marathon®

Vertical Pump Motors

Model No: 445TTDN16101
Catalog No: M748

Vertical Pump Motor, 100 HP, 3 Ph, 60 Hz, 460 V, 900 RPM, 445HPV Frame, DP

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Product Information Packet: Model No: 445TTDN16101, Catalog No: M748 Vertical Pump Motor, 100 HP, 3 Ph, 60 Hz, 460 V, 900 RPM, 445HPV Frame, DP

Nameplate Specifications

Phase	**3**	Output HP	**100 Hp**
Output KW	**75.0 kW**	Voltage	**460 V**
Speed	**890 r/min**	Synchronous RPM	**900 r/min**
Service Factor	**1.15**	Frame	**445HPV**
Enclosure	**Drip Proof**	Thermal Protection	**No Protection**
Efficiency	**94.1 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**135.0 A**
Power Factor	**72**	Duty	**Continuous**
Insulation Class	**F**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6318**
Opp Drive End Bearing Size	**7316**	UL	**Recognized**
CSA	**Y**	CE	**Y**
IP Code	**22**	Number of Speeds	**1**

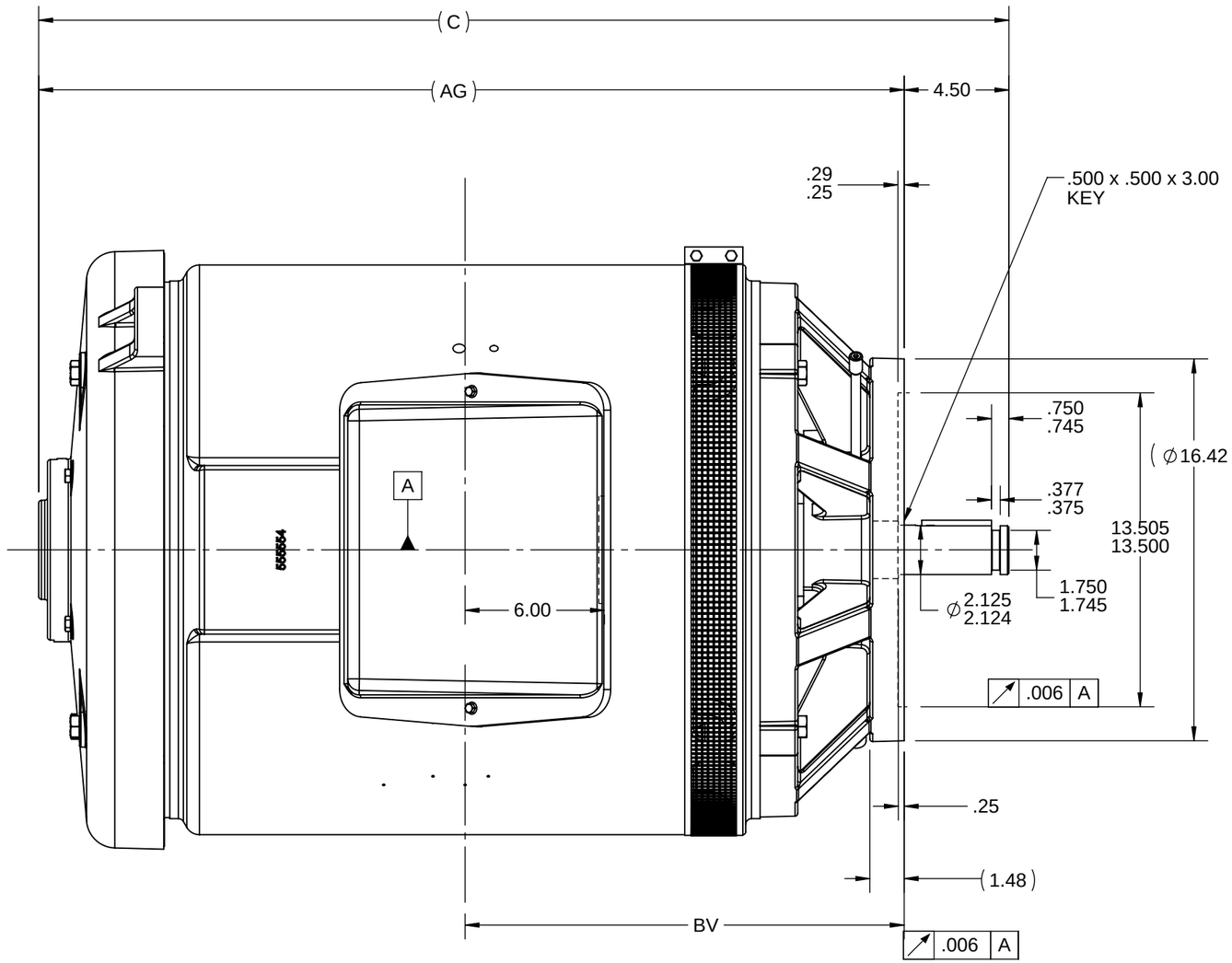
Technical Specifications

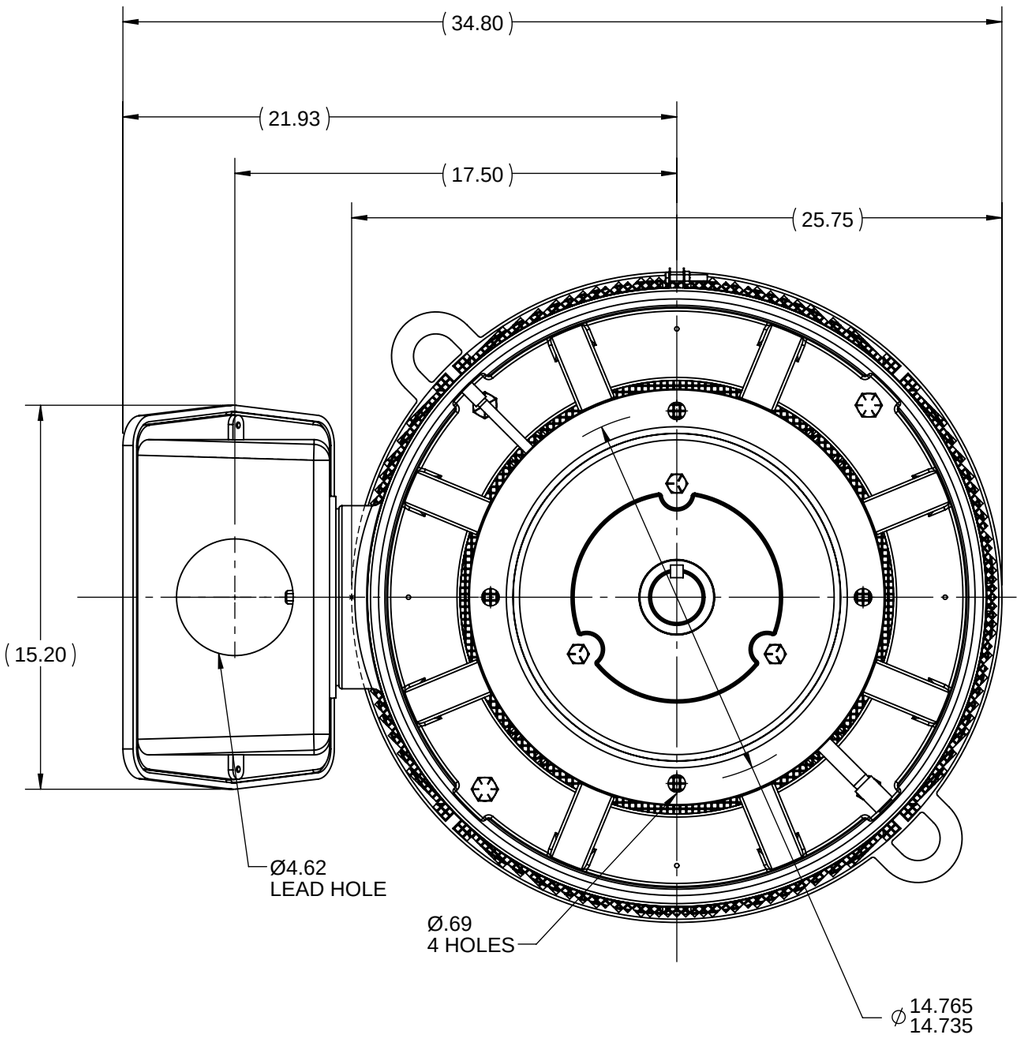
Electrical Type	**Squirrel Cage Induction Run**	Starting Method	**Across The Line**
Poles	**8**	Rotation	**Reversible**
Resistance Main	**.045 O**	Mounting	**Round**
Motor Orientation	**Shaft Down**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Duplex Tandem Angular Contact**	Frame Material	**Cast Iron**
Shaft Type	**HP**	Overall Length	**41.72 in**
Frame Length	**25.38 in**	Shaft Diameter	**2 1/8 in**
Shaft Extension	**4.5 in**	Assembly/Box Mounting	**F1/F2 Capable**

Drawings

Connection Drawing	**A-EE7300U**	Outline Drawing	**B-SS555833-2538**

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NOTES:
1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS
2. NAMEPLATES TO BE READ FROM SHAFT EXTENSION END OF MOTOR

DASH	FRAME	C	AG	BV
2538	444/5PV	41.72	37.22	18.88

DRAWING REVISION: D	REVISION BY: SV	REV DATE/© DATE: 05/22/2026
REQUEST NUMBER: CR-0026372	APPROVED BY: RMS	DATE: 05/22/2026
REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED		

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TOLERANCES (EXCEPT AS NOTED):

DEC.	INCH	mm	ANGLE
.X	±0.1	[±3]	±0.5°
.XX	±0.01	[±0.3]	
.XXX	±0.005	[±0.13]	
.XXXX	±0.0005	[±0.013]	

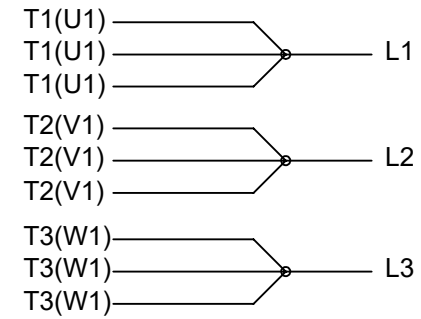
REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.08/.38] X 45°
CORNER FILLETS: R.02 [.5]
MACHINED SURFACES: 125/ 3.2/ INCH mm
mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY

DRAWN BY: TJW	
DATE: 07-16-2013	
APPROVED BY: DJK	
DATE: 07-19-2013	
REFERENCE	MATERIAL / PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE: B / DRAWING NUMBER: SS555833 / SHEET: 1 OF 1

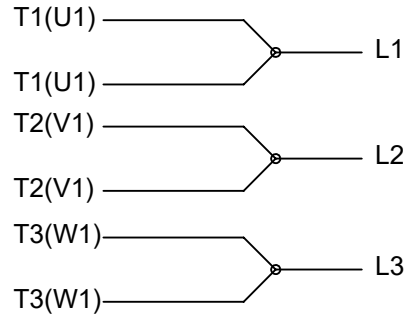
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DESCRIPTION: OUTLINE
444/5PV FR. -DR.PR. -P'BASE

IF MOTOR HAS 9 LEADS

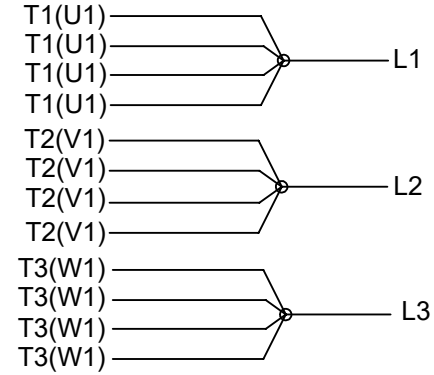


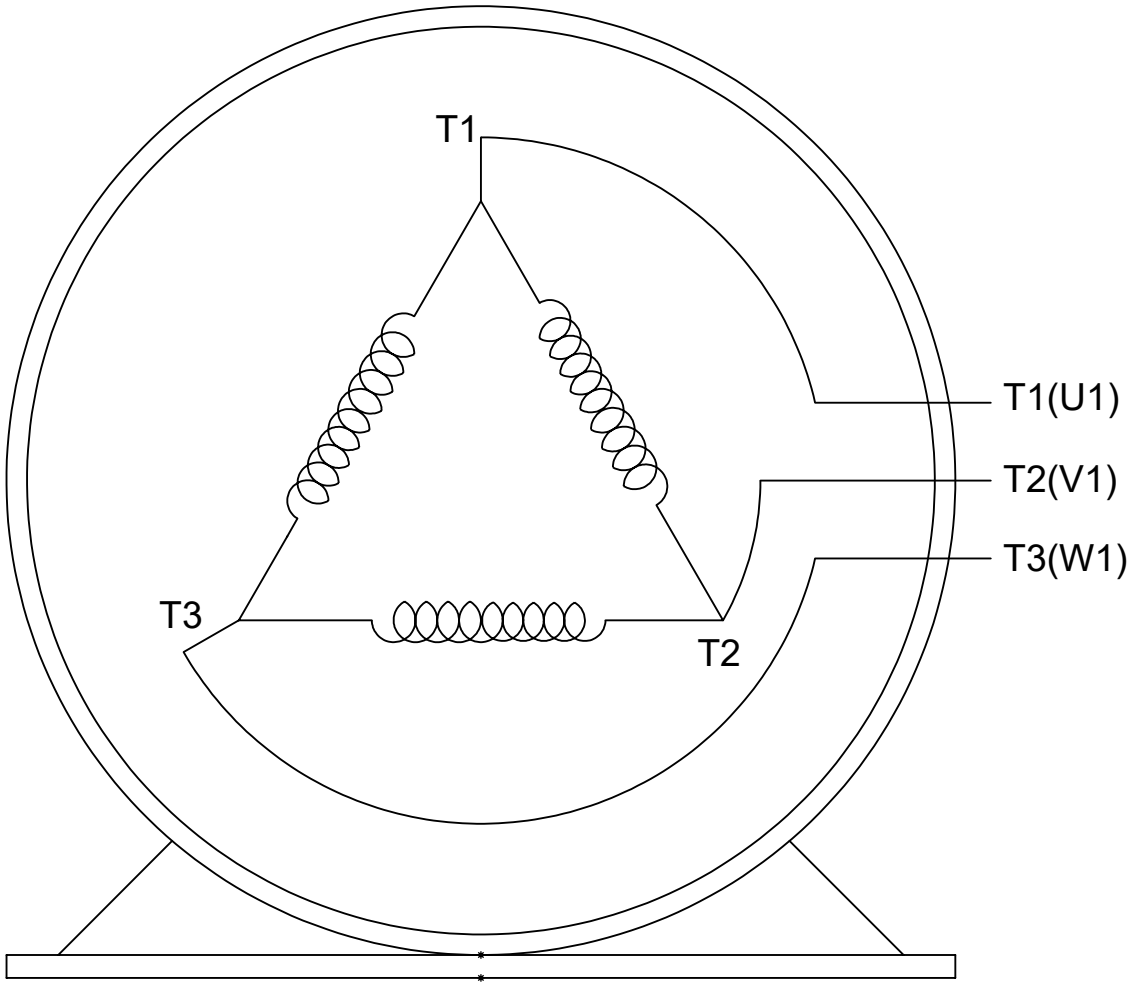
IF MOTOR HAS 6 LEADS



A-9806 DECAL IF CALLED FOR

IF MOTOR HAS 12 LEADS





VIEW OF TERMINAL END

DRAWING REVISION	REVISION BY	REV DATE/© DATE
M	SB	08/01/2025
REQUEST NUMBER	APPROVED BY	DATE
CR-0023654	SBD	08/01/2025

REQUEST NUMBER DESCRIPTION
DRAWING TITLE BLOCK UPDATED

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PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY	DRS
DATE	09-27-1996
APPROVED BY	GK
DATE	09-30-1996
REFERENCE	
THIRD ANGLE PROJECTION	

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DESCRIPTION
CONN DIAGRAM-EXTERNAL
3Ø SINGLE VOLTAGE

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
A	EE7300U	1 OF 1

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Data Sheet

Date: 6/29/2017
Customer:
Attention:
Submitted by: FAREEDA DUDEKULA

marathon electric

445TTDN16101

Submittal

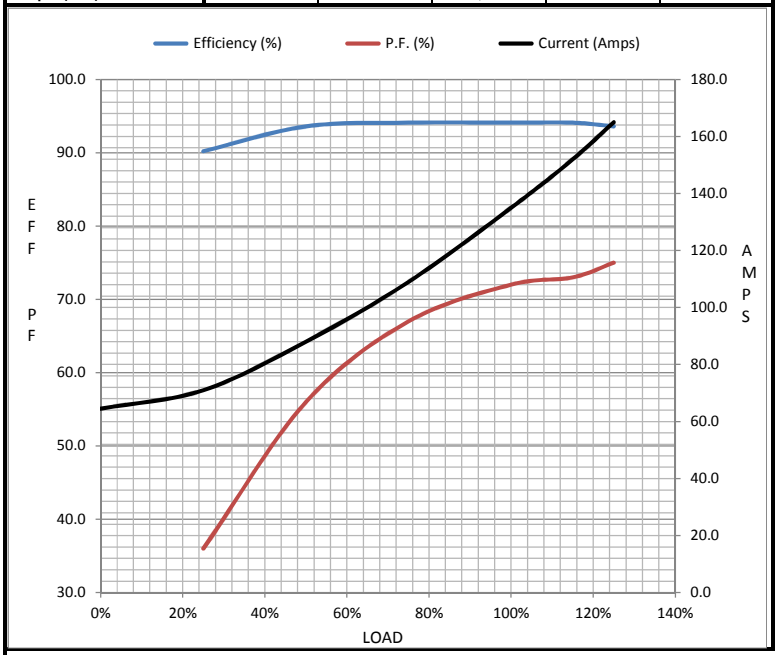
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	64.5	71.0	88.0	109	135	152	165	725	
Torque (ft-lb)	0.00	146	293	441	590	665	738	745	
RPM	900	898	895	892	890	888	886	0	
Efficiency (%)		90.2	93.6	94.1	94.1	94.1	93.6		
P.F. (%)	3.0	36.0	56.0	67.0	72.0	73.0	75.0	24.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	450	855	890	900
Current (Amps)	725	650	425	135	64.5
Torque (ft-lb)	745	725	1,350	590	0.00

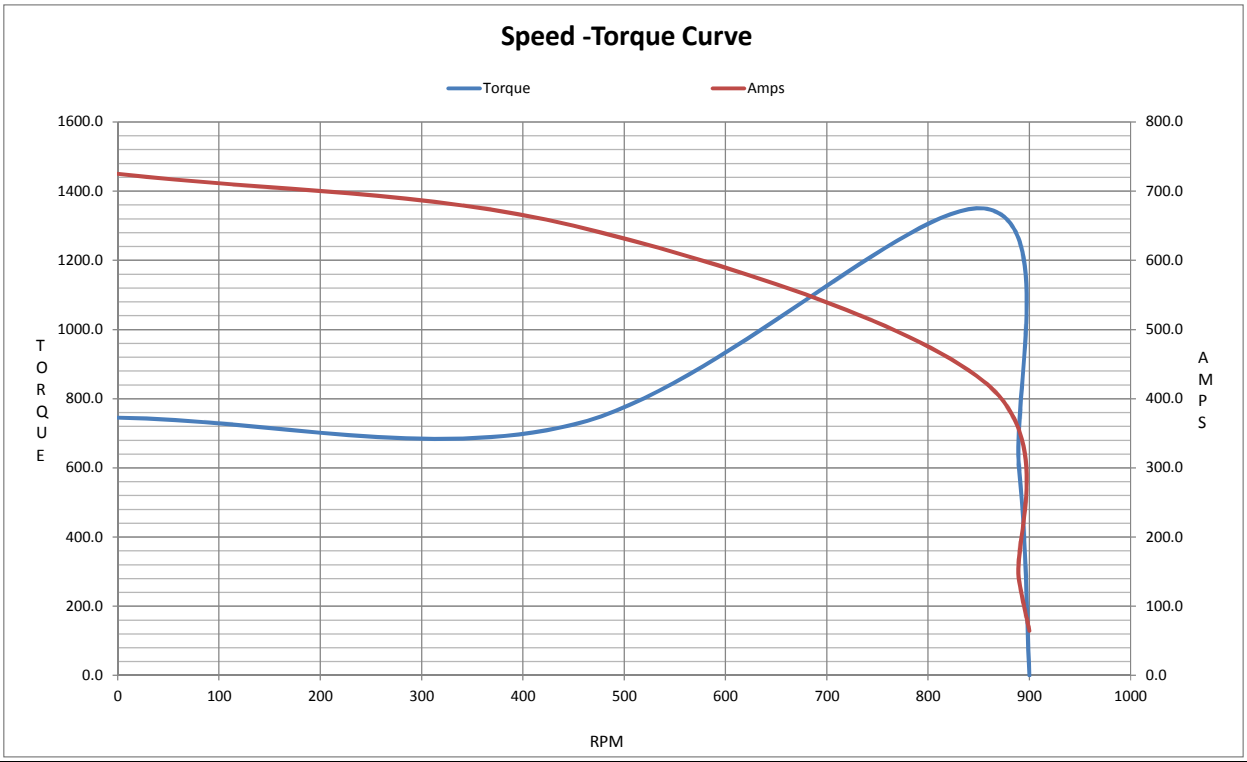


Information Block

HP	100.0
Sync. RPM	900
Frame	445
Enclosure	DP
Construction	TDN
Voltage	460 V
Frequency	60 Hz
Design	B
LR Code letter	G
Service Factor	1.15
Temp Rise @ FL	50 ° C
Duty	CONT
Ambient	40 ° C
Elevation	1,000 feet
Rotor/Shaft wk²	80.0 Lb-Ft²
Ref Wdg	T445861 NONE
Sound Pressure @ 1M	999 dBA
VFD Rating	NONE
Outline Dwg	B-SS555833-2538
Conn. Diag	A-EE7300U
Additional Specifications:	
0	
0	

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.0310	0.0210	0.2950	0.3690	3.9900



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CERTIFICATION DATA SHEET

Model#: 445TTDN16101 AA
WINDING#: T445861 NONE 1
CONN. DIAGRAM: A-EE7300U
ASSEMBLY: F1/F2 CAPABLE
OUTLINE: B-SS555833-2538

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
100	75	900	890	445HPV	DP	G	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60	460	135	ACROSS THE LINE	CONTINUOUS	F1	1.15	40	3300

FULL LOAD EFF: 94.1	3/4 LOAD EFF: 94.1	1/2 LOAD EFF: 93.6	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 72	3/4 LOAD PF: 67	1/2 LOAD PF: 56	93.6	SQ CAGE IND RUN	64.5

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
590 LB-FT	725	745 LB-FT 125	1350 LB-FT 225	50

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
- dBA	- dBA	80 LB-FT^2	- LB-FT^2	20 SEC.	-	- LBS.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
P-BASE	STANDARD	ROUND	SHAFT DOWN	FALSE	NONE	TRUE	RODENT	BLUE (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL	DUPLEX TANDEM ANGULAR CONTACT	POLYREX EM	HP	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6318	7316 2						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE /n HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
NONE	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: NONE
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE NONE
NONE NONE PPR

BRAKE: NONE NONE
NONE P/N NONE
NONE NONE
NONE FT-LB NONE V NONE Hz

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