

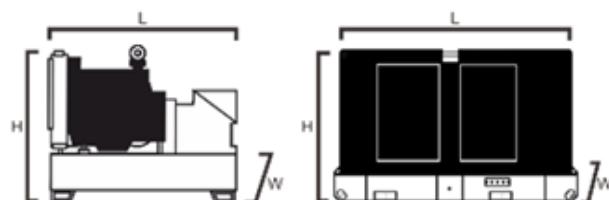
Technical Data

Engine		Alternator		Generator Model		
YTO LR4A3L-D		Tide FPA22-587		PC85X-YT / Silent		
Frequency	Phase	Power Factor			Emissions	
60Hz/1800rpm	3-Phase	Factor Cos Φ = 0.8			N/A	
RATINGS	Prime Power		Standby Power	Rated Current	Fuel Consumption @100% Load	
	(PRP)		(ESP)	Amps		
Voltage (V)	kWe	kVA	kWe	kVA	(A)	L/h
380/220	68	85	75	94	129,1	21,03
440/254	68	85	75	94	111,5	21,03
220/127	68	85	75	94	223,1	21,03

Key Features:



- High efficient water cooled diesel engine.
- Single bearing with brushless alternators (Class H, with AVR).
- Radiator with pressure cap and drain point.
- Fully guarded engine-driven fan.
- Fully welded steel skid base with lifting holes and fork lift legs.
- Integral fuel tank with filler cap and gauge (≤ 650 kVA).
- Heavy duty rubber anti-vibration mountings.
- 12V or 24V maintenance free starter battery and connecting cables.
- Separate engine-driven battery charging alternator.
- Spin on oil and fuel filters and dry type air filter element.
- Industrial silencer (15dBA reduction) supplied loose.
- Auto start control system with LCD show.
- Battery charger provided.
- Main line 3P circuit breaker.
- Rigorous factory test wiring with IEC standard.
- Operation & Maintenance manual & Wiring diagrams.
- Wide range of optional extra features available.



Dimensions & Weights

Silent

Length (L)-mm:	2800
Width (W)-mm:	1080
Height (H)-mm:	1500
Dry Weight-kg:	1540
Fuel tank (h)	8
(dBA)@7m no load	≤ 85

Ratings:

All three phase generator sets are rated at 0.8 power factor. All single-phase generator sets are rated at 0.8 or 1.0 power factor.

(1)PRP (Prime Power):

Available continuously at variable load in lieu of commercially purchased power for an unlimited number of hours per year accordance with ISO8528-1, and an overload of 10% permitted for one hour in every twelve hours of operation in accordance with ISO 3046-1.

(2)ESP (Standby Power):

Emergency Standby Power in variable load applications in accordance with ISO8528-1 in the event of a utility power failure.

(3)STD:Standard Alternator.

Tide Power reserves the right to change the design or specifications without notice and without any obligation or liability.



 Engine	YTO LR4A3L-D		
General Performance	Frequency	Hz	60
	Engine Speed	r/min	1800
	Cylinders / Type	4cyl / In-line / 4-stroke	
	Aspiration	Turbocharged with Aftercooler	
	Governor Type	Electronic	
	Bore / Stroke	mm	105/125
	Displacement	Litres	4,33
	Compression Ratio	17:1	
	Direction of rotation	Anti-clockwise viewed on flywheel	
	Cooling medium	Liquid	
Fuel System	Engine Power	kWm	80 88
	Fuel Consumption at 110% Prime Power	Litres/hour	23,16
	Fuel Consumption at 100% Prime Power	Litres/hour	21,03
	Fuel Consumption at 75% Prime Power	Litres/hour	15,7
	Fuel Consumption at 50% Prime Power	Litres/hour	10,4
	Fuel Consumption at 25% Prime Power	Litres/hour	5,31
Oil System	Standard Fuel Tank Capacity	Hours	8
	Total Oil System Capacity	Litres	14
	Oil Pressure @ Governed Speed	kPa	294-490kPa
	Lubricating oil type	L-ECD 15W/40	
Cooling System	Lubricating oil temperature maximum to bearings	°C	115
	Coolant Capacity - Engine Only	Litres	6
	Thermostat operating range	°C	76-95
Electric System	Maximum top tank temperature	°C	99
	Electrical System Voltage	V	12
	Battery	Maintenance-free	
Energy Balance	Energy to coolant and oil	BTU/min	3214
	Energy to exhaust	BTU/min	3707
	Heat to radiation	BTU/min	269
 Alternator	60Hz/1800rpm		
General Data	Manufacture / Brand	Tide	
	Model	FPA22-587	
	Coupling / No. of Bearings	Direct / Single Bearing	
	Phase / Poles	3-Phase / 4-Pole	
	Power Factor	Cos Φ = 0.8	
	AVR Regulation	Yes	
	Voltage Regulation	±1 %	
	Insulation Class	H	
	Drip Proof	IP23	
	Voltage Regulator	AVR	
	Altitude	≤1000 m	

Tide Power Easycon Function Summary
SMARTGEN HGM420N

HGM420N: used for automation of single unit, between genset and mains controls generator to start/stop by remote start signal. AMF (Auto Mains Failure) and Mains/Gens automatic transfer control functions.


Main characteristics are as below:

132x64 LCD with backlight, selectable language interface (Chinese, English, Spanish, Turkish, Russian and French), push-button operation;

Improved LCD wear-resistance and scratch resistance due to hard screen acrylic;

Silicon panel and pushbuttons for better operation in high/low temperature environment;

Suitable for 3-phase 4-wire, 3-phase 3-wire, single phase 2-wire, and 2-phase 3-wire systems with voltage 120/240V and frequency 50/60Hz;

Collects and shows 3-phase voltage, 3-phase current, power parameter and frequency of generator or mains.

For Mains, controller has over voltage, under voltage and loss of phase detection functions; For generator, controller has over voltage, under voltage, over frequency, under frequency, over current and over power detection functions;

Precisely collect and display all parameters of engine;

Control and protection function: automatic start/stop of the genset, ATS (Auto Transfer Switch) control and perfect fault indication and protection function;

ETS (Energize To Stop), idle control, pre-heat control, speed raise control and speed drop control functions, and all output ports are relay outputs;

Parameter setting function: allows users to modify and set the parameters and meanwhile will be stored in internal FLASH and won't be lost even in case of power outage; all controller parameters can be adjusted on front panel of the controller or via USB interface on PC.

Multiplex input port 3 and 4 can be used in various occasions: input 3 can be used as auxiliary input port or fuel level sensor, while input 4 can be used as auxiliary input port or configurable sensor.

Multiple temperature, oil pressure, and fuel level sensors can be used directly, and parameters can be users-defined.

One configurable sensor: can be set to temperature sensor, oil pressure sensor or fuel level sensor, which enables the detection of double temperatures, double oil-pressures and double fuel levels.

Multiple crank disconnect conditions (magnetic pickup, oil pressure, generator) are optional;

Emergency start function;

Fly teeth auto-recognition function;

Wide power supply range: DC(8~35)V, which suitable for different starter battery voltage environments.

All parameters apply digital adjustment, instead of conventional analog modulation with normal potentiometer, improving the wholesome reliability and stability;

Maintenance function: types can be set to date or running time. Actions (warning, alarm shutdown) can also be set when maintenance time is out;

Event log function (max. 99 pieces of records), real-time clock, and schedule to start/stop generator function (start once monthly/weekly/daily on/off load can be set).

IP55 waterproofness with rubber-ring gasket between enclosure and screen;

Metal fixing clips are used to fix the controller;

Modular design, self-extinguished ABS plastic enclosure, pluggable connection terminals and embedded installation way; compact structure with easy mounting.

