Marine Commercial **N45**

Rating type B: 66.5 kW (90 HP) @ 2800 rpm

63 kW (85 HP) @ 2800 rpm Rating type C:

Rating type D: 63 kW (85 HP) @ 2800 rpm

SPECIFICATIONS

Thermodynamic cycle		Diesel 4 stroke
Air handling		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

WEIGHT AND DIMENSIONS

Dimensions	LxWxH (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

/oltage	V	12

STANDARD CONFIGURATION

Flywheel housing	type	SAE 3
Flywheel size	inch	10"
Air filter		left side
Turbocharger		Naturally Aspirated (NA)
Heat excharger		tube type
Exhaust gas water mixer - Exhaus	t 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 blow-by 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"

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

- 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 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.
- 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.
- 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.

Heavy Duty

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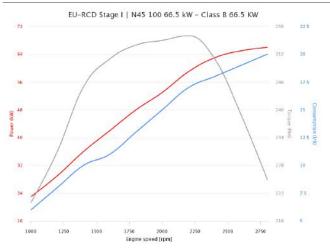


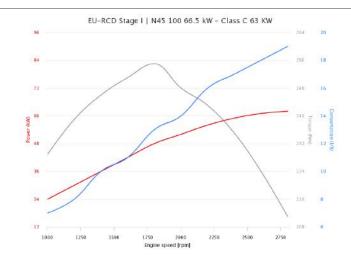


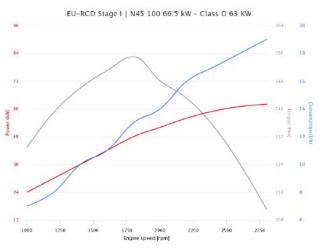
RATING TYPE		В	С	D
Maximum power [*]	kW (HP)	66.5 (90)	63 (85)	63 (85)
At speed	rpm	2800	2800	2800
Maximum no load governed speed at max rating	rpm	3100	3100	3100
Minimu idling speed	rpm	650	650	650
Mean piston speed at rated speed	m/s	12.3	12.3	12.3
BMEP at max power	bar	7.2	7.2	7.2
Specific fuel consumption at full load (best value)	g/kWh @ rpm	230 @ 1800	230 @ 1800	230 @ 1800
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 3046/1, after 50 hours running, Fuel Diesel EN 590. Power tolerance 5%.

POWER & TORQUE







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

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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. 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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