



Certificate No. 02-003275/025287

TYPE APPROVAL CERTIFICATE

This is to certify that this product complies with the Rules for the classification of ships, Part 1 - General requirements, Chapter 3 - Type approval of products.

TYPE AND DESCRIPTION OF PRODUCT:

DIESEL ENGINE, type C16ENTMP100 LIGHT DUTY

MANUFACTURER:



FPT Industrial S.p.A.
Via Puglia 15
10156 Turin, Italy

THE PRODUCT MEETS FOLLOWING RULES/REGULATIONS:

CRS: Rules for the classification of ships, Part 9. - Machines.

FURTHER DETAILS OF THE PRODUCT AND CONDITIONS FOR CERTIFICATION ARE GIVEN OVERLEAF.

APPROVAL IS VALID UNTIL: **2025-05-27**

Place and date: Split, 2021-05-27

Seal

Marinko Popović, dipl.ing.

NOTE: This certificate is not valid for equipment, the design or manufacture of which has been varied or modified from the specimen tested. The manufacturer should notify Croatian Register of Shipping of any modification or changes to the product in order to obtain a valid certificate.

DETAILED PRODUCT DESCRIPTION:

<i>Number of cylinders</i>	6
<i>Cylinder arrangement</i>	In-line
<i>Working cycle</i>	4- stroke
<i>Cylinder bore (mm)</i>	141
<i>Stroke (mm)</i>	170
<i>Kind of fuel</i>	Liquid
<i>Mean effective pressure (bar)</i>	24,1
<i>Max. firing pressure (bar)</i>	180
<i>Fuel injection system</i>	Direct injection type, electronically controlled, common rail
<i>Valve operation</i>	Cam control
<i>Turbocharging system</i>	Twin turbo in parallel configuration with charge air cooling

APPLICATION / LIMITATIONS:

Application: Propulsion engine

<i>Engine name</i>	C16ENTMP100 LIGHT DUTY
<i>Max. rated power (kW/cyl.)</i>	122,5
<i>At speed (rpm)</i>	2300
<i>Time between overhauls (hrs)</i>	5000

Application of the engine is limited to the military vessels and other government vessels operated for non-commercial purposes, up to 100 GT, under following operative profile:

- *maximum 1000 running hours per year,*
- *maximum power operation restricted within 10% of the total use period,*
- *cruising speed at engine rpm less than 90% of the rated speed.*

Each application is to be agreed to between the engine manufacturer and shipyard/owner based on load profile and rating definition compatibility.

Lower ratings than this stated is accepted as long as they are within the values approved by engine designer.

TYPE APPROVAL DOCUMENTATION:

Approved by the Croatian Register of Shipping with letter No.(dated): 1127/TSE/DL/025287 (2021-05-28)

MARKING OF PRODUCT:

- *manufacturer's mark*
- *location and year of final fitting*
- *CRS mark*

CONDITIONS FOR CERTIFICATION:

Signalization and protection related to the engine shall be subject to CRS approval in each particular case and will depend on service applied and the degree of automation of the engine plant.