



ELECTRIC DRIVES
FOR EVERY DEMAND

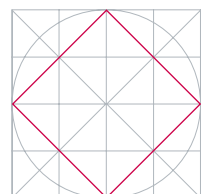


Explosion-protected motors

Type of protection increased safety "e"
Efficiency class IE1, IE2 and IE3

VEM CHEM
ex motors

www.vem-group.com





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Drives for the chemical industry and power generation industry

Safe drives in case of explosion hazards

Situations in which explosive gas or vapour/air mixtures can be formed, or where combustible dusts can arise, call for special electric drives. VEM is able to supply drives to suit your particular needs, because

- › highly qualified specialists are at hand to advise our customers
- › VEM has many decades of experience in high-quality explosion-protected drives
- › production in our factories is governed by a quality management system certified by IBExU Freiberg
- › machines are available for use in hazardous areas in zones 1 and 2, equipment group II, categories 2G and 3G (Gb, Gc)
- › VEM drives of this type are already operating reliably at renowned European and global chemical and power enterprises.

Quality tested and certified

The motors of the VEM type series are tested and certified by

- › Physikalisch-Technische Bundesanstalt Braunschweig (*Notified Body* no. 0102)
- › IBExU Institut für Sicherheitstechnik GmbH Freiberg (*Notified Body* no. 0637),
- › DEKRA EXAM GmbH (*Notified Body* no. 0158)

and comply with the directive 94/9/EC – ATEX 95. The test certificates are recognised by all member states of the European Union, and are additionally accepted by those CENELEC members which do not belong to the EU. In the case of special versions influencing explosion protection (pole-changing motors, other frequencies, outputs or coolant temperatures, inverter operation, etc.), supplementary or renewed approval is required.

Type	KPR/KPER/IE1-KPR/IE1-KPER/IE2-KPR/IE2-KPER K1.R/IE1-K1.R/IE2-K1.R/IE3-K1.R/IE2-K4.R/IE3-K4.R
Sizes	56 to 400
Efficiency class	without, IE1, IE2 and IE3 acc. to IEC/EN 60034-30-1 in the power range 0.75...320 kW, 2-, 4-, 6- and 8-pole
Type of protection	IP 54, IP 55, IP 56, IP 65 acc. to IEC/EN 60034-5
Type of construction	IM B3, IM B35, IM B5, IM B14, IM B34 and derived types of construction acc. to IEC/EN 60034-7
Type of cooling	IC 411 acc. to IEC/EN 60034-6





Explosion-protected motors with protection rating “e” (increased safety) are used above all in the chemical industry.

When installing motors in types of construction with vertical shaft it must be prevented that foreign objects can fall in the air inlets (protective cover).

Explosion-protected design complying with equipment group II, category 2 acc. to

- EN 60079-0 General requirements
- EN 60079-7 increased safety “e”

Temperature classes T1 and T2, T3 or T4
 Ambient temperature -40 °C up to +40 °C (+55 °C)
 For sizes 56 to 112: -20 °C up to +40°C
 Other values complying with the addition and related data and continuation sheets

Mounting dimensions and performances acc. to EN 50347 (DIN 42673 sheet 2 and DIN 42677 sheet 2)

Overview of approvals:

Design series and sizes	EC-Type examination certificate	EC-Type examination certificate
(IE.-)KPER 56	PTB99ATEX3308	IBExU02ATEX1109
(IE.-)KPER 63	PTB99ATEX3309	IBExU02ATEX1110
(IE.-)KPER 71	PTB99ATEX3310	IBExU02ATEX1111
(IE.-)KPER 80	PTB99ATEX3311	IBExU02ATEX1112
(IE.-)KPER 90	PTB99ATEX3312	IBExU02ATEX1113
(IE.-)KPER 100	PTB99ATEX3313	IBExU02ATEX1114
(IE.-)KPER 112	PTB99ATEX3314	IBExU02ATEX1115
(IE.-)K1.R 112	PTB09ATEX3004 / PTB08ATEX3026X	IBExU02ATEX1109
(IE.-)K1.R 132	PTB08ATEX3037 / PTB08ATEX3001X	IBExU99ATEX1142
(IE.-)K1.R 160	PTB08ATEX3038 / PTB07ATEX3142X	IBExU99ATEX1105
(IE.-)K1.R 180	PTB08ATEX3039 / PTB07ATEX3143X	IBExU99ATEX1138
(IE.-)K1.R 200	PTB08ATEX3040 / PTB08ATEX3027X	IBExU99ATEX1143
(IE.-)K1.R 225	PTB08ATEX3041 / PTB08ATEX3028X	IBExU99ATEX1144
(IE.-)K1.R 250	PTB08ATEX3042 / PTB08ATEX3029X	IBExU99ATEX1131
(IE.-)K1.R 280	PTB08ATEX3043 / PTB08ATEX3030X	IBExU99ATEX1030
(IE.-)K1.R 315	PTB08ATEX3044 / PTB08ATEX3031X	IBExU99ATEX1137
(IE.-)K1.R 355	PTB08ATEX3032X	IBExU01ATEX1009
(IE.-)K..R 400		application submitted

Example of identification mark:
 Ex e IIC T3 Gb

Please refer to our catalogues for technical details. The catalogues are available in printed or in digital version on DVD. They are also available in the internet.



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For detailed information
please visit our website.