



Windg. calc. card.:	motor No. <u>5</u>			
type: <u>DM1-112M8</u>	Output: <u>1,5</u> kW	Duty type: <u>S1</u>		
Voltage: <u>400</u> V	conn. <u>Y</u>	frequency: <u>50</u> Hz	cosφ <u>0,68</u>	IM <u>B3</u>
current: <u>4,2</u> A	speed: <u>730</u> rpm	eff. <u>75,0</u> %	M of I	<u>0,0138</u> kgm ²
remarks: <u>PTC150°C inside the motors</u>				

Statorwinding resistance measurement (cold) :

Connection: <u>Y</u>	R_{u1-v1} : <u>7,436</u> Ω	
Winding temp: <u>8,0</u> °C	R_{v1-w1} : <u>7,438</u> Ω	R_{av} = <u>7,431</u> Ω ;
room temp: <u>8,0</u> °C	R_{w1-u1} : <u>7,420</u> Ω	

No-load test

R_{begin} = 8,454 Ω
 R_{end} = 8,492 Ω

				Losses		
U_0	I_0	P_0	$\cos\phi_0$	V_{cu1}	V_{fe}	V_w
V	A	W		W	W	W
473	5,1	574	0,137	331	231	12
438	4,0	395	0,130	204	179	12
400	3,2	272	0,123	130	130	12
358	2,5	191	0,123	80	99	12
310	2,1	137	0,122	56	69	12
253	1,6	94	0,134	33	49	12
179	1,1	51	0,150	15	24	12
127	0,8	33	0,188	8	13	12

sound pressure level in dB(A) (at 1m) : 51,5
 sound power level in dB(A) : 59,5
 vibration level (mm/s) : x = 1,2 y = 1,1 z = 1,3

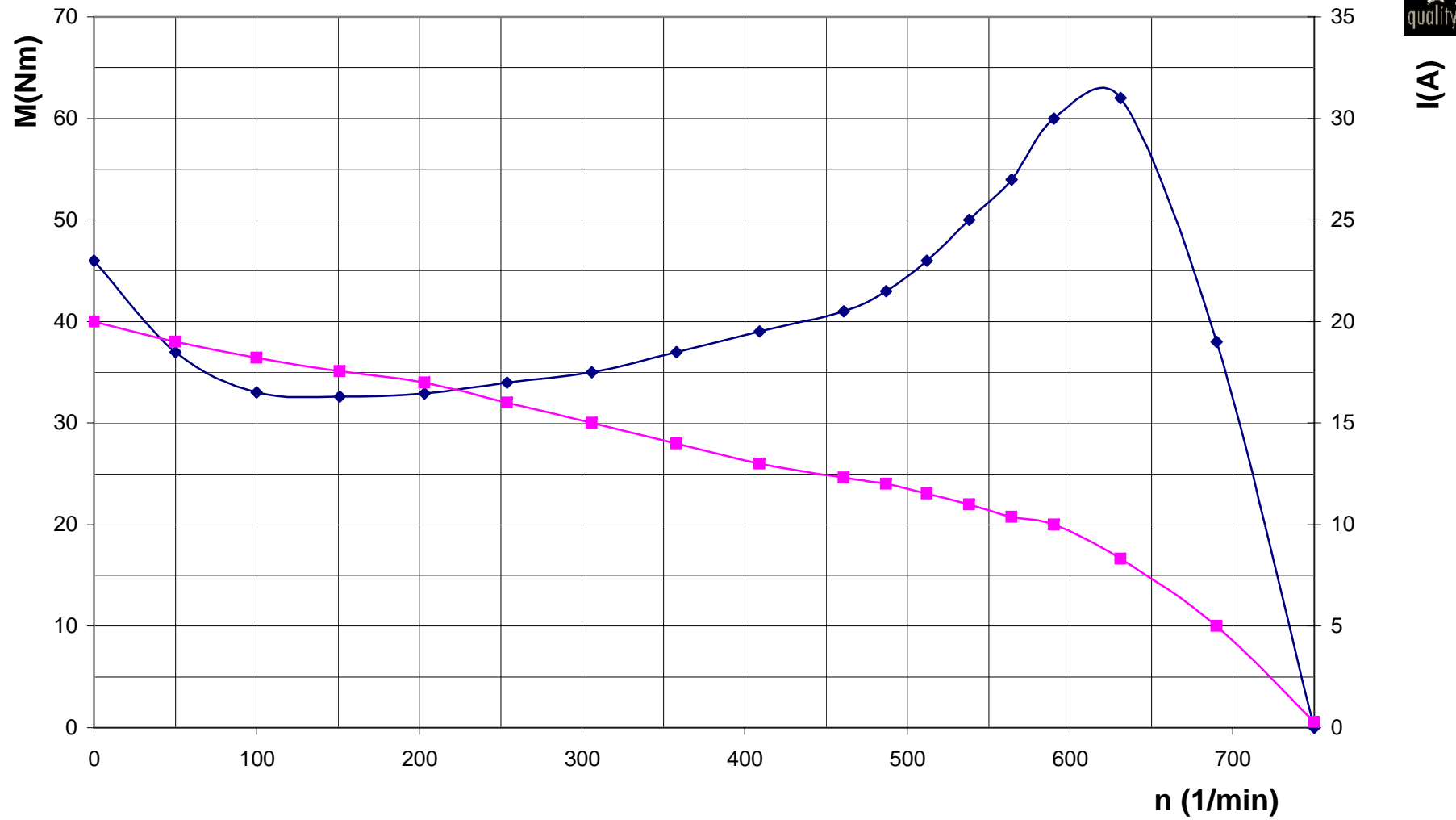
Temperature rise test

voltage : 400 V frequency: 50 Hz current 4,2 A connection : Y

		Room Temp. °C	$R_{wdg.}$ Ω	wdg. Temp. by $R_{wdg.}$	wdg. temp. rise (K)	measured Temperature (°C) with ETD*			
According to IEC 34 -1	time					wdg.	bearing DE	bearing NDE	frame
begin	12:35	8,0	7,438	8,2				8,1	
	14:45	10,0						43,0	
End	15:15	10,5	8,847	54,3	44,3	65	65,0	43,0	

* ETD = embedded temperature detector

DM1-112M8 ST.400V 50HZ 1,5kW



Load test

DM1-112M8

frequency : 50 Hz

connection : Y

$t_{\text{wdg,av}} = 47,9$ °C

$R_{\text{av}} = 8,65$ Ω

P ₂ approx. %	U V	I A	P ₁ kW	cosφ	n min ⁻¹	s %	Losses						P ₂ kW	η %
							V _{fe} W	V _{cu,1} W	V _e W	V _{cu,2} W	V _w W	V _v W		
25	400	3,3	0,661	0,29	741	1,20	130	141	6	5	12	294	0,37	55,59
50	400	3,4	1,067	0,45	733	2,27	130	150	6	18	12	316	0,75	70,41
75	400	3,7	1,498	0,58	723	3,60	130	178	8	43	12	369	1,13	75,34
100	400	4,2	1,966	0,68	711	5,20	130	229	10	83	12	463	1,50	76,43
125	400	4,8	2,484	0,75	697	7,07	130	299	13	144	12	598	1,89	75,94
150	400	5,6	3,064	0,79	681	9,20	130	407	17	231	12	797	2,27	73,99
100	440	4,6	2,072	0,59	719	4,13	182	275	12	66	12	547	1,53	73,62
100	420	4,4	2,017	0,63	716	4,53	155	251	11	73	12	502	1,52	75,13
100	380	4,1	1,923	0,71	708	5,60	113	218	9	89	12	441	1,48	77,06
100	360	4,1	1,891	0,74	701	6,53	98	218	9	102	12	440	1,45	76,74

Torque/speed and Current/speed test

voltage : 400 V

frequency: 50 Hz

connection : Y

n min ⁻¹	T Nm	I A	n min ⁻¹	T Nm	I A	n min ⁻¹	T Nm	I A
750	0,0	0,29	512	46,0	11,53	254	34,0	16
690	38,0	5	487	43,0	12	203	32,9	17
631	62,0	8,33	461	41,0	12,31	151	32,6	18
590	60,0	10	409	39,0	13	100	33,0	18
564	54,0	10,37	358	37,0	14	50	37,0	19
538	50,0	11	306	35,0	15	0,01	46,0	20

Locked rotor test

wdg. temp. °C	U V	I A	P ₁ kW	cosφ	T Nm
8	400	20	8,54	0,62	46
13,1	350	16,9	6,22	0,61	33
22,9	300	14	4,34	0,60	23
24,2	250	11,4	2,86	0,58	15
23	200	9	1,73	0,55	10
21,1	100	4,5	0,38	0,48	1



Date: 5-3-1998

Name: HvD

Signature: