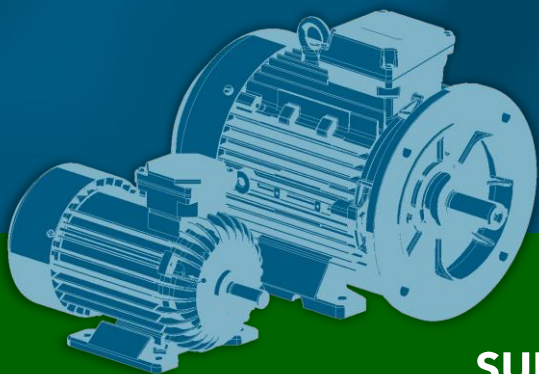


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CANTONI
MOTOR 

**3-PHASE INDUCTION MOTORS
SUPER PREMIUM EFFICIENCY IE4 - SERIES 4SIE**

3-PHASE INDUCTION MOTORS

SUPER PREMIUM EFFICIENCY IE4 - SERIES 4SIE

TD 225
Version V_01, 17-05-2017
Changes and misprints reserved

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1. General information

1.1. Cantoni product range

Cantoni offers a full range of induction electric motors, from 0,04 kW up to 6000 kW, in standard and special executions. Cantoni motors operate in almost all industrial segments like: pumps, fans, compressors, conveyors, mining, power plants and many other fields. The Cantoni product range consists of standard motors according to IEC standard in efficiency classes IE1, IE2, IE3, IE4 and motors according to Nema standard e.g. Nema Premium motors. Apart from standard motors, it is possible to offer motors for special applications in marine, oil, gas, energy, construction and many other industries. All main components of the motors are produced in Europe (Poland) in order to guarantee the highest quality level. Particular importance is attached to the raw materials used for production, they are delivered only by qualified suppliers exclusively from the European Union.

The designs and solutions correspond to the customer requirements and international norms. All motors are manufactured according to Quality Management System consistent with ISO 9001 and Environmental Management System consistent with ISO 14001. Cantoni motors are provided with CE mark and fulfil the EU Directives regarding the safety measures. The motors comply with almost all international standards: German standards DIN VDE, British standards BS, Italian standards CEI, Canadian standards CSA, American standards UL and NEMA and EU standard ATEX.

1.2. Ratings and tolerances

Permissible deviations between real values and catalogue values according to IEC 60034-1:

Description	Permissible deviations
Power factor $\cos \varphi$	$\Delta \cos \varphi = -\frac{1}{6} \cdot (1 - \cos \varphi_N)$
Efficiency η	$\Delta \eta = -15\% \cdot (100 - \eta_N)$ for $P_N \leq 150$ kW $\Delta \eta = -10\% \cdot (100 - \eta_N)$ for $P_N > 150$ kW
Speed n	$\Delta n = \pm 20\% \cdot (n_s - n_N)$ for $P_N > 1$ kW $\Delta n = \pm 30\% \cdot (n_s - n_N)$ for $P_N \leq 1$ kW
Locked rotor current I_L/I_N	$\Delta \frac{I_L}{I_N} = +20\% \cdot \frac{I_L}{I_N}$
Locked rotor torque T_L/T_N	$\text{Min } \frac{T_L}{T_N} = -15\% \cdot \frac{T_L}{T_N}$ $\text{Max } \frac{T_L}{T_N} = +25\% \cdot \frac{T_L}{T_N}$
Breakdown torque T_B/T_N	$\Delta \frac{T_B}{T_N} = -10\% \cdot J$
Moment of inertia J [kg·m ²]	$\Delta J = \pm 10\% \cdot J$

2. 4SIE series

2.1. Technical data

2-Pole motors (3000 rpm)

Efficiency class IE4 according IEC 60034-30-1

Type	Rated output	Rated speed	Rated torque	Efficiency			Power Factor	Full load current at rated voltage 400V	Locked rotor torque	Locked rotor current	Breakdown torque	Moment of inertia	Netto weight B3
	P_N [kW]	n_N [min ⁻¹]	T_N [N·m]	50% load	75% load	100% load	$\cos\phi_N$ [-]	I_N [A]	T_L/T_N [-]	I_L/I_N [-]	T_B/T_N [-]	J [kg·m ²]	m [kg]
4SIE 56-2B	0,12												
4SIE 63-2A	0,18												
4SIE 63-2B	0,25												
4SIE 71-2A	0,37												
4SIE 71-2B	0,55												
4SIE 80-2A	0,75												
4SIE 80-2B	1,1												
4SIE 200L2A	30	2970	96	93,8	94,7	94,5	0,91	50	2,6	7,5	2,8		
4SIE 200L2B	37	2971	119	94,3	95,0	94,8	0,91	62	2,8	7,8	2,9		
4SIE 225M2	45	2978	144	93,2	94,5	95,0	0,89	77	2,0	8,1	3,3		
4SIE 250M2	55	2972	177	94,8	95,4	95,3	0,91	92	2,1	8,0	3,1		
4SIE 280S2	75	2981	240	94,8	95,5	95,6	0,89	127	2,1	7,6	3,0		
4SIE 280M2	90	2981	288	95,3	95,9	95,8	0,90	151	2,3	8,0	3,0		
4SIE 315S2	110	2981	352	95,8	96,2	96,0	0,90	184	2,0	7,2	2,4		
4SIE 315M2A	132	2982	423	96,2	96,6	96,2	0,91	218	2,5	8,1	2,7		
4SIE 315M2B	160	2982	512	95,7	96,2	96,3	0,91	264	2,1	7,7	3,1		

4-Pole motors (1500 rpm)

Efficiency class IE4 according IEC 60034-30-1

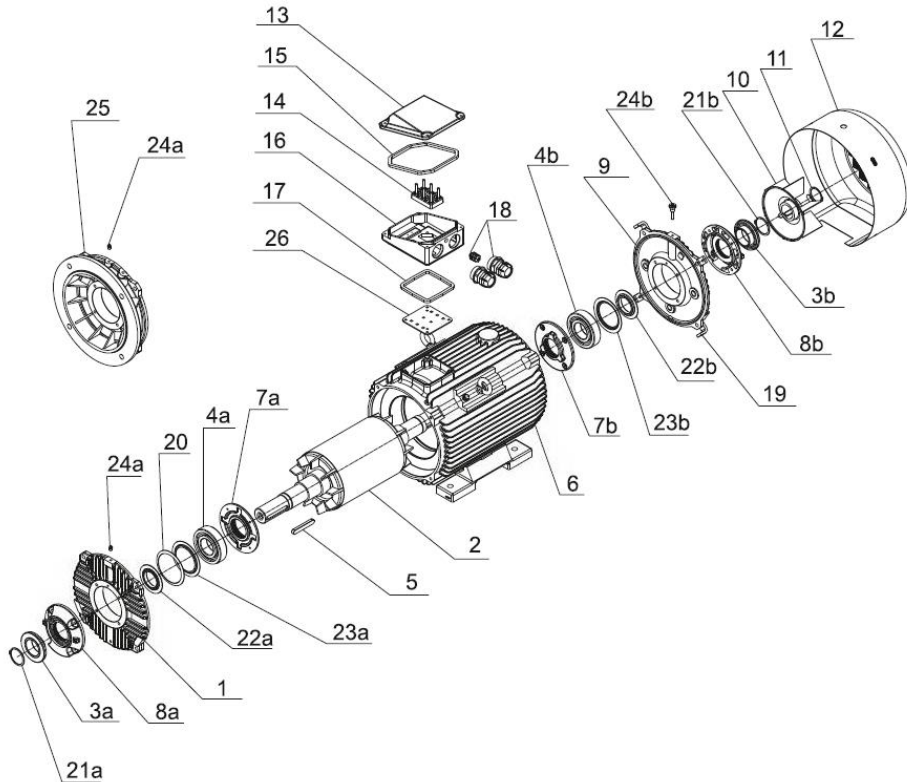
Type	Rated output	Rated speed	Rated torque	Efficiency			Power Factor	Full load current at rated voltage 400V	Locked rotor torque	Locked rotor current	Breakdown torque	Moment of inertia	Netto weight B3
	P_N	n_N	T_N	η_N [%]			$\cos\phi_N$	I_N	T_L/T_N	I_L/I_N	T_B/T_N	J	m
	[kW]	[min ⁻¹]	[N·m]	50% load	75% load	100% load	[-]	[A]	[-]	[-]	[-]	[kg·m ²]	[kg]
4SIE 63-4A	0,12							On request					
4SIE 63-4B	0,18							On request					
4SIE 71-4A	0,25							On request					
4SIE 71-4B	0,37							On request					
4SIE 80-4A	0,55							On request					
4SIE 200L4	30	1483	193	94,8	95,2	94,9	0,91	50	2,5	8,0	3,0		
4SIE 225S4	37	1487	238	94,9	95,6	95,2	0,86	65	2,0	7,5	2,9		
4SIE 225M4	45	1487	289	95,2	95,8	95,4	0,87	78	2,2	7,8	3,0		
4SIE 250M4	55	1488	353	95,1	95,8	95,7	0,90	92	2,3	8,1	3,1		
4SIE 280S4	75	1489	481	95,9	96,2	96,0	0,87	130	2,3	7,4	2,4		
4SIE 280M4	90	1489	577	96,1	96,4	96,1	0,87	155	2,4	7,6	2,4		
4SIE 315S4	110	1489	706	96,0	96,4	96,3	0,86	192	2,5	7,8	2,4		
4SIE 315M4A	132	1490	846	96,2	96,6	96,4	0,87	227	2,7	8,0	2,4		
4SIE 315M4B	160	1490	1026	96,5	96,8	96,6	0,87	275	2,9	8,3	2,4		

6-Pole motors (1000 rpm)

Efficiency class IE4 according IEC 60034-30-1

Type	Rated output	Rated speed	Rated torque	Efficiency			Power Factor	Full load current at rated voltage 400V	Locked rotor torque	Locked rotor current	Breakdown torque	Moment of inertia	Netto weight B3
	P_N	n_N	T_N	η_N [%]			$\cos\phi_N$	I_N	T_L/T_N	I_L/I_N	T_B/T_N	J	m
	[kW]	[min ⁻¹]	[N·m]	50% load	75% load	100% load	[-]	[A]	[-]	[-]	[-]	[kg·m ²]	[kg]
4SIE 200L6A	18,5	990	178	92,1	93,3	93,4	0,81	35,5	2,7	7,8	3,1		
4SIE 200L6B	22	990	212	92,3	93,5	93,7	0,80	42	2,4	7,5	3,0		
4SIE 225M6	30	991	289	93,2	94,2	94,2	0,82	56	2,3	7,3	2,7		
4SIE 250M6	37	992	356	93,4	94,4	94,5	0,80	71	2,2	6,8	2,6		
4SIE 280S6	45	991	434	94,6	95,2	94,8	0,85	81	2,1	7,1	2,5		
4SIE 280M6	55	991	530	94,8	95,4	95,1	0,84	99	2,3	7,5	2,6		
4SIE 315S6	75	991	723	94,6	95,3	95,4	0,83	137	2,1	7,1	2,6		
4SIE 315M6A	90	991	867	94,8	95,5	95,6	0,85	160	2,2	7,1	2,6		
4SIE 315M6B	110	992	1059	95,1	95,8	95,8	0,85	195	2,3	7,6	2,7		

2.2. Spare parts



#	Description
1	DE shield
2	Rotor
3	Shaft seal
4	Bearing
5	Key
6	Housing with feet
7	Internal bearing cap
8	External bearing cap
9	NDE shield
10	Fan
11	Seeger ring
12	Fan cover
13	Terminal box cover

#	Description
14	Terminal board
15	Rubber gasket
16	Terminal box housing
17	Rubber gasket
18	Cable glands
19	Fan cover support
20	Spring washer
21	Seeger ring
22	Grease shield
23	Bearing internal ring
24	Grease nipple
25	Flange B5
26	Rubber gasket

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