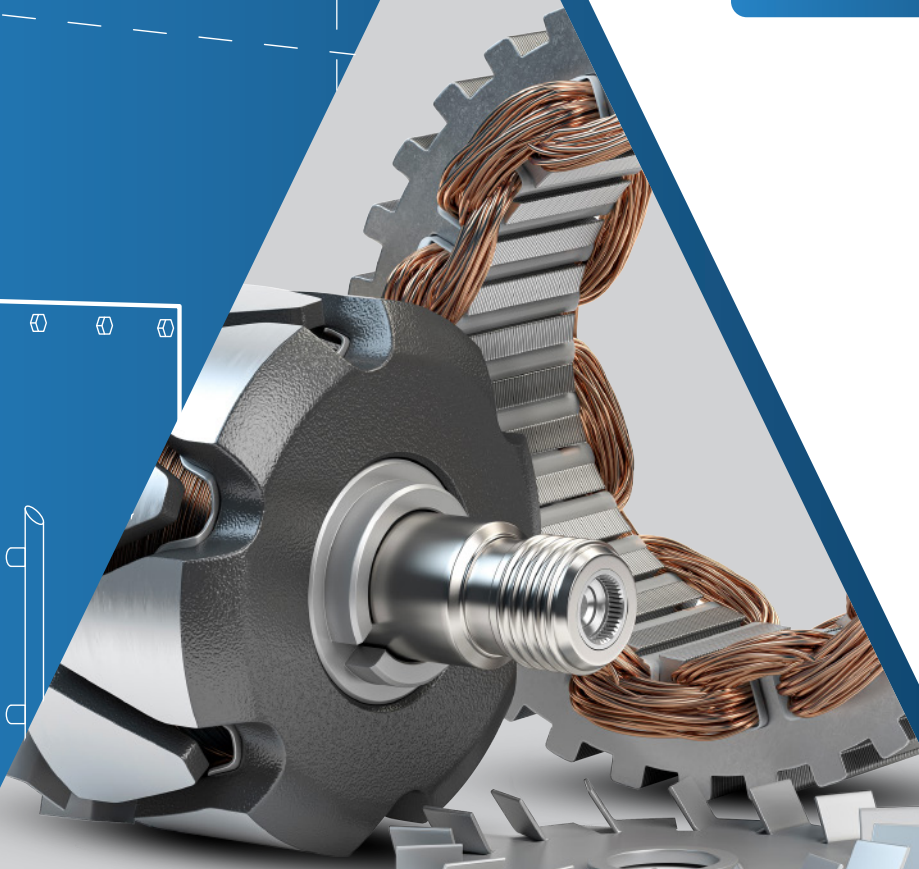




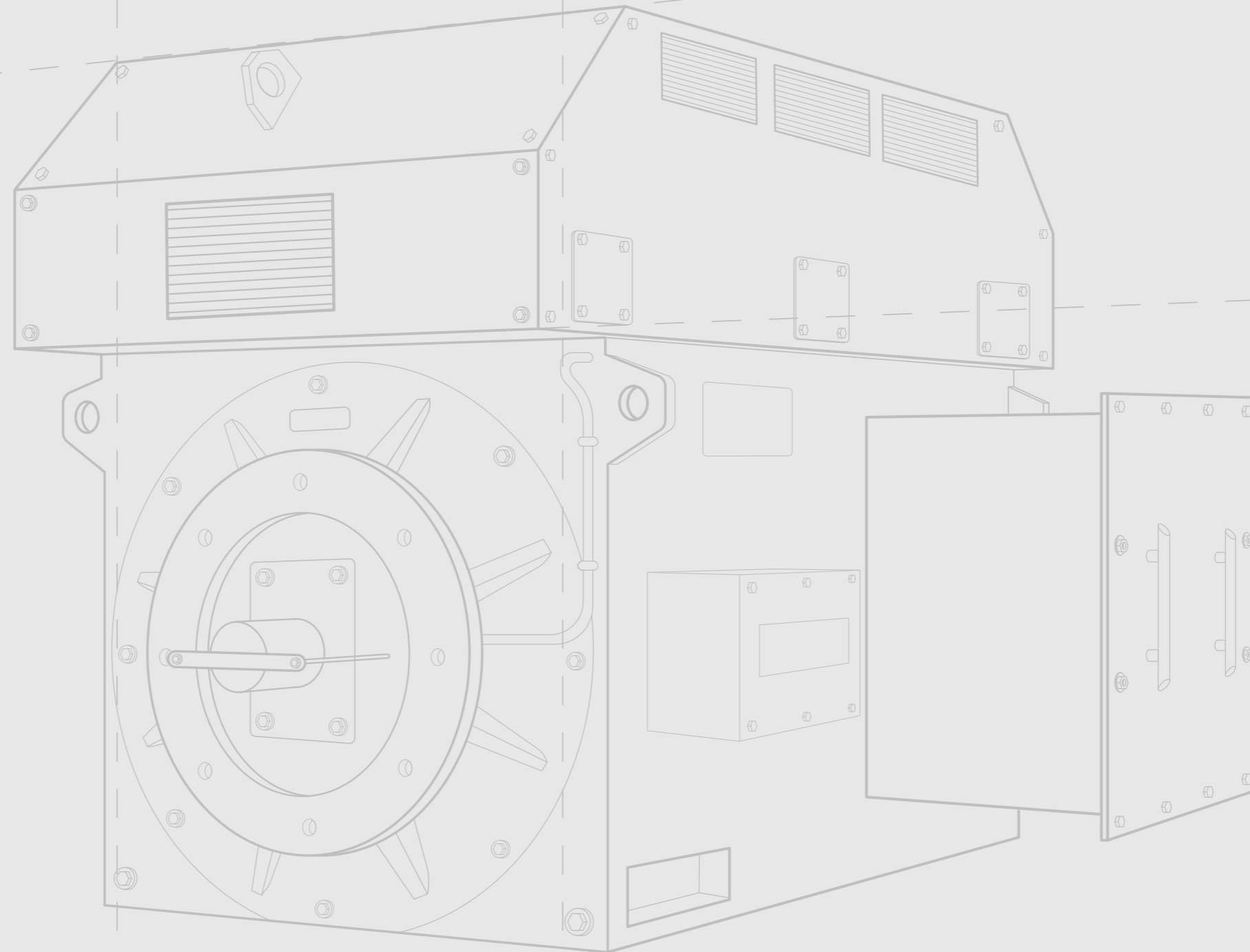
Elektrim **MOTORS**

Medium Voltage
Motor Catalogue

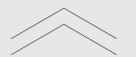


Elektrim **MOTORS**

MEDIUM VOLTAGE
CATALOGUE



PROJECT
REFERENCE



SCAN
HERE FOR
DIGITAL
CONTENT



WEBSITE

Elektrim TECHTOP

Elektrim aims to provide our customers with the highest quality products on a global scale. Our top priority is to deliver excellent customer service to ensure customers' satisfaction. To achieve this, we have the best after-sales policy in the industry, as well as a team of professional technical personnel and experienced sales representatives.

Established in 1981 as Elektrim Motors & Machinery Pte Ltd, our company has emerged as a prominent powerhouse in South East Asia Pacific over the last four decades. Our motto is to be **The Driving Force Behind Every Machine**. We have built a strong regional presence across more than 11 Asian countries, with branch offices situated in the East and West of Malaysia, in the North and South of Vietnam, and formed partnerships with agents and distributors across the rest of the region. Our customers' needs are always well attended to.

Our brand is the No. 1 specialized brand in supplying electric motors to various industries such as the Palm Oil Industry, Water & Oil Pump, Fire Pump, and Quarry Mining. Our brand is well recognized and trusted in sectors like Rubber Machinery, Industrial Fan, Marine & Offshore Engineering, Agricultural, Buildings, Cement and particularly among OEM production.

Our customizable medium voltage motors are engineered to meet the specific needs of industries like mining, cement, sugar, paper and water. With robust designs and flexible configurations, they deliver unmatched efficiency and durability in even the most demanding applications. Empower your operations with motors built to perform.



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USAFE TRADING PTE LTD

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PT BIOTANI INDONESIA

SRI LANKA
MOUNT LAVINIA

SM INTERNATIONAL
PTE., LTD

01

ELEKTRIM
MEDIUM
VOLTAGE
MOTORS

03

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EM SERIES
TEFC

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CACA SERIES
IC611, IC616

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CACW SERIES
IC81W, IC86W

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ACCESSORIES



ELEKTRIM MOTORS

MEDIUM VOLTAGE

Elektrim medium voltage motor line is engineered for heavy-duty industrial applications and effortlessly performs in compressors, pumps, and fan applications. These motors deliver exceptional performance and reliability, even in the most challenging operating conditions.

EXCEPTIONAL FLEXIBILITY

Elektrim medium voltage motors provide outstanding versatility with various configurations. They can be customized as standard totally enclosed fan cooled (TEFC), forced cooled models (IC06, IC86W, IC616, IC666), or enclosed air-air cooled (IC611) and air-water cooled (IC81W) options.

SPACE-SAVING DESIGN

Featuring a compact and lightweight design, **Elektrim** medium voltage motors are built with reduced dimensions and a smaller footprint, allowing for efficient use of space on the skid or base where they are installed. These characteristics make them some of the most space-efficient modular motors available.

BUILT TO WITHSTAND HARSH CONDITIONS

Designed for demanding environments, these motors come with high-quality cast iron end shields, a sturdy frame, and a stiff shaft that avoids critical frequencies below rated speed, resulting in minimal vibration and noise.

ADVANCED ENGINEERING DESIGN

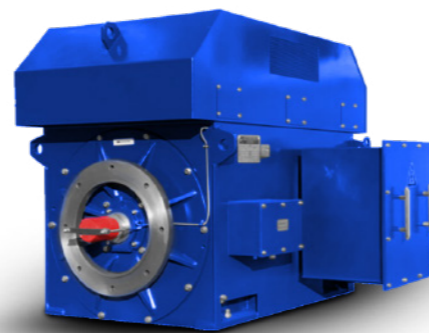
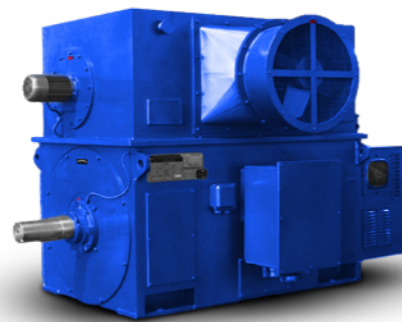
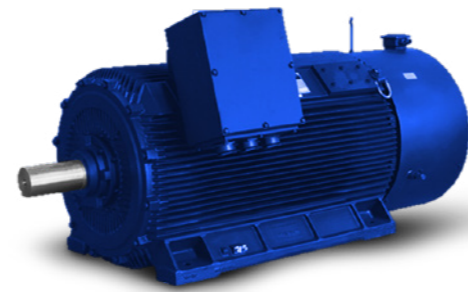
Our engineers have utilized advanced engineering design for rotor and stator lamination, low-loss fans, and an optimized heat exchanger in **Elektrim** motors. This innovative approach enhances power density (output per weight), making them a highly energy-efficient choice.

RELIABLE PERFORMANCE

Engineered for continuous, uninterrupted operation, **Elektrim** medium voltage motors are designed to be easy to build, assemble, and install, ensuring exceptional reliability in challenging conditions.

COMPATIBLE WITH VFDS

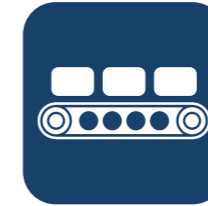
Elektrim medium voltage motors are designed to work seamlessly with any medium voltage drive. They can operate at any speed within their rated range and provide improved performance.



APPLICATIONS



CONVEYOR BELTS



ROLLER TABLES



FANS / EXHAUSTERS



WINDING / UNCOILING MACHINES



GRANULATORS / PALLETISERS



CENTRIFUGAL PUMPS



DRYERS / ROTARY OVENS



STIRRERS / MIXERS



PRODUCT TYPE FEATURES

1. STANDARDS

Elektrim medium voltage motors are built to adhere to the IEC EN 60034-1 standard and fulfil the criteria and guidelines of other applicable standards, as outlined in Table 1.

Standard	Title
IEC EN 60034-1	Rotating electrical machines Part 1: Rating and performance
IEC 60034-2-1	Rotating electrical machines Part 2-1: Standard methods for determining losses and efficiency from tests (excluding machines for traction vehicles)
IEC 60034-8	Rotating electrical machines Part 8: Terminal markings and direction of rotation
IEC 60034-7	Rotating electrical machines Part 7: Classification of types of construction, mounting arrangements and terminal box position (IM Code)
IEC 60034-11	Rotating electrical machines Part 11: Thermal protection
IEC 60034-6	Rotating electrical machines Part 6: Methods of cooling (IC Code)
IEC 60034-5	Rotating electrical machines Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code) - Classification
IEC 60034-14	Rotating electrical machines - Part 14: Mechanical vibration of certain machines with shaft heights 56 mm and higher - Measurement, evaluation and limits of vibration severity
IEC 60034-9	Rotating electrical machines Part 9: Noise limits
IEC 60034-12	Rotating electrical machines - Part 12: Starting performance of single-speed three-phase cage induction motors
IEC 60038	IEC standard voltages

Table 1 - Standards observed in the motor design.

2. ENVIRONMENT

The rated outputs provided in the electrical data tables of this catalogue are based on continuous duty, S1, as per IEC 60034-1, and under these conditions:

- Ambient temperature between -30 °C and +40 °C.
- Altitudes up to 1,000 meters above sea level (masl).

If operating conditions deviate from these temperature and altitude ranges, you will need to use the derating factors listed in Table 2 to determine the maximum useful power output.

T (°C)	Altitude (m)								
	1000	1500	2000	2500	3000	3500	4000	4500	5000
10							0,97	0,92	0,88
15						0,98	0,94	0,90	0,86
20				1,00	0,95	0,91	0,87	0,83	
25			1,00	0,95	0,93	0,89	0,85	0,81	
30		1,00	0,96	0,92	0,90	0,86	0,82	0,78	
35	1,00	0,95	0,93	0,90	0,88	0,84	0,80	0,75	
40	1,00	0,97	0,94	0,90	0,86	0,82	0,80	0,76	0,71
45	0,95	0,92	0,90	0,88	0,85	0,81	0,78	0,74	0,69
50	0,92	0,90	0,87	0,85	0,82	0,80	0,77	0,72	0,67
55	0,88	0,85	0,83	0,81	0,78	0,76	0,73	0,70	0,65
60	0,83	0,82	0,80	0,77	0,75	0,73	0,70	0,67	0,62
65	0,79	0,76	0,74	0,72	0,70	0,68	0,66	0,62	0,58
70	0,74	0,71	0,69	0,67	0,66	0,64	0,62	0,58	0,53
75	0,70	0,68	0,66	0,64	0,62	0,60	0,58	0,53	0,49
80	0,65	0,64	0,62	0,60	0,58	0,56	0,55	0,48	0,44

Table 2 - Derating factor considering altitude and ambient temperature.

3. NAMEPLATE

The primary nameplate contains information about the motor's mounting features and performance, along with the serial number and year of manufacture.

TYPE		SERIAL NO.	
EM 500 - 4		24060900 K	
POWER	KW	SPEED	RPM
1000		1488	
IP	IM	IC	FREQ.
55	B3	411	50 Hz
DUTY	S.F	P.F	INS
S1	1.0	0.86	F
STATOR	V	A	CONN
6000		116.7	Y
EFF %	EFF %	WEIGHT	
95.9		5700 kg	
ROTOR	V	A	
STD	Year of Manufacture		
IEC60034	2024		
ELEKTRIM TECHTOP MOTORS PTE LTD			
SINGAPORE			

THE
**DRIVING
FORCE**
BEHIND EVERY MACHINE



PRODUCT TYPE FEATURES

4. DEGREE OF PROTECTION

The IEC 60034-5 standard defines the degrees of protection for electrical equipment using the IP designation, followed by two numerals. Elektrim medium voltage motors come with protection rating of IP54. Other protection ratings upon request.

First characteristic numeral	
1 st charact. numeral	Definition
0	No-protected machine
1	Machine protected against solid objects greater than 50 mm
2	Machine protected against solid objects greater than 12 mm
3	Machine protected against solid objects greater than 2,5 mm
4	Machine protected against solid objects greater than 1,0 mm
5	Dust-protected machine
6	Dust-tight machine

Table 3 - The first numeral in the characteristic code represents the degree of protection against the entry of solid objects and accidental or unintended contact.

Second characteristic numeral	
2 nd charact. numeral	Definition
0	No-protected machine
1	Machine protected against dripping water
2	Machine protected against dripping water when tilted up to 15°
3	Water falling as a spray at any angle up to 60° from the vertical
4	Water splashing against the machine from any direction
5	Water protected by nozzle against the enclosure from any direction
6	Water from heavy seas or water projected in powerful jets
7	Machine protected against the effects of immersion
8	Machine protected against the effects of continuous submersion

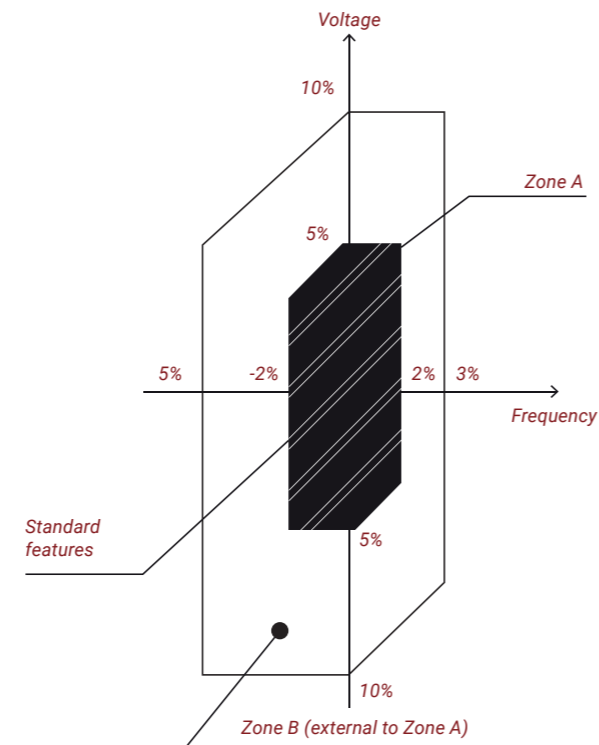
Table 4 - The second numeral in the characteristic code indicates the level of protection against water ingress into the machine.

5. VOLTAGE/FREQUENCY

According to IEC 60034-1, voltage and frequency variations are classified into Zone A and Zone B.

A motor should be able to consistently perform its primary function within Zone A conditions, although it might not achieve its full rated performance and could display some deviations. Temperature rises may be higher than those observed at rated voltage and frequency.

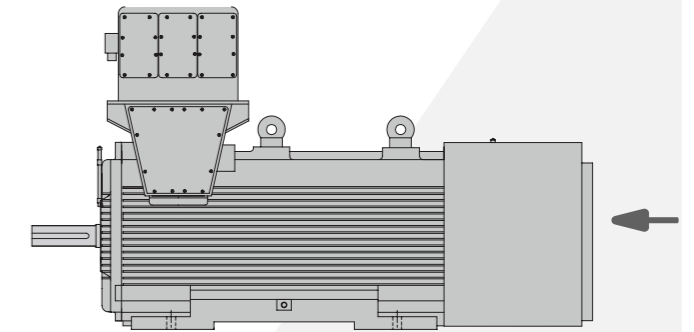
In Zone B, the motor must still function effectively, but it may experience greater deviations from the rated performance compared to Zone A. Temperature increases may exceed those at rated conditions, and extended operation in Zone B is not recommended.



Limits of voltage and frequency variations during operation.

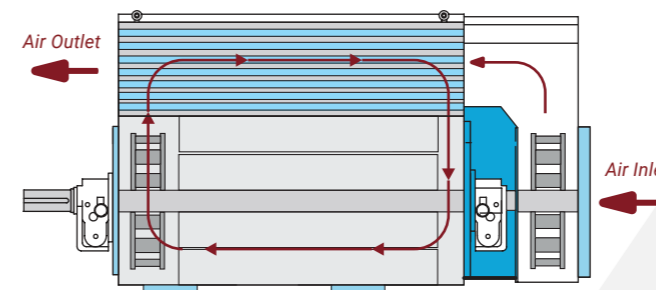
6. VENTILATION SYSTEM

Elektrim medium voltage motors comply with the Totally Enclosed Fan Cooled (TEFC-IC-411) standards specified in IEC 60034-6. An optional model with forced ventilation (IC 416) is offered, and non-ventilated (TENV) or Air Over (TEAO) versions can be provided upon request.



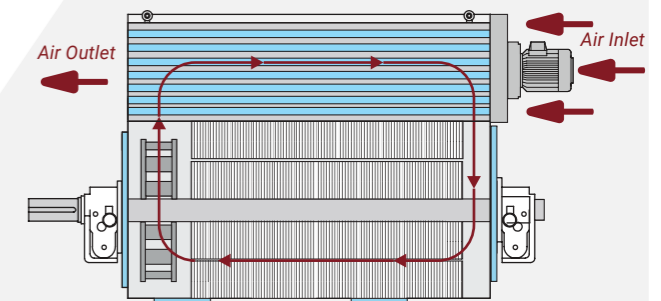
Naturally Cooled

Ribbed motors (IP44 and higher) can be:
IC411 - TEFC - Totally Enclosed Fan Cooled (own fan ventilated)



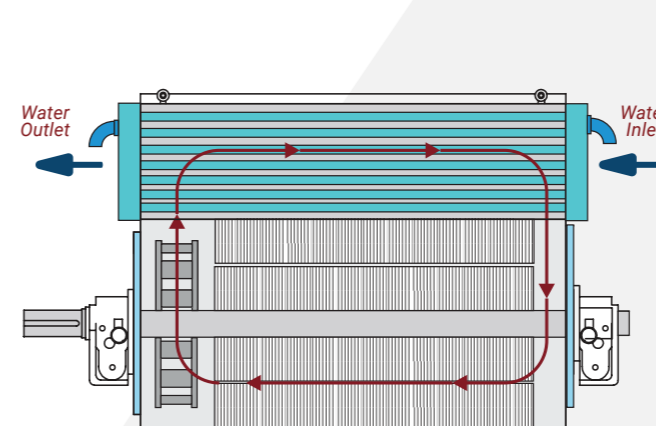
Air Cooled

IC611 - (formerly IC 0161) - CACA - Air-Air cooling with integral fan on motor's shaft inside stator and heat exchanger with open external circuit with fan on motor's shaft.



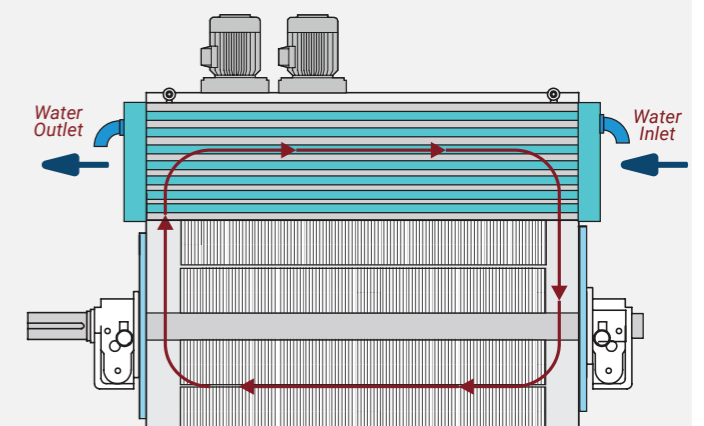
Air Cooled

IC616 - Air-Air cooling with integral fan on motor's shaft inside stator and heat exchanger with open external circuit with force ventilation.



Water Cooled

IC81W - Air-Water cooling with integral fan on motor's shaft inside stator and water cooled heat exchanger.



Water Cooled

IC86W - Air-Water cooling with force ventilation system inside stator and water cooled heat exchanger.

CONSTRUCTION FEATURES

Frame		315	355	400	450	500	560	
Mechanical Features								
Mounting		B3R / B35R / B3L / B35L						
Frame	Material	Carbon Steel / Cast Iron FC-200						
Degree of Protection	WPI/ODP	IP23						
	WPII	IP24						
	TEAAC/TEWAC	IP55						
Grounding		Double grounding (1 terminal box + 1 frame)						
Cooling Method		ODP / WPI / WPII (IC01) - TEAAC (IC611) TEWAC (IC81W) - Forced Ventilation (IC06/IC86W/ IC616/IC666)						
Internal Fan	Material	Carbon Steel / Aluminum						
External Fan		Carbon Steel / Aluminum						
Cooling box		Carbon Steel 1010/20						
Endshields		Carbon Steel / Cast Iron (FC-200)						
Drain plug		Plastic threaded plug						
Antifriction Bearing	Shielded/clearance DE 2P	C4						
	Shielded/clearance DE 4P-6P-8P	C3						
	Shielded/clearance NDE 2P	C4						
	Shielded/clearance NDE 4P-6P-8P	C3						
	Locating bearing		Fixed on DE with external and internal bearing cap and preload spring NDE					
	Drive end	2P	6218	6218	6220	6222	6222	6224
Non-drive end	4P-6P-8P	6220	6224	6228	6224	6230	6230	
	2P	6218	6218	6220	6222	6222	6224	
Non-drive end	4P-6P-8P	6218	6218	6220	6222	6222	6224	
	Axial clearance		6mm					
Sleeve bearings*	Locating bearing		Located both bearings					
	Drive end	2P	9-80	9-80	9-80	9-100	9-100	9-100
		4P-6P-8P	9-80	9-80	9-80	9-100	14-140	14-140
	Non-drive end	2P	9-80	9-80	9-80	9-100	9-100	9-100
		4P-6P-8P	9-80	9-80	9-80	9-100	9-100	9-100
	Bearing seal	IP23 / IP24	N/A					
IP55		Taconite Labyrinth						
Lubrication	Type of grease	2P	Polyrex EM103			Shell Gadus S3 T100 (Stamina RL2)		
		4P-6P-8P				Polyrex EM103		
	Grease fitting		With grease fitting					
Terminal box	Material	Carbon Steel / Cast Iron (FC-200)						
Lead inlet	Main (medium voltage)	Size	2 x M63 x 1.5					
	Main (high voltage)		3 x M20 x 1.5					
	Additional		Plastic threaded plug					
	Plug							
Shaft	Material	AISI 4140						
	2P	M20						
		4P-6P-8P	M24					
Shaft key		B key			C key			
Vibration level		Grade A						
Balancing without/half/full key		With 1/2 key						
Nameplate	Material	Nameplate Material Laser printed Stainless Steel AISI 304						
Painting	Type	214P						
	Colour	RAL 5009						
Electrical Features								
Design								
Voltage	Single speed	380 V to 6.6 kV	380 V to 10000 V					
Winding	Impregnation	VPI						
	Insulation Class	F (DT 80 K)						
Space Heater		110-127 V / 200-240 /400-440 V						
Service Factor		1.0						
Ambient Temperature	Maximum	+40 °C						
	Minimum	-20 °C						
Starting Method		DOL						
Rotor		Die cast Aluminium / Copper bar						
Winding thermal protection		Pt-100 - 3 wires (2 per phase)						
Bearing thermal protection		Pt-100 - 3 wires (1 per bearing)						

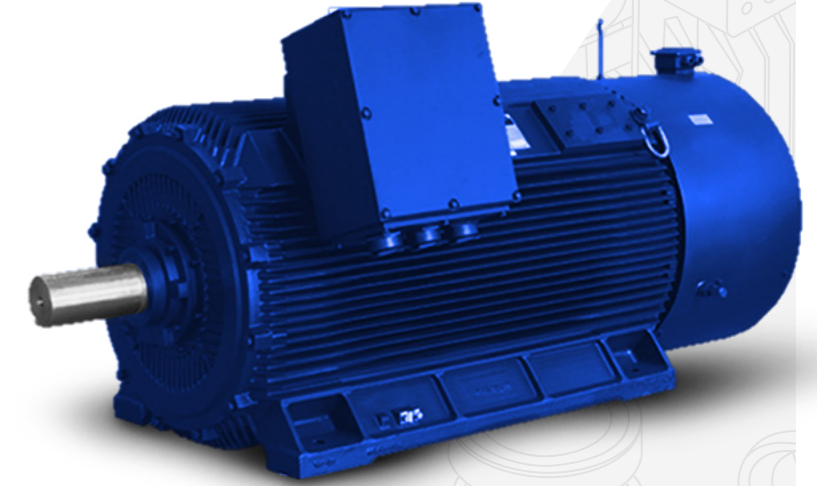
Disclaimer: The information provided for bearing specifications is subject to change without notice. Sleeve bearing can be changed according to design. For the most accurate and up-to-date technical details, please contact your sales representative.

EM SERIES

MEDIUM VOLTAGE MOTORS
NATURALLY COOLED (TEFC)

Elektrim medium voltage induction motors are efficient, quiet, and easy to install. They're built to be strong but light, and they produce very little noise or vibration.

These reliable motors can be used in many different industries, including general applications like compressors, pumps, fans, and machines, as well as heavy-duty applications like mining, quarrying, petrochemical, water treatment, sugar, cement, and paper industries. EM series motors are versatile and high-performance, making them perfect for a wide range of industrial needs.



MODEL DATA

FEATURES

- UP TO 560 FRAME
- UP TO 10KV
- UP TO 1600KW
- FOOT MOUNTING
- COOLING METHOD IC411

EM 2 POLE

Frame	Power (kW)	Rate Current (A)	Rated Speed (RPM)	Efficiency (%)	Power Factor (cosφ)	Starting Torque (multiplier)	Starting Current (multiplier)	Maximum Torque (multiplier)	Vibration (mm/s)	Noise Level (dB(A))	Moment of Inertia (kgm ²)	Weight (kg)
EM-3551-2	185	22.6	2985	93.9	0.84	0.7	7	2	2.8	109	8	2035
EM-3552-2	200	24.4	2985	94	0.84	0.7	7	2	2.8	109	8.5	2075
EM-3553-2	220	26.8	2985	94.2	0.84	0.7	7	2	2.8	109	9.5	2160
EM-3554-2	250	30.3	2985	94.4	0.84	0.7	7	2	2.8	111	10	2215
EM-3555-2	280	33.1	2985	94.6	0.86	0.7	7	2	2.8	111	11	2280
EM-4001-2	315	37.2	2985	94.8	0.86	0.7	7	2	2.8	111	17	2630
EM-4002-2	355	41.9	2985	94.9	0.86	0.7	7	2	2.8	111	18	2700
EM-4003-2	400	47.1	2985	95.1	0.86	0.7	7	2	2.8	111	19.5	2830
EM-4004-2	450	52.9	2985	95.2	0.86	0.7	7	2	2.8	111	21	2920
EM-4501-2	500	58	2985	95.3	0.87	0.7	7	2	2.8	111	22	3200
EM-4502-2	560	64.9	2985	95.4	0.87	0.7	7	2	2.8	112	24	3300
EM-4503-2	630	73	2985	95.5	0.87	0.7	7	2	2.8	112	27	3500
EM-4504-2	710	82.1	2985	95.7	0.87	0.7	7	2	2.8	112	30	3600
EM-5001-2	800	91.5	2985	95.6	0.88	0.7	7	2	2.8	112	61	5360
EM-5002-2	900	103	2985	95.7	0.88	0.7	7	2	2.8	112	65	5500
EM-5003-2	1000	114	2985	95.9	0.88	0.7	7	2	2.8	112	69	5640
EM-5004-2	1120	128	2985	96	0.88	0.7	7	2	2.8	113	75	5900
EM-5601-2	1250	141	2985	96.1	0.89	0.7	7	2	2.8	113	111	5800
EM-5602-2	1400	157	2985	96.3	0.89	0.7	7	2	2.8	113	119	5860
EM-5603-2	1600	179	2985	96.5	0.89	0.7	7	2	2.8	113	127	5930

EM 4 POLE

Frame	Power (kW)	Rate Current (A)	Rated Speed (RPM)	Efficiency (%)	Power Factor (cosφ)	Starting Torque (multiplier)	Starting Current (multiplier)	Maximum Torque (multiplier)	Vibration (mm/s)	Noise Level dB(A)	Moment of Inertia (kgm ²)	Weight (Kg)
EM-3551-4	185	22.6	1488	93.7	0.84	0.8	6.5	2	2.8	106	19	2120
EM-3552-4	200	24.4	1488	93.9	0.84	0.8	6.5	2	2.8	106	21.5	2220
EM-3553-4	220	26.8	1488	94.1	0.84	0.8	6.5	2	2.8	106	23	2290
EM-3554-4	250	30.4	1488	94.3	0.84	0.8	6.5	2	2.8	108	24.5	2340
EM-3555-4	280	33.9	1488	94.5	0.84	0.8	6.5	2	2.8	108	25.5	2400
EM-4001-4	315	37.7	1488	94.6	0.85	0.8	6.5	2	2.8	108	32	2970
EM-4002-4	355	42.4	1488	94.8	0.85	0.8	6.5	2	2.8	108	34	3080
EM-4003-4	400	47.7	1488	95	0.85	0.8	6.5	2	2.8	108	37	3170
EM-4004-4	450	53.5	1488	95.2	0.85	0.8	6.5	2	2.8	108	39	3250
EM-4501-4	500	58.7	1488	95.3	0.86	0.8	6.5	2	2.8	108	52	3500
EM-4502-4	560	65.7	1488	95.4	0.86	0.8	6.5	2	2.8	111	58	3700
EM-4503-4	630	73.8	1488	95.5	0.86	0.8	6.5	2	2.8	111	65	3950
EM-4504-4	710	831	1488	95.6	86	0.8	6.5	2	2.8	111	73	4200
EM-5001-4	800	93.5	1488	95.7	0.86	0.8	6.5	2	2.8	111	130	5350
EM-5002-4	900	105	1488	95.8	0.86	0.8	6.5	2	2.8	111	141	5540
EM-5003-4	1000	117	1488	95.9	0.86	0.8	6.5	2	2.8	111	148	5700
EM-5004-4	1120	131	1488	96	0.86	0.8	6.5	2	2.8	113	156	5800
EM-5601-4	1250	144	1488	96.1	0.87	0.7	6.5	2	2.8	113	252	5900
EM-5602-4	1400	161	1488	96.2	0.87	0.7	6.5	2	2.8	113	272	5950
EM-5603-4	1600	184	1488	96.4	0.87	0.7	6.5	2	2.8	113	305	6020

EM 6 POLE

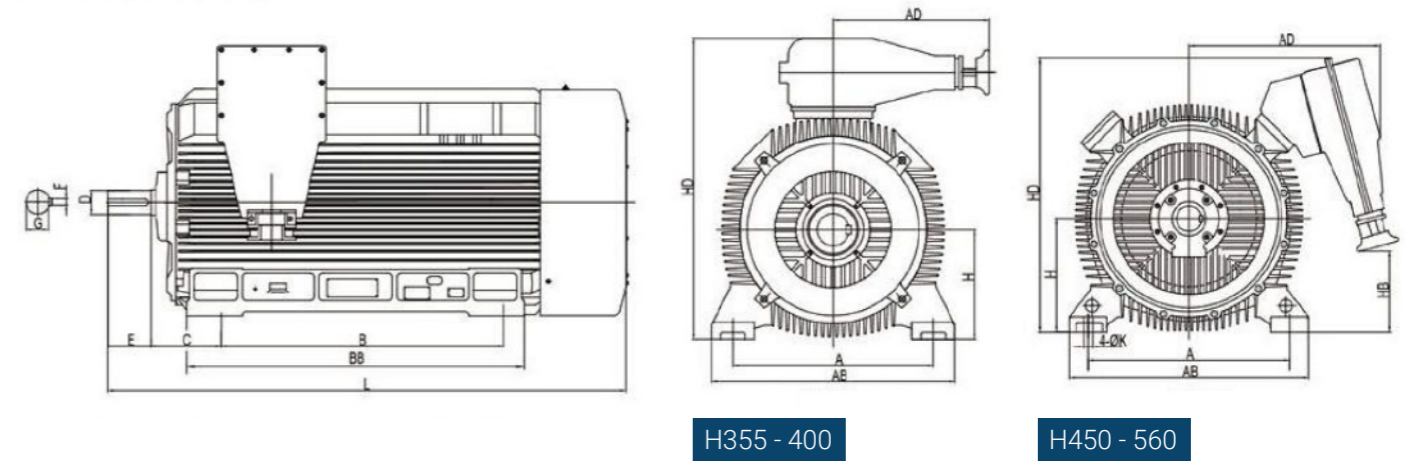
Frame	Power (kW)	Rate Current (A)	Rated Speed (RPM)	Efficiency (%)	Power Factor (cosφ)	Starting Torque (multiplier)	Starting Current (multiplier)	Maximum Torque (multiplier)	Vibration (mm/s)	Noise Level dB(A)	Moment of Inertia (kgm ²)	Weight (Kg)
EM-3553-6	160	20.6	987	96.4	0.8	0.8	6	2	2.8	102	26	2255
EM-3554-6	185	23.8	987	93.5	0.8	0.8	6	2	2.8	102	28	2345
EM-3555-6	200	25.7	987	93.6	0.8	0.8	6	2	2.8	102	31	2440
EM-4001-6	220	27.5	987	93.8	0.82	0.8	6	2	2.8	102	47	3010
EM-4002-6	250	31.2	987	93.9	0.82	0.8	6	2	2.8	105	50	3110
EM-4003-6	280	34.9	987	94.1	0.82	0.8	6	2	2.8	105	53	3200
EM-4004-6	315	39.2	987	94.3	0.82	0.8	6	2	2.8	105	57	3250
EM-4501-6	355	43.6	987	94.5	0.83	0.8	6	2	2.8	105	64	3600
EM-4502-6	400	49	987	94.6	0.83	0.8	6	2	2.8	105	73	3800
EM-4503-6	450	55.1	987	94.7	0.83	0.8	6	2	2.8	105	81	4000
EM-4504-6	500	61.1	987	94.9	0.83	0.8	6	2	2.8	105	90	4200
EM-5001-6	560	68.3	987	95.1	0.83	0.8	6	2	2.8	108	177	5370
EM-5002-6	630	76.7	987	95.2	0.83	0.8	6	2	2.8	108	184	5500
EM-5003-6	710	86.4	987	95.3	0.83	0.8	6	2	2.8	108	191	5630
EM-5004-6	800	97.2	987	95.4	0.83	0.8	6	2	2.8	108	202	5830
EM-5601-6	900	108	987	95.6	0.84	0.7	6	2	2.8	108	388	5930
EM-5602-6	1000	120	987	95.7	0.84	0.7	6	2	2.8	108	402	6020
EM-5603-6	1120	134	987	95.8	0.84	0.7	6	2	2.8	110	423	6100
EM-5604-6	1250	149	987	95.9	0.84	0.7	6	2	2.8	110	450	6150

EM 8 POLE

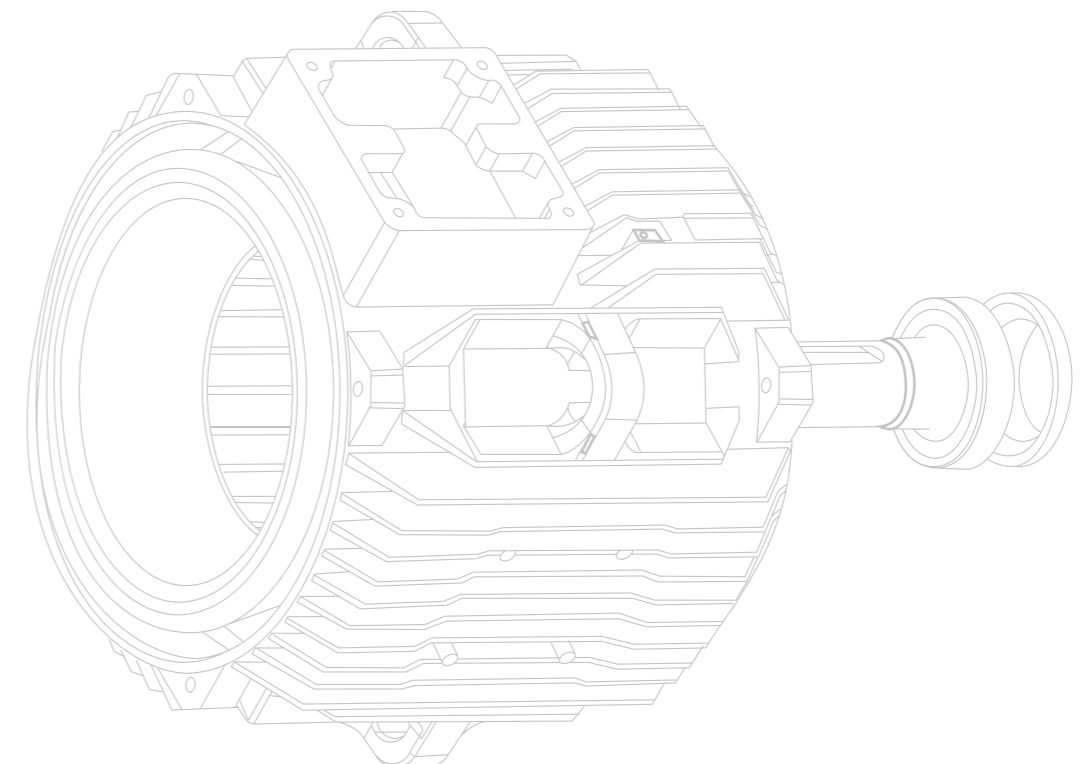
Frame	Power (kW)	Rate Current (A)	Rated Speed (RPM)	Efficiency (%)	Power Factor (cosφ)	Starting Torque (multiplier)	Starting Current (multiplier)	Maximum Torque (multiplier)	Vibration (mm/s)	Noise Level dB(A)	Moment of Inertia (kgm ²)	Weight (Kg)
EM-4001-8	160	21.7	742	93.2	0.76	0.8	5.5	2	2.8	99	50	3020
EM-4002-8	185	25.1	742	93.3	0.76	0.8	5.5	2	2.8	99	52	3090
EM-4003-8	200	26.7	742	93.5	0.77	0.8	5.5	2	2.8	99	56	3150
EM-4004-8	220	29.3	742	93.7	0.77	0.8	5.5	2	2.8	99	61	3260
EM-4501-8	250	32.8	742	93.9	0.78	0.8	5.5	2	2.8	102	65	3600
EM-4502-8	280	36.7	742	94.1	0.78	0.8	5.5	2	2.8	102	73	3800
EM-4503-8	315	41.3	742	94.2	0.78	0.8	5.5	2	2.8	102	82	4000
EM-4504-8	355	46.4	742	94.4	0.78	0.8	5.5	2	2.8	102	91	4200
EM-5001-8	400	51.6	742	94.5	0.8	0.8	5.5	2	2.8	102	177	5380
EM-5002-8	450	57.9	742	94.6	0.8	0.8	5.5	2	2.8	102	184	5510
EM-5003-8	500	63.4	742	94.8	0.8	0.8	5.5	2	2.8	102	191	5640
EM-5004-8	560	71	742	94.9	0.8	0.8	5.5	2	2.8	105	202	5850
EM-5601-8	630	78.7	742	95.1	0.81	0.7	5.5	2	2.8	105	480	6200
EM-5602-8	710	88.5	742	95.3	0.81	0.7	5.5	2	2.8	105	510	6240
EM-5603-8	800	99.6	742	95.4	0.81	0.7	5.5	2	2.8	105	535	6320
EM-5604-8	900	112	742	95.6	0.81	0.7	5.5	2	2.8	105	560	6400

DIMENSIONAL DRAWING

EM SERIES



Frame	Pole	A	B	C	D	E	F	G	H	K	AB	AD	BB	HB	HD	L
355	2	630	900	254	75	140	20	67.5	355	28	790	860	1110	210	1250	2000
355	46	630	900	254	100	210	28	90	355	28	790	860	1110	210	1250	2000
400	2	710	1000	280	85	170	22	76	400	35	870	860	1200	290	1340	2200
400	468	710	1000	280	110	210	28	100	400	35	870	860	1200	290	1340	2200
450	2	800	1120	280	95	170	25	86	450	35	950	930	1340	390	1340	2310
450	4	800	1120	280	120	210	32	109	450	35	950	930	1340	390	1340	2310
450	68	800	1120	280	130	250	32	119	450	35	950	930	1340	390	1340	2310
500	2	900	1250	315	110	210	28	100	500	42	7080	970	1490	470	1420	2610
500	4	900	1250	315	130	250	32	119	500	42	1080	970	1490	470	1420	2610
500	68	900	1250	315	140	250	36	128	500	42	1080	970	1490	470	1420	2610
560	2	1000	1400	355(530)	130	250	32	119	560	42	1180	1030	1680	590	1480	2900
560	4	1000	1400	355	150	250	36	138	560	42	1180	1030	1680	590	1480	2900
560	68	1000	1400	355	160	300	40	147	560	42	1180	1030	1680	590	1480	2900

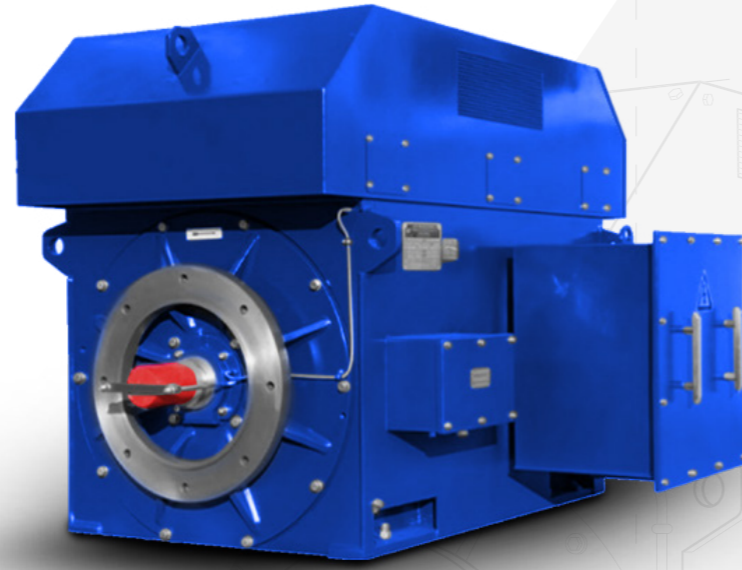


CACA SERIES

MEDIUM VOLTAGE MOTORS
AIR COOLED

CACA medium voltage induction motors are designed for efficiency, quiet operation, and easy installation. They feature a lightweight yet robust frame, low noise and vibration levels, and reliable quality.

These motors are suitable for various industrial applications, including power plants, water treatment, mining, and quarrying.



MODEL DATA

FEATURES

- UP TO 710 FRAME
- UP TO 10KV
- UP TO 3550KW
- FOOT MOUNTING
- COOLING METHOD IC611, IC616

CACA 2 POLE

Frame	Power (KW)	Rated Speed (RPM)	Rate Current (A)	Efficiency (%)	Power Factor (cosΦ)	Rated Torque (multiplier)	Rated Current (multiplier)	Maximum Torque (multiplier)	Weight (Kg)
CA3551-2	220	2980	26.9	92.5	0.85	0.6	7	1.8	2470
CA3552-2	250	2980	30.6	92.6	0.85	0.6	7	1.8	2700
CA3553-2	280	2980	34.2	92.8	0.85	0.6	7	1.8	2730
CA3554-2	315	2980	38.3	93.1	0.85	0.6	7	1.8	2750
CA4002-2	355	2980	42.5	93.4	0.86	0.6	7	1.8	3540
CA4003-2	400	2980	47.8	93.7	0.86	0.6	7	1.8	3570
CA4004-2	450	2980	53.6	94	0.86	0.6	7	1.8	3590
CA4005-2	500	2980	59.4	94.2	0.86	0.6	7	1.8	3620
CA4502-2	560	2980	66.4	94.4	0.86	0.6	7	1.8	4325
CA4503-2	630	2980	73.7	94.6	0.87	0.6	7	1.8	4300
CA4504-2	710	2980	82.9	94.7	0.87	0.6	7	1.8	4365
CA4505-2	800	2980	93.3	94.8	0.87	0.6	7	1.8	4430
CA5001-2	900	2980	105	95	0.87	0.6	7	1.8	5310
CA5002-2	1000	2980	116	95.1	0.87	0.6	7	1.8	5510
CA5003-2	1120	2980	130	95.2	0.87	0.6	7	1.8	5710
CA5004-2	1250	2980	145	95.3	0.87	0.6	7	1.8	5910
CA5601-2	1400	2980	161	95.4	0.88	0.6	7	1.8	6700
CA5602-2	1600	2980	183	95.5	0.88	0.6	7	1.8	7100
CA5603-2	1800	2980	206	95.6	0.88	0.6	7	1.8	7500
CA6301-2	2000	2980	229	95.7	0.88	0.6	7	1.8	9700
CA6302-2	2240	2980	256	95.8	0.88	0.6	7	1.8	9800
CA6303-2	2500	2980	285	95.9	0.88	0.6	7	1.8	10020
CA7101-2	2800	2980	315	96	0.89	0.6	7	1.8	14370
CA7102-2	3150	2980	354	96.1	0.89	0.6	7	1.8	14690
CA7103-2	3550	2980	399	96.2	0.89	0.6	7	1.8	15230
CA7104-2	4000	2980	449	96.3	0.89	0.6	7	1.8	15450

CACA 4 POLE

Frame	Power (KW)	Rated Speed (RPM)	Rate Current (A)	Efficiency (%)	Power Factor (cosΦ)	Rated Torque (multiplier)	Rated Current (multiplier)	Maximum Torque (multiplier)	Weight (Kg)
CA3551-4	185	1490	22.6	92.8	0.85	0.7	6.5	1.8	2280
CA3552-4	200	1490	24.4	92.9	0.85	0.7	6.5	1.8	2325
CA3553-4	220	1490	26.8	93	0.85	0.7	6.5	1.8	2390
CA3554-4	250	1490	30.4	93.1	0.85	0.7	6.5	1.8	2450
CA4002-4	280	1490	33.6	93.2	0.86	0.7	6.5	1.8	3780
CA4003-4	315	1490	37.8	93.3	0.86	0.7	6.5	1.8	3845
CA4004-4	355	1490	42.5	93.5	0.86	0.7	6.5	1.8	3925
CA4005-4	400	1490	47.8	93.7	0.86	0.7	6.5	1.8	4050
CA4006-4	450	1490	53.6	93.9	0.86	0.7	6.5	1.8	4160
CA4502-4	500	1490	59.5	94	0.86	0.7	6.5	1.8	4370
CA4503-4	560	1490	66.5	94.2	0.86	0.7	6.5	1.8	4460
CA4504-4	630	1490	74.7	94.4	0.86	0.7	6.5	1.8	4530
CA4505-4	710	1490	84	94.6	0.86	0.7	6.5	1.8	4680
CA5001-4	800	1490	93.3	94.8	0.87	0.7	6.5	1.8	5500
CA5002-4	900	1490	105	94.9	0.87	0.7	6.5	1.8	5830
CA5003-4	1000	1490	116	95	0.87	0.7	6.5	1.8	6025
CA5004-4	1120	1490	130	95.1	0.87	0.7	6.5	1.8	6235
CA5601-4	1250	1490	144	95.2	0.88	0.6	6.5	1.8	7150
CA5602-4	1400	1490	161	95.3	0.88	0.6	6.5	1.8	8100
CA5603-4	1600	1490	183	95.4	0.88	0.6	6.5	1.8	9050
CA6301-4	1800	1490	206	95.5	0.88	0.6	6.5	1.8	11250
CA6302-4	2000	1490	228.8	95.6	0.88	0.6	6.5	1.8	12220
CA6303-4	2240	1490	255.9	95.7	0.88	0.6	6.5	1.8	13100
CA7101-4	2500	1490	291.1	96.1	0.86	0.5	7	1.8	14870
CA7102-4	2800	1490	325.7	96.2	0.86	0.5	7	1.8	15300
CA7103-4	3150	1490	361.8	96.3	0.87	0.5	7	1.8	15500
CA7104-4	3550	1490	407.7	96.3	0.87	0.5	7	1.8	15970

CACA 6 POLE

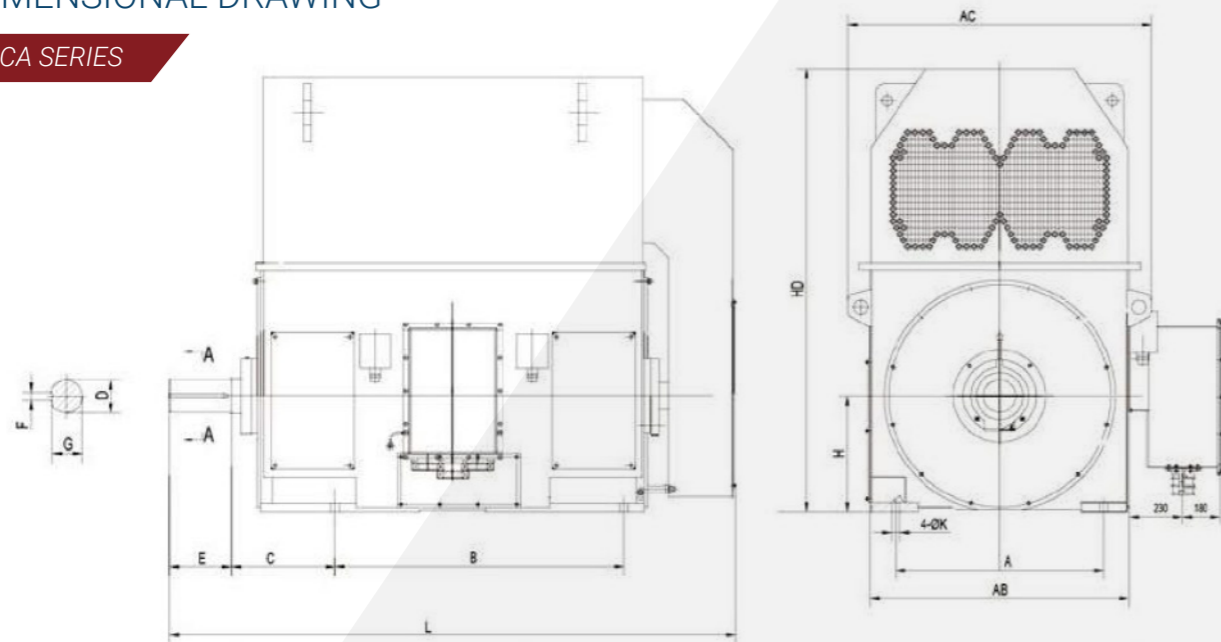
Frame	Power (KW)	Rated Speed (RPM)	Rate Current (A)	Efficiency (%)	Power Factor (cosΦ)	Rated Torque (multiplier)	Rated Current (multiplier)	Maximum Torque (multiplier)	Weight (Kg)
CA4001-6	185	990	23.5	92.4	0.82	0.7	6	1.8	2470
CA4002-6	200	990	25.3	92.6	0.82	0.7	6	1.8	2520
CA4003-6	220	990	27.8	92.8	0.82	0.7	6	1.8	3860
CA4004-6	250	990	31.5	93	0.82	0.7	6	1.8	3900
CA4005-6	280	990	35.2	93.3	0.82	0.7	6	1.8	3950
CA4006-6	315	990	39.5	93.5	0.82	0.7	6	1.8	4060
CA4502-6	355	990	43.9	93.7	0.83	0.7	6	1.8	4300
CA4503-6	400	990	49.4	93.8	0.83	0.7	6	1.8	4350
CA4504-6	450	990	55.4	94.1	0.83	0.7	6	1.8	4470
CA4505-6	500	990	61.5	94.3	0.83	0.7	6	1.8	4600
CA5001-6	560	990	68	94.4	0.84	0.7	6	1.8	5515
CA5002-6	630	990	76.4	94.5	0.84	0.7	6	1.8	5590
CA5003-6	710	990	85.8	94.8	0.84	0.7	6	1.8	5810
CA5004-6	800	990	96.6	94.9	0.84	0.7	6	1.8	6010
CA5601-6	900	990	107	95	0.85	0.7	6.5	1.8	7650
CA5602-6	1000	990	119	95.1	0.85	0.7	6.5	1.8	7780
CA5603-6	1120	990	133	95.2	0.85	0.7	6.5	1.8	7900
CA6301-6	1250	990	147	95.3	0.86	0.7	6.5	1.8	8730
CA6302-6	1400	990	164	95.4	0.86	0.7	6.5	1.8	11250
CA6303-6	1600	990	188	95.5	0.86	0.7	6.5	1.8	10250
CA7101-6	1800	990	213	95.8	0.85	0.5	7	1.8	14880
CA7102-6	2000	990	236	95.9	0.85	0.5	7	1.8	15230
CA7103-6	2240	990	264	96	0.85	0.5	7	1.8	15670
CA7104-6	2500	990	295	96.1	0.85	0.5	7	1.8	15880

CACA 8 POLE

Frame	Power (kW)	Rated Speed (RPM)	Rate Current (A)	Efficiency (%)	Power Factor (cosφ)	Rated Torque (multiplier)	Rated Current (multiplier)	Maximum Torque (multiplier)	Weight (Kg)
CA4004-8	185	740	24.7	92.5	0.78	0.8	5.5	1.8	3830
CA4005-8	200	740	26.6	92.7	0.78	0.8	5.5	1.8	3890
CA4006-8	220	740	29.2	92.9	0.78	0.8	5.5	1.8	3940
CA4502-8	250	740	32.7	93	0.79	0.8	5.5	1.8	4110
CA4503-8	280	740	36.6	93.2	0.79	0.8	5.5	1.8	4200
CA4504-8	315	740	41.1	93.4	0.79	0.8	5.5	1.8	4330
CA4505-8	355	740	46.2	93.5	0.79	0.8	5.5	1.8	4460
CA5001-8	400	740	51.3	93.7	0.8	0.8	5.5	1.8	5265
CA5002-8	450	740	57.7	93.8	0.8	0.8	5.5	1.8	5425
CA5003-8	500	740	63.8	94.2	0.8	0.8	5.5	1.8	5605
CA5004-8	560	740	71.4	94.4	0.8	0.8	5.5	1.8	5775
CA5601-8	630	740	78.2	94.5	0.82	0.7	6	1.8	6850
CA5602-8	710	740	88.1	94.6	0.82	0.7	6	1.8	7050
CA5603-8	800	740	99.1	94.7	0.82	0.7	6	1.8	7300
CA6301-8	900	740	109	94.8	0.84	0.7	6	1.8	8270
CA6302-8	1000	740	121	94.9	0.84	0.7	6	1.8	8675
CA6303-8	1120	740	135	95	0.84	0.7	6	1.8	9080
CA7102-8	1250	740	96	94	0.8	0.6	6.5	1.8	15250
CA7103-8	1400	740	107.4	94.1	0.8	0.6	6.5	1.8	15560
CA7104-8	1600	740	122.6	94.2	0.8	0.6	6.5	1.8	15700

DIMENSIONAL DRAWING

CACA SERIES



Frame	Pole	A	B	C	D	E	F	G	H	K	AB	AC	HD	L
355	2	630	900	315	80	170	22	71	355	28	800	994	1480	2150
355	4	630	900	315	100	210	28	90	355	28	800	994	1480	2150
400	2	710	1000	375	90	170	25	81	400	35	900	1094	1490	2290
400	4-8	710	1000	335	110	210	28	100	400	35	900	1094	1490	2290
450	2	800	1120	400	100	210	28	90	450	35	980	1174	1750	2430
450	4	800	1120	355	120	210	32	109	450	35	980	1174	1550	2385
450	6-12	800	1120	355	130	250	32	119	450	35	980	1174	1550	2425
500	2	900	1250	560	110	210	28	100	500	42	1120	1314	1980	2630
500	4	900	1250	475	130	250	32	119	500	42	1120	1314	1780	2600
500	6-12	900	1250	475	140	250	36	128	500	42	1120	1314	1780	2600
560	2	1000	1400	560	130	250	32	119	560	42	1220	1410	2100	2780
560	4	1000	1400	500	150	250	36	138	560	42	1220	1410	1900	2780
560	6-12	1000	1400	500	160	300	40	147	560	42	1220	1410	1900	2780
630	2	1120	1600	560	140	250	36	128	630	48	1360	1620	2250	3040
630	4	1120	1600	530	170	300	40	157	630	48	1360	1620	2250	2975
630	6-12	1120	1600	530	180	300	45	165	630	48	1360	1620	2250	2975
710	2	1400	1800	530	160	300	40	147	710	56	1600	1860	2250	3490
710	4-16	1400	1800	530	200	350	45	185	710	56	1600	1860	2300	3550

CACW SERIES

MEDIUM VOLTAGE MOTORS
WATER COOLED

CACW medium voltage induction motors are designed for efficiency, quiet operation, and easy installation. They boast a lightweight yet sturdy construction, minimal noise and vibration, and dependable performance. These motors are ideal for various industrial applications, including power plants, water treatment, mining, and quarrying.

Water-cooled electric motors are designed to handle high power outputs and continuous operation by using a water-based cooling system. This design is particularly effective in dissipating heat, allowing for more compact and efficient motor designs.



MODEL DATA

FEATURES

- UP TO 710 FRAME
- UP TO 3550KW
- UP TO 10KV
- FOOT MOUNTING
- COOLING METHOD IC81W, IC86W

EMVR SERIES

MEDIUM VOLTAGE MOTORS
SLIP RING

Elektrim MV slip-ring motors are ideal for applications that need high starting torque but low starting current. They reduce mechanical stress during startup, extending the lifespan of your connected equipment. These motors offer maximum uptime and high torque across all speeds.

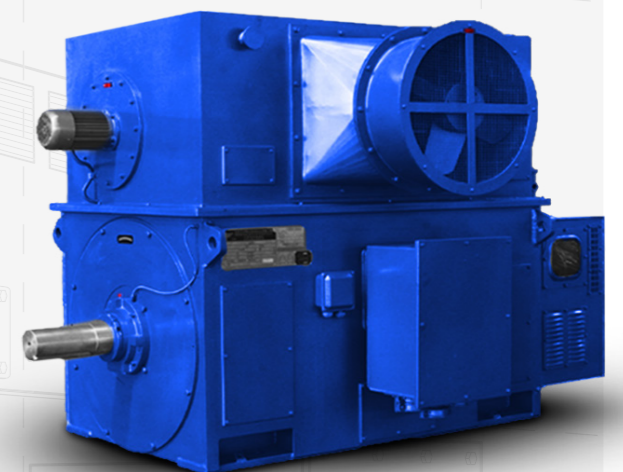
Slip-ring motors are often used in mills, fans, crushers, and conveyors in industries like mining, cement, and metalworking. They're also a reliable choice for pumps in water treatment, as well as pumps, compressors, and mixers in the petrochemical industry, especially in areas where safety is a priority.

Elektrim MV slip-ring motors are not only reliable but also highly efficient, which means less downtime and lower operating costs. This ultimately reduces the overall cost of using these motors

MODEL DATA

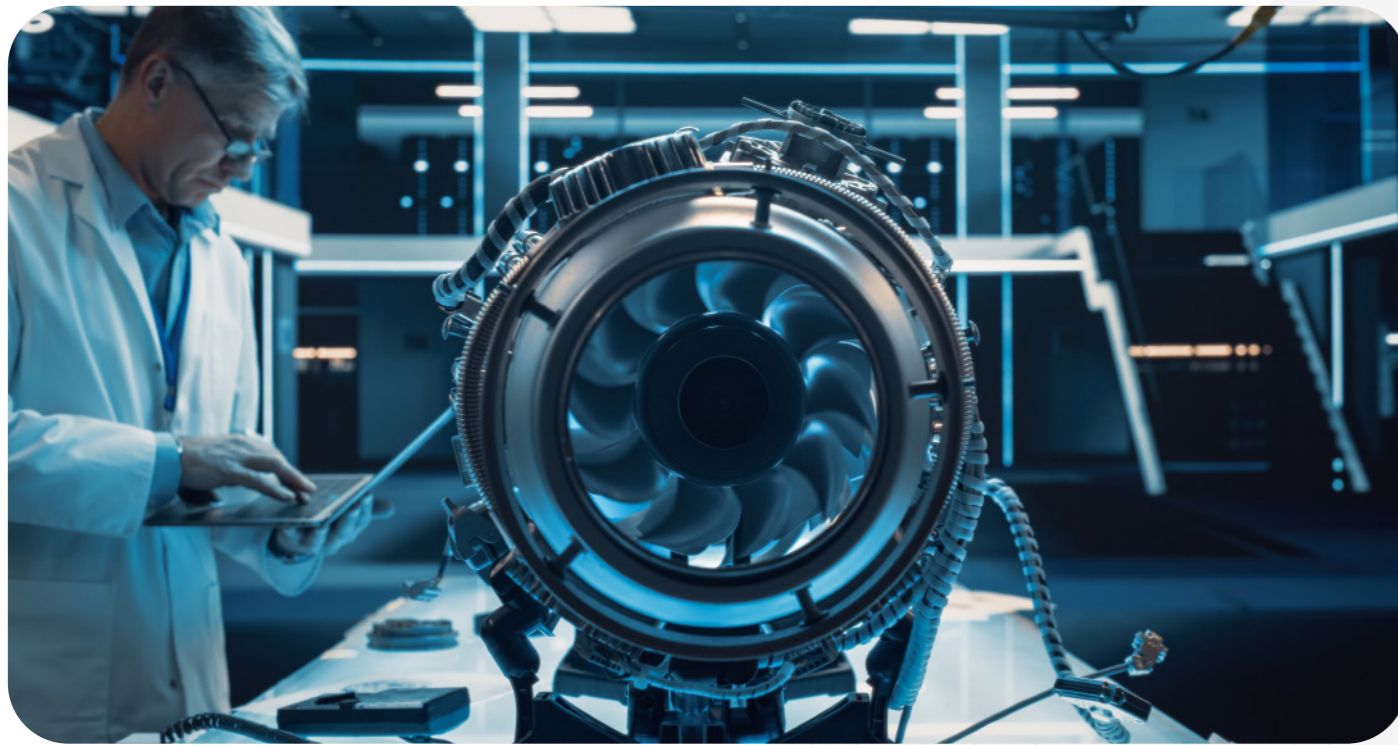
FEATURES

- UP TO 620 FRAME
- UP TO 2000KW
- UP TO 10KV
- FOOT MOUNTING
- COOLING METHOD IC611



SERVICES

TEST LAB



Elektrim offers a wide range of services for electric motors, including:

- **Installation and setup:** Ensures smooth operation of applications with electric motors.
- **Alignment:** Aligns electric motors with connected equipment for optimal performance.
- **Vibration analysis and troubleshooting:** Identifies potential issues and prevents breakdowns.
- **Inspection and verification:** Checks the accuracy of electric motors and components.
- **Regular maintenance:** Provides routine care to ensure optimal motor performance.
- **Overhaul and restoration:** Repairs and restores electric motors to like-new condition, including:
 - Bearing replacement
 - Rewinding of electric motors (stator/rotor)
 - Rotor shaft replacement
 - Sleeve bearing recovery
 - Spare part replacement
 - Accessory repair and replacement
- **Balancing:** Ensures smooth operation and reduces vibration.
- **Customization:** Adapts electric motors to new operating conditions.
- **Painting and finishing:** Restores the appearance of electric motors.
- **Training:** Provides customer training on electric motor operation and maintenance.
- **Energy analysis and efficiency:** Helps customers optimize energy consumption.

With these comprehensive services, Elektrim ensures the reliability and efficiency of your electric motors.

ACCESSORIES

PROTECTION

- PT100 type temperature sensors on the stator windings
- PT100 type temperature sensors on the bearings
- Temperature sensors thermocouple-type and thermistors
- Space heater (for dehumidification)
- Vibration sensors
- Lightning arrester for protection against voltage surges
- Current transformers (CT) for measuring or differential protection
- Temperature sensors for air inlet and outlet
- Non-reverse ratchet

PERFORMANCE

- Capacitors for correction of power factor or voltage surge protection
- Indicators of position or speed (encoder or tacogenerator)
- Class H insulation
- Reduced vibration level
- Reduced noise level
- Degree of protection IP56 / IP65 and IP66

MECHANICAL

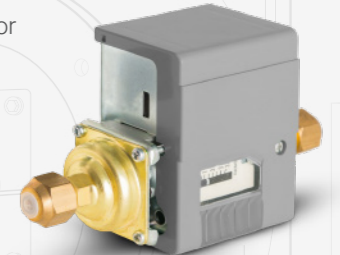
- **Terminal Box**
 - Modified main terminal box
 - Additional terminal box
- **Shaft**
 - Tapered shaft end
 - Double shaft end
 - Hollow shaft
 - Shaft with collar
 - Materials other than standard
- **Inverter Duty**
 - Insulated Bearing
 - Insulated End Shield
 - Aegis Ring
 - Force Cooling Fan

BEARING

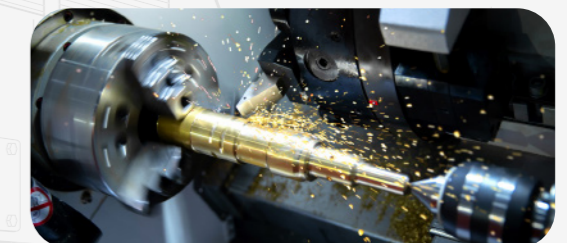
- Thermometer
- Thermometer for oil
- Flow switch for oil
- System for injecting oil under pressure to start and stop the motor (hydrostatic jacking)
- Oil-lubricated bearings
- Sleeve Bearing

FOR AIR-WATER HEAT EXCHANGER

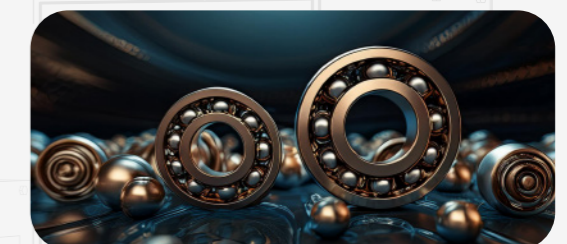
- Flow switch for water
- Sight glass of water flow
- Temperature sensor for water
- Water leak sensor



Protection: Temperature sensor



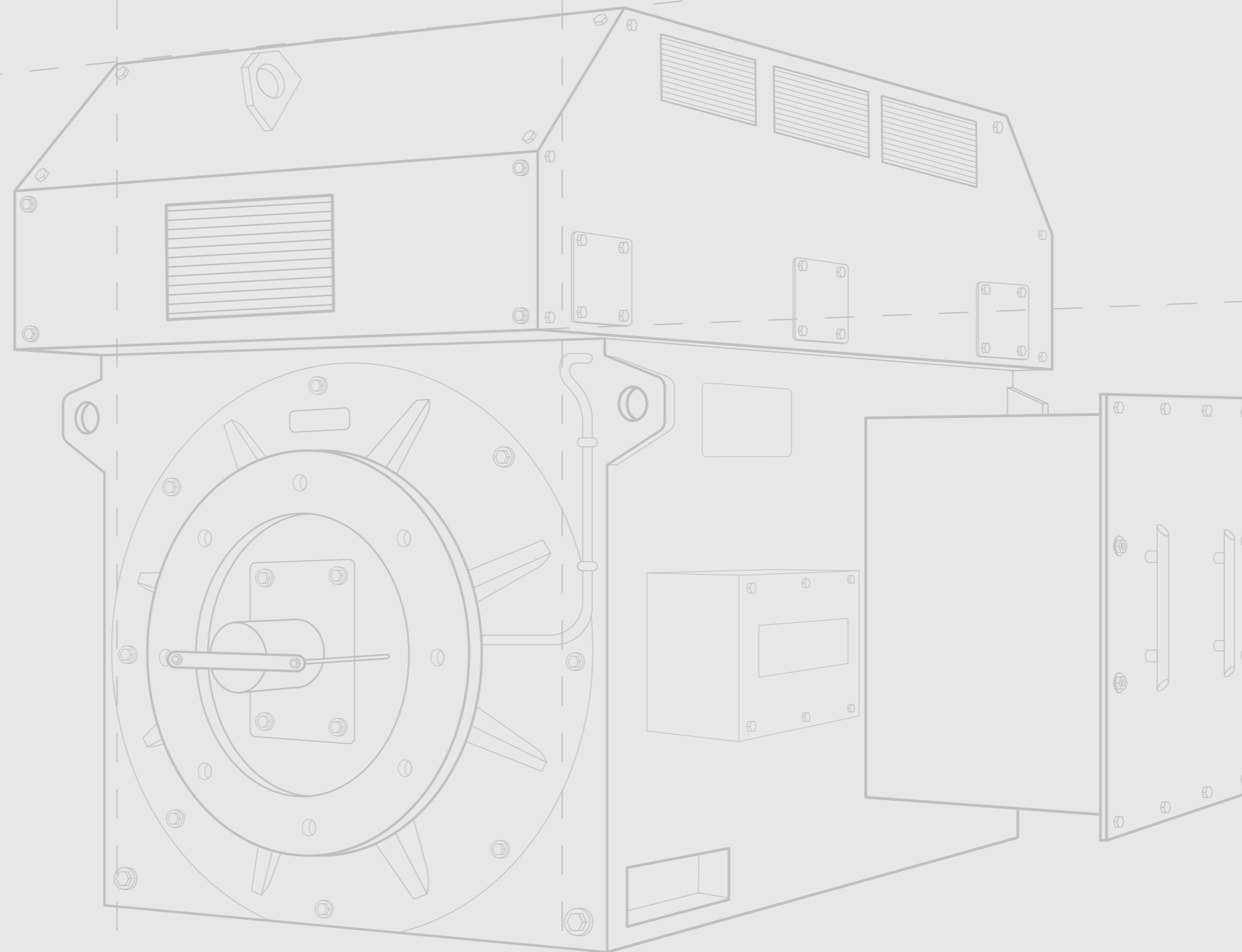
Mechanical: Shaft



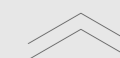
Bearing

Elektrim **MOTORS**

MEDIUM VOLTAGE
CATALOGUE



PROJECT
REFERENCE



SCAN
HERE FOR
DIGITAL
CONTENT



WEBSITE



Elektrim
MOTORS



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FOR DIGITAL COPY