



Date of test:	12.02.2018	Report Number:	17897	Date of issue	25.05.2018
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Motor description					
Rated output power	kW	7,5		Manufacturer	ARÇELİK
Rated voltage	V	400		Model Nr.	Q3H132M4D40
Rated current	A	14,8		Serial Nr.	9517281
Rated speed	min ⁻¹	1470		Duty type IEC 60034-1	S1
Supply frequency	Hz	50		Design	-
Number of Phases	-	3		Insulation class IEC 60085	F
IEC 60034-30-1 (Rated)	IE-Code	IE3-90,4%		Max. Ambient temperature	°C

Initial motor conditions			
Test resistance	R_1	Ω	0,852
Winding temperature	θ_0	°C	20,7
Ambient temperature	θ_a	°C	20,7

6.1.3.2.1 Rated load test			
Test resistance	R_N	Ω	1,061
Winding temperature	θ_N	°C	85,7
Ambient temperature	θ_a	°C	20,4

6.1.3.2.3 Load curve test			Test resistance before load test				R	Ω	1,061
Rated Output Power		%	125%	115%	100%	75%	50%	25%	
Torque	T	N m	61,41	56,25	48,78	36,32	24,14	12,01	
Input Power	P_i	W	10514,2	9623,9	8353,0	6226,0	4203,5	2211,8	
Line Current	I	A	18,02	16,72	14,76	12,09	9,95	8,28	
Operating Speed	n	min ⁻¹	1458,3	1462,2	1470	1476,7	1484,7	1492,5	
Terminal Voltage	U	V	400	400	400	400	400	400	
Frequency	f	Hz	50	50	50	50	50	50	
Winding Temperature	θ_w	°C	50,8	51,4	51,6	51,7	51,4	51,3	
			Test resistance after load test				R	Ω	1,070

6.1.3.2.4 No-load test				Test resistance before no-load test				R	Ω	1,061
Rated Voltage		%	115%	100%	95%	90%	60%	50%	40%	30%
Input Power	P_0	W	465,1	331,6	278,6	258,9	127,5	107,3	80,4	62,5
Line Current	I_0	A	10,70	7,77	6,84	6,13	3,48	2,83	2,24	1,68
Terminal Voltage	U_0	V	440	400	380	360	240	200	160	120
Frequency	f_0	Hz	50	50	50	50	50	50	50	50
Power Factor	$\cos j$	$\cos j$	0,057	0,062	0,062	0,068	0,088	0,110	0,130	0,179
Winding Temperature	θ_w	°C	48,51	48,14	47,94	47,68	47,30	47,29	47,08	46,80
			Test resistance after no-load test				R	Ω	1,069	

6.1.3.3 Efficiency determination									
Rated output power corrected	$P_{z,\theta}$	%	125%	115%	100%	75%	50%	25%	
Output power corrected	$P_{z,\theta}$	W	9391	8637	7557	5641	3765	1862	
Slip corrected	$s_{,\theta}$	p.u.	0,0282	0,0256	0,0203	0,0158	0,0103	0,0051	
Input power corrected	$P_{1,\theta}$	W	10525	9633	8360	6231	4206	2213	
Iron losses	P_{fe}	W	166	168	171	176	180	184	
Frict. And wind.losses corrected	$P_{fw,\theta}$	W	40,40	40,67	41,23	41,70	42,28	42,85	
Additional - losees corrected	P_{LL}	W	127,48	106,95	80,43	44,58	19,70	4,88	
Stator losses corrected	$P_{s,\theta}$	W	524	451	352	236	160	111	
Rotor losses corrected	$P_{r,\theta}$	W	277	230	159	92	40	10	
Power factor	$\cos \phi$	%	0,843	0,831	0,817	0,743	0,610	0,386	
Efficiency	η	%	89,2	89,7	90,4	90,5	89,5	84,1	

Tested by:	Ömer ÜZÜM	Approved by:	Aptullah İŞLER
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