

SPECIFICATION



Power Link the World

MODEL VR450XS-AU **VR SERIES** **(FOR 50Hz DIESEL GENSET)**

Revision: A2 (10/21)

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document, visit our website at:
www.powerlinkworld.co.uk



1 Standards & Conditions

Design Standards

The designs and the productions are in conformity with:

- Conformance Européenne (CE)
- ISO8528-5:2005
- AS 3000-2018
- AS 3010-2017

Environmental Operating Conditions

- Installation place: Outdoors or indoors (well ventilated).
- Ambient temperature: -25°C to 45°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.

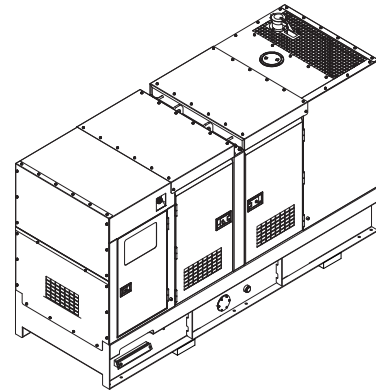
2 General Features

- PowerLink engine VR6-13TAG3
- Close coupled to PowerLink alternator PL5S
- Microprocessor control module PLC-920
- Main circuit breaker: 800A
- 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

- 2x12V/120AH sealed for life maintenance free battery
- Lockable battery isolator switch
- Powder coated canopy
- 50°C radiator
- Oil pump on the engine
- Steel base frame with forkslots
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank with 12 hours running
- Drain points for fuel tank
- Operator's Manual / Specifications

3 Equipment Specification

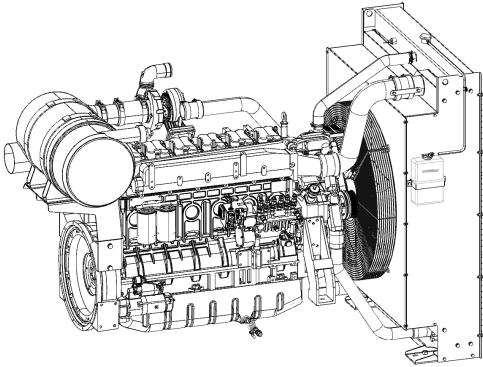
General technical data



Model.....	VR450XS-AU
Tank capacity.....	1200L
Dry weight.....	4800kg
Sound pressure level @ 7m.....	74.0dBA
Dimensions L×W×H.....	4240x1420x2500mm
Standby Power.....	495kVA/396kW
Prime Power.....	450kVA/360kW

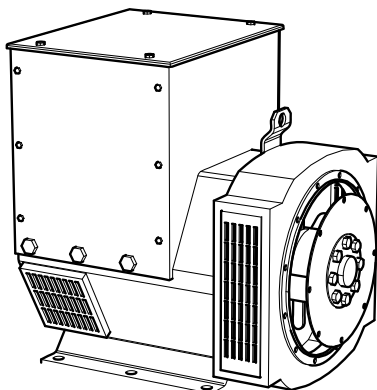
Voltage	380V	400V	415V		
Ampere	683.7A	649.5A	626.0A		
Genset Fuel Consumption					
Frequency/Load	25%	50%	75%	100%	110%
50Hz (L/h)	26	50	73	99	109

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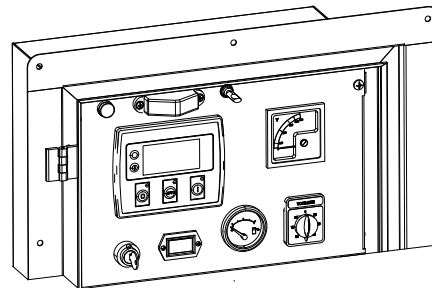
Engine Manufacturer/Brand	PowerLink
Engine Model	VR6-13TAG3
Dimensions L×W×H.....	2372x1120x1488mm
Dry Weigh (approx.)	1950kg
Number of Cylinders.....	6
Bore.....	129mm
Stroke	165mm
Displacement.....	12.94L
Compression Ratio	16.5
Type of injection.....	Direct injection
Intake System.....	Turbocharged and charge air cooled
Intake Resistance	≤5kPa
Cooling System	Water cooled
Fan	Pusher
Battery Voltage	24V
Type of Fuel.....	No.2 or ASTM D975
Type of Oil	API CF/SE or CCMCF4
Oil Capacity	34.0L
Type of Coolant	Glycol mixture
Coolant Capacity	58.0L
Back Pressure	≤10.1kPa
Standby Power	441kW
Prime Power	401kW

Alternator



Alternator Manufacturer/Brand	PowerLink
Alternator Model	PL5S
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

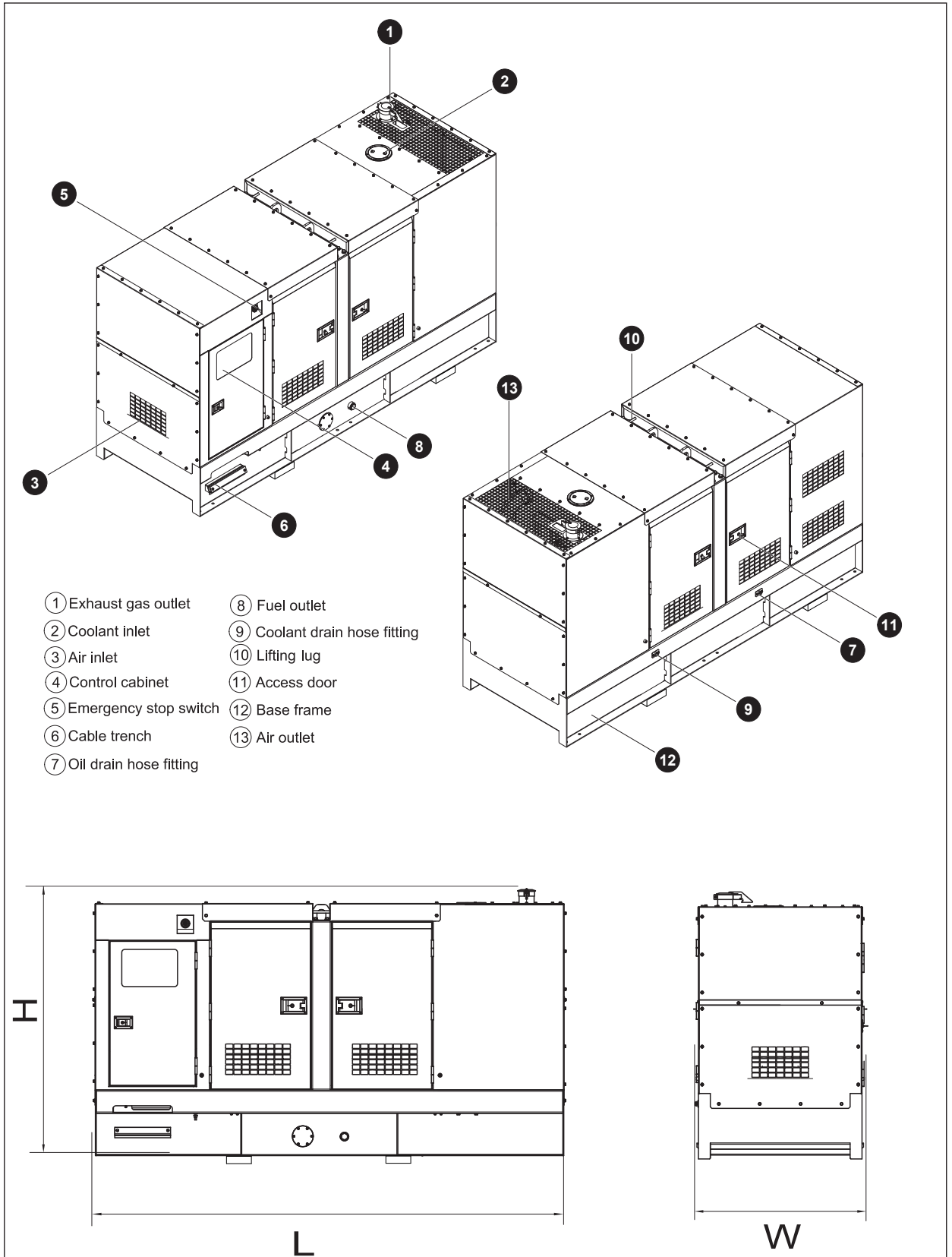


PLC-920 is an advanced control module based on microprocessor designed to control the engine via push buttons on the front panel. The module is used to start and stop the engine and indicate fault conditions, automatically shutting down the engine and giving a true first up fault condition of an engine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

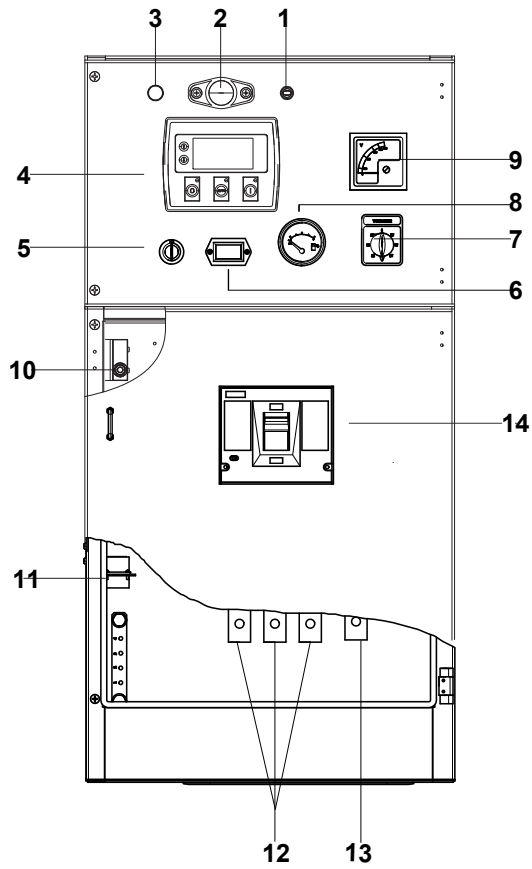
Standard Control Function

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

4 Overall Dimensions

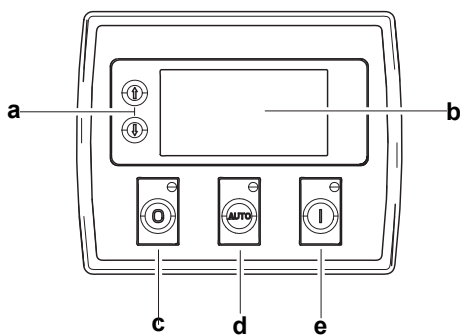


5 Control System



Control & field wiring cabinet

Ref.	Description
1	Control cabinet lamp switch
2	Control cabinet lamp
3	Charge indicator
4	Control module
5	Key switch
6	Time counter
7	Voltage changer-over switch
8	Fuel level meter
9	Voltage meter
10	Limit switch
11	Mains input/Remote control/ATS connector
12	Live wire terminal
13	Neutral wire terminal
14	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)

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VR SERIES DIESEL GENSET

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