MARINE **Commercial N40**

Rating type B1: Rating type B: Rating type C: Rating type C: 169 kW (230 HP) @ 2800 rpm 147 kW (200 HP) @ 2800 rpm 110 kW (150 HP) @ 2800 rpm 74 kW (100 HP) @ 2800 rpm

SPECIFICATIONS

Thermodynamic cycle		Diesel 4 stroke
Air Feeding		TCA
Cylinders arrangement		4L
Bore x Stroke	millimeters	102 x 120
Total displacement	liters	3.9
Valves per cylinder	number	4
Cooling System		liquid
Direction of Rotation (viewed facing flywheel)		CCW
Engine management		by EDC (Electronic Diesel Control)
Injection System		CR

WEIGHT AND DIMENSIONS

Dimensions (L x W x H)	mm	850 x 780 x 785
Dry Weight	Kg	490

DIMENSIONS CAN BE CHANGED ACCORDING TO ENGINE OPTIONS



IMAGES SHOWN ARE FOR ILLUSTRATION PURPOSE ONLY

STANDARD CONFIGURATION

Flywheel housing

	* *	
Flywheel size	inch	11" ½
Air filter		rear side
Turbocharger	Fixed Geometry (water	cooled) Turbo with Aftercooler (TCA)
Heat excharger		tube type
Exhaust gas water mixer - Exhaust	cooled elbow	
Water charge tank		included
Fuel filter		1
Fuel prefilter		included (loose)
Fuel pump		included
Oil filter	number	1
Oil sump		aluminium
Oil vapours blow-by circuit		rear
Oil heat exchanger		built in the crankcase
Oil filler		by cylinder head cover
Starter		12V - 3kW
Alternator		12 V - 90 A
Engine stop device		by electronic central unit
Wiring harness		with negative to ground connection
Painting color		white "ICE"

ELECTRICAL SYSTEM

/oitage	V	12

NOT INCLUDED IN STANDARD CONFIGURATION

Battery - minimum capacity recommended	Ah	120 Ah
Battery - minimum cold cranking capacity recommended	Ah	900 Ah

LEGEND

SAE 3

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 Turbocharge)	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/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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SPECIFICATION SUBJECT TO CHANGE WITHOUT NOTICE

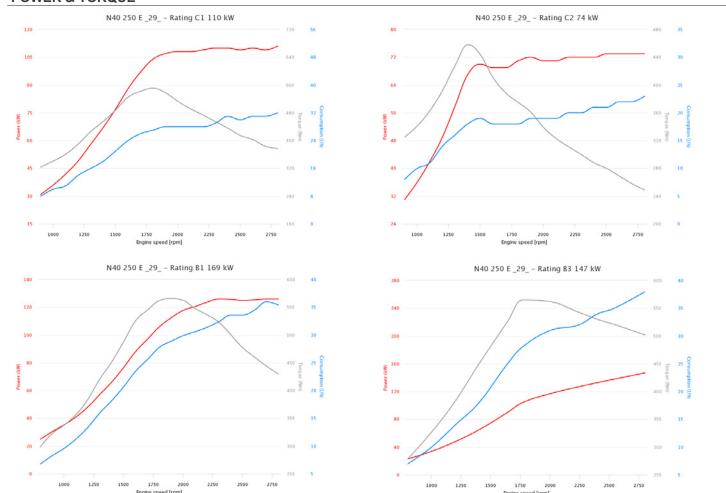






RATING TYPE	B1	В	С	С
Maximum power [*] kW (HP)	169 (230)	147 (200)	110 (150)	74 (100)
At speed rpm	2800	2800	2800	2800
Maximum no load governed speed at max rating rpm	3000	3000	3000	3000
Minimum idling speed rpm	700	700	700	700
Mean piston speed at rated speed m/s	11.2	11.2	11.2	11.2
BMEP at max power bar	18.7	18.3	15.6	18.3
Specific fuel consumption (best value) g/kWh @ rpm	235@ 2400	216.7 @ 2400	241 @ 2400	296 @ 2400
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	< 0.1	< 0.1	< 0.1
Minimum starting temperature without auxiliaries ${}^{\circ}\text{C}$	-10°	-10°	-10°	-10°
Oil and oil filter maintenance interval for replacement hours * Net Power at flywheel according to ISO 8665, after 50 hours running, Fuel Diese	600 I EN 590. Power tolerance 5%.	600	600	600

POWER & TORQUE





Air Handling TC (Turbocharged) NA (Naturally Aspirated) TCA (Turbocharged with aftercooler)

Turbocharger WG (Wastegate) VGT (Variable Geometry Turbocharger) TST (Twin Stage Turbocharge)

LEGEND

Injection System M (Mechanical) CR (Common Rail) EUI (Electronic Unit Injector) MPI (Multi Point Injection)

Exhaust System EGR (Exhaust Gas Recirculation) SCR (Selective Catalytic Reduction)

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D Heavy Duty