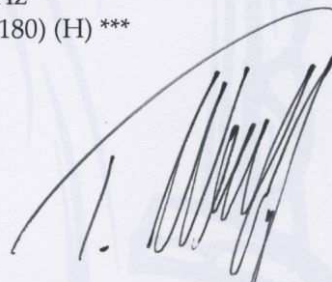


## Type Approval Certificate Extension

*This is to certify* that Certificate No. 92/20022 (E4) for the undernoted products is extended and renumbered as shown.

This certificate is issued to:

<b>PRODUCER</b>	VEM motors Thurm GmbH
<b>PLACE OF PRODUCTION</b>	Äußere Dresdener Str. 35 08066 Zwickau Germany
<b>DESCRIPTION</b>	A.C. polyphase squirrel cage induction motors
<b>TYPES</b>	(IE#-)KPER 63 – 132 (IE#-)KPR 56 - 100 (# = 1, 2, 3)
<b>APPLICATION</b>	Marine, offshore and industrial use
<b>SPECIFIED STANDARDS</b>	EN 60034-1: 2011 EN 60079-0: 2009 EN 60079-7 : 2007
<b>RATINGS</b>	Types (IE#-)KPR / (IE#-)KPER (standard motors)  Rated voltage: up to 690 V Rated power: up to 9kW Ambient air temperature: up to 60° Degrees of protection: IP 54, IP 55, IP 56, IP 65 Number of poles: 2, 4, 6, 8 and combination Speed range: 670 min <sup>-1</sup> up to 3600 min <sup>-1</sup> Rated frequency: 50Hz, 60Hz Insulation class: 155 (F) / 180) (H) ***
<b>Certificate No.</b>	92/20022 (E5)
<b>Issue Date</b>	10 December 2012
<b>Expiry Date</b>	06 November 2017
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## RATINGS continued

### Types (IE#-)KPR / (IE#-)KPER (safetype motors)

Rated voltage:	127 V up to 725 V ( $\pm 5\%$ **)**)
Rated Frequency:	50Hz / 60Hz ( $\pm 2\%$ *)
Rated power:	0,12kW up to 5,5kW
Ambient air temperature:	up to 60°
Degrees of protection:	IP 54, IP 55, IP 56, IP 65
Number of poles:	2, 4, 6, 8
Speed range:	670 min <sup>-1</sup> up to 3600 min <sup>-1</sup>
Protection concept:	
(IE#-)KPR/(IE#-)KPER 56 to 132	Ex II 2 G Ex e II T3 or T4
(IE#-)KPR/(IE#-)KPER 56 to 132	Ex II 3 D
(IE#-)KPR/(IE#-)KPER 56 to 132	Ex II 2 D
(IE#-)KPR/(IE#-)KPER 63 to 132	Ex II 3 G ExnA T3 or T4

#### Notes:

- \*) Suitable measures are to be taken to ensure that the permissible voltage and frequency deviations will not be exceeded.
- \*\*) The PTB certificates for each individual type of motor state the working voltage range available for the type.
- \*\*\*) For application in the marine industry the ambient air temperature of 45 °C is to be considered.

## Modifications List

- Thermal winding protection	(IE#-)KPR...TPM., (IE#-)KPER..TPM., (IE#-)KPR...TS., (IE#-)KPER...TS..
- built-in motors	(IE#-)KPR.....E, (IE#-)KPER....E
- fanmotors	(IE#-)YP..., (IE#-)YPE....
- unventilated motors	(IE#-)KPO..., (IE#-)KPEO....
- explosion-proof motors	(IE#-)KPR...Exe, (IE#-)KPER....Exe, (IE#-)KPR...ExnA., (IE#-)KPER...ExnA., (IE#-)KPR.../(IE#-)KPER...ExII2G, (IE#-)KPR.../(IE#-)KPER...ExII3G, (IE#-)KPR.../(IE#-)KPER... ExII2D; (IE#-)KPR../ (IE#-)KPER... ExII3D

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- motors with built-on brakes (IE#-)BPR..., (IE#-)BPER..., (IE#-)BPRK..., (IE#-)BPERK...
- motors with separately driven fan (IE#-)KPRF..., (IE#-)KPERF....
- motors with tachometer or IGR (IE#-)KPR....., (IE#-)KPER....., (IE#-)KPO....., (IE#-)KPEO.....
- motors with anti-condensations heater (IE#-)KPR...HB, (IE#-)KPER...HB
- reluctance motors (IE#-)KPR...syn, (IE#-)KPER...syn
- motors with special requirements (IE#-)KPRW..., (IE#-)KPERW..., (IE#-)BPRKW..., (IE#-)BPERKW...
- single phase motors (IE#-)EBPR(W)..., (IE#-)EBPER(W)..., (IE#-)EDPR..., (IE#-)EDPER...

## Explanation List

Ex II 3 G : ExnA  
 Ex II 2 G : Exe  
 Ex II 2 D : Ex II 2D Ex tb  
 Ex II 3 D : Ex II 3D Ex tc

50Hz/60Hz Standard-types, 45 deg.C, S1

Types Frame Sizes		No. of poles	Rated Power / (kW) 50/60 Hz
KPR and IE1-KPR	KPER and IE1-KPER		
56 K2	63 K2	2	0.18/0.21
56 G2	63 G2	2	0.25/0.3
63 K2	71 K2	2	0.37/0.44
63 G2	71 G2	2	0.55/0.65
71 K2	80 K2	2	0.75/0.9
71 G2	80 G2	2	1.1/1.3
80 K2	90 S2	2	1.5/1.8
80 G2	90 L2	2	2.2/2.6
90 L2	100 L2	2	3.0/3.6
100 S2	112 M2	2	4.0/4.8
100 L2	112 MX2	2	5.5/6.6
-	132 S2T	2	5.5/6.6

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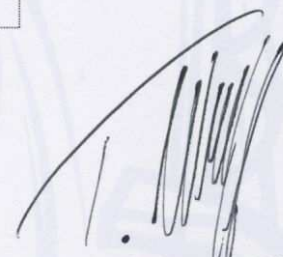
Types Frame Sizes		No. of poles	Rated Power / (kW) 50/60 Hz
100 LV2	112 MV2	2	7.5/9
-	132 SX2T	2	7.5/9

Types Frame Sizes		No. of poles	Rated Power / (kW) 50/60 Hz
56 K4	63 K4	4	0.12/0.14
56 G4	63 G4	4	0.18/0.21
63 K4	71 K4	4	0.25/0.3
63 G4	71 G4	4	0.37/0.44
71 K4	80 K4	4	0.55/0.65
71 G4	80 G4	4	0.75/0.9
80 K4	90 S4	4	1.1/1.3
80 G4	90 L4	4	1.5/1.8
90 L4	100 L4	4	2.2/2.6
100 S4	100 LX4	4	3.0/3.6
100 L4	112 M4	4	4.0/4.8
100 LX4	112 MX4	4	5.5/6.6
-	132 S4T	4	5.5/6.6

56 K6	63 K6	6	0.09/0.105
56 G6	63 G6	6	0.12/0.14
63 K6	71 K6	6	0.18/0.21
63 G6	71 G6	6	0.25/0.3
71 K6	80 K6	6	0.37/0.44
71 G6	80 G6	6	0.55/0.65
80 K6	90 S6	6	0.75/0.9
80 G6	90 L6	6	1.1/1.3
90 L6	100 L6	6	1.5/1.8
100 L6	112 M6	6	2.2/2.6
100 LX6	112 MX6	6	3.0/3.6
-	132 S6T	6	3.0/3.6

63 K8	71 K8	8	0.09/0.105
63 G8	71 G8	8	0.12/0.14
71 K8	80 K8	8	0.18/0.21
71 G8	80 G8	8	0.25/0.3
80 K8	90 S8	8	0.37/0.44

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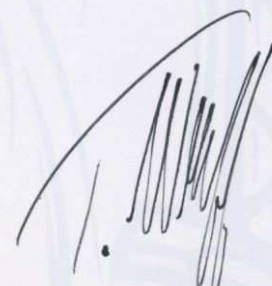
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80 G8	90 L8	8	0.55/0.65
90 L8	100 L8	8	0.75/0.9
100 S8	100 LX8	8	1.1/1.3
100 L8	112 M8	8	1.5/1.8
100 LX8	112 MX8	8	2.2/2.6
-	132 S8T	8	2.2/2.6

Types Frame Sizes		No. of poles	Rated Power / (kW) 50/60 Hz
IE2-KPR	IE2-KPER		
80 K2	-	2	0.75/0.9
80 G2	-	2	1.1/1.3
90 S2	-	2	1.5/1.8
90 L2	-	2	2.2/2.6
100 L2	-	2	3.0/3.6
-	112 MX2	2	4.0/4.8
-	112 MV2	2	5.5/6.6
-	132 SX2T	2	5.5/6.6
80 G4	-	4	0.75/0.9
90 S4	-	4	1.1/1.3
90 L4	-	4	1.5/1.8
100 L4	-	4	2.2/2.6
100 LX4	-	4	3.0/3.6
-	112 MZ4	4	4.0/4.8
90 S6	-	6	0.75/0.9
90 L6	-	6	1.1/1.3
100 LX6	-	6	1.5/1.8
-	112 MV6	6	2.2/2.6

Types Frame Sizes		No. of poles	Rated Power / (kW) 50 Hz
IE3-KPR	IE3-KPER		
80 K2	-	2	0.75
80 G2	-	2	1.1
90 S2	-	2	1.5
90 L2	-	2	2.2
100 L2	-	2	3
-	112 MV2	2	4
80 G4	-	4	0.75
90 S4	-	4	1.1

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Types Frame Sizes		No. of poles	Rated Power / (kW) 50 Hz
90 L4	-	4	1.5
100 L4	-	4	2.2
100 LZ4	-	4	3
90 S6	-	6	0.75
90 L6	-	6	1.1
100 LV6	-	6	1.5

50Hz, Ex II 2G ExeII T3 -Types, 45 deg.C, S1

Types Frame Sizes		No of poles	Rated Power (kW)
KPR and IE1-KPR	KPER and IE1-KPER		
56 K2	63 K2	2	0.18
56 G2	63 G2	2	0.25
-	63 GX2	2	0.25
63 KY2	-	2	0.25
63 K2	71 K2	2	0.37
63 G2	71 G2	2	0.55
71 KY2	-	2	0.55
71 K2	80 K2	2	0.75
71 G2	80 G2	2	1.1
80 KY2	-	2	1.1
80 K2	90 S2	2	1.3
80 G2	90 L2	2	1.85
90 L2	100 L2	2	2.5
100 S2	112 M2	2	3.3
100 L2	112 MX2	2	4.1
-	132 S2T	2	4.6
-	132 SX2T	2	5.5
56 K2	63 K4	4	0.12
56 G2	63 G4	4	0.18
63 K4	71 K4	4	0.25
63 G4	71 G4	4	0.37
71 KY4	-	4	0.37
71 K4	80 K4	4	0.55
-	80 GY4	4	0.55
71 G4	80 G4	4	0.75

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Types Frame Sizes		No of poles	Rated Power (kW)
-	80 GX4	4	0.75
80 GY4	-	4	0.75
80 K4	90 S4	4	1.0
80 G4	90 L4	4	1.35
90 L4	100 L4	4	2.0
100 S4	100 LX4	4	2.5
100 L4	112 M4	4	3.6
-	112 MX4	4	4.4
-	132 S4T	4	4.4
KPR and IE1-KPR	KPER and IE1-KPER		
71 K6	80 K6	6	0.37
71 G6	80 G6	6	0.55
80 K6	90 S6	6	0.65
80 G6	90 L6	6	0.95
90 L6	100 L6	6	1.4
100 L6	112 M6	6	1.9
-	132 SX6T	6	2.6
71 K8	80 K8	8	0.18
71 G8	80 G8	8	0.25
80 K8	90 S8	8	0.37
80 G8	90 L8	8	0.55
90 L8	100 L8	8	0.65
100 S8	100 LX8	8	0.95
100 L8	112 M8	8	1.3
-	132 SX8T	8	1.9
Types Frame Sizes		No. of poles	Rated Power (kW)
IE2-KPR	IE2-KPER		
80 K2	-	2	0.75
80 G2	-	2	1.1
90 S2	-	2	1.3
90 L2	-	2	1.85
100 L2	-	2	2.5
-	112 MX2	2	3.3
80 G4	-	4	0.75

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Types Frame Sizes		No. of poles	Rated Power (kW)
90 S4	-	4	1.0
90 L4	-	4	1.35
100 L4	-	4	2.0
100 LX4	-	4	2.5
-	112MZ4	4	3.6
90 S6	-	6	0.75
90 L6	-	6	0.95
100 LX6	-	6	1.3
-	112 MV6	6	1.9

## OTHER CONDITION

Ratings of motors for use in hazardous areas are to be obtained from the relevant Ex-Certificates.

*"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."*

*The attached Design Appraisal Document No. HDS/ETS 27408-12 and its supplementary Type Approval Terms and Conditions form part of this Certificate.*

All other details remain as the previous Certificate No. 92/20022 (E4) to which this extension should be attached.

Certificate No. 92/20022 (E5)  
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