



## FNM® MARINE DIESEL ENGINES INBOARD DIESEL ENGINE

# 13HPE<sub>135,110,80,40S</sub>

### TECHNICAL DATA



Engine designation	13HPE135	13HPE110	13HPE80	13HPE40S
teljesítmény f tengelyen Crankshaft Power [kW] (hp)	95 (129)	81 (110)	59 (80)	29 (40)
teljesítmény propeller tengelyen Propeller shaft power [kW] (hp)	93 (126)	78 (107)	57 (78)	27 (38)
fordulatszám max. Engine speed [min <sup>-1</sup> ]	4400	4400	4000	4000
henger rtartalom Displacement [l] (in <sup>3</sup> )	1,3 (76)	1,3 (76)	1,3 (76)	1,3 (76)
hengerek száma Number of cylinders	4	4	4	4
furat / löket Bore/stroke [mm] (in)	69,6/82 (2,74/3,23)	69,6/82 (2,74/3,23)	69,6/82 (2,74/3,23)	69,6/82 (2,74/3,23)
kompresszió arány Compression ratio	17,6:1	17,6:1	17,6:1	17,6:1
száraz tömeg TM345A váltóval Dry weight with TM345A [kg]	203	203	203	203
száraz tömeg ZF25A váltóval Dry weight with ZF25A [kg]	202	202	202	202
Power Rating	A	B	C	D

The engine illustrated may not be entirely identical to production standard engines.

#### Emission compliance

RCD Stage II 2013/53/UE (13HPE80,40S)  
US EPA Tier III (40CFR1042) (13HPE135,110)

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.

### RELIABLE AND ENDURING

FNM® 4-cylinder 13HPE engine is based upon the 1,3 Multiojet II engine, a reference in automotive for small diesel engines. The engine utilize a common-rail fuel injection system electronically controlled by a proprietary electronic control unit, expressly set for this unit. The engine spots a high displacement per cylinder and is capable to perform at fast powers, resulting in a high power-to-displacement ratio propulsion unit.

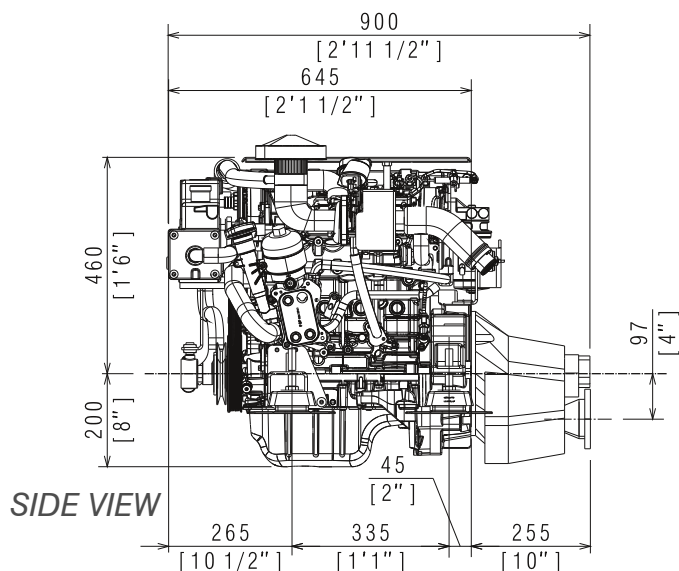
### FIRST CLASS PERFORMANCE

Set for recreational use, where the engine reaches up to 95kW (129HP), or for any of the commercial rating, where this engine is capable to achieve up to 3000h per year, this unit will guarantee first-class performance in every functioning condition.

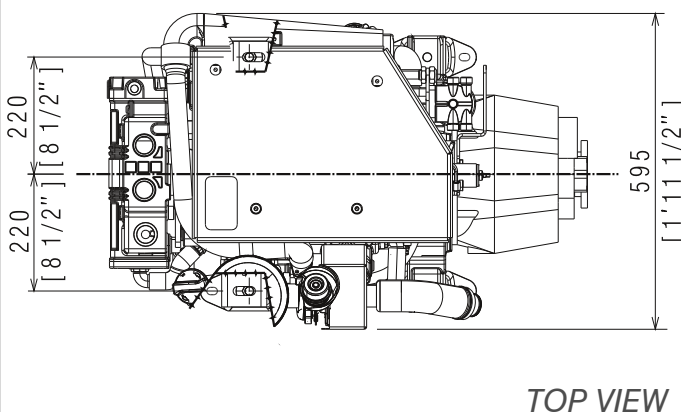
### A PROPRIETARY ELECTRONIC CONTROL UNIT

The engine electronic control unit results from a 10-year development from CMD electronic department and is especially made for HPE engine's marine application. The ECU fits the first-class Bosch common rail system parts that carry out the fuel injection perfectly; this ECU includes unique control strategies, such as anti-shutdown on gear insertion for high-inertia installation, or fast-reversing situations, and guarantees high performances within emission limits.

### DIMENSIONAL



Not valid for installation  
13HPE TM345 - Measures in mm [in]





13HPE135,110,80,40S

FNM® MARINE DIESEL ENGINES  
INBOARD DIESEL ENGINE

## TECHNICAL CHARACTERISTICS

### 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

Oil-cooled pistons with compression and scraper rings  
Five bearing crankshaft

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-75A

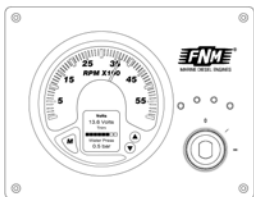
Emergency stop button on engine's ECU

CANBUS Panel with 8m extension and digital display of engine data

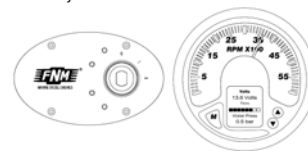
## CONTROL PANEL

Every tachometer integrates CANBUS technology and spots a multifunction display for monitoring alarms, engine's hours, coolant temperature's, oil pressure, battery voltage, turbo pressure, fuel level, trim angle, rudder angle and water tank level. Standard CANBUS J1939 upgradable to NMEA2000.

Assembled panel (standard for gearboxes applications): integrates tachometer, alarm lights and key block.



Disassembled panel (standard for sterndrive and jetdrive applications): panel with alarm lights and key block and separated tachometer (5", available upon request 4").



## GEARS

### Angled gearboxes

- TM345A (8°): R. 1,54:1, 2,00:1, 2,47:1
- ZF25A (8°): R. 1,55:1, 1,93:1, 2,48:1, 2,29:1, 2,71:1

### In-line and coaxial gearboxes

- TM345 (in line): R. 1,54:1, 2,00:1, 2,47:1
- ZF25 (in line): R. 1,97:1, 2,80:1
- ZF45C (coaxial): R. 1,00:1

## OPTIONALS

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

Trolling Valve

Additional PTO (ISO4183 B/SPB)

NMEA2000 compatibility kit

Wide range of additional instruments

## CONTACT US

www.fnm-marine.com



FNM is a registered brand of  
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## PERFORMANCE CURVES

