

Trofazni kavezni asinkroni motori

Three-phase squirrel cage induction motors

Dreiphasige Asynchronmotoren mit Käfigläufer

Naši trofazni asinkroni kavezni motori potpuno zatvorene izvedbe i hlađeni vlastitim ventilatorom (IC 411) nalaze najširu primjenu u svim dijelovima proizvodnih i procesnih aktivnosti u industriji te u brodogradnji. Projektirani prema visokim zahtjevima moderne pogonske tehnike oni su, radi svoje modularne konstrukcije, s lakoćom prilagodljivi različitim zahtjevima korisnika.

Njihova su ekološka svojstva (niska bučnost i male vibracije, visoka iskoristivost i gotovo 100%-tna reciklabilnost) usklađena s pouzdanošću u svakodnevnoj uporabi, čak i u otežanim radnim i klimatskim uvjetima.

Odlikuju se visokom kvalitetom upotrijebljenih materijala, ležajevima podmazanim za vijek trajanja, završnim premazom otpornim na utjecaje vremena i koroziju te izolacijskim sustavom visoke dielektričke čvrstoće predviđenim za rad preko frekvenzijskog pretvarača.

Sve to daje Vam dodatno povjerenje da će Vaši pogonski sustavi opremljeni ovim modernim serijama motora postati još konkurentniji i pouzdaniji.

Our three-phase squirrel cage induction T.E.F.V. (IC411) motors find widest range of application in all segments of manufacturing and processing activities in the industry and shipbuilding. Designed to meet the highest requirements of modern drives technology, they are adaptable to the various customers demands due to their modular design.

Their ecological features (low noise level, low vibrations, high efficiency and almost 100% recyclability) are harmonised with their reliability in everyday use, even under hard working and climate conditions.

They are distinguished by high quality of used materials, life greased bearings, weather and corrosion resistant final coating and high dielectric strength insulation system intended to be fed over by static frequency converter.

All of that gives you additional confidence that your drive system equipped with this modern motor series will become more competitive and reliable.

Unsere dreiphasigen Asynchronmotoren mit Käfigläufer völlig geschlossener Ausführung und mit einem Eigenlüfter gekühlt (IC411), finden breiteste Anwendung in allen Segmenten der Herstellungs- u. Prozessstätigkeiten in der Industrie und im Schiffsbau. Projektiert nach hohen Anforderungen moderner Antriebstechnik, sind sie wegen modularer Bauweise mit Leichtigkeit verschiedener Anforderungen des Benutzers adaptierbar. Die ökologischen Eigenschaften der Motoren (geräusch- u. vibrationsarm, hoher Wirkungsgrad und beinahe 100%-ige Entsorgung) harmonisieren mit der Verlässlichkeit bei täglicher Anwendung auch bei erschwerten Betriebs- u. Umweltverhältnissen.

Sie zeichnen sich durch hochwertige eingesetzte Werkstoffe, daürgeschmierte Lager, witterungs- u.korrosionsfesten Endanstrich und das Isolationsystem höher dielektrischer Festigkeit vorgesehen für den Frequenzrichterbetrieb, aus.

All das gibt Ihnen zusätzliche Sicherheit, dass Ihre Antriebssysteme ausgerüstet mit diesen modernen Motorenbaureihen noch konkurrenzfähiger und verlässlicher sein werden.

SCHEMATA SPAJANJA

CONNECTION DIAGRAMS

SCHALTSCHEMEN

Tablica 1.1. / Table 1.1. / Tabelle 1.1.

TROFAZNI JEDNOBRZINSKI MOTORI · THREE PHASE SINGLE SPEED MOTORS · EINTOURIGE DREIPHASENMOTOREN		
	NIŽI NAPON (spoj Δ) LOWER VOLTAGE (Δ connection) NIEDRIGE SPANNUNG (Δ Schaltung)	VIŠI NAPON (spoj Y) HIGHER VOLTAGE (Y connection) HÖHERE SPANNUNG (Y Schaltung)
NAMOT U SPOJU D/Y WINDING CONNECTED IN D/Y WICKLUNG GESCHALTET IN D/Y		
SCHEMA PRIKLJUČKA NA MREŽU DIAGRAM OF TERMINALS FOR POWER SUPPLY KLEMMENSCHALTPLAN AUFNS NETZ		

Trofazni kavezni asinkroni motori

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1.1A TROFAZNI KAVEZNI ASINKRONI ELEKTROMOTORI - SERIJE 5 (56 – 160), SERIJE 7 (180 – 315) I SERIJE 8 (132-315)

1.1A THREE-PHASE SQUIRREL CAGE INDUCTION MOTORS SERIES 5 (56 – 160), SERIES 7 (180 – 315) AND SERIES 8 (132 – 315)

1.1A DREIPHASENASYNCHRONMOTOREN MIT KÄFIGLÄUFER DER BAUREIHEN 5 (56 – 160), 7 (180 – 315) UND 8 (132 – 315)

Tablica 1.2. / Table 1.2. / Tabelle 1.2.

Standardna izvedba	Standard design	Standardausführung
Norme:	Standards:	Normen:
IEC 60034, 60072, 60038 i 60085	IEC 60034, 60072, 60038 and 60085	IEC 60034, 60072, 60038 und 60085
Serije i veličine:	Motor series and frame sizes:	Baureihen und Baugrößen
5AZ 56-160 u siluminskom, tlačno lijevanom orebrenom kućištu s odlivenim nogama 7AZ 180-315 u orebrenom kućištu od sivog lijeva s montažnim nogama (veličine 112 – 160 na upit) 8AZ 132-315 u orebrenom kućištu od sivog lijeva s montažnim nogama	5AZ 56 – 160 in ribbed die casted aluminum alloy frame, with casted feet 7AZ 180 – 315 in ribbed cast iron frame with dismantable feet (for sizes 112 – 160 on request) 8AZ 132 - 315 in ribbed cast iron frame with dismantable feet	5AZ 56 – 160 im gerippten Alu-Druckgussgehäuse mit gegossenen Füßen 7AZ 180 – 315 im gerippten Graugussgehäuse mit angeschraubten Füßen (für Bgr.112 – 160 auf Anfrage) 8AZ 132 - 315 im gerippten Graugussgehäuse mit angeschraubten Füßen
Oblici ugradnje :	Mouting arrangements:	Bauformen:
IM B3, B5, B35, B14 i B34 (dva posljednja do uključivo veličine 132)	IM B3, B5, B35, B14 and B34 (last two available up to frame size 132)	IIM B3, B5, B35, B14 und B34 (die zwei letzten bis einschließlich der Bgr.132)
Priključni ormarić:	Terminal box:	Klemmenkasten:
metalni, gledano sa strane pogonskog vratila u oblicima IM B3, B35 i B34 smješten gore uvodnice i čepovi sa „M“ navojem prema tehničkim razjašnjenjima	metal, viewed from drive end side in mounting arrangements IMB3, B35 and B34 situated on top cable glands and cable plugs with „M“ thread according to technical explanations	aus Metall, von der Antriebswellenseite betrachtet in Bauformen IMB3, B35 und B34 oben aufgestellt Kabelverschraubungen und Stopfen mit metrischem Gewinde M nach technischen Erläuterungen
Raspon snaga:	Power range:	Leistungsbereich:
0.06 – 160 kW	0.06 – 160 kW	0.06 – 160 kW
Vrsta pogona:	Duty type:	Betriebsart:
S1; (za okolinu –20°C do +40°C i postav do 1000 m nm.)	S1 (for ambient from –20°C to +40°C and altitude up to 1000 m above sea level)	S1 (für die Umgebung von –20°C bis +40°C und die Aufstellung bis 1000m über den Meeresspiegel)
Napon i frekvencija:	Voltage and frequency:	Spannung u.Freqüenz:
230/400 V ± 10% Δ/Y (do 2,2 kW), 400/690V ± 10% Δ/Y (od 3 kW) i 50 Hz	230/400 V ± 10% Δ/Y (to 2,2 kW), 400/690V ± 10% Δ/Y (from 3 kW) i 50 Hz	230/400 V ± 10% /Y (bis 2,2 kW), 400/690V ± 10% /Y (ab 3 kW) i 50 Hz
Iskoristivost:	Efficiency:	Wirkungsgrad:
u klasi IE1/IE2 prema IEC 60034-30	in class IE1/IE2 according to IEC 60034-30 agreement	in Wirkungsgradklasse IE1/IE2 nach der IEC 60034-30 Vereinbarung
Broj polova:	Number of poles:	Polpaarzahl:
jednobrzijski motori: 2, 4, 6 i 8 standardno	single-speed motors: 2, 4, 6 and 8 as standard	eintourige Motoren: 2, 4, 6 und 8 standardmä ßig
Stupanj zaštite:	Protection index:	Schutzgrad:
IP55	IP55	IP55
Klasa izolacije:	Insulation class:	Isolationsklasse:
F (zagrijavanje u B)	F (rise in B)	F (Erwärmung in B)
Ton boje:	Colour tone:	Farbton:
RAL 5010	RAL 5010	RAL 5010
Ostalo:	Other:	Sonstiges:
u motorima serije 7 i 8 standardno ugrađene PTC sonde T150	in motor series 7 and 8 as standard built in PTC probes T150	in den Motoren der Baureihen 7 und 8 sind standardmä ßig die PTC Kaltleiter T150 eingebaut

TEHNIČKI PODACI

TECHNICAL DATA

TEHNISCHE DATEN

Tablica 1.3. / Table 1.3. / Tabelle 1.3.

2p=2		3000 min ⁻¹									400V / 50Hz			3600 min ⁻¹ / 440V / 60Hz		
P (kW)	Motor type	n (min ⁻¹)	η (%)	cos φ	I _n (A)	$\frac{I_k}{I_n}$	$\frac{M_k}{M_n}$	$\frac{M_{max}}{M_n}$	J (kgm ²)	m (kg)	P (kW)	n (min ⁻¹)	I _n (A)			
0.09	5AZ 56A-2	2810	61	0.81	0.26	3.6	2.2	2.2	0.000112	3.2	0.09	3370	0.26			
0.12	5AZ 56B-2	2820	61	0.80	0.37	3.8	2.5	2.5	0.000112	3.3	0.12	3380	0.37			
0.18	5AZH 56B-2	2730	63	0.84	0.5	4.2	2.5	2.5	0.000112	3.3	0.2	3280	0.5			
0.18	5AZ 63A-2	2840	70	0.75	0.5	4.2	3.3	3.5	0.000127	3.8	0.2	3400	0.5			
0.25	5AZ 63B-2	2860	70	0.7	0.75	5.0	3.4	3.8	0.000162	4.2	0.3	3430	0.75			
0.37	5AZH 63B-2	2780	70	0.84	0.9	4.2	2.4	2.6	0.000162	4.3	0.4	3340	0.9			
0.37	5AZ 71A-2	2750	70	0.8	0.95	3.8	2.0	2.1	0.000350	5.5	0.4	3300	0.95			
0.55	5AZ 71B-2	2760	70	0.82	1.4	4.2	2.2	2.2	0.000530	5.8	0.6	3260	1.4			
0.75	5AZH 71B-2	2760	73	0.77	2	3.7	2.4	2.4	0.000530	6.9	0.8	3320	2			
0.75	5AZ 80A-2	2830	73	0.8	1.85	4.5	2.6	2.6	0.000930	9	0.8	3400	1.85			
1.1	5AZ 80B-2	2830	79	0.83	2.45	4.9	2.6	2.6	0.001100	9.2	1.2	3400	2.45			
1.5	5AZH 80B-2	2800	78	0.78	3.6	4.6	2.9	3.0	0.001100	10.1	1.7	3360	3.6			
1.5	5AZ 90S-2	2820	78	0.82	3.4	5.3	2.6	2.6	0.001500	11.7	1.7	3385	3.4			
2.2	5AZ 90L-2	2820	80.5	0.79	5	5.6	2.8	2.9	0.002100	14.5	2.5	3385	5			
3	5AZ 100L-2	2870	83	0.84	6.2	6.6	3.2	3.4	0.004000	21	3.4	3420	6.2			
4	5AZH 100L-2	2850	79	0.86	8.5	5.2	2.5	2.6	0.008750	23	4.5	3420	8.5			
4	5AZ 112M-2	2900	85	0.85	8.0	7.0	3.2	3.4	0.006300	30	4.5	3480	8.0			
5.5	5AZH 112M-2	2880	82	0.84	11.5	6.1	2.1	2.7	0.007200	31	6.2	3460	11.5			
5.5	5AZ 132SA-2	2900	85	0.83	11.3	7.0	2.6	3.4	0.014000	36	6.2	3480	11.3			
7.5	5AZ 132SB-2	2900	87	0.87	14.3	7.0	2.6	3.2	0.015000	43	8.5	3480	14.3			
9.5	5AZ 132M-2	2920	88	0.87	18	7.7	3.0	3.6	0.020000	56	11	3500	18			
11	5AZH 132M-2	2920	89	0.85	21	8.0	3.0	3.6	0.020000	62	12.5	3500	21			
11	5AZ 160MA-2	2920	89	0.85	21	7.5	3.0	3.3	0.034000	72	12.5	3510	21			
15	5AZ 160MB-2	2930	90	0.89	27	8.8	3.0	3.8	0.053000	82	17	3520	27			
18.5	5AZ 160L-2	2940	90	0.90	33	8.8	3.0	3.8	0.063000	99	21	3530	33			
22	5AZH 160L-2	2940	90	0.86	43	8.3	4.0	4.5	0.063000	100	25	3530	43			
22	7AZ 180M-2	2940	90	0.85	41.5	7.5	3.0	3.8	0.093000	185	25	3530	41.5			
30	7AZ 180L-2	2945	91.5	0.86	55	7.5	3.0	3.5	0.140000	220	33	3535	55			
30	7AZ 200LA-2	2950	92	0.89	53	7.5	2.2	2.4	0.140000	220	33	3540	53			
37	7AZ 200LB-2	2955	92.5	0.89	65	7.5	2.3	2.5	0.160000	237	42	3550	65			
45	7AZ 225M-2	2950	93	0.90	77.5	7.5	2.3	2.5	0.260000	327	50	3540	77.5			
55	7AZ 250M-2	2960	94	0.88	96	7.3	2.2	2.8	0.340000	385	62	3550	96			
75	7AZ 280S-2	2970	94	0.89	129.5	7.5	2.2	2.8	0.500000	530	85	3550	129.5			
90	7AZ 280M-2	2970	94	0.89	155.5	7.5	2.2	2.8	0.550000	560	105	3550	155.5			
110	7AZ 315S-2	2975	94.5	0.90	186	7.0	1.6	2.5	1.120000	800	124	3570	186			
132	7AZ 315M-2	2980	95	0.90	222	7.7	1.6	2.5	1.280000	845	149	3575	222			
160	7AZ 315LA-2	2980	95	0.90	268	7.5	1.6	2.5	1.400000	895	180	3575	268			
5.5	8AZ 132SA-2	2900	85.7	0.88	10.6	7.5	2.2	2.3	0.014000	62	6.2	3480	10.6			
7.5	8AZ 132SB-2	2900	87.0	0.88	14.2	7.5	2.2	2.3	0.015000	67	8.5	3480	14.2			
11	8AZ 160MA-2	2930	88.4	0.89	20.2	7.5	2.2	2.3	0.034000	119	12.5	3520	20.2			
15	8AZ 160MB-2	2930	88.4	0.89	27.2	7.5	2.2	2.3	0.053000	126	17	3520	27.2			
18.5	8AZ 160L-2	2930	90.0	0.90	33.0	7.5	2.2	2.3	0.063000	153	21	3520	33			
22	8AZ 180M-2	2940	90.5	0.90	39.0	7.5	2.0	2.3	0.093000	176	25	3530	39			
30	8AZ 200LA-2	2950	91.4	0.90	52.7	7.5	2.0	2.3	0.140000	257	33	3540	52.7			
37	8AZ 200LB-2	2950	92.0	0.90	64.5	7.5	2.0	2.3	0.140000	273	40	3540	64.5			
45	8AZ 225M-2	2960	92.5	0.90	78.1	7.5	2.0	2.3	0.260000	305	50	3550	78.1			
55	8AZ 250M-2	2965	93.0	0.90	94.9	7.5	2.0	2.3	0.340000	403	60	3560	94.9			
75	8AZ 280S-2	2970	93.6	0.90	129	7.5	2.0	2.3	0.430000	544	85	3565	129			
90	8AZ 280M-2	2970	93.9	0.90	152	7.5	2.0	2.3	0.480000	620	100	3565	152			
110	8AZ 315S-2	2975	94.0	0.91	186	7.1	1.8	2.2	1.100000	925	122	3570	186			
132	8AZ 315M-2	2975	94.5	0.91	222	7.1	1.8	2.2	1.250000	1040	147	3570	222			
160	8AZ 315LA-2	2975	94.6	0.92	265	7.1	1.8	2.2	1.400000	1130	178	3570	265			

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Tablica 1.4. / Table 1.4. / Tabelle 1.4.

2p=4		1500 min ⁻¹			400V / 50Hz						1800 min ⁻¹ / 440V / 60Hz		
P (kW)	Motor type	n (min ⁻¹)	η (%)	cos φ	I _n (A)	$\frac{I_k}{I_n}$	$\frac{M_k}{M_n}$	$\frac{M_{max}}{M_n}$	J (kgm ²)	m (kg)	P (kW)	n (min ⁻¹)	I _n (A)
0.06	5AZ 56A-4	1415	58	0.62	0.25	2.8	2.1	2.1	0.000176	3.3	0.06	1700	0.25
0.09	5AZ 56B-4	1400	58	0.60	0.38	2.6	1.9	1.9	0.000176	3.2	0.09	1680	0.35
0.12	5AZH 56B-4	1350	58	0.70	0.41	3.0	1.9	1.9	0.000176	3.3	0.12	1620	0.41
0.12	5AZ 63A-4	1360	58	0.75	0.44	3.0	2.0	2.1	0.000193	3.5	0.12	1630	0.44
0.18	5AZ 63B-4	1370	60	0.72	0.60	3.3	2.2	2.4	0.000248	4.2	0.2	1640	0.60
0.25	5AZH 63B-4	1310	60	0.78	0.80	2.7	1.8	1.8	0.000248	4.2	0.3	1570	0.80
0.25	5AZ 71A-4	1370	61	0.72	0.85	3.4	2.0	2.1	0.000600	4.9	0.3	1640	0.85
0.37	5AZ 71B-4	1360	66	0.75	1.1	3.4	2.0	2.1	0.000850	5.7	0.4	1630	1.1
0.55	5AZH 71C-4	1380	70	0.70	1.7	3.6	2.2	2.3	0.001080	8.0	0.6	1630	1.7
0.55	5AZ 80A-4	1390	70	0.76	1.6	4.1	2.0	2.1	0.001500	7.9	0.6	1670	1.6
0.75	5AZ 80B-4	1390	75	0.76	1.9	4.1	2.2	2.3	0.001600	10	0.8	1670	1.9
1.1	5AZH 80C-4	1360	73	0.76	3.0	4.0	2.4	2.3	0.002000	11	1.2	1630	3.0
1.1	5AZ 90S-4	1380	75.5	0.78	2.7	4.2	2.2	2.3	0.003300	11.3	1.2	1660	2.7
1.5	5AZ 90L-4	1380	78	0.80	3.5	4.4	2.2	2.3	0.004100	13.8	1.7	1660	3.5
2.2	5AZH 90L-4	1410	75	0.78	5.4	4.4	2.5	2.6	0.004715	16.5	2.5	1630	5.4
2.2	5AZ 100LA-4	1410	81	0.80	4.9	5.0	2.2	2.3	0.006500	19.4	2.5	1690	4.9
3	5AZ 100LB-4	1410	82.5	0.82	6.5	5.7	2.5	2.8	0.008750	24	3.4	1690	6.5
3.5	5AZH 100LB-4	1410	82	0.77	8.0	5.8	2.7	2.9	0.008750	25	4.0	1690	8.0
4	5AZ 112M-4	1435	84.5	0.80	8.5	7	2.8	3.1	0.011300	33	4.5	1720	8.5
5.5	5AZH 112M-4	1410	82	0.78	12.5	5.5	2.7	3.0	0.011300	33	6.2	1690	12.5
5.5	5AZ 132S-4	1435	85.5	0.85	11	5.9	2.5	3.0	0.021000	39	6.2	1720	11.0
7.5	5AZ 132M-4	1440	87	0.83	15	6.5	2.7	3.2	0.027000	49	8.5	1730	15.0
9.5	5AZ 132MA-4	1440	88	0.82	19	6.7	2.9	3.4	0.035000	56	11	1730	19
11	5AZH 132MA-4	1430	88	0.82	22	6.6	2.7	2.9	0.039000	62	12.5	1720	22.0
11	5AZ 160M-4	1460	88.6	0.82	22	7.3	2.8	3.3	0.067000	80	12.5	1750	22.0
15	5AZ 160L-4	1460	89.7	0.83	29	7.0	2.8	3.1	0.083000	95	17	1750	29.0
18.5	7AZ 180M-4	1460	90.5	0.83	35.5	7.5	2.7	3.1	0.130000	183	21	1750	35.5
22	7AZ 180L-4	1460	91	0.84	41.5	7.5	2.8	3.1	0.160000	199	25	1750	41.5
30	7AZ 180LA-4	1460	91	0.84	57	7.5	2.8	3.1	0.200000	225	34	1750	57
30	7AZ 200L-4	1470	93.5	0.85	54.5	7.5	2.4	2.6	0.250000	250	34	1760	54.5
37	7AZ 225S-4	1475	93.5	0.85	67	7.1	2.3	2.6	0.410000	322	42	1780	67
45	7AZ 225M-4	1470	94.3	0.85	81	7.2	2.4	2.6	0.480000	354	52	1780	81
55	7AZ 250M-4	1480	94.2	0.86	98	7.5	2.4	2.8	0.710000	440	63	1780	98
75	7AZ 280S-4	1480	93.5	0.83	140	7.5	2.4	2.8	1.070000	550	85	1780	145
90	7AZ 280M-4	1480	94.5	0.83	165	7.5	2.4	2.8	1.290000	610	103	1780	165
110	7AZ 315S-4	1485	95	0.88	190	7.4	1.6	2.5	2.120000	880	124	1785	190
132	7AZ 315M-4	1485	95	0.88	228	7.5	1.6	2.5	2.460000	945	149	1785	228
160	7AZ 315LA-4	1485	95.5	0.88	275	7.5	1.6	2.5	3.090000	1080	180	1785	275
5.5	8AZ 132S-4	1440	85.7	0.83	11.2	7.0	2.3	2.3	0.021000	65	6.2	1720	11.2
7.5	8AZ 132M-4	1440	87.0	0.84	14.9	7.0	2.3	2.3	0.027000	79	8.5	1720	14.9
11	8AZ 160M-4	1460	89.4	0.84	21.4	7.0	2.2	2.3	0.067000	126	12.5	1750	21.4
15	8AZ 160L-4	1460	89.4	0.85	28.5	7.5	2.2	2.3	0.083000	148	17	1750	28.5
18.5	8AZ 180M-4	1470	90.0	0.86	34.5	7.5	2.2	2.3	0.130000	171	21	1765	34.5
22	8AZ 180L-4	1470	90.5	0.86	40.8	7.5	2.2	2.3	0.160000	199	25	1765	40.8
30	8AZ 200L-4	1470	91.4	0.86	55.4	7.2	2.2	2.3	0.250000	284	34	1765	55.4
37	8AZ 225S-4	1475	92.0	0.87	66.8	7.2	2.2	2.3	0.420000	305	42	1770	66.8
45	8AZ 225M-4	1475	92.5	0.87	80.7	7.2	2.2	2.3	0.490000	329	52	1770	80.7
55	8AZ 250M-4	1480	93.0	0.87	98.2	7.2	2.2	2.3	0.710000	420	63	1775	98.2
75	8AZ 280S-4	1480	93.6	0.87	133	7.2	2.2	2.3	0.860000	462	85	1775	133
90	8AZ 280M-4	1480	93.9	0.87	159	7.2	2.2	2.3	0.900000	667	100	1775	159
110	8AZ 315S-4	1480	94.5	0.88	191	6.9	2.1	2.2	1.900000	935	122	1775	191
132	8AZ 315M-4	1480	94.8	0.88	229	6.9	2.1	2.2	2.300000	1110	147	1775	229
160	8AZ 315LA-4	1480	94.9	0.89	274	6.9	2.1	2.2	2.900000	1165	178	1775	274

Tablica 1.5. / Table 1.5. / Tabelle 1.5.

2p=6		1000 min ⁻¹			400V / 50Hz						1200 min ⁻¹ / 440V / 60Hz		
P (kW)	Motor type	n (min ⁻¹)	η (%)	cos φ	I _n (A)	$\frac{I_k}{I_n}$	$\frac{M_k}{M_n}$	$\frac{M_{max}}{M_n}$	J (kgm ²)	m (kg)	P (kW)	n (min ⁻¹)	I _n (A)
0.05	5AZ 56B-6	850	43	0.62	0.35	2.2	2.2	2.3	0.000176	3.3	0.05	1020	0.35
0.07	5AZ 63A-6	850	43	0.62	0.42	2.2	2.2	2.3	0.000193	4	0.07	1020	0.42
0.12	5AZ 63B-6	860	43	0.62	0.8	2.2	2.2	2.3	0.000248	4.1	0.12	1030	0.8
0.18	5AZ 71A-6	870	51	0.67	0.9	2.2	1.6	1.8	0.000600	4.9	0.2	1040	0.9
0.25	5AZ 71B-6	880	53	0.65	1.1	2.5	1.7	1.8	0.000850	5.7	0.3	1060	1.1
0.37	5AZ 80A-6	900	65	0.75	1.2	3.5	1.7	2.0	0.001400	7.7	0.4	1080	1.2
0.55	5AZ 80B-6	900	67	0.77	1.7	3.4	2.1	2.2	0.002000	9	0.6	1080	1.7
0.75	5AZH 80C-6	900	73	0.73	2.1	3.7	2.0	2.3	0.002300	11.5	0.8	1080	2.1
0.75	5AZ 90S-6	900	70	0.65	2.4	3.2	2.2	2.3	0.003300	11.2	0.8	1080	2.4
1.1	5AZ 90L-6	900	73	0.69	3.2	3.2	2.0	2.1	0.004300	15.2	1.2	1080	3.2
1.5	5AZ 100L-6	930	76	0.75	3.8	4.0	19.	2.1	0.007000	20	1.7	1110	3.8
2.2	5AZ 112M-6	930	78	0.72	5.7	5.3	2.7	3.1	0.013000	29	2.5	1110	5.7
3	5AZH 112MA-6	950	82	0.72	7.5	3.4	2.7	3.3	0.022000	35	3.4	1140	7.5
3	5AZ 132S-6	940	81.5	0.72	7.4	4.6	2.1	2.5	0.030000	39	3.4	1130	7.4
4	5AZ 132MA-6	950	83.1	0.72	9.7	5.6	2.7	3.0	0.037000	45	4.5	1140	9.7
5.5	5AZ 132MB-6	950	84	0.74	12.8	5.8	2.8	3.0	0.045000	49	6.2	1140	12.8
7.5	5AZ 160M-6	965	86.5	0.81	15.5	7.5	2.8	3.3	0.095000	78	8.2	1160	15.5
11	5AZ 160L-6	965	88	0.82	22	7.5	2.8	3.3	0.120000	98	12.5	1160	22
15	7AZ 180L-6	970	90.5	0.84	28.5	7.8	2.8	3.6	0.200000	165	17	1165	28.5
18.5	7AZ 180LA-6	975	90	0.80	37	7.7	2.4	3.3	0.250000	220	21	1170	37
18.5	7AZ 200LA-6	970	90	0.80	37	6.5	2.2	2.5	0.310000	245	21	1170	37
22	7AZ 200LB-6	975	91	0.82	42.5	6.1	2.2	2.8	0.310000	265	25	1170	42.5
30	7AZ 225M-6	975	92.5	0.83	56.5	7.3	3.0	3.0	0.520000	350	34	1170	56.5
37	7AZ 250M-6	985	93	0.73	78.5	7.8	2.8	3.0	0.780000	395	42	1180	78.5
45	7AZ 280S-6	985	93	0.77	90	7.8	2.5	3.0	1.140000	510	50	1180	90
55	7AZ 280M-6	985	93.5	0.77	110	7.8	2.5	3.0	1.360000	550	60	1180	110
75	7AZ 315S-6	990	94.5	0.80	143	7.3	2.0	2.6	2.290000	800	84	1185	143
90	7AZ 315M-6	990	94.5	0.80	172	7.5	2.1	2.7	2.740000	865	101	1185	172
110	7AZ 315LA-6	990	94.5	0.80	208	7.6	2.1	2.7	3.300000	960	124	1185	208
3	8AZ 132S-6	960	81.0	0.76	7.4	6.5	2.1	2.1	0.030000	61	3.4	1150	7.4
4	8AZ 132MA-6	960	82.0	0.76	9.3	6.5	2.1	2.1	0.037000	72	4.5	1150	9.3
5.5	8AZ 132MB-6	960	84.0	0.77	12.3	6.5	2.1	2.1	0.045000	83	6.2	1150	12.3
7.5	8AZ 160M-6	970	86.0	0.77	16.4	6.5	2.0	2.1	0.095000	119	8.2	1165	16.4
11	8AZ 160L-6	970	87.5	0.78	23.3	6.5	2.0	2.1	0.120000	148	12.5	1165	23.3
15	8AZ 180L-6	970	89.0	0.81	30.1	7.0	2.1	2.1	0.200000	185	17	1165	30.1
18.5	8AZ 200LA-6	980	90.0	0.81	36.7	7.0	2.1	2.1	0.320000	242	21	1175	36.7
22	8AZ 200LB-6	980	90.0	0.83	42.5	7.0	2.1	2.1	0.320000	255	25	1175	42.5
30	8AZ 225M-6	980	91.5	0.84	56.4	7.0	2.0	2.1	0.520000	305	34	1175	56.4
37	8AZ 250M-6	980	92.0	0.86	67.5	7.0	2.1	2.1	0.780000	408	42	1175	67.5
45	8AZ 280S-6	980	92.5	0.86	81.7	7.0	2.1	2.0	0.980000	536	50	1175	81.7
55	8AZ 280M-6	980	92.8	0.86	99.5	7.0	2.1	2.0	1.050000	595	62	1175	99.5
75	8AZ 315S-6	985	93.5	0.86	134.8	7.0	2.0	2.0	2.000000	880	85	1180	134.8
90	8AZ 315M-6	985	93.8	0.86	161	7.0	2.0	2.0	2.600000	990	101	1180	161
110	8AZ 315LA-6	985	94.0	0.86	196.1	6.7	2.0	2.0	3.100000	1080	124	1180	196.1

Trofazni kavezni asinkroni motorji

Three-phase squirrel cage induction motors / Dreiphasige Asynchronmotoren mit Käfigläufer

Tablica 1.6. / Table 1.6. / Tabelle 1.6.

2p=8		400V / 50Hz				750 min ⁻¹					900 min ⁻¹ 440V / 60Hz		
P (kW)	Motor type	n (min ⁻¹)	η (%)	cos φ	I _n (A)	$\frac{I_k}{I_n}$	$\frac{M_k}{M_n}$	$\frac{M_{max}}{M_n}$	J (kgm ²)	m (kg)	P (kW)	n (min ⁻¹)	I _n (A)
0.03	5AZ 56B-8	670	30	0.50	0.35	1.8	3.3	3.5	0.000176	3.2	0.03	800	0.35
0.06	5AZ 63B-8	640	35	0.60	0.50	1.9	2.5	2.6	0.000248	4.3	0.06	770	0.50
0.09	5AZH 63C-8	620	40	0.60	0.62	1.8	1.9	2.0	0.000355	5	0.09	750	0.62
0.09	5AZ 71A-8	670	43	0.53	0.60	2.0	1.8	1.9	0.000600	5.4	0.09	800	0.60
0.12	5AZ 71B-8	670	43	0.58	0.75	2.0	2.0	2.2	0.000850	5.6	0.12	800	0.75
0.18	5AZH 71C-8	620	45	0.60	1	2.2	2.0	2.2	0.001000	6.5	0.2	750	1
0.18	5AZ 80A-8	700	60	0.58	0.75	3.0	2.3	2.6	0.001400	8.4	0.2	840	0.75
0.25	5AZ 80B-8	680	60	0.60	1	2.6	1.7	2.0	0.001400	8.6	0.3	820	1
0.37	5AZ 90S-8	680	60	0.60	1.7	2.5	1.7	2.0	0.002800	11	0.4	830	1.7
0.55	5AZ 90L-8	670	60	0.60	2.3	2.8	2.0	2.1	0.003500	15	0.6	810	2.3
0.75	5AZH 90LC-8	660	63	0.61	2.9	2.7	1.9	2.0	0.004200	16	0.8	790	2.9
0.75	5AZ 100LA-8	700	65	0.61	2.8	3.1	1.8	2.2	0.007000	18.5	0.8	840	2.8
1.1	5AZ 100LB-8	700	73	0.62	3.5	3.7	2.1	2.4	0.011000	23	1.2	840	3.5
1.5	5AZ 112M-8	680	72	0.70	4.3	3.8	1.9	2.3	0.013000	29	1.7	820	4.3
2.2	5AZH 112MA-8	700	76	0.68	6.3	4.2	1.9	2.5	0.022000	32	2.5	840	6.3
2.2	5AZ 132S-8	690	78	0.78	5.5	4.2	2.0	2.1	0.030000	35	2.5	830	5.5
3	5AZ 132M-8	690	78	0.78	7.5	4.2	2.1	2.4	0.040000	43	3.4	830	7.5
4	5AZ 160MA-8	710	85	0.78	9	4.8	2.0	2.7	0.060000	65	4.5	850	9
5.5	5AZ 160MB-8	710	85	0.78	12.5	5.1	2.0	2.7	0.095000	75	6.2	850	12.5
7.5	5AZ 160L-8	720	86	0.78	16.5	5.5	2.2	2.6	0.140000	95	8.5	860	16.5
11	7AZ 180L-8	720	88	0.80	24	5.6	2.3	2.8	0.220000	195	12.5	860	24
15	7AZ 180LA-8	720	88	0.80	34	6.4	2.2	3.3	0.280000	225	17	860	34
15	7AZ 200L-8	730	90	0.78	31	5.8	1.9	2.4	0.320000	235	17	880	31
18.5	7AZ 225S-8	735	91	0.78	38	5.9	2.0	2.6	0.460000	290	21	880	38
22	7AZ 225M-8	735	91	0.78	46	5.9	2.0	2.5	0.530000	312	25	880	45
30	7AZ 250M-8	735	92	0.78	60	5.6	1.9	2.4	0.860000	390	34	880	60
37	7AZ 280S-8	735	92	0.79	75	5.6	1.9	2.4	1.200000	515	40	880	75
45	7AZ 280M-8	735	92.5	0.79	90	5.6	1.9	2.4	1.400000	550	50	880	90
55	7AZ 315S-8	740	93.5	0.81	105	5.5	1.9	2.4	2.120000	765	62	890	105
75	7AZ 315M-8	740	94.0	0.82	141	5.5	1.9	2.4	2.750000	855	85	890	141
90	7AZ 315LA-8	740	94.3	0.82	168	5.3	1.8	2.3	3.320000	940	102	890	168
2.2	8AZ 132S-8	690	78.0	0.69	5.9	6.0	1.8	2.0	0.030000	65	2.5	830	5.9
3	8AZ 132M-8	705	79.0	0.71	7.8	6.0	1.8	2.0	0.040000	77	3.4	845	7.8
4	8AZ 160MA-8	720	81.0	0.73	9.8	6.0	1.9	2.0	0.060000	107	4.5	860	9.8
5.5	8AZ 160MB-8	720	83.0	0.74	12.9	6.0	1.9	2.0	0.095000	119	6.2	860	12.9
7.5	8AZ 180L-8	720	85.5	0.75	16.9	6.0	1.9	2.0	0.140000	142	8.5	860	16.9
11	8AZ 180L-8	730	87.5	0.76	23.9	6.6	1.9	2.0	0.220000	185	12.5	875	23.9
15	8AZ 200L-8	730	88	0.76	32.4	6.6	2.0	2.0	0.320000	221	17	875	32.4
18.5	8AZ 225S-8	730	90	0.76	39.1	6.6	1.9	2.0	0.460000	278	21	875	39.1
22	8AZ 225M-8	730	90.5	0.78	45.0	6.6	1.9	2.0	0.530000	302	25	875	45
30	8AZ 250M-8	735	91	0.79	60.3	6.6	1.9	2.0	0.860000	408	34	880	60.3
37	8AZ 280S-8	735	91.5	0.79	73.9	6.6	1.9	2.0	1.100000	536	42	880	73.9
45	8AZ 280M-8	735	92	0.79	89.4	6.6	1.9	2.0	1.190000	595	50	880	89.4
55	8AZ 315S-8	735	92.8	0.81	106	6.6	1.8	2.0	2.000000	850	62	880	106
75	8AZ 315M-8	735	93.0	0.81	143.8	6.6	1.8	2.0	2.600000	1035	85	880	143.8
90	8AZ 315LA-8	735	93.8	0.82	168.8	6.6	1.8	2.0	3.100000	1100	101	880	168.8

Motori s oznakom H u tipskoj oznaci su motori istih priključnih mjera kao motori osnovne izvedbe, ali povećanih nazivnih snaga s obzirom na nazivne snage koje propisuje IEC 60072-1. Izolacijski sustav primijenjen u tim motorima je toplinske klase F s dopuštenim zagrijavanjem klase F.

Motors having letter H in motor type designation are motors with the same mounting dimensions as motors of basic design, but with increased power in comparison with standard IEC 60072-1. Insulation system applied in this motors is for temperature class F with permissible temperature rise for class F.

Die Motoren mit dem Buchstabe H in der Typenbezeichnung sind die Motoren gleicher Anbaumaßen wie die Motoren der Grundausführung aber mit progressiven Nennleistungen bezüglich auf die Nennleistungen nach IEC 60072-1. Das eingebaute Isolationssystem in diesen Motoren befindet sich in der Wärmeklasse F mit zulässiger Erwärmung der Wärmeklasse F.

$$M = \frac{P \cdot 9550}{n}$$

Izračun nazivnog momenta

M – nazivni moment (Nm)

P – snaga (kW)

n – brzina (min⁻¹)

I_k/I_n – odnos struja kod pokretanja (odnos struje kratkog spoja i nazivne struje kod nazivnog momenta)

M_k/M_n – odnos momenta kod pokretanja (odnos momenta u kratkom spoju i nazivnog momenta motora)

M_{max}/M_n – odnos maksimalnog momenta i nazivnog momenta motora

Napomena: Ostale podatke za 440 V, 60 Hz koristiti iz tablice za 400 V, 50 Hz.

Equation for rated torque calculation

M – rated torque (Nm)

P – power (kW)

n – motor revolving speed (rpm)

I_k/I_n – ratio of currents at starting (ratio between locked rotor current and full load current)

M_k/M_n – ratio of torques at starting (ratio between locked rotor torque and full load torque)

M_{max}/M_n – ratio between breakdown torque and full load torque

Remark: Other data for 440V, 60 Hz can be taken from tables for 400V, 50 Hz

Berechnung des Nennmoments :

M – Nennmoment (Nm)

P – Nennleistung (kW)

n – Nenndrehzahl (U/min)

I_k/I_n – Startverhältnis der Ströme (Verhältnis des Anlauf- u. Nennstroms beim Nennmoment)

M_k/M_n – Startverhältnis der Momente (Verhältnis des Anlauf- u. Nennmoments)

M_{max}/M_n – Verhältnis des Kipp- u. Nennmoments

Bemerkung: Andere Daten für 440V,60Hz bitte der Tabelle für 400V, 50 Hz entnehmen