



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	VEM Motors GmbH
Address	Elektromotorenwerk Wernigerode GmbH, Carl-Friedrich-Gauss-Str. 1, Wernigerode, 38855, Germany
Type	Electric Motors
Description	A.C. polyphase induction motors with squirrel cage
Trade Name	KPR, KPER, KPO, KPEO, K1xR, K2xR, WExR, W2xR, W4xR, W6xR, (IE*-)KPR, (IE*-)KPO (IE*-)KPER, (IE*-)KPEO, IE*-K1xR, IE*-K2xR, IE*WExR, IE*-W2xR, IE*-W4xR, IE*-W6xR
Application	Marine, offshore and industrial use
Specified Standard	IEC 60034-1: 2010-02 IEC 60092-301: 1980 + AMD 1: 1994 + AMD 2: 1995
Ratings	See appendix

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: LR2002663TA & 92/20022(E6)

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

Jochen Koerner

Senior Specialist to Lloyd's Register EMEA
A member of the Lloyd's Register group

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The Design Appraisal Document HPC1462198-22/JK and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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Appendix

PLACES OF PRODUCTION	<p>VEM motors GmbH, Factory Wernigerode Carl-Friedrich-Gauss-Str. 1 Wernigerode, 38855 Germany</p> <p>VEM motors GmbH, Factory Zwickau Äußere Dresdner Str. 35 08066 Zwickau Germany</p>
TYPES	<p>KPR, KPER, KPO, KPEO, K1xR, K2xR, WExR, W2xR, W4xR, W6xR (IE*-)KPR, (IE*-)KPO (IE*-)KPER, (IE*-)KPEO, IE*-K1xR, IE*-K2xR, IE*WExR, IE*-W2xR, IE*-W4xR, IE*-W6xR x= 0, 1, 2, 3, 5, 6, 7, 8: Code for VEM construction type *= 1, 2, 3 or 4: Efficiency Class acc. to IEC 60034-30</p>
RATINGS	<p>Size 56 – 450 Rated voltage: up to 750 V Power: 0.06 kW up to 1000 kW Synchronous speed: 250 1/min. up to 3600 1/min. Rated frequency: 50 Hz, 60 Hz Ambient temperature: 45°C, up to max.60 °C Duty type: S1- S9 Thermal class: 155(F), optional 180(H) Type of enclosure: IP 54, IP 55, IP 56, IP 65, IP 66 No. of poles: 2, 4, 5, 6, 8, 10, 12, 16, 24 and combinations Spec. model: SS (Seewasserschutz), resistant to sea water Description of type: * = 1, 2, 3, 4 Efficiency class acc. to IEC 60034-30 Type of construction: IM B3/ IM 1002, IM B35/ IM 2002, IM B34/ M2102, IM B5/ IM3002, IM B14/ IM3602 and derived forms of construction acc. to IEC 60034-7:1992+A1:2000</p>