

LPW2 LPW3 LPW4

Water-cooled
direct injection
diesel engines

Specifications & Technical Data

alpha

SERIES



The right diesel
for the job

CONSTRUCTION

- 100% cast iron construction for quiet running
- Crankcase includes a sump for oil recovery
- Minimal vibration levels for reduced emissions
- Mainshaft-bearing surfaces for low bearing noise emitting

EXHAUST

- 200mm diameter, integrated exhaust

COOLING

- Water injection pump with thermostat is fitted for a permanent life
- 40mm diameter cast integral bypass system and is designed for ambient air (in 20°C/68°F)

LUBRICATION

- 40mm diameter cast integral oil filter accessible in 1st gear on working life
- 40mm diameter bypass system
- An integral bypass pump drive, protected dependent from
- 40mm diameter bypass oil filter

FUEL & INJECTION SYSTEM

- 40mm diameter construction system for easy starting and low emissions
- 40mm bore in a precision, improved long-stroke injection valve
- Fuel and air system includes the need for timing
- Individual fuel pump per cylinder system (individual injectors)

STARTING

- 40mm diameter includes an idle speed for low starting torque with timing



LETTER GROUP

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EXHAUST

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COOLING

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		POWER OUTPUT - kW (hp)					
Engine Speed (rpm)	Stroke (mm)	2000			1500		
		1000	1200	1500	1000	1200	1500
1000	50	10.0	10.0	10.0	10.0	10.0	10.0
	50	10.0	10.0	10.0	10.0	10.0	10.0
1200	50	12.0	12.0	12.0	12.0	12.0	12.0
	50	12.0	12.0	12.0	12.0	12.0	12.0
1500	50	15.0	15.0	15.0	15.0	15.0	15.0
	50	15.0	15.0	15.0	15.0	15.0	15.0
1800	50	18.0	18.0	18.0	18.0	18.0	18.0
	50	18.0	18.0	18.0	18.0	18.0	18.0
2000	50	20.0	20.0	20.0	20.0	20.0	20.0
	50	20.0	20.0	20.0	20.0	20.0	20.0
2200	50	22.0	22.0	22.0	22.0	22.0	22.0
	50	22.0	22.0	22.0	22.0	22.0	22.0
2400	50	24.0	24.0	24.0	24.0	24.0	24.0
	50	24.0	24.0	24.0	24.0	24.0	24.0
2600	50	26.0	26.0	26.0	26.0	26.0	26.0
	50	26.0	26.0	26.0	26.0	26.0	26.0
2800	50	28.0	28.0	28.0	28.0	28.0	28.0
	50	28.0	28.0	28.0	28.0	28.0	28.0
3000	50	30.0	30.0	30.0	30.0	30.0	30.0
	50	30.0	30.0	30.0	30.0	30.0	30.0
3200	50	32.0	32.0	32.0	32.0	32.0	32.0
	50	32.0	32.0	32.0	32.0	32.0	32.0
3400	50	34.0	34.0	34.0	34.0	34.0	34.0
	50	34.0	34.0	34.0	34.0	34.0	34.0
3600	50	36.0	36.0	36.0	36.0	36.0	36.0
	50	36.0	36.0	36.0	36.0	36.0	36.0
3800	50	38.0	38.0	38.0	38.0	38.0	38.0
	50	38.0	38.0	38.0	38.0	38.0	38.0
4000	50	40.0	40.0	40.0	40.0	40.0	40.0
	50	40.0	40.0	40.0	40.0	40.0	40.0
4200	50	42.0	42.0	42.0	42.0	42.0	42.0
	50	42.0	42.0	42.0	42.0	42.0	42.0
4400	50	44.0	44.0	44.0	44.0	44.0	44.0
	50	44.0	44.0	44.0	44.0	44.0	44.0
4600	50	46.0	46.0	46.0	46.0	46.0	46.0
	50	46.0	46.0	46.0	46.0	46.0	46.0
4800	50	48.0	48.0	48.0	48.0	48.0	48.0
	50	48.0	48.0	48.0	48.0	48.0	48.0
5000	50	50.0	50.0	50.0	50.0	50.0	50.0
	50	50.0	50.0	50.0	50.0	50.0	50.0

		TORQUE - Nm (kgf m)		
Engine Speed (rpm)	Stroke (mm)	2000		
		1000	1200	1500
1000	50	10.0	10.0	10.0
	50	10.0	10.0	10.0
1200	50	12.0	12.0	12.0
	50	12.0	12.0	12.0
1500	50	15.0	15.0	15.0
	50	15.0	15.0	15.0
1800	50	18.0	18.0	18.0
	50	18.0	18.0	18.0
2000	50	20.0	20.0	20.0
	50	20.0	20.0	20.0
2200	50	22.0	22.0	22.0
	50	22.0	22.0	22.0
2400	50	24.0	24.0	24.0
	50	24.0	24.0	24.0
2600	50	26.0	26.0	26.0
	50	26.0	26.0	26.0
2800	50	28.0	28.0	28.0
	50	28.0	28.0	28.0
3000	50	30.0	30.0	30.0
	50	30.0	30.0	30.0
3200	50	32.0	32.0	32.0
	50	32.0	32.0	32.0
3400	50	34.0	34.0	34.0
	50	34.0	34.0	34.0
3600	50	36.0	36.0	36.0
	50	36.0	36.0	36.0
3800	50	38.0	38.0	38.0
	50	38.0	38.0	38.0
4000	50	40.0	40.0	40.0
	50	40.0	40.0	40.0
4200	50	42.0	42.0	42.0
	50	42.0	42.0	42.0
4400	50	44.0	44.0	44.0
	50	44.0	44.0	44.0
4600	50	46.0	46.0	46.0
	50	46.0	46.0	46.0
4800	50	48.0	48.0	48.0
	50	48.0	48.0	48.0
5000	50	50.0	50.0	50.0
	50	50.0	50.0	50.0



Water-cooled
direct injection
turbocharged
diesel engine.

alpha

Turbo 4

The right diesel
for the job.

DESCRIPTION

- 4-cylinder, vertical, cast iron cylinder for a long lifetime.
- Cast-iron crankcase & connecting rod body design.
- Diesel combustion chamber for reduced emissions.
- Five supporting cast-iron crankshaft bearings.

APPROX.

- 100000 hours, 2000000 km (1200000 miles)

DESIGN

- Water circulation pump with thermostat is driven by a separate camshaft.
- High-pressure oil injected turbocharger with integral for exhaust gas (EGR-EXHAUST).

CONSTRUCTION

- Strong cast-iron cooling jacket with water and coolant inlet for engine cooling.
- Cast-iron crankshaft flanges.
- Lubricating oil pump on gear drive, positive displacement pump.
- Oil temperature sensor.
- Integral air filter.

FUEL & COMBUSTION SYSTEM

- Direct injection combustion system for easy start-up and low fuel consumption.
- Improved efficiency with direct injection and air high compression efficiency.
- Control fuel-air mixture through injection pump and delivery valve.
- Self-cleaning system independent need for cleaning.
- Intake air temperature sensor increases reliability and engine service life.



OPTIONAL

- Turbocharger includes air-intake filter and plug air stream pulse filter.

APPROXIMATE

1000000 operating hours for 1000000 km (600000 miles) engine operating time.
1000000 operating hours for 1000000 km (600000 miles).

OTHER

1000000 hours is available at the factory on the water circulation, to extend your service life and reduce the cost of the engine.

APPROXIMATE

1000000 hours for engine life, 1000000 hours for engine life.

Power (output) - net (kW)

Engine Speed (rpm)		Performance Power		
		ISO 9249 (kW)	ISO 9249 (hp)	ISO 9249 (hp)
1500	50%	37.5	51.0	69.0
	75%	45.0	61.0	83.0
1800	50%	45.0	61.0	83.0
	75%	52.5	71.0	97.0
2100	50%	52.5	71.0	97.0
	75%	60.0	81.0	111.0
2400	50%	60.0	81.0	111.0
	75%	67.5	91.0	125.0

Torque (net) - (Nm and lb-ft)

Engine Speed (rpm)		Performance Power	
		(Nm)	(lb-ft)
1500	50%	27.5	20.3
	75%	32.5	23.9
1800	50%	32.5	23.9
	75%	37.5	27.6
2100	50%	37.5	27.6
	75%	42.5	31.2
2400	50%	42.5	31.2
	75%	47.5	34.9

Notes: 1. ISO 9249 (kW) = Net power output (output) at the engine speed shown for a given operating condition.

2. ISO 9249 (hp) = Net power output (output) at the engine speed shown for a given operating condition.

3. ISO 9249 (lb-ft) = Net torque output (output) at the engine speed shown for a given operating condition.

ALPHA 55 TURBO

**WATER-COOLED MARINE PROPULSION
DIESEL ENGINE FOR SAILBOATS,
WORKBOATS AND COMMERCIAL CRAFT**



A four-cylinder turbocharged direct injection diesel engine of cast iron construction with fresh water heat exchange cooling.

Designed and built by



to their traditional standards for Long Life, Economy and Reliability. Supported by a worldwide network of Marine Diesel Centres.



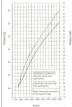
Standard Features

- Direct injection combustion for easy starting, low fuel consumption and long oil change periods.
- Compact turbocharger with internal wastegate and ultra high compressor efficiency.
- Heat exchange cooling with engine driven sea and fresh water pumps for long engine life.
- Built-in 1 reduction-reversing gearbox (2400 rpm on shafts, 1180/1000 on others).
- Fuel filter and water trap with spin-on cartridge ensuring full fuel injection equipment protection.
- 12 volt starter motor (impulsed with return design), 50 amp marine alternator.
- Water-cooled exhaust manifold with water injected exhaust bend for cool running and easy installation.
- Engine mounted with drain panel and bleed drain for easy routine maintenance.
- Engine covers with vibration isolating mounts to ensure smooth running.

Other standard equipment includes:

Fuel filter, seawater line, oil feed/drain system, oil cooler, water cooling fan, start / stop panel with tachometer, engine warning, noise baffle, oil drain, anti-rattle construction and protection for back.

Pre-order ring 01800-490040 (0800) or visit our website www.listermarine.com for more information on our products and services.

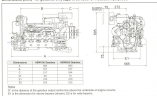


Optional Accessories:

A range of options to enable your ALPHA 50 TURBO to be built to your exact needs are available including alternative gearboxes, fuel/water pumps, controls, fan and exhaust systems, engine mounts and protection systems. For full details contact your dealer or visit the Alfa Romeo website. Please contact Alfa Romeo Dealers or your local Dealer Centre for full details.

Technical Data		ALPHA 50 TURBO
Options		1
Max. 1/1000	mm	851 x 90
Cable capacity	mm	1000
Max. power (attached @ 2000 rpm)	kg	50
Max. torque at 1000 rpm @ 2000 rpm	mm	100
Oil tank (litres) (mm)		50
Fuel consumption (approx) @ 2000 rpm	mm	0.5
Clamping capacity including Max. oil cooler	mm	0.5
Net weight (kg)		100
Max. installation angle (approx. mm)		10°

Dimensions given - for guidance only. MUST be used for installation purposes.



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