# MARINE **Commercial N40**

Rating type C: Rating type C: Rating type C: Rating type C: 125 kW (170 HP) @ 2800 rpm 110 kW (150 HP) @ 2800 rpm 74 kW (100 HP) @ 2800 rpm 63 kW (85 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
•	IIICII	
Air filter		rear side
Turbocharger	Fixed Geometry (water	cooled) Turbo with Aftercooler (TAA)
Heat excharger		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		aluminium
Oil vapours blow-by circuit		rear
Oil heat exchanger		built in the crankcase
Oil filler		n° 1
Starter		12 V - 3 kW
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**

voitage	V	12 V

# NOT INCLUDED IN STANDARD CONFIGURATION

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

## 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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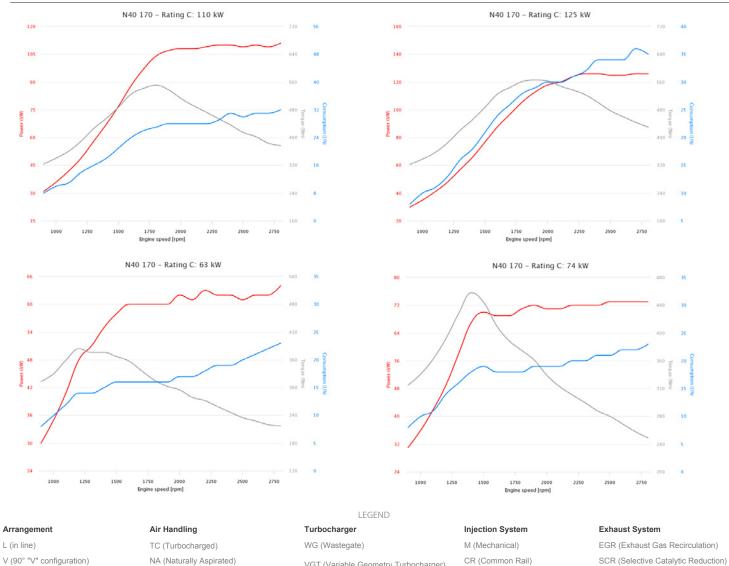






At speed rpm 2800 2800 2800 2800 2800 2800 2800 280	RATING TYPE		C	C	С	C
Maximum no load governed speed at max rating         rpm         3000         3000         3000         3000           Minimum idling speed         rpm         700         700         700         700           Mean piston speed at rated speed         m/s         11.2         11.2         11.2         11.2           BMEP at max power         bar         V         V         263         297         305           IMO Marpol Tier 2 (IMO Annex VI Technical Code 2008)         F         28,6         263         297         305           IMO Stage 2 (2013/53/EC)         -         -         -         -         -         -           RCD Stage 2 (2013/53/EC)         -         -         -         -         -         -         -           RCD Stage V (EU 2016/1628)         -	Maximum power [*]	kW (HP)	125 (170)	110 (150)	74 (100)	63 (85)
Minimum idling speed   rpm	At speed	rpm	2800	2800	2800	2800
Mean piston speed at rated speed m/s 11.2 11.2 11.2 11.2 11.2 11.2 11.2 11.	Maximum no load governed speed at max rating	rpm	3000	3000	3000	3000
BMEP at max power         bar           Specific fuel consumption (best value)         g/kWh @ rpm         228,6         263         297         305           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)         -	Minimum idling speed	rpm	700	700	700	700
Specific fuel consumption (best value)         g/kWh @ rpm         228,6         263         297         305           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)         -         -         -         -         -         -         -           China GB II (GB15097-2016)         - </td <td>Mean piston speed at rated speed</td> <td>m/s</td> <td>11.2</td> <td>11.2</td> <td>11.2</td> <td>11.2</td>	Mean piston speed at rated speed	m/s	11.2	11.2	11.2	11.2
MO Marpol Tier 2 (IMO Annex VI Technical Code 2008)	BMEP at max power	bar				
RCD Stage 2 (2013/53/EC)  FROD Stage 2 (2015/53/EC)  FROD Stage 2 (2013/53/EC)  FROD Stage 2 (2013/53/	Specific fuel consumption (best value)	g/kWh @ rpm	228,6	263	297	305
IWV Stage V (EU 2016/1628)         √         2         3         2         3         3         3<	IMO Marpol Tier 2 (IMO Annex VI Technical Code 2008	)	-	-	-	-
EPA Tier 3 Commercial         -         -         -         -         -           EPA Tier 3 Recreational         -         -         -         -         -         -         -           China GB I (GB15097-2016)         -	RCD Stage 2 (2013/53/EC)		-	-	-	-
EPA Tier 3 Recreational         -	IWV Stage V (EU 2016/1628)		✓	✓	✓	✓
China GB I (GB15097-2016)       -<	EPA Tier 3 Commercial		-	-	-	-
China GB II (GB15097-2016)         - </td <td>EPA Tier 3 Recreational</td> <td></td> <td>-</td> <td>-</td> <td>-</td> <td>-</td>	EPA Tier 3 Recreational		-	-	-	-
Oil consumption at max rating (% of fuel cons.) < 0.1 < 0.1 < 0.1 < 0.1  Minimum starting temperature without auxiliaries °C -10° -10° -10° -10° -10°  Oil and oil filter maintenance interval for replacement hours 600 600 600 600	China GB I (GB15097-2016)		-	-	-	-
Minimum starting temperature without auxiliaries °C -10° -10° -10° -10° -10°  Oil and oil filter maintenance interval for replacement hours 600 600 600 600	China GB II (GB15097-2016)		-	-	-	-
Oil and oil filter maintenance interval for replacement hours 600 600 600 600	Oil consumption at max rating	(% of fuel cons.)	< 0.1	< 0.1	< 0.1	< 0.1
·	Minimum starting temperature without auxiliaries	°C	-10°	-10°	-10°	-10°
	Oil and oil filter maintenance interval for replacement * Net Power at flywheel according to ISO 8665, after 50			600	600	600

# **POWER & TORQUE**



L (in line)

V (90° "V" configuration)

NA (Naturally Aspirated)

TCA (Turbocharged with aftercooler)

VGT (Variable Geometry Turbocharger)

TST (Twin Stage Turbocharge)

CR (Common Rail)

EUI (Electronic Unit Injector)

MPI (Multi Point Injection)

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