

# **SPECIFICATION**



## **MODEL VR20PX VR SERIES (FOR 50Hz DIESEL GENSET)**

Revision: A3 (11/21)

# VS series VR20PX

50 Hz @ 1500rpm,3-phase/5-wiring

## 1 Standards & Conditions

### Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- ISO8528-5:2005
- GB/T2820.5-2009

### Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25°C to 50°C. The coolant heater is needed when the temperature is below 5°C
- Humidity: Less than 90%.
- Altitude: Below one thousand (1000) meters above sea level.

### Factory Inspection

- Inspection items.
- Protection devices working test.
- Starting ability in normal temperature.
- 50% rated power load moment capability.
- Voltage deviation and speed variation: 0%, 25%, 50%, 75%, 100%, 110% Load.

### Painting Process

- Painting process specifications and colors are based on the manufacturer's standard.
- The customer could also choose the color which the manufacturer offers.

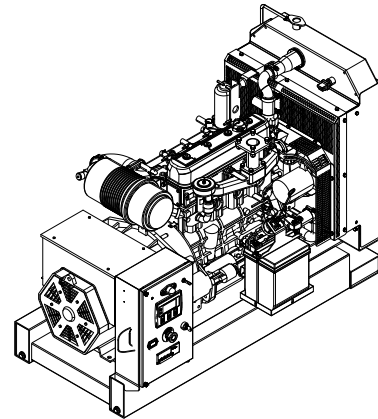
## 2 General Features

- PowerLink engine VR4-2.7G1
- Close coupled to PowerLink alternator PL1E
- Microprocessor control module PLC-920
- Main circuit breaker: 32A
- Rotate speed governor: Mechanical governor
- Excitation system: Self excited,SHUNT
- A.V.R model: SX440
- Key switch
- Emergency stop switch
- ATS(automatic transfer switch)receptacle

- Remote run connector
- 1x12V/60AH sealed for life maintenance free battery
- Lockable battery isolator switch
- 50°C radiator
- Steel base frame
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank for 6 hours running
- Drain points for fuel tank
- Operation Manual / Specifications

## 3 Equipment

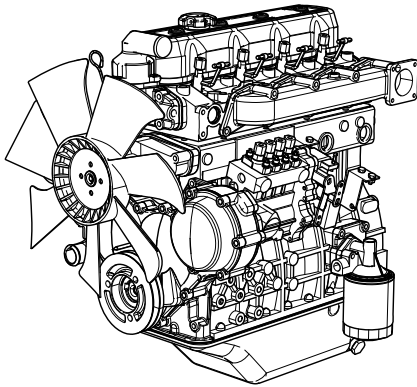
### General technical data



Model.....VR20PX  
 Structure type .....D  
 Tank capacity..... 32L  
 Dry weight..... 330kg  
 Sound pressure level @ 7m ..... N/A  
 Dimensions L×W×H..... 1415x720x1079mm  
 Standby Power ..... 22kVA/18kW  
 Prime Power ..... 20kVA/16kW

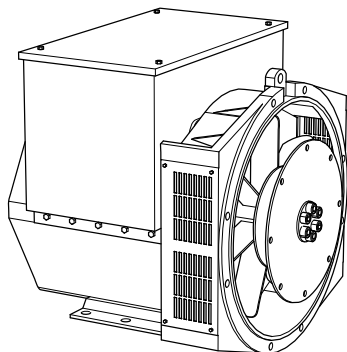
Voltage	380V	400V	415V		
Ampere	30.4A	28.9A	27.8A		
<b>Genset Fuel Consumption</b>					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	1.7	3.0	4.2	5.7	6.6

## Power System



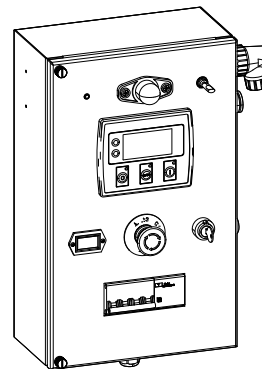
Engine Manufacturer/Brand .....	PowerLink
Engine Model .....	VR4-2.7G1
Dimensions L×W×H.....	750x565x696mm
Dry Weigh (approx.) .....	260kg
Number of Cylinders.....	4
Bore.....	90mm
Stroke .....	105mm
Displacement.....	2.7L
Compression Ratio .....	18.5
Type of injection.....	Direct injection
Intake System.....	Natural aspirated
Intake Resistance .....	≤5kPa
Cooling System .....	Water cooled
Fan .....	Pusher
Battery Voltage .....	12V
Type of Fuel.....	No.2 or ASTM D975
Type of Oil .....	API CF/SE or CCMCF4
Oil Capacity .....	6.5L
Type of Coolant .....	Glycol mixture
Coolant Capacity .....	5.0L
Back Pressure .....	≤10.1kPa
Standby Power .....	24kW
Prime Power .....	22kW

## Alternator



Alternator Manufacturer/Brand .....	PowerLink
Alternator Model .....	PL1E
Exciter.....	Brushless
Cooling Fan .....	Cast alloy aluminum
Windings.....	100% copper
Insulation Class .....	H
Winding Pitch.....	2/3
Terminals .....	12
Drip Proof .....	IP23
Altitude.....	≤1000m
Overspeed .....	2250rpm
Air Flow.....	N/A
Voltage Regulation .....	±1.0%
Total Harmonic TGH / THCat no load < 1.5 % - on load < 5%	
Telephone Interference.....	THF<2%;TIF<50

## PLC-920 Control System

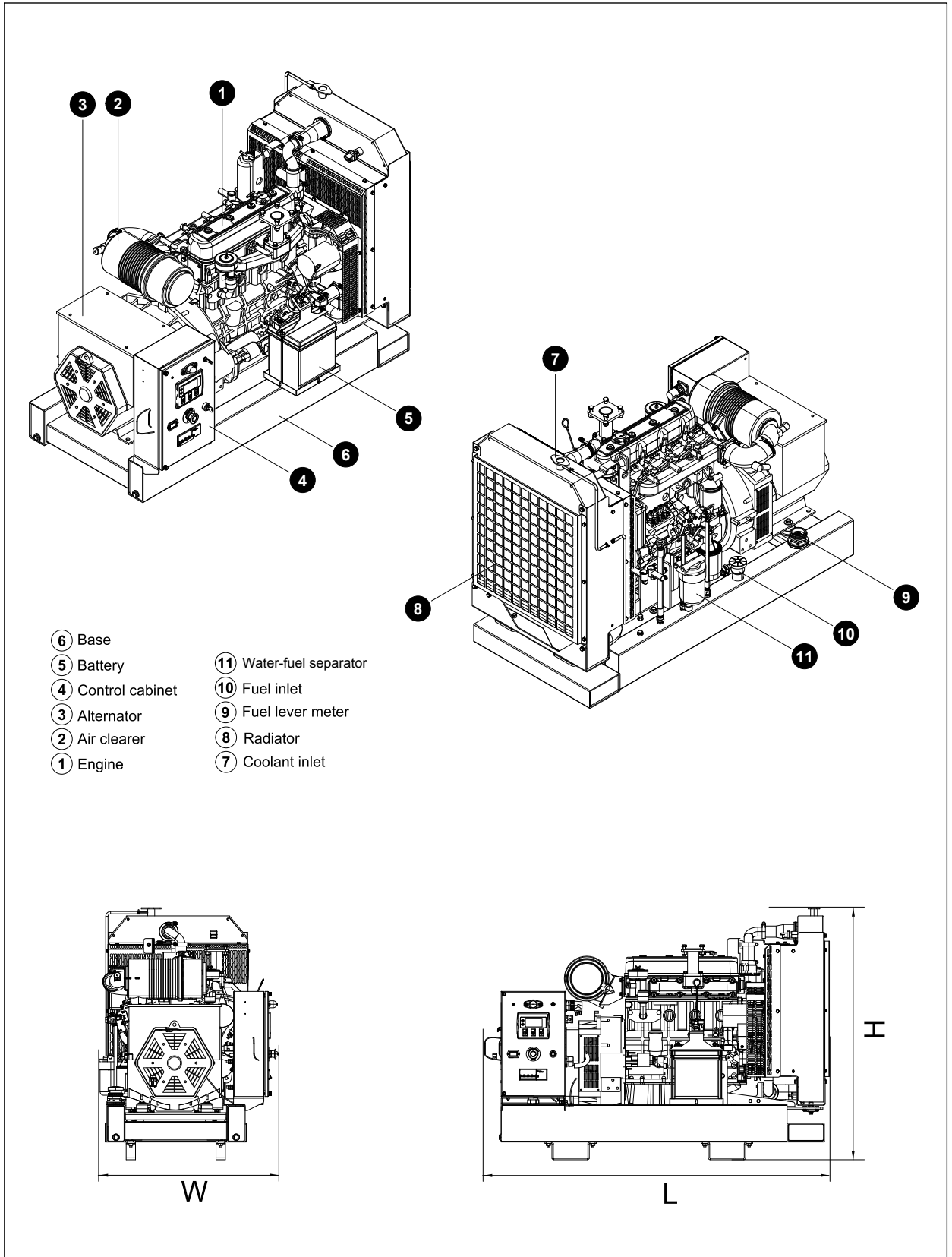


PLC-920 is an advanced control module based on microprocessor designed to control the engine via push buttons on the front panel. The module is used to start and stop the engine and indicate fault conditions, automatically shutting down the engine and giving a true first up fault condition of an engine failure.

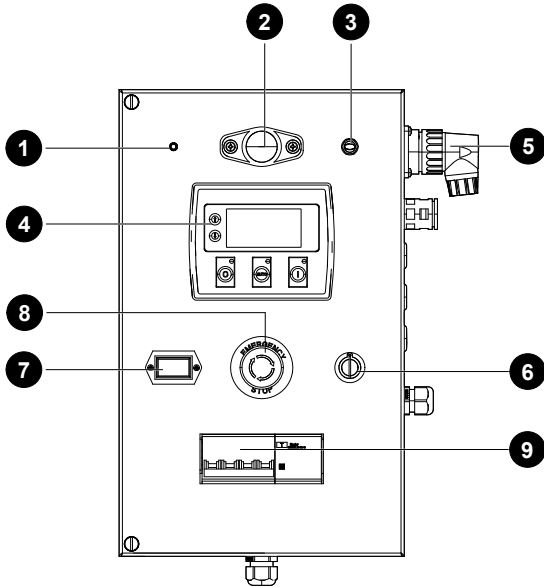
### Standard Control Function

- Manual Engine Control Module
- Low Oil Pressure
- High Engine Temperature
- Auxiliary Shutdown
- Overspeed Protection
- Protection hold-off timer
- Charge Failure warning

## 4 Overall Dimensions

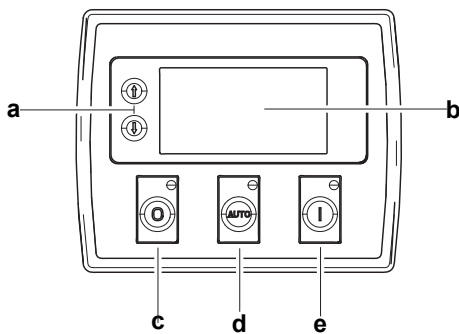


## 5 Control System



**Control&Field wiring cabinet**

Ref.	Description
1	Charge indicator
2	Control cabinet lamp
3	Control cabinet lamp switch
4	Control module
5	Control cables connector
6	Key switch
7	Time counter
8	Emergency stop switch
9	Main circuit breaker



**Control module**

Ref.	Description
a	Navigation button Accept (Configuration mode only)
b	Main status display
c	Stop/reset button Next page (Configuration mode only)
d	Auto start button Decrease value/next item (Configuration mode only)
e	Start button Increase value/next item (Configuration mode only)