

marathon™

Motors

SyMAX®

56 Permanent Magnet
AC Motors with Integrated
Electronic Control

SB701



A Regal Brand

REGAL

SyMAX-i®

56-Frame Permanent Magnet AC Motors With Integrated Electronic Control

The Next Generation of Power

PRIMARY APPLICATION

Condenser fan

OPTIONAL APPLICATIONS

(Please contact your Regal sales rep. for suitability)

- Commercial HVAC
- Fan & Blower direct and belt drive
- Commercial Refrigeration direct and belt drive fans

SPECIFICATIONS

- Radial Flux Technology
- Interior Permanent Magnet Rotor
- Heavy duty rolled steel construction
- UL and CSA recognition
- Class F Insulation
- Integrated terminal box
- IP54 Enclosure
- Up to 60-degrees C ambient
- 56 Frame full round (no base)
- 3-Phase Input Power
 - > 230v and 460v product options
 - > 50Hz or 60Hz

Options available for custom orders (>24-pcs)

- Program motor speeds to meet customer needs
- 56, 140, 180 Frame NEMA rigid base mountings
 - > Custom mounting options available
 - > Custom shaft extension options
- Shaft-End or Opposite Shaft-End control location
- Operating speed feedback signal
- IP55 Enclosure
- Discrete speed options (up to 9 speeds)
- Vertical Shaft-Down orientation
- Multiple I/O speed control options
- Program electronic control to run in constant torque mode

STANDARD MODELS FEATURES

- Multiple speed/HP operations
- Constant speed
- High efficiency over wide RPM range
- Vertical Shaft-up and Horizontal orientation
- Reliable ball bearings (6205 on both ends)
- Soft start with quiet operation
- Shaft-End control location
- Meets Class A EMI requirements
- Passive power factor correction (85-89% @ FL)
- 6000v transient capability
- Operating speed feedback signal
- Built-in intelligence and electronic protection
- ECM Toolbox™ compatible
- Drop-in for existing induction motors
- Accommodates smaller frame size, lighter weight
- 2 years warranty

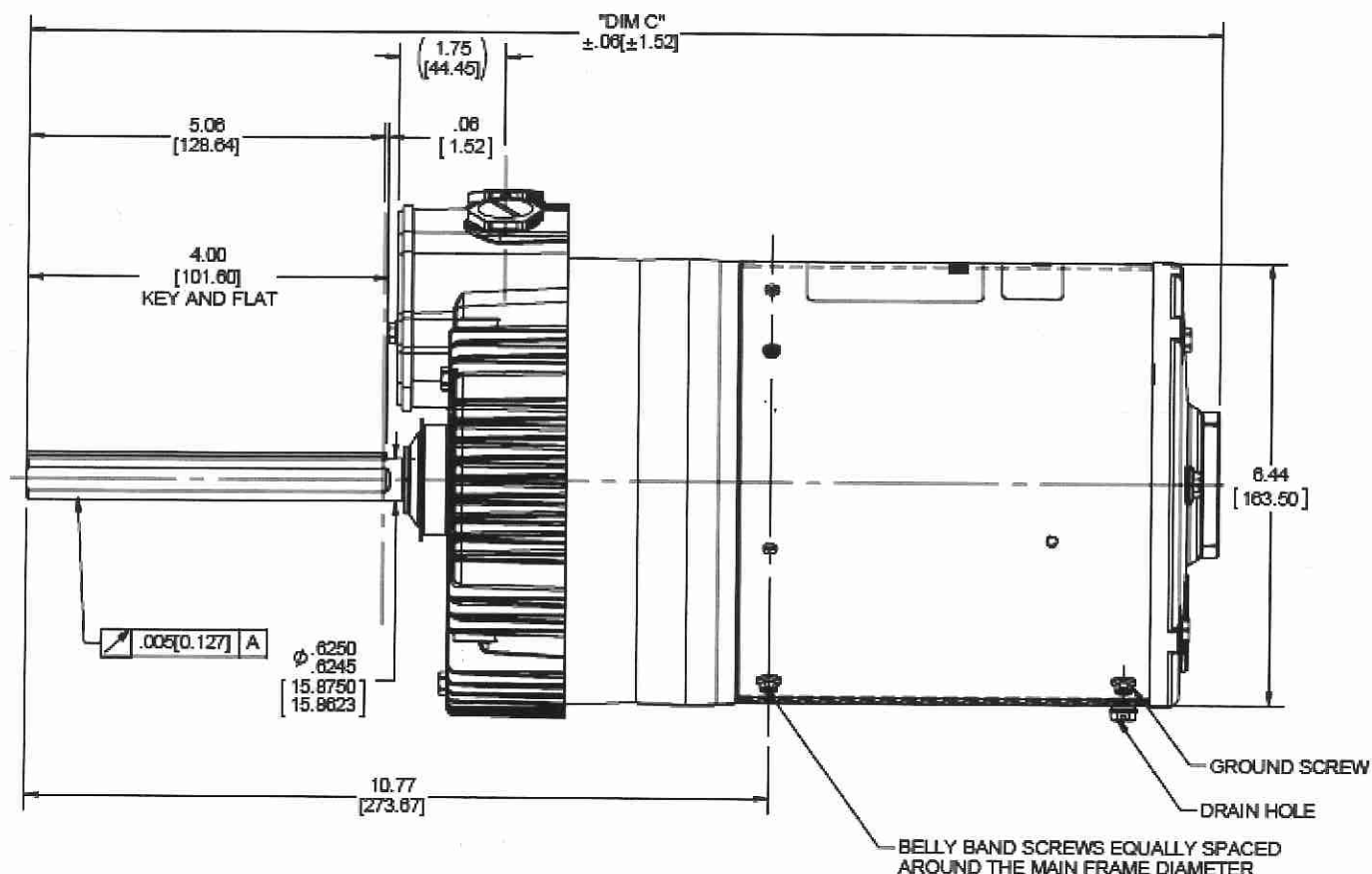
BENEFITS

- Suitable for indoor or outdoor environments, longer service life
- Noise reduction
- Controllability
- Application flexibility
- Easy installation
- Drop in replacement for 56-Frame induction motors
- Lower operation cost

SyMAX-i® Stock Models

HP	RPM	Voltage	Frame	CAT. NO.	MODEL NO.	List Price (\$)	MULT. SYMB.	F.L. EFFIC (%)	F.L. AMPS	Power Factor (%)	Weight (lbs)	"C" Dim. (in)
0.75	850	200-230	56 No Base	SI202	E56Y22T-FC2050	1650.00	PM1	82.2 - 81.9	2.4 - 2.2	77.7	25	16.02
1	1025							83.1 - 83.0	3.0 - 2.8	81.8		
1	1140							84.3 - 84.1	3.0 - 2.8	81.4		
0.75	850	460	56 No Base	SI402	E56Y42T-FC2050	1650.00	PM1	81.3	1	81	25	16.02
1	1025							83.7	1.3	84.1		
1	1140							84.9	1.3	84.3		
1	850	200-230	56 No Base	SI203	E56Y22T-FC2051	1800.00	PM1	84.6 - 84.3	3 - 2.8	78.9	30	16.52
1.33	1025							85.5 - 85.3	3.8 - 3.5	83.5		
1.5	1140							86.2 - 85.8	4.2 - 3.9	85		
1	850	460	56 No Base	SI403	E56Y42T-FC2051	1800.00	PM1	84.7	1.3	84	30	16.52
1.33	1025							87	1.6	88.9		
1.5	1140							87.6	1.9	88.9		
2	850	200-230	56 No Base	SI204	E56Y22T-FC2052	1900.00	PM1	84.8 - 84.5	5.5 - 5.0	89.3	38	17.77
2	1025							86.9 - 86.6	5.4 - 4.9	89		
2	1140							87.6 - 87.4	5.3 - 4.8	89.2		
2	850	460	56 No Base	SI404	E56Y42T-FC2052	1900.00	PM1	85.9	2.4	90.9	38	17.77
2	1025							87.6	2.3	91.4		
2	1140							87.8	2.3	91.3		

SyMAX-i® Outline for Stock Models

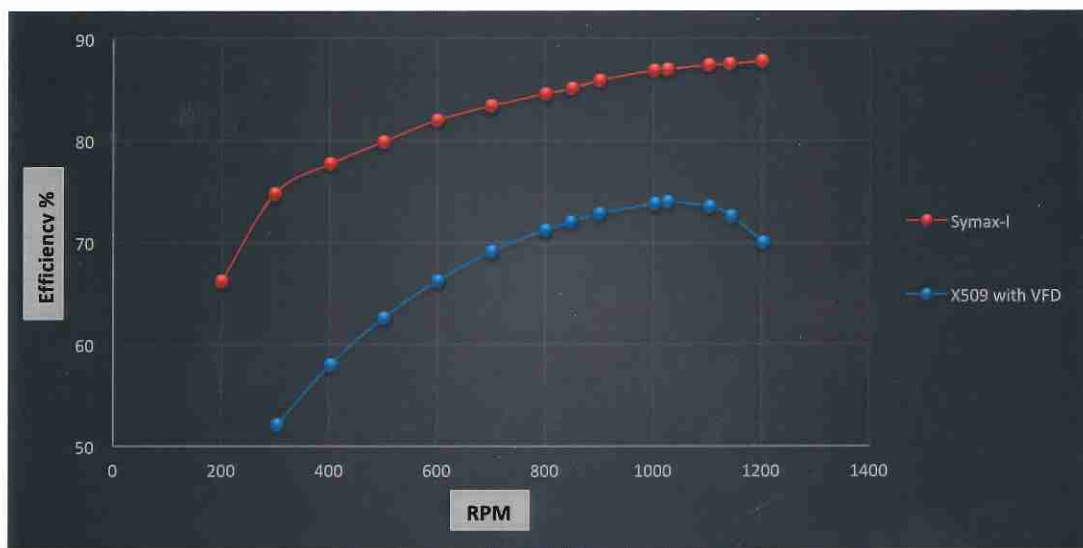


SyMAX-i® Model Number Nomenclature

1	2	3	4	5	6	7	8	9	10
E	56	Y	2	2	T	R	XXXX	P	A
Position	Example	Characteristic	Defined Values						
1	E	Agency Code	E = UL Recognized						
2	56	Frame Size	NEMA frame size designation						
3	Y	Electrical Type	Y = Interior Permanent Magnet						
4	2	Input Voltage	2 = 200-230, 230V 4 = 460V						
5	3	Input Voltage Phase	2 = Three Phase						
6	T	Enclosure Type	T = TEAO						
7	R	Mount Style	R = Special B = Base (56) H = Base (56H) T = Base (143T) Z = Base (180) C = C-Face F = Full Round D = 56C/ Base (56)						
8	XXXX	Serialized Number							
9	P	Revision							
10	A	Motor Type	A = Control OSE, VSU C = Control SE, VSU H = Control OSE, Horiz M = Control SE, Horiz D = Control OSE, VSD B = Control SE, VSD						

SyMAX-i® Performance Data

Typical motor
performance
Efficiency
vs Speed



2HP SyMAX-i vs Marathon X509 Induction motor with VFD

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