Dimensional Drawing

Dayton®

4M097BH	REV. -

MODEL	REF	CUSTOMER	HP	VOLTS	AMPS	HZ	RPM	ROTATION	CUSTOMER PN	DESCRIPTION / REMARKS
K55HXJYK-2337	E42250-2	DAYTON	1/4	208-230	1.5	60	1075	C.CW. LEAD END REV	4M097BH	SAB

#16 GRN/YEL GROUND LEAD TO BE 12±.250 BETWEEN CENTERS OF TERMS. TERM. TO FIT #10 SCREW.

AUTOMATIC THERMAL PROTECTOR

5.604

4.000

2.250

SEAM WELD

6 LEADS,#18,.031 THICK INSUL. TO EXTEND BEYOND MOTOR.
WHT =30.000 +2 -0, BLK =30.000 +2 -0,
BLU =30.000 +2 -0 ,RED =30.000 +2 -0,
BRN =30.000 +2 -0 ,BRN/WHT =30.000 +2 -0

.750±.062 SKINNED

(2).250 FLAG TYPE Q.C. TERMS.

ROTATION: CCW VIEWING LEAD END WITH ORG-ORG AND YEL-YEL. TO REV. ROTATION INTERCHANGE ORG. AND YEL LEADS.

ROTATION: C.CW.LEAD END REV

NAMEPLATE

WARNING LABEL TO BE ADJACENT TO REVERSING LEADS

9.652

4.000 ±.047

3.500

TOP

TOP

TOP

.453 .469

.500 +.000 -.001

8-32 NC-2A, 4 STUDS

WARNING LABEL

1.625

5.250

5.125 DIA B.C.

INCLUDE KIT FOR 2.5 HUB RING ASSEMBLY

MALE

FEMALE

CAP.

YEL YEL

AUX.

ORG ORG

BRN

BRN/WHT

M1 M2 M3

LACE LEADS TO WINDING

PROTECTOR

WHT

BLK

BLU

RED

DRAWING NO.	PAGE 1 of 1	REV. -
4M097BH		

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

Performance Data

Dayton®

4M097BH	REV. -

SHADED-POLE & PSC MOTOR PERFORMANCE

HP:	1/4
Poles:	4
Ambient (ºC):	40
Altitude (FASL):	1000
No. of Speeds:	3

HIGH SPEED

		208-230 / 120	208	230	277	460	100	200
Volts:		208-230	120	208	230	277	460	100	200
HZ:		60	60	60	60	60	60	50	50
Service Factor:		1							
Efficiency:	@ Rated Load			57.4	57.9				
Power Factor:	@ Rated Load			91.6	90.8				
Amps:	@ No Load								
	@ Rated Load			1.4	1.6				
	@ Locked Rotor								
RPM:	@ Rated Load			1075	1075				
Torques:	Breakdown			19.8	24.8				
Oz.Ft. / Lb.In.	Locked Rotor			5	6.7				
(Circle One)	Pull-Up			5.6	7				
	Rated Load			16.4	20				
	Service Factor			1	1				
Watts:	Rated Load			272	330				
Temperature Rise:	@ Rated Load								
Thermal Protector:	Trip Temp (ºC)			140~150	140~150				
Winding Material:	Start (Auxiliary)			Al	Al				
	Run (Main)			Al	Al				
Capacitor:	Run (MFD / Volts)	5.0 MFD 370V							
	No. of Run Capacitors	1							

MEDIUM-HIGH SPEED

HP:		1/4							
Volts:		208-230	120	208	230	277	460	100	200
HZ:		60	60	60	60	60	60	50	50
Efficiency:	@ Rated Load			55.2	56.5				
Power Factor:	@ Rated Load			91.1	91				
Amps:	@ No Load								
	@ Rated Load			1	1.1				
	@ Locked Rotor								
Torques:	Breakdown			12.8	16.1				
Oz.Ft. / Lb.In.	Locked Rotor			3	4				
(Circle One)	Pull-Up			3.2	4.6				
	Rated Load			10.5	13.2				
Watts:	Rated Load			181	223				
Temperature Rise:	@ Rated Load								

DRAWING NO.	PAGE 1	REV.
4M097BH		-

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

Performance Data

Dayton®

4M097BH	REV. -

SHADED-POLE & PSC MOTOR PERFORMANCE

MEDIUM-LOW SPEED

HP:		1/4							
Volts:	208-230		120	208	230	277	460	100	200
HZ:	60		60	60	60	60	60	50	50
Efficiency:	@ Rated Load								
Power Factor:	@ Rated Load								
Amps:	@ No Load								
	@ Rated Load								
Torques:	Breakdown								
Oz.Ft. / Lb.In.	Locked Rotor								
(Circle One)	Pull-Up								
	Rated Load								
Watts:	Rated Load								
Temperature Rise:	@ Rated Load								
Watts:	Rated Load								
Temperature Rise:	@ Rated Load								
Thermal Protector:	Trip Temp (ºC)								
Winding Material:	Start (Auxiliary)								
	Run (Main)								

LOW SPEED

HP:		1/4							
Volts:	208-230		120	208	230	277	460	100	200
HZ:	60		60	60	60	60	60	50	50
Efficiency:	@ Rated Load			52.6	54.1				
Power Factor:	@ Rated Load			90.8	90.6				
Amps:	@ No Load								
	@ Rated Load			0.7	0.8				
Torques:	Breakdown			8.9	11.3				
Oz.Ft. / Lb.In.	Locked Rotor			1.9	2.6				
(Circle One)	Pull-Up			2.1	2.8				
	Rated Load			7.1	9.1				
Watts:	Rated Load			129	161				
Temperature Rise:	@ Rated Load								

Notes:

DRAWING NO.	PAGE 1	REV.
4M097BH		-

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

Performance Data

Dayton®

4M097BH   REV. -

Dayton Manufacturing Company

Filtered

Motor Description

Model:	K55HXHXJYK-2337
Motor ID:	4M097BH
Poles:	6
Volts:	208-230
Frequency:	60
HP:	1/4
Speed:	1075
Phase:	1
Protector:	7AM036-A5

Test Conditions

Test Type:	Run	Run Cap:	5	
Test Number:	24	Start Cap:	0μfd	
Poles:	6	Environment:		
Volts:	230	Tested:	1/22/2016 2:31:20 PM	
Hz:	60	Tested By:	Liu, Bingmin	
Rotation:		Gear Ratio:	1:1	
Special Cond:		Bearing Friction:	-0.18 Oz-Ft	
Speed Conn:	LOW	Windage Torque:	-0.30 Oz-Ft	
TestBoard:	NMQC Plotter Fixture #1			

Special Points	Vline(V)	Vaux(V)	Vcap(V)	Iline(A)	Watts	RPM	Tq(Oz-ft)	HP	Eff(%)	PF(%)
	230.0	251.6	317.5	0.316	62.5	1181	0.000	0.000	0.0	0.0
	230.0	249.5	314.4	0.329	66.6	1176	0.473	0.007	7.1	0.0
	230.0	235.8	292.8	0.406	84.8	1162	2.739	0.038	33.1	0.0
	230.0	223.1	274.2	0.490	102.1	1147	4.464	0.061	45.1	0.0
	230.0	215.0	264.5	0.551	115.2	1133	5.639	0.076	49.4	0.0
	230.0	206.4	254.2	0.617	129.6	1118	6.892	0.092	52.8	0.0
	230.0	198.0	244.4	0.683	143.1	1102	7.897	0.104	54.0	0.0
	230.0	190.1	236.1	0.739	154.3	1085	8.739	0.113	54.6	0.0
1075 RPM	230.0	185.6	231.7	0.771	160.6	1075	9.104	0.117	54.1	0.0
	230.0	182.1	228.3	0.797	165.7	1067	9.473	0.120	54.2	0.0
	230.0	173.1	220.0	0.861	178.0	1046	10.079	0.125	52.6	0.0
	230.0	164.7	212.6	0.921	189.0	1024	10.641	0.130	51.2	0.0
	230.0	155.9	205.0	0.983	200.3	1001	11.017	0.131	48.9	0.0
	230.0	147.3	198.2	1.043	210.7	976	11.171	0.130	46.0	0.0
BDT OZ-FT	230.0	139.9	193.0	1.094	219.0	952	11.316	0.128	43.7	0.0
	230.0	139.1	192.4	1.099	219.9	949	11.315	0.128	43.4	0.0
	230.0	131.0	187.2	1.154	228.3	919	11.251	0.123	40.2	0.0
	230.0	123.0	182.8	1.206	236.2	886	11.096	0.117	37.0	0.0
	230.0	114.9	179.1	1.250	243.6	851	10.824	0.110	33.6	0.0
	230.0	107.4	176.2	1.299	250.0	812	10.434	0.101	30.1	0.0
	230.0	100.3	174.0	1.347	255.7	770	9.940	0.091	26.6	0.0
	230.0	93.4	172.6	1.389	260.6	725	9.380	0.081	23.2	0.0
	230.0	87.3	171.9	1.427	264.3	676	8.667	0.070	19.7	0.0
	230.0	81.2	171.6	1.462	267.7	624	7.986	0.059	16.5	0.0
	230.0	75.6	171.6	1.494	270.4	567	7.261	0.049	13.5	0.0
	230.0	70.2	172.2	1.521	272.4	506	6.535	0.039	10.8	0.0
	230.0	65.4	173.2	1.544	273.8	442	5.991	0.031	8.6	0.0
	230.0	61.6	175.2	1.560	274.4	373	5.465	0.024	6.6	0.0
	230.0	59.2	177.7	1.575	276.0	299	4.843	0.017	4.7	0.0
	230.0	57.4	180.2	1.590	277.5	220	4.488	0.012	3.2	0.0
	230.0	56.0	183.1	1.603	278.9	137	3.948	0.006	1.7	0.0
	230.0	54.9	186.7	1.610	279.9	49	3.200	0.002	0.5	0.0

DRAWING NO.	PAGE 1 of 6	REV.
	4M097BH	-

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

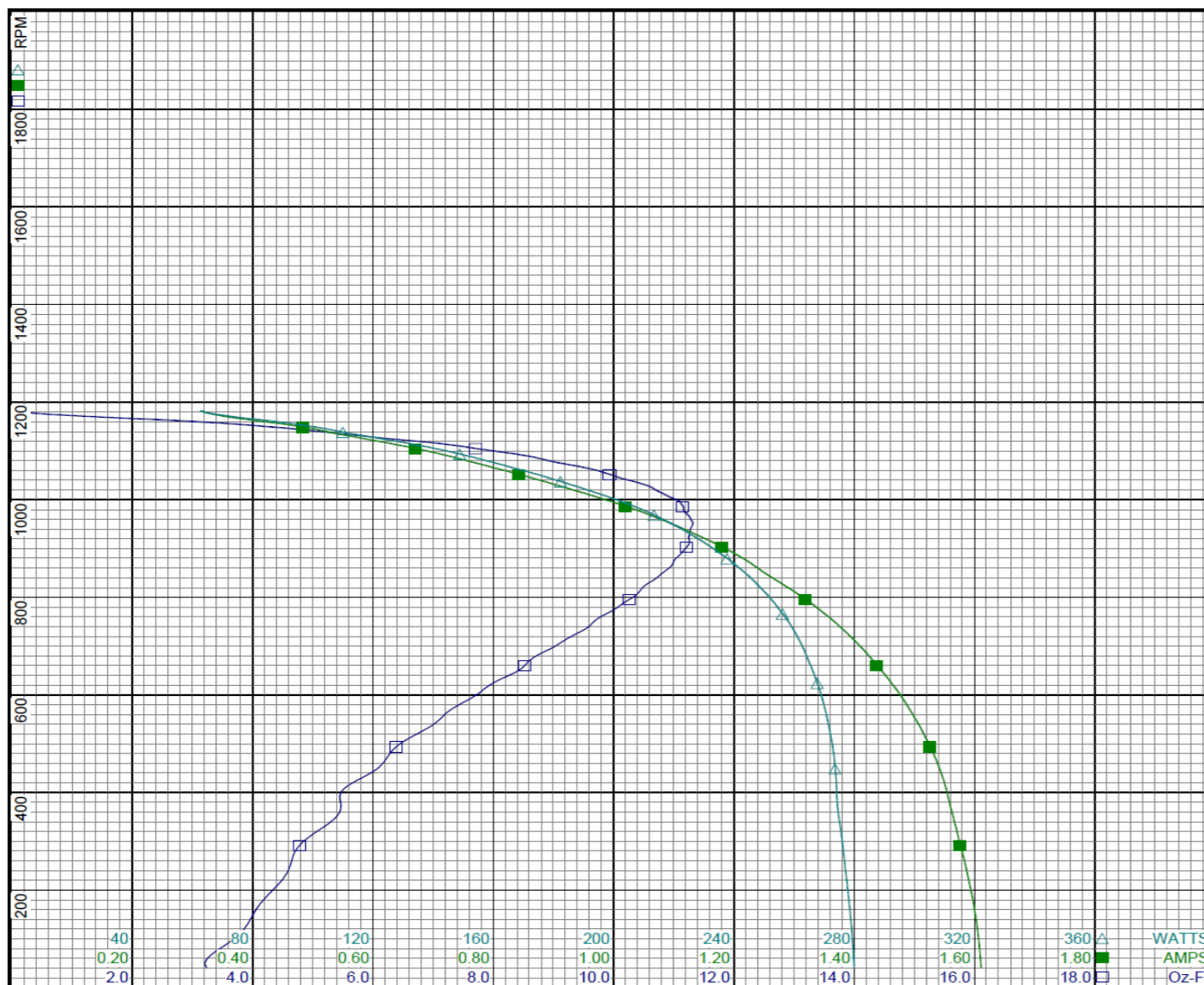# Performance Data

Dayton®

4M097BH	REV. -

Dayton®

Curve Descriptions:
Motor(1) Test 24 Run 230V 60 Hz 6P
LOW 5ufd Run Filtered Data
□ SPEED vs TORQUE
■ SPEED vs ILine
△ SPEED vs WATTS

Motor Ratings:
(1) K55HXHXJYK-2337 ID: 1 of 3
   4M097BH

40	80	120	160	200	240	280	320	360		WATTS
0.20	0.40	0.60	0.80	1.00	1.20	1.40	1.60	1.80		AMPS
2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0		Oz-Ft

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

Performance Data

Dayton®

4M097BH	REV. -	

Dayton Manufacturing Company

Filtered

Motor Description

					Test Conditions			

Motor Description		Test Conditions			
Model:	K55HXHXJYK-2337	Test Type:	Run	Run Cap:	5
Motor ID:	4M097BH	Test Number:	20	Start Cap:	0μfd
Poles:	∪	Poles:	6	Environment:	
Volts:	208-230	Volts:	230	Tested:	1/22/2016 2:44:20 PM
Frequency:	60	Hz:	60	Tested By:	Liu, Bingmin
HP:	1/4	Rotation:		Gear Ratio:	1:1
Speed:	1075	Special Cond:		Bearing Friction:	-0.14 Oz-Ft
Phase:	1	Speed Conn:	MED	Windage Torque:	-0.21 Oz-Ft
Protector:	7AM036-A5	TestBoard:	NMQC Plotter Fixture #1		

Special Points	Vline(V)	Vaux(V)	Vcap(V)	Iline(A)	Watts	RPM	Tq(Oz-ft)	HP	Eff(%)	PF(%)
	230.0	291.6	371.8	0.468	82.7	1187	0.000	0.000	0.0	0.0
	230.0	290.4	370.2	0.476	85.5	1181	0.422	0.006	5.0	0.0
	230.0	279.3	352.5	0.555	110.4	1167	3.456	0.048	31.9	0.0
	230.0	267.8	333.6	0.656	134.3	1153	5.988	0.082	46.3	0.0
	230.0	259.0	321.8	0.739	152.8	1138	7.733	0.105	51.3	0.0
	230.0	250.1	310.8	0.816	170.0	1123	9.216	0.123	54.1	0.0
	230.0	240.6	299.4	0.904	189.3	1108	10.792	0.142	56.1	0.0
	230.0	230.4	288.1	0.993	208.3	1091	12.268	0.159	57.1	0.0
1075 RPM	230.0	222.1	279.2	1.064	222.6	1075	13.164	0.168	56.5	0.0
	230.0	220.5	277.5	1.077	225.3	1072	13.352	0.170	56.4	0.0
	230.0	210.6	268.1	1.155	240.8	1053	14.238	0.178	55.3	0.0
	230.0	201.0	258.6	1.225	256.0	1032	15.017	0.185	53.8	0.0
	230.0	190.7	250.1	1.302	270.4	1010	15.495	0.186	51.4	0.0
	230.0	180.2	243.2	1.383	285.3	985	15.854	0.186	48.6	0.0
	230.0	169.6	235.5	1.465	299.8	958	16.069	0.183	45.6	0.0
BDT OZ-FT	230.0	166.6	233.3	1.488	303.8	950	16.106	0.182	44.7	0.0
	230.0	160.0	228.7	1.540	312.4	929	16.024	0.177	42.3	0.0
	230.0	150.5	222.9	1.612	323.8	897	15.867	0.169	39.0	0.0
	230.0	141.0	217.9	1.684	334.7	862	15.530	0.159	35.5	0.0
	230.0	131.7	213.8	1.750	344.4	824	14.971	0.147	31.8	0.0
	230.0	122.8	210.6	1.813	352.7	783	14.342	0.134	28.3	0.0
	230.0	114.9	208.3	1.871	360.3	739	13.633	0.120	24.8	0.0
	230.0	107.1	206.7	1.925	366.7	691	12.750	0.105	21.3	0.0
	230.0	99.5	205.8	1.972	371.6	639	11.856	0.090	18.1	0.0
	230.0	92.3	205.2	2.015	375.7	584	10.879	0.076	15.0	0.0
	230.0	85.7	205.4	2.053	379.1	525	9.874	0.062	12.1	0.0
	230.0	79.8	205.8	2.083	381.1	461	8.915	0.049	9.6	0.0
	230.0	75.0	207.6	2.110	383.2	393	8.032	0.038	7.3	0.0
	230.0	71.2	210.4	2.132	385.6	321	7.661	0.029	5.7	0.0
	230.0	68.7	213.7	2.151	387.9	244	6.739	0.020	3.8	0.0
	230.0	66.5	216.7	2.168	390.0	162	5.883	0.011	2.2	0.0
	230.0	64.9	220.1	2.180	391.5	75	5.571	0.005	0.9	0.0

DRAWING NO.	PAGE 3 of 6	REV.
	4M097BH	-

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

Performance Data

4M097BH	REV. -

Curve Descriptions:
Motor(1) Test 20 Run 230V 60 Hz 6P
MED 5ufd Run Filtered Data
□ SPEED vs TORQUE
■ SPEED vs ILine
△ SPEED vs WATTS

Motor Ratings:
(1) K55HXHXJYK-2337 ID: 1 of 3
4M097BH

									WATTS
40	80	120	160	200	240	280	320	360	AMPS
0.40	0.80	1.20	1.60	2.00	2.40	2.80	3.20	3.60	
2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	Oz-Ft
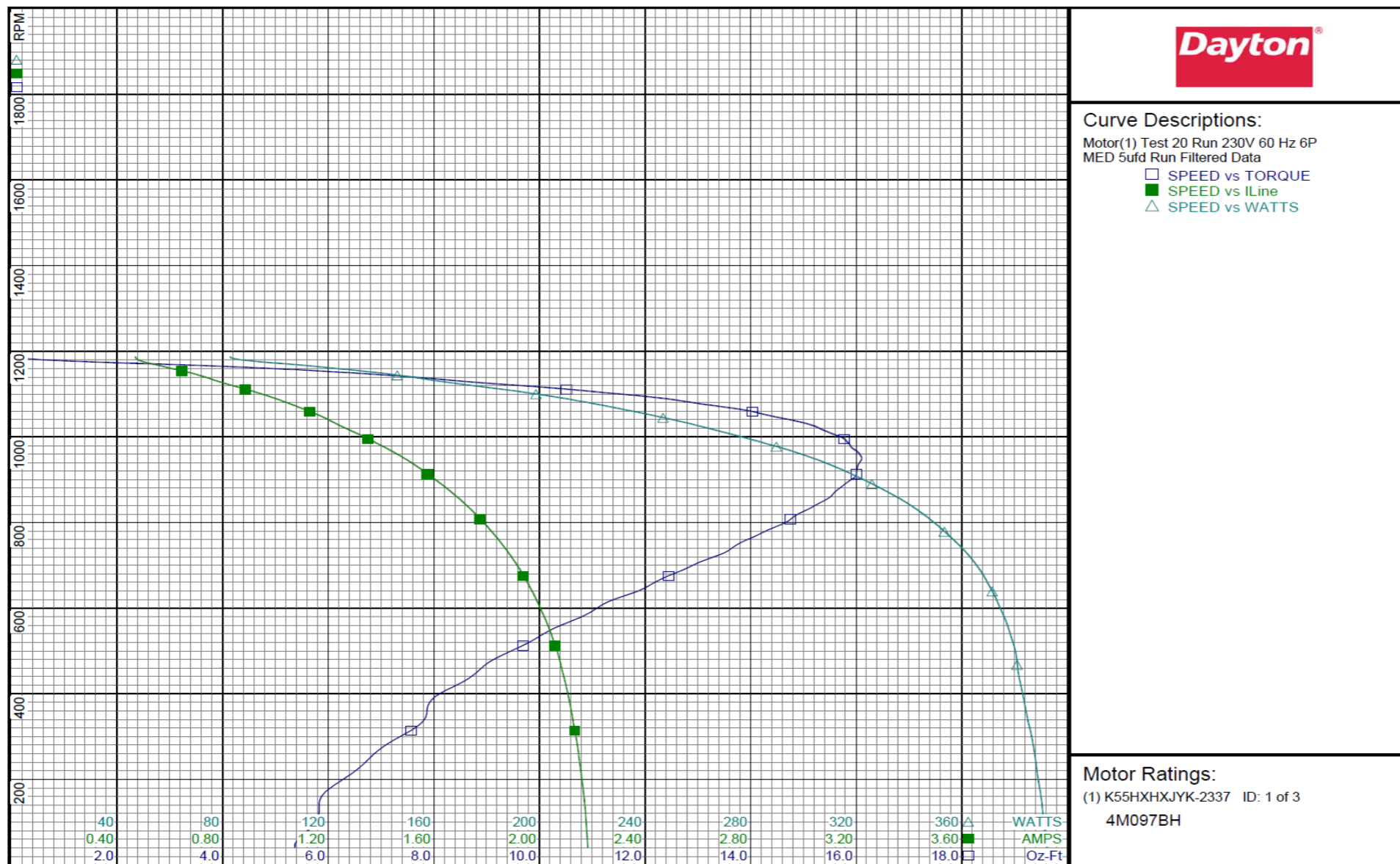
DRAWING NO.	PAGE 4 of 6	REV.
	4M097BH	-

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

Performance Data

Dayton®

4M097BH | REV. -

Filtered

Motor Description

Model:	K55HXHXJYK-2337
Motor ID:	4M097BH
Poles:	6
Volts:	208-230
Frequency:	60
HP:	1/4
Speed:	1075
Phase:	1
Protector:	7AM036-A5

Test Conditions

Test Type:	Run	Run Cap:	5
Test Number:	16	Start Cap:	0μfd
Poles:	6	Environment:	
Volts:	230	Tested:	1/22/2016 2:51:19 PM
Hz:	60	Tested By:	Liu, Bingmin
Rotation:		Gear Ratio:	1:1
Special Cond:		Bearing Friction:	-0.13 Oz-Ft
Speed Conn:	HI	Windage Torque:	-0.19 Oz-Ft
TestBoard:	NMQC Plotter Fixture #1		

Special Points	Vline(V)	Vaux(V)	Vcap(V)	Iline(A)	Watts	RPM	Tq(Oz-ft)	HP	Eff(%)	PF(%)
	230.0	337.7	443.9	0.896	124.0	1191	0.00	0.000	0.0	0.0
	230.0	337.0	443.3	0.896	126.6	1186	0.08	0.001	0.9	0.0
	230.0	331.3	432.5	0.928	153.8	1172	3.43	0.048	22.1	0.0
	230.0	323.3	417.2	1.018	189.4	1158	7.62	0.105	42.0	0.0
	230.0	316.9	407.0	1.111	215.4	1145	10.26	0.140	48.7	0.0
	230.0	309.0	396.1	1.191	241.3	1131	12.73	0.171	53.0	0.0
	230.0	297.4	380.6	1.317	272.4	1114	15.62	0.207	56.8	0.0
	230.0	287.1	368.1	1.443	299.6	1097	17.84	0.233	58.1	0.0
0.25 HP	230.0	277.5	357.8	1.542	321.7	1081	19.42	0.250	58.0	0.0
	230.0	276.9	357.1	1.548	323.1	1080	19.52	0.251	58.0	0.0
1075 RPM	230.0	274.0	354.0	1.579	329.8	1075	19.99	0.256	57.9	0.0
	230.0	266.3	345.4	1.661	347.8	1061	21.08	0.266	57.1	0.0
	230.0	254.9	333.9	1.777	371.6	1041	22.41	0.278	55.7	0.0
	230.0	243.0	322.8	1.894	395.3	1018	23.46	0.284	53.7	0.0
	230.0	230.0	311.3	2.018	419.5	994	24.27	0.287	51.1	0.0
	230.0	217.2	301.0	2.136	441.9	968	24.66	0.284	47.9	0.0
BDT OZ-FT	230.0	208.6	294.6	2.214	455.8	947	24.76	0.279	45.7	0.0
	230.0	204.9	292.1	2.247	461.4	938	24.72	0.276	44.6	0.0
	230.0	192.0	284.3	2.352	479.4	907	24.52	0.265	41.1	0.0
	230.0	179.6	280.6	2.450	498.0	873	23.84	0.248	37.1	0.0
	230.0	168.4	275.2	2.543	513.8	835	23.12	0.230	33.4	0.0
	230.0	157.8	270.4	2.641	527.7	795	22.28	0.211	29.8	0.0
	230.0	147.2	266.7	2.728	539.9	752	21.16	0.189	26.2	0.0
	230.0	137.0	263.9	2.808	550.4	705	19.85	0.167	22.6	0.0
	230.0	127.5	261.9	2.879	559.0	654	18.51	0.144	19.2	0.0
	230.0	118.8	260.6	2.945	566.6	600	17.10	0.122	16.1	0.0
	230.0	110.3	259.7	3.001	572.2	542	15.60	0.101	13.1	0.0
	230.0	102.3	259.6	3.049	576.4	480	14.22	0.081	10.5	0.0
	230.0	95.3	260.5	3.089	580.0	413	13.14	0.065	8.3	0.0
	230.0	90.2	262.7	3.118	582.9	342	12.15	0.049	6.3	0.0
	230.0	86.5	265.8	3.149	586.9	267	11.19	0.036	4.5	0.0
	230.0	83.0	269.3	3.175	590.8	186	9.82	0.022	2.7	0.0
	230.0	80.6	273.4	3.194	593.8	100	8.81	0.010	1.3	0.0

DRAWING NO.	PAGE 5 of 6	REV.
	4M097BH	-

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

Performance Data

Dayton®

4M097BH	REV. -
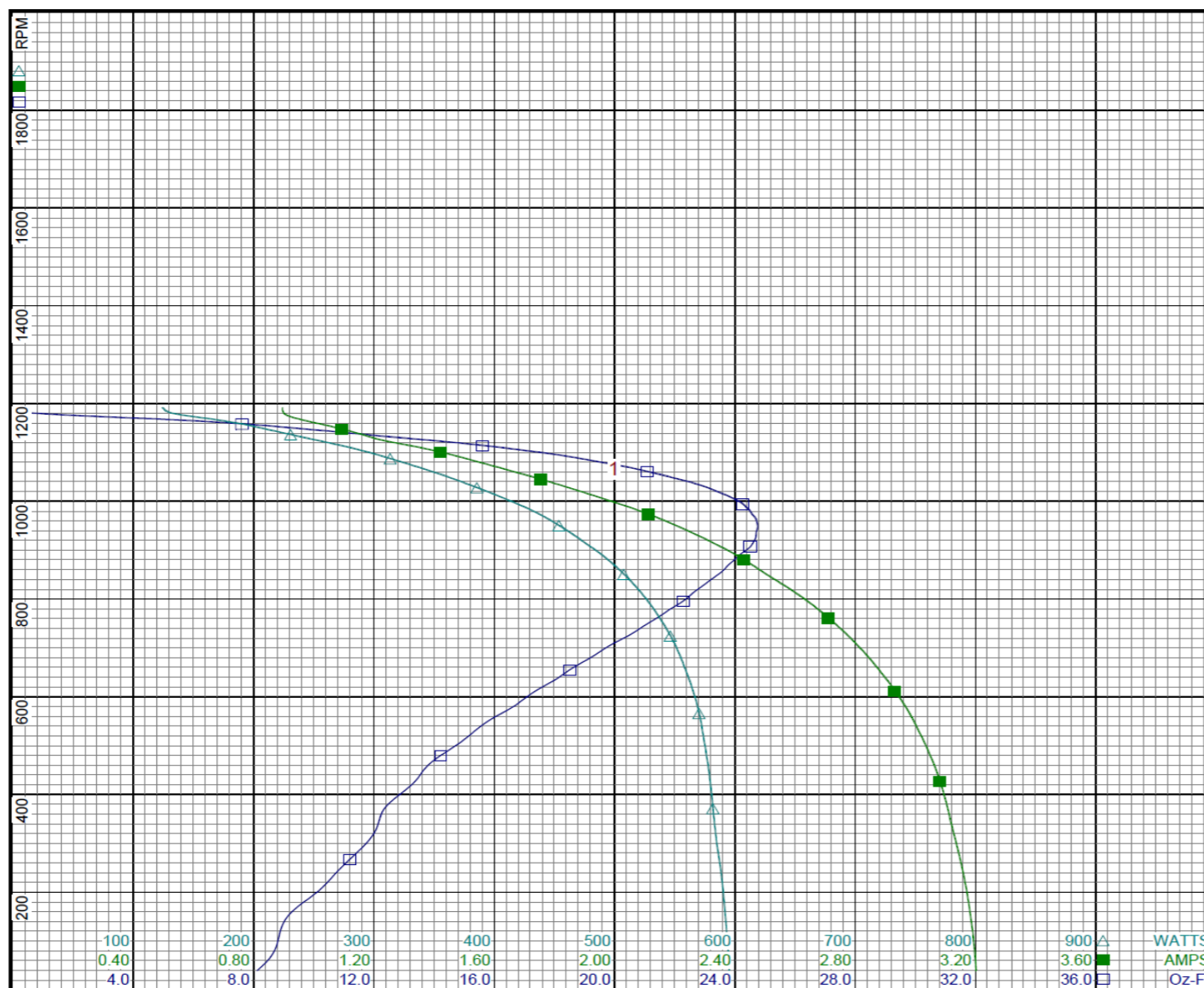
Curve Descriptions:

Motor(1) Test 16 Run 230V 60 Hz 6P
HI 5ufd Run Filtered Data

□ SPEED vs TORQUE
1 Special Point: SPEED = 1075 RPM
■ SPEED vs ILine
△ SPEED vs WATTS

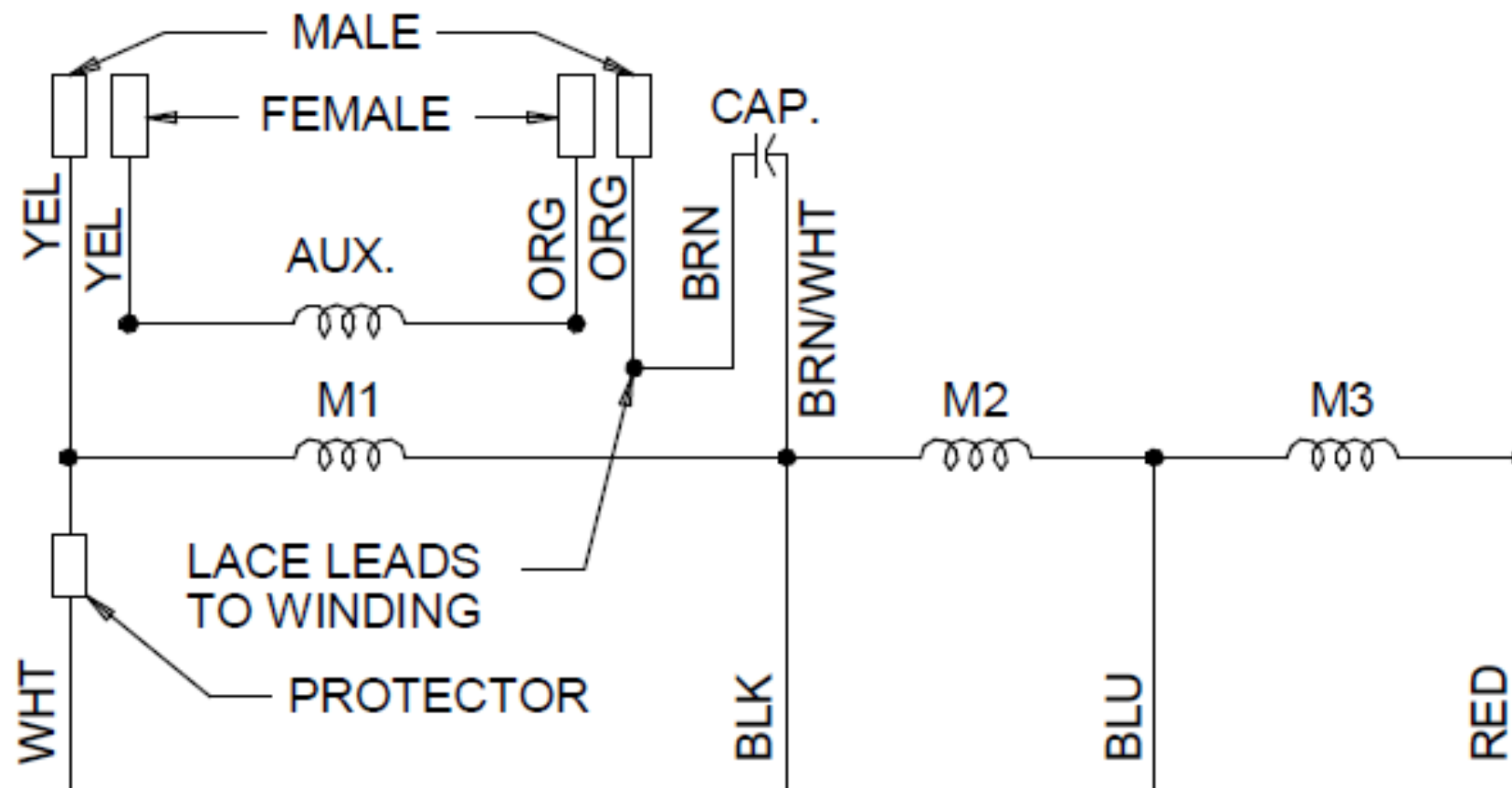**Motor Ratings:**

(1) K55HXHXJYK-2337 ID: 1 of 3

4M097BH

100	200	300	400	500	600	700	800	900 △	WATTS
0.40	0.80	1.20	1.60	2.00	2.40	2.80	3.20	3.60 ■	AMPS
4.0	8.0	12.0	16.0	20.0	24.0	28.0	32.0	36.0 □	Oz-Ft

DRAWING NO.	PAGE 6 of 6	REV.
	4M097BH	-

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

Wiring Diagram

Dayton®

4M097BH	REV. -

MALE

FEMALE

CAP.

YEL
YEL
AUX.
ORG
ORG
BRN
BRN/WHT

M1
M2
M3

LACE LEADS
TO WINDING

WHT

PROTECTOR

BLK

BLU

RED

ROTATION: CCW VIEWING LEAD END
WITH ORG-ORG AND YEL-YEL.
TO REV. ROTATION INTERCHANGE
ORG. AND YEL LEADS.

DRAWING NO.	PAGE 1 of 1	REV.
	4M097BH	-

Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA

Dayton®

DIRECT DRIVE BLOWER MOTOR

Part No
4M097BH

Disconnect Power Before Making Any Electrical Connections or Changes

HP: 1/4   **PH:** 1
VOLTS: 208-230   **HZ:** 60
AMPS: 1.5   **FR:** 48YZ
RPM: 1075 / 3SPD   **INS CL:** B
DUTY: CONT   **AMB:** 40 ℃
ENCL: OAO   **SF:** 1.0
THERMALLY PROTECTED: AUTO
MFG. NO. [ ]   PROT. CODE : 7A010   AVG.F.L
MTR REF: K55HXJYK-2337   EFF.

Ⓤ Ⓛ
E37403

CSA
258501

US PAT
7709992

TO REVERSE ROTATION
INTERCHANGE ORG AND YEL LEADS

WHT
208-230
VOLT LINE
BLK - HI
BLU - MED
RED - LO
YEL
ORG
ORG
YEL
BRN
BRN/WHT STRIPE
5.0 MFD 370V CAP.
MOTOR
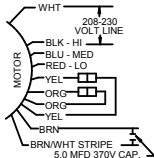
Mfd for Dayton Electric Mfg. Co., Lake Forest, IL 60045 USA   Made in China