



# ENGINE DRIVEN WELDER TS 400 PS

The images are for reference

## WELDING PROCESS



SMAW Shielded Metal Arc welding (STICK)



Gas Tungsten Arc Welding (TIG)



Air carbon Arc Gouging



## FEATURES

- Arc welding source in D.C. welding
- Electronic regulation of welding current
- Welding with any type of electrode including cellulosic electrodes
- Double welding range (20A-200A / 30A-400A)
- Arc Gouging dedicated sockets
- AC power generator also available in welding
- Fully opening engine side bonnet which facilitates all maintenance operations
- Central lifting hook

## 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  
VRD Indicator



water cooled



diesel



electric starter

## ENGINE 1500 RPM

4 STROKE, DIRECT INJECTION, NATURAL ASPIRATED	
Model	PERKINS - 404A-22G1
* Stand-by net power	20.3 kWm (27.6 hp)
* PRP net power	18.4 kWm (25 hp)
* COP net power	/
Cylinder / Displacement	4/ 2216 cm <sup>3</sup> (2,216 lt.)
Bore / Stroke	84 / 100 (mm)
Compression ratio	23.3 : 1
BMEP (Brake Mean Effective Pressure : LTP - PRP)	743.7 kPa – 669.3 kPa
Speed governor type	Mechanical
<b>FUEL CONSUMPTION</b>	
110 % (Stand-by power)	6.1 lt./h
100 % of PRP	5.3 lt./h
75 % of PRP	4 lt./h
50 % of PRP	2.9 lt./h
25% of PRP	
<b>COOLING SYSTEM</b>	
Total system cap. - only engine	7 lt - 3.6 lt.
Fan air flow	40.2 m <sup>3</sup> /min
<b>LUBRICATION SYSTEM</b>	
Total oil system capacity	10.3 lt
Oil capacity in sump	/
Oil consumption at full load	/

<b>EXHAUST SYSTEM</b>	3.94 m <sup>3</sup> /min.
Maximum exhaust gas flow	505 °C
Max. exhaust gas temp.	10.2 kPa (0.102 bar)
Maximum back pressure	/
External diameter exhaust pipe	12 Vdc
<b>ELECTRICAL SYSTEM</b>	2 kW
Starter motor power	55 A
Battery charging alternator cap.	- 15°C
Cold start	/
<b>AIR FILTER</b>	Dry
Combustion air flow	1.45 m <sup>3</sup> /min.
<b>HEAT REJECTED AT FULL LOAD</b>	
To exhaust system	16.6 kW - 944 Btu/min.
To water and oil	19.6 kW - 1114 Btu/min.
Radiated to room	4.4 kW - 250 Btu/min.
To charge cooler	/

\* Maximum output (not overloadable) according to ISO 3046-1



# WELDING AND GENERATION

## C.C. WELDING

### CONSTANT CURRENT

Welding current Max	400A / 30V (Stick) 350A / 34V (Stick - IEC rating) 400A / 26V (Tig)
Current adjustment range	20 A / 20.8 V - 400 A / 30 V (Stick) 20 A / 20.8 V - 350 A / 34 V (Stick - IEC rating) 20 A / 10.8 V - 400 A / 26 V (Tig)
Type of regulation	Continue on 2 Step: 20A ÷ 200A / 30A ÷ 400A
Duty cycle	350A / 34V @ 100% (Stick) 400A / 26V @ 60% - 350A / 24V @ 100% (Tig)
Open circuit voltage	72 V
Arc force control	Si

## GENERAL SPECIFICATIONS

Fuel tank capacity	60 l
Starter battery	12 Vdc -80Ah
Fuel consumption (welding 60%)	3.15 l/h
Running time (welding 60%)	19 h

IP protection degree	IP 23
Acoustic pressure	66 dB(A) @ 7m
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	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	1-phase
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	1-phase
Frequency	50 Hz
Apparent Power + Active Power	5kVA / kW
Cos φ	1
Voltage	110 V
Current	45.5 A

### OUTPUT 4

Type of source	/
Frequency	/
Apparent Power + Active Power	/
Cos φ	/
Voltage	/
Current	/

## SIMULTANEOUS LOAD CHARACTERISTIC

WELDING CURRENT	≥ 250A	175A	125A	75A	0A
POWER GENERATION 400V	0kVA	8,5kVA	11kVA	13kVA	16kVA
POWER GENERATION 230V	0kVA	6kVA	8,5kVA	10kVA	10kVA
POWER GENERATION 110V	0kVA	3,5kVA	5kVA	5kVA	5kVA



# CONTROL PANEL

## ENGINE

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

FEATURES CONTROLLER RGK420SA	
<b>Operating Mode</b>	<ul style="list-style-type: none"> <li>• MAN - REMOTE</li> </ul>
<b>Display</b>	<ul style="list-style-type: none"> <li>• Graphic back-light LCD display</li> <li>• Buttons: START ▼ - ▲</li> <li>• Key</li> </ul>
<b>Measures generator</b>	<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>
<b>Measures engine</b>	<ul style="list-style-type: none"> <li>• Fuel level</li> <li>• rpm meter</li> <li>• Hours meter</li> <li>• Battery voltage</li> </ul>
<b>Protections generator</b>	<ul style="list-style-type: none"> <li>• Overvoltage</li> <li>• Undervoltage</li> <li>• Overfrequency</li> <li>• Underfrequency</li> </ul>
<b>Protections engine</b>	<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>
<b>Features</b>	<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 30A to 400A or 20A to 200A
- Welding range switch
- Continuous control of the arc force
- Remote control connector. Automatic switching when the connector is inserted
- Welding output sockets: 1x Welding (+) 600A  
1x Welding (-) 600A  
1x Only gouging (+) 600A
- 2x Display (only with EVO Instrument panel)
  - Welding current setting
  - Current and voltage measurement during the welding phase
- VRD ON/OFF switch (inside electrical box)

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

- Differential switch (400V/230V)
- Magnetothermic switch for 230V sockets
- Magnetothermal switch for 110V-32A socket
- Thermal circuit breaker for 110V-16A socket protection
- Output sockets : 1x 400V 32A 3P+N+T CEE IP67  
1x 230V 32A 2P+T CEE IP67  
1x 110V 32A 2P+T CEE  
1x 110V 16A 2P+T CEE
- Earth terminal (PE)



# WEIGHT - DIMENSIONS ACCESSORIES

TS 400 PS

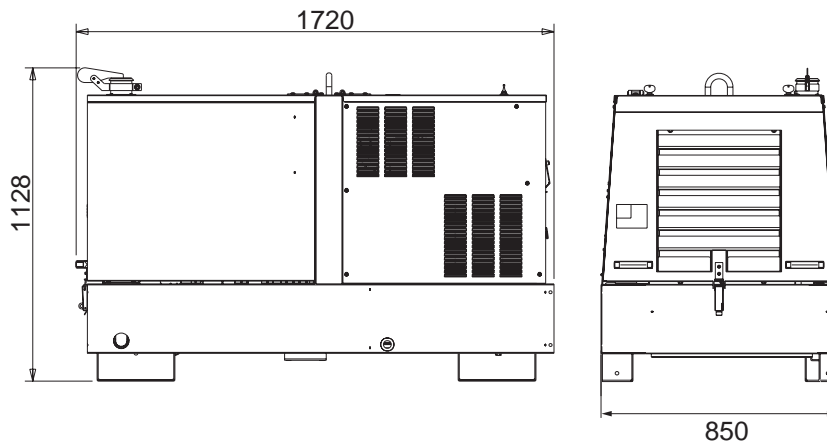


**DRY WEIGHT:**  
• 780 Kg

The welding machine pictured may include optional accessories.



**DIMENSION PICTURE**



## VERSIONS IN ADDITION TO THE STANDARD FEATURES

	INSTRUMENT	POL	OIL & GAS	TOP
V and A digital welding	✓	✓	✓	✓
Water T. + Oil P. indicator light	✓	✓	✓	✓
Polarity change		✓		✓
Spark arrestor			✓	✓
Battery switch			✓	✓
Chalwin valve			✓	✓

## OPTIONS ON REQUEST

- Remote control RC2
- Remote control RCE (with EVO instrument panel)
- Remote control extension cord (30m)
- Welding cables K500 (20+15 m, 50 mm<sup>2</sup>)
- 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

## AVAILABLE VERSIONS

C1BC1029	STANDARD
C1BC1029BK	INSTRUMENT
C1BC1022BK	POL
C1BC1029BCKNP	OIL & GAS
C1BC1022BCKNP	TOP

## 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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