



Windg. calc. card.: _____ motor No. _____
 type: DM1-132MX4 output: 9 kW Duty type: S1
 Voltage: 400 V conn. Δ frequency: 50 Hz cosφ 0,84 IM _____
 current: 17,8 A speed: 1435 rpm eff. 87,1 % M of I _____
 remarks: PTC150°C inside the motors

Statorwinding resistance measurement (cold) :

Connection: Δ $R_{u1-v1} :$ 0,94 Ω
 Winding temp: 27,0 °C $R_{v1-w1} :$ 0,94 Ω $R_{av} =$ 0,94 Ω ;
 room temp: 27,0 °C $R_{w1-u1} :$ 0,94 Ω

No-load test

$R_{begin} =$ 1,101 Ω
 $R_{end} =$ 1,100 Ω

				Losses		
U_0	I_0	P_0	$\cos\phi_0$	V_{cu1}	V_{fe}	V_w
V	A	W		W	W	W
473	13,5	852	0,077	301	504	47
438	11,5	741	0,085	218	476	47
400	8,3	495	0,087	112	336	47
358	6,1	357	0,094	62	248	47
310	4,8	264	0,104	37	180	47
253	3,6	186	0,117	22	117	47
179	2,5	114	0,147	10	57	47
127	1,6	81	0,227	4	30	47

sound pressure level in dB(A) (at 1m) : 58,1
 sound power level in dB(A) : 66
 vibration level (mm/s) : $x =$ 1,4 $y =$ 1,6 $z =$ 1,5

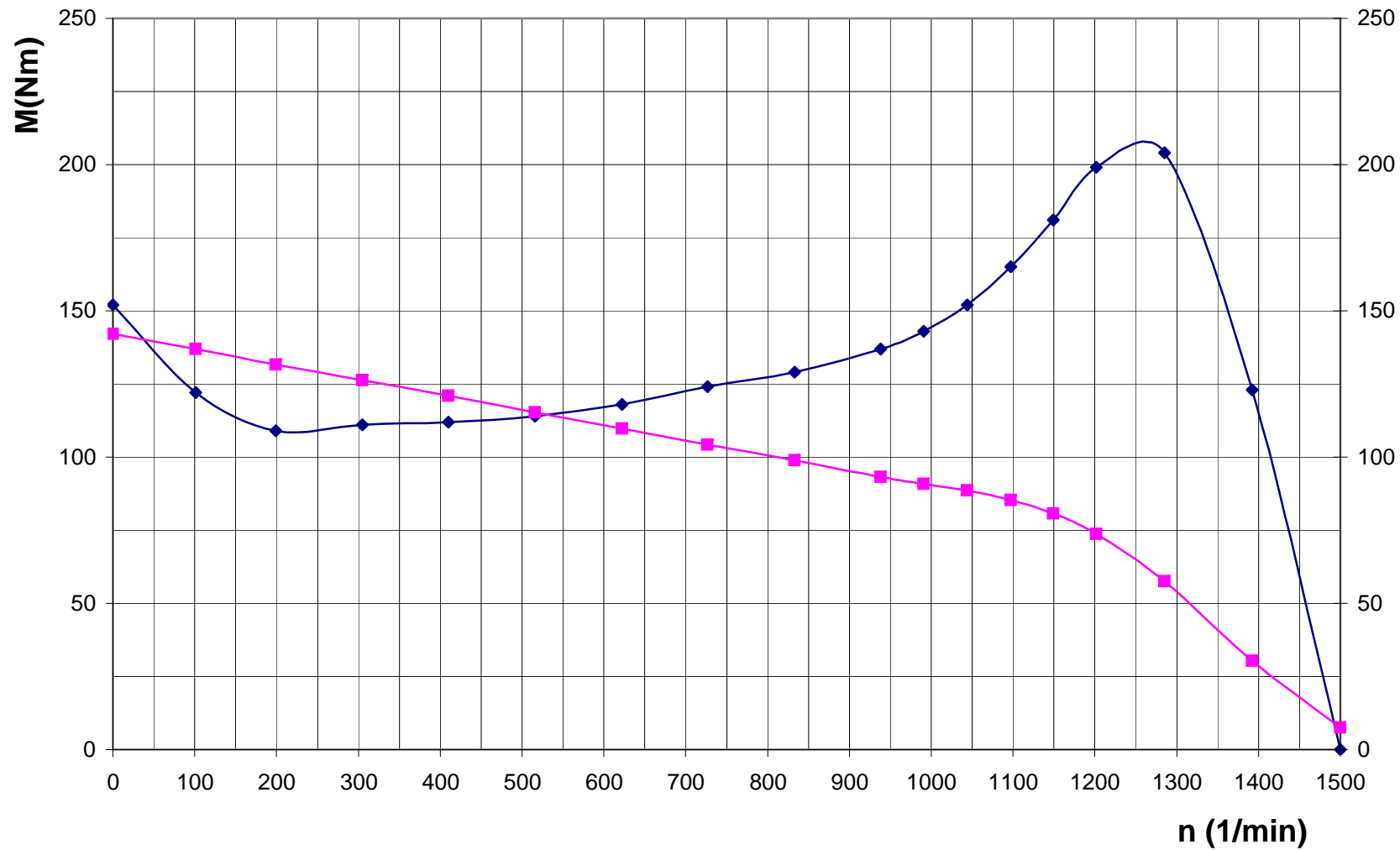
Temperature rise test

voltage : 400 V frequency: 50 Hz current 17,9 A connection : Δ

		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	10:55	27,0	0,942	27,2					27,1
	12:45	26,0							75,3
End	13:15	26,0	1,220	104,7	78,7	80		79,0	75,3

* ETD = embedded temperature detector

DM1-132MX4 Δ 400V 50HZ 9kW



Load test

DM1-132MX4

frequency : 50 Hz connection : Δ $t_{wdg,av} = 104,4$ °C $R_{av} = 1,219$

P ₂ approx. %	U V	I A	P ₁ kW	cosφ	n min ⁻¹	s %	Losses						P ₂ kW
							V _{fe} W	V _{cu,1} W	V _e W	V _{cu,2} W	V _w W	V _v W	
25	400	9,0	2,803	0,450	1486	0,93	336	148	13	22	47	566	2,24
50	400	11,1	5,207	0,676	1473	1,80	336	226	20	83	47	712	4,49
75	400	14,1	7,716	0,788	1460	2,67	336	365	32	186	47	966	6,75
100	400	17,9	10,365	0,837	1445	3,67	336	584	52	344	47	1363	9,00
125	400	22,0	13,188	0,865	1427	4,87	336	885	79	579	47	1925	11,26
150	400	26,6	16,218	0,879	1406	6,27	336	1296	115	907	47	2701	13,52
100	440	17,5	10,500	0,787	1452	3,20	445	560	50	302	47	1404	9,10
100	420	17,9	10,430	0,802	1449	3,40	384	584	52	320	47	1387	9,04
100	380	18,1	10,350	0,868	1440	4,00	296	601	53	376	47	1373	8,98
100	360	18,5	10,305	0,893	1433	4,47	264	626	56	418	47	1410	8,89

Torque/speed and Current/speed test


voltage : 400 V frequency: 50 Hz connection : Δ

n min ⁻¹	T Nm	I A	n min ⁻¹	T Nm	I A	n min ⁻¹	T Nm	I A
1500	0	7,63	1044	152	88,6	516	114	115
1392	123	30,4	991	143	90,9	410	112	121
1285	204	57,6	938	137	93,1	305	111	126
1202	199	73,6	833	129	98,9	199	109	132
1149	181	80,6	727	124	104	101	122	137
1097	165	85,4	622	118	110	0	152	142

Locked rotor test

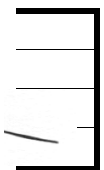
wdg. temp. °C	U V	I A	P ₁ kW	cosφ	T Nm
27	400	142	59,149	0,60	152,2
42,7	300	106	32,913	0,60	84,5
47,6	200	57	10,121	0,51	27,3
47,1	160	43	5,789	0,49	16,2
43,6	120	29	2,609	0,43	7,3



Date: 8-9-2000
 Name: HvD
 Signature: 

Ω

η
%
79,82
86,32
87,48
86,85
85,40
83,35
86,63
86,70
86,73
86,31





B3

kgm²