



TECHNICAL SPECIFICATION 16-LITRE ENGINE DC16 450 - 500 KVA

The DC16 is a turbo charged 4-stroke diesel engine equipped with Engine Management System (EMS) and Electronically controlled unit injectors (EUI).

No. of cylinders	8 in 90° V
Displacement	15.6 litres
Bore	127 mm
Stroke	154 mm
Weight excl. oil and water	1290 kg

Standard equipment

Unit injectors and Scania EMS electronic control unit (Engine Management System). Turbo charger, exhaust bend 90°, centrifugal lube oil cleaner, oil filter, oil cooler, fuel pre-filter with water separator, fuel filter, alternator 1-pole 100A 28V, starting motor 1-pole 6.7 kW 24V, flywheel SAE 14", flywheel housing SAE1 of silumin, front mounted engine brackets, Operator's manual.

Optional equipment

Optional oil filling, starter 2-pole 6.7kW 24V.

Extra equipment

Pre-assembled radiator 1.3 m² with charge-air cooler, fan cover, fan ring, expansion tank and protection covers, fan Ø965 mm, stiff or fixed engine suspension. Air compressor, Side mounted power take-off with a maximum continuous torque of 400 Nm (41 kpm). front mounted power take-off with a maximum continuous torque of 635 Nm (65 kpm). Crankshaft belt pulley with two extra grooves, various exhaust connections, silencer and air cleaner, engine heater, manual or electrical pump for oil draining, closed crankcase ventilation. Torsional vibration calculations for industrial applications.

Engine description

Cylinder block Made of alloy cast iron. **Cylinder heads** Individual cylinder heads. Unit injector technology with engine mounted electronic control unit. Steel gasket between block and cylinder heads. **Valves** Four valves per cylinder head. **Timing gear train** Mounted at the flywheel end of the crankshaft. **Camshaft** One camshaft for each cylinder row. **Pistons** Aluminium bodies and steel crowns. **Oil cooler** Mounted inside the engine block and of multi-plate type. **Connection rods** I-section pressforgings of alloy steel. **Crankshaft** Made of alloy steel with hardened and polished bearing surfaces. **Oil sump** Made of cast aluminium. **Flywheel** Made of cast iron. Direction of rotation seen from flywheel end – counter clockwise. **Electrical system** 1-pole 24 V.

Engine type		DC16 45A (450 - 500 kVA)			
		50 Hz		60 Hz	
		Prime Power	Stand-by Power	Prime Power	Stand-by Power
Engine output, gross	kW	400	439	399	438
Fan losses*	kW	13	13	12	12
kVA band**	KVA	450	500	450	500
Governor, type	Scania Engine Management System (EMS)				
Spec. fuel consumption:					
1/1 load	g/kWh	196	196	199	199
3/4 load	g/kWh	197	197	199	199
1/2 load	g/kWh	200	199	205	204
Spec. lube oil consumption:					
	g/kWh	< 0.3		< 0.3	
Compression ratio	18:1				
Heat rejection					
to cooling water	kW	150	164	152	166
to exhaust gas	kW	284	309	285	312
to charge air	kW	79	91	99	111
to surrounding air	kW	33	36	31	34
Air consumption	kg/min	35	38	43	46
Exhaust flow	kg/min	36	39	44	47
Exhaust temperature	°C	456	462	387	399

*Fan losses: With recommended fan for +35 °C air-on temperature to cooling system.

**Range, kVA: As per above note *fan losses and with generator efficiency common on the market.

Speed variations according to ISO 3046/IV, Class A1, and ISO 8528-1, Class G2.

Output values: 0 to +3%. Fuel values: +/-3%.

Prime power

PRP: For continuous operation at varying load. Max. mean load factor of 70% of rated power over 24 h of operation. 1 hour/12 hours period of accumulated peak overload to 110%.

Test conditions

Air temperature	+25°C
Barometric pressure	100 kPa (750 mmHg)
Humidity	30%
Diesel fuel acc. to	ECE R 24 Annex 6
Density of fuel	0.840 kg/dm ³
Viscosity of fuel	3.0 cSt at 40°C
Energy value	42700 kJ/kg

Environment:

Complies to EU Stage II, US Tier 2 and CPCB-I* emission regulation levels.

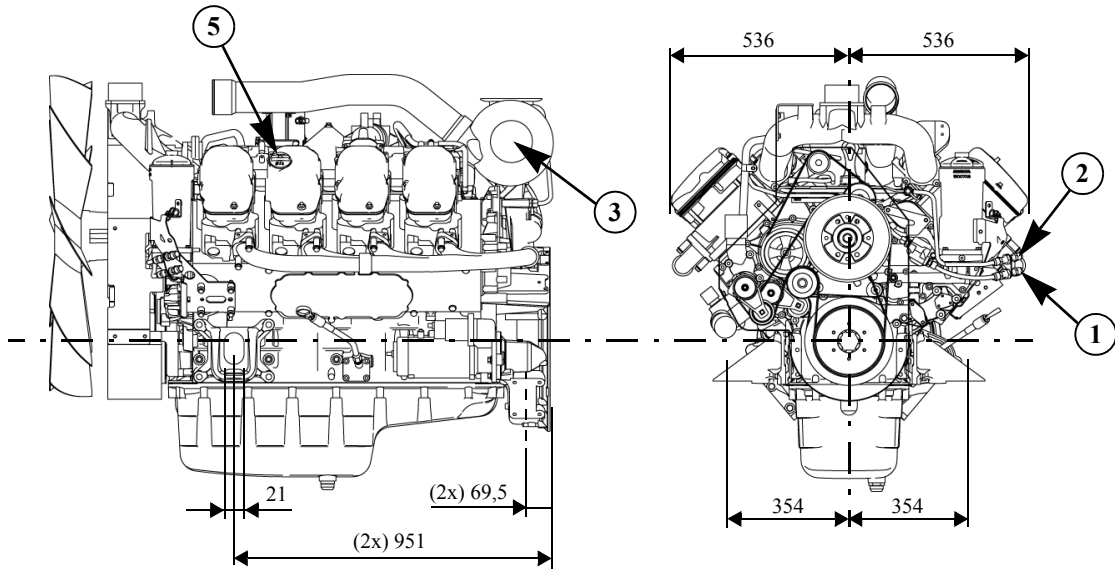
Stand-by Power

ESP: For operation under normal varying load during a power outage. Not overloadable. Max mean load factor of 70% of rated power over 24 h of operation. Not for applications intended for more than 200 h/year.

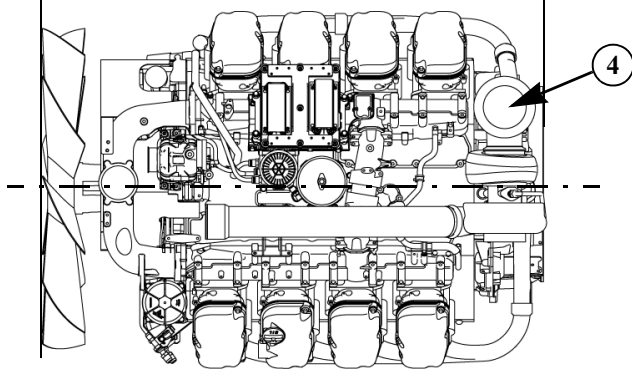
This specification may be revised without notice.

*) CPCB-I: Mass Emission & Smoke Norms for Genset Diesel Engine, up to 800 kW (for India). Only valid for PRP.

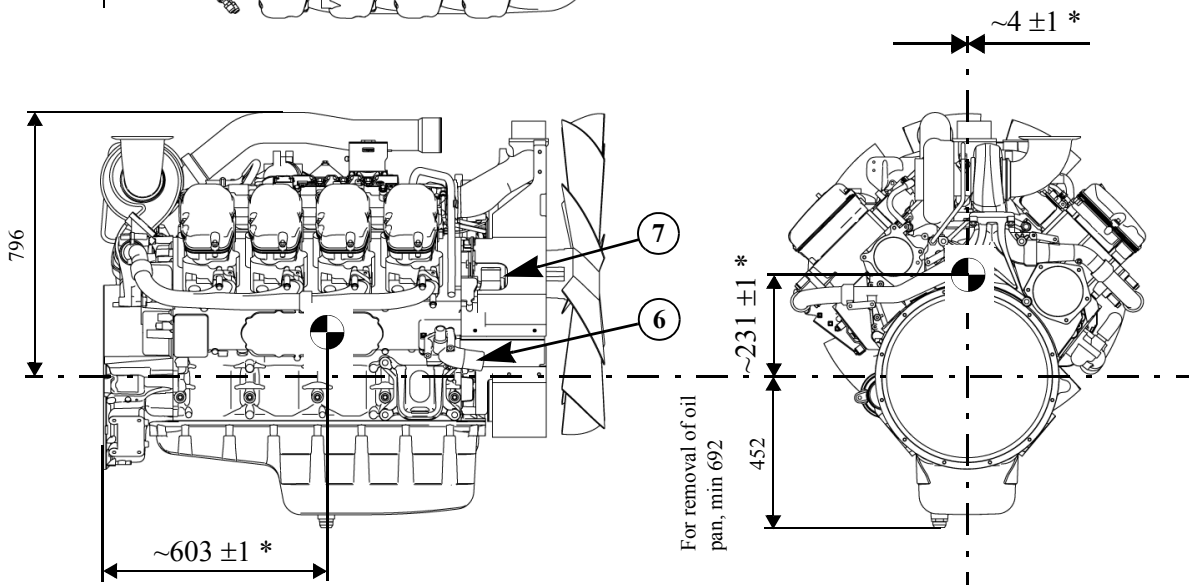
DC16



fan Ø912 mm: Puller 1428, Pusher 1452
fan Ø787 mm: Puller 1432, Pusher 1454



- 1 Fuel inlet
- 2 Fuel return
- 3 Air inlet
- 4 Exhaust outlet
- 5 Oil filling cap
- 6 Water inlet
- 7 Water outlet



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