



3 PHASE ASYNCHRON MOTOR TEST REPORT ACCORDING TO IEC 60034-2-1

ELECTRIC
MOTOR PLANT

NAMEPLATE VALUES

Motor Type	Q3E112M4D	Voltage	400/690V	Nominal limit for IE3	88,60%
Serial Number		Current	8.3 / 4.8 A	Duty Type	S1
Power	4kW	RPM	1455	Insulation Class	F
Frequency	50Hz	Power Factor	0,79	IC	41

NOLOAD TEST	TEST NUM:	: 10803	REV	: 2
	DATE:	: 11.09.2009		

U(V)	U ²	Im(A)	Pin(W)	Pcu(W)	Pfe+Pstv	P fe(W)	P stv(W)	R(ohm)
80	6400	0,65	22	4,0	18,0	7,3	10,7	3,159
120	14400	0,95	36	8,6	27,6	16,9	10,7	3,159
160	25600	1,49	48	7,0	41,1	30,5	10,7	3,159
200	40000	1,81	68	10,4	57,6	47,0	10,7	3,159
240	57600	2,24	93	15,8	76,9	66,2	10,7	3,159
305	93025	3,01	140	28,7	111,5	100,8	10,7	3,159
370	136900	4,12	210	53,5	156,7	146,0	10,7	3,159
400	160000	4,88	263	75,2	187,5	176,9	10,7	3,159
435	189225	6,49	366	133,1	232,9	222,2	10,7	3,159
500	250000	12,60	905	501,8	402,8	392,2	10,7	3,159

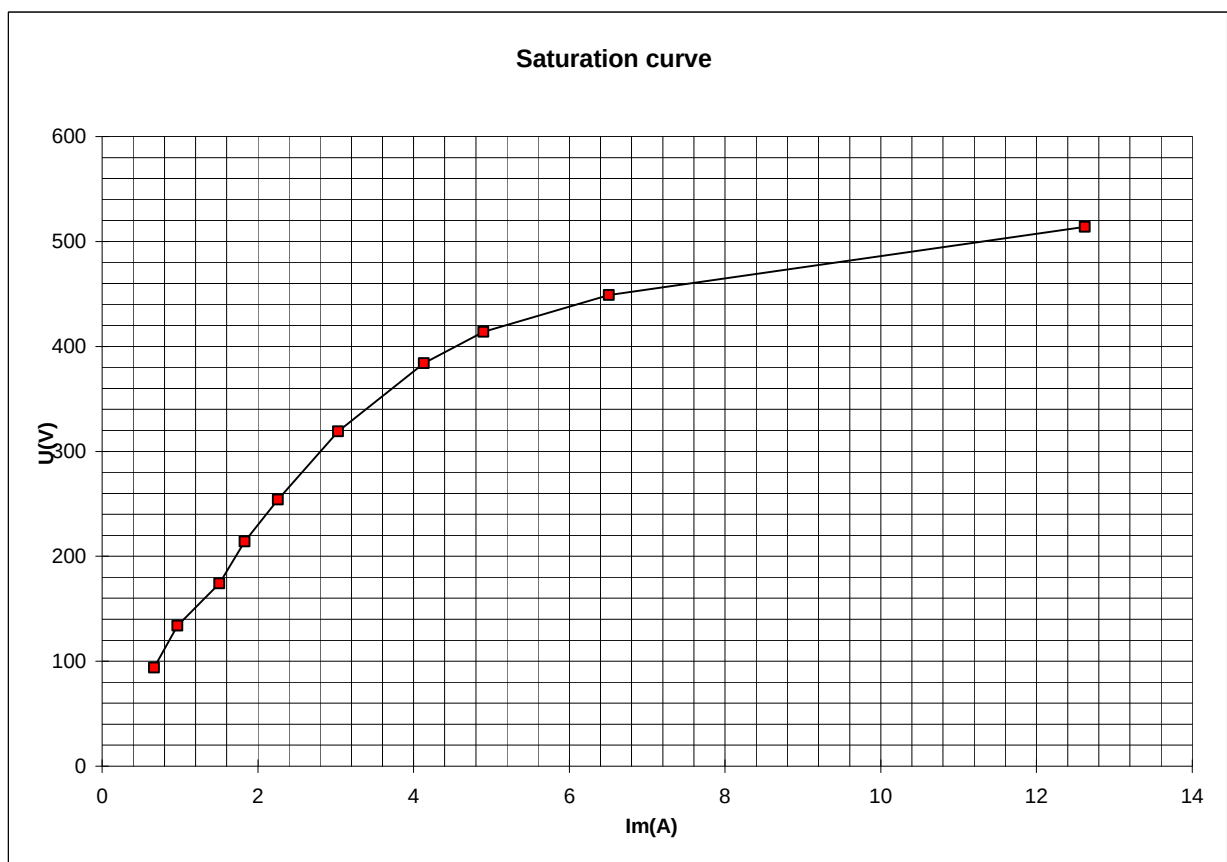
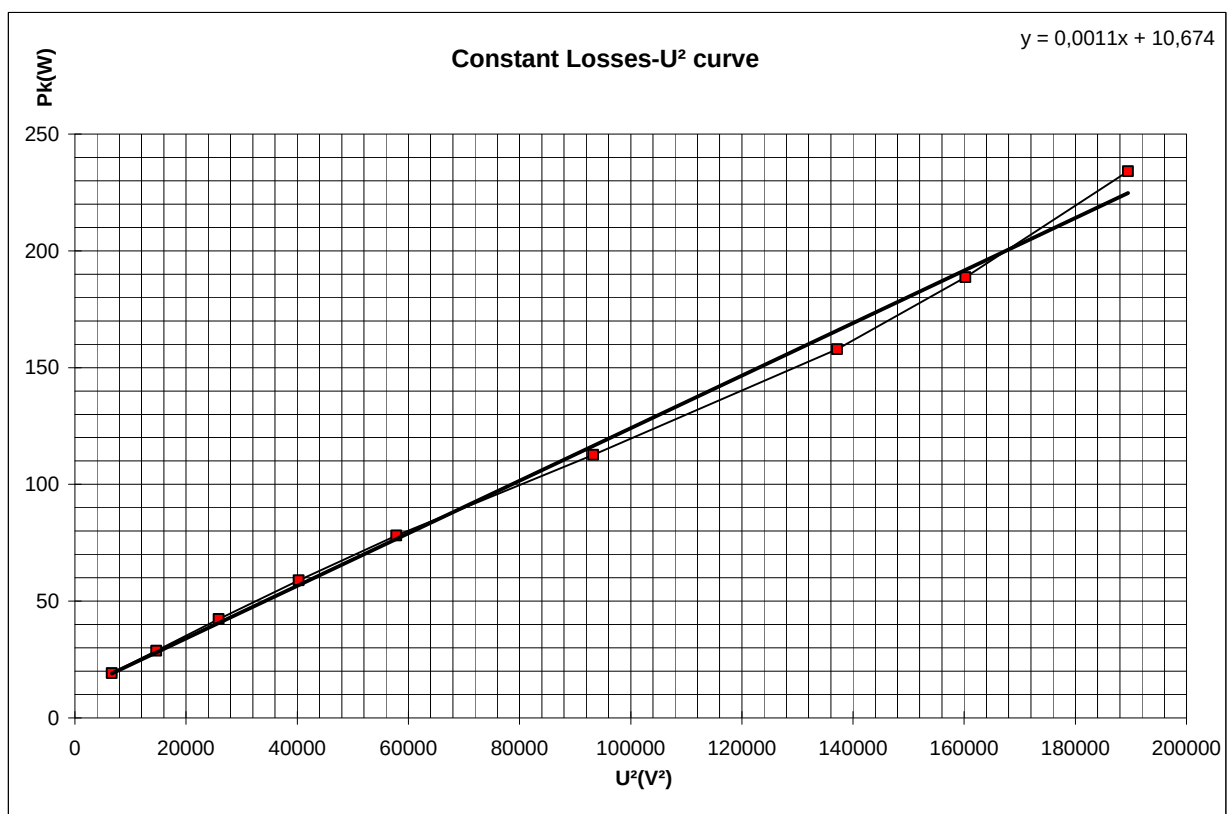
PERFORMANCE

Amb.Temp 24 °C Dt : 44 K

Voltage	U(V)	402	400	401	401	400	401
Phase current	Im(A)	5,19	5,88	6,91	8,22	9,73	11,41
Input Power	Pin(W)	1264	2327	3415	4529	5655	6819
Resistance	R()	3,159	3,159	3,159	3,159	3,159	3,159
Copper Losses	Pcu(W)	85	109	151	213	299	411
Iron Losses	Pfe(W)	177	177	177	177	177	177
	Pcu+Pstv(W)	262	286	328	390	476	588
	Pin-Pcu-Pstv(W)	1002	2041	3088	4139	5179	6231
slip	s(%)	0,60	1,33	2,27	2,87	4,07	4,93
Rotor Losses	Pr(W)	6	27	70	119	211	307
Friction Losses	Pstv(W)	11	11	11	11	11	11
Stray load losses	PLL(W)	1,6	6,3	14,1	25,0	39,1	56,4
	Pr+Pstv+PLL (W)	18	44	95	154	260	374
Output Power	Pout (W)	984	1997	2993	3984	4918	5856
Apparent Power	S(VA)	3614	4075	4800	5709	6739	7926
Power Factor	COSphi	0,350	0,571	0,712	0,793	0,839	0,860
Efficiency	Eta(%)	77,8	85,8	87,6	88,0	87,0	85,9
Torque	M(Nm)	6,6	13,2	19,8	26,3	32,9	39,5
Speed	n(U/min)	1491	1480	1466	1457	1439	1426
	Pmech(W)	1028	2041	3033	4019	4962	5900

PREPARED BY : H.GEDIK

CONTROL : C.ERTÜRK



Stray load losses curve

$$y = 0,0361x - 41,566$$

$$R^2 = 0,9679$$



—◆— T²(Nm²) — Linear (T²(Nm²))