

■ Engine Specification: DC13 072A 02-14

Basic technical data	
No. of cylinders	6
Cylinder arrangement	In-line
Cycle	4 stroke
Displacement	12.7 dm ³
Bore	130 mm
Stroke	160 mm
Compression ratio	16.3:1
Piston speed	
at 1500rpm	8 m/s
at 1800rpm	9.6 m/s
Pistons	Steel pistons
Camshaft	High position alloy steel

Cooling system	
Coolant volume excl. radiator	16 dm ³
Coolant volume incl. 1.1 m ² radiator	38 dm ³
Coolant temperature	90-95 ° C
Number of thermostats	1
Opening temperature	80/87 ° C

Injection system	
Type	Unit injectors, PDE
Governor	ECU
Fuel filter	Paper filter element, 6 micro
Fuel pre-filter with water separator	Paper filter element, 10 micro

Inlet System	
Permissible pressure drop in intake system	
with cleaned or new filter	30 mbar
with blocked(dirty) filter	65 mbar

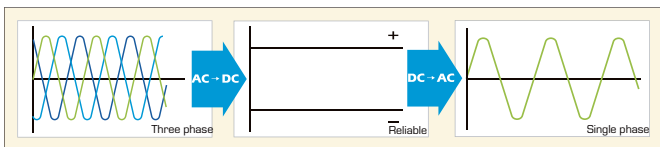
Lubrication system	
Oil capacity	
min	30 dm ³
max	36 dm ³
Oil consumption	<0.3 g/kWh
Oil change intervals	500 h
Oil pressure	
normal	3-6 bar
minimum permitted at idle speed	0.7 bar
Oil temp (normal)	90-110 ° C
Oil cleaner	Centrifugal
Oil filter	Paper/full flow
Oil cooler	Water cooled/full flow

Electrical system	
Type	1 pole, 24V DC
Starter, standard equipment	1 pole, 24V, 6KW
Alternator, standard equipment	1 pole, 28V, 100A

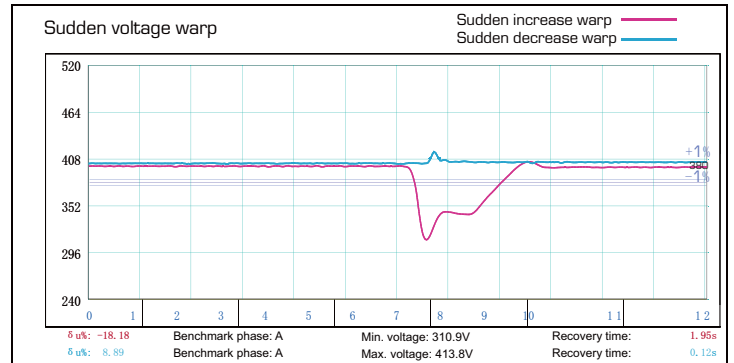
General installation	Prime power
Gross power	445 KW
	503 KVA
Heat rejection	
to coolant	142 KW
to exhaust gas	320 KW
to charge air	96 KW
to surrounding air	36 KW
Air consumption	35 kg/min
Air temperature	
before charge air cooler	213° C
after charge air cooler	50° C
Pressure in intake manifold	2.1 Bar
Fall of pressure, charge air cooler	0.15 Bar
Exhaust flow	36 kg/min
Exhaust temperature	521
Step load performance (according to class G2)	72% 328 KW

■ Alternator Specification

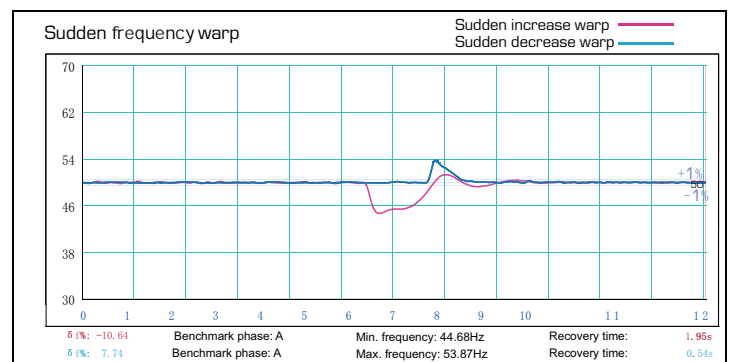
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



■ Options

Engine	Alternator	Generator Sets	Fuel System
<ul style="list-style-type: none"> Water Jacket Pre-heater Fuel heater 	<ul style="list-style-type: none"> Winding Temp measuring Instrument Alternator Pre-heater PMG Anti-damp and anti-corrosion treatment Anti-condensation heater Winding and bearing RTD 	<ul style="list-style-type: none"> Tools with the machine Extended range fuel tank Bunded fuel tank 	<ul style="list-style-type: none"> Low fuel level alarm Automatic fuel feeding system Fuel T-valves
Canopy	Lub oil system	Cooling System	Control Panel
<ul style="list-style-type: none"> Rental type Canopy Trailer 	<ul style="list-style-type: none"> Oil Pre-heater Oil temp sensor 	<ul style="list-style-type: none"> Front heat protection 	<ul style="list-style-type: none"> Remote control panel ATS Synchronizing controller Adjustable earth leakage relay

Control Panel

Configuration

- Emergency stop button
- Protection MCB
- Battery charger
- Integrated aviation plug
- ATS connection
- Digital control module

Features

- 3 phase generator set monitoring
- Support of engines equipped with electronic control unit
- Comprehensive diagnostic message
- Automatic or manual start/stop of the gensets
- Push buttons for simple control, lamp test
- Graphic back-lit LCD display
- Parameters adjustable via keyboard or PC
- Mains measurements (50HZ/60HZ)
- Generator measurements (50HZ/60HZ)
- Comprehensive shutdown or warning on fault condition
- 3 phase Generator protections
 - Over-/under voltage
 - Over-/under frequency
 - Current/voltage asymmetry
 - Over current/overload
- 3 phase AMF function
 - Over-/under frequency
 - Over-/under voltage
 - Voltage asymmetry
- Configurable analog inputs
- Battery voltage, engine speed (pick-up) measurement
- Configurable programmable binary inputs and outputs
- Warm-up and cooling functions
- Generator C.B. and Mains C.B. control with feedback and return timer
- RS232 interface
- Modem communication support
- Hours counter
- Sealed to Ip65
- Event log

Benefits

- Less wiring and components
- Integrated solution
- Less engineering and programming
- User friendly set-up and button layout
- Module can be configured to suit individual applications
- PC software for simplified configuration
- Wide range of communication capabilities

Operation conditions

- Operation temp: -20 °C to + 70 °C
- Storage temp: -30 °C to + 80 °C
- Operating humidity: 95% w/o condensation
- Vibration : 5-25Hz, ±1.6 mm
5-100Hz, a=4g
- Shocks: a= 500m/s²

Options

- Ethernet interface (Remote monitoring and control)
- GSM modem/wireless internet (Remote monitoring and control)
- RS232-RS485 Dual port interface
- Synchronizing control panel
- Distribution board with sockets kit and power busbar
- Battery trickle charge ammeter
- Earth leakage protection
- Earth fault protection
- Low fuel level alarm
- Low fuel level shutdown
- High fuel level alarm
- Fuel transfer system control
- Low coolant level shutdown
- High lube oil temp shutdown
- Overload via alarm switch on breaker
- Engine coolant heater controls
- Control panel heater
- Speed adjust switch
- Oil temp displayed on LCD screen
- Additional 8 inputs and outputs