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Two speed motors available from Van Houcke and three speed motors from Obeki

Van Houcke Belgium stocks two speed motors up to D180 frame with regular replenishments and factory lead times of 5 working weeks. We can supply two speed motors in constant torque and also for fan duty in both Dahlander and separate winding executions from D63 frame to D315 frame.

Standard (Constant Torque) Two-speed motors:																	Go to: www.vanhoucke.co.uk/DataSheet & Drawings/2-speed motors										
Dahlander D/YY																											
Frame	63M	63M	71M	71M	80M	80M	90S	90L	100L	100L	112M	132S	132M	160M	160L	180L	200L	225S	225M	250M	280S	280M	315L	280M	280M	315L	315L
4pole kW	0.1	0.15	0.21	0.3	0.48	0.7	1.1	1.5	1.9	2.5	3.7	4.7	6.5	9.3	13	18	26	32	38	46	63	73	145	46	63	73	145
2pole kW	0.15	0.2	0.28	0.43	0.6	0.85	1.4	1.9	2.4	3.1	4.4	5.9	8	11.5	16	21.5	31	38	45	55	75	87	172	55	75	87	172
Separate windings																											
Frame	80M	90S	90L	100L	100L	112M	132S	132M	160M	160L	180L	180L	200L	225S	225M	250M	280S	280M	315S	315M	315L	315L	315L	315L	315L	315L	315L
6pole kW	0.26	0.38	0.55	0.9	1.1	1.5	2	2.8	4.3	6.3	9.5	11	16	21	25	32	45	54	62	75	90	90	90	90	90	90	90
4pole kW	0.4	0.65	0.9	1.3	1.7	2.3	3.1	4.3	6.6	9.5	14	16.5	24	31	37	47	66	80	92	110	132	132	132	132	132	132	132
Dahlander D/YY																											
Frame	71M	80M	90S	90L	100L	100L	112M	132S	132M	160M	160L	180L	200L	225S	225M	250M	280S	280M	315S	315M	315L	315L	315L	315L	315L	315L	315L
8pole kW	0.09	0.18	0.35	0.5	0.55	0.9	1.1	1.6	2.2	3.5	5.6	11	17	22	25	32	38	46	56	78	92	92	92	92	92	92	92
4pole kW	0.18	0.37	0.5	0.7	1.1	1.5	1.9	3.2	4.4	7	11	18	27	32	37	47	56	67	82	115	135	135	135	135	135	135	135

Fan Duty (Quadratic Load) Two-speed motors:																	Go to: www.vanhoucke.co.uk/DataSheet & Drawings/2-speed motors									
Dahlander D/YY																										
Frame	71M	80M	80M	90S	90L	100L	100L	112M	132S	132M	160M	160L	180L	200L	225S	225M	250M	280S	280M	315S	315M	315L	315L	315L	315L	315L
4pole kW	0.16	0.15	0.25	0.33	0.5	0.65	0.8	1.1	1.45	2	2.9	4.3	5.8	8.4	10.5	13	15	18	22	26	32	40	40	40	40	40
2pole kW	0.65	0.7	0.95	1.4	2	2.4	3.1	4.4	5.9	8	11.5	16	21.5	31	38	45	55	67	80	90	110	161	161	161	161	161
Separate windings																										
Frame	80M	80M	90S	90L	100L	100L	112M	132S	132M	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M	315S	315M	315L	315L	315L	315L	315L
6pole kW	0.12	0.18	0.29	0.38	0.6	0.8	0.9	1.2	1.7	2.5	3.7	5.5	6.5	9.5	12	14.5	18	25	30	33	45	55	55	55	55	55
4pole kW	0.4	0.55	0.8	1.1	1.7	2.1	3	3.9	5.4	7.2	12	16	19	26	34	40	52	70	82	92	120	170	170	170	170	170
Dahlander D/YY																										
Frame	71M	80M	80M	90S	90L	100L	100L	112M	132S	132M	160M	160L	180M	180L	200L	225S	225M	250M	280S	280M	315S	315M	315L	315L	315L	315L
8pole kW	0.06	0.1	0.15	0.22	0.33	0.5	0.65	0.9	1.1	1.4	2.2	3.3	4.5	5	7.5	9.5	11.5	14.5	19	23	26	30	35	35	35	35
4pole kW	0.3	0.5	0.7	1	1.5	2	2.5	3.6	4.7	6.4	9.5	14	16	18.5	28	35	42	52	70	83	95	115	140	140	140	140

With some applications such as crane duty there is still a requirement for three speed motors whereby the application is more suited than using a VSD and a single speed motor. Three speed motors have always been regarded as ‘super specials’ and many motor manufacturers discontinued the limited ranges they used to manufacture. Obeki in Spain manufacture many specials to customer requirements including PM motors and generators, IP67 and IP68, discontinued replacement motors and three speed motors are not unusual within the portfolio. We welcome all multi speed enquiries, many of

Lunch and learn with Van Houcke!

Some of our customers were unable to attend our training day or felt that the training was too generic for them, this was particularly the case for our OEM customers. Lunch and learn is an opportunity for our customers to discuss their particular motor requirement and any necessary training around it in detail. As long as we have access to a meeting room, we can prepare a presentation tailored specifically to our customer needs, staff can then drift in and out of the room over the lunchtime period to minimise disruption to the daily course of business. With a clearly set out agenda everyone wishing to attend a part (although full training session is encouraged) of the training and then return at the end of the session to discuss any specific questions they may have. The session is usually between noon and 2pm so that those wishing to attend can eat their lunch whilst attending any part of the training they wish. If you think you could benefit from lunch and learn then please do not hesitate to contact us to arrange a mutually suitable time and agree an agenda.

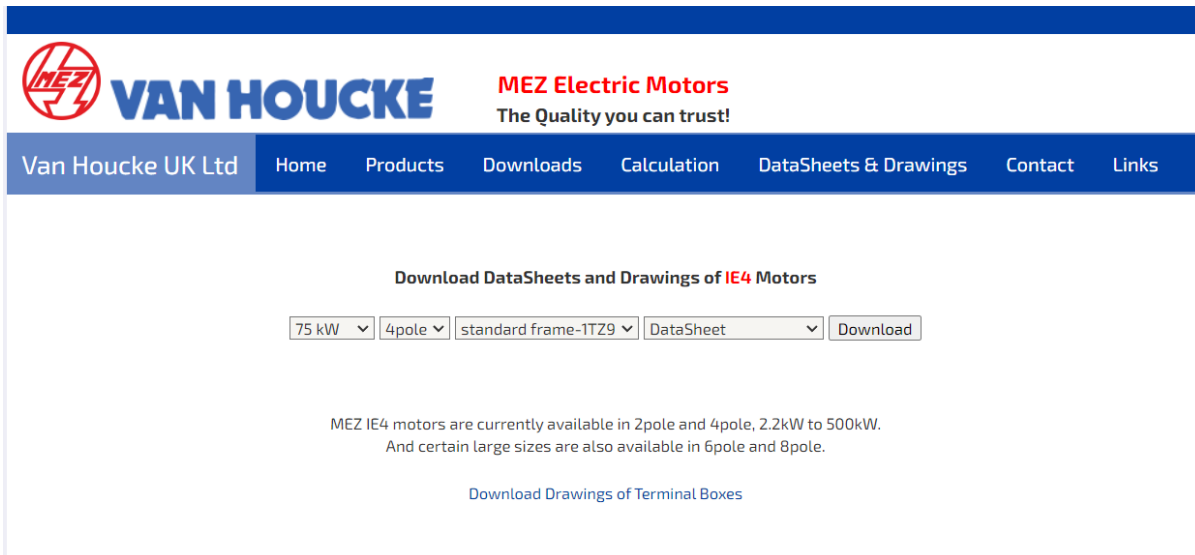


Download technical data from our website

This is a reminder that our website is loaded with technical data which you can download. Please note that these are only some of the technical data you can access, visit our website www.mez-motors.com for more information.

Datasheets and drawings:

IE2, IE3, IE4, ATEX zones 2, 21, 22, single phase, two speed, marine, WIMES compliant, brake motors, Kostal inverters, forced ventilation units and coolant pumps.



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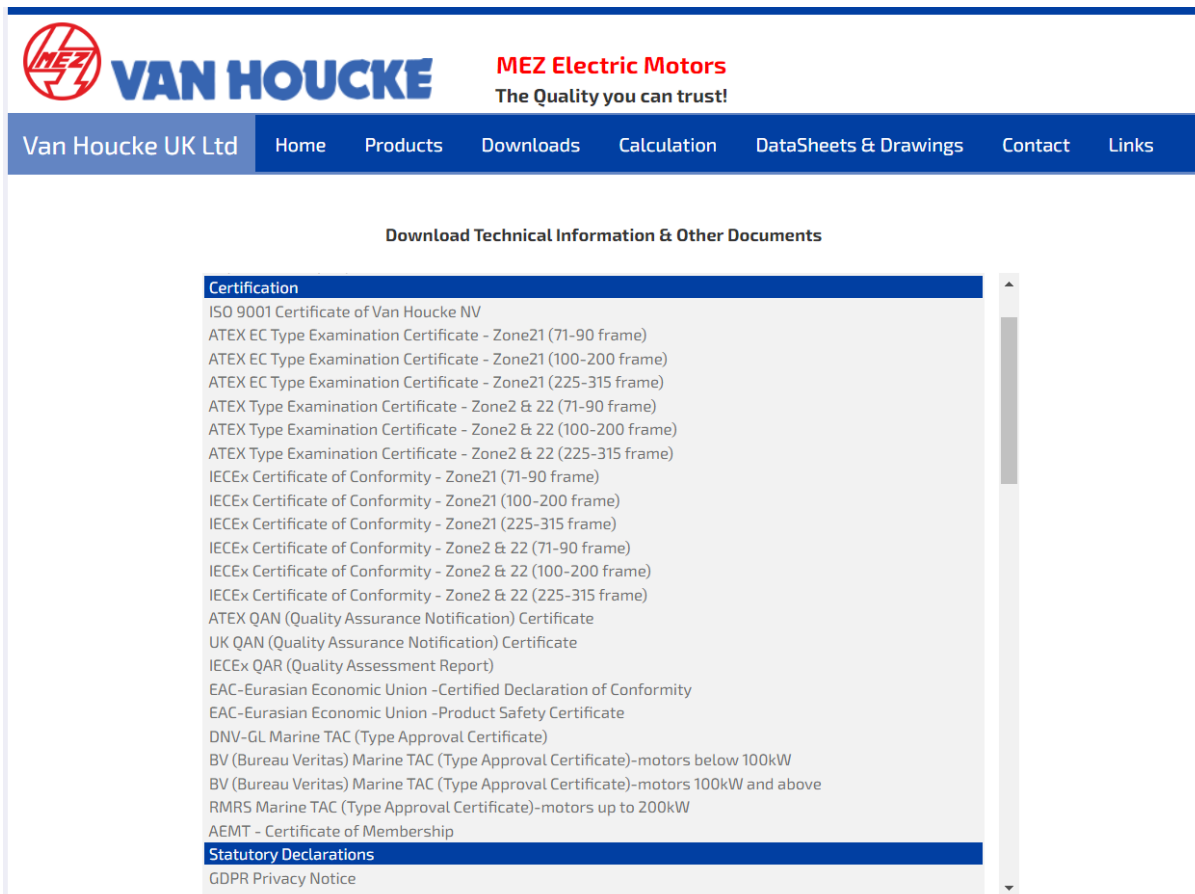
Download DataSheets and Drawings of IE4 Motors

75 kW | 4pole | standard frame-1TZ9 | DataSheet | Download

MEZ IE4 motors are currently available in 2pole and 4pole, 2.2kW to 500kW. And certain large sizes are also available in 6pole and 8pole.

[Download Drawings of Terminal Boxes](#)

Certifications:



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Download Technical Information & Other Documents

- Certification**
- ISO 9001 Certificate of Van Houcke NV
- ATEX EC Type Examination Certificate - Zone21 (71-90 frame)
- ATEX EC Type Examination Certificate - Zone21 (100-200 frame)
- ATEX EC Type Examination Certificate - Zone21 (225-315 frame)
- ATEX Type Examination Certificate - Zone2 & 22 (71-90 frame)
- ATEX Type Examination Certificate - Zone2 & 22 (100-200 frame)
- ATEX Type Examination Certificate - Zone2 & 22 (225-315 frame)
- IECEX Certificate of Conformity - Zone21 (71-90 frame)
- IECEX Certificate of Conformity - Zone21 (100-200 frame)
- IECEX Certificate of Conformity - Zone21 (225-315 frame)
- IECEX Certificate of Conformity - Zone2 & 22 (71-90 frame)
- IECEX Certificate of Conformity - Zone2 & 22 (100-200 frame)
- IECEX Certificate of Conformity - Zone2 & 22 (225-315 frame)
- ATEX QAN (Quality Assurance Notification) Certificate
- UK QAN (Quality Assurance Notification) Certificate
- IECEX QAR (Quality Assessment Report)
- EAC-Eurasian Economic Union -Certified Declaration of Conformity
- EAC-Eurasian Economic Union -Product Safety Certificate
- DNV-GL Marine TAC (Type Approval Certificate)
- BV (Bureau Veritas) Marine TAC (Type Approval Certificate)-motors below 100kW
- BV (Bureau Veritas) Marine TAC (Type Approval Certificate)-motors 100kW and above
- RMRS Marine TAC (Type Approval Certificate)-motors up to 200kW
- AEMT - Certificate of Membership
- Statutory Declarations**
- GDPR Privacy Notice



Many other documents:

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Download Technical Information & Other Documents

- Electric Motor Disposal & Recycling Guidelines
- Paint Specification - Three-phase motors
- Paint Specification - Single-phase motors
- List of RAL shades available for MEZ electric motors [Open Search Page](#)
- Wiring Diagrams**
- Wiring Diagram - Three-phase motors
- Wiring Diagram - Three-phase motors (with accessories)
- Wiring Diagram - Single-phase motors
- Other Documents**
- Multiple Dimensions Sheet - Your tool for Enquiries
- [Interactive Electric Motor Specification Form](#) - Your tool for Enquiries
- Motor Mounting Explanation & Basic Dimensions
- Motor Mounting Positions - Explanation
- Auxiliary Terminal Boxes - Availability
- Degree of Protection (IP Rating)
- Motor Cooling Systems (IC Rating)
- Insulation/temperature classes (explanation)
- Thermal protection (explanation)
- MEZ motors' insulation system
- Voltage & Frequency Limits as per IEC 60034-1 (explanation)
- Vibration levels of Electric Motors and Vibration Classification of installed motors
- Shaft/Flange Concentricity, Perpendicularity and Runouts
- Insulated bearing / Insulated shaft as cheaper option
- Located (fixed) bearing methods (explanation)
- Corrosion Agresivity Classification - Environment Categories
- Induction motor Torque Curve (explanation and terminology)
- Inspections and Tests carried out on Electric Motors

Torque/speed diagrams for self ventilated and forced ventilated motors:

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Torque/Speed Model of **TEFC Self-ventilated (IC411)** Squirrel Cage Induction Motor controlled with Frequency Inverter.
 Reduced Torque up to 80% of the Base Frequency and Constant Power (field weakening) after the Base Frequency (nominal speed) point.


Enter Motor Output and Speed:

The curve with zero deration is valid for class F/F.

If class F/B is to be maintained derate the Power by 10% (enter '10' in the Deration % field)!

Motor [kW]	Motor [rpm]	Deration [%]	B/down Torque [Nm]
45	2987	10	

Calculations of duty cycles:



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IE1 Motors S2 Duty

IE1 Motors S3 Duty

IE1 Motors S6 Duty

IE2 Motors S2 Duty

IE2 Motors S3 Duty

IE2 Motors S6 Duty

IE3 Motors S2 Duty

IE3 Motors S3 Duty

IE3 Motors S6 Duty

Duty Types (Duty Cycles)

The power output values specified in Catalogues and DataSheets (which can be downloaded from this website) are based on maximum power at continuous load at what the thermal stability of the motor winding is reached. The continuous load is referred to as S1 Duty Cycle. Electric motors can be used at various Duty Cycles, short-term or intermittent (S2, S3, S4, etc.). A higher power output may be achieved whilst used at short-term or intermittent duty. The main factor for determination of the maximum power output at a short-term or intermittent duties is the temperature rise, which when added to the (standard) ambient temperature of 40°C must not exceed the limit temperature of the insulation material used in the electric motor winding.


The Duty Cycles (S1 to S10) have been defined in IEC 60034-1 standard indicating the run cycles of electric motors and in case of the short or intermittent duty also the frequency of the run periods.

The most frequently Duty Cycles specified by our customers are:
 Duty type S2 – Short-time duty
 Duty type S3 – Intermittent periodic duty
 Duty type S6 – Continuous-operation periodic duty

In order to determine the power at these Duty Cycles the following constants are needed:
 T - Thermal time constant
 ko - Equivalent losses ratio (no-load/load)
 h - Heat dissipation ratio (ventilated/non-ventilated motor)

The motor data of MEZ IE1, IE2 and IE3 motors and the relevant constants have been loaded in this webpage and the calculation can

Power de rating based on ambient temperature or altitude:



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Power Output Reduction based on Ambient Temperature and Altitude

Motor power output is calculated for ambient temperature of max 40°C. If a motor needs to be used in an ambient temperature higher than that the power output of the motor will be reduced depending on the required temperature. As a general guidance please select the required ambient temperature (in increments of 5°C), the standard motor output and the altitude the motor is to be installed in. The reduced power output will be displayed.

60°C

7.5 kW

Altitude 1000 metres

Show

At the Ambient Temperature of 60°C the standard 7.5 kW motor will be able to deliver 6.15 kW.

This is valid for motors with Insulation class F, Temperature rise B and for Altitude 1000 metres.

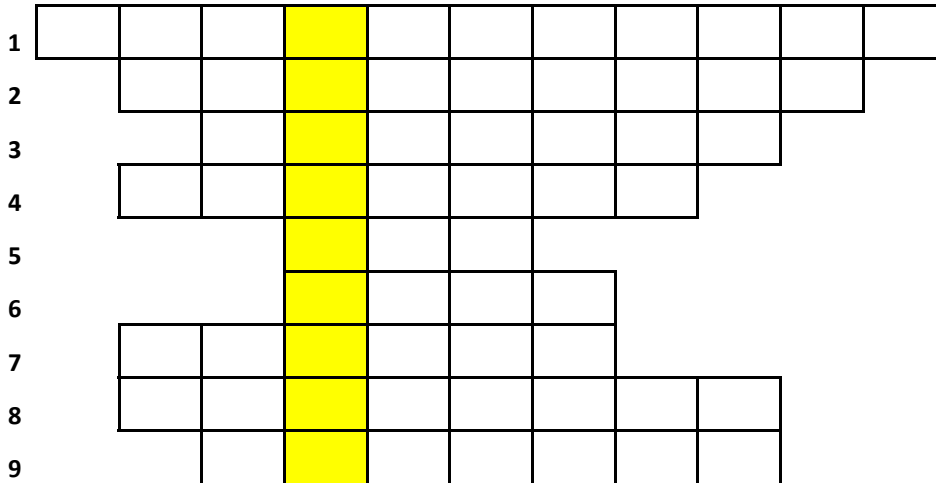
This calculator can be used for MEZ ATEX electric motors (Zone2, Zone22, Zone2+22) up to 60°C.

To be used for general guidance only. For more information please contact Van Houcke.

If you need to check the Motor Power at 60Hz or a special Motor Power, please use this [Power Reduction Calculator](#).

Crossword- win a box of chocolates

The first person to email us at sales@mez-motors.com with the correct answer of the below crossword will receive a box of chocolates with their next order.



1. What is required in order to start an electric motor?
2. What is a type of two speed motor winding?
3. What is measured in Amps?
4. What is the first name of the person who was contributed as the inventor of the electric motor?
5. What are the units of resistance?
6. Capital of Peru?
7. A year is split into these in assimilation to the weather.
8. .One of the reasons for de rating a motor?
9. In which country is the Van Houcke HQ located in?