

**Rating type A1: 74 kW (100 HP) @ 2800 rpm****Rating type B: 66.5 kW (90 HP) @ 2800 rpm****Rating type D: 63 kW (85 HP) @ 2800 rpm****SPECIFICATIONS**

Thermodynamic cycle		Diesel 4 stroke
Air Feeding		NA
Cylinders arrangement		4L
Bore x Stroke	millimeters	104 x 132
Total displacement	liters	4.5
Valves per cylinder	number	2
Cooling System		liquid
Direction of Rotation (viewed facing flywheel)		CCW
Engine management		mechanical
Injection System		MPI

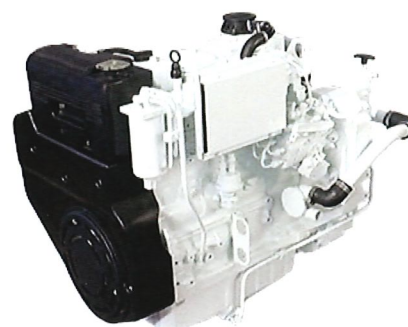
**STANDARD CONFIGURATION**

Flywheel housing	type	SAE 3
Flywheel size	inch	10"
Air filter		left side
Turbocharger		Naturally Aspirated (NA)
Heat exchanger		tube type
Exhaust gas water mixer - Exhaust cooled elbow		-
Water charge tank		included
Fuel filter	number	1
Fuel prefilter		included (loose)
Fuel pump		included
Oil filter	number	1
Oil sump		cast iron
Oil vapours blowby circuit		on valve cover
Oil heat exchanger		built in the crankcase
Oil filler		by cylinder head cover
Starter		12V - 3kW
Alternator		12 V - 90 A with W contact
Engine stop device		electrical excitation
Wiring harness		with negative to ground connection
Painting color		white "ICE"

**WEIGHT AND DIMENSIONS**

Dimensions (L x W x H)	mm	811 x 700 x 836
Dry Weight	Kg	450

DIMENSIONS CAN BE CHANGED ACCORDING TO ENGINE OPTIONS



IMAGES SHOWN ARE FOR ILLUSTRATION PURPOSE ONLY

**ELECTRICAL SYSTEM**

Voltage	V	12
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**NOT INCLUDED IN STANDARD CONFIGURATION**

Battery - minimum capacity recommended	Ah	180 Ah
Battery - minimum cold cranking capacity recommended	Ah	800 Ah

**LEGEND**

Arrangement	Air Handling	Turbocharger	Injection System	Exhaust System
L (in line)	TC (Turbocharged)	WG (Wastegate)	M (Mechanical)	EGR (Exhaust Gas Recirculation)
V (90° "V" configuration)	NA (Naturally Aspirated)	VGT (Variable Geometry Turbocharger)	CR (Common Rail)	SCR (Selective Catalytic Reduction)
	TCA (Turbocharged with aftercooler)	TST (Twin Stage Turbocharger)	EUI (Electronic Unit Injector)	
			MPI (Multi Point Injection)	

**LEESGROUP**  
 MARINE & INDUSTRIAL POWER | GENERATORS

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A1 High Performance Crafts. Full throttle operation restricted within 10% of total use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 300 hours per year.  
 A2/B1 Pleasure Commercial Vessels. Full throttle operation restricted within 10% of total use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 1000 hours per year.  
 B Light Duty: Full throttle operation restricted within 10% of use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 1500 hours per year.  
 C Medium Duty: Full throttle operation < 25% of use period. Cruising speed at engine rpm <90% of rated speed setting - Maximum usage 3000 hours per year.  
 D Heavy Duty

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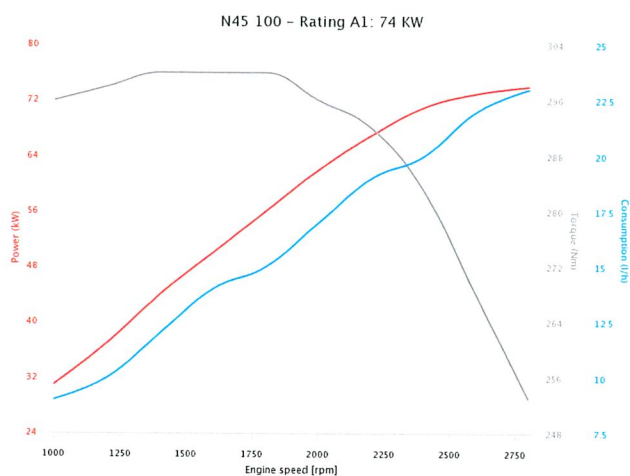
## RATING TYPE

## A1

Maximum power [1]	kW (HP)	74 (100)
At speed	rpm	2800
Maximum no load governed speed at max rating	rpm	3100
Minimum idling speed	rpm	650
Mean piston speed at rated speed	m/s	12.3
BMEP at max power	bar	8.6
Specific fuel consumption (best value)	g/kWh @ rpm	230 @ 1800
IMO Marpol Tier 2 (IMO Annex VI Technical Code 2008)		-
RCD Stage 2 (2013/53/EC)		-
IWV Stage V (EU 2016/1628)		-
EPA Tier 3 Commercial		-
EPA Tier 3 Recreational		-
China GB I (GB15097-2016)		-
China GB II (GB15097-2016)		-
Oil consumption at max rating	(% of fuel cons.)	= 0.1
Minimum starting temperature without auxiliaries	°C	-10°
Oil and oil filter maintenance interval for replacement	hours	600

\* Net Power at flywheel according to ISO 8665, after 50 hours running, Fuel Diesel EN 590. Power tolerance 5%.

## POWER & TORQUE



### LEGEND

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