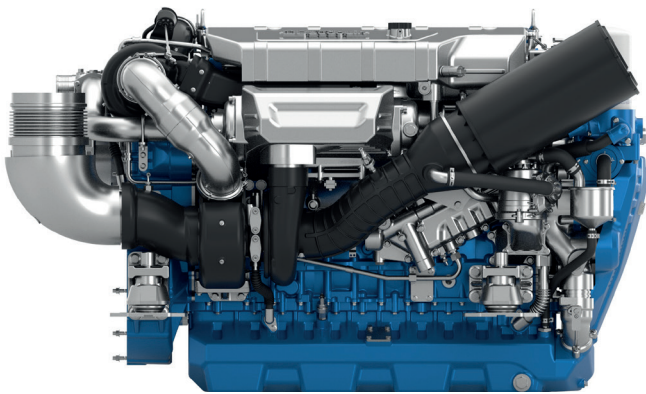


6F21

Propulsion Diesel Engine



Number of cylinders	4 in line
Bore and stroke (mm)	105 X 130
Total displacement (L)	4.5
Compression ratio	
Engine rotation	counter clockwise
Idle speed	700
Flywheel	SAE 3
Flywheel housing	SAE 11.5"

Customer benefits

Most advanced Common Rail technology and high-end injection system (2200 bar), key to achieve strict emissions regulations and competitive performances.

Highly efficient turbochargers optimized to operate with high performance keeping fuel consumption under control.

Individual cylinder heads allowing easy maintenance.

Key components made of highly reliable materials.

Rated power - Fuel consumption

Duty	kW	HP	RPM	Fuel consumption			IMO	EPA
				Optimum value	Rated power			
				g/kWh	g/kWh	l/h		
P3	599	815	2300	202	220	155	II	-
P4	662	900	2300	201	223	174	II	-
P5	735	1000	2300	186	228	194	II	-

	P3	P4	P5
Application	Intermittent	Light	High performance
Engine load variations	Important	Very important	Important
Average Engine load factor	60%	60%	60%
Annual working time	1000-3000h	less than 1500h	500h
Time at full load	2h each 12h	1h each 12h	1h each 12h

P1 Continuous Duty

- Deep sea trawlers
- Shrimps trawlers
- Sea going tug boats
- River tug boats
- Push boats
- Freighters
- Dredges
- LCT
- Ferries

P2 Heavy Duty

- Deep sea trawlers
- Shrimps trawlers
- Sea going tug boats
- River tug boats
- Push boats
- Freighters
- Dredges
- LCT
- Ferries

P3 Intermittent Duty

- Seasonal passenger vessels
- Fishing boats
- Pilot boats
- Commercial pleasure boats
- Pump boats
- Displacement sailboats
- Trawlers
- Bow thrusters

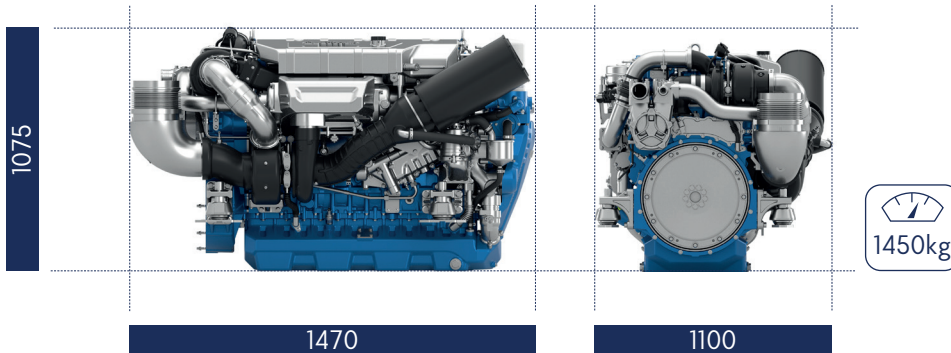
P4 Light Duty

- Private pleasure boats
- Multi-hull pleasure boats
- Survey or rescue fast vessels
- Military fast vessels.

P5 High performance Duty

- Private pleasure boats
- Multi-hull pleasure boats

Dimensions and dry weight (mm/kg)



Standard equipment

Cooling System

Two - stage cooling circuit with built - in HT thermostatic valve
 Integrated fresh water expansion tank
 High efficiency tubular heat exchanger
 Gear driven centrifugal fresh water pump
 Self priming raw water pump with bronze impeller

Lubrication System

Full flow lube oil filters duplex type
 Fresh water cooled lube oil heat exchanger

Fuel System

Common-rail electronic injection
 High pressure pump with shielded high pressure injection rail and pipes
 Fuel oil filter duplex type
 External fuel pre-filter with water separator

Intake Air and Exhaust System

Double flow raw water cooled intake air heat exchanger module
 High efficiency dry turbocharger with ball bearing technology
 Two Stage Turbocharging system

Electrical System

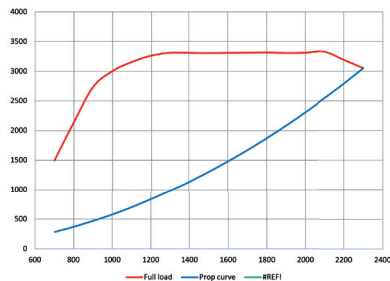
Voltage: 24V DC insulated
 Electrical starter
 190A battery alternator

Optional Equipment

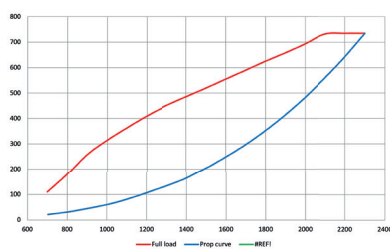
Wet exhaust
 PTO elastic coupling
 Additional pulley
 Electric drain system
 Standard PTO for hydraulic pump
 Different alternators possible - including 12V
 Electrical rotary actuator

Performance - P5

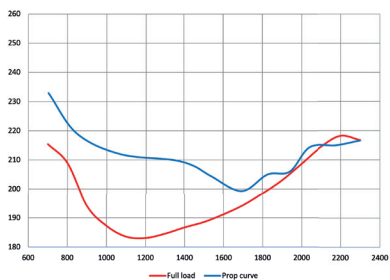
6F21 P5 735@2300 - Torque



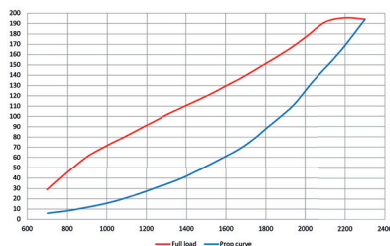
6F21 P5 735@2300 - Power



6F21 P5 735@2300 - BSFC (g/kWh)

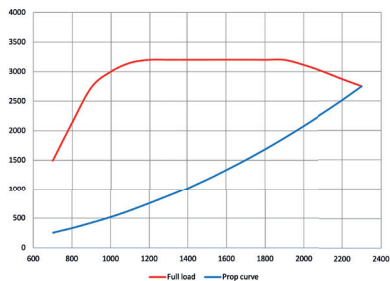


6F21 P5 735@2300 - BSFC (L/H)

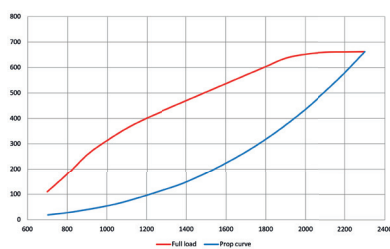


Performance - P4

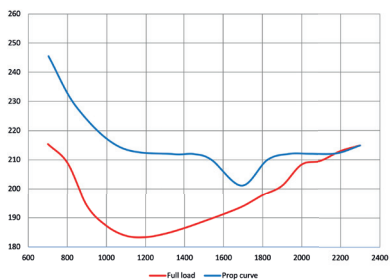
6F21 P4 662@2300 - Torque



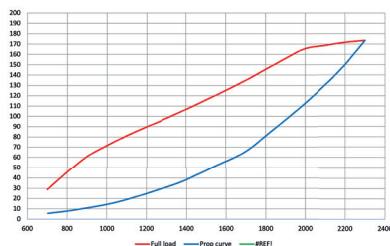
6F21 P4 662@2300 - Power



6F21 P4 662@2300 - BSFC (g/kWh)

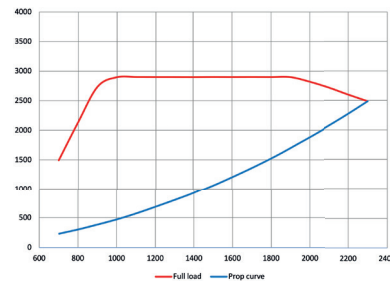


6F21 P4 662@2300 - BSFC (L/H)

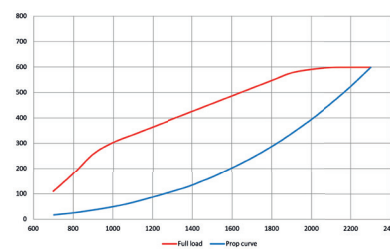


Performance - P3

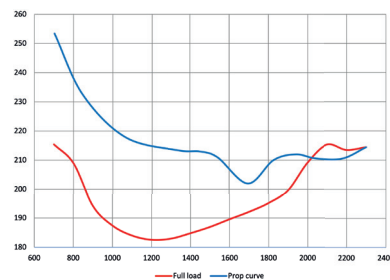
6F21 P3 588@2300 - Torque



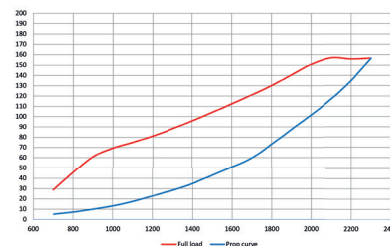
6F21 P3 588@2300 - Power



6F21 P3 588@2300 - BSFC (g/kWh)



6F21 P3 588@2300 - BSFC (L/H)



Power definition

(Standard ISO 3046/1 - 1995 (F))

Reference conditions

Ambient temperature	25°C / 77°F
Barometric pressure	100 kPa
Relative humidity	30%R
Raw water temperature	25°C / 77°F

Fuel oil

Relative density	0,840 ± 0,005
Lower calorific power	42 700 kJ/kg
Consumption tolerances	+ 5%
	(DIN ISO 3046-1)
Inlet limit temperature	35°C / 95°F

Our ratings also comply with classification societies maximum temperature definition without power derating.

Ambient temperature	45°C / 113°F
Raw water temperature	32°C / 90°F