

Date of test:	24.11.2017	Report Number:	17693	Date of issue	25.05.2018
---------------	------------	----------------	-------	---------------	------------

Motor description						
Rated output power	kW	4		Manufacturer	ARÇELİK	
Rated voltage	V	400		Model Nr.	Q3H112M2C40	
Rated current	A	7,45		Serial Nr.	9517369	
Rated speed	min ⁻¹	2915		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	IE3-88,1%		Max. Ambient temperature	°C	40

Initial motor conditions			
Test resistance	R_1	Ω	1,804
Winding temperature	θ_0	°C	23,9
Ambient temperature	θ_a	°C	23,9

6.1.3.2.1 Rated load test			
Test resistance	R_N	Ω	2,136
Winding temperature	θ_N	°C	74,0
Ambient temperature	θ_a	°C	26,4

6.1.3.2.3 Load curve test			Test resistance before load test			R	Ω	2,136
Rated Output Power		%	125%	115%	100%	75%	50%	25%
Torque	T	N m	16,56	15,15	13,24	9,76	6,45	3,23
Input Power	P_i	W	5781,4	5286,0	4619,1	3433,4	2331,8	1285,8
Line Current	I	A	9,09	8,38	7,45	5,83	4,46	3,44
Operating Speed	n	min ⁻¹	2888	2900	2915	2937	2958	2978
Terminal Voltage	U	V	401	401	399	400	400	401
Frequency	f	Hz	50	50	50	50	50	50
Winding Temperature	θ_w	°C	48,2	48,8	49,25	49,1	48,45	48
			Test resistance after load test			R	Ω	2,097

6.1.3.2.4 No-load test				Test resistance before no-load test				R	Ω	0
Rated Voltage		%	115%	100%	95%	90%	60%	50%	40%	30%
Input Power	P_0	W	314,8	244,4	221,2	198,2	112,5	92,5	81,9	59,6
Line Current	I_0	A	4,22	2,93	2,56	2,27	1,26	1,03	0,92	0,69
Terminal Voltage	U_0	V	439	400	380	360	240	200	176	130
Frequency	f_0	Hz	50	50	50	50	50	50	50	50
Power Factor	$\cos j$	$\cos j$	0,098	0,120	0,131	0,140	0,214	0,259	0,291	0,396
Winding Temperature	θ_w	°C	45,00	44,85	44,65	44,45	44,15	43,95	43,70	43,26
				Test resistance after no-load test				R	Ω	2,097

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	5039	4632	4069	3025	2017	1022	
Slip corrected	$s_{,\theta}$	p.u.	0,0372	0,0332	0,0282	0,0209	0,0139	0,0073	
Input power corrected	$P_{i,\theta}$	W	5779	5284	4618	3433	2331	1286	
Iron losses	P_{fe}	W	150	152	153	159	163	168	
Frict. And wind.losses corrected	$P_{fw,\theta}$	W	43,06	43,51	44,07	44,90	45,70	46,48	
Additional - losees corrected	P_{LL}	W	83,87	70,24	53,62	29,16	12,75	3,18	
Stator losses corrected	$P_{s,\theta}$	W	263	224	177	108	64	38	
Rotor losses correctedd	$P_{r,\theta}$	W	199	163	121	66	29	8	
Power factor	$\cos \phi$	%	0,916	0,909	0,896	0,849	0,754	0,538	
Efficiency	η	%	87,2	87,6	88,1	88,1	86,5	79,5	

Tested by:	Ünal GÜL	Approved by:	Aptullah İŞLER
------------	----------	--------------	----------------