



MARINE DIESEL ENGINES

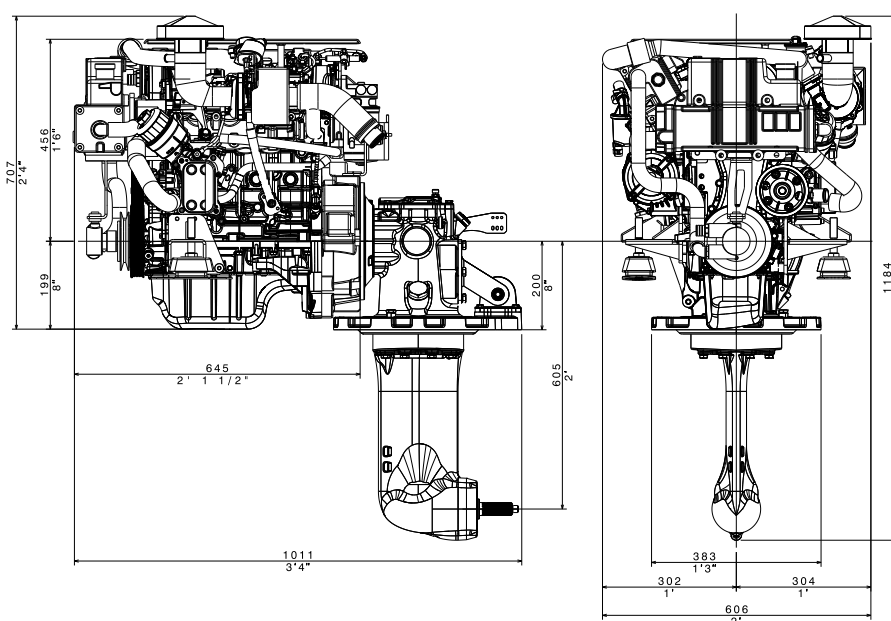


SAIL DRIVE MARINE ENGINE **13HPE SD**

Models:
13HPE 80

FNM® 4-cylinder 13HPE marine engine is built according to 1,3 Multijet II propulsion features. It has always been a key product for small diesel engines in automotive industry. **The engine uses a common-rail fuel injection system** controlled by an ECU (Electronic Control Unit), made specifically for this unit.

Dimensions | FNM 13HPE SD with SEA PROP 60



Technical data

Engine designation	13 HPE 80
Crankshaft Power [kW] (hp)	59 (80)
Propeller shaft power [kW] (hp)	57 (78)
Propeller shaft power [min-1]	3800
Displacement [l] - (cc)	1,3 - 1248
Number of cylinders	4
Bore/stroke [mm] (in)	(69,6/82) - (2.74/3.23)
Compression ratio	17,6:1
Dry weight with Sail Drive [kg]	230
Emission compliance	Directive 2013/53/UE

Technical data according to ISO8665. Fuel complies EN590. Merchant fuel may differ in specification and may influence engine power output and consumption. Production tolerance within 5% (of power). Not all models, standard equipment and accessories are available in all countries. All specifications are subject to change without notice.

Gears • Saildrive SP60

Standard technical equipment

ENGINE BLOCK AND HEAD

- Cylinder block made of cast-iron
- Cylinder head made of aluminium
- 4-valve per cylinder technology with hydraulic lash adjusters
- Double overhead camshafts
- Automotive-class availability of service and parts
- Metal chain gear

ENGINE MOUNTING

- Flexible engine mounting

LUBRICATION SYSTEM

- Easily replaceable oil filter, on top of engine
- Easily to inspect or replace oil separator
- Oil vapour filter
- Integrated cooler with engine's coolant

FUEL SYSTEM

- Common rail fuel injection system
- CMD proprietary ECU
- Fuel filter with water separator and alarm

AIR INLET AND EXHAUST SYSTEM

- Air filter
- Oil vapours vented into inlet air
- Exhaust elbow or raiser depending on application
- Variable geometry turbocharger
- Raw-water cooled intercooler

COOLING SYSTEM

- Thermostatically regulated freshwater cooling
- Thermal unit that integrates tubular heat exchanger and expansion tank
- Easily accessible seawater impeller pump

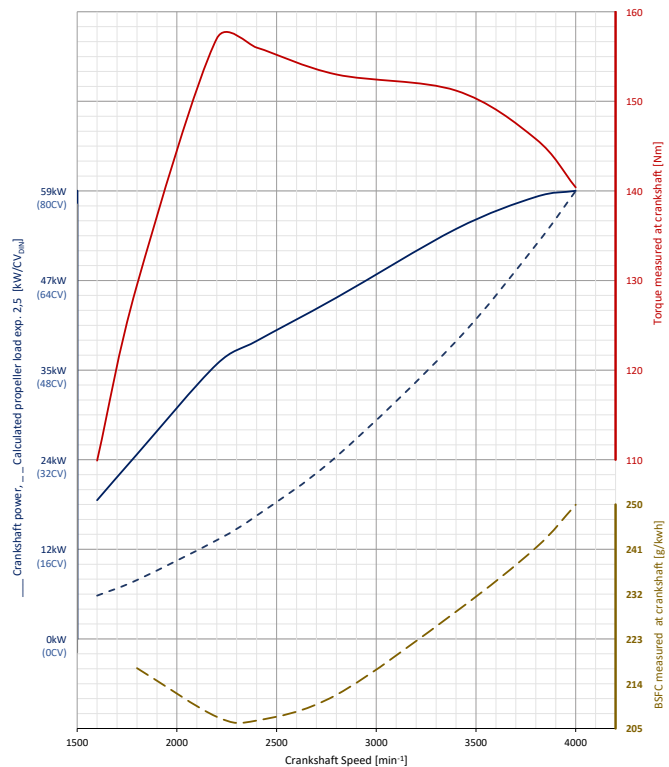
ELECTRICAL SYSTEM

- 12V standard two-pole electrical system
- 12V-1,3kW starter
- Alternator 12V - 90A
- Emergency stop button on engine's ECU
- CANBUS Panel with 8m extension and digital display of engine data

Optionals

- Spinner for fixed blade propellers
- VTR Tecnodrive engine base
- Boats template
- Single or double electronic CANBUS control station
- Boiler kit for heating
- Various length panel extension
- Second control panel for flybridge installations
- RACOR and Mediterraneo filters
- Wide range of additional instruments
- Flange for application without VTR base
- Water Sensor

Performance curves



Referred to 13HPE SD 80

Panel instrument CANBUS

Panel Instrument **high brightness 5" TFT display**, with **touchscreen** and a very simple and intuitive interface.

- Engine data acquisition with CANBUS J1939 interface.
- Data acquisition from traditional sensors for up to eight analog inputs, five digital inputs and one frequency input
- Acquisition of navigation data with NMEA0183 interface
- Up to five relay command outputs for signals and simple activations
- Alarm monitoring according to approved safety standards
- Automatic brightness adjustment and day / night mode
- USB local connectivity for firmware update and configuration

The unit is supplied already programmed and ready to work.

