

# SPECIFICATION



*Power Link the World*

## **MODEL VR165XS-EU** **VR SERIES** **(FOR 50Hz DIESEL GENSET)**

Revision: A2 (10/21)

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# VR series VR165XS-EU



50 Hz @ 1500rpm,3-phase/4-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 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.

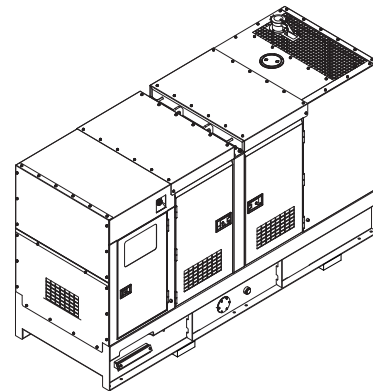
## 2 General Features

- PowerLink engine VR6-6.5TAG2
- Close coupled to PowerLink alternator PL3EM
- Microprocessor control module PLC-920
- Main circuit breaker: 320A
- 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/72AH 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 forklifts
- Vibration isolators between the engine/alternator and base frame
- Dry type air filter
- Base fuel tank with 24 hours running
- Drain points for fuel tank
- Operator's Manual / Specifications

## 3 Equipment Specification

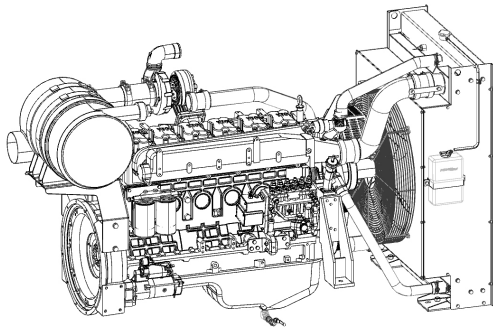
### General technical data



Model.....VR165XS-EU  
 Tank capacity.....800L  
 Dry weight.....2693kg  
 Sound pressure level @ 7m ..... 71.0dBA  
 Dimensions L×W×H.....3500x1250x2100mm  
 Standby Power ..... 182kVA/145kW  
 Prime Power ..... 165kVA/132kW

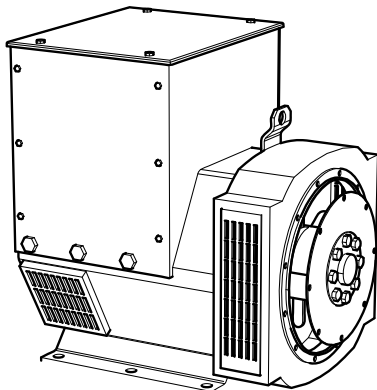
| Voltage                 | 380V   | 400V   | 415V   |      |      |
|-------------------------|--------|--------|--------|------|------|
| Ampere                  | 250.7A | 238.2A | 229.6A |      |      |
| Genset Fuel Consumption |        |        |        |      |      |
| Frequency/Load          | 25%    | 50%    | 75%    | 100% | 110% |
| 50Hz (L/h)              | 9      | 17     | 25     | 33   | 36   |

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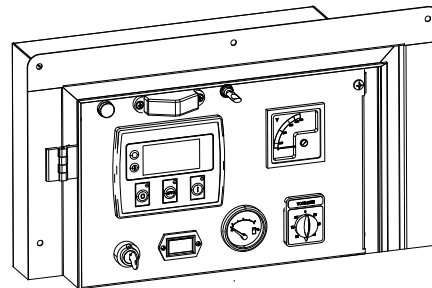
|                                |                                    |
|--------------------------------|------------------------------------|
| Engine Manufacturer/Brand..... | PowerLink                          |
| Engine Model.....              | VR6-6.5TAG2                        |
| Dimensions L×W×H.....          | 1456×710×1080mm                    |
| Dry Weigh (approx.) .....      | 650kg                              |
| Number of Cylinders.....       | 6                                  |
| Bore.....                      | 110mm                              |
| Stroke .....                   | 125mm                              |
| Displacement.....              | 6.5L                               |
| Compression Ratio.....         | 17.0                               |
| 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 .....             | 16.0L                              |
| Type of Coolant .....          | Glycol mixture                     |
| Coolant Capacity .....         | 21.0L                              |
| Back Pressure.....             | ≤10.1kPa                           |
| Standby Power .....            | 165kW                              |
| Prime Power.....               | 150kW                              |

## Alternator



|   |                     |
|---|---------------------|
| Alternator Manufacturer/Brand.....                        | PowerLink           |
| Alternator Model .....                                    | PL3EM               |
| 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

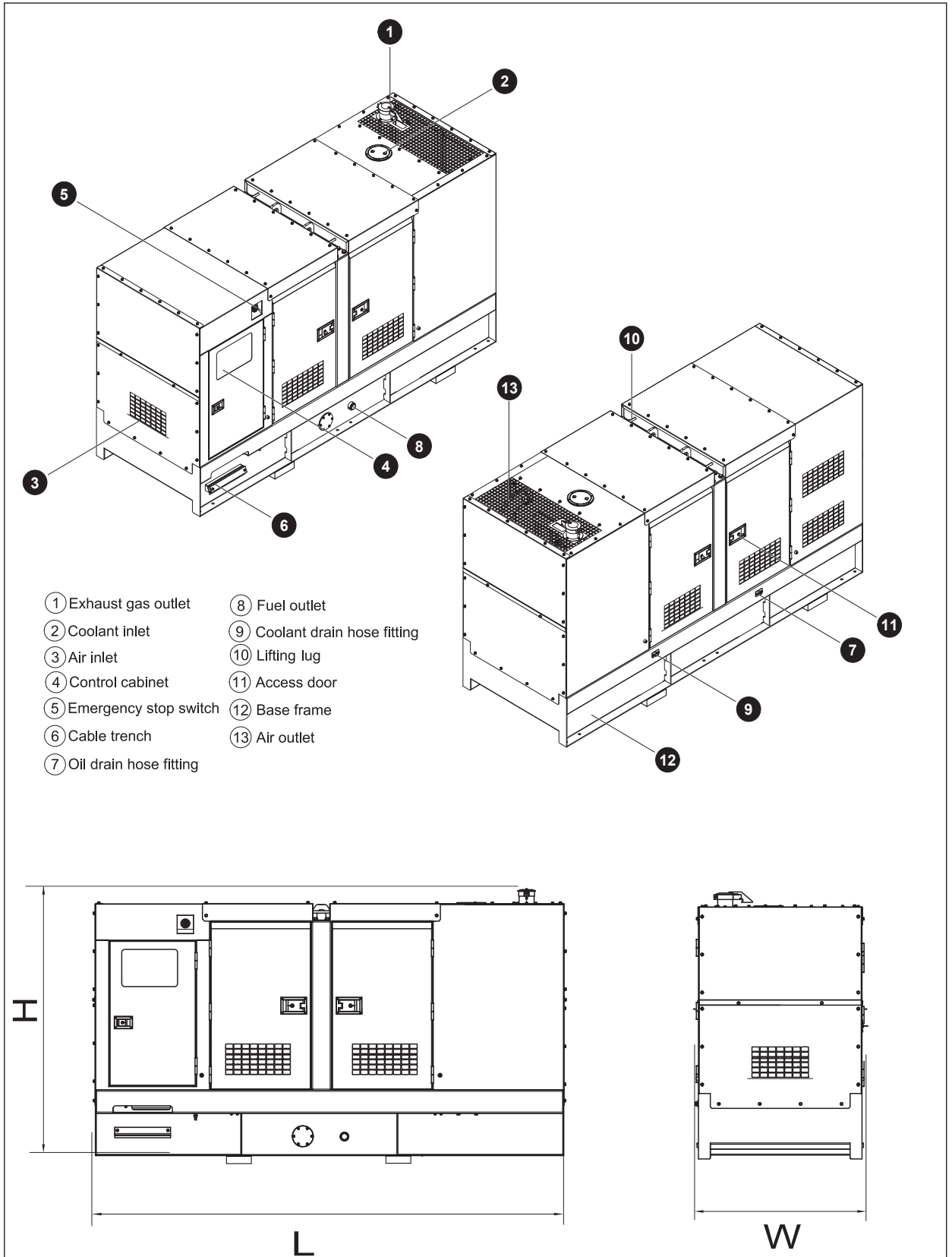


PLC-920 is an advanced control module based on microprocessor designed to control the engine via push buttons on the front panel. The module is used to start and stop the engine and indicate fault conditions, automatically shutting down the engine and giving a true first up fault condition of an engine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

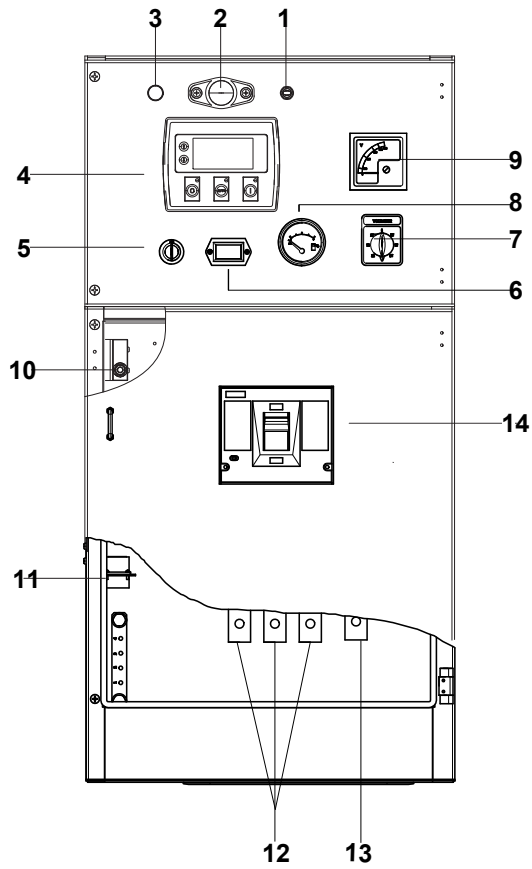
### Standard Control Function

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

## 4 Overall Dimensions

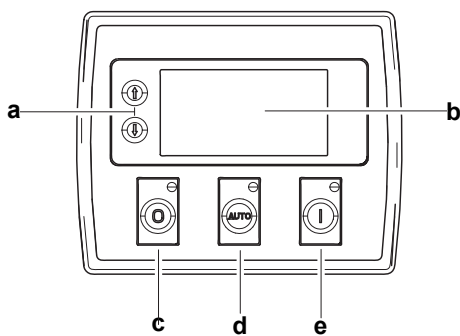


## 5 Control System



**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 «»<br>Accept (Configuration mode only)                   |
| b    | Main status display  |
| c    | Stop/reset button «»<br>Next page (Configuration mode only)                |
| d    | Auto start button «»<br>Decrease value/next item (Configuration mode only) |
| e    | Start button «»<br>Increase value/next item (Configuration mode only)      |

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**VR SERIES DIESEL GENSET**

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