



**VALIADIS**  
HELLENIC MOTORS

# KZR & KZ series







# KZR & KZ series

## Three-phase crane motors

### Introduction

These series of three phase metallurgical industrial and crane motors, with wound or squirrel cage rotor are specially designed to drive metallurgical industrial cranes and other similar machines, it has excellent overload capability and high mechanical strength.

Therefore, it is well suited for short duty cycle, or intermittent periodic duty, and on equipments with frequent starting and braking or are subject to vibration and shock.

The standard range of power output and mounting dimensions complies with the recommended standard of (IEC 72).

The motor can be operated well up to altitude of 1,000m.

There are two classes of insulation, F and H. Class F is applicable to temperature condition not exceeding 40°C. Class H is suitable for metallurgical industrial sites where ambient temperature is below 60°C. Both have the same technical data.

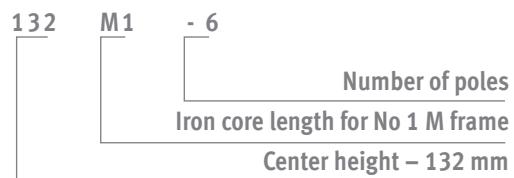
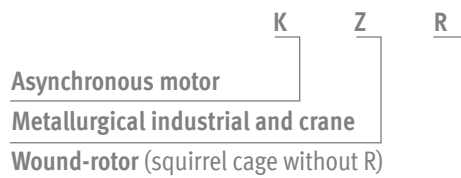
The motors possess a better enclosure, with protection standard of IP44 for normal site condition, and IP55 for metallurgical industrial condition.

Motor's rated voltage and frequency is 380V/50Hz.

# KZR & KZ series

## Three-phase crane motors

### Symbol definitions:



The basic motor duty is  $S_3 - 40\%$ . See the follow table for the relationship between frame size and rating.

### The relationship between frame size, synchronous speed and power.

Frame size		1000 r / min	750 r / min	600 r / min
112	M	1.5	-	-
132	M1	2.2	-	-
	M2	3.7	-	-
160	M1	5.5	-	-
	M2	7.5	-	-
	L	11	7.5	-
180	L	15	11	-
200	L	22	15	-
225	M	30	22	-
250	M1	37	30	-
	M2	45	37	-
280	S	55	45	37
	M	75	55	45
315	S	-	75	55
	M	-	90	75
355	M	-	-	90
	L1	-	-	110
	L2	-	-	132
400	L1	-	-	160
	L2	-	-	200

KZ series motors are shown in the dashed line.



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## Three-phase crane motors

### Motors duty and technical data

These motors are well suited to intermittent heavy duty operation .It can be classified as the following categories according to different load characteristics:

#### Short Time Duty ( $S_2$ ):

Operation is under constant load in fixed time and the motor is resting or deenergizing when the heat balance is not reached. In a period of time , the motor is cooled and the temperature difference between motor and medium is limited within 2K.

$$\text{Intermittent rate: } FC = \frac{N}{N+R} * 100\%$$

N= operation under rated condition. R= at rest and deenergized.

#### Intermitted Periodic Duty ( $S_3$ ):

To run according to a series of identical cycles, the running time under constant load and the time of rest deenergized are included in period of one cycle, but the time is shorter and does not make motor to 2 heal balance condition.

The starting current shouldn't be enough to affect the temperature rise obviously.

#### Intermitted Period Duty with Starting ( $S_4$ ):

To run according to a series of identical cycles, each cycle is formed by a starting time , a constant load's time and a rest or deenergized time. But the time is short without condition making motor to a heat balance.

$$\text{Intermittent rate: } FC = \frac{D+N}{D+N+R} * 100\%$$

D=starting. N= operation under rated condition.  
R= at rest and deenergized.

**Intermittent Periodic Duty with Starting and Electric Braking ( $S_5$ ):** It runs according to a series of identical cycles, there are starting time constant load's time, electric quick braking time and a rest or deenergized time in each cycle, but motor can not reach the condition of heat balance in such short time.

$$\text{Intermittent rate: } FC = \frac{D+N+F}{D+N+F+R} * 100\%$$

D=starting. N= operation under rated condition.  
R= at rest and deenergized. F=electric braking

When you choose motor, various conditions of starting and braking have to be contained in to a equivalent data of starts/hour according to equivalent heat, then the motor quota is determined by the equivalent data.

### Conversion

When the touch starting is end, the speed does not exceed 25% of rated, i.e. rated , i.e. four times equal once of starting.

Once electric braking (to brake to one third of rated speed) is equal to 80% starting.

The duty type  $S_3$  - 40% is basic duty, the motor technical data is in the Table 3, Table 4-1 and Table 4-2 the data of delivery condition on the name plate only under basic duty. If you need a duty type out of  $S_2$  to  $S_4$  consultation with manufacturer must be needed.

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The relationship between equivalent number of starts, number of starts, brakes and starts.

Duty type	Starting and Braking condition				Equivalent starts/h
	No of starts/h	No of touch starts/h	No of brakes/h	No of brakes and reverses/h	
S <sub>3</sub>	6	0	0	0	6
S <sub>3</sub>	4	8	0	0	
S <sub>3</sub>	2	8	2	0	
S <sub>4</sub>	150	0	0	0	150
S <sub>4</sub>	100	200	0	0	
S <sub>5</sub>	80	0	80	0	
S <sub>5</sub>	65	130	65	0	
S <sub>5</sub>	30	160	30	30	
S <sub>4</sub>	300	0	0	0	300
S <sub>4</sub>	200	400	0	0	
S <sub>5</sub>	160	0	160	0	
S <sub>5</sub>	130	260	130	0	
S <sub>5</sub>	60	320	60	60	
S <sub>4</sub>	600	0	0	0	600
S <sub>4</sub>	400	800	0	0	
S <sub>5</sub>	320	0	320	0	
S <sub>5</sub>	260	520	260	0	
S <sub>5</sub>	120	640	120	120	

# KZR & KZ series

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**6 POLES-1.000 Rpm**  
380 V / 50 Hz

Duty type	S <sub>2</sub>						Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	30 minutes			60 minutes				
Frame size	KW	I <sub>1</sub> (A)	n r / min	KW	I <sub>1</sub> (A)	n r / min		
KZ 112M-6	1.8	4.9	892	1.5	4.25	920	0.022	58
KZ 132M1-6	2.5	6.5	920	2.2	5.9	935	0.056	80
KZ 132M2-6	4	9.2	915	3.7	8.8	912	0.062	92
KZ 160M1-6	6.3	14.1	922	5.5	12.5	933	0.114	119
KZ 160M2-6	8.5	18	943	7.5	15.9	948	0.143	132
KZ 160L-6	15	32	920	11	24.6	953	0.192	152

**8 POLES-750 Rpm**  
380 V / 50 Hz

Duty type	S <sub>2</sub>						Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	30 minutes			60 minutes				
Frame size	KW	I <sub>1</sub> (A)	n r / min	KW	I <sub>1</sub> (A)	n r / min		
KZ 160L-8	9	21.1	694	7.5	18	705	0.192	152
KZ 180L-8	13	30	675	11	25.8	694	0.352	205
KZ 200L-8	18.5	40	697	15	33.1	710	0.622	276
KZ 225M-8	26	53.5	701	22	45.8	712	0.82	347
KZ 250M-8	35	74	681	30	63.3	694	1.432	462

**6 POLES-1.000 Rpm**  
380 V / 50 Hz

Duty type	S <sub>3</sub> 6 Starts/h						Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	15%			25%				
Frame size	KW	I <sub>1</sub> (A)	n r / min	KW	I <sub>1</sub> (A)	n r / min		
KZ 112M-6	2.2	6.5	810	1.8	4.9	892	0.022	58
KZ 132M1-6	3	7.5	804	2.5	6.5	920	0.056	80
KZ 132M2-6	5	11.6	890	4	9.2	915	0.062	92
KZ 160M1-6	7.5	16.8	903	6.3	14.1	922	0.114	119
KZ 160M2-6	11	25.4	926	8.5	18	943	0.143	132
KZ 160L-6	15	32	920	13	28.7	936	0.192	152

**8 POLES-750 Rpm**  
380 V / 50 Hz

Duty type	S <sub>3</sub> 6 Starts/h						Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	15%			25%				
Frame size	KW	I <sub>1</sub> (A)	n r / min	KW	I <sub>1</sub> (A)	n r / min		
KZ 160L-8	11	27.4	675	9	21.1	694	0.192	152
KZ 180L-8	15	35.3	654	13	30	675	0.352	205
KZ 200L-8	22	47.5	686	18.5	40	697	0.622	276
KZ 225M-8	33	69	687	26	53.5	701	0.82	347
KZ 250M-8	42	89	663	35	74	681	1.432	462

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Three-phase crane motors

**6 POLES-1.000 Rpm**  
380 V / 50 Hz

Duty type	S <sub>3</sub> 6 Starts/h								Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	40%									
Frame size	KW	I <sub>1</sub> (A)	n (r/min)	Mmax	Mst	Ist	n%	conn		
				Mn	Mn	I <sub>1</sub>				
KZ 112M-6	1.5	4.25	920	2.7	2.44	4.47	69.5	0.75	0.022	58
KZ 132M1-6	2.2	5.9	935	2.9	3.1	5.16	74	0.76	0.056	80
KZ 132M2-6	3.7	8.8	912	2.8	3	5.54	78	0.79	0.062	92
KZ 160M1-6	5.5	12.5	933	2.7	2.5	4.9	80	0.82	0.114	119
KZ 160M2-6	7.5	15.9	948	2.9	2.4	5.52	81	0.83	0.143	132
KZ 160L-6	11	24.6	953	2.9	2.7	6.17	83	0.84	0.192	152

**8 POLES-750 Rpm**  
380 V / 50 Hz

Duty type	S <sub>3</sub> 6 Starts/h								Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	40%									
Frame size	KW	I <sub>1</sub> (A)	n (r/min)	Mmax	Mst	Ist	n%	conn		
				Mn	Mn	I <sub>1</sub>				
KZ 160L-8	7.5	18	705	2.7	2.5	5.1	80	0.76	0.192	152
KZ 180L-8	11	25.8	694	2.5	2.6	4.9	81	0.79	0.352	205
KZ 200L-8	15	33.1	710	2.8	2.7	6.1	82.5	0.8	0.622	276
KZ 225M-8	22	45.8	712	2.9	2.9	6.2	84	0.82	0.82	347
KZ 250M-8	30	63.3	694	2.54	2.7	5.47	85	0.84	1.432	462

**6 POLES-1.000 Rpm**  
380 V / 50 Hz

Duty type	S <sub>3</sub> 6 Starts/h						Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	60%			100%				
Frame size	KW	I <sub>1</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	n r/min		
KZ 112M-6	1.1	2.7	946	0.8	3.5	980	0.022	58
KZ 132M1-6	1.8	5.3	950	1.5	4.9	960	0.056	80
KZ 132M2-6	3	7.5	940	2.5	7.2	945	0.062	92
KZ 160M1-6	5	11.5	940	4	10	953	0.114	119
KZ 160M2-6	6.3	14.2	956	5.5	13	961	0.143	132
KZ 160L-6	9	20.6	964	7.5	18.8	972	0.192	152

**8 POLES-750 Rpm**  
380 V / 50 Hz

Duty type	S <sub>3</sub> 6 Starts/h						Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	60%			100%				
Frame size	KW	I <sub>1</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	n r/min		
KZ 160L-8	6	15.6	717	5	14.2	724	0.192	152
KZ 180L-8	9	21.5	710	7.5	19.2	718	0.352	205
KZ 200L-8	13	28.1	714	11	26	720	0.622	276
KZ 225M-8	18.5	40	718	17	37.5	720	0.82	347
KZ 250M-8	26	56	702	22	45	717	1.432	462



# KZR & KZ series

Three-phase crane motors

## 6 POLES-1.000 Rpm

380 V / 50 Hz

Duty type	S <sub>2</sub>								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
	30 minutes				60 minutes						
FC											
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR112M-6	1.8	5.3	13.4	815	1.5	4.63	12.5	866	100	0.03	74
KZR132M1-6	2.5	6.5	12.9	892	2.2	6.05	12.6	908	132	0.06	97
KZR132M2-6	4	9.7	14.2	900	3.7	9.2	14.5	908	185	0.07	108
KZR160M1-6	6.3	16.4	29.4	921	5.5	15	25.7	930	138	0.12	154
KZR160M2-6	8.5	19.6	29.8	930	7.5	18	26.5	940	185	0.15	160
KZR160L-6	13	28.6	31.6	942	11	24.5	27.6	957	250	0.2	174
KZR180L-6	17	36.7	49.8	955	15	33.8	46.5	962	218	0.39	230
KZR200L-6	26	56.1	82.4	956	22	49.1	69.9	964	200	0.67	320
KZR225M-6	34	70	85	957	30	62	74.4	962	250	0.84	398
KZR250M1-6	42	80	103	960	37	70.5	91.5	965	250	1.52	512
KZR250M2-6	52	97	110	958	45	84.5	95	965	290	1.78	559
KZR280S-6	63	118	142	966	55	101.5	129.8	969	280	2.35	747
KZR280M-6	85	157	140	966	75	139	124	970	370	2.86	848

## 8 POLES-750 Rpm

380 V / 50 Hz

Duty type	S <sub>2</sub>								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
	30 minutes				60 minutes						
FC											
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR160L-8	9	22.4	28.1	694	7.5	19.1	23	705	205	0.2	172
KZR180L-8	13	29.1	47.8	700	11	27	44	700	172	0.39	230
KZR200L-8	18.5	40	67.2	701	15	33.5	53.5	712	178	0.67	317
KZR225M-8	26	55	71.2	708	22	46.9	59.1	715	232	0.82	390
KZR250M1-8	35	64	80	715	30	63.4	67.7	720	272	1.52	515
KZR250M2-8	42	86	79	716	37	78	70	720	335	1.79	563
KZR280S-8	52	108	106	712	45	96.5	92	717	305	2.35	747
KZR280M-8	63	126	110	722	55	110.5	92.5	725	360	2.86	848
KZR315S-8	85	164.8	117.8	722	75	146.7	156.7	725	302	7.22	1050
KZR315M-8	100	190	183.5	715	90	172	160.9	720	372	8.68	1170

## 10 POLES-600 Rpm

380 V / 50 Hz

Duty type	S <sub>2</sub>								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
	30 minutes				60 minutes						
FC											
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR280S-10	42	92	177.1	571	37	84.8	153.2	560	150	3.58	767
KZR280M-10	55	127	207	556	45	103.8	165	560	172	3.98	840
KZR315S-10	63	132	161.9	580	55	118.3	138.7	580	242	7.22	1026
KZR315M-10	85	179	171	576	75	160	149.3	579	325	8.68	1156
KZR355M-10	110	218	207	581	90	180	166.6	585	330	14.32	1520
KZR355L1-10	132	257	213	576	110	217	172	582	388	17.08	1764
KZR355L2-10	150	293	194	588	132	262	167.5	588	475	19.18	1810
KZR400L1-10	190	390	290	585	160	338	244	587	395	24.52	2400
KZR400L2-10	240	490	302	585	200	427	252	588	460	28.1	2950

# KZR & KZ series

Three-phase crane motors

## 6 POLES-1.000 Rpm

380 V / 50 Hz

Duty type FC	S <sub>3</sub> 6 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
	15%				25%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR112M-6	2.2	6.6	18.4	725	1.8	5.3	13.4	815	100	0.03	74
KZR132M1-6	3	8	16.1	855	2.5	6.5	12.9	892	132	0.06	97
KZR132M2-6	5	12.3	18.2	875	4	9.7	14.2	900	185	0.07	108
KZR160M1-6	7.5	18.5	35.4	910	6.3	16.4	29.4	921	138	0.12	154
KZR160M2-6	11	24.6	39.6	908	8.5	19.6	29.8	930	185	0.15	160
KZR160L-6	15	34.7	39	920	13	28.6	31.6	912	250	0.2	174
KZR180L-6	20	42.6	58.7	946	17	36.7	49.8	955	218	0.39	230
KZR200L-6	33	62	103	942	26	56.1	82.4	956	200	0.67	320
KZR225M-6	40	80	101	917	34	70	85	957	250	0.84	398
KZR250M1-6	50	99	123	950	42	80	103	960	250	1.52	512
KZR250M2-6	63	121	134	947	52	97	110	958	290	1.78	559
KZR280S-6	75	144	169.5	960	63	118	142	966	280	2.35	747
KZR280M-6	100	185	166	960	85	157	140	966	370	2.86	848

## 8 POLES-750 Rpm

380 V / 50 Hz

Duty type FC	S <sub>3</sub> 6 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
	15%				25%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR160L-8	11	27.5	35.3	676	9	22.4	28.1	694	205	0.2	172
KZR180L-8	15	34	56	690	13	29.1	47.8	700	172	0.39	230
KZR200L-8	22	48	81	690	18.5	40	67.2	701	178	0.67	317
KZR225M-8	33	70	92	696	26	55	71.2	708	232	0.82	390
KZR250M1-8	42	75	97.5	710	35	64	80	715	272	1.52	515
KZR250M2-8	52	103	98	706	42	86	79	716	335	1.79	563
KZR280S-8	63	129	130	704	52	108	106	712	305	2.35	747
KZR280M-8	75	150	132	715	63	126	110	722	360	2.86	848
KZR315S-8	100	200	162	715	85	164.8	177.8	722	302	7.22	1050
KZR315M-8	125	250	232	717	100	190	183.5	715	372	8.68	1170

## 10 POLES-600 Rpm

380 V / 50 Hz

Duty type FC	S <sub>3</sub> 6 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
	15%				25%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR280S-10	55	112	235.2	564	42	92	177.1	571	150	3.58	767
KZR280M-10	63	146	241	548	55	127	207	556	172	3.98	840
KZR315S-10	75	154	194	574	63	132.5	161.9	580	242	7.22	1026
KZR315M-10	100	210	203	570	85	179	171	576	325	8.68	1156
KZR355M-10	132	266	252	576	110	218	207	581	330	14.32	1520
KZR355L1-10	160	314	261	571	132	257	213	578	388	17.08	1764
KZR355L2-10	185	353	241	585	150	293	194	588	475	19.18	1810
KZR400L1-10	220	445	336	581	190	390	290	584	395	24.52	2400
KZR400L2-10	270	540	340	582	240	490	302	586	460	28.1	2950

# KZR & KZ series

Three-phase crane motors

**6 POLES-1.000 Rpm**  
380 V / 50 Hz

Duty type	S <sub>3</sub> 6 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	40%										
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	T <sub>m</sub>	I <sub>0</sub> (A)	n r/min	n%	cosφ			
KZR112M-6	1.5	4.63	12.5	2.5	3.37	866	65.0	0.77	100	0.03	74
KZR132M1-6	2.2	6.05	12.6	2.86	4.04	908	70	0.77	132	0.06	97
KZR132M2-6	3.7	9.2	14.5	2.51	5.58	908	75.5	0.78	185	0.07	108
KZR160M1-6	5.5	15	25.7	2.56	7.95	930	75.5	0.78	138	0.12	154
KZR160M2-6	7.5	18	26.5	2.78	11.2	940	79	0.8	185	0.15	160
KZR160L-6	11	24.9	27.6	2.47	13	945	82	0.8	250	0.2	174
KZR180L-6	15	33.8	46.5	3.2	18.8	962	84	0.81	218	0.39	230
KZR200L-6	22	49.1	69.9	2.88	26.6	964	86	0.8	200	0.67	320
KZR225M-6	30	62	74.4	3.3	29.9	962	88	0.82	250	0.84	398
KZR250M1-6	37	70.5	91.5	3.13	26.5	960	89	0.89	250	1.52	512
KZR250M2-6	45	84.5	95	3.48	28.2	965	90.5	0.89	290	1.78	559
KZR280S-6	55	101.5	119.8	3	34	969	91	0.9	280	2.35	747
KZR280M-6	75	139	124	3.2	47.5	970	91.8	0.89	370	2.86	848

**8 POLES-750 Rpm**  
380 V / 50 Hz

Duty type	S <sub>3</sub> 6 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	40%										
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	T <sub>m</sub>	I <sub>0</sub> (A)	n r/min	n%	cosφ			
KZR160L-8	7.5	19.1	23	2.73	12.7	705	78.5	0.72	205	0.2	172
KZR180L-8	11	27	44	2.72	14.8	700	81	0.77	172	0.39	230
KZR200L-8	15	33.5	53.5	2.94	17.75	712	85	0.78	178	0.67	317
KZR225M-8	22	46.9	59.1	2.96	24.17	715	86	0.79	232	0.82	390
KZR250M1-8	30	63.4	68.8	2.64	31.4	720	87	0.8	272	1.52	515
KZR250M2-8	37	78.1	70	2.73	36.9	720	88	0.82	335	1.79	563
KZR280S-8	45	96.5	92	3.17	48	717	88.8	0.8	305	2.35	747
KZR280M-8	55	110.5	92.5	2.85	52.3	725	89	0.84	360	2.86	848
KZR315S-8	75	146.7	156.7	2.94	62	725	89	0.85	302	7.22	1050
KZR315M-8	90	172	160.9	3.13	57.7	720	90	0.87	372	8.68	1170

**10 POLES-600 Rpm**  
380 V / 50 Hz

Duty type	S <sub>3</sub> 6 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	40%										
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	T <sub>m</sub>	I <sub>0</sub> (A)	n r/min	n%	cosφ			
KZR280S-10	37	84.8	153.2	2.8	44.2	572	86	0.76	150	3.58	767
KZR280M-10	45	103.8	165	3.16	63.6	560	86	0.77	172	3.98	840
KZR315S-10	55	118.3	138.7	3.11	62.5	580	88.5	0.79	242	7.22	1026
KZR315M-10	75	160	149.3	3.45	85.3	579	89	0.79	325	8.68	1156
KZR355M-10	90	180	166.6	3.33	83	589	90	0.81	330	14.32	1520
KZR355L1-10	110	217	172	3.1	90	582	91	0.82	388	17.08	1764
KZR355L2-10	132	262	167.5	3.48	126	588	92	0.82	475	19.18	1810
KZR400L1-10	160	338	244	3.02	175	587	91.5	0.79	395	24.52	2400
KZR400L2-10	200	423	252	2.85	213	588	92.2	0.77	460	28.1	2950

# KZR & KZ series

Three-phase crane motors

**6 POLES-1.000 Rpm**

380 V / 50 Hz

Duty type FC	S <sub>3</sub> 6 Starts/h								Rotor voltage (V)	Moment of inertia Jm (kgm <sup>2</sup> )	Weight (kg)
	60%				100%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR112M-6	1.1	3.8	7.32	912	0.8	3.5	5.16	940	100	0.03	74
KZR132M1-6	1.8	5.4	8.96	921	1.5	5	7.3	940	132	0.06	97
KZR132M2-6	3	7.9	10.2	937	2.5	7.5	8.4	950	185	0.07	108
KZR160M1-6	5	14	22.9	935	4	12.5	18.2	944	138	0.12	154
KZR160M2-6	6.3	16	21.7	949	5.5	15	18.8	956	185	0.15	160
KZR160L-6	9	21	22.3	952	7.5	18.8	18.5	970	250	0.2	174
KZR180L-6	13	29.7	37.3	968	11	25.5	31.4	975	218	0.39	230
KZR200L-6	19	44.5	60.5	969	17	40.5	52.6	973	200	0.67	320
KZR225M-6	26	55	64.5	968	22	50	54.2	975	250	0.84	398
KZR250M1-6	32	61	79	970	28	55	69	975	250	1.52	512
KZR250M2-6	39	73	83	969	33	64	71	974	290	1.78	559
KZR280S-6	48	88	107.1	972	40	76	88.9	976	280	2.35	747
KZR280M-6	63	118	104	975	50	96.3	82	980	370	2.86	848

**8 POLES-750 Rpm**

380 V / 50 Hz

Duty type FC	S <sub>3</sub> 6 Starts/h								Rotor voltage (V)	Moment of inertia Jm (kgm <sup>2</sup> )	Weight (kg)
	60%				100%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR160L-8	6	16.4	18.2	712	5	14	15	724	205	0.2	172
KZR180L-8	9	21.9	32.1	720	7.5	19.6	26.6	726	172	0.39	230
KZR200L-8	13	30	46	718	11	27	38.7	723	178	0.67	317
KZR225M-8	18.5	41	49.5	721	17	38	45	723	232	0.82	390
KZR250M1-8	26	52	59.1	725	22	46	49.7	729	272	1.52	515
KZR250M2-8	32	68	60	725	27	60	51	729	335	1.79	563
KZR280S-8	39	86.2	79.4	722	33	76.3	67	726	305	2.35	747
KZR280M-8	48	103	82.8	730	40	93	68.7	732	360	2.86	848
KZR315S-8	63	126.4	130.7	729	55	105.4	104.3	731	302	7.22	1050
KZR315M-8	75	140	136	725	63	124	113.8	728	372	8.68	1170

**10 POLES-600 Rpm**

380 V / 50 Hz

Duty type FC	S <sub>3</sub> 6 Starts/h								Rotor voltage (V)	Moment of inertia Jm (kgm <sup>2</sup> )	Weight (kg)
	60%				100%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR280S-10	32	77	133.4	578	27	69	111.8	582	150	3.58	767
KZR280M-10	37	90	136	569	33	89.5	118	587	172	3.98	840
KZR315S-10	48	106.6	122	585	40	95.2	101	588	242	7.22	1026
KZR315M-10	63	140	124.8	584	50	125	98.5	587	325	8.68	1156
KZR355M-10	75	154	140	588	63	136	117	589	330	14.32	1520
KZR355L1-10	90	181	143	585	75	157	119	588	388	17.08	1764
KZR355L2-10	110	226	141.8	591	90	191	115.6	592	475	19.18	1810
KZR400L1-10	135	294	206	592	115	268	174	591	395	24.52	2400
KZR400L2-10	170	372	214	591	145	332	183	592	460	28.1	2950

# KZR & KZ series

Three-phase crane motors

**6 POLES-1.000 Rpm**

380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> 150 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	25%				40%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR112M-6	1.6	4.75	11.3	845	1.3	4.2	8.85	890	100	0.03	74
KZR132M1-6	2.2	6	11.2	908	2	5.7	10	913	132	0.06	97
KZR132M2-6	3.7	9.7	13.1	915	3.5	9.2	11.2	925	185	0.07	108
KZR160M1-6	5.8	15.5	27.3	927	5	14.1	23.4	935	138	0.12	154
KZR160M2-6	7.5	18	27.6	940	7	17.1	25.6	945	185	0.15	160
KZR160L-6	11	28.3	27.8	950	10	23	25	957	250	0.2	174
KZR180L-6	15	33	43.7	960	13	29.5	37.7	965	218	0.39	230
KZR200L-6	21	47	55.4	965	18.5	42.5	48.5	970	200	0.67	320
KZR225M-6	28	58	70	965	25	53	62.2	969	250	0.84	398
KZR250M1-6	33	63	82.6	970	30	58	74.9	973	250	1.52	512
KZR250M2-6	42	78	90.5	967	37	70	79.3	971	290	1.78	559
KZR280S-6	52	95	116	970	45	83	100	974	280	2.35	747
KZR280M-6	70	130	115	972	62	114	102	975	370	2.86	848

**8 POLES-750 Rpm**

380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> 150 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	25%				40%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR160L-8	7.5	19	22.8	712	7	18.1	21.2	716	205	0.2	172
KZR180L-8	11	25.4	40.6	711	10	23.5	36.6	717	172	0.39	230
KZR200L-8	15	34	54.1	713	13	30	46.6	718	178	0.67	317
KZR225M-8	21	45	56.8	718	18.5	41	49.7	721	232	0.82	390
KZR250M1-8	29	61.5	68.5	700	25	54	58.7	705	272	1.52	515
KZR250M2-8	33	70	62.5	725	30	64	56.6	727	335	1.79	563
KZR280S-8	42	91	85.8	719	37	83	75.6	723	305	2.35	747
KZR280M-8	52	104	90.2	727	45	93	77.7	730	360	2.86	848
KZR315S-8	64	118	132.7	731	60	110.5	124.2	733	302	7.22	1050
KZR315M-8	75	142	136	725	72	136	130.7	725	372	8.68	1170

**10 POLES-600 Rpm**

380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> 150 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	25%				40%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR280S-10	33	78.7	141.8	578	30	74	125	579	150	3.58	767
KZR280M-10	42	98.7	154	565	37	90	136	569	172	3.98	840
KZR315S-10	50	110	128.4	583	45	100	115.3	585	242	7.22	1026
KZR315M-10	65	144	129	584	63	136	119	585	325	8.68	1156
KZR355M-10	80	160.5	149.7	587	72	156	134.5	588	330	14.32	1520
KZR355L1-10	100	185	157	586	90	170	142	588	388	17.08	1764
KZR355L2-10	120	250	149.8	588	110	230	137.5	589	475	19.18	1810
KZR400L1-10	146	314	223	588	130	288	199	589	410	24.52	2400
KZR400L2-10	185	396	223	590	165	365	262	589	480	28.1	2950

# KZR & KZ series

Three-phase crane motors

**6 POLES-1.000 Rpm**  
380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> 150 Starts/h				Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	60%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR112M-6	1	3.75	6.57	920	100	0.03	74
KZR132M1-6	1.7	5.3	8.4	931	132	0.06	97
KZR132M2-6	2.8	8.5	9.65	940	185	0.07	108
KZR160M1-6	4.8	13.8	22.7	937	138	0.12	154
KZR160M2-6	6	15.6	21.8	954	185	0.15	160
KZR160L-6	8	19.5	19.8	969	250	0.2	174
KZR180L-6	12	28	34.6	969	218	0.39	230
KZR200L-6	17	40.5	53.8	973	200	0.67	320
KZR225M-6	22	50	54.5	973	250	0.84	398
KZR250M1-6	28	54	69.8	975	250	1.52	512
KZR250M2-6	33	63	70.5	975	290	1.78	559
KZR280S-6	42	80	93.6	975	280	2.35	747
KZR280M-6	55	90.5	104	978	370	2.86	848

**8 POLES-750 Rpm**  
380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> 150 Starts/h				Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	60%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR160L-8	5.8	16.4	17.3	724	205	0.2	172
KZR180L-8	8	20.5	28.8	728	172	0.39	230
KZR200L-8	12	28.2	43	720	178	0.67	317
KZR225M-8	17	38	45.6	724	232	0.82	390
KZR250M1-8	22	49	51.9	712	272	1.52	515
KZR250M2-8	28	61	52.8	728	335	1.79	563
KZR280S-8	33	76.3	67	726	305	2.35	747
KZR280M-8	42	89	72.4	732	360	2.86	848
KZR315S-8	56	106	115.8	733	302	7.22	1050
KZR315M-8	65	126	117.6	727	372	8.68	1170

**10 POLES-600 Rpm**  
380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> 150 Starts/h				Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	60%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR280S-10	28	71	116	580	150	3.58	767
KZR280M-10	33	84.3	118	573	172	3.98	840
KZR315S-10	42	96	107.4	586	242	7.22	1026
KZR315M-10	55	130	109	586	325	8.68	1156
KZR355M-10	65	140	121	589	330	14.32	1520
KZR355L1-10	80	155	126.5	589	388	17.08	1764
KZR355L2-10	95	210	122.7	591	475	19.18	1810
KZR400L1-10	115	268	175	590	410	24.52	2400
KZR400L2-10	145	332	183	592	480	28.1	2950



# KZR & KZ series

Three-phase crane motors

## 6 POLES-1.000 Rpm

380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> 300 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	40%				60%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR112M-6	1.2	4	8	900	0.9	3.7	5.87	930	100	0.03	74
KZR132M1-6	1.8	5.4	8.95	926	1.6	5.1	7.87	936	132	0.06	97
KZR132M2-6	3.3	9.4	11.9	925	2.7	8.5	9.65	940	185	0.07	108
KZR160M1-6	4.8	14.1	23.4	935	4.5	13.8	22.4	937	138	0.12	154
KZR160M2-6	6	15.6	21.8	954	5.5	14.8	19.8	959	185	0.15	160
KZR160L-6	9	19.5	19.8	969	7.5	18.7	18.5	971	250	0.2	174
KZR180L-6	12	28	34.6	969	11	26.6	31.7	972	218	0.39	230
KZR200L-6	17	40.5	52.6	973	15	37	40	975	200	0.67	320
KZR225M-6	22	50	54.5	973	20	46	49.4	977	250	0.84	398
KZR250M1-6	26	52	64.6	977	25	50	62.1	978	250	1.52	512
KZR250M2-6	31	60	66.1	976	30	58	63.9	977	290	1.78	559
KZR280S-6	40	76	89	977	37	71	82.2	978	280	2.35	747
KZR280M-6	52	98	85.5	979	47	92	77.3	981	370	2.86	848

## 8 POLES-750 Rpm

380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> 300 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	40%				60%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR160L-8	6	16.7	18	722	5	15.5	14.9	727	205	0.2	172
KZR180L-8	8	20.5	28.8	728	7.5	19.7	26.9	729	172	0.39	230
KZR200L-8	12	28.2	43	720	11	27	39.1	724	178	0.67	317
KZR225M-8	17	38	45.6	724	15	35.1	40	727	232	0.82	390
KZR250M1-8	22	49	51.9	712	20	46	46.2	716	272	1.52	515
KZR250M2-8	26	58	48.9	730	25	57	47	731	335	1.79	563
KZR280S-8	31	74	63.5	728	30	72	61.5	732	305	2.35	747
KZR280M-8	42	89	72.4	732	37	83	63.5	735	360	2.86	848
KZR315S-8	52	100	107	735	48	94	98.8	736	302	7.22	1050
KZR315M-8	60	120	108	729	55	116	99	729	372	8.68	1170

## 10 POLES-600 Rpm

380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> 300 Starts/h								Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	40%				60%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR280S-10	26	68	108	582	25	66	103	583	150	3.58	767
KZR280M-10	31	82	110	574	28	78.5	98	577	172	3.98	840
KZR315S-10	40	94	102.2	587	37	90	94.5	587	242	7.22	1026
KZR315M-10	53	126	98.7	587	48	124	94.7	588	325	8.68	1156
KZR355M-10	60	130	112	590	55	124	102.4	590	330	14.32	1520
KZR355L1-10	75	150	119	590	70	145	111	591	388	17.08	1764
KZR355L2-10	90	205	116.2	591	80	190	130.2	592	475	19.18	1810
KZR400L1-10	110	260	168	591	97	247	148	592	410	24.52	2400
KZR400L2-10	140	324	176	592	123	298	155	592	480	28.1	2950

# KZR & KZ series

Three-phase crane motors

## 6 POLES-1.000 Rpm, 380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> , 600 Starts/h				Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	60%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR112M-6	0.7	3.4	4.46	946	100	0.03	74
KZR132M1-6	1.35	4.9	6.8	945	132	0.06	97
KZR132M2-6	2.3	6	7.5	950	185	0.07	108
KZR160M1-6	3.8	12.2	17.5	946	138	0.12	154
KZR160M2-6	4	13	14.2	970	185	0.15	160
KZR160L-6	6	16.7	14.2	978	250	0.2	174
KZR180L-6	9	23.6	22.9	978	218	0.39	230
KZR200L-6	11	31.5	28.5	981	200	0.67	320
KZR225M-6	15	39	36.8	982	250	0.84	398
KZR250M1-6	17.5	39	43.2	984	250	1.52	512
KZR250M2-6	24	49	50.9	981	290	1.78	559
KZR280S-6	30	64	66.5	980	280	2.35	747
KZR280M-6	37	78	61	982	370	2.86	848

## 8 POLES-750 Rpm, 380 V / 50 Hz

Duty type	S <sub>4</sub> - S <sub>5</sub> , 600 Starts/h				Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	60%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR160L-8	3.8	13.7	11.2	732	205	0.2	172
KZR180L-8	5.8	17.8	20.6	736	172	0.39	230
KZR200L-8	9	23	28.1	731	178	0.67	317
KZR225M-8	11	31	29.1	733	232	0.82	390
KZR250M1-8	15	39	34.2	725	272	1.52	515
KZR250M2-8	18.5	45	34.4	736	335	1.79	563
KZR280S-8	24	64	49.1	733	305	2.35	747
KZR280M-8	30	73	51.4	737	360	2.86	848
KZR315S-8	35	80	71.7	740	302	7.22	1050
KZR315M-8	41	100	73.7	732	372	8.68	1170

## 10 POLES-600 Rpm, 380 V / 50 H

Duty type	S <sub>4</sub> - S <sub>5</sub> , 600 Starts/h				Rotor voltage (V)	Moment of inertia J <sub>m</sub> (kgm <sup>2</sup> )	Weight (kg)
FC	60%						
Frame size	KW	I <sub>1</sub> (A)	I <sub>2</sub> (A)	n r/min			
KZR280S-10	17	56	69.8	588	150	3.58	767
KZR280M-10	22	72.5	75	582	172	3.98	840
KZR315S-10	30	84	76.3	589	242	7.22	1026
KZR315M-10	37	114	73	589	325	8.68	1156
KZR355M-10	41	104	76.19	591	330	14.32	1520
KZR355L1-10	50	120	78.4	594	388	17.08	1764
KZR355L2-10	60	165	77.1	594	475	19.18	1810
KZR400L1-10	75	220	114	594	410	24.52	2400
KZR400L2-10	95	265	122	594	480	28.1	2950

**Note:** The data in the table is based on the moment of inertia of the load being equal to the moment of inertia of the motor. The selection of motors for S1 or S5 operation must be test checked according to the moment of inertia of the real load.

# KZR & KZ series

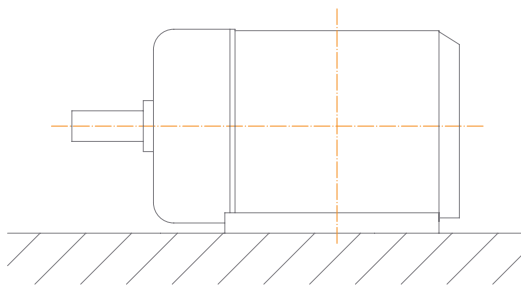
Three-phase crane motors

## Construction of motor

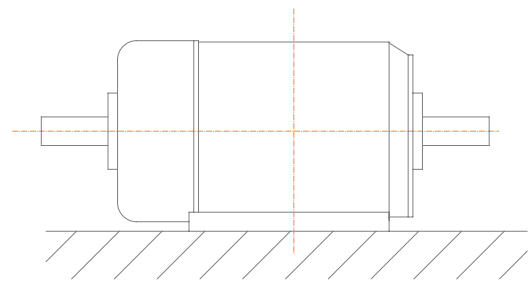
### Mode of cooling:

- Frame 112-132 cooling use external natural (IC0041)
- Frame 160-400 cooling use the form of fan cooling (IC0141)
- Frame 400 cooling can use fan for internal circulation either (IC0151)

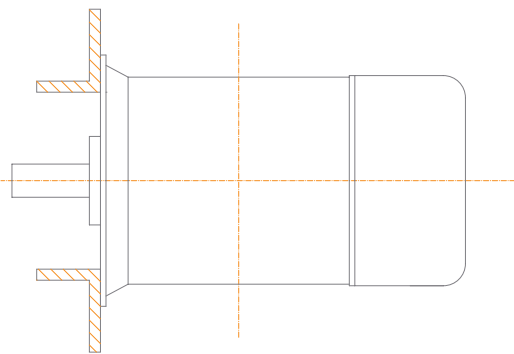
### Mounting arrangements



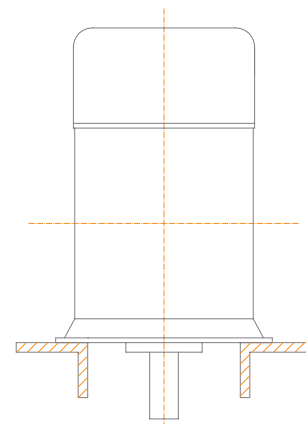
Symbol	Range (Frame size)
IM1001	112 – 160
IM1003	180 – 400



Symbol	Range (Frame size)
IM1002	112 – 160
IM1004	180 – 400



Symbol	Range (Frame size)
IM3001	112 – 160
IM3003	180



Symbol	Range (Frame size)
IM3011	112 – 160
IM3013	180 - 315

The shaft extension can be made according to customer 's request.

Transmission through shaft coupling or spur wheel may be used. If the latter is taken, the minimum pitch circle diameter of the shaft extension end.

Terminal box on the top of the frame has two directions along both sides of the motor for stator, but the rotor's outlet position may be from both sides of the end shield.

The measures are taken to prevent slack on the fastener of the motor.

# KZR & KZ series

Three-phase crane motors

## CARBON BRUSH

Frame size	The dimensions of brush (mm)	The outer diameter of slip-ring (mm)
KZR112	20x8x32	100
KZR132	20x8x32	100
KZR160	25x10x40	112
KZR180	25x10x40	125
KZR200	32x12.5x50	140
KZR225	32x12.5x50	140
KZR250	40x12.5x50	160
KZR280	40x20x60	200
KZR315	40x20x60	200
KZR355	50x20x60	250
KZR400	2(40x20x60)	250

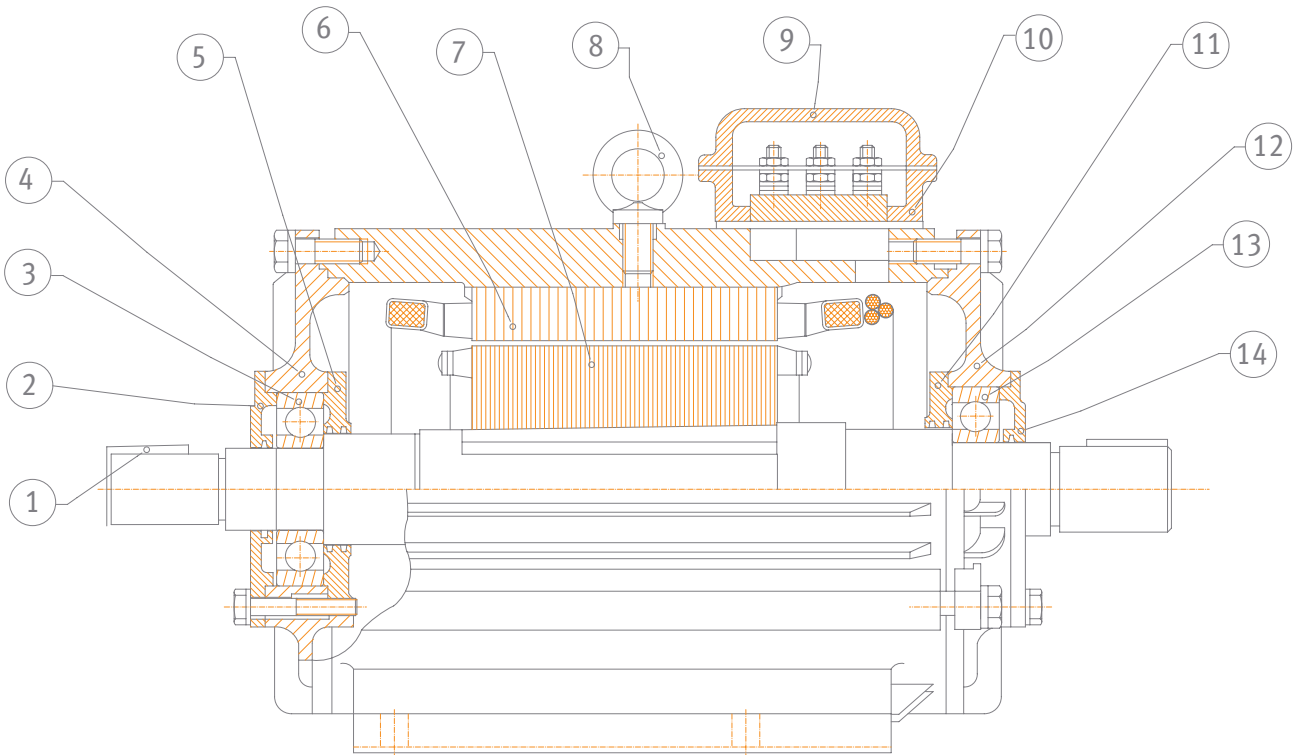
The carbon brush type is J201

## BEARINGS

Frame size	IM1		IM2	
	Load end	Non-load end	Load end	Non-load end
112	6308	6308	6308	6308
132	6309	6309	6309	6309
160	6311	6311	6311	6311
180	6313	6313	6313	6313
200	NU 315	6315	NU 315	7315
225	NU 315	6315	NU 315	7315
250	NU 316	6316	NU 316	7316
280	NU 320	6320	NU 320	7320
315	NU 322	6322	NU 322	7322
355	NU 326	6326		
400	NU 330	6330		

# KZR & KZ series

## Arrangement & Parts list

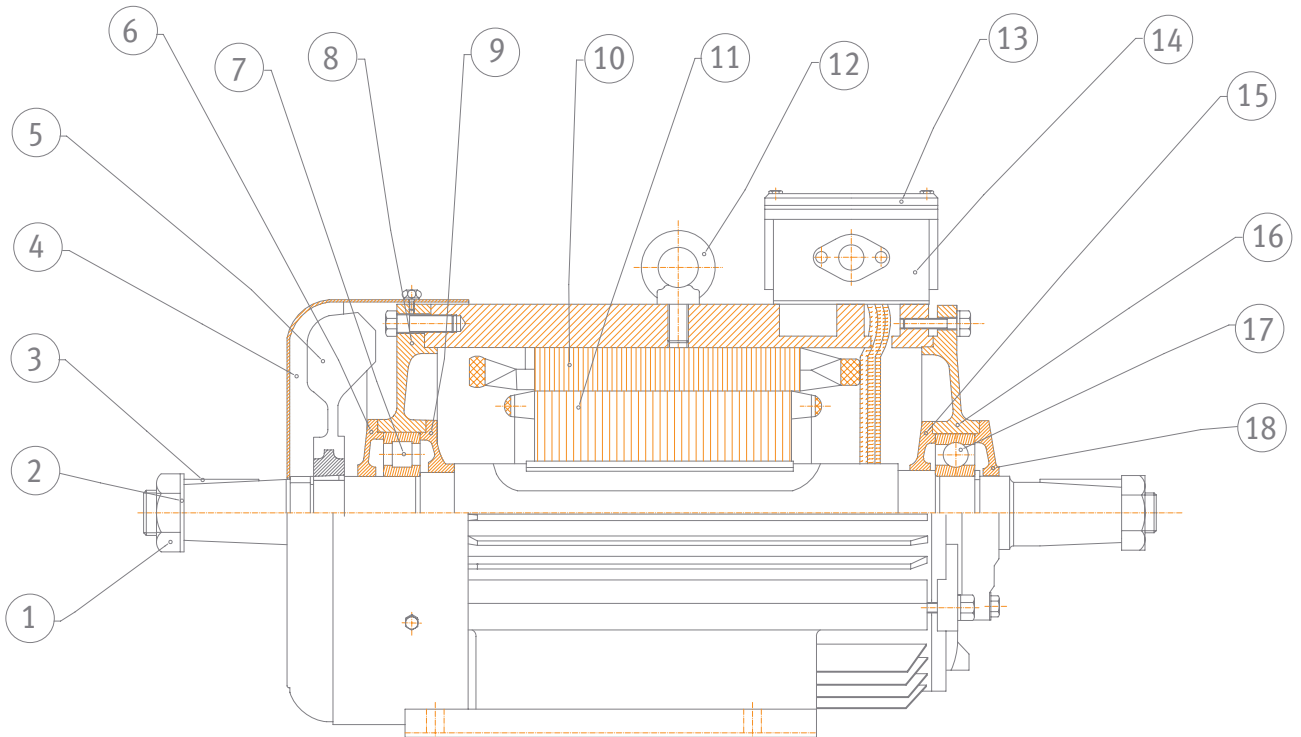


KZ 112 ~ 132

- |   |                        |    |                          |
|---|------------------------|----|--------------------------|
| 1 | Shaft and key          | 8  | Eyebolt                  |
| 2 | Outer bearing cap D.E. | 9  | Terminal box lid         |
| 3 | Bearing D.E.           | 10 | Terminal box base        |
| 4 | Endshield D.E.         | 11 | Inner bearing cap N.D.E. |
| 5 | Inner bearing cap D.E. | 12 | Endshield N.D.E.         |
| 6 | Stator lamination pack | 13 | Bearing N.D.E.           |
| 7 | Rotor lamination pack  | 14 | Outer bearing cap N.D.E. |

# KZR & KZ series

## Arrangement & Parts list



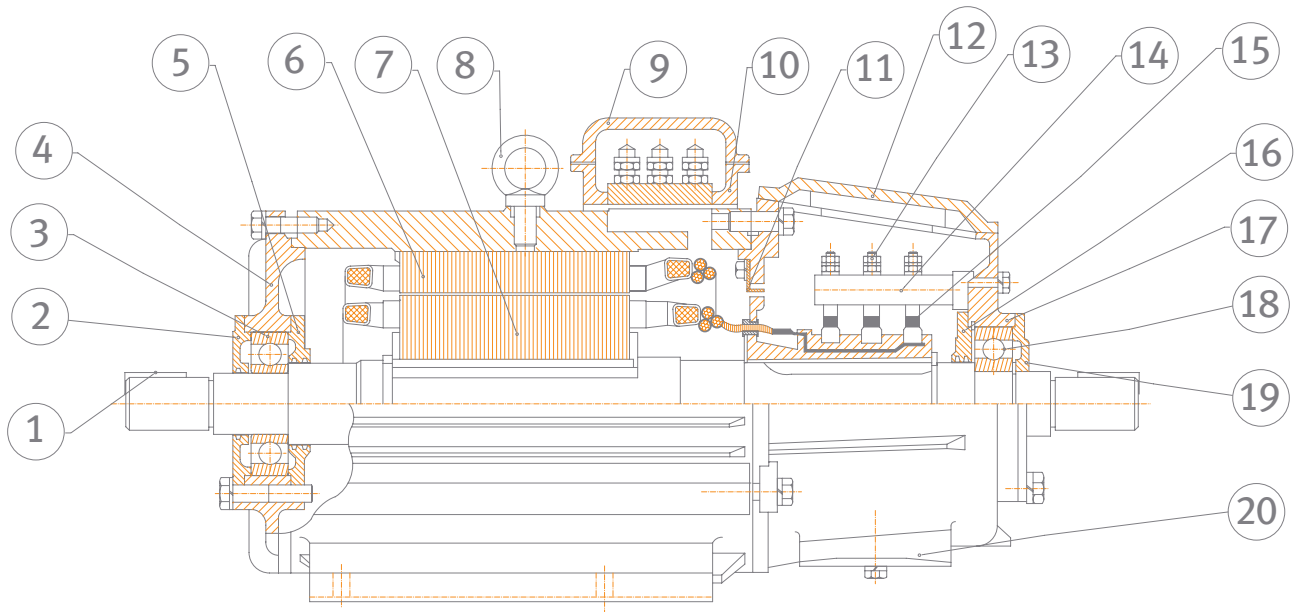
KZ 160 ~ 250

- |   |                        |    |                          |
|---|------------------------|----|--------------------------|
| 1 | Hexagon nut            | 10 | Stator lamination pack   |
| 2 | Lock washer            | 11 | Rotor lamination pack    |
| 3 | Shaft and key          | 12 | Eyebolt                  |
| 4 | Fan cowl               | 13 | Terminal box lid         |
| 5 | Fan                    | 14 | Terminal box base        |
| 6 | Outer bearing cap D.E. | 15 | Inner bearing cap N.D.E. |
| 7 | Bearing D.E.           | 16 | Endshield N.D.E.         |
| 8 | Endshield D.E.         | 17 | Bearing N.D.E.           |
| 9 | Inner bearing cap D.E. | 18 | Outer bearing cap N.D.E. |



# KZR & KZ series

## Arrangement & Parts list

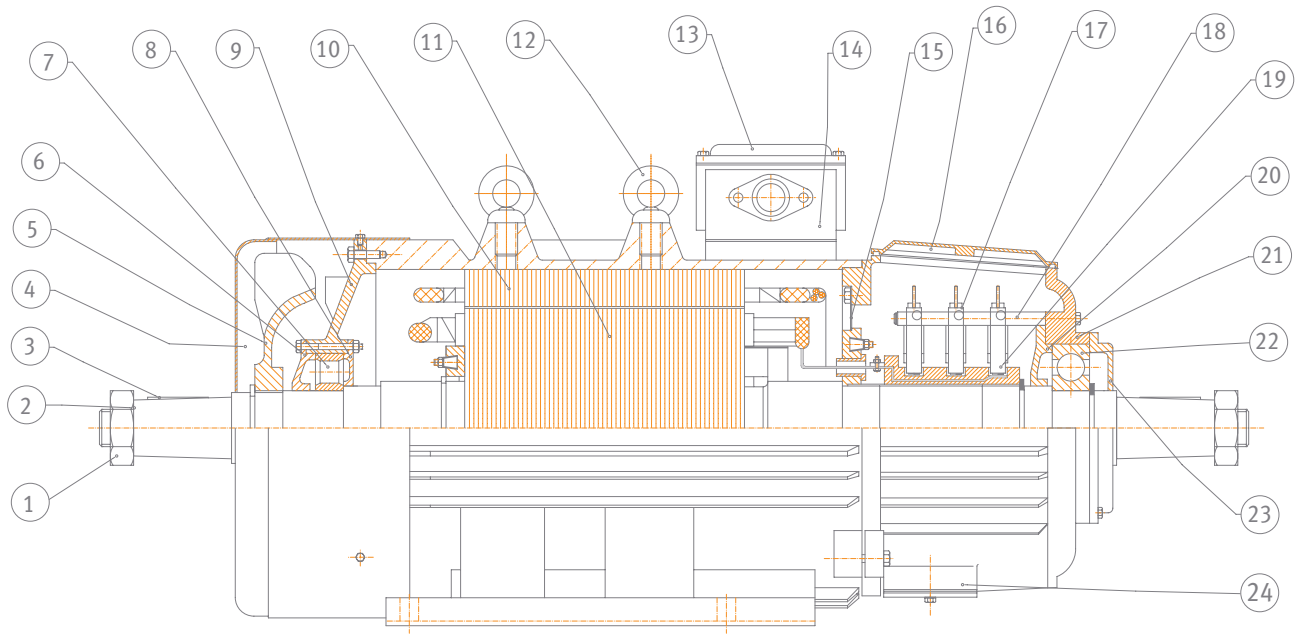


KZR 112 ~ 132

1	Shaft and key	11	Dust shield (divider shield)
2	Outer bearing cap D.E.	12	Inspection cover
3	Bearing D.E.	13	Brush holder
4	Endshield D.E.	14	Brush holder mounting rod
5	Inner bearing cap D.E.	15	Slip ring
6	Stator lamination pack	16	Inner bearing cap N.D.E.
7	Rotor lamination pack	17	Endshield N.D.E.
8	Eyebolt	18	Bearing N.D.E.
9	Terminal box lid	19	Outer bearing cap N.D.E.
10	Terminal box base	20	Dust – vent lid

# KZR & KZ series

## Arrangement & Parts list



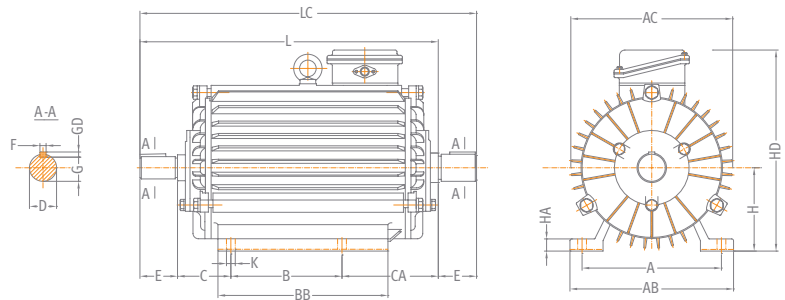
KZR 160 ~ 355

1	Hexagon nut	13	Terminal box lid
2	Lock washer	14	Terminal box base
3	Shaft and key	15	Dust shield (divider shield)
4	Fan cowl	16	Inspection cover
5	Fan	17	Brush holder
6	Outer bearing cap D.E.	18	Brush holder mounting rod
7	Bearing D.E.	19	Slip ring
8	Endshield D.E.	20	Inner bearing cap N.D.E.
9	Inner bearing cap D.E.	21	Endshield N.D.E.
10	Stator lamination pack	22	Bearing N.D.E.
11	Rotor lamination pack	23	Outer bearing cap N.D.E.
12	Eyebolt	24	Dust – vent lid

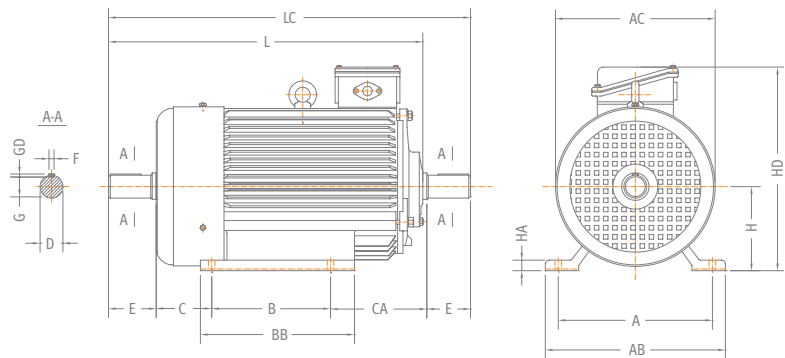
# KZR & KZ series

Three-phase crane motors

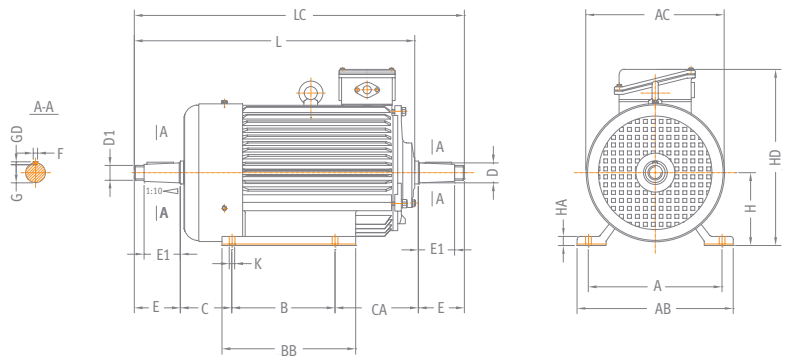
## KZ112 ~ 132 IM1



## KZ160 IM1



## KZ180 ~ 250 IM1



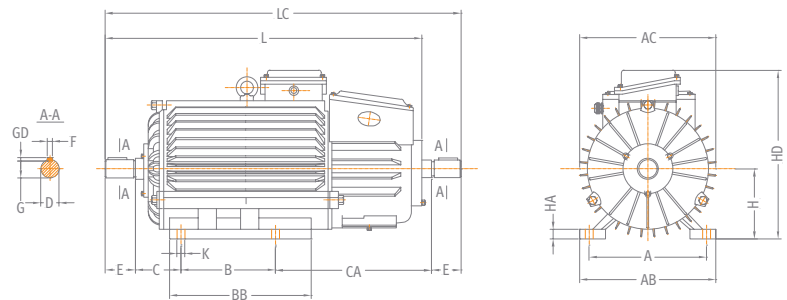
## KZ 112 ~ 250 IM1 Outline dimensions

Frame size	H	A	B	C	CA	K	D	D1	E	E1	F	G	GD	AC	AB	HD	BB	L	LC	HA
KZ112M	112	190	140	70	135	12	32	-	80	-	10	27	8	245	250	330	235	420	505	15
KZ132M	132	216	178	89	150	12	38	-	80	-	10	33	8	285	275	355	260	495	577	17
KZ160M	160	254	210	108	180	14.5	48	-	110	-	14	42.5	9	325	320	420	290	608	718	20
KZ160L	160	254	254	108	180	14.5	48	-	110	-	14	42.5	9	325	320	420	335	650	762	20
KZ180L	180	279	279	121	180	14.5	55	M36x3	110	82	14	19.9	9	360	360	460	380	685	800	22
KZ200L	200	318	305	133	210	18.5	60	M42x3	140	105	16	21.4	10	405	405	510	400	780	928	25
KZ225M	225	356	311	149	258	18.5	65	M42x3	140	105	16	23.9	10	430	455	545	410	850	998	28
KZ250M	250	406	349	168	295	24	70	M48x3	140	105	18	25.4	11	480	515	605	510	935	1092	30

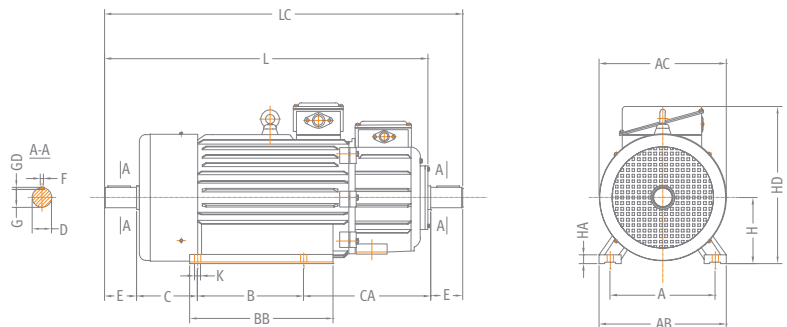
# KZR & KZ series

Three-phase crane motors

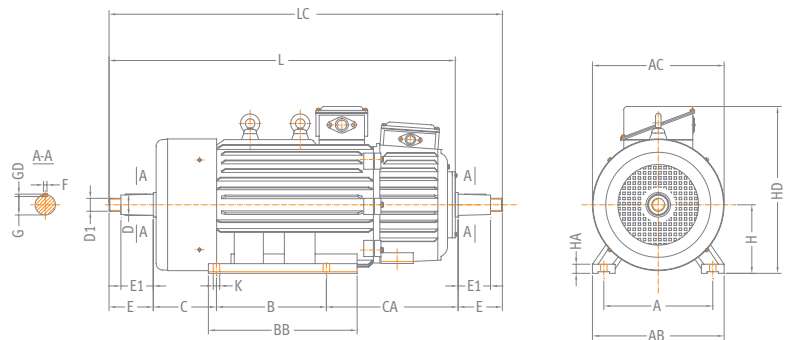
## KZR112 ~ 132 IM1



## KZR160 IM1



## KZR180 ~ 400 IM1



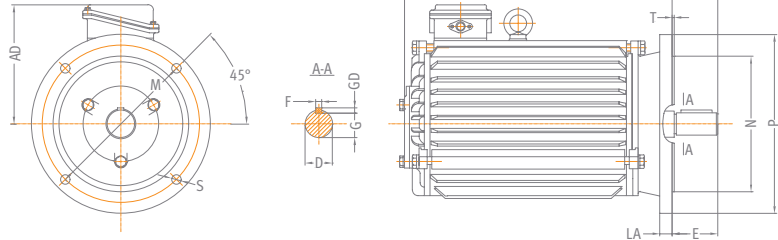
## KZR 112 ~ 315 IM3 outline and mount dimensions

Frame size	H	A	B	C	CA	K	D	D1	E	E1	F	G	GD	AC	AB	HD	BB	L	LC	HA
KZR112M	112	190	140	70	300	12	32	-	80	-	10	27	8	245	250	330	235	590	670	15
KZR132M	132	216	178	89	300	12	38	-	80	-	10	33	8	285	275	360	260	645	727	17
KZR160M	160	254	210	108	330	14.5	48	-	110	-	14	42.5	9	325	320	420	290	758	868	20
KZR160L	160	254	254	108	330	14.5	48	-	110	-	14	42.5	9	325	320	420	335	800	912	20
KZR180L	180	279	279	121	360	14.5	55	M36x3	110	82	14	19.9	9	360	360	460	380	870	980	22
KZR200L	200	318	305	133	400	18.5	60	M42x3	140	105	16	21.4	10	405	405	510	400	975	1118	25
KZR225M	225	356	311	149	450	18.5	65	M42x3	140	105	16	23.9	10	430	455	545	410	1050	1190	28
KZR250M	250	406	349	168	540	24	70	M48x3	140	105	18	25.4	11	480	515	605	510	1195	1337	30
KZR280S	280	457	368	190	540	24	85	M56x4	170	130	20	31.7	12	535	575	665	530	1265	1438	32
KZR280M	280	457	419	190	540	24	85	M56x4	170	130	20	31.7	12	535	575	665	580	1315	1489	32
KZR315S	315	508	406	216	600	28	95	M64x4	170	130	22	35.2	14	620	640	750	580	1390	1562	35
KZR315M	315	508	457	216	600	28	95	M64x4	170	130	22	35.2	14	620	640	750	630	1440	1613	35
KZR355M	355	610	560	254	630	28	110	M80x4	210	165	25	41.9	14	710	740	840	730	1650	1864	38
KZR355L	355	610	630	254	630	28	110	M80x4	210	165	25	41.9	14	710	740	840	800	1720	1934	38
KZR400L	400	686	710	280	630	35	130	M100x4	250	200	28	50	16	840	855	950	910	1865	2120	45

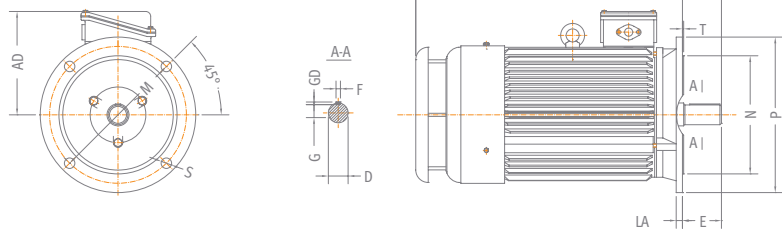
# KZR & KZ series

Three-phase crane motors

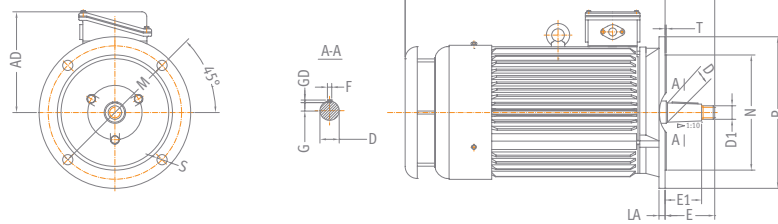
## KZ 112 ~ 132 IM3



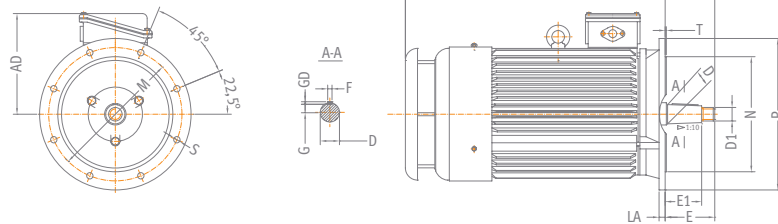
## KZ 160 IM3



## KZ 180 IM3



## KZ 200~250 IM3



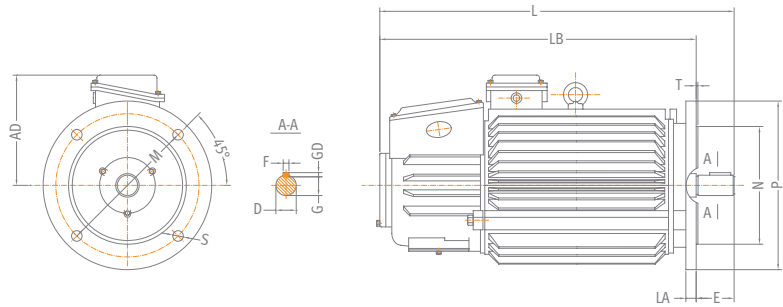
## KZR 112 ~ 315 IM3 outline and mount dimensions

Frame size	The symbol of flange	M	N	P	LA	T	S	D	D1	E	E1	F	G	GD	L	AD	LB
KZ112M	F 215	215	180	250	14	4	4xØ14.5	32	-	80	-	10	27	8	430	220	350
KZ132M	F 265	265	230	300	14	4	4xØ14.5	38	-	80	-	10	33	8	495	230	415
KZ160M	F 300	300	250	350	18	5	4xØ18.5	48	-	110	-	14	42.5	9	700	250	590
KZ160L	F 300	300	250	350	18	5	4xØ18.5	48	-	110	-	14	42.5	9	743	250	633
KZ180L	F 300	300	250	350	18	5	4xØ18.5	55	M36x3	110	82	14	19.9	9	735	280	625
KZ200L	F 400	400	350	450	20	5	8xØ18.5	60	M42x3	140	105	16	21.4	10	855	310	715
KZ225L	F 400	400	350	450	20	5	8xØ18.5	65	M42x3	140	105	16	23.9	10	915	320	775
KZ250M	F 500	500	450	550	22	5	8xØ18.5	70	M48x3	140	105	18	25.4	11	1005	355	865

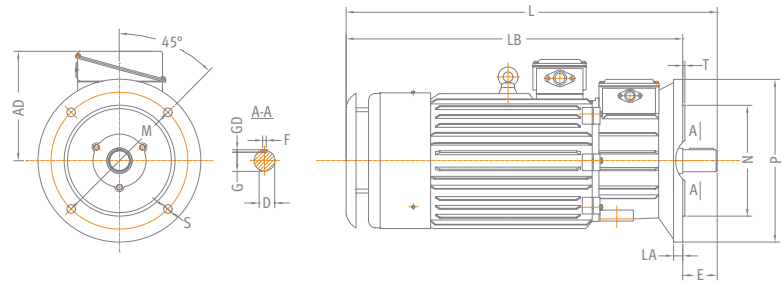
# KZR & KZ series

## Dimension sheet

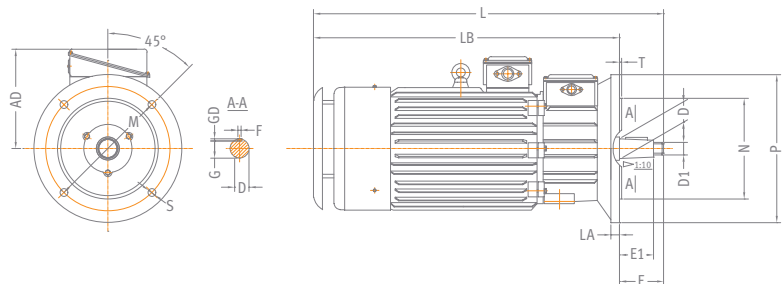
KZR 112 ~ 132 IM3



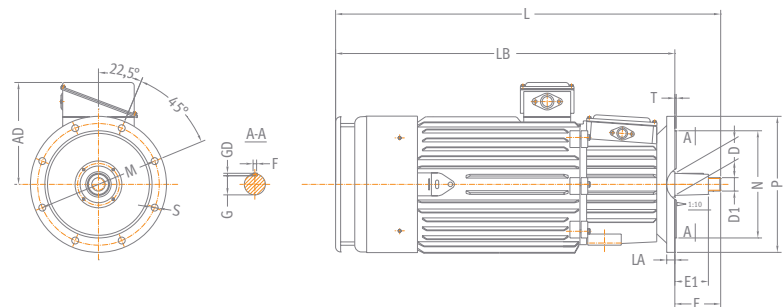
KZR 160 IM3



KZR 180 IM3



KZR 200 ~ 315 IM3



KZR 112 ~ 315 IM3 outline and mount dimensions

Frame size	The symbol of flange	M	N	P	LA	T	S	D	D1	E	E1	F	G	GD	L	AD	LB
KZR112M	F 215	215	180	250	14	4	4xØ14.5	32	-	80	-	10	27	8	595	220	515
KZR132M	F 265	265	230	300	14	4	4xØ14.5	38	-	80	-	10	33	8	645	230	565
KZR160M	F 300	300	250	350	18	5	4xØ18.5	48	-	110	-	14	42.5	9	828	250	718
KZR160L	F 300	300	250	350	18	5	4xØ18.5	48	-	110	-	14	42.5	9	872	250	762
KZR180L	F 300	300	250	350	18	5	4xØ18.5	55	M36x3	110	82	14	19.9	9	915	280	805
KZR200L	F 400	400	350	450	20	5	8xØ18.5	60	M42x3	140	105	16	21.4	10	1050	310	910
KZR225M	F 400	400	350	450	20	5	8xØ18.5	65	M42x3	140	105	16	23.9	10	1110	320	970
KZR250M	F 500	500	450	550	22	5	8xØ18.5	70	M48x3	140	105	18	25.4	11	1266	355	1126
KZR280S	F 500	500	450	550	22	5	8xØ18.5	85	M56x3	170	130	20	31.7	12	1370	385	1200
KZR280M	F 500	500	450	550	22	5	8xØ18.5	85	M56x3	170	130	20	31.7	12	1420	385	1250
KZR315S	F 600	600	550	660	25	6	8xØ24	95	M64x3	170	130	22	35.2	14	1475	435	1305
KZR315M	F 600	600	550	660	25	6	8xØ24	95	M64x3	170	130	22	35.2	14	1525	435	1355





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