

# Type Test Report

Report No.: TTR3IA31321A2SL

## Test Result Data

### Nameplate data

Type:	HMA3 132M1-6	Protection Class.:	IP55
Voltage:	400 V	Duty:	S1
Current:	8.75 A	Frequency:	50 Hz
Output:	4 kW	Efficiency.:	86.9 %
Connection:	D	Cos $\phi$ :	0.76
Speed:	974 rpm	Insulation Class:	F

### No-Load test at rated voltage

No load loss:	273.4 W	No load current:	5.18 A
Machine loss:	26.8 W	Core loss:	159.6 W
Sound pressure level 1m:	59 dB(A)	Vibration:	0.7 mm/s

### Temperature rise test

Voltage:	400.0 V	Current:	8.75 A
Power:	4.00 kW	Temperature - rise:	47 K
Winding hotspot temperature:	70 °C	Bearing temperature:	55 °C
Frequency:	50 Hz	Ambient temperature:	24 °C

### Load performance test

Load %	Un V	f Hz	P1 KW	I1 A	N rpm	T Nm	Cos $\phi$ Cos $\phi$	Eff ( $\eta$ ) %
125	400	50	5.80	10.45	967	49.37	0.80	86.27
<b>100</b>	<b>400</b>	<b>50</b>	<b>4.60</b>	<b>8.75</b>	<b>974</b>	<b>39.21</b>	<b>0.76</b>	<b>86.92</b>
75	400	50	3.46	7.35	981	29.20	0.68	86.84
50	400	50	2.36	6.24	988	19.33	0.55	84.92
25	400	50	1.30	5.43	994	9.61	0.35	76.76

### Locked rotor test at rated voltage

Input power:	26.1 kW	Cos $\phi$ :	0.57
Starting current:	66.54 A	Starting torque:	83.50 Nm
Starting/Rated current:	7.60	Starting/Rated torque:	2.13

6/19/2017

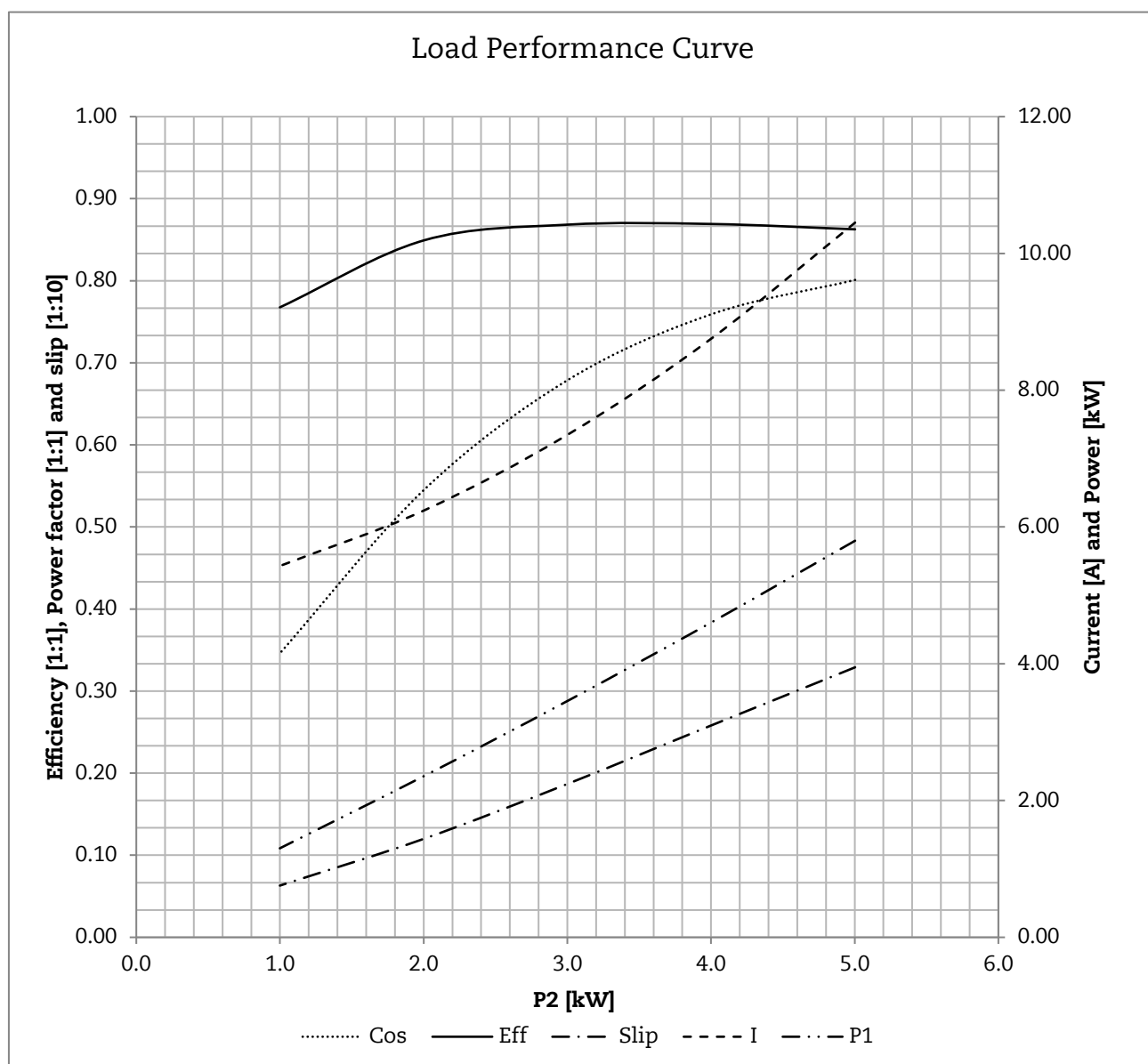
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Data are not binding. Hoyer reserves the right to implement changes without notice. The extent of data are not equivalent to nameplate on the motors.

## Load test data

P2 kW	P1 kW	Eff ( $\eta$ ) P2/P1	I A	T Nm	Cos $\phi$
5.0	5.8	0.863	10.45	49.4	0.80
4.0	4.6	0.869	8.75	39.2	0.76
3.0	3.5	0.868	7.35	29.2	0.68
2.0	2.4	0.849	6.24	19.3	0.55
1.0	1.3	0.768	5.43	9.6	0.35



## No-load test data at rated frequency

U <sub>o</sub> V	I <sub>o</sub> A	P <sub>o</sub> W	P <sub>cul.</sub>
499.8	11.50	834.0	448.5
439.2	6.75	397.0	154.5
401.2	5.24	282.0	93.1
319.2	3.59	158.0	43.7
280.0	3.06	123.0	31.8
239.7	2.56	95.0	22.2
199.9	2.09	75.0	14.8
160.1	1.65	59.0	9.2
120.0	1.23	44.0	5.1
100.0	1.04	34.0	1.1

