

ENGINE DRIVEN WELDER

ZEN 500 PS/BC

The images are for reference

WELDING PROCESS



SMAW Shielded Metal Arc welding (STICK)



Gas Tungsten Arc Welding (TIG)



60Hz

FEATURES

- Arc welding source in D.C. welding
- Electronic regulation of welding current
- Special BC (Base Current) circuit for vertical-down pipe welding
- Double welding scale
- Arc Gouging socket
- Aux power also available while welding
- ELCB-GFI (Ground Fault Interruptor)
- Engine protection
- Emergency stop button
- Meets EC directives

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.



water cooled



diesel



electric starter



silenced

ENGINE 1800 RPM

4 STROKE, DIRECT INJECTION, NATURAL ASPIRATED	
Model	PERKINS - 404A-22G1
* Stand-by net power	22.6 kWm (30.7 hp)
* PRP net power	20.4 kWm (27.8 hp)
* COP net power	/
Cylinder / Displacement	4/ 2216 cm ³
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
FUEL CONSUMPTION	
110 % (Stand-by power)	6.9 lt./h
100 % of PRP	6.2 lt./h
75 % of PRP	4.8 lt./h
50 % of PRP	3.5 lt./h
25% of PRP	
COOLING SYSTEM	
Total system cap. - only engine	/
Fan air flow	
LUBRIFICATION SYSTEM	
Total oil system capacity	/
Oil capacity in sump	/

Oil consumption at full load	
EXHAUST SYSTEM	
Maximum exhaust gas flow	3.94 m ³ /min.
Maximum exhaust gas temp.	505 °C
Max. exhaust gas temp.	10.2 kPa (0.102 bar)
Maximum back pressure	/
External diameter exhaust pipe	12 Vdc
ELECTRICAL SYSTEM	
Starter motor power	2 kW
Battery charging alternator cap.	55 A
Cold start	- 15°C
	/
AIR FILTER	
Combustion air flow	Dry
	1.45 m ³ /min.
HEAT REJECTED AT FULL LOAD	
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	
Current range	20A ÷ 200A 20A ÷ 500A
Type of regulation	Continue on 2 Step
Duty cycle	500A 35% - 450A 60% - 400A 100%
Open circuit voltage	70 Vcc
Arc force control	Yes - BC function (Base Current)

GENERAL SPECIFICATIONS

Fuel tank capacity	60 l	Running time (welding 60%)	14.5 h
Starter battery	12V - 80Ah	IP protection degree	IP 23
Fuel consumption (welding 60%)	4.2 l/h	Acoustic power LwA (pressure LpA)	94 dB(A) (69 dB(A) @ 7m)

A.C. GENERATION

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

AUXILIARY GENERATION

OUTPUT 1	
Type of source	3-phase
Frequency	60 Hz
Apparent Power + Active Power	16kVA (12.8kW)
Cos φ	0.8
Voltage	400V
Current	23.1A

OUTPUT 2	
Type of source	1-phase
Frequency	60 Hz
Apparent Power + Active Power	12kVA (9.6kW)
Cos φ	0.8
Voltage	230V
Current	52.2A

OUTPUT 3	
Type of source	1-phase
Frequency	60 Hz
Apparent Power + Active Power	6kVA (4.8kW)
Cos φ	0.8
Voltage	110V
Current	54.4A

OUTPUT 4	
Type of source	/
Frequency	/
Apparent Power + Active Power	/
Cos φ	/
Voltage	/
Current	/

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

SIMULTANEOUS LOAD CHARACTERISTIC

WELDING CURRENT	>250 A	200A	150A	100A	200
POW. IN THREE PHASE 400V	0	4 kVA	7.5 kVA	10 kVA	3.5 kVA

CONTROL PANEL

WELDING

- Welding current adjustment knob
- Remote control connection connector
- Remote control enable switch
- Welding scale switch
- BC (Base Current) function enable switch
- Reverse polarity switch (only for PL version)
- Welding electronic board protection fuse
- Welding output sockets: 1 x Welding (+)
1 x Welding (-)
1 x Gouging (+)

ENGINE

- Engine start and stop key
- Engine thermal circuit breaker
- Emergency stop button
- Hour counter
- Fuel level gauge
- Low oil pressure indicator
- High water temperature indicator
- Battery charge indicator
- Low fuel indicator
- Cold start aid indicator

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

- ELCB-GFI (Ground Fault Interruptor) (400V/230V)
- ELCB-GFI (Ground Fault Interruptor) (110V)
- Circuit breaker for AC sockets
- 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
- AC Voltmeter
- Earth terminal (PE)

WEIGHT - DIMENSIONS ACCESSORIES

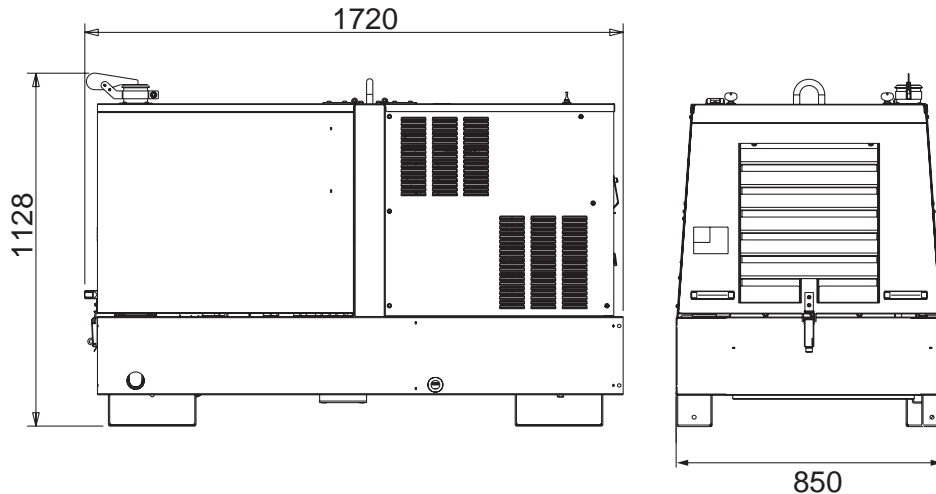


DRY WEIGHT:
• 780 Kg

The welding machine pictured may include optional accessories.



DIMENSION PICTURE



OPTIONS ON REQUEST

- Locking Fuel Cap
- Remote control: TC2 (cable 20m) - TC2/50 (cable 50m)
- Remote control with polarity change (only for PL version)
- Welding cables K500 (20+15 m, 50 mm²)
- Welding kit (mask gloves, etc.)
- Earthing kit
- Site tow CTL22
- Site tow trailer, 4 wheels, 2 steering wheels
- Road trailer CTV1/S
- Road trailer CTV1/O



VERSION ON REQUEST

• /



OPTIONS FACTORY INSTALLED

- Spark arrestor
- Chalwyn valve
- Polarity change

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.