

ROYCE CROSS GROUP

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

NAMEPLATE DATA

YE2-315L2-8 FRAME	IEC TYPE	110 kW	740 r/min
8 POLE	3 PHASE	415 VOLTS	50 Hz
ROYCE CROSS GROUP MANUFACTURER	202.2 AMPS	IP55 Pro Class	
	S1 DUTY	F INS.CLASS	Δ CONNECTION

MAJOR CONTENTS	UNIT	TEST VALUE
STATOR RESISTANCE OF PHASE	OHM	0.04618
NO LOAD CURRENT	AMP	82.240
NO LOAD INPUT	W	3525.71
NO LOAD CORE LOSS(Pfe)	W	2589.66
WINDAGE FRICTION LOSS(Pfw)	W	645.55
FULL LOAD STATOR WINDING LOSS(Pcu1)	W	1860.63
FULL LOAD ROTOR WINDING LOSS(Pcu2)	W	1705.31
FULL LOAD STRAY LOAD LOSS(Ps)	W	1915.86
LOCKED ROTOR CURRENT	AMP	1145.09
LOCKED ROTOR TORQUE	N.m	2499.67
PULL OUT TORQUE	N.m	3529.92
LOCKED ROTOR CURRENT/FULL LOAD CURRENT	P.U.	5.66
LOCKED ROTOR TORQUE/FULL LOAD TORQUE	P.U.	1.76
PULL OUT TORQUE/FULL LOAD TORQUE	P.U.	2.49
FULL LOAD TORQUE	N.m	1421.74
FULL LOAD CURRENT	AMP	201.94
FULL LOAD SLIP	%	1.492
INPUT @ FULL LOAD	kW	118.658
FULL LOAD SPEED	r/min	738.81
EFFICIENCY @ FULL LOAD	%	92.71
POWER FACTOR @ FULL LOAD		0.817
STATOR WINDING TEMPERATURE RISE@ FULL LOAD	K	62.15
D.E. BEARINGS TEMPERATURE BY PT100@ FULL LOAD	Deg. C	59.30
AMBIENT TEMPERATURE OF TESTING	Deg. C	15.4
HIGH VOLTAGE TEST	V	1830
INSULATION RESISTANCE	MΩ	500
NOISE @NO LOAD	dB(A)	80
VIBRATION @NO LOAD	mm/s	1.3

The data above is calculated as per IEC 34-2,all data at nominal Volts.

ROYCE CROSS GROUP YE2-315L2-8 110 kW 415 VOLTS 50 Hz	SERIAL NO.		
	DATE		REV
	DRAWN		DOCUMENT NO.
	APPRVD		
	CHECKED		

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

ROYCE CROSS GROUP

Type	YE2-315L2-8	Poles	8	Power	110.0 kW
Voltage	415 V	Current	202.2 A	Frequency	50 Hz
Speed	740 r/min	Duty	S1	Connection	△
Ins. class	F	Weight	0 kg	Pro Class	IP55

NO LOAD TEST

VOL	mul.	Hz	I01	I02	I03	mul.	W1	W2	mul.	℃
494.0	1	50	2.810	2.833	2.860	50	-681.2	845.3	50	72.3
455.9	1	50	2.115	2.124	2.146	50	-477.8	580.9	50	72.1
415.0	1	50	1.638	1.641	1.656	50	-337.4	407.9	50	71.9
366.9	1	50	3.324	3.320	3.355	20	-604.3	735.3	20	71.7
323.2	1	50	2.817	2.817	2.835	20	-448.1	554.3	20	71.4
256.0	1	50	2.157	2.150	2.166	20	-263.0	343.1	20	71.3
207.4	1	50	1.718	1.712	1.726	20	-162.6	227.1	20	70.9
173.2	1	50	2.880	2.862	2.901	10	-220.8	321.9	10	70.6
138.0	1	50	2.296	2.275	2.299	10	-124.1	218.9	10	70.5
89.0	1	50	1.548	1.534	1.567	10	-32.8	109.0	10	70.2

ROYCE CROSS GROUP	Manufacturing Date	Serial No
	Test Date	Report Number

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

ROYCE CROSS GROUP

Type	YE2-315L2-8	Poles	8	Power	110.0	kW
Voltage	415 V	Current	202.2 A	Frequency	50.0	Hz
Speed	740 r/min	Duty	S1	Connection	Δ	
Ins. class	F	Weight	0 kg	Pro Class	IP55	

LOCKED ROTOR TEST

VOL	mul.	Ik1	Ik2	Ik3	mul.	W1	W2	mul.	Torque N. m
269.5	1.0	3.289	3.293	3.329	200.0	-218.3	704.3	200	832.21
242.9	1.0	2.878	2.888	2.916	200.0	-176.9	550.8	200	645.73
213.3	1.0	2.440	2.445	2.469	200.0	-138.5	406.5	200	472.67
180.7	1.0	1.991	1.995	2.015	200.0	-99.2	277.0	200	313.04
152.0	1.0	3.251	3.258	3.288	100.0	-139.3	377.9	100	209.97
132.4	1.0	2.786	2.793	2.819	100.0	-105.0	280.6	100	154.84
109.5	1.0	2.277	2.280	2.303	100.0	-72.1	189.0	100	103.07
77.9	1.0	1.603	1.604	1.619	100.0	-35.9	94.2	100	54.17

ROYCE CROSS GROUP	Manufacturing Date	Serial No
	Test Date	Report Number

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

ROYCE CROSS GROUP

Type	YE2-315L2-8		Poles	8		Power	110 kW	
Voltage	415 V		Current	202.2 A		Frequency	50 Hz	
Speed	740 r/min		Duty	S1		Connection	Δ	
Ins. class	F		Weight	0 kg		Pro Class	IP55	

TEMPERATURE RISE TEST

TIME (h:min)	V	I1	I2	I3	mul.	W1	W2	mul.	T1 °C	T2 °C	T3 °C	T4 °C	T5 °C	T6 °C	T7 °C	T8 °C	T9 °C	T10 °C	T11 °C	T12 °C	T13 °C	
11:00	415.1	2.017	2.020	2.040	100	356.7	812.4	100	46.8	—	73.1	—	—	—	—	—	—	—	—	—	—	15.2
11:30	415.3	1.998	2.001	2.020	100	353.9	804.7	100	50.0	—	75.7	—	—	—	—	—	—	—	—	—	—	15.5
12:00	415.2	1.996	1.999	2.020	100	355.3	804.8	100	53.1	—	77.8	—	—	—	—	—	—	—	—	—	—	15.4
12:30	415.3	2.026	2.030	2.051	100	364.6	817.1	100	55.2	—	79.1	—	—	—	—	—	—	—	—	—	—	15.5
13:00	415.1	2.031	2.037	2.058	100	369.3	820.6	100	57.1	—	79.8	—	—	—	—	—	—	—	—	—	—	15.7
13:30	415.0	2.018	2.023	2.043	100	366.3	814.7	100	58.4	—	81.0	—	—	—	—	—	—	—	—	—	—	15.6
14:00	415.0	2.019	2.020	2.040	100	365.4	813.6	100	59.0	—	81.3	—	—	—	—	—	—	—	—	—	—	15.4
14:30	415.1	2.005	2.011	2.031	100	365.0	810.1	100	59.3	—	81.4	—	—	—	—	—	—	—	—	—	—	15.1
最后三点平均值	202.340		A		117836.7		W		59.3	—	81.2	—	—	—	—	—	—	—	—	—	—	15.4

T1 T2: DE BEARING TEMPERATURE T9: AIR INLET TEMPERATURE T11: CORE TEMPERATRE T12: FRAME TEMPERATRE
T3~8: DE WINDING TEMPERATURE T10: AIR OUTLET TEMPERATURE T13: AMBIENT TEMPERATURE

WINDING RESISTANCE (HOT) AT END OF TEMPERATURE RISE TEST

TIME (S)	42	62	82	102	122	142	162	182
RESISTANCE	0.02930	0.02925	0.02919	0.02914	0.02909	0.02905	0.02900	0.02896

WINDING RESISTANCE (COLD)

	U1-V1	U1-W1	V1-W1	AVERAGE	MIN	AMBIENT TEM.
	0.02316	0.02316	0.02315	0.02316	0.0232	13.3 °C

ROYCE CROSS GROUP

Manu. Date	Serial No
Test Date	Report Number

**ELECTRIC MOTOR TEST REPORT -
THREE PHASE INDUCTION MOTOR**

ROYCE CROSS GROUP

Type	YE2-315L2-8	Poles	8	Power	110.0	kW
Voltage	415 V	Current	202.2 A	Frequency	50.0	Hz
Speed	740 r/min	Duty	S1	Connection	Δ	
Ins. class	F	Weight	0 kg	Pro Class	IP55	

LOAD TEST

V	Hz	I1	I2	I3	mul.	W1	W2	mul.	r/min	Temperature °C	Torque N.m
415.1	50.00	2.755	2.760	2.787	100	517.6	1125.7	100	733.659	81.9	1967.7
415.0	50.00	2.490	2.495	2.520	100	466.5	1017.5	100	735.632	81.8	1780.4
415.1	50.00	2.032	2.035	2.055	100	371.5	828.7	100	738.957	81.7	1441.4
415.1	50.00	1.540	1.542	1.557	100	254.3	625.6	100	742.532	81.5	1058.8
415.0	49.99	2.248	2.253	2.273	50	248.8	888.8	50	745.607	81.3	675.6
415.1	50.00	1.651	1.657	1.672	50	19.1	590.0	50	748.771	80.8	347.6

Final Resistance of load: 0.00000 Ω ambient temperature 0.0 °C

LOAD %	P2 W	I A	P1 W	Pcu1s W	Ss %	Pcu2s W	Ps W	Pfe W	EFF %	P.F
150.0	165000	304.4	180937.1	4226.9	2.565	4469.0	4406.1	2485.3	91.11	0.827
125.0	137500	251.9	149414.2	2894.1	1.992	2868.8	3024.1	2500.6	92.02	0.825
100.0	110000	201.9	118658.5	1860.6	1.492	1705.3	1915.9	2520.7	92.71	0.817
75.0	82500	155.8	88750.9	1107.5	1.036	881.9	1067.8	2538.5	92.96	0.793
50.0	55000	116.6	59669.7	620.8	0.614	347.0	470.5	2554.3	92.14	0.712
25.0	27500	83.9	31213.5	320.9	0.175	49.7	116.6	2572.8	88.00	0.518

ROYCE CROSS GROUP

Manufacturing Date

Serial No

Test Date

Report Number

ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

ROYCE CROSS GROUP

Type	YE2-315L2-8	Poles	8	output Power	110.0	kW
Voltage	415 V	Current	202.2 A	Frequency	50.0	Hz
Speed	740 r/min	Duty	S1	Connection	Δ	
Ins. class	F	Weight	0 kg		IP55	

LOAD CURVE

