



Windg. calc. card.:	motor No. <u>2</u>			
type: <u>DM1-132M4</u>	output: <u>7,5</u> kW	Duty type: <u>S1</u>		
Voltage: <u>400</u> V	conn. <u>Δ</u>	frequency: <u>50</u> Hz	cosφ <u>0,84</u>	IM <u>B3</u>
current: <u>14,5</u> A	speed: <u>1452</u> rpm	eff. <u>87,0</u> %	M of I	kgm <sup>2</sup>
remarks: <u>PTC150°C inside the motors</u>				

**Statorwinding resistance measurement ( cold ) :**

Connection: <u>Δ</u>	R <sub>u1-v1</sub> : <u>1,221</u> Ω	
Winding temp: <u>25,0</u> °C	R <sub>v1-w1</sub> : <u>1,219</u> Ω	R <sub>av</sub> = <u>1,220</u> Ω ;
room temp: <u>25,0</u> °C	R <sub>w1-u1</sub> : <u>1,219</u> Ω	

**No-load test**

R<sub>begin</sub> = 1,491 Ω  
 R<sub>end</sub> = 1,491 Ω

				Losses		
U <sub>0</sub>	I <sub>0</sub>	P <sub>0</sub>	cosφ <sub>0</sub>	V <sub>cu1</sub>	V <sub>fe</sub>	V <sub>w</sub>
V	A	W		W	W	W
473	10,08	754	0,091	227	484	43
438	7,35	501	0,090	121	337	43
400	5,57	345	0,089	69	233	43
358	4,35	253	0,094	42	168	43
310	3,43	192	0,104	26	122	43
253	2,60	138	0,121	15	79	43
179	1,82	87,5	0,155	7	37	43
127	1,41	68,2	0,220	4	21	43

sound pressure level in dB(A) ( at 1m ) : 56,5  
 sound power level in dB(A) : 64,5  
 vibration level (mm/s) : x = 1,0      y = 0,8      z = 0,7

**Temperature rise test**

voltage : 400 V frequency: 50 Hz current 14,38 A connection : Δ

		Room Temp. °C	R <sub>wdg.</sub> Ω	wdg. Temp. by R <sub>wdg.</sub>	wdg. temp. rise (K)	measured Temperature (°C) with ETD*			
According to IEC 34 -1	time					wdg.	bearing DE	bearing NDE	frame
begin	13:00	25,0	1,221	25,3					25,1
	15:30	28,0							67,0
End	16:00	28,0	1,576	101,0	73,0	61,5		57,5	67,0

\* ETD = embedded temperature detector

## Load test

## DM1-132M4

frequency : 50 Hz

connection : Δ

$t_{\text{wdg,av}} = 100,7$  °C

$R_{\text{av}} = 1,575$

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
							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	6,48	2,2712	0,506	1485	1,00	233	99	9	19	43	403	1,87
50	400	8,56	4,2832	0,722	1472	1,87	233	173	15	72	43	536	3,75
75	400	11,23	6,3860	0,821	1458	2,80	233	298	26	163	43	763	5,62
100	400	14,48	8,6265	0,860	1442	3,87	233	495	44	304	43	1118	7,51
125	400	18,31	11,0512	0,871	1420	5,33	233	792	70	531	43	1669	9,38
150	400	22,73	13,7067	0,870	1397	6,87	233	1221	108	834	43	2438	11,27
100	440	13,83	8,4515	0,802	1453	3,13	344	452	40	239	43	1117	7,33
100	420	13,92	8,4465	0,834	1449	3,40	281	458	40	261	43	1083	7,36
100	380	14,39	8,0965	0,855	1433	4,47	197	489	43	329	43	1101	7,00
100	360	14,94	8,4015	0,902	1423	5,13	170	527	47	393	43	1180	7,22

## Torque/speed and Current/speed test

voltage : 400 V

frequency: 50 Hz

connection : 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
1500	0	4,88	1041	120	66,7	515	90	84,8
1391	97	23,8	989	113	68,2	410	88	88,6
1282	161	44,0	936	108	70,0	305	87	92,2
1199	156	55,9	831	101	73,4	199	86	95,7
1147	143	61,3	726	97	77,1	101	96	99,5
1094	130	64,9	620	94	80,9	0	121	103

## Locked rotor test

wdg. temp. °C	U V	I A	P <sub>1</sub> kW	cosφ	T Nm
25,0	400	103	42,551	0,60	121
33,7	350	84,6	30,609	0,60	84,31
38,2	300	68,0	20,869	0,59	56,21
46,7	250	52,9	13,199	0,58	35,09
64,8	200	39,2	7,466	0,55	19,81
62,3	100	16,0	1,289	0,46	2,13



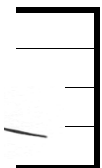
Date: 6-9-2004

Name: HvD

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Ω

η
%
82,27
87,49
88,05
87,04
84,90
82,21
86,78
87,18
86,40
85,96



# DM1-132M4 $\Delta$ 400V 50Hz 7,5kW

