

# ROYCE CROSS GROUP

## ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

<b>NAMEPLATE DATA</b>			
YE2-100L2-8 <b>FRAME</b>	IEC TYPE	1.1 kW	690 r/min
8 <b>POLE</b>	3 <b>PHASE</b>	415 <b>VOLTS</b>	50 <b>Hz</b>
ROYCE CROSS GROUP <b>MANUFACTURER</b>	3.1 <b>AMPS</b>	IP55 <b>IP</b>	
	S1 <b>DUTY</b>	F <b>INS.CLASS</b>	Y <b>CONNECTION</b>

MAJOR CONTENTS	UNIT	TEST VALUE
STATOR RESISTANCE OF PHASE	OHM	6.046
NO LOAD CURRENT	AMP	2.332
NO LOAD INPUT	W	208.9
CORE LOSS(Pfe)	W	55.7
WINDAGE FRICTION LOSS(Pfw)	W	70.0
STATOR WINDING LOSS(Pcu1)	W	168.8
ROTOR WINDING LOSS(Pcu2)	W	86.1
STRAY LOAD LOSS(Ps)	W	24.4
FULL LOAD CURRENT	AMP	3.195
LOCKED ROTOR CURRENT	AMP	16.58
LOCKED ROTOR CURRENT/FULL LOAD CURRENT	P.U.	5.35
FULL LOAD TORQUE	N.m	15.01
LOCKED ROTOR TORQUE	N.m	33.89
LOCKED ROTOR TORQUE/FULL LOAD TORQUE	P.U.	2.23
PULL OUT TORQUE	N.m	42.30
PULL OUT TORQUE/FULL LOAD TORQUE	P.U.	2.78
INPUT @ FULL LOAD	kW	1.507
EFFICIENCY @ FULL LOAD	%	73.00
POWER FACTOR @ FULL LOAD		0.656
FULL LOAD SLIP	%	6.717
FULL LOAD SPEED	r/min	699.6
STATOR WINDING TEMPERATURE RISE	K	42
D.E. BEARINGS TEMPERATURE BY PT100	Deg. C	34.3
AMBIENT TEMPERATURE OF TESTING	Deg. C	5.8
NOISE	dB(A)	59
VIBRATION	mm/s	0.5

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

<b>ROYCE CROSS GROUP</b>  YE2-100L2-8 1.1 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	YE2-100L2-8	Poles	8	Power	1.1 kW
Voltage	415 V	Current	3.1 A	Frequency	50 Hz
Speed	690 r/min	Duty	S1	Connection	Y
Ins. class	F	Weight	0 kg		IP55

### NO LOAD TEST

VOL	mul.	HZ	I01	I02	I03	mul.	W1	W2	mul.	°C
484.7	1	50	3.230	3.248	3.228	1	-666.5	982.5	1	43.7
449.8	1	50	2.716	2.727	2.715	1	-515.9	767.7	1	43.6
415.7	1	50	2.336	2.342	2.337	1	-403.8	613.4	1	43.5
364.9	1	50	1.904	1.906	1.904	1	-279.9	445.6	1	43.5
307.7	1	50	1.521	1.523	1.520	1	-175.4	311.3	1	43.4
254.6	1	50	1.219	1.220	1.218	1	-103.4	216.5	1	43.4
206.4	1	50	0.978	0.977	0.974	1	-53.1	151.2	1	43.3
176.4	1	50	0.843	0.842	0.839	1	-28.9	118.3	1	43.3
147.8	1	50	0.736	0.735	0.733	1	-9.0	93.7	1	43.1
93.8	1	50	0.676	0.678	0.675	1	16.0	64.0	1	43.0

<b>ROYCE CROSS GROUP</b>	Manufacturing Date	Serial No
	Test Date	Report Number

# ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

## ROYCE CROSS GROUP

Type	YE2-100L2-8	Poles	8	Power	1.1	<b>kW</b>
Voltage	415 <b>V</b>	Current	3.1 <b>A</b>	Frequency	50.0	<b>Hz</b>
Speed	690 <b>r/min</b>	Duty	S1	Connection	Y	
Ins. class	F	Weight	0 <b>kg</b>		IP55	

### LOCKED ROTOR TEST

VOL	mul.	Ik1	Ik2	Ik3	mul.	W1	W2	mul.	Torque (kg. m)
416.0	1.0	3.479	3.049	3.457	5.0	252.7	1167.6	5	3.48
372.8	1.0	2.918	2.566	2.929	5.0	180.1	871.5	5	2.65
327.1	1.0	2.404	2.106	2.417	5.0	111.2	620.3	5	1.91
286.9	1.0	1.984	1.737	1.992	5.0	66.1	442.6	5	1.37
247.0	1.0	1.602	1.408	1.605	5.0	34.1	304.5	5	0.93
210.1	1.0	3.196	2.853	3.208	2.0	32.7	517.0	2	0.63
169.5	1.0	2.399	2.186	2.406	2.0	0.0	314.3	2	0.37
131.8	1.0	1.753	1.635	1.763	2.0	0.0	180.1	2	0.21
101.9	1.0	1.309	1.241	1.319	2.0	0.0	104.6	2	0.09

<b>ROYCE CROSS GROUP</b>	Manufacturing Date	Serial No
	Test Date	Report Number

# ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

## ROYCE CROSS GROUP

Type	YE2-100L2-8		Poles	8		Power	1.1 kW	
Voltage	415 V		Current	3.1 A		Frequency	50 Hz	
Speed	690 r/min		Duty	S1		Connection	Y	
Ins. class	F		Weight	0 kg			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	
13:00	414.9	3.167	3.176	3.172	1	199.3	1299.9	1	25.8	—	38.6	—	—	—	—	—	—	—	—	—	—	4.3
13:30	414.9	3.139	3.148	3.151	1	197.4	1287.9	1	28.9	—	44.8	—	—	—	—	—	—	—	—	—	—	4.6
14:00	415.0	3.144	3.155	3.157	1	202.2	1292.7	1	33.2	—	48.9	—	—	—	—	—	—	—	—	—	—	5.0
14:30	415.1	3.126	3.136	3.131	1	194.4	1283.0	1	34.0	—	50.4	—	—	—	—	—	—	—	—	—	—	5.6
15:00	415.0	3.125	3.136	3.132	1	195.2	1283.3	1	34.1	—	50.7	—	—	—	—	—	—	—	—	—	—	6.1
15:29	414.9	3.118	3.127	3.124	1	192.7	1278.8	1	34.3	—	50.9	—	—	—	—	—	—	—	—	—	—	5.7
最后三点平均值		3.128			A	1475.8		W	34.3	—	50.7	—	—	—	—	—	—	—	—	—	—	5.8

T1 T2: DE BEARING TEMPERATURE  
T3~T10: DE WINDING TEMPERATURE

T11: CORE TEMPERATRE  
T13: AMBIENT TEMPERATURE

T12: FRAME TEMPERATRE

#### WINDING RESISTANCE (HOT) AT END OF TEMPERATURE RISE TEST

TIME (S)	30	76	112	141	169	193	215	264
RESISTANCE	5.145	5.120	5.105	5.095	5.085	5.080	5.075	5.065

#### WINDING RESISTANCE (COLD)

Y	U1-U2	V1-V2	W1-W2	AVERAGE	MIN	AMBIENT TEM.
	4.3715	4.3715	4.3715	4.372	4.3715	3.6 °C

## ROYCE CROSS GROUP

Manu. Date

Serial No

Test Date

Report Number

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

**ROYCE CROSS GROUP**

Type	YE2-100L2-8	Poles	8	Power	1.1	<b>kW</b>
Voltage	415 V	Current	3.1 A	Frequency	50.0	<b>Hz</b>
Speed	690 r/min	Duty	S1	Connection	Y	
Ins. class	F	Weight	0 kg		IP55	

**LOAD TEST**

V	HZ	I1	I2	I3	mul.	W1	W2	mul.	r/min	Temperature °C	Torque N.m
415.1	50.00	3.610	3.619	3.616	1	338.7	1509.9	1	693.8	47.5	18.66
415.0	50.00	3.433	3.442	3.439	1	286.0	1424.6	1	696.6	47.5	17.22
415.1	50.00	3.134	3.144	3.139	1	185.2	1274.9	1	705.0	47.9	14.57
415.2	50.00	2.798	2.805	2.802	1	47.4	1087.9	1	714.2	48.0	10.97
415.2	50.00	2.541	2.548	2.542	1	-95.9	916.1	1	722.7	48.0	7.32
415.3	49.99	2.530	2.537	2.533	1	-104.5	907.1	1	723.1	48.0	7.11
415.1	50.00	2.405	2.411	2.407	1	-211.5	790.7	1	728.9	47.7	4.42

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	1650	4.182	2291.6	289.2	9.413	183.2	62.2	51.7	71.42	0.762
125.0	1375	3.678	1898.2	223.7	8.261	133.7	39.6	52.3	72.44	0.718
100.0	1100	3.195	1506.9	168.8	6.717	86.1	24.4	53.0	73.00	0.656
75.0	825	2.813	1146.0	130.8	5.204	49.9	13.4	53.7	71.99	0.567
50.0	550	2.540	814.6	106.7	3.910	25.5	5.9	54.4	67.52	0.446
25.0	275	2.365	504.0	92.5	2.771	9.9	1.7	54.9	54.56	0.296

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# ELECTRIC MOTOR TEST REPORT - THREE PHASE INDUCTION MOTOR

## ROYCE CROSS GROUP

Type	YE2-100L2-8	Poles	8	output Power	1.1	kW
Voltage	415 V	Current	3.1 A	Frequency	50.0	Hz
Speed	690 r/min	Duty	S1	Connection	Y	
Ins. class	F	Weight	0 kg		IP55	

### LOAD CURVE

