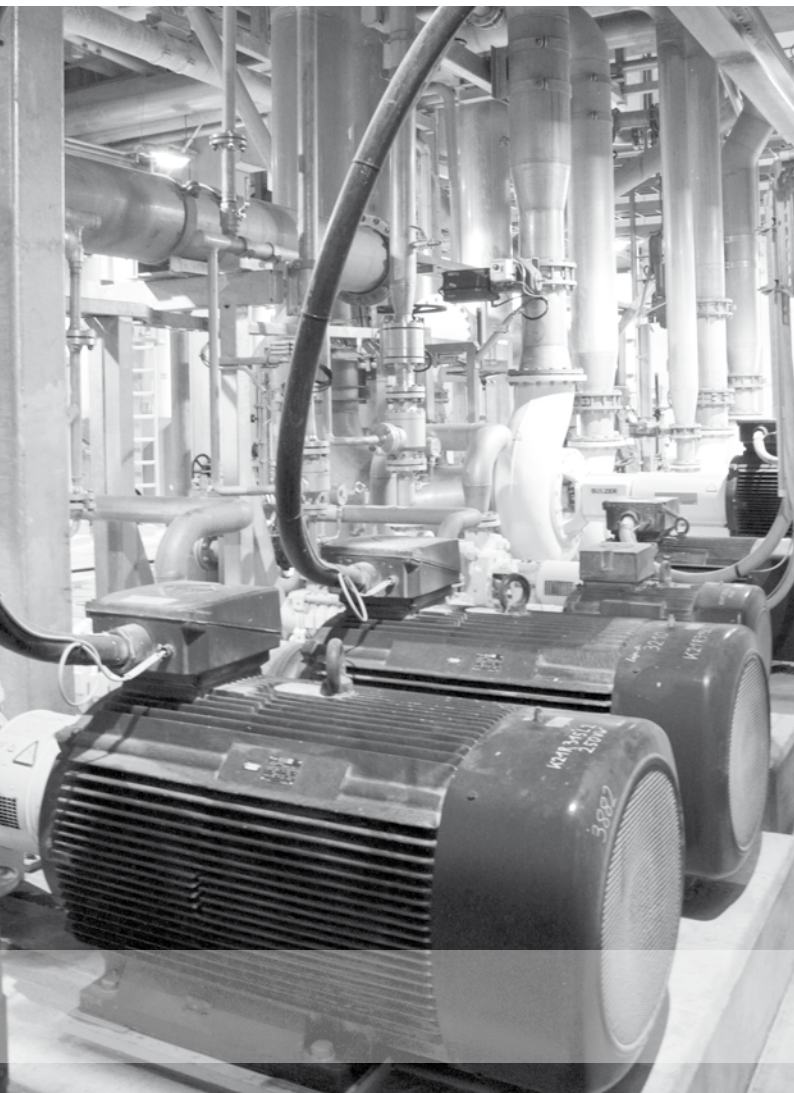




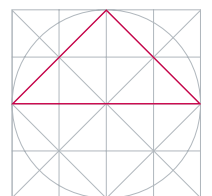
**ELECTRIC DRIVES**  
FOR EVERY DEMAND



# Energy saving motors

designed for Premium Efficiency IE3

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# Energy saving motors designed for Premium Efficiency IE3

Energy efficient drives for pumps, fans and compressors.

## **Economy and Ecology**

Motors with high efficiency from VEM

- › lower power consumption
- › help reduce energy costs
- › comply with European statutory regulations
- › are suitable for retrofitting of existing plants
- › spare natural resources by increased energy efficiency.

The efficiencies of all motors of the VEM energy efficient series comply with efficiency class IE3 according to IEC/EN 60034-30-1.

## **IE3 minimum efficiencies since 01.01.2015**

In the power range from 0.75 kW to 1000 kW new efficiency classes are valid for three-phase motors with 2-, 4-, 6- and 8-pole design according to IEC/EN 60034-30-1

### **Standard Efficiency IE1**

### **High Efficiency IE2**

### **Premium Efficiency IE3**

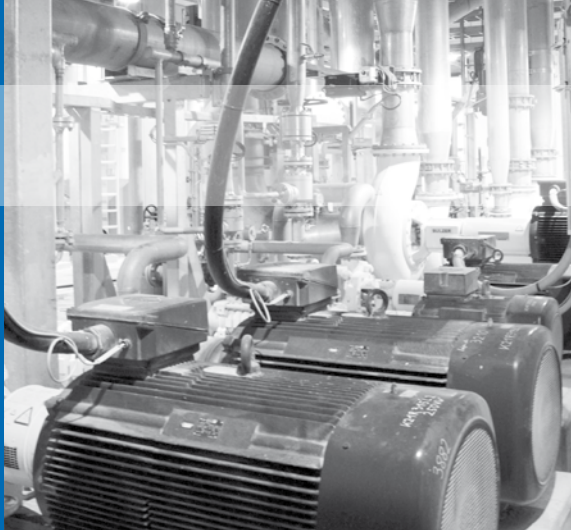
These classes in connection with the new standard for testing IEC/EN 60034-2-1 replace the former EFF-designation. In addition minimum efficiencies complying with regulation (EC) no. 640/2009 (dated 22<sup>nd</sup> July 2009) and regulation (EC) 4/2014 (dated 6<sup>th</sup> January 2014) have been effective for asynchronous motors since June 2011.

- › From 16.06.2011 until 31.12.2014 only IE2-motors were allowed in the product range for standard motors.

- › And since 01.01.2015 efficiency class IE2 has been replaced by IE3 in the power range from 7.5 kW up to 375 kW
- › **Efficiency class IE2 must then only be used in connection with inverter operation.**
- › After 01.01.2017 the power range is extended so that motors from 0.75 upwards are included. The use of IE2-motors is still permitted in connection with inverter operation.

## **Energy efficiency with expert knowledge from VEM**

Energy efficient motors from VEM are based on most advanced magnet materials, a special winding design and optimised bearings and ventilation. The output correlation and motor dimensions are the same as for the existing standard motors series, so that older motors and motors already placed into production can be replaced without problems by energy saving drives. With the participation at the Voluntary Agreement between CEMEP and European Union and the "Motor Challenge Programme" of EU, VEM has documented a clear statement for energy efficiency of all VEM products. This process is continued by implementation of the directive 2009/125/EC "setting of ecodesign requirements for energy-related products" and is clearly documented by the conversion of the product range to production of electric motors with efficiency classes IE2 and IE3.



Energy-saving motors of the class Premium Efficiency IE3 are designed for universal use. They play out their strengths above all in general mechanical engineering and wherever the expected operating hours are high.

<b>Series</b>	<b>IE3-W41R</b>
	<b>Mounting dimensions and output correlation according to DIN EN 50347</b>
Sizes	80 to 400
Power range	0.75 – 710 kW
Efficiency class	IE3 acc. to IEC/EN 60034-30-1 in the power range 0.75...710 kW, 2-, 4-,6- and 8-pole
Type of protection	IP 55 acc. to IEC/EN 60034-5
Type of construction	IM B3, IM B35, IM B5 and derived types of construction acc. to IEC/EN 60034-7
Duty type	Continuous duty, S1
Type of cooling	IC 411 acc. to IEC/EN 60034-6

kW	2-pole			4-pole			6-pole			8-pole		
	Type	η	m	Type	η	m	Type	η	m	Type	η	m
[kW]		[%]	[kg]		[%]	[kg]		[%]	[kg]		[%]	[kg]
0.75	IE3-W41R 80 K2	80.7	15	IE3-W41R 80 GX4	82.5	17	IE3-W41R 90 S6	78.9	30	IE3-W41R 100 L8	77	33.5
1.1	IE3-W41R 80 G2	82.7	18	IE3-W41R 90 S4	84.1	28	IE3-W41R 90 L6	81	30	IE3-W41R 100 LX8	79	36
1.5	IE3-W41R 90 S2	84.2	23.5	IE3-W41R 90 LX4	85.3	31	IE3-W41R 100 LX6	82.5	36	IE3-W41R 112 MZ8	78	46
2.2	IE3-W41R 90 L2	85.9	29	IE3-W41R 100 L4	86.7	45	IE3-W41R 112 MZ6	84.3	50	IE3-W41R 132 S8	80.5	65
3	IE3-W41R 100 L2	87.1	38	IE3-W41R 100 LZ4	87.7	50	IE3-W41R 132 S6	85.6	70	IE3-W41R 132 M8	83.5	70
4	IE3-W41R 112 M2T	88.1	46	IE3-W41R 112 M4	88.6	65	IE3-W41R 132 M6	86.8	75	IE3-W41R 160 M8	84.5	102
5.5	IE3-W41R 132 S2	89.2	65	IE3-W41R 132 S4	89.6	92	IE3-W41R 132 MX6	88	105	IE3-W41R 160 MX8	86	136
7.5	IE3-W41R 132 SX2	90.1	75	IE3-W41R 132 M4	90.4	110	IE3-W41R 160 M6	89.1	145	IE3-W41R 160 L8	88	155
11	IE3-W41R 160 M2	91.4	125	IE3-W41R 160 M4	91.4	120	IE3-W41R 160 L6C	90.3	168	IE3-W41R 180 L8	89	200
15	IE3-W41R 160 MX2	91.9	145	IE3-W41R 160 L4C	92.1	175	IE3-W41R 180 L6C	91.2	214	IE3-W41R 200 L8	89.2	235
18.5	IE3-W41R 160 L2	92.4	160	IE3-W41R 180 M4	92.6	200	IE3-W41R 200 L6	91.7	310	IE3-W41R 225 S8	90.5	310
22	IE3-W41R 180 M2C	92.7	214	IE3-W41R 180 L4	93	255	IE3-W41R 200 LX6C	92.2	321	IE3-W41R 225 M8	91	395
30	IE3-W41R 200 L2	93.3	305	IE3-W41R 200 L4C	93.6	320	IE3-W41R 225 M6	92.9	400	IE3-W41R 250 M8	92	520
37	IE3-W41R 200 LX2C	93.7	310	IE3-W41R 225 S4C	93.9	365	IE3-W41R 250 M6	93.3	545	IE3-W41R 280 S8	92	690
45	IE3-W41R 225 M2	94	375	IE3-W41R 225 M4	94.2	425	IE3-W41R 280 S6	93.7	695	IE3-W41R 280 M8	92.3	800
55	IE3-W41R 250 M2	94.6	510	IE3-W41R 250 M4	94.6	550	IE3-W41R 280 M6	94.1	815	IE3-W41R 315 S8	93.8	1060
75	IE3-W41R 280 S2	94.7	500	IE3-W41R 280 S4	95	605	IE3-W41R 315 S6	94.6	1060	IE3-W41R 315 M8	94.3	1100
90	IE3-W41R 280 M2	95	545	IE3-W41R 280 M4	95.2	760	IE3-W41R 315 M6	94.9	1100	IE3-W41R 315 MX8	94.6	1250
110	IE3-W41R 315 S2	95.2	750	IE3-W41R 315 S4	95.4	760	IE3-W41R 315 MX6	95.1	1210	IE3-W41R 315 L8	94.9	1550
132	IE3-W41R 315 M2	95.4	815	IE3-W41R 315 M4	95.6	850	IE3-W41R 315 L6	95.4	1550	IE3-W41R 355 M8	95.1	1850
160	IE3-W41R 315 MX2	95.7	1095	IE3-W41R 315 MX4	95.8	1120	IE3-W41R 355 M6	95.6	1850	IE3-W42R 355 MX8	95.4	2200
200	IE3-W41R 315 MY2	95.8	1200	IE3-W41R 315 MY4	96	1250	IE3-W41R 355 MX6	95.8	2200	IE3-W42R 355 L8	95.6	2400
250	IE3-W41R 315 L2	95.8	1460	IE3-W41R 315 L4	96.2	1450	IE3-W42R 355 L6	95.8	2400	IE3-W42R 355 LX8	95.6	2400
315	IE3-W41R 315 LX2	95.8	1700	IE3-W41R 315 LX4	96	1630	IE3-W42R 355 LX6	95.8	2400	IE3-W42R 400 MY8	95.6	2800
355	IE3-W41R 355 M2	96	2000	IE3-W41R 355M 4	96.2	2150	IE3-W42R 400 MY6	95.8	2900	IE3-W42R 400 M8	95.6	2900
400	IE3-W42R 355 MX2	95.8	2200	IE3-W42R 355 MX4	96	2400	IE3-W42R 400 M6	95.8	2900	IE3-W42R 400 MX8	95.6	3100
450	IE3-W42R 355 L2	95.8	2445	IE3-W42R 355 L4	96	2500	IE3-W42R 400 MX6	95.8	3100	IE3-W42R 400 L8	95.6	3400
500	IE3-W42R 355 L2	95.8	2445	IE3-W42R 355 L4	96	2500	IE3-W42R 400 L6	95.8	3400			
560	IE3-W42R 400 M2	95.8	3000	IE3-W42R 400 M4	96	2900						
630	IE3-W42R 400 MX2	95.8	3200	IE3-W42R 400 MX4	96	3100						
710	IE3-W42R 400 L2	95.8	3450	IE3-W42R 400 L4	96	3400						



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.