

ENGINE DATASHEET



Engine ref. : KD62V12A-5DFS

General technical data

Cylinder configuration	V
Number of cylinders	12
Emission level	Fuel consumption optimization
Dual Frequency	No
Speed 50Hz (RPM)	1500
Displacement (l)	62,06
Bore (mm)	175
Stroke (mm)	215
Compression ratio	16 : 1
Engine Firing Order	A1-B2-A2-B4-A4-B6-A6-B5-A5-B3-A3-B1
Air inlet system	Turbo
Fuel	Diesel Fuel/HVO

Performance

	RPM	1500
Maximum stand-by power at rated RPM (kW)		2406
PRP Power (kW)		2187
Pistons speed (m/s)		10,75
BMEP @ ESP (bar)		31
Friction Power Loss (kW)		182
Max Combustion Pressure (Mpa)		240

Electrical system

Governor type	Electronic
ECU type	KODEC
Frequency regulation, no-load to full-load	Isochronous
Frequency regulation, steady state (%)	+/- 0.25%
No. of teeth on ring gear	182
Idle speed (RPM)	650
Battery voltage (V)	24
Charging alternator (V/V/A)	24 / 28 / 140
Starter characteristics	2 * (24 / 9)

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Dimensions and weight

Length (mm)	2586
Width (mm)	1757
Height (mm)	2094
Dry weight (kg)	8350
Wet weight (kg)	8935
Center of Gravity from Rear Face of Block (mm)	960

Construction / Material

Main Bearing Type	Half shell bearing
Cylinder Head Material	Cast Iron
Crankshaft Material	Forged Steel
Intake and Exhaust Valve Material	Forged Steel
Piston type & material	Forged Steel
Exhaust manifold type	Dry

Installation

Maximum Bending Moment at Rear Face of Block (RFOB) (Nm)	100000
Maximal engine inclination, longitudinal front up/down (degree)	10
Maximal engine inclination, lateral (degree)	15
SAE Flywheel housing	00
SAE Flywheel	21
Inertia (kg.m ²)	33,49

Fuel system

	RPM	1500
Maximum fuel pump flow (l/h)		767
Max. restriction at fuel pump (m fuel)		3,5
Max head on fuel return line (m fuel)		3,5
Maximum allowed inlet fuel temperature (°C)		70
Primary Fuel Filter Rating		5
Fuel Prefilter / Water Separator Micron Size		10
Fuel Inlet Minimum recommended size (mm)		25,4
Fuel Outlet Minimum recommended size (mm)		19

Fuel consumption (Specific fuel consumption +5% ; ISO3046-1 ; 42.7 MJ/kg)

	RPM	1500
Specific consumption @ 25% of PRP Power (g/kW.h)		235

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Specific consumption @ 50% of PRP Power (g/kW.h)	207
Specific consumption @ 75% of PRP Power (g/kW.h)	196
Specific consumption @ PRP Max Power (g/kW.h)	192
Specific consumption @ 25% of ESP Power (g/kW.h)	230
Specific consumption 50% of ESP Power (g/kW.h)	204
Specific consumption @ 75% of ESP Power (g/kW.h)	195
Specific consumption @ ESP Max Power (g/kW.h)	195

Lubrication system

	RPM	1500
Oil consumption 100% ESP 50Hz (l/h)		1,34
Oil system capacity including filters (l)		378
Oil sump capacity (l)		340
Oil capacity between dipstick marks Max-Min (l)		55
Oil Pressure at rated speed (bar)		4,5
Min. oil pressure (bar)		2
Max. oil pressure (bar)		11
Oil temperature maximum (°C at 25°C ambient)		100
Oil filter micron size		10
Oil Filter Quantity and type		Spin On / 6
Oil cooler		Plate Exchanger

Air intake system

	RPM	1500
Combustion air flow (l/s)		2749
Max. intake restriction (mm H2O)		510
Max intake manifold air temp without derating (°C)		

Exhaust system

	RPM	1500
Heat rejection to exhaust (kW)		1788
Exhaust gas temperature @ ESP (°C)		506
Max. exhaust back pressure (mm H2O)		867
Exhaust gas flow @ ESP (l/s)		7562

Cooling system

	RPM	1500
Radiated heat to ambient (kW)		110
Heat rejection to coolant HT (kW)		735
HT circuit flow rate (l/min)		1695
Outlet coolant temperature (°C)		100
Maximum Coolant temp without derating (°C)		100

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Max coolant temperature, Shutdown (°C)	105
Coolant capacity HT, engine only (l)	180
Restriction pressure drop off engine – HT circuit (mbar)	700
Minimal pressure before HT pump (mbar)	400
Max. pressure at inlet of HT water pump (mbar)	2500
Thermostat begin of opening HT (°C)	71
Thermostat end of opening HT (°C)	81
HT Standard pressure cap setting (kPa)	100
Heat rejection to coolant LT (kW)	560
LT circuit flow rate (l/min)	460
Temperature of inlet to LT engine water circuit (°C)	45
Coolant capacity LT, engine only (l)	80
Restriction pressure drop off engine – LT circuit (mbar)	700
Minimal pressure before LT pump (mbar)	400
Max. pressure at inlet of LT water pump (mbar)	2500
Thermostat begin of opening LT (°C)	45
Thermostat end of opening LT (°C)	57
LT Standard pressure cap setting (kPa)	100
Radiator & Engine capacity (l)	809
Water Pump Type	Vane Wheel pump