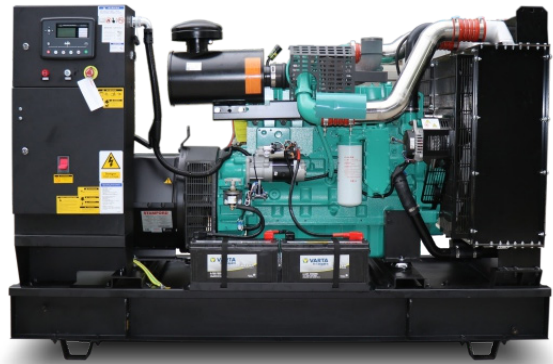


# VP POWER SOLUTION

— POWER WITHOUT LIMITS —

## Model: FH35D6

Powered by FAW



### Generator Specification

Service	PRP <sub>(1)</sub>	ESP <sub>(2)</sub>
Power (kVA)	32	35
Power (kW)	25	28
Rated speed (r.p.m)	1800	
Standard voltage (V)	220/127V	
Rated at power factor (cos phi)	0.8	

Performance Data		
Model	FH35D6	
Engine brand	FAW	
Engine model	4DW92-42D	
Speed control type	Electronic	
Phase	3	
Control system	Digital	
Starter motor voltage	24V	
Frequency	60HZ	
Engine speed (RPM)	1800	
Fuel Consumption (L/H)	110% stand power	8.6
	100% primer power	7.6
	75% primer power	5.7
	50% primer power	3.8



Hong Fu Co are compliant with ISO 9001 and CE standard, which include the following directives:

- 2006/42/EC Machinery safety.
- 2006/95/EC Low voltage
- EN 60204-1: 2006+A1: 2009, EN ISO 12100: 2010, EN ISO 13849-1: 2008, EN 12601 : 2010

#### (1) PRP (Prime Power):

According to ISO8528-1, prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during at 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

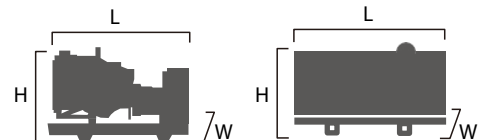
#### (2) ESP (Standby Power):

According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. No overload capability is available.

Powers Voltage (V)	ESP		PRP		Standby Amps
	KVA	KW	KVA	KW	
480/277	35	28	31	25	42.1
440/254	35	28	31	25	45.9
380/220	35	28	31	25	53.2
220/127	35	28	31	25	91.9
208/120	35	28	31	25	97.2

#### Standard reference Conditions

Note: Standard reference condition 25°C (77°F) air inlet temp, 100m(328ft) A.S.L 30% relative humidity. Fuel consumption dat with diesel fuel with specific gravity of 0.85 and conforming to BS 2869: 1998, Class A2



Dimension and Weight		
Dimension	Open	Silent
Length (L)	1650 mm	2200 mm
Width (W)	750 mm	1000 mm
Height (H)	1000 mm	1250 mm
Net Weight	700 Kg	1000 Kg
Fuel Tank (L)	90	100

# VP POWER SOLUTION

— POWER WITHOUT LIMITS —

## ■ Engine Specification: 4DW92-42D

Basic technical data	
No. of cylinders Cylinder	4
Cylinder arrangement	In-line
Cycle	4 stroke
Induction system	Turbocharger
Compression ratio	18 : 1
Bore	90 mm
Stroke	100 mm
Displacement	2.5 L
Engine idle speed	950 - 1050 RPM
Approximate engine weight	260 Kg

Fuel system	
Injection system	BYC A
Governor type	Electronic
Maximum restriction at lift pump	13.6kPa
Maximum fuel inlet temperature	/
Total drain flow (constant for all loads)	30 litre/hour

## ■ Alternator Specification

Alternator	
Model	CJ184F
Alternator Brand	VP Power. Cert. Stamford
Number of phase	3
Power factor (cos Phi)	0.8
Poles	4
Winding Connections (standard)	Start-serie
Terminals	12
Insulation type	H class
Voltage	220
Ip rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Frequency	60Hz
Voltage regulator	A.V.R
Primer power	31.25 KVA

Cooling system	
Coolant capacity-engine	3.7 L
Max coolant friction head to engine	35 kPa
Max water temp standby/prime power	110/104 °C

Air intake system	
Fan diameter	420 mm
Fan power consumption	1.2 Kw

Lubrication system	
Oil Consumption	0.04 L/h
Oil capacity including filter	8 L

Electrical system	
Cranking motor (Heavy duty, positive engagement)	24V
Battery charging system, negative ground	40 ampere
Maximum allowable resistance of cranking circuit	0.002 ohm
Minimum recommended battery capacity-cold soak	312 CCA

General installation	
Gross engine power output	30 kw
Piston speed	6.0 m/s
Friction horsepower	11.9 kW
Engine water flow to engine	2.81 l/sec
Intake air flow	43.0 l/sec
Exhaust gas flow	78.5 l/sec
Exhaust gas temperature	326 °C
Radiated heat to ambient	TBD
Heat rejection to coolant	32 kW
Heat rejection to fuel	TBD

# VP POWER SOLUTION

— POWER WITHOUT LIMITS —

## Control Panel

DEEP SEA 6120



### KEY FEATURES

- Large back-lit text display
- Multiple display languages
- Heated display option available
- DSENet® expansion compatible
- Data logging facility
- Fully configurable via PC using USB communication
- Front panel configuration
- Efficient power save mode
- 3 phase generator sensing
- 3 phase mains (utility) sensing (DSE6120 MKII only)
- Generator/load power monitoring (kW, kV A, kV Ar, pf)
- Accumulated power monitoring (kW h, kVA h, kVAR h)
- Generator/load current monitoring and protection
- Generator overload protection (kW)
- Breaker control via fascia buttons
- Fuel and start outputs, configurable when using CAN
- 4 configurable DC outputs
- 4 configurable analogue/digital inputs
- Support for 0 to 10 V &
- 4 to 20 mA oil pressure sensors
- 6 configurable digital inputs
- Configurable staged loading outputs
- CAN, MPU and alternator speed sensing in one variant
- 3 engine maintenance alarms
- Engine speed protection
- Engine hours counter
- Engine pre-heat
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel pump control
- Real time clock
- Battery voltage monitoring

- Start on low battery voltage
- Configurable remote start input
- 1 alternative configuration
- Comprehensive warning, electrical trip or shutdown protection upon fault condition
- LCD and LED alarm indication
- Customisable information screens
- Configurable event log (100)
- Tier 4 ECO engine support including exhaust fluids & filters
- J1939-75 instrumentation output, configurable CAN instrumentation and alarms
- Start on low battery
- Enhanced alarm functionality
- Low load alarm

### KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE6120 MKII only)
- Increased input and output expansion capability via DSENet®
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored simultaneously which are clearly displayed on a large back-lit text display via multiple languages
- The module can be configured to suit a wide range of applications
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- IP65 rating (with optional gasket) offers increased resistance to water ingress

The DSE6120 MKII Auto Start Control Module (Utility) Failure Control Module are suitable for a wide variety of single gen-set applications.

Monitoring engine speed, oil pressure, coolant temperature, frequency, voltage, current, power and fuel level, the modules give comprehensive engine and alternator protection. This is indicated on a large back-lit LCD text display via an array of warning, electrical trip and shutdown alarms in multiple languages.

Electronic J1939 (CAN) and non-electronic MPU and alternator sensing engine support for diesel, gas and petrol engines all in one variant.

With a number of flexible inputs, outputs and protections, the modules can be easily adapted to suit a wide range of applications.

Through USB Communication both modules can be configured using the DSE Configuration Suite PC Software or through the module's front panel editor.

Using the DSE Configuration Suite PC Software the controller is easy to use and configure which allows alteration of operating parameters, sequences, timers and alarms.

## SPECIFICATIONS

### DC SUPPLY

**CONTINUOUS VOLTAGE RATING**  
8 V to 35 V Continuous

**MAXIMUM OPERATING CURRENT**  
100 mA at 12 V, 105 mA at 24 V

**MAXIMUM STANDBY CURRENT**  
60 mA at 12 V, 55 mA at 24 V

**MAXIMUM SLEEP CURRENT**  
40 mA at 12 V, 35 mA at 24 V

### GENERATOR & MAINS (UTILITY) VOLTAGE RANGE

15 V to 415 V AC (Ph to N)  
26 V to 719 V AC (Ph to Ph)

**FREQUENCY RANGE**  
3.5 Hz to 75 Hz

### INPUTS

**DIGITAL INPUTS A to F**  
Negative switching

### ANALOGUE INPUT A

Configurable as:  
Negative switching digital input  
0 V to 10 V  
4 mA to 20 mA  
0 Ω to 240 Ω

### ANALOGUE INPUTS B TO D

Configurable as:  
Negative switching digital input  
0 Ω to 480 Ω

### OUTPUTS

**OUTPUT A (FUEL)**  
10 A short term, 5 A continuous, at supply voltage

### OUTPUT B (START)

10 A short term, 5 A continuous, at supply voltage

### AUXILIARY OUTPUTS C, D, E & F

2 A DC at supply voltage

### DIMENSIONS

**OVERALL**  
216 mm x 158 mm x 43 mm  
8.5" x 6.2" x 1.5"

### PANEL CUT-OUT

184 mm x 137 mm  
7.2" x 5.3"

### MAXIMUM PANEL THICKNESS

8 mm  
0.3"

### STORAGE TEMPERATURE RANGE

-40 °C to +85 °C  
-40 °F to +185 °F

### OPERATING TEMPERATURE RANGE

**NON HEATED DISPLAY VARIANT**  
-30 °C to +70 °C  
-22 °F to +158 °F

### HEATED DISPLAY VARIANT

-40 °C to +70 °C  
-40 °F to +158 °F

**VP POWER SOLUTION**  
— POWER WITHOUT LIMITS —

© PLANTASELECTRICASMARACAIBO  
☎ +57 316 8310705

Distributed by  
**VP Energy Service CA**