

Industrial Diesel Genset

DD 22

POWER RATING	1500rpm/50Hz	1800rpm/60Hz
Prime	22.7 kVA, 18.1 kW	29 kVA, 23.2 kW
Standby	25.3 kVA, 29.2 kW	32.2 kVA, 25.7 kW

Generator set consisting of engine and alternator mounted on a fabricated steel profile base, painted with a phosphate primer and top coat.

The alternator is directly coupled to the engine flywheel housing to SAE standards. The rotor is fixed to the flywheel using steel discs for flexibility. Perfect alignment and the absence of vibration are thus guaranteed.

The unit is fixed to the baseframe using anti-vibration pads.

ENGINE

4-stroke diesel engine with direct injection.

Manufacturer.....	Deutz
Model	F4L 1011F
No. of cylinders	4
Engine capacity.....	2730 cc
Bore	91 mm
Stroke	105 mm
Compression ratio	18.5: 1
Aspiration.....	Atmospheric
Engine speed 50 / 60 Hz	1500 / 1800 rpm
Prime power 50 / 60 Hz	32.6 / 41.44 HP ISO 3046/1 (IFN) Nb
Fuel consumption 100% load 50 / 60 Hz	5.7 / 8.8 ltr/h
Fuel tank capacity.....	56 litres
Approximate running time without refill 50 / 60 Hz	9.8 / 6.3 hours
Noise level	88 / 89 dB(A) at 1 metre

Cooling system

Air cooled by axial fan.

Lubrication system

Forced lubrication using excentric rotor type pump. Oil filter

Oil sump capacity	12 litres
Oil consumption	0.3% of fuel consumption

Air intake system

Naturally aspirated via oil soaked air filter.

Injection system

In line injection pump with mechanical governor. Fuel filter.

Electrical system

12 V electric starting system. Axial starter motor. 70 Ah battery. Battery charging alternator. Oil pressure and engine temperature sensors.

Protection system

Automatic engine shutdown for low oil pressure, low fuel level, high temperature or battery charge defect..

Exhaust system

Consists of silencer with 10 db(A) noise reduction, flexible exhaust pipe and brackets. Residential silencer optional.

Exhaust gas flow 1500 / 1800 rpm 313 / 376 m3/h

ALTERNATOR

Synchronous, three phase and brushless. Self regulation via automatic voltage regulator maintaining voltage within +/- 1.5%. Class "H" insulation. All windings are impregnated with polyester resin, making them resistant to acids and oil. IP 22 protection. Electrical characteristics to BS 5000, VDE 0530, UTE 5100, NEMA MG 1-22, CMA IEC 34, CSA 22,2 and AS 1359. Harmonic distortion below 3.5%. Radio interference suppression to BS-800.

Manufacturer.....	Stamford
Model	BCI 184 E
Power rating.....	22.5 kVA at 1500; 27 kVA at 1800 rpm
Voltage (*).....	220/380 V three phase
Frequency.....	50 / 60 Hz
Speed	1500 / 1800 rpm
Regulation.....	Electronic
Nominal current 50 / 60 Hz.....	34.2 / 41 A (at 380 V)

(*) 12 wire output permitting reconnection to any existing voltage.

VERSIONS

The **DD 22** generator set may be supplied in the following versions:

STATIONARY, MOBILE WITH CANOPY AND AUTOMATIC

STATIONARY

In the stationary version, the set is supplied on a skidbase with a control panel operated manually using an ignition key.

Length 1760 mm x Width 850 mm x Height 1370 mm
Weight: 670 kgs

Control panel

Metal cabinet, with IP 54 protection, mounted on the frame using anti-vibration pads, equipped with:

- Thermo - magnetic circuit breaker
- 3 Ammeters.
- Frequency meter.
- Voltmeter with selector switch.
- Hours run meter.
- Three phase output terminals.
- Battery voltmeter.
- Fuel meter.
- On light.

Control card including: ignition key, start/stop buttons and indicator lamps for low oil pressure, battery charge, high temperature, low fuel level, overload and start-up failure.

STATIONARY WITH CANOPY

In the STATIONARY WITH CANOPY version, the set is supplied on a skidbase and includes a metal canopy housing a control panel which is operated manually using an ignition key.

Length 1760 mm x Width 850 mm x Height 1370 mm
Weight: 750 kgs

Metal canopy

Ideal for outdoor use, it is painted with a phosphate primer and long lasting top coat.

Control panel

Metal cabinet, with IP 54 protection, mounted on the frame using anti-vibration pads, equipped with:

- Thermo - magnetic circuit breaker
- 3 Ammeters.
- Frequency meter.
- Voltmeter with selector switch.
- Hours run meter.
- Three phase output terminals.
- Battery voltmeter.
- Fuel meter.
- On light.

Control card including: ignition key, start/stop buttons and indicator lamps for low oil pressure, battery charge, high temperature, low fuel level, overload and start-up failure.

MOBILE WITH CANOPY

Set on baseplate mounted on independent trailer. Incorporates metal canopy housing control panel which is operated manually via an ignition key.

Length: 2531 mm
Width: 1290 mm
Height: 1717 mm
Weight: 830 kgs

Metal canopy

Ideal for outdoor use, it is painted with a phosphate primer and a long lasting top coat.

Trailer

Made up of: wheels with tyres, DIN towing eye, rubber axle suspension, and support leg. Jockey wheel on request.

As an option, A TRAILER ADAPTED FOR ROAD TRANSPORTATION may be supplied.

Control panel

Metal cabinet, with IP 54 protection, mounted on the frame with anti-vibration pads.

Equipped with:

- Thermo - magnetic circuit breaker
- 3 Ammeters.
- Frequency meter.
- Voltmeter with selector switch.
- Hours run meter.
- Three phase output terminals.
- Battery voltmeter.
- Fuel meter.
- On light.

Control card including: ignition key, start/stop buttons and indicator lamps for low oil pressure, battery charge, high temperature, low fuel level, overload and start-up failure.

AUTOMATIC

The automatic version generator set is supplied on a skidbase with an automatic start/stop panel for mains failure.

Length 1760 mm x Width 850 mm x Height 1370 mm
Weight: 670 kgs

ELECTRICAL PANEL

Mounted in a metal cabinet with IP 54 protection and supplied loose for wall mounting. Includes monitoring and control, measuring and handling, and transfer system.

Monitoring and control system

- Automatically monitors the mains, and, if the mains fails (in one or all three phases) connects the consumers to the generator set via mechanically and electrically interlocking contactors. When the mains is restored, the load is reconnected to the mains, the set idles and then stops.
- No. of start up attempts: 3
- Selector switch for Disconnect, Automatic Service, Manual Service and Test
- The set may be selected to run manually or automatically. When running manually a selector switch is used for shutdown, start-up and changeover.
- Three phase voltage monitor with adjustable values.

Measuring and handling equipment

Consists of the following items:

- 1 Ammeter
- 1 Voltmeter
- 1 mains-generator set voltmeter selector switch.
- 1 Frequency meter
- 1 Battery voltmeter.
- Off button.
- Battery maintenance system
- Battery indicator lamp
- Battery charge indicator lamp.
- Mushroom type emergency stopbutton.
- Audible and visual alarm for low fuel level. (Appears as "ALARMAS NO STOP").
- Alarm system disconnecting generator set, shutdown, acoustic alarm and visual signals for:
 - Start-up failure
 - Low oil pressure
 - High water / engine body temperature.
 - Overload.
- Protective fuse.
- Thermo-magnetic circuit breaker.

Transfer system

Made up of two mechanically and electrically interlocking contactors.

WORKING VOLTAGE: 380/220 V