THREE-PHASE, SELF-EXCITED, SELF-REGULATED, BRUSHLESS	
Insulation class	H

GENERATION AND CONTROL PANEL

AUXILIARY GENERATION

OUTPUT 1	
Type of source	Three-phase
Frequency	50Hz
Power kVA (Power kW) Max	14 kVA (11.2 kW)
Cos φ	0.8
Voltage	400V
Current	20.2 A

OUTPUT 3	
Type of source	Single-Phase
Frequency	50Hz
Power kVA (Power kW) Max	4 kVA/kW
Cos φ	0.8/1
Voltage	110V CTE
Current	36.4A

OUTPUT 2	
Type of source	Single-Phase
Frequency	50Hz
Power kVA (Power kW) Max	8 kVA/kW
Cos φ	0.8/1
Voltage	230V
Current	34.8 A

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

ENGINE CONTROL PANEL

- Controller RGK420SA
- Thermal circuit breaker for motor protection: 1x30A
- Thermal circuit breaker for motor protection: 1x5A
- Acoustic signal
- Emergency stop button



RGK420SA CONTROLLER FEATURES	
Operating modes	• MAN - REMOTE
Display	• Backlit display, LCD • Buttons: START ▼ - ▲ • Key
Generator measurements	• Voltage L1-L2 / L2-L3 / L3-L1 - N-L1/N-L2/N-L3 • Frequency Hz
Engine measurements	• Fuel level • Engine revs • Hour meter • Battery voltage
Generator protections	• Overvoltage • Under tension • Overfrequency • Underfrequency
Motor protections	• Overspeed • Low speed • High temperature • Low oil pressure • Low fuel pre-alarm • Low fuel level • Battery voltage • Inefficient battery • Battery charge alternator fault • Emergency stop • Failure to start • Failure to stop • Maintenance
Features	• Operator interface with symbols, codes and texts • Panel or PC programming • External start and stop • Programmable inputs and outputs • Operating temperature: -30 °C - + 70 °C • NFC interface for wireless programming

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

- Differential switch (400V / 230V)
- Magnetothermic switch for 230V sockets
- Thermal cut-offs for socket protection: 1x 16A for 230V 16A 2P + T CEE socket
- Output sockets: 1x 400V 32A 3P+N+T CEE
 - 1x 230V 32A 2P+T CEE
 - 1x 230V 16A 2P+T CEE
 - N ° 2 200A output terminals (for 48V)
- Earth terminal (PE)

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

- Differential switch (400V / 230V)
- Magnetothermic switch for 230V sockets
- Magnetothermic switch for 110V sockets
- Thermal cut-offs for protection 1x 16A sockets for 110V 16A 2P + T CEE socket
- 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)

- Differential switch (400V / 230V)
- Magnetothermic switch 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)

CONTROL PANEL

WELDING

- Welding output sockets: 1x Welding (+) 400A
1x Welding (-) 400A
- Remote control connector. Automatic switching upon insertion of the connector.
- 14-pole connector for connecting the wire feeder or the PL 400 Box. External polarity inversion
- VRD ON / OFF switch

CONTROL PANEL MULTI4

MULTI4 CONTROLLER FEATURES	
Rotary switch for welding process	• Stick (SMAW) • Stick contact • Mig/Flux Cored (GMAW) • Mig/Flux Cored contact • Tig lift arc (GTAW) • Tig pulse
Encoder for current - voltage welding control	
Multifunctional encoder	• Arc force control (Stick) • Hot start voltage setting (Mig) • Turn-off time arc control (Tig scratch) • Switching frequency setting (Tig pulsed)
2x Display (4 Digit)	• Current and voltage during the welding process • DISPLAY 1: Set the welding current and the voltage • DISPLAY 2: Settings controlled by the multifunction encoder
LED VRD	• Show if VRD is enabled
LED A/V	• Kind of value shown on display 1
LED % - s - Hz - V - A	• Kind of value shown on display 2
Button SET	• Shows and saves the program
BUTTON WS1 -WS2 -WS3	• Recall a welding program saved previously, up to 3 programs can be stored for each welding process
BUTTON WS3	• Access to the secondary parameters for welding
LED Button	• Signal for storing and program recall



WEIGHT - DIMENSIONS ACCESSORIES

TS 405 EVO MULTI4



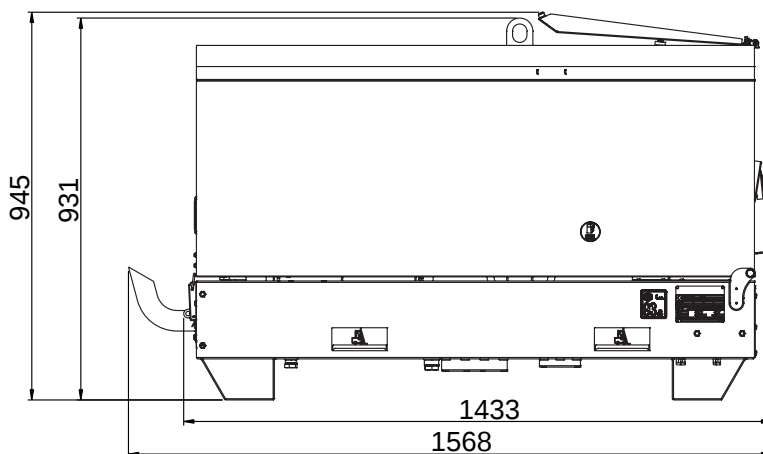
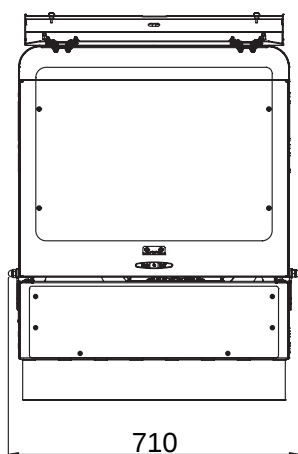
DRY WEIGHT:

- 455 Kg

The welding machine pictured may include optional accessories.



DIMENSION PICTURE (mm)



OPTIONS ON REQUEST

- Remote control: RCE
- Remote control RCE PL - (Remote control for polarity inversion)
- Remote control extension (30m)
- Wirefeeder WF4
- Box PL 400 - External Polarity Reversal - max. 400A
- Welding kit (mask, gloves, etc.)
- K500 welding cables (20 + 15 m, 50 mm²)
- Site tow wheels CTL255
- Road trailer CTV4
- Earthing kit



AVAILABLE VERSION

C1KS1021BP	400/230/110 - EVO MULTI4 • Indicatore temperatura acqua • Indicatore pressione olio • Staccabatteria
C1KS1061BP	400/230/48 - EVO MULTI4 • Indicatore temperatura acqua • Indicatore pressione olio • Staccabatteria
C1KS1041BP	400/230 - EVO MULTI4 (AUSTRALIA) • Indicatore temperatura acqua • Indicatore pressione olio • Staccabatteria

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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