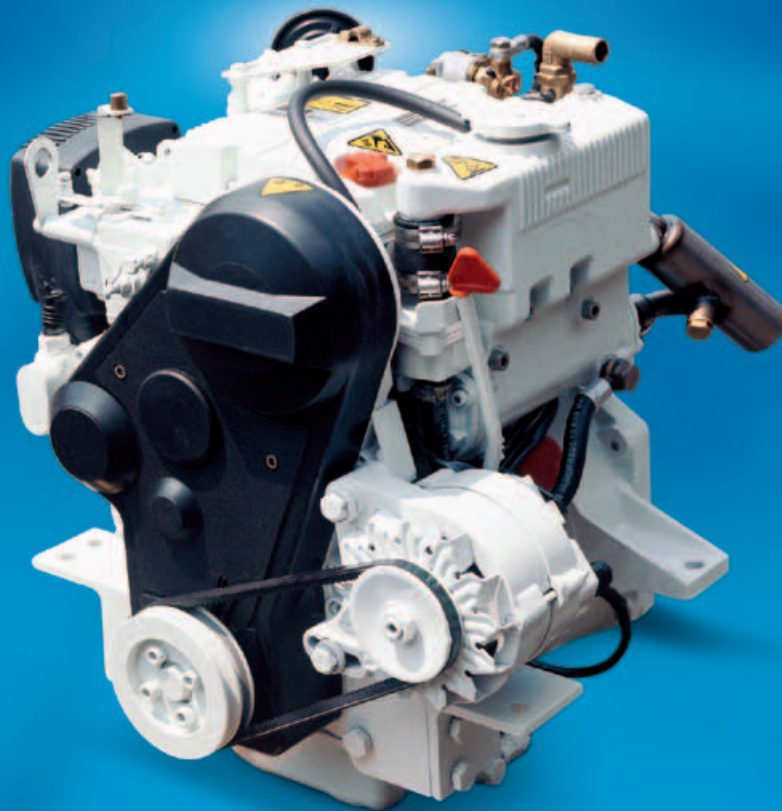


4021 M20

FOR MARINE APPLICATIONS
2 CYLINDERS IN LINE - DIESEL CYCLE
14.7 kW (20 CV) @ 3600 rpm (A1)



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

**IVECO
MOTORS**

 **FPT**
POWERTRAIN TECHNOLOGIES

4021 M20 FOR MARINE APPLICATIONS

Thermodynamic cycle		Diesel 4 stroke - D.I.
Air intake		NA
Arrangement		2L
Bore x Stroke	mm	75 X 77.6
Total displacement	l	0.686
Valves per cylinder		2
Cooling		liquid
Direction of rotation (viewed facing flywheel)		CCW
Compression ratio		22.8 : 1
Rotation mass moment of inertia (without flywheel)	kgm ²	-
Standard flywheel inertia	kgm ²	0.064

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)	-
Air requirement for combustion at 100% load/rated speed (comb. + ventilation)	kg/h (m ³ /h)	87 (74)
Turbocharging pressure at full load/rated speed	kPa(bar)	-
Turbocharging air max temperature (engine inlet)	°C	-

Exhaust system

Max allowable backpressure	kPa(bar)	13.3 (0.13)
Max exhaust temperature at maximum power	°C	560
Exhaust flow at max output	kg/h	93

Lubrication system

Minimum oil pressure at idle (at 100°C)	kPa(bar)	70 (0.7)
Max oil temperature at full load/rated speed	°C	130
Engine angularity limits continuous operation: max front up and front down	0/360	25
max left hand and right hand	0/360	25
Total system capacity including pipes, filters etc.	liters	1.7

Sea water cooling system (open circuit)

Max intake restriction	kPa(bar)	50 (0.5)
Sea water pump flow	m ³ /h	1.5
Heat rejected (total) at max power	kJ/s(kcal/h)	12.5 (10,700)
Sacrificial zinc anodes	n°	1

Cooling system (closed circuit)

Coolant capacity (engine only)	liters	2
Water pump flow at rated speed	m ³ /h	2.1
Thermostat (modulating range)	°C	80 ÷ 95
Cooling liquid max temperature	°C	88
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		Unit Injection
Gas oil max intake restriction	kPa(bar)	-
Gas oil max intake temperature	°C	60
Max fuel backpressure to tank	kPa(bar)	20 (0.2)

Electrical system

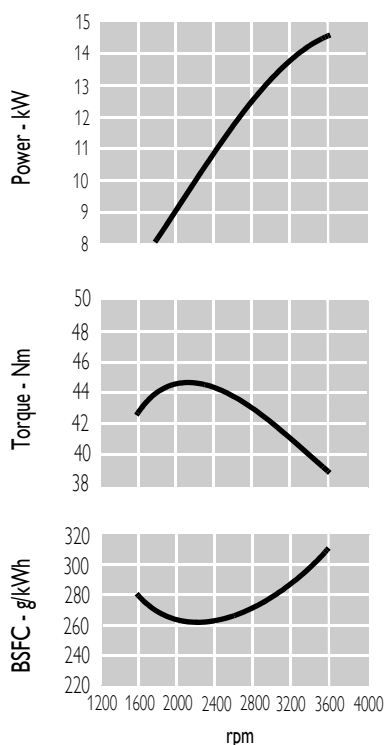
Voltage	V	12
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4021 M20 FOR MARINE APPLICATIONS

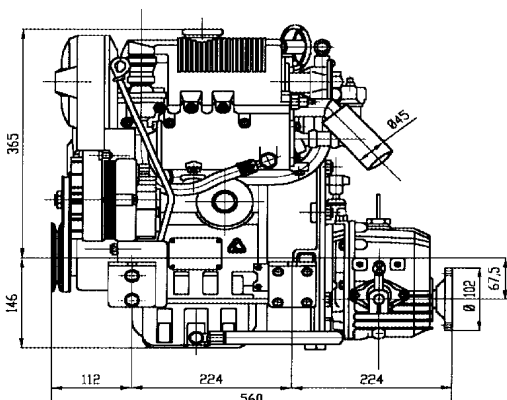
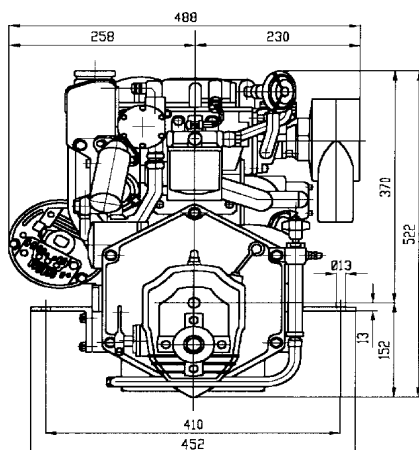
Rating type		A1
Maximum power *	kW(CV)	14.7 (20)
At speed	rpm	3600
Maximum no load governed speed at max rating	rpm	3850
Minimum idling speed	rpm	850 ± 50
Mean piston speed at rated speed	m/s	9.3
BMEP at max torque	kg/cm ²	8.06
Available certifications		-
Specific fuel consumption at full load (best value)	g/kWh @ rpm	260 @ 2400
Oil consumption at max rating	(% of fuel consumption)	≤ 0.2
Minimum starting temperature without auxiliaries	°C	- 20
Oil and oil filter maintenance interval for replacement	hours	250 oil / 125 filters
Dry weight (without marine gear)	kg	99

* **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



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.



4021 M20 FOR MARINE APPLICATIONS

Standard configuration

Flywheel housing	SAE	B
Flywheel size	inch	alignment, flexible coupling Ø 121.5 mm
Air filter		dry
Turbocharger		-
Heat exchanger		tube type
Exhaust cooled elbow		stainless steel Ø 45 mm
Water charge tank		included
Fuel filter	n°	1 - rear side
Fuel prefilter		-
Fuel pump		included
Oil filter	n°	1 - left side
Oil sump		pressed steel with corrosion inhibiting treatment
Oil vapours blow-by circuit		yes
Oil heat exchanger		-
Oil filler		on timing cover frontward
Starting motor		12 V - 1.1 kW
Alternator		12 V - 65 A
Engine stop device		electrical excitation
Wiring harness		wiring harness and electrical panel
Painting	colour	white "ICE"

Not included in the standard configuration

Battery - minimum capacity recommended		55 Ah
Battery - minimum cold cranking capacity recommended		-

IVECO MOTORS OFFERS THE WIDEST AVAILABILITY OF ENGINE BUILD OPTIONS TO CUSTOMER SPECIFIC REQUIREMENTS WITHIN THE ENGINE SUPPLY. TO FIND OUT MORE ABOUT THE CONFIGURATIONS AND ACCESSORIES WHICH ARE AVAILABLE, CONTACT THE IVECO MOTORS SALES NETWORK.

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