

TYPE APPROVAL CERTIFICATE

Certificate No:
TAM00000D9

This is to certify:

That the Diesel Engine

with type designation(s)
(L,M)41

Issued to

Motorenfabrik Hatz GmbH & Co. KG
94095 Ruhstorf, Germany

is found to comply with

DNVGL Rules for Classification: Ships/ High Speed and Light Craft

Application :

auxiliary / emergency

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

This Certificate is valid until **8th October, 2022**.

Issued at **Hamburg** on **9th October, 2017**

DNV GL local station: **Augsburg**

for **DNV GL**

Approval Engineer: **Ralph Michael**

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Burkhard Lilienthal
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: **262.1-024115-1**
Certificate No: **TAM00000D9**

Product description

four stroke, in-line engine, non-reversible, trunk-piston, without supercharging, direct injection, injection operation by cams, valve operation by cams, liquid fuel

Cylinder bore [mm] :102
Piston stroke [mm] :105
No. of cylinders :2,3,4

Additional place of production

not applicable

Application/Limitation

Rated power [kW/cyl.]	11.85	8.9	9.12	7.62
Rated speed [rpm]	3000	2000	1800	1500
Mean effective pressure [bar]	5.5	6.22	6.99	6.99
Max. firing pressure [bar]	65	80	80	80
Definition	-	-	-	-

Type Approval documentation

00-96494, 05-052964, 05-145443, 262.1-007957

Tests carried out

Documentation:

Test report titel TAT 4M41C
Place of test Ruhstorf, Germany
Date of test 2005-11-07 until 2005-11-08

Test engine:

Model 4M41C
Serial no. 1041404010686
No. of cylinders 4
Power [kW/cyl.] 12
Speed [rpm] 3000

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.

The objective of the Periodical Assessment is to verify that the conditions for the Type Approval are not altered since the Type Approval certificate was issued.

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

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

END OF CERTIFICATE