

# CURSOR 770

C13 ENT M77

**FOR MARINE APPLICATIONS**  
6 CYLINDERS IN LINE - DIESEL CYCLE  
567 kW (770 CV) @ 2300 rpm (A1)  
515 kW (700 CV) @ 2300 rpm (A2)  
442 kW (600 CV) @ 2300 rpm (B)  
397 kW (540 CV) @ 2300 rpm (C)



T E C H N O L O G I C A L E X C E L L E N C E



a brand of



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Thermodynamic cycle		Diesel 4 stroke - D.I.
Air intake		TAA
Arrangement		6L
Bore x Stroke	mm	135 X 150
Total displacement	l	12.88
Valves per cylinder		4
Cooling		liquid
Direction of rotation (viewed facing flywheel)		CCW
Compression ratio		16.5 to 1
Rotation mass moment of inertia (without flywheel)	kgm <sup>2</sup>	1.32
Standard flywheel inertia	kgm <sup>2</sup>	1.44

### Air induction

Max suggested intake restriction with clean air filter	kPa(bar)	3.5 (0.035)
Max allowable restriction with dirty air filter	kPa(bar)	6.0 (0.060)
Air requirement for combustion at 100% load/rated speed (comb. + ventilation)	kg/h (m <sup>3</sup> /h)	14,000 (12,000)
Turbocharging pressure at full load/rated speed	kPa(bar)	220 (2.2)
Turbocharging air max temperature (engine inlet)	°C	45

### Exhaust system

Max allowable backpressure	kPa(bar)	5.0 (0.050)
Max exhaust temperature at maximum power	°C	750
Exhaust flow at max output	kg/h	3080

### Lubrication system

Minimum oil pressure at idle (at 100°C)	kPa(bar)	200 (2.0)
Max oil temperature at full load/rated speed	°C	120
Engine angularity limits continuous operation: max front up and front down	0/360	20°
max left hand and right hand	0/360	22° 30'
Total system capacity including pipes, filters etc.	liters	42

### Sea water cooling system (open circuit)

Max intake restriction	kPa(bar)	20 (0.2)
Sea water pump flow	m <sup>3</sup> /h	32
Heat rejected (total) at max power	kJ/s(kcal/h)	527 (456,000)
Sacrificial zinc anodes	n°	2

### Cooling system (closed circuit)

Coolant capacity (engine only)	liters	40
Water pump flow at rated speed	m <sup>3</sup> /h	41
Thermostat (modulating range)	°C	70 to 85
Cooling liquid max temperature	°C	105
Min/max inner pressure in the cooling circuit (for keel cooling)	kPa(bar)	-
External cooling system max pressure drop (for keel cooling)	kPa(bar)	-

### Fuel system

Injection system		Electronic Unit Injection (E.U.I.)
Gas oil max intake restriction	kPa(bar)	30 (0.3)
Gas oil max intake temperature	°C	60

### Electrical system

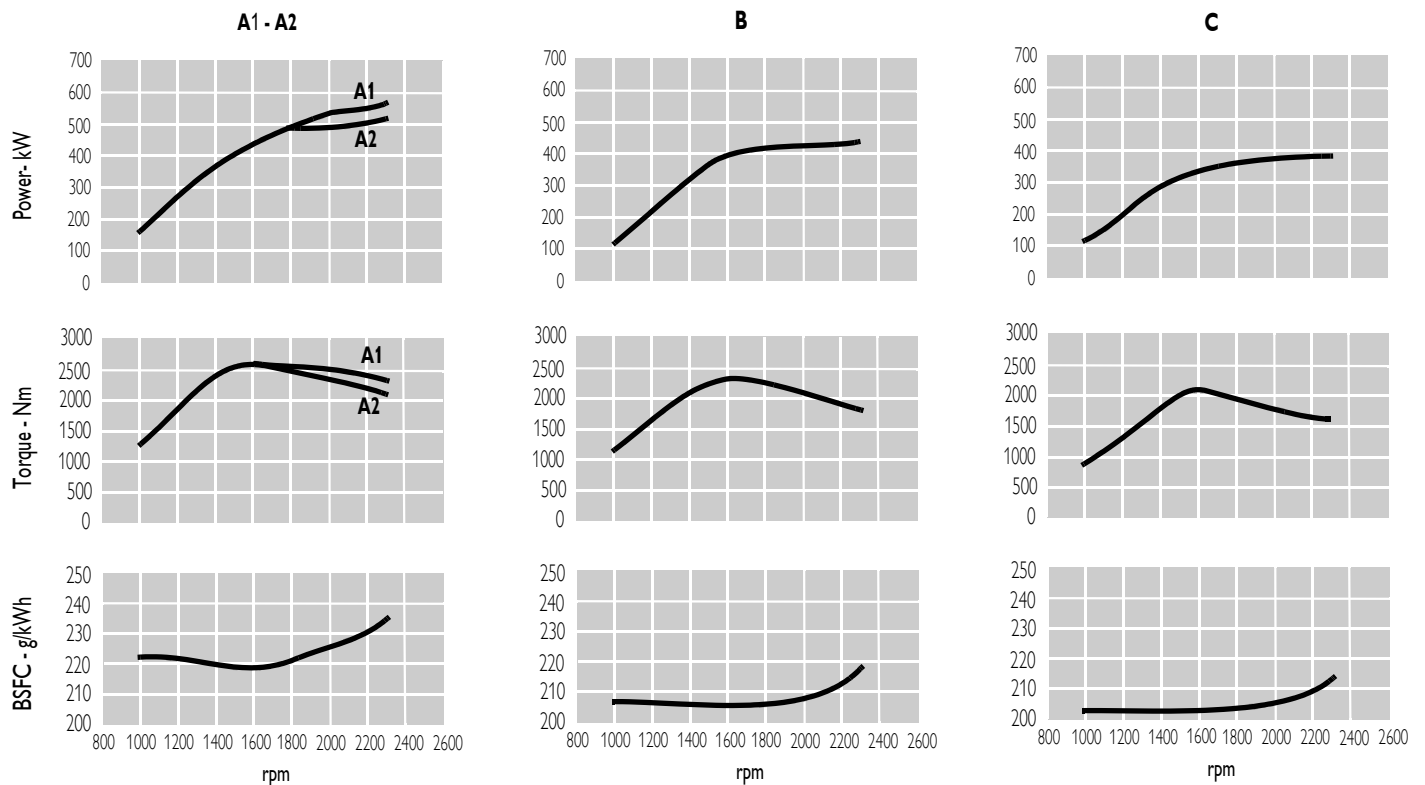
Voltage	V	24
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Rating type		A1	A2	B	C
Maximum power *	kW(CV)	567 (770)	515 (700)	442 (600)	397 (540)
At speed	rpm	2300	2300	2300	2300
Maximum no load governed speed at max rating	rpm	2520	2520	2520	2520
Minimum idling speed	rpm	550	550	550	550
Mean piston speed at rated speed	m/s	11.5	11.5	11.5	11.5
BMEP at max torque	kg/cm <sup>2</sup>	26.6	26.5	23.7	20.8
Specific fuel consumption at full load (best value)	g/kWh @ rpm	201 @ 1400			
Oil consumption at max rating	(% of fuel consumption)	0.2			
Minimum starting temperature without auxiliaries	°C	- 15			
Oil and oil filter maintenance interval for replacement	hours	600			
Dry weight (without marine gear)	kg	1380			

\* **Net Power** at flywheel according to ISO 3046/1, after 50 hours running, fuel Diesel EN 590. Power tolerance 5%

**Test conditions** : ISO 3046/1, 25 °C air temperature, 100 kPa atmospheric pressure, 30 % relative humidity.

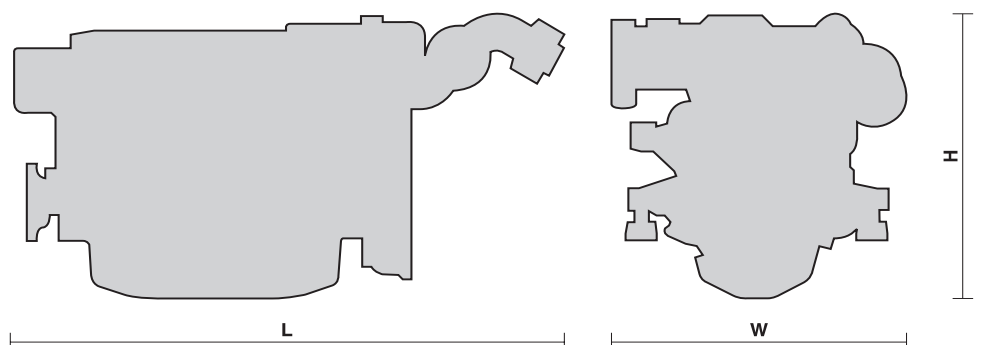


**A1**= High performance crafts.  
**A2**= Pleasure/commercial vessels.  
 Full throttle operation restricted within 10% of total use period.  
 Cruising speed at engine rpm < 90% of rated speed setting - Maximum usagee :  
 - 300 hours per year (A1 service)  
 - 1000 hours per year (A2 service).

**B** = Light duty.  
 Full throttle operation restricted within 10% of total use period.  
 Cruising speed at engine rpm < 90% of rated speed setting - Maximum usagee 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 usagee 3000 hours per year.

L = 2015 mm  
 W = 1064 mm  
 H = 1039 mm



## C13 ENT M77 FOR MARINE APPLICATIONS

### Standard configuration

Flywheel housing	SAE	1
Flywheel size	inch	14
Air filter		rear side
Turbocharger		2, water cooled
Heat exchanger		tube type
Exhaust cooled elbow		-
Water charge tank		included
Fuel filter	n°	1
Fuel prefilter		1 (loose)
Fuel pump		gear driven
Oil filter	n°	2
Oil sump		aluminium
Oil vapours blow-by circuit		included
Oil heat exchanger		included
Oil filler		on timing cover
Starting motor		24 V - 5.5 kW
Alternator		28 V - 90 A
Engine stop device		by electronic central unit
Wiring harness		with EDC (Electronic Diesel Control)
Painting	colour	white "ICE"

### Not included in the standard configuration

Battery - minimum capacity recommended	2 x 180 Ah
Battery - minimum cold cranking capacity recommended	1200 A

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### HEAD OFFICE AND BRANCHES

<p><b>IVECO S.p.A.</b> Iveco Motors Via Puglia, 15 - 10156 Torino Tel. +39 (011) 0076245 - Fax +39 (011) 0076275 www.ivecomotors.com</p>	<p><b>Italy</b></p>	<p><b>IVECO S.p.A.</b> Iveco Motors Viale dell'Industria, 15/17 - 20010 Pregnana Milanese - Milano Tel. +39 (02) 935101 - Fax +39 (02) 93590029</p>	<p><b>Italy</b></p>
<p><b>IVECO FRANCE S.A.</b> Iveco Motors 50 Rue Ampère - B.P. 103 - 69685 Chassieu Cedex Tel. +33 (04) 72472222 - Fax +33 (04) 78905990</p>	<p><b>France</b></p>	<p><b>IVECO S.p.A.</b> Branch Office India Second Floor - 50, Okhla Industrial Estate - Phase III 110020 New Delhi Tel. +91 11 51001417 - Fax +91 11 26931271</p>	<p><b>India</b></p>
<p><b>IVECO MAGIRUS A.G.</b> Iveco Motors Heiner Fleischmann-Strasse, 9 - 74172 Neckarsulm Tel. +49 (07132) 97690 - Fax +49 (07132) 976935</p>	<p><b>Germany</b></p>	<p><b>IVECO FIAT</b> 10/F Jinling Hotel World Trade Center 2 Hanzhong Road - 210005 Nanjing Tel. +86 25 84710981 - Fax +86 25 84701105</p>	<p><b>China</b></p>
<p><b>IVECO U.K. Ltd</b> Iveco Motors Road One - Industrial Estate CW7 3QP Winsford Tel. +44 (01606) 541027 - Fax +44 (01606) 541124</p>	<p><b>Great Britain</b></p>	<p><b>IVECO LATIN AMERICA Ltda.</b> Iveco Motors Rua Alameda da Serra, 222 Vale do Sereno - 34000 - 000 Nova Lima (MG) Tel. +55 31 3286 3732/33/34 - Fax +55 31 3286 3735</p>	<p><b>Brazil</b></p>
<p><b>IVECO SWEDEN A.B.</b> Iveco Motors Transportgatan, 59 - 42246 Hisings Backa Tel. +46 (31) 492450 - Fax +46 (31) 492457</p>	<p><b>Sweden</b></p>	<p><b>IVECO Motors of N.A.</b> 245 E. North Avenue Carol Stream, IL 60188 - 2021 USA Tel. +1 630 260 4226 - Fax +1 630 260 4267</p>	<p><b>North America</b></p>

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