

INDUSTRIAL DIESEL GENSET

Series DV 505

POWER RATING	1500 rpm/50 Hz	1800 rpm/60 Hz
Prime	505kVA, 404kW	569kVA, 455kW
Standby	556kVA, 445kW	631kVA, 505kW

Generator set consisting of engine and alternator mounted on a fabricated steel profile base, painted with a phosphate coating and top coat. Alternator directly coupled to the engine flywheel housing to SAE standards. 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 Volvo Penta
 Model TAD 1631 G
 No. of cylinders 6
 Engine capacity 16 120 cc
 Bore 144 mm
 Stroke 165 mm
 Compression ratio 15 : 1
 Aspiration Turbocharged
 Cooling Water
 Engine speed 50/60Hz 1500 / 1800 rpm
 Prime power 50/60Hz 584/ 643 hp ISO 3046
 Fuel consumption 50/60Hz .. 101 / 111ltr/h 100% load
 Fuel tank capacity 710 litres
 Approx. run time 50/60Hz 7.2 / 6.3 h without refill

Cooling system

Closed circuit water cooled with expander tank included in the radiator. Tropical radiator and pusher fan with guard. Equipped to work at ambient temperature of up to 52° C.

Cooling air flow from fan 324/438 m³/min 50/60Hz
 Cooling system capacity 64 litres

Lubrication system

Forced lubrication using gear driven pump. Oil filter
 Oil sump capacity 57 litres
 Consumption 0.12 ltr/h

Air intake system

Turbocharged intake via dry air filter and intermediate air cooling of combustion air.
 Combustion air flow 31.8 m³/min

Injection system

Injection pump in line with GAC electronic governor.
 Fuel filter and pre-filter.

Electrical system

24 V electric starting system. Axial starter motor. 2x180 A.h. battery. 60 Amp battery charging alternator. Oil pressure and engine temperature sensors.

Protection system

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

Exhaust system

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

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 varnish, 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 HC 544 D
 Power rating 500/993 kVA at 1500/1800 rpm
 Voltage (*) 380/220 V three phase
 Frequency 50 / 60 Hz
 Speed 1500 / 1800 rpm
 Regulation Electronic
 Nominal current 760 A

(*) 12 wire output permits reconnection to any voltage.

VERSIONS

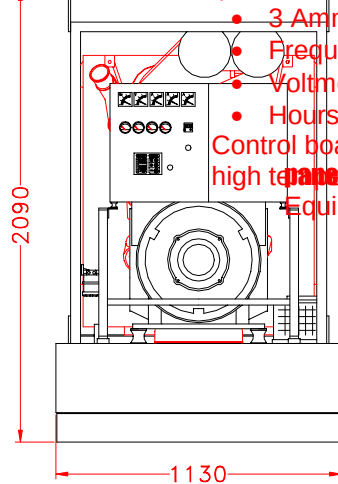
The **DV 505** generator set may be supplied in the following versions:

STATIONARY, STATIONARY WITH CANOPY, MOBILE WITH CANOPY AND AUTOMATIC

STATIONARY VERSION

DV 505

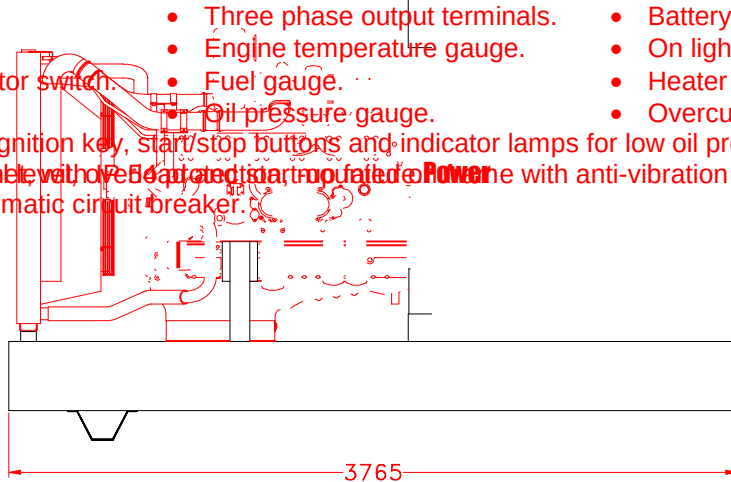
Applied on a skid base with a control panel operated manually using an ignition key and a 210 kg lasting top coat. **Panel both versions** is detachable and is protected manually using a front window key. **Control**



- 3 Ammeters.
- Frequency meter.
- Voltmeter with selector switch.
- Hours run meter.

Control board including: ignition key, start/stop buttons and indicator lamps for low oil pressure, battery charge, high temperature, overcurrent, overheat, start up failure, **Power**

Equipped with automatic circuit breaker.



- Three phase output terminals.
- Engine temperature gauge.
- Fuel gauge.
- Oil pressure gauge.

- Battery charge ammeter
- On light.
- Heater button.
- Overcurrent indicator lamp

MOBILE WITH CANOPY

DV 505-MC

Set on baseframe mounted on independent trailer. Incorporates metal canopy housing the control panel which is operated manually via an ignition key. **Metacanop y** ideal f or outdoor use, it is painted with a phosphate coating and a long l

AUTOMATIC VERSION

DV 505-N

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

ELECTRICAL PANEL

Mounted in a metal cabinet with IP 54 protection and supplied loose for wall mounting. Includes control, measuring 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 contactors which are mechanically and electronically activated. When the mains is restored, the load is reconnected to the mains, the set idles and then stops. Equipped with:

- Push button controls, indicator lamp and protection fuses.
- No. of start up attempts: 3
- Three phase voltage monitor with adjustable values.

Measuring equipment

Consists of the following items:

- 3 Ammeters
- 1 Voltmeter
- 1 mains-generator set voltmeter selector switch.
- 1 Frequency meter
- 1 Battery voltmeter.
- Selector switch for Disconnect, Automatic Service, Manual Service and Test
- Off button.
- Start-up selector switch.
- Heater indicator lamp.
- Battery maintenance system.
- Audible alarm for faults
- Visual alarm system for low oil pressure, high temperature and/or overload.
- Mushroom type emergency stop pushbutton.

The set may be selected to run manually or automatically: When running manually a pushbutton is used for shutdown and a selector switch is used for start-up and changeover.

Transfer system

Made up of two mechanically and electrically interlocking 800 A contactors.

WORKING VOLTAGE: 380/220 V

Heater

In this version, the set incorporates a heater which aids diesel engine start-up and response. It consists of a tank connected to the engine cooling system and a heating element with an adjustable thermostat.