

TYPE APPROVAL CERTIFICATECertificate No:
TAM00000XT**This is to certify:****That the Diesel Engine**with type designations
L16/24

Issued to

**MAN DIESEL & TURBO, BRANCH OF MAN DIESEL & TURBO SE
Copenhagen SV, Denmark**

is found to comply with

**DNV GL Rules for classification, Ships - DNVGL-RU-SHIP-Pt4 Ch3 Sec1, Reciprocating Internal
Combustion Engines****Application :**

Auxiliary

Products approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **31st December, 2023**.Issued at **Høvik** on **21st June, 2018**DNV GL local station: **Copenhagen**for **DNV GL**Approval Engineer: **Dag Harald Williksen**

**Oddvar Deinboll
Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Job Id: **262.1-000538-9**
Certificate No: **TAM00000XT**

Product description

Four stroke, in-line engine, non-reversible, trunk-piston, with supercharging, with charge air cooling, direct injection, injection operation by cams, valve operation by cams, liquid fuel

Cylinder bore [mm]	160
Piston stroke [mm]	240
No. of cylinders	5,6,7,8,9 in-line

Application/Limitation

Definition	5L16/24		6/7/8/9L16/24	
Rated power [kW/cyl]	90	95	100	110
Rated speed [rpm]	1000	1000	1200	1200
Mean effective pressure [bar]	22.38	22.62	20.72	22.8
Max. firing pressure [bar]	170	180	170	180

Type Approval documentation

Tests carried out

Documentation:
Test report titel Prototype 8L16/24
Place of test Holeby
Date of test 1997-05-15 until 1997-05-16

Test engine:
Model 8L16/24
No. of cylinders 8

Marking of product

The product to be marked with manufacturer's name or trademark and type number identification.

Periodical assessment

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

In case where the Type Approved product is manufactured at other companies, the Periodical Assessment shall verify that the Type Approval applicant has a quality control system for consistent production at their licensees/subcontractors. Furthermore Periodical Assessment shall be carried out randomly at these companies.

Other Conditions

Flexible hoses to be Type Approved by DNV GL.

Engine safety, control and monitoring systems, including sensors and actuators are not covered by this type approval certificate. Documentation for engine safety, control including speed governing and monitoring systems shall be submitted for approval according to the Rules Pt.4 Ch.9 Sec.1 Table 5 and/or as listed in relevant type approval certificates.

Electric cables and installation of this is not covered by this approval and must be verified to comply with the requirement of the Rules Pt.4 Ch.8 - Electrical Installation.

END OF CERTIFICATE