

## Test Result Data

### Nameplate data

Type:	HMC3 225S-4	Protection Class.:	IP55
Voltage:	400 V	Duty:	S1
Current:	65.98 A	Frequency:	50 Hz
Output:	37 kW	Efficiency.:	93.9 %
Connection:	D	Cos $\phi$ :	0.86
Speed:	1482 rpm	Insulation Class:	F

### No-Load test at rated voltage

No load loss:	830.25 W	No load current:	22.46 A
Machine loss:	137.43 W	Core loss:	601.38 W
Sound pressure level 1m:	73.6 dB(A)	Vibration:	0.7 mm/s

### Temperature rise test

Voltage:	400.0 V	Current:	65.98 A
Power:	37.00 kW	Temperature - rise:	59 K
Winding hotspot temperature:	80 °C	Bearing temperature:	56 °C
Frequency:	50 Hz	Ambient temperature:	21 °C

### Load performance test

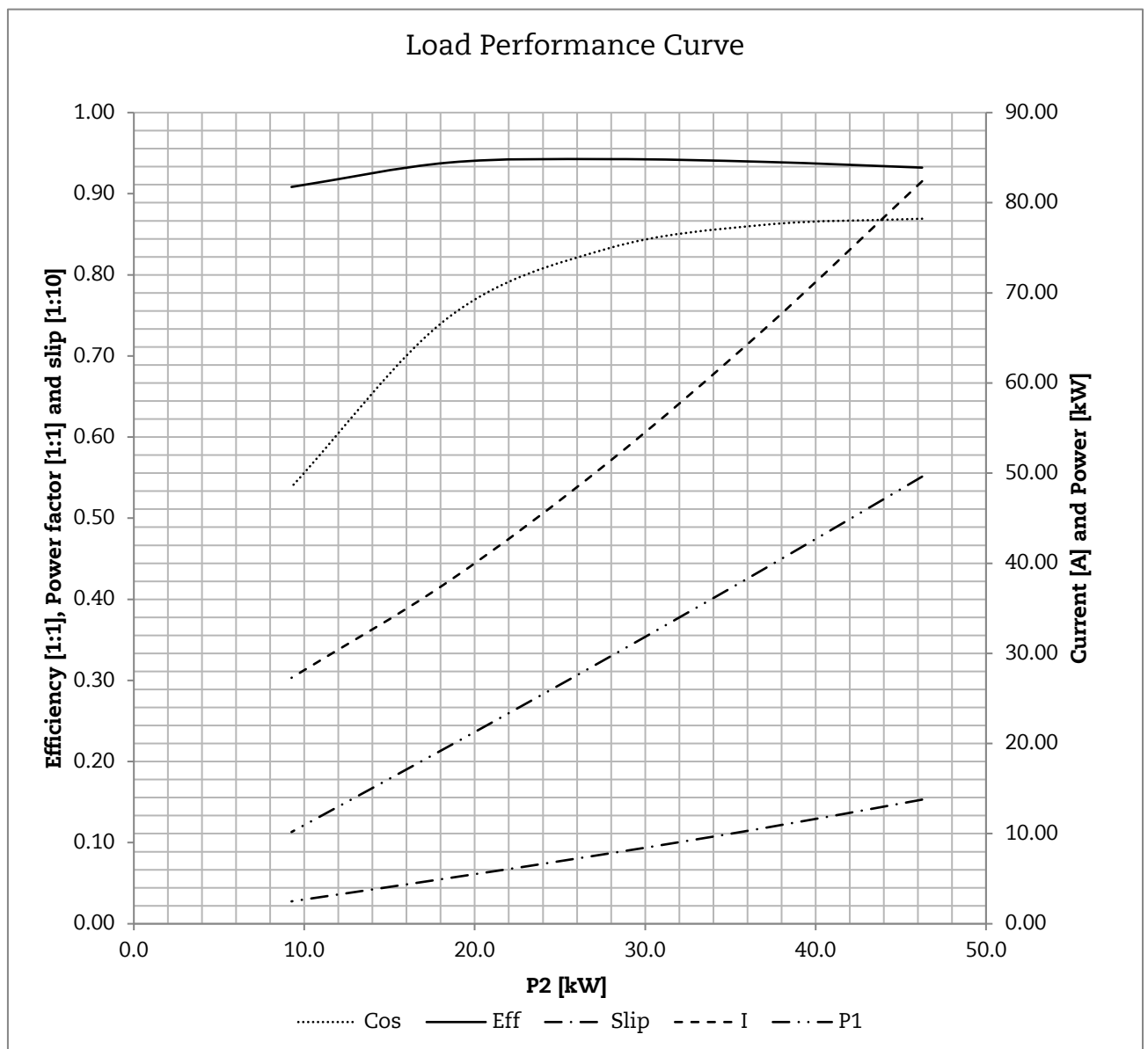
Load %	Un V	f Hz	P1 KW	I1 A	N rpm	T Nm	Cos $\phi$	Eff ( $\eta$ ) %
125	400	50	49.61	82.39	1477	299.04	0.87	93.22
<b>100</b>	<b>400</b>	<b>50</b>	<b>39.39</b>	<b>65.98</b>	<b>1482</b>	<b>238.38</b>	<b>0.86</b>	<b>93.93</b>
75	400	50	29.44	51.06	1487	178.21	0.83	94.27
50	400	50	19.71	38.03	1492	118.45	0.75	93.85
25	400	50	10.18	27.29	1496	59.05	0.54	90.84

### Locked rotor test at rated voltage

Input power:	168.8 kW	Cos $\phi$ :	0.47
Starting current:	521.15 A	Starting torque:	732.96 Nm
Starting/Rated current:	7.90	Starting/Rated torque:	3.07

Load test data

P2 kW	P1 kW	Eff ( $\eta$ ) P2/P1	I A	T Nm	Cos $\phi$
46.3	49.6	0.932	82.39	299.0	0.87
37.0	39.4	0.939	65.98	238.4	0.86
27.7	29.4	0.943	51.06	178.2	0.83
18.5	19.7	0.938	38.03	118.5	0.75
9.2	10.2	0.908	27.29	59.1	0.54



## 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>
499.9	47.38	2480.0	407.1
454.7	32.22	1340.0	188.3
414.5	24.36	920.0	107.6
375.6	19.96	710.0	72.2
335.1	16.94	560.0	52.0
294.1	14.52	450.0	38.2
253.7	12.25	390.0	27.2
223.2	10.66	340.0	20.6
193.4	9.18	290.0	15.3
162.8	7.64	250.0	10.6

