

# Type Test Report

Report No.: TTR3IA20900A1SL

## Test Result Data

### Nameplate data

Type:	HMA3 90S-4	Protection Class.:	IP55
Voltage:	400 V	Duty:	S1
Current:	2.48 A	Frequency:	50 Hz
Output:	1.1 kW	Efficiency.:	84.2 %
Connection:	Y	Cos $\phi$ :	0.76
Speed:	1450 rpm	Insulation Class:	F

### No-Load test at rated voltage

No load loss:	101.1 W	No load current:	1.52 A
Machine loss:	13.7 W	Core loss:	61.9 W
Sound pressure level 1m:	54 dB(A)	Vibration:	0.8 mm/s

### Temperature rise test

Voltage:	400.0 V	Current:	2.48 A
Power:	1.10 kW	Temperature - rise:	41 K
Winding hotspot temperature:	64 °C	Bearing temperature:	62 °C
Frequency:	50 Hz	Ambient temperature:	23 °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	1.64	2.93	1435	9.15	0.81	83.51
<b>100</b>	<b>400</b>	<b>50</b>	<b>1.31</b>	<b>2.48</b>	<b>1450</b>	<b>7.25</b>	<b>0.76</b>	<b>84.24</b>
75	400	50	0.98	2.10	1464	5.38	0.67	84.00
50	400	50	0.68	1.81	1476	3.56	0.54	81.42
25	400	50	0.38	1.58	1488	1.77	0.35	71.27

### Locked rotor test at rated voltage

Input power:	9.4 kW	Cos $\phi$ :	0.68
Starting current:	19.90 A	Starting torque:	20.75 Nm
Starting/Rated current:	8.02	Starting/Rated torque:	2.86

6/19/2017

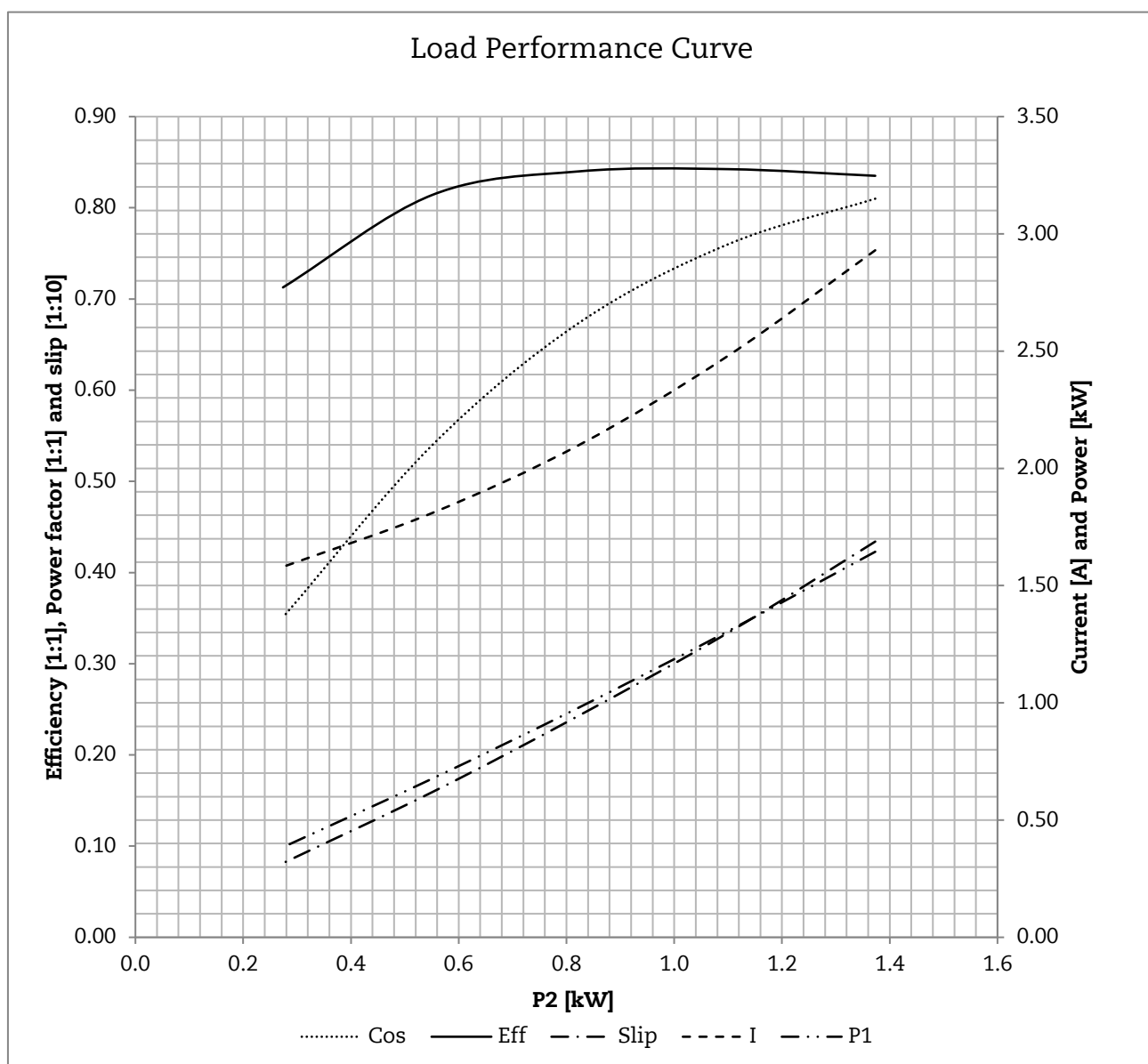
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Data are not binding. Hoyer reserves the right to implement changes without notice. The extent of data are not equivalent to nameplate on the motors.

## Load test data

P2 kW	P1 kW	Eff ( $\eta$ ) P2/P1	I A	T Nm	Cos $\phi$
1.4	1.6	0.835	2.93	9.2	0.81
1.1	1.3	0.842	2.48	7.2	0.76
0.8	1.0	0.840	2.10	5.4	0.67
0.6	0.7	0.814	1.81	3.6	0.54
0.3	0.4	0.713	1.58	1.8	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	3.35	272.0	128.9
439.2	1.97	140.0	44.6
401.3	1.53	103.0	26.9
319.8	1.04	62.0	12.4
280.0	0.88	50.0	8.8
240.0	0.72	40.0	6.0
200.3	0.59	32.0	4.0
160.2	0.46	25.0	2.4
120.0	0.35	20.0	1.4
100.0	0.31	17.0	0.3

