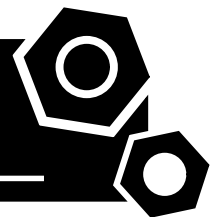


**DIESEL ENGINE DRIVEN  
STATIONARY AIR COMPRESSOR  
DR850-13**

**SPECIFICATIONS**



## 1 Standards & Conditions

### Design Standards

The designs and the productions are in conformity with:

- JB/T6430-2002
- JB/T3771-1992
- JB/T4223-2007
- GB/T15487
- ISO 1217
- ISO 2151
- ASME B 19.1-1990

### 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 80%.
- Altitude: Below one thousand (1000) meters.

### Factory Inspection

- Inspection items.
- Protection devices working test.
- Starting ability in normal temperature.
- 2 hours performance test of continuous full load.
- Performance test, including flux, pressure, temperature, noise, thermal balance etc.

### 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.

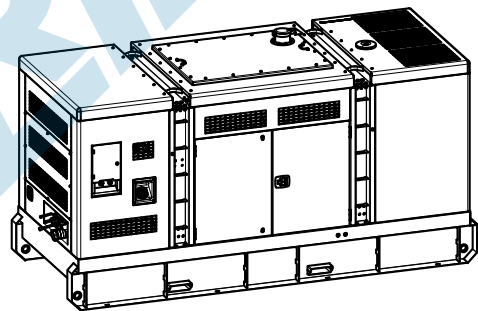
## 2 General Features

- Cummins engine
- Oil-injection double-screw air compressor
- PLC controller with microprocessor technique
- Suction valve
- Solenoid valve
- Pressure regular valve
- Safety valve
- Minimum pressure valve
- Vent valve
- Shuttle valve

- Oil thermostatic valve
- 50°C radiator
- Lubricating oil radiator
- Double layer air filter of engine
- Double layer air filter of compressor
- Lubricating oil filter
- Vertical air/oil tank (ASME approval)
- Air/oil separator
- Emergency stop button
- Lockable battery isolator switch
- 2x12V/200AH sealed for life maintenance free battery
- Fuel tank for 12 hours running
- Powder coated canopy

## 3 Equipment Specification

### Air Compressor

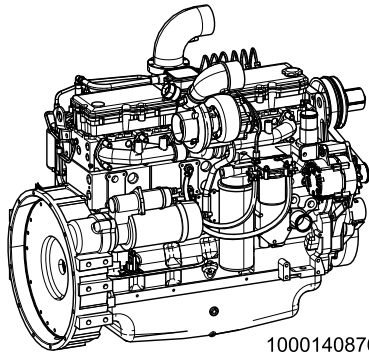


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Model.....	DR850-13
Drive type .....	Diesel engine driven
Speed under full load.....	1800rpm
Rated flux .....	841cfm(23.8m <sup>3</sup> /min)
Rated discharge pressure .....	13bar
Max. unloading pressure .....	13.0bar
Min. working pressure .....	5.0bar
Discharge port .....	2xG1 1/2"+1xG2 1/2"
Total capacity of oil system.....	80L
Lubricating oil type.....	Synthetic oil
Total capacity of coolant system.....	45L
Fuel tank capacity.....	780L
Dry weight.....	4858kg
Dimensions L×W×H.....	4581x1784x2337mm

Note: all pressures in the manual are relative values (compared with atmospheric pressure)

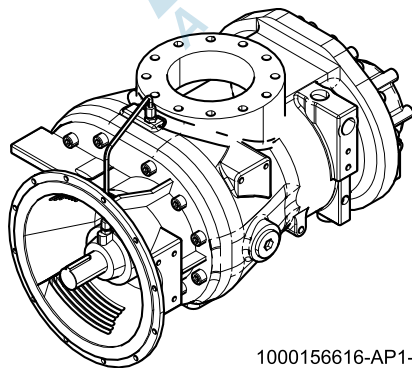
## Diesel Engine



1000140876-AP1-A5

Engine Manufacturer/Brand.....	Cummins
Engine Model.....	6LTAA8.9-C360
Dimensions L×W×H.....	1210x919x1116mm
Dry Weigh (approx.).....	650Kg
Number of Cylinders.....	6
Bore.....	114mm
Stroke.....	145mm
Displacement.....	8.8L
Compression Ratio.....	16.3
Type of injection.....	Direct injection
Intake System.....	Turbocharged, air-to-air charge cooled
Intake Resistance.....	≤6.0kPa
Cooling System.....	Water cooled
Fan.....	Pusher
Battery Voltage.....	24V
Type of Fuel.....	No.2-ASTM D975
Type of Oil.....	CI-4
Type of Coolant.....	Glycol mixture
Back Pressure.....	≤10.1kPa
Standby Power.....	N/A
Prime Power.....	.264kW
Fuel Consumption(100%load).....	.222g/kW.h

## Compressor

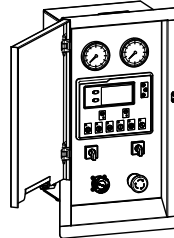


1000156616-AP1-A1

Structure.....	Oil-injection double-screw
Suction temperature.....	0-40°C
Working pressure.....	≤13.0bar

Rated speed.....	1400rpm
Speed ratio.....	1.277
Weight.....	564kg

## Control Cabinet



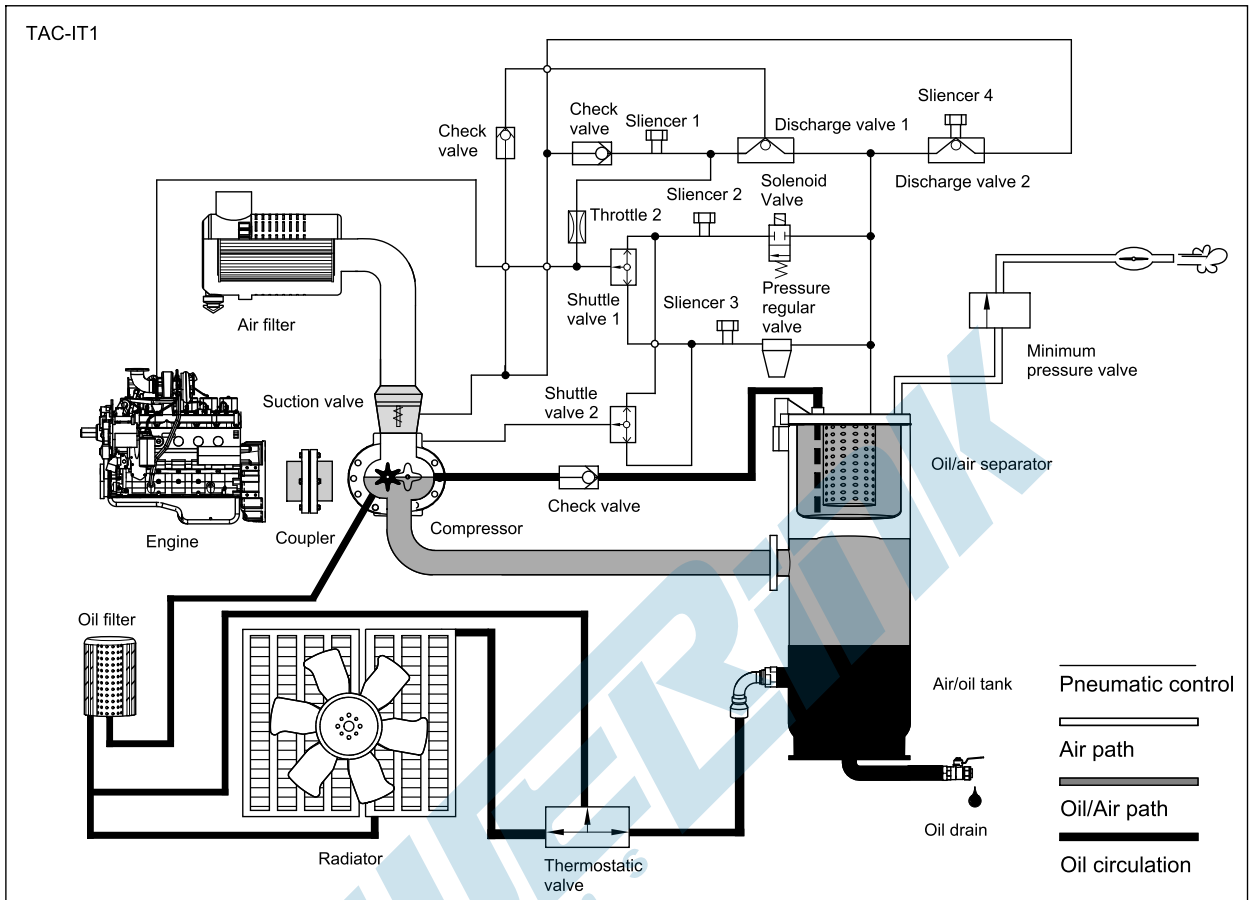
1000138882-AP1-C2

PLC of the machine is an advanced control module based on microprocessor for the automatic control and monitor system of the air compressor, realizing auto start/stop, data measure and alarm protection function. During running the module can accurately measure various parameters, like engine oil pressure, coolant temperature, discharge temperature and pressure etc. and display real values on LCD. When there is any fault, the control module alarms or stops the engine automatically and displays alarm information on LCD.

- Microprocessor control, with high stability and credibility
- Monitoring and measuring operational parameters of the air compressor
- Indicating operation status, fault conditions, all parameters and alarms
- Multiple protections; multiple parameters display, like engine oil pressure, discharge temperature and pressure etc.
- Manual and remote work mode selectable
- Real time clock for time and date display, overall runtime display
- Many configurable parameters from control panel

Warning Item	Shutdown Item
High discharge temperature	Emergency stop
High discharge pressure	Failure to start
High coolant temperature	High discharge temperature
Low engine oil pressure	High discharge pressure
Low fuel level	High coolant temperature
Low coolant level	Low engine oil pressure
Ail filter clogged	Low fuel level
Failure to stop	Low coolant level
Battery charge failure	Ail filter clogged
Low battery voltage	
High battery voltage	

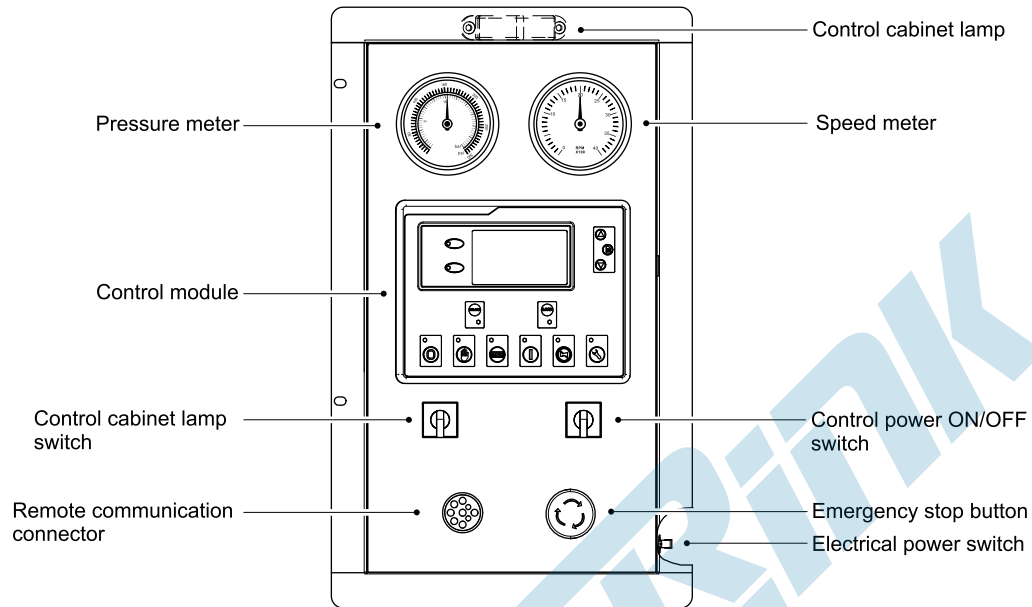
## 4 Air and Oil Path System



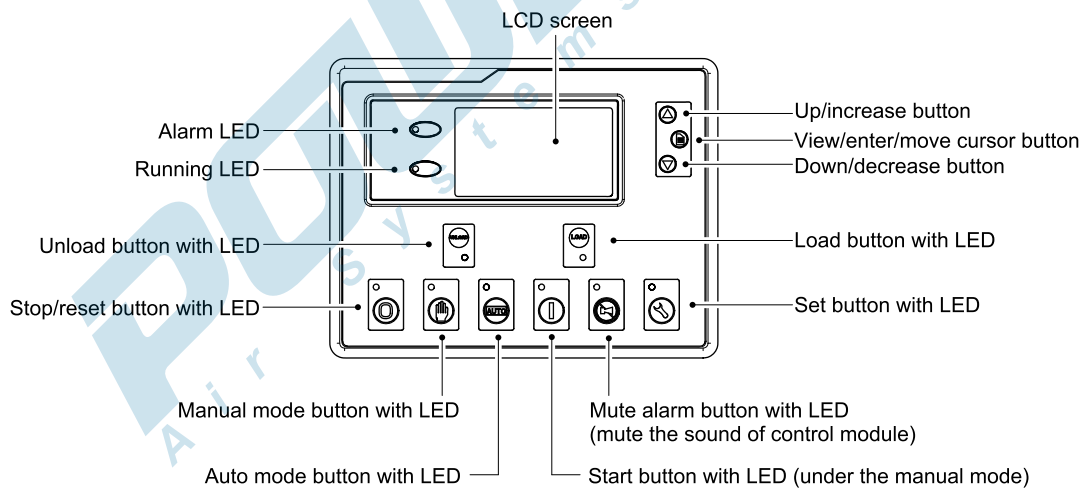
- Suction Valve
  - Control mode ..... Direct proportion
  - Working pressure .....  $\leq 13.0\text{bar}$
- Pressure Regular Valve
  - Working pressure .....  $13.0\text{bar}$
  - Pressure setting mode ..... Manual
- Minimum Pressure Valve
  - Activation pressure .....  $5.0\text{bar}$
  - Fully opened pressure .....  $5.0\text{-}5.5\text{bar}$
- Thermostatic Valve
  - Activation temperature .....  $85^\circ\text{C}$
  - Fully opened temperature .....  $100^\circ\text{C}$
- Air/oil Tank
  - Working pressure .....  $\leq 13.0\text{bar}$
  - Activation pressure of safety valve .....  $14.3\text{bar}$
- Air/oil Separator
  - Working pressure .....  $\leq 13.0\text{bar}$
  - Oil residue ratio (approx.) .....  $3\text{ppm}$

## 5 Control System

### Control Cabinet



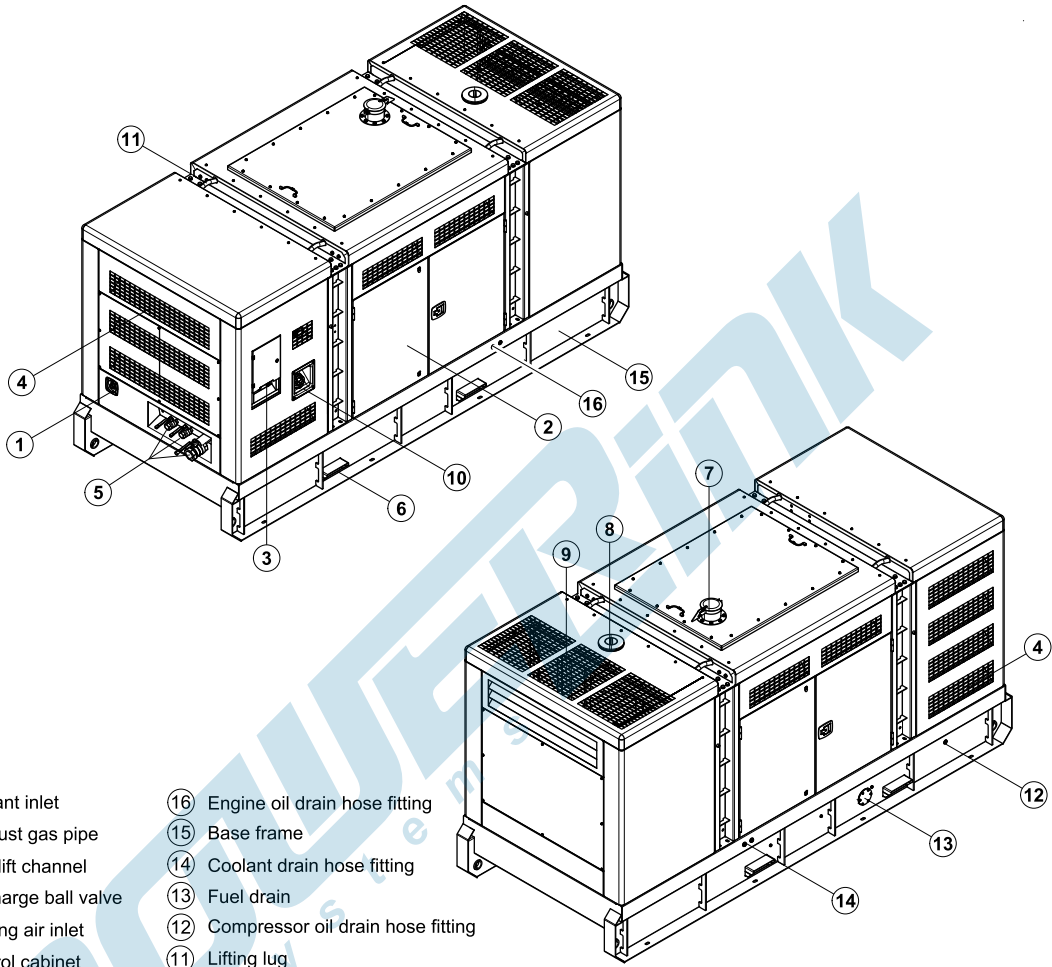
### Control Module



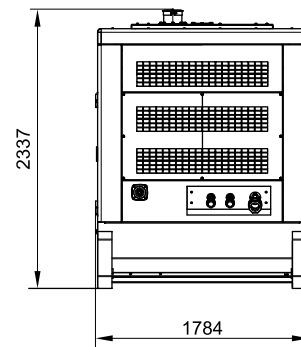
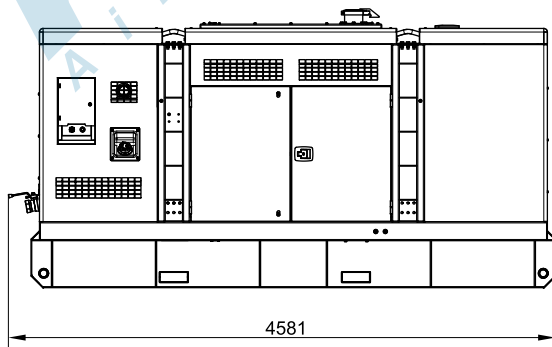
## 6 Overall Dimensions

3000020042-DR1-A11

Dry weight	4858kg
Dimensions	4581x1784x2337mm



- |                         |                                     |
|-------------------------|-------------------------------------|
| ⑧ Coolant inlet         | ⑬ Engine oil drain hose fitting     |
| ⑦ Exhaust gas pipe      | ⑭ Base frame                        |
| ⑥ Fork lift channel     | ⑮ Coolant drain hose fitting        |
| ⑤ Discharge ball valve  | ⑯ Fuel drain                        |
| ④ Cooling air inlet     | ⑰ Compressor oil drain hose fitting |
| ③ Control cabinet       | ⑱ Lifting lug                       |
| ② Access door           | ⑲ Fuel inlet                        |
| ① Emergency stop switch | ⑳ Hot air outlet                    |



3000020042-A11-E
06.2013

**POWERLINK**  
Air Systems

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*Specification may change without prior notice. For more info.,  
contact Power Link or your local distributors please.*