

VEM TECHNIK we get things moving

**Great success in fire gas tests for the output range from 3 kW up to 75 kW for Class F400 [400 °C, 2 hours],
Prerequisite for the Series Certification acc. to EN 12101-3**

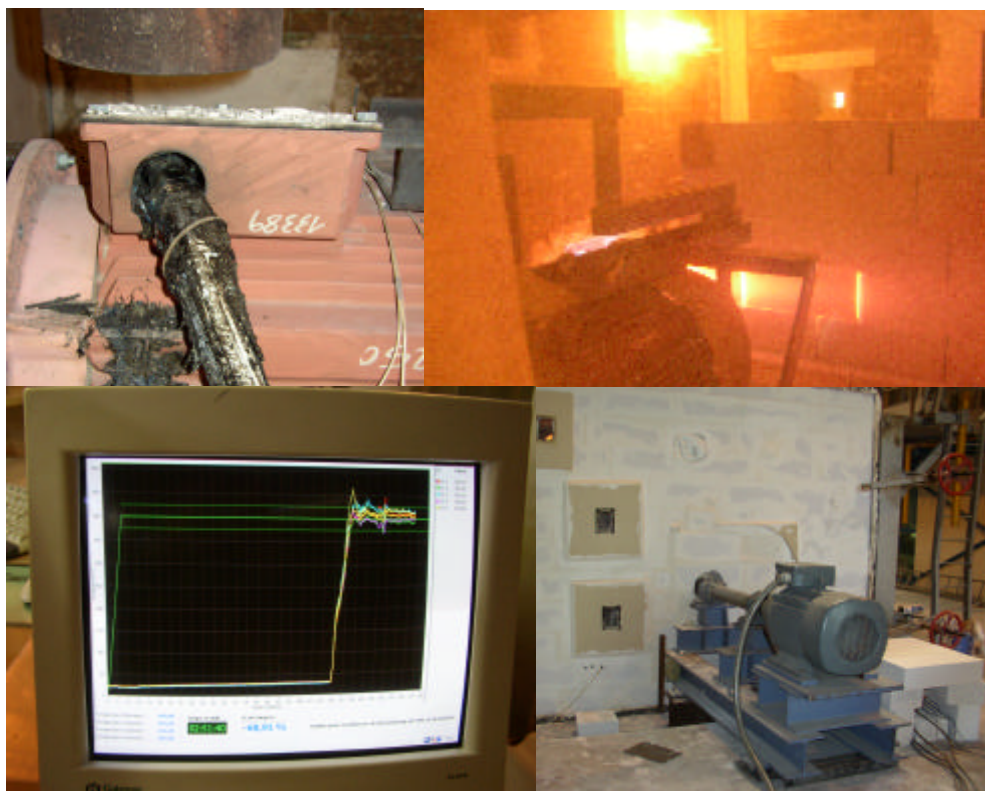
**Motors for fire gas and smoke exhaust fans
K11R 132M 2 FV4-2,
K11R 280M 2 FV4-2
at CTICM Metz, France,
for more than
2 hours at 400 °C
successfully tested
according to**

F400

VEM motors GmbH

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VEM motors GmbH Wernigerode is, since several years, experienced in the field of motors for fire gas and smoke exhaust fans. Up to now, many motors for the use in fire gas and smoke temperatures between 200 °C up to 400 °C were developed, manufactured and tested.

Such high temperatures are hardly covered and cannot be handled by the use of standard materials from the electrical engineering without taking an unacceptable risk into account.

Based on new materials and specific technologies, VEM has now created an insulation system and a bearing arrangement, that meet the extremely strong stress according to EN 12101-3.

The first testing of this system on May 23rd of 2003 at the French Test Authority CTICM was, included into the jet fan unit of a well-known fan manufacturer, passed with great success. The test output of this procedure at that time was 355 kW with a synchronous speed of 1500 rpm.

Now, we had a successful test of two further motors, and based on them, VEM will now get the Certification of the series K11R in the sizes 132 up to 280 and related outputs 3 kW up to 75 kW.

The Certification will include speeds up to 3000 rpm.

To simulate the strong axial and radial bearing loads, a very expensive and complex test equipment was developed, it has, during the tests, proved its worth, too.

With this successful test series, VEM has opened time and temperature dimensions, that in the past, were considered to be nearly unattainable.





Klasse DIN EN 12101-3		-	F200	-	F300	-	-	F400	F600
Beanspruchungszeit, Beansprungstemperatur		1 h, 200°C	2 h, 200°C	1 h, 250°C	1 h, 300°C	2 h, 250°C	2 h, 300°C	2 h, 400°C 1,5 h, 400°C	1 h, 600°C
VEM-Kurzzeichen		FV	FV1	FV1	FV2	FV2	FV3	FV4-2	FV5
Baureihe		Bemessungsleistung P _B [kW]							
Synchrondrehzahl 3000 min ⁻¹ – 2polige Ausführung									
K11R 132S 2	K10R 112MY2	5,5	5,5	4,0	4,0	4,0	4,0	3,0	-
K11R 132SX2	K10R 112M 2	7,5	7,5	5,5	5,5	5,5	5,5	4,0	-
K11R 160M 2	K10R 132M 2	11,0	11,0	7,5	7,5	7,5	7,5	5,5	-
K11R 160MX2	K10R 160S 2	15,0	15,0	11,0	11,0	11,0	11,0	7,5	7,5
K11R 160L 2	K10R 160M 2	18,5	18,5	15,0	15,0	15,0	15,0	11,0	11,0
K11R 180M2	K10R 180S 2	22,0	22,0	18,5	18,5	18,5	18,5	15	15,0
K11R 200L 2	K10R 180M 2	30,0	30,0	22,0	22,0	22,0	22,0	18,50	18,5
K11R 200LX2	K10R 200M 2	37,0	37,0	30,0	30,0	30,0	30,0	30,0	30,0
K11R 225M 2	K10R 200L 2	45,0	45,0	37,0	37,0	37,0	37,0	37,0	37,0
K11R 250M 2	K10R 225M 2	55,0	55,0	45,0	45,0	45,0	45,0	45,0	45,0
K11R 280S 2	K10R 250S 2	75,0	75,0	55,0	55,0	55,0	55,0	55,0	55,0
K11R 280M 2	K10R 250M 2	90,0	90,0	75,0	75,0	75,0	75,0	75,0	75,0
K11R 315S 2	K10R 280S 2	110,0	110,0	90,0	90,0	90,0	90,0	90,0	90,0
K11R 315M 2	K10R 280M 2	132,0	132,0	110,0	110,0	110,0	110,0	110,0	110,0
K11R 315MX2	K10R 315S 2	160,0	160,0	132,0	132,0	132,0	132,0	132,0	132,0
K11R 315MY2	K10R 315M 2	200,0	200,0	160,0	160,0	160,0	160,0	160,0	160,0
K11R 315 L2	-	250,0	250,0	200,0	200,0	200,0	200,0	200,0	200,0
K11R 315LX2	-	315,0	315,0	250,0	250,0	250,0	250,0	250,0	250,0
K22R 355M 2	-	355,0	355,0	300,0	300,0	300,0	300,0	300,0	300,0
K22R 355MX2	-	400,0	400,0	340,0	340,0	340,0	340,0	340,0	-
K22R 355LY2	-	450,0	450,0	380,0	380,0	380,0	380,0	380,0	-
K22R 355L 2	-	500,0	500,0	420,0	420,0	420,0	420,0	420,0	-

**Drehstrom-Asynchronmotoren zum Einsatz
in maschinellen Rauch- und Wärmeabzugsgeräten
nach EN 12101-3 (Brandgasausführung)**



Klasse EN 12101-3		-	F200	-	F300	-	-	F400	F600
Beanspruchungszeit, Beansprungtemperatur		1 h, 200°C	2 h, 200°C	1 h, 250°C	1 h, 300°C	2 h, 250°C	2 h, 300°C	2 h, 400°C 1,5 h, 400°C	1 h, 600°C
VEM-Kurzzeichen		FV	FV1	FV1	FV2	FV2	FV3	FV4-2	FV5
Baureihe		Bemessungsleistung P _B [kW]							
Synchrondrehzahl 1500 min ⁻¹ - 4-polige Ausführung									
K11R 132S 4	K10R 112M 4	5,5	5,5	4,0	4,0	4,0	4,0	3,0	-
K11R 132M 4	K10R 132S 4	7,5	7,5	5,5	5,5	5,5	5,5	4,0	-
K11R 160M 4	K10R 132M 4	11,0	11,0	7,5	7,5	7,5	7,5	5,5	-
K11R 160L 4	K10R 160S 4	15,0	15,0	11,0	11,0	11,0	11,0	7,5	7,5
K11R 180M 4	K10R 160M 4	18,5	18,5	15,0	15,0	15,0	15,0	11,0	11,0
K11R 180L 4	K10R 180S 4	22,0	22,0	18,5	18,5	18,5	18,5	15,0	15,0
K11R 200L 4	K10R 180M 4	30,0	30,0	22,0	22,0	22,0	22,0	18,5	18,5
K11R 225S 4	K10R 200M 4	37,0	37,0	30,0	30,0	30,0	30,0	30,0	30,0
K11R 225M 4	K10R 200L 4	45,0	45,0	37,0	37,0	37,0	37,0	37,0	37,0
K11R 250M 4	K10R 225M 4	55,0	55,0	45,0	45,0	45,0	45,0	45,0	45,0
K11R 280S 4	K10R 250S 4	75,0	75,0	55,0	55,0	55,0	55,0	55,0	55,0
K11R 280M 4	K10R 250M 4	90,0	90,0	75,0	75,0	75,0	75,0	75,0	75,0
K11R 315S 4	K10R 280S 4	110,0	110,0	90,0	90,0	90,0	90,0	90,0	90,0
K11R 315M 4	K10R 280M 4	132,0	132,0	110,0	110,0	110,0	110,0	110,0	110,0
K11R 315MX4	K10R 315S 4	160,0	160,0	132,0	132,0	132,0	132,0	132,0	132,0
K11R 315MY4	K10R 315M 4	200,0	200,0	160,0	160,0	160,0	160,0	160,0	160,0
K11R 315 L4	-	250,0	250,0	200,0	200,0	200,0	200,0	200,0	200,0
K11R 315LX4	-	315,0	315,0	250,0	250,0	250,0	250,0	250,0	250,0
K22R 355M 4	-	355,0	355,0	300,0	300,0	300,0	300,0	300,0	300,0
K22R 355MX4	-	400,0	400,0	340,0	340,0	340,0	340,0	340,0	-
K22R 355LY4	-	450,0	450,0	380,0	380,0	380,0	380,0	380,0	-
K22R 355L 4	-	500,0	500,0	420,0	420,0	420,0	420,0	420,0	-

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Beanspruchungszeit, Beansprungstemperatur		1 h, 200°C	2 h, 200°C	1 h, 250°C	1 h, 300°C	2 h, 250°C	2 h, 300°C	2 h, 400°C 1,5 h, 400°C	1 h, 600°C
VEM-Kurzzeichen		FV	FV1	FV1	FV2	FV2	FV3	FV4-2	FV5
Baureihe		Bemessungsleistung P _B [kW]							
Synchrondrehzahl 1000 min ⁻¹ - 6-polige Ausführung									
K11R 132S 6	K10R 112M 6	3,0	3,0	2,2	2,2	2,2	2,2	1,5	-
K11R 132M 6	K10R 112MX6	4,0	4,0	3,0	3,0	3,0	3,0	2,2	-
K11R 132MX6	K10R 132S 6	5,5	5,5	4,0	4,0	4,0	4,0	3,0	-
K11R 160M 6	K10R 132M 6	7,5	7,5	5,5	5,5	5,5	5,5	4,0	-
K11R 160L 6	K10R 160S 6	11,0	11,0	7,5	7,5	7,5	7,5	5,5	5,5
K11R 180L 6	K10R 160M 6	15,0	15,0	11,0	11,0	11,0	11,0	7,5	7,5
K11R 200L 6	K10R 180S 6	18,5	18,5	15,0	15,0	15,0	15,0	11,0	11,0
K11R 200LX6	K10R 180M 6	22,0	22,0	18,5	18,5	18,5	18,5	15,0	15,0
K11R 225M 6	K10R 200M 6	30,0	30,0	22,0	22,0	22,0	22,0	22,0	22,0
K11R 250M 6	K10R 225M 6	37,0	37,0	30,0	30,0	30,0	30,0	30,0	30,0
K11R 280S 6	K10R 250S 6	45,0	45,0	37,0	37,0	37,0	37,0	37,0	37,0
K11R 280M 6	K10R 250M 6	55,0	55,0	45,0	45,0	45,0	45,0	45,0	45,0
K11R 315S 6	K10R 280S 6	75,0	75,0	55,0	55,0	55,0	55,0	55,0	55,0
K11R 315M 6	K10R 280M 6	90,0	90,0	75,0	75,0	75,0	75,0	75,0	75,0
K11R 315MX6	K10R 315S 6	110,0	110,0	90,0	90,0	90,0	90,0	90,0	90,0
K11R 315MY6	K10R 315M 6	132,0	132,0	110,0	110,0	110,0	110,0	110,0	110,0
K11R 315 L6	-	160,0	160,0	132,0	132,0	132,0	132,0	132,0	132,0
K11R 315LX6	-	200,0	200,0	160,0	160,0	160,0	160,0	160,0	160,0
K22R 355M 6	-	250,0	250,0	200,0	200,0	200,0	200,0	200,0	200,0
K22R 355MX6	-	315,0	315,0	250,0	250,0	250,0	250,0	250,0	-
K22R 355LY6	-	355,0	355,0	300,0	300,0	300,0	300,0	300,0	-

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Klasse EN 12101-3		-	F200	-	F300	-	-	F400	F600
Beanspruchungszeit, Beansprungstemperatur		1 h, 200°C	2 h, 200°C	1 h, 250°C	1 h, 300°C	2 h, 250°C	2 h, 300°C	2 h, 400°C 1,5 h, 400°C	1 h, 600°C
VEM-Kurzzeichen		FV	FV1	FV1	FV2	FV2	FV3	FV4-2	FV5
Baureihe		Bemessungsleistung P _B [kW]							
Synchrondrehzahl 750 min ⁻¹ - 8-polige Ausführung									
K11R 132S 8	K10R 112M 8	2,2	2,2	1,5	1,5	1,5	1,5	1,1	-
K11R 132M 8	K10R 112MX8	3,0	3,0	2,2	2,2	2,2	2,2	1,5	-
K11R 160M 8	K10R 132S 8	4,0	4,0	3,0	3,0	3,0	3,0	2,2	-
K11R 160MX8	K10R 132M 8	5,5	5,5	4,0	4,0	4,0	4,0	3,0	-
K11R 160L 8	K10R 160S 8	7,5	7,5	5,5	5,5	5,5	5,5	4,0	4,0
K11R 180L 8	K10R 160M 8	11,0	11,0	7,5	7,5	7,5	7,5	5,5	5,5
K11R 200L 8	K10R 180S 8	15,0	15,0	11,0	11,0	11,0	11,0	7,5	7,5
K11R 225S 8	K10R 180M 8	18,5	18,5	15,0	15,0	15,0	15,0	11,0	11,0
K11R 225M 8	K10R 200M 8	22,0	22,0	18,5	18,5	18,5	18,5	18,5	18,5
K11R 250M 8	K10R 225M 8	30,0	30,0	22,0	22,0	22,0	22,0	22,0	22,0
K11R 280S 8	K10R 250S 8	37,0	37,0	30,0	30,0	30,0	30,0	30,0	30,0
K11R 280M 8	K10R 250M 8	45,0	45,0	37,0	37,0	37,0	37,0	37,0	37,0
K11R 315S 8	K10R 280S 8	55,0	55,0	45,0	45,0	45,0	45,0	45,0	45,0
K11R 315M 8	K10R 280M 8	75,0	75,0	55,0	55,0	55,0	55,0	55,0	55,0
K11R 315MX8	K10R 315S 8	90,0	90,0	75,0	75,0	75,0	75,0	75,0	75,0
K11R 315MY8	K10R 315M 8	110,0	110,0	90,0	90,0	90,0	90,0	90,0	90,0
K11R 315 L8	-	132,0	132,0	110,0	110,0	110,0	110,0	110,0	110,0
K11R 315LX8	-	160,0	160,0	132,0	132,0	132,0	132,0	132,0	132,0
K22R 355M 8	-	200,0	200,0	160,0	160,0	160,0	160,0	160,0	160,0
K22R 355MX8	-	250,0	250,0	200,0	200,0	200,0	200,0	200,0	-
K22R 355LY8	-	280,0	280,0	230,0	230,0	230,0	230,0	230,0	-