

# Type Test Report

Report No.: TTR3IA10900A1SL

## Test Result Data

### Nameplate data

Type:	HMA3 90S-2	Protection Class.:	IP55
Voltage:	400 V	Duty:	S1
Current:	3.10 A	Frequency:	50 Hz
Output:	1.5 kW	Efficiency.:	84.9 %
Connection:	Y	Cos $\phi$ :	0.82
Speed:	2922 rpm	Insulation Class:	F

### No-Load test at rated voltage

No load loss:	106.4 W	No load current:	1.63 A
Machine loss:	39 W	Core loss:	43.4 W
Sound pressure level 1m:	62 dB(A)	Vibration:	1.3 mm/s

### Temperature rise test

Voltage:	400.0 V	Current:	3.10 A
Power:	1.50 kW	Temperature - rise:	43 K
Winding hotspot temperature:	69 °C	Bearing temperature:	56 °C
Frequency:	50 Hz	Ambient temperature:	25 °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	2.24	3.79	2897	6.18	0.85	83.66
<b>100</b>	<b>400</b>	<b>50</b>	<b>1.77</b>	<b>3.10</b>	<b>2922</b>	<b>4.90</b>	<b>0.82</b>	<b>84.87</b>
75	400	50	1.32	2.53	2944	3.65	0.75	85.33
50	400	50	0.89	2.07	2964	2.42	0.62	83.85
25	400	50	0.49	1.73	2981	1.20	0.41	75.73

### Locked rotor test at rated voltage

Input power:	14.2 kW	Cos $\phi$ :	0.73
Starting current:	27.99 A	Starting torque:	13.77 Nm
Starting/Rated current:	9.03	Starting/Rated torque:	2.81

6/19/2017

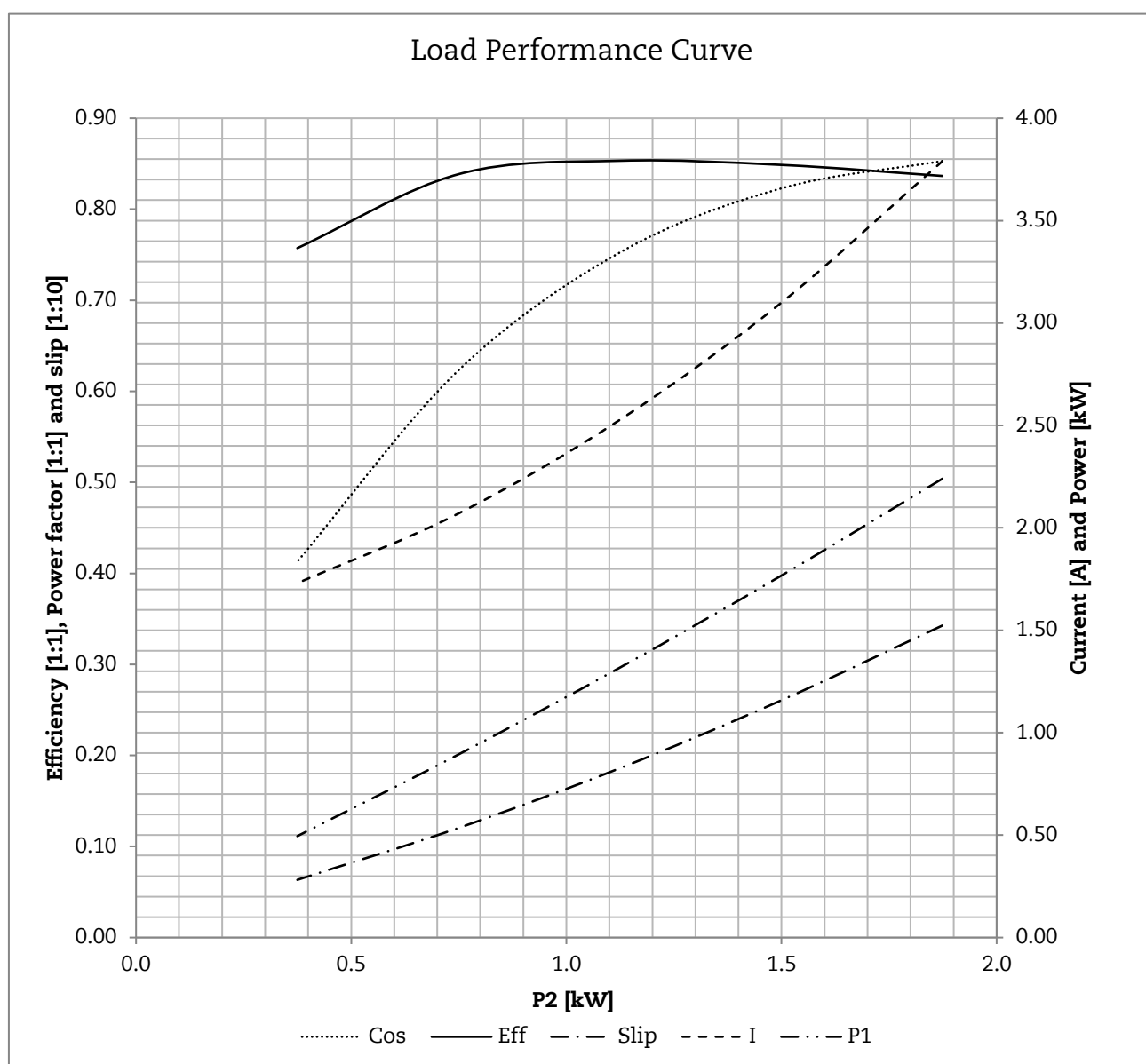
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Data are not binding. Hoyer reserves the right to implement changes without notice. The extent of data are not equivalent to nameplate on the motors.

## Load test data

P2 kW	P1 kW	Eff ( $\eta$ ) P2/P1	I A	T Nm	Cos $\phi$
1.9	2.2	0.837	3.79	6.2	0.85
1.5	1.8	0.849	3.10	4.9	0.82
1.1	1.3	0.853	2.53	3.6	0.75
0.7	0.9	0.839	2.07	2.4	0.62
0.4	0.5	0.757	1.73	1.2	0.41



## 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>
500.0	4.49	352.0	196.9
440.9	2.38	155.0	55.3
401.1	1.63	109.0	25.9
319.6	1.02	76.0	10.2
280.0	0.85	69.0	7.3
240.0	0.71	63.0	4.9
200.2	0.58	52.0	3.3
160.3	0.47	48.0	2.2
120.1	0.39	44.0	1.5
100.0	0.35	42.0	0.2

