

# MAX+ AC Inverter-Duty Motors with Encoder

## Performance Data

Performance Data (460 Volt) – MAX+													
Part Number	HP	NEMA Design	F.L. RPM	Min. RPM	F.L. AMPS @460V	N.L. AMPS @460V	F.L. Torque (lb-ft)	B.D. Torque (lb-ft)	Max. CHP RPM*	Max. Safe RPM	F.L. Effic.	F.L. Power Factor	Rotor Inertia (lb-ft <sup>2</sup> )
Y280	1/2	A	1725	0	0.8	0.5	1.5	5.8	3510	5400	80.0	72.0	0.06
Y281	3/4	A	1725		1.2	0.8	2.3	10.2	3450		82.5	73.5	0.09
Y282	1	A	1725		1.5	1.0	3.0	15.0	3505		84.0	75.0	0.11
Y284	1-1/2	B	1755		2.4	1.6	4.5	29.0	3500		85.5	69.0	0.14
Y285	2	B	1750		3.0	1.7	6.0	28.5	3525		85.5	78.0	0.13
Y286A	3	B	1755		4.1	2.3	9.0	49.3	3510		87.5	78.5	0.42
Y287A	5	B	1760		6.7	3.2	14.9	61.5	3520		89.5	79.0	0.52

\* Maximum Constant HP RPM is for direct coupled loads.

## Dimensions (units = inches)

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

Figure 1 – Y280, Y281, Y282

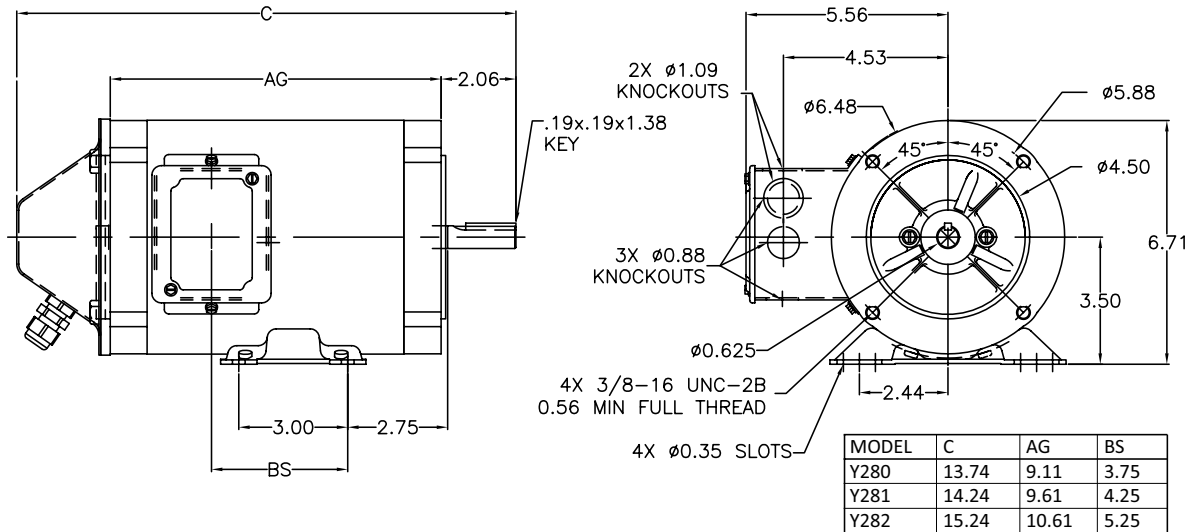
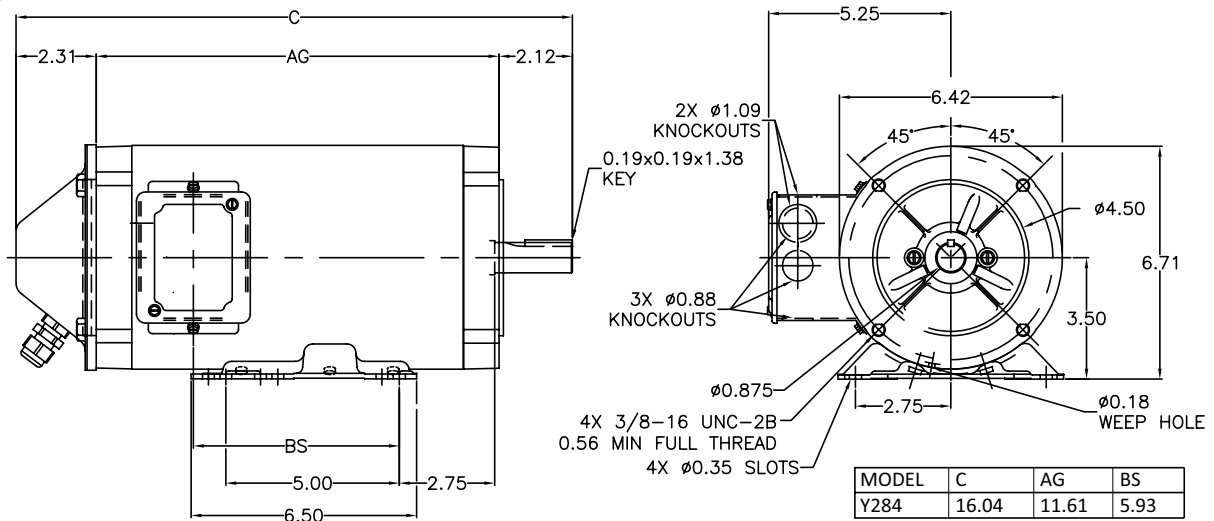


Figure 2 – Y284



# MAX+ AC Inverter-Duty Motors with Encoder

## Motors – Dimensions (units = inches)

See our website: [www.AutomationDirect.com](http://www.AutomationDirect.com) for complete engineering drawings.

Figure 3 – Y285

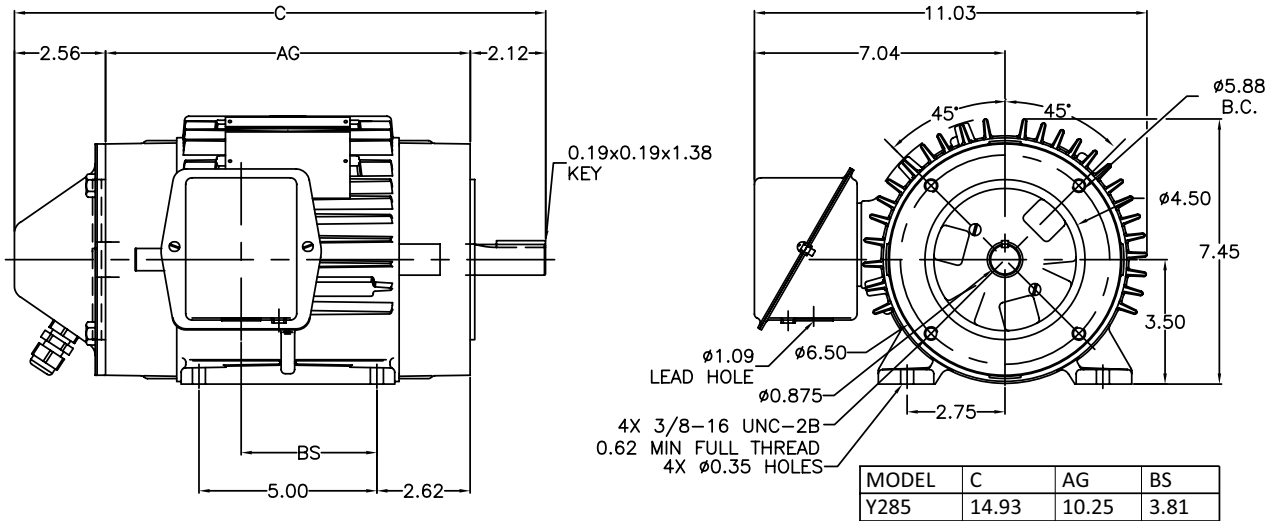
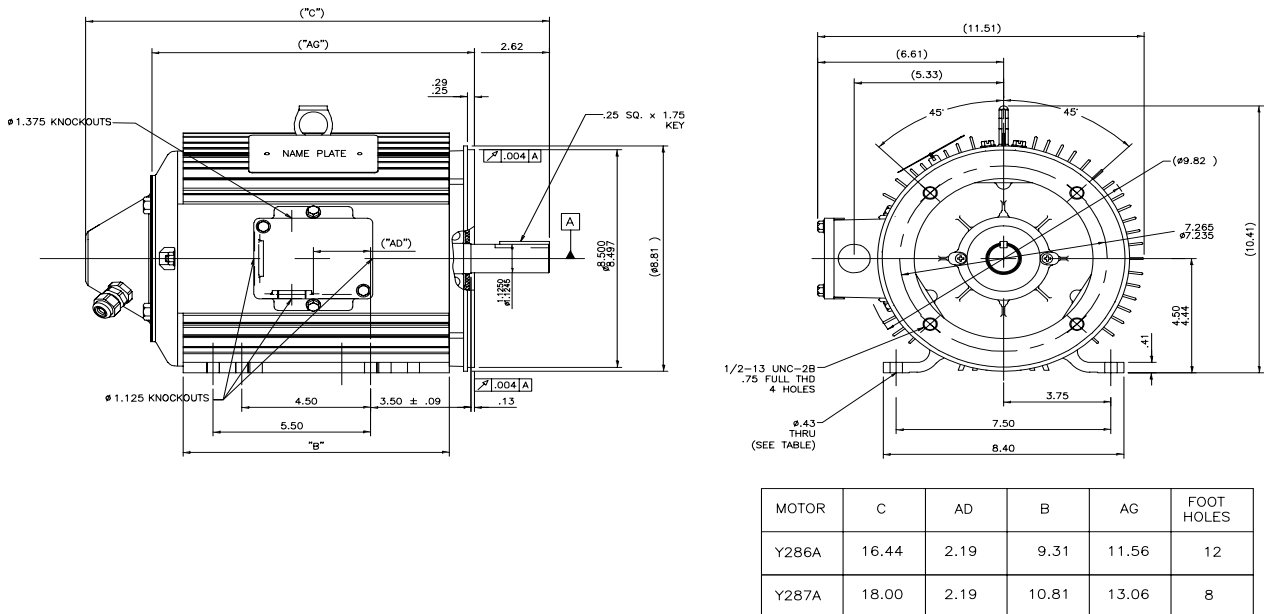


Figure 4 – Y286A, Y287A



# Black Max® Vector Duty Motors

## Motor Shipping Schedule

Same or one day	Up to 7 days	Up to 10 days
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**Color indicates shipping lead time in business days. Check stock status online.**

## 575V Motor Specifications

Part Number	Price	HP	Base RPM	Volts	Enclosure	NEMA Frame	Model No.	F.L. Amps	Weight (lb)	Footnotes
<b>Y555</b>	\$313.00	1/2	1800	575	TENV	56C	56H17T5311	0.64	28	T, S, 6, 13
<b>Y556</b>	\$378.00	1	1800	575	TENV	56C	56H17T5312	1.2	41	T, S, 6, 13
<b>Y557</b>	\$642.00	2	1800	575	TENV	145TC	145THTN6060	2.4	72	T, CI
<b>Y558A</b>	\$817.00	3	1800	575	TENV	182TC	182THTY7736	3.3	110	T, AL
<b>Y559A</b>	\$978.00	5	1800	575	TENV	184TC	184THTY7736	5.4	125	T, AL
<b>Y560</b>	\$1,244.00	7-1/2	1800	575	TENV	213TC	213HTL7736	8.4	146	T, AL
<b>Y561</b>	\$1,489.00	10	1800	575	TENV	215TC	215HTL7736	10.8	159	T, AL
<b>Y562</b>	\$1,797.00	15	1800	575	TENV	254TC	254HTL5736	16.0	250	T, AL, I
<b>Y563</b>	\$2,584.00	20	1800	575	TENV	256TC	256HTNA7036	20.8	300	T, CI, I

Footnotes:  
 6 Bolt-on, removable base for footless mounting option  
 13 F1 Mounting Only, cannot modify to F2  
 AL Aluminum Frame Construction

Footnotes (continued):  
 CI Cast Iron Frame Construction  
 I Intermittent duty from 90-120 Hz operation  
 S Steel Frame Construction

Footnotes (continued):  
 T Thermostat overload

**Note: Please review the AutomationDirect Terms & Conditions for warranty and service on this product. Warranty service can be arranged through numerous Marathon Electric service centers. See list of service centers on our Web site at [www.AutomationDirect.com](http://www.AutomationDirect.com).**

## Motor with Shaft-Mounted Encoder\*

A Dynapar Model HS35 shaft-mounted encoder can be supplied pre-installed on the motors as shown in the price table below. The encoder requires a 5–26 VDC power source, provides a count of 1024 pulses per revolution (PPR) differential line driver output, and includes a 10-pin mating connector.

\* If connecting the motor to a GS3 DURApulse AC drive, a GS3-FB Feedback Card is required for the drive.

## Motor Accessories

Part Number	Price	Description *
<b>A772</b>	\$765.00	Encoder kit, replacement, for Black Max encoder motors. Dynapar HS35 encoder, 5–26 VDC input, Line Driver output, 1024 pulses per revolution, 5/8-in bore.

\* Replacement/spare encoder kit for Black Max Yxxx-A772 motors; can also be field installed on Black Max Yxxx motors without encoders.

## Motor with Pre-installed Shaft-Mounted Encoder

230/460V Motors						575V Motors		
Part Number	Price	HP	Part Number	Price	HP	Part Number	Price	HP
<b>Y592-A772</b>	\$1,085.00	1/4	<b>Y544-A772</b>	\$2,239.00	5	<b>Y557-A772</b>	\$1,498.00	2
<b>Y534-A772</b>	\$1,163.00	1/2	<b>Y545-A772</b>	\$2,079.00	7-1/2	<b>Y558A-A772</b>	\$1,679.00	3
<b>Y535-A772</b>	\$1,208.00	1	<b>Y546-A772</b>	\$2,679.00	7-1/2	<b>Y559A-A772</b>	\$1,839.00	5
<b>Y536-A772</b>	\$1,235.00	1	<b>Y547-A772</b>	\$2,324.00	10	<b>Y560-A772</b>	\$2,079.00	7-1/2
<b>Y537-A772</b>	\$1,278.00	1	<b>Y548-A772</b>	\$2,967.00	10	<b>Y561-A772</b>	\$2,358.00	10
<b>Y538-A772</b>	\$1,299.00	1-1/2	<b>Y549-A772</b>	\$2,608.00	15	<b>Y562-A772</b>	\$2,605.00	15
<b>Y551-A772</b>	\$1,475.00	2	<b>Y552-A772</b>	\$3,419.00	20	<b>Y563-A772</b>	\$3,419.00	20
<b>Y540-A772</b>	\$1,776.00	2	<b>Y553-A772</b>	\$3,645.00	25			
<b>Y541A-A772</b>	\$1,679.00	3	<b>Y393-A772</b>	\$4,015.00	30			
<b>Y542-A772</b>	\$1,963.00	3	<b>Y555-A772</b>	\$1,165.00	1/2			
<b>Y543A-A772</b>	\$1,838.00	5	<b>Y556-A772</b>	\$1,208.00	1			

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# Blue Max<sup>®</sup> 2000 Vector Duty Motors

Blower Motor Performance Data (for TEBC Blower Cooled Motors)										
Blower Fits Motor Type				Blower Motor Characteristics						
Part Number	Model No.	NEMA Frame	Encl.	HP (60/50Hz)	RPM (60/50Hz)	Volts	Hz	F.L. Amps	Sound Pressure	Watts
<b>Y513</b>	324THFPA8038	324TC	TEBC	1 / 0.75	1735 / 1460	230/460 – 190/380	60 / 50	3.0 / 1.5	40	850
<b>Y513-A775</b>										850
<b>Y514</b>	326THFPA8038	326TC								851
<b>Y514-A775</b>										852
<b>Y515</b>	364THFS8046	364TC						853		
<b>Y515-A775</b>								854		
<b>Y516</b>	365THFS8046	365TC						3.7 / 1.85	68	855
<b>Y516-A775</b>										856
<b>Y517</b>	405THFS8046	405TC								857
<b>Y517-A775</b>										858

## Encoder shaft-mounted to motor\*

A Dynapar Model HS35/HSD38 shaft-mounted encoder can be supplied pre-installed on the selected motor, either TEFC or TEBC type, as shown in the table below. The encoder requires a 5–26 VDC power source\*\*, provides a count of 1024 pulses per revolution (PPR) differential line driver output, and includes a 10-pin connector. A mating connector is supplied with TEFC (totally enclosed fan cooled) motor encoders; the customer is responsible for supplying the wiring cable and determining the connections to the equipment being used in the application. The encoder adds 1 inch to the TEFC motor's "C" dimension as shown in the dimensional diagram.

The TEBC (totally enclosed blower cooled) motor encoders have the mating connector pre-wired, installed and ending in a pigtail located inside a conduit box mounted on the motor. (See Figure 2 under the motor dimensional information on the next page.) The customer is responsible for determining the connections to the equipment being used in their application.

\* **If connecting the motor to a DURApulse AC drive, a GS3-FB Feedback Card is required for the drive.**

\*\* **When used with a GS3-FB equipped DURApulse AC drive, the GS3-FB will supply power to the encoder.**

## Motor Shipping Schedule

<b>Same or one day *</b>	<b>Up to 7 days</b>	<b>Up to 10 days</b>
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*Color indicates shipping lead time in business days. Check stock status online.*

\* *Certain heavy and oversized items can be shipped only via LTL. Check our web site for current shipping method constraints by part number.*

## Motor Accessories

Part Number	Price	Description *
<b>A774</b>	\$747.00	Encoder kit, replacement, for Blue Max TEFC encoder motors. Dynapar HS35 encoder, 5–26 VDC input, Line Driver output, 1024 pulses per revolution, 1-in bore.
<b>A775</b>	\$747.00	Encoder kit, replacement, for Blue Max TEBC encoder motors. Dynapar HSD38 encoder, 5–26 VDC input, Line Driver output, 1024 pulses per revolution, 1-in bore.

\* **Replacement/spare encoder kit for Blue Max Y5xx-A774 and Y5xx-A775 motors; can also be field installed on Blue Max Y5xx motors; select appropriate encoder kit per motor fan type (TEFC or TEBC).**

## Motor with Pre-installed Shaft-Mounted Encoder

Part Number	Price	HP	Part Number	Price	HP
<b>Y571-A774</b>	\$4,628.00	40 (TEFC)	<b>Y574-A774</b>	\$7,572.00	75 (TEFC)
<b>Y513-A775</b>	\$5,539.00	40 (TEBC)	<b>Y516-A775</b>	\$8,648.00	75 (TEBC)
<b>Y572-A774</b>	\$5,445.00	50 (TEFC)	<b>Y575-A774</b>	\$10,097.00	100 (TEFC)
<b>Y514-A775</b>	\$6,211.00	50 (TEBC)	<b>Y517-A775</b>	\$11,693.00	100 (TEBC)
<b>Y573-A774</b>	\$6,779.00	60 (TEFC)			
<b>Y515-A775</b>	\$7,389.00	60 (TEBC)			

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## Encoder Connector Pinout

**Note: A mating connector is supplied loose for the customer's wiring on encoder equipped TEFC motors and a mating connector pre-wired to a cable and pigtailed in a conduit box on encoder equipped TEBC motors.**

**Prewired cables TRDA-25CBL-VWD-xx (10, 20, & 30 ft) and replacement MS connectors TRDA-25CON-VWD are available from AutomationDirect.**

Dynapar HS35/HSD38 Encoder

