

Generator set
Sound-proof type
PR16K-S-SAE

# **SPECIFICATIONS**



## www.prpower.com | 1300 399 499

PR Power reserves the right to make changes in model, technical specification, color, configuration and accessories without prior notice. Please contact the sales team before ordering.

Rev. [April].[2023]



# 1 Standards & Conditions

#### **Design Standards**

The designs and the productions are in conformity with:

- Conformite Europeenne (CE)
- ISO8528-5:2005
- GB/T2820.5-2009
- AS 3000-2018
- AS 3010-2017

# **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.

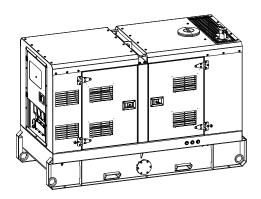
# 2 General Features

- Kubota engine D1803-M-DI-BG-BBT
- Close coupled to LSA alternator LSA42.3VS3
- Microprocessor control module PLC-920
- SCHNEIDER main circuit breaker: 80A
- · Rotate speed governor: Electronic governor
- Excitation System: Self excited
- A.V.R
- Key switch
- Emergency stop switch
- ATS (automatic transfer switch) receptacle
- Convenience receptacles: 1P

- 1x12V/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 forkslots
- Vibration isolators between the engine/alternator and base frame
- · Dry type air filter
- · Base fuel tank for 33 hours running
- · Drain points for fuel tank
- · Operation Manual / Specifications

# 3 Equipment Specification

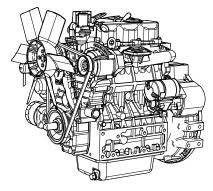
#### General technical data



| Model            | PR16K-S-SAE     |
|------------------|-----------------|
| Structure type   | RS              |
| Tank capacity    | 120L            |
| Dry weigh        | 755kg           |
| Noise level @7m  | 64.8dBA         |
| Dimensions L×W×H | 1932x830x1262mm |
| Standby Power    | 19.8kVA/15.87kW |
| Prime Power      | 18kVA/14.4kW    |

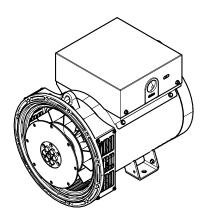
| Voltage                 | 220V   |     | 230V   |     | 24  | 240V  |      |
|-------------------------|--------|-----|--------|-----|-----|-------|------|
| Ampere                  | 81.82A |     | 78.26A |     | 75  | 75.0A |      |
| Genset Fuel Consumption |        |     |        |     |     |       |      |
| Frequency/Load          |        | 25% | 5      | 0%  | 75% | 100%  | 110% |
| 50Hz (L/h)              |        | N/A | 2      | 2.0 | 3.0 | 3.9   | 4.3  |

# Diesel engine



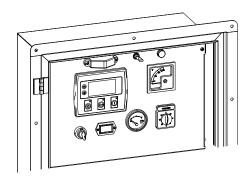
| Engine Manufacturer/Brand  | KUBOTA                   |
|----------------------------|--------------------------|
| Engine Model               | D1803-M-DI-BG-BBT        |
| Dimensions L×W×H           | 575.9x499x685mm          |
| Dry Weigh (approx.)        | 151kg                    |
| Number of Cylinders        | 3                        |
| Bore                       | 87mm                     |
| Stroke                     | 102.4mm                  |
| Displacement               | 1.826L                   |
| Compression Ratio          | 23.8                     |
| Type of Injection          | Direct injection         |
| Intake System              | Natural aspirated        |
| Intake Resistance          | 1.96kPa                  |
| Cooling System             | Water cooled             |
| Fan                        | Pusher                   |
| Battery Voltage            | 12V                      |
| Type of Fuel               | No.2-D(ASTMD975)         |
| Type of Oil                | Class CF lubricating oil |
| Oil Capacity               | 7.6L                     |
| Type of Coolant            | Glycol mixture           |
| Coolant Capacity           | 7.1L                     |
| Back Pressure              | 7.1kPa                   |
| Standby Power              | 15.87kW                  |
| Prime Power                | 14.4kW                   |
| Fuel Consumption(100%load) | N/A                      |

## **Alternator**



| Alternator Manufacturer/Brand          | Leroy Somer        |
|--|--------------------|
| Alternator Model                       | LSA42.3VS3         |
| Exciter                                | Brushless          |
| Cooling Fan                            | Synthetic plastic  |
| Windings                               | 100% copper        |
| Insulation Class                       | H                  |
| Winding Pitch                          | 2/3                |
| Terminals                              | 12                 |
| Drip Proof                             | IP23               |
| Altitude                               | ≤1000m             |
| Overspeed                              | 2250rpm            |
| Air Flow 0.10 m³/s(50H;                | z),0.13m³/s(60Hz)  |
| Voltage Regulation                     | ±0.5 %             |
| Total harmonic TGH / THCat no load < 3 | 2 % - on load < 4% |
| Telephone Interference                 | THF<2%;TIF<50      |

# PLC-920 Control System

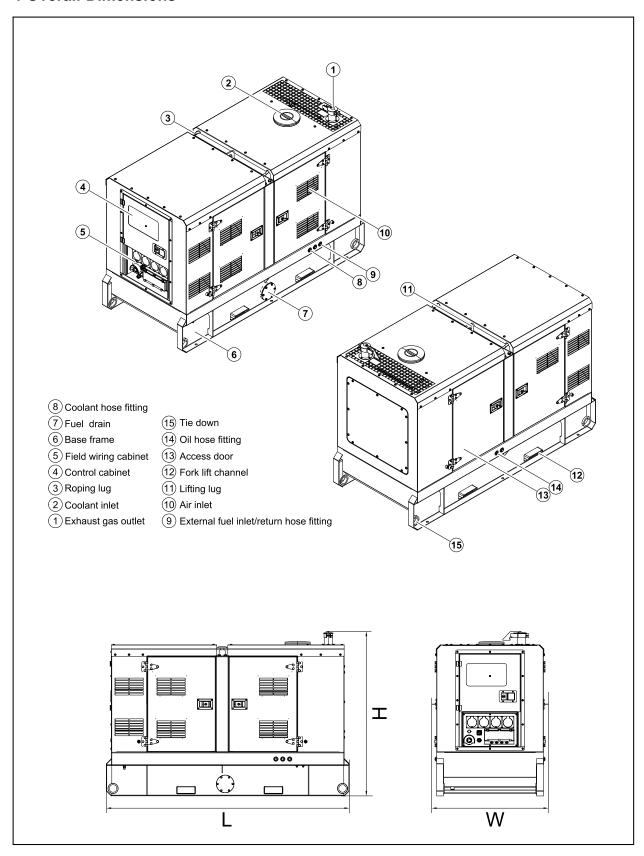


PLC-920 is an advanced control module based on microprocessor designed to control the engine via push buttons on the front panel. The module is used to start and stop the engine and indicate fault conditions, automatically shutting down the engine and giving a true first up fault condition of an engine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

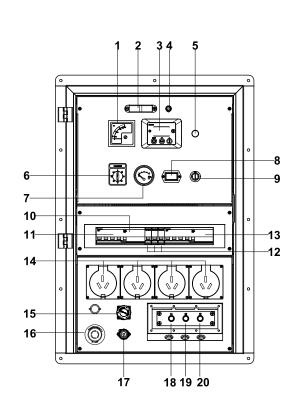
## **Standard Control Function**

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

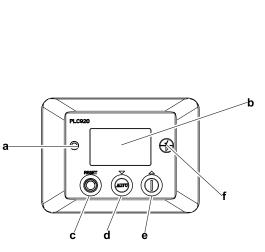
# **4 Overall Dimensions**



# 5 Control System



Control & field wiring cabinet



**Control module** 

| Ref. | Description   |
|------|---|
| 1    | Voltage meter   |
| 2    | Control cabinet lamp                                    |
| 3    | Control module  |
| 4    | Control cabinet lamp switch                             |
| 5    | Charge indicator  |
| 6    | Voltmeter change-over switch                            |
| 7    | Fuel level meter  |
| 8    | Time counter  |
| 9    | Key switch  |
| 10   | RCD.  |
| 11   | Circuit breaker of three-phase convenience receptacle   |
| 12   | Circuit breakers of single-phase convenience receptacle |
| 13   | Main circuit breaker                                    |
| 14   | 4x single-phase convenience receptacle                  |
| 15   | Remote control/<br>ATS communication connector          |
| 16   | Emergency stop switch                                   |
| 17   | Mains input/<br>Remote control communication connector  |
| 18   | Live wire terminal                                      |
| 19   | Neutral wire terminal                                   |
| 20   | Ground wire terminal                                    |

| Ref. | Description  |
|------|--|
| а    | Alarm indicator  |
| b    | Main status display  |
| С    | Stop/reset button; Next page (Configuration mode only)                 |
| d    | Auto start button; Decrease value/next item (Configuration mode only)  |
| е    | Start button;<br>Increase value/next item (Configuration<br>mode only) |
| f    | Navigation button; Accept (Configuration mode only)                    |