

		3 PHASE ASYNCHRON MOTOR TEST REPORT ACCORDING TO IEC 60034-2-1					ELECTRIC MOTOR PLANT																																																																																																																																																																																																										
NAMEPLATE VALUES																																																																																																																																																																																																																	
Motor TypeQ3E200L2D			Voltage400/690V			Nominal limit for IE393.7%																																																																																																																																																																																																											
Serial Number-			Current62.3 / 36.0 A			Duty TypeS1																																																																																																																																																																																																											
Power37kW			RPM2960			Insulation ClassF																																																																																																																																																																																																											
Frequency50Hz			Power Factor0.91			IC41																																																																																																																																																																																																											
NOLOAD TEST						TEST NUM: : 15857		REV: 1																																																																																																																																																																																																									
						DATE: : 02.10.2014																																																																																																																																																																																																											
<table><tr><td></td><td>U(V)</td><td>U^2</td><td>Im(A)</td><td>Pin(W)</td><td>Pcu(W)</td><td>Pfe+Pstv</td><td>P fe(W)</td><td>P stv(W)</td><td>R(ohm)</td></tr><tr><td></td><td>80</td><td>6400</td><td>3,75</td><td>306</td><td>2,8</td><td>303,4</td><td>9,9</td><td>293,6</td><td>0,200</td></tr><tr><td></td><td>120</td><td>14400</td><td>4,51</td><td>342</td><td>4,1</td><td>338,3</td><td>44,7</td><td>293,6</td><td>0,200</td></tr><tr><td></td><td>160</td><td>25600</td><td>5,58</td><td>372</td><td>6,2</td><td>365,8</td><td>72,2</td><td>293,6</td><td>0,200</td></tr><tr><td></td><td>200</td><td>40000</td><td>7,18</td><td>423</td><td>10,3</td><td>412,7</td><td>119,1</td><td>293,6</td><td>0,200</td></tr><tr><td></td><td>240</td><td>57600</td><td>8,67</td><td>479</td><td>15,0</td><td>463,6</td><td>170,1</td><td>293,6</td><td>0,200</td></tr><tr><td></td><td>304</td><td>92416</td><td>11,27</td><td>603</td><td>25,3</td><td>577,7</td><td>284,1</td><td>293,6</td><td>0,200</td></tr><tr><td></td><td>380</td><td>144400</td><td>15,95</td><td>763</td><td>50,7</td><td>712,3</td><td>418,7</td><td>293,6</td><td>0,200</td></tr><tr><td></td><td>400</td><td>160000</td><td>17,88</td><td>821</td><td>63,8</td><td>757,2</td><td>463,7</td><td>293,6</td><td>0,200</td></tr><tr><td></td><td>435</td><td>189051</td><td>23,23</td><td>953</td><td>107,6</td><td>845,4</td><td>551,8</td><td>293,6</td><td>0,200</td></tr><tr><td></td><td>500</td><td>250000</td><td>42,60</td><td>1688</td><td>362,1</td><td>1325,7</td><td>1032,1</td><td>293,6</td><td>0,200</td></tr></table>											U(V)	U^2	Im(A)	Pin(W)	Pcu(W)	Pfe+Pstv	P fe(W)	P stv(W)	R(ohm)		80	6400	3,75	306	2,8	303,4	9,9	293,6	0,200		120	14400	4,51	342	4,1	338,3	44,7	293,6	0,200		160	25600	5,58	372	6,2	365,8	72,2	293,6	0,200		200	40000	7,18	423	10,3	412,7	119,1	293,6	0,200		240	57600	8,67	479	15,0	463,6	170,1	293,6	0,200		304	92416	11,27	603	25,3	577,7	284,1	293,6	0,200		380	144400	15,95	763	50,7	712,3	418,7	293,6	0,200		400	160000	17,88	821	63,8	757,2	463,7	293,6	0,200		435	189051	23,23	953	107,6	845,4	551,8	293,6	0,200		500	250000	42,60	1688	362,1	1325,7	1032,1	293,6	0,200																																																																																										
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PERFORMANCE						Amb.Temp30 °C		Δt : 66 K																																																																																																																																																																																																									
<table><tr><td>Voltage</td><td>U(V)</td><td></td><td>400</td><td>400</td><td>400</td><td>400</td><td>400</td><td>400</td><td></td></tr><tr><td>Phase current</td><td>Im(A)</td><td></td><td>23,69</td><td>34,69</td><td>47,94</td><td>62,29</td><td>77,05</td><td>93,09</td><td></td></tr><tr><td>Input Power</td><td>Pin(W)</td><td></td><td>10417</td><td>20031</td><td>29721</td><td>39658</td><td>49521</td><td>59901</td><td></td></tr><tr><td>Resistance</td><td>R()</td><td></td><td>0,200</td><td>0,200</td><td>0,200</td><td>0,200</td><td>0,200</td><td>0,200</td><td></td></tr><tr><td>Copper Losses</td><td>Pcu(W)</td><td></td><td>112</td><td>240</td><td>458</td><td>774</td><td>1184</td><td>1729</td><td></td></tr><tr><td>Iron Losses</td><td>Pfe(W)</td><td></td><td>464</td><td>464</td><td>464</td><td>464</td><td>464</td><td>464</td><td></td></tr><tr><td></td><td>Pcu+Pstv(W)</td><td></td><td>576</td><td>704</td><td>922</td><td>1238</td><td>1648</td><td>2193</td><td></td></tr><tr><td></td><td>Pin-Pcu-Pstv(W)</td><td></td><td>9842</td><td>19328</td><td>28799</td><td>38421</td><td>47873</td><td>57708</td><td></td></tr><tr><td>slip</td><td>s(%)</td><td></td><td>0,40</td><td>0,66</td><td>0,99</td><td>1,30</td><td>1,74</td><td>2,16</td><td></td></tr><tr><td>Rotor Losses</td><td>Pr(W)</td><td></td><td>39</td><td>127</td><td>286</td><td>499</td><td>834</td><td>1246</td><td></td></tr><tr><td>Friction Losses</td><td>Pstv(W)</td><td></td><td>294</td><td>294</td><td>294</td><td>294</td><td>294</td><td>294</td><td></td></tr><tr><td>Stray load losses</td><td>PLL(W)</td><td></td><td>27,4</td><td>109,5</td><td>246,3</td><td>438,8</td><td>678,6</td><td>985,1</td><td></td></tr><tr><td></td><td>Pr+Pstv+PLL (W)</td><td></td><td>360</td><td>531</td><td>826</td><td>1232</td><td>1806</td><td>2525</td><td></td></tr><tr><td>Output Power</td><td>Pout (W)</td><td></td><td>9481</td><td>18797</td><td>27973</td><td>37189</td><td>46067</td><td>55184</td><td></td></tr><tr><td>Apparent Power</td><td>S(VA)</td><td></td><td>16411</td><td>24033</td><td>33213</td><td>43156</td><td>53379</td><td>64495</td><td></td></tr><tr><td>Power Factor</td><td>COSphi</td><td></td><td>0,635</td><td>0,834</td><td>0,895</td><td>0,919</td><td>0,928</td><td>0,929</td><td></td></tr><tr><td>Efficiency</td><td>Eta(%)</td><td></td><td>91,0</td><td>93,8</td><td>94,1</td><td>93,8</td><td>93,0</td><td>92,1</td><td></td></tr><tr><td>Torque</td><td>M(Nm)</td><td></td><td>29,9</td><td>59,7</td><td>89,6</td><td>119,6</td><td>148,7</td><td>179,1</td><td></td></tr><tr><td>Speed</td><td>n(U/min)</td><td></td><td>2988</td><td>2980</td><td>2970</td><td>2961</td><td>2948</td><td>2935</td><td></td></tr><tr><td></td><td>Pmech(W)</td><td></td><td>9351</td><td>18635</td><td>27860</td><td>37070</td><td>45892</td><td>55060</td><td></td></tr></table>										Voltage	U(V)		400	400	400	400	400	400		Phase current	Im(A)		23,69	34,69	47,94	62,29	77,05	93,09		Input Power	Pin(W)		10417	20031	29721	39658	49521	59901		Resistance	R()		0,200	0,200	0,200	0,200	0,200	0,200		Copper Losses	Pcu(W)		112	240	458	774	1184	1729		Iron Losses	Pfe(W)		464	464	464	464	464	464			Pcu+Pstv(W)		576	704	922	1238	1648	2193			Pin-Pcu-Pstv(W)		9842	19328	28799	38421	47873	57708		slip	s(%)		0,40	0,66	0,99	1,30	1,74	2,16		Rotor Losses	Pr(W)		39	127	286	499	834	1246		Friction Losses	Pstv(W)		294	294	294	294	294	294		Stray load losses	PLL(W)		27,4	109,5	246,3	438,8	678,6	985,1			Pr+Pstv+PLL (W)		360	531	826	1232	1806	2525		Output Power	Pout (W)		9481	18797	27973	37189	46067	55184		Apparent Power	S(VA)		16411	24033	33213	43156	53379	64495		Power Factor	COSphi		0,635	0,834	0,895	0,919	0,928	0,929		Efficiency	Eta(%)		91,0	93,8	94,1	93,8	93,0	92,1		Torque	M(Nm)		29,9	59,7	89,6	119,6	148,7	179,1		Speed	n(U/min)		2988	2980	2970	2961	2948	2935			Pmech(W)		9351	18635	27860	37070	45892	55060	
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PREPARED BY : H.GEDİK						CONTROL : C.ERTÜRK																																																																																																																																																																																																											