

ENGINE DATASHEET



KOHLER®

Engine ref. : KD62V12-5AFP

General technical data

Cylinders configuration	V
Number of cylinders	12
Engine optimisation	Fuel optimisation
Dual Frequency	No
Speed (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

Performance

	RPM	1500
Maximum stand-by power at rated RPM (kW)		1718,20
PRP Power (kW)		1562
Pistons speed (m/s)		10,75
BMEP @ PRP 50 Hz (bar)		20,10
Friction Power Loss (kW)		185
Max Combustion Pressure (Mpa)		240

Electrical system

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

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Dimensions and weight

Length (mm)	2661
Width (mm)	1753
Height (mm)	2126
Dry weight (kg)	9300
Wet weight (kg)	9979
Center of Gravity from Rear Face of Block (mm)	857

Construction / Material

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

Installation

Maximum Bending Moment at Rear Face of Block (RFOB) (Nm)	
Maximum Rear Bearing Load (N)	
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)	37,70

Fuel system

	RPM	1500
Maximum fuel pump flow (L/h)		265
Maximum fuel return flow (L/h)		
Maximum heat rejected to return fuel (kW)		
Max. restriction at fuel pump (m)		3,50
Max head on fuel return line (m)		3,50
Maximum allowed inlet fuel temperature (°C)		70
Primary fuel filter rating (micron)		5
Fuel Prefilter / Water Separator Micron Size		10
Fuel Inlet Minimum recommended size (mm)		25,40
Fuel Outlet Minimum recommended size (mm)		19,05

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

	RPM	1500
Specific consumption 25% PRP load (g/kW.h)		247
Specific consumption 50% PRP load (g/kW.h)		212
Specific consumption 75% PRP load (g/kW.h)		199
Specific consumption 100% PRP load (g/kW.h)		195
Specific consumption 25% ESP load (g/kW.h)		239
Specific consumption 50% ESP load (g/kW.h)		208
Specific consumption 75% ESP load (g/kW.h)		196
Specific consumption 100% ESP load (g/kW.h)		190

Lubrication system

	RPM	1500
Oil consumption 100% ESP (L/h)		0,81
Oil system capacity including filters (L)		375
Oil sump capacity (L)		308
Oil capacity between dipstick marks Max-Min (L)		60
Min. oil pressure (bar)		3,50
Oil Pressure at rated speed (bar)		4,50
Max. oil pressure (bar)		
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
Intake air flow (L/s)		1875,29
Max. intake restriction (mm H2O)		510

Exhaust system

	RPM	1500
Heat rejection to exhaust (kW)		1170
Exhaust gas temperature @ PRP 50Hz (°C)		465
Max. exhaust back pressure (mm H2O)		867
Exhaust gas flow @ PRP 50Hz (L/s)		4994

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Cooling system

	RPM	1500
Radiated heat to ambient (kW)		80
Heat rejection to coolant HT (kW)		580
Flow on the HT circuit at 0.7Bars pressure drop off engine		1631
Outlet coolant temperature (°C)		100
Maximum Coolant temp without derating (°C)		100
Max coolant temperature, Shutdown (°C)		103
Coolant capacity HT, engine only (L)		254
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)		300
Flow on the LT circuit at 0.7Bars pressure drop off engine		450
Temperature of inlet to LT engine water circuit (°C)		55
Coolant capacity LT, engine only (L)		102
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
Water Pump Type		Vane Wheel pump

Charge air cooling system

	RPM	1500
CAC Heat Rejection (kW)		
CAC Temperature into Engine at 25°C Limit, (°C min / max)		
CAC Temperature into Engine Limit (max at any ambient temperature) (°C)		40
Compressor Discharge Temp at 25°C (°C)		
Compressor Discharge Temp Max (°C)		
Maximum Pressure Drop through CAC (kPa)		
Turbocharger Boost Pressure (kPa)		450