



Windg. calc. card.: _____	motor No. <u>5</u>			
type: <u>DM1-132S2</u>	Output: <u>5,5</u> kW	Duty type: <u>S1</u>		
Voltage: <u>400</u> V	conn. <u>Δ</u>	frequency: <u>50</u> Hz	cosφ <u>0,88</u>	IM <u>B3</u>
current: <u>10,5</u> A	speed: <u>2910</u> rpm	eff. <u>86,0</u> %	M of I	<u>0,0104</u> kgm <sup>2</sup>
remarks: <u>PTC150°C inside the motors</u>				

**Statorwinding resistance measurement ( cold ) :**

Connection: <u>Δ</u>	$R_{u1-v1}$ : <u>1,35</u> Ω	
Winding temp: <u>10,5</u> °C	$R_{v1-w1}$ : <u>1,35</u> Ω	$R_{av}$ = <u>1,35</u> Ω ;
room temp: <u>10,5</u> °C	$R_{w1-u1}$ : <u>1,35</u> Ω	

**No-load test**

$R_{begin}$  = 1,38 Ω  
 $R_{end}$  = 1,38 Ω

				Losses		
$U_0$	$I_0$	$P_0$	$\cos\phi_0$	$V_{cu1}$	$V_{fe}$	$V_w$
V	A	W		W	W	W
473	7,0	753	0,131	102	465	186
438	5,2	567	0,144	56	325	186
400	4,0	421	0,152	33	202	186
358	3,2	316	0,159	21	109	186
310	2,7	254	0,175	15	53	186
253	2,2	230	0,239	10	34	186
179	1,6	207	0,417	5	16	186
127	1,5	194	0,588	5	3	186

sound pressure level in dB(A) ( at 1m ) : 70,4  
 sound power level in dB(A) : 78,4  
 vibration level (mm/s) : x = 0,9      y = 1,1      z = 1

**Temperature rise test**

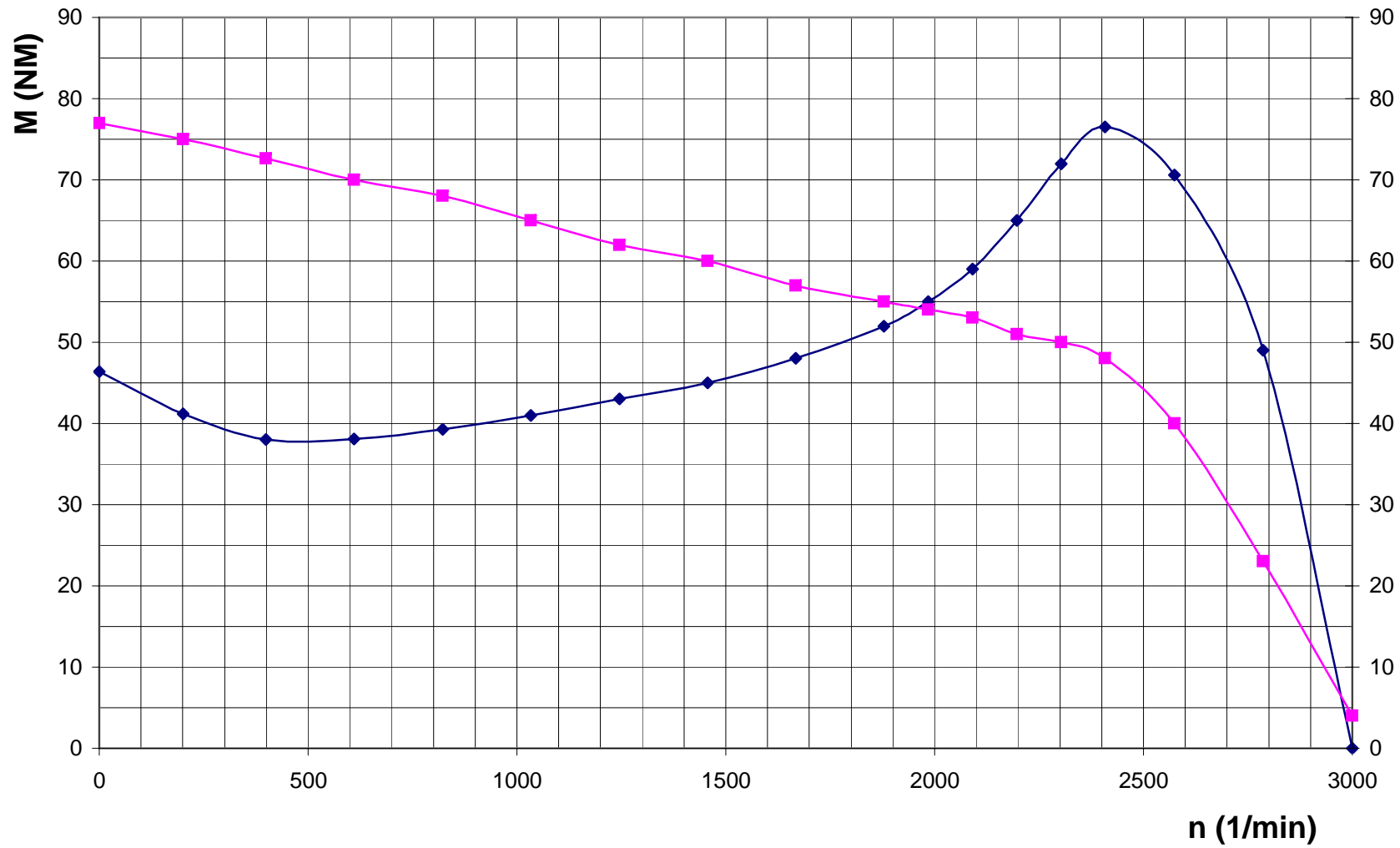
voltage : 400 V frequency: 50 Hz current 10,8 A connection : Δ

		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	7:55	9,0	1,36	9,3				9,1	
	9:45	11,0						34,0	
End	10:15	11,0	1,65	63,3	52,3	72	72,0	34,0	

\* ETD = embedded temperature detector

**EFF 2**

# DM1-132S2 DR.400V 50HZ 5,5kW



**I (A)**

**Load test****DM1-132S2**frequency : 50 Hzconnection : Δ $t_{wdg,av} = 60,8$  °C $R_{av} = 1,632$  Ω

P <sub>2</sub> approx. %	U V	I A	P <sub>1</sub> kW	cosφ	n min <sup>-1</sup>	s %	Losses						P <sub>2</sub> kW	η %
							V <sub>fe</sub> W	V <sub>cu,1</sub> W	V <sub>e</sub> W	V <sub>cu,2</sub> W	V <sub>w</sub> W	V <sub>v</sub> W		
25	400	4,9	1,83	0,540	2982	0,60	202	59	7	9	186	463	1,37	74,75
50	400	6,4	3,28	0,740	2964	1,20	202	100	12	36	186	535	2,74	83,67
75	400	8,2	4,78	0,842	2942	1,93	202	165	19	85	186	657	4,13	86,27
100	400	10,4	6,35	0,881	2919	2,70	202	265	31	158	186	842	5,50	86,74
125	400	12,8	7,97	0,899	2894	3,53	202	401	47	259	186	1095	6,88	86,27
150	400	15,4	9,68	0,907	2870	4,3	202	580	68	382	186	1419	8,26	85,34
100	440	10,2	6,43	0,827	2936	2,13	335	255	30	124	186	930	5,50	85,55
100	420	10,2	6,37	0,858	2927	2,43	264	255	30	142	186	876	5,49	86,24
100	380	10,8	6,36	0,894	2906	3,13	150	285	34	184	186	840	5,52	86,79
100	360	11,3	6,40	0,908	2896	3,47	110	313	37	206	186	851	5,55	86,70

**Torque/speed and Current/speed test**voltage : 400 Vfrequency: 50 Hzconnection : Δ

n min <sup>-1</sup>	T Nm	I A	n min <sup>-1</sup>	T Nm	I A	n min <sup>-1</sup>	T Nm	I A
3000	0	4	2091	59	53	1033	41	65
2787	49	23	1985	55	54	822	39	68
2574	71	40	1879	52	55	610	38	70
2408	77	48	1668	48	57	399	38	73
2303	72	50	1456	45	60	201	41	75
2197	65	51	1245	43	62	0,01	46	77

**Locked rotor test**

wdg. temp. °C	U V	I A	P <sub>1</sub> kW	cosφ	T Nm
14	400	77,1	39,58	0,741	49
29,3	350	65,3	29,57	0,747	29
35,7	300	54,3	21,10	0,748	17
41,5	250	44	14,13	0,742	10
43,1	200	34,4	8,64	0,725	6
42,1	100	16,3	1,925	0,682	1

Date: 29-1-1998Name: HvD

Signature: