



Certificate no.:
TAE00004V6

TYPE APPROVAL CERTIFICATE

This is to certify:

that the Electric Motor

with type designation(s)
YQ

issued to

Wolong Electric Huai'An Qingjiang Motor Co., Ltd.
Huaian, China

is found to comply with

DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

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

Issued at **Hamburg** on **2024-03-12**

This Certificate is valid until **2029-03-11**.

DNV local unit: **Nanjing NB & CMC**

for **DNV**

Approval Engineer: **Harald Amberger**

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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Form code: TA 251

Revision: 2023-09

www.dnv.com

Page 1 of 3

Product description

Marine electric motors 3ph

Voltage	380V - 690V
Frequency	50/60Hz
Enclosure	Cast iron frame standard IP55, IP56
Cooling method	IC411 (standard)
Temperature rise	Class F
Insulation class	Class F, H
Duty cycle	S1, S2, S6

Type	Ratings					
	Current		Power		Power Factor	
	380V 50Hz [A]	440V 60Hz [A]	380V 50Hz [kW]	440V 60Hz [kW]	[cosφ 50Hz]	[cosφ 60Hz]
YQ-280M-2-H	—	165.8	—	104	—	0.89
YQ-280M1-2-H	204.2	204.0	110	128	0.88	0.89
YQ-280M-4-H	—	164.0	—	104	—	0.89
YQ-280MB-4-H	200.8	201.8	110	128	0.89	0.89
YQ-315S-2-H	203.0	209.7	110	128	0.89	0.88
YQ-315M-2-H	242.3	249.3	132	153	0.89	0.88
YQ-315L1-2-H	292.1	301.5	160	186	0.89	0.88
YQ-315L2-2-H	365.2	376.0	200	232	0.89	0.88
YQ-315S-4-H	200.8	206.3	110	128	0.89	0.88
YQ-315M-4-H	239.7	245.3	132	153	0.89	0.88
YQ-315L1-4-H	289.0	296.6	160	186	0.89	0.88
YQ-315L2-4-H	361.3	370.0	200	232	0.89	0.88
YQ-315L3-4-H	454.0	464.1	250	291	0.89	0.88
YQ-315M-6-H	—	171.2	—	104	—	0.86
YQ-315L1-6-H	205.5	210.0	110	128	0.87	0.86
YQ-315L2-6-H	245.8	250.2	132	153	0.87	0.86
YQ-315L3-6-H	301.4	303.2	160	186	0.86	0.86
YQ-355M-2-H	451.4	466.4	250	291	0.9	0.89
YQ-355L-2-H	565.7	583.4	315	366	0.9	0.89
YQ-355M-4-H	464.5	477.4	250	291	0.87	0.86
YQ-355L-4-H	582.1	597.3	315	366	0.87	0.86
YQ-355M1-6-H	302.0	308.4	160	186	0.86	0.85
YQ-355M2-6-H	376.7	383.9	200	232	0.86	0.85
YQ-355L-6-H	468.9	479.4	250	291	0.86	0.85
YQ-400M1-4-H	698.3	727.6	400	466	0.9	0.88
YQ-400M2-4-H	785.6	805.9	450	522	0.9	0.89
YQ-400L1-4-H	872.9	894.5	500	580	0.9	0.89
YQ-400L2-4-H	966.9	998.3	560	650	0.91	0.89
YQ-400L3-4-H	1087.8	1121.1	630	730	0.91	0.89
YQ-400M1-6-H	543.9	576.2	315	366	0.91	0.87
YQ-400M2-6-H	619.8	648.7	355	412	0.9	0.87
YQ-400L-6-H	698.3	723.8	400	466	0.9	0.88
YQ-400M-8-H	502.8	520.4	250	291	0.85	0.86
YQ-400M2-8-H	501.6	535.2	280	326	0.85	0.86
YQ-400L-8-H	704.2	730.2	400	466	0.9	0.9
YQ-400L1-8-H	584.1	602.4	315	366	0.84	0.85
YQ-400L2-8-H	608.4	630.2	355	412	0.85	0.85

Application/Limitation

For use as propulsion motor documentation according to DNV rules must be submitted for approval for each project.

Product certification shall be carried out for motors of 300kW and above, as required by DNV rules Pt.4 Ch.8 Sec.1 Table 8.

Type Approval documentation

Tests carried out

Visual inspection, IP degree, overspeed, resistance measurements of windings, withstand voltage test, measurement of winding resistance, insulation resistance, overload test, temperature rise test.

Marking of product

Type designation - technical data including rated voltage - RPM, rated power - ambient temperature - rated current - rated frequency - insulation class - IP class, cooling method.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routine Tests (RT) checked (if not available tests according to RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

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.

END OF CERTIFICATE