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Severe Duty Motors

Model No: 256THFCD9001
Catalog No: W551A

Severe Duty Motor, 20 HP, 3 Ph, 60 Hz, 460 V, 3600 RPM, 256T Frame, TEFC

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Product Information Packet: Model No: 256THFCD9001, Catalog No: W551A Severe Duty Motor, 20 HP, 3 Ph, 60 Hz, 460 V, 3600 RPM, 256T Frame, TEFC

Nameplate Specifications

Phase	**3**	Output HP	**20 Hp**
Output KW	**14.9 kW**	Voltage	**460 V**
Speed	**3540 r/min**	Synchronous RPM	**3600 r/min**
Service Factor	**1.15**	Frame	**256T**
Enclosure	**Totally Enclosed Fan Cooled**	Thermal Protection	**No Protection**
Efficiency	**91 %**	Ambient Temperature	**40 °C**
Frequency	**60 Hz**	Current	**23.5 A**
Power Factor	**88**	Duty	**Continuous**
Insulation Class	**H**	Design Code	**B**
KVA Code	**G**	Drive End Bearing Size	**6309**
Opp Drive End Bearing Size	**6209**	UL	**Listed**
CSA	**Y**	CE	**Y**
IP Code	**56**	Number of Speeds	**1**
Hazardous Location	**DIVISION 2 T2B**		

Technical Specifications

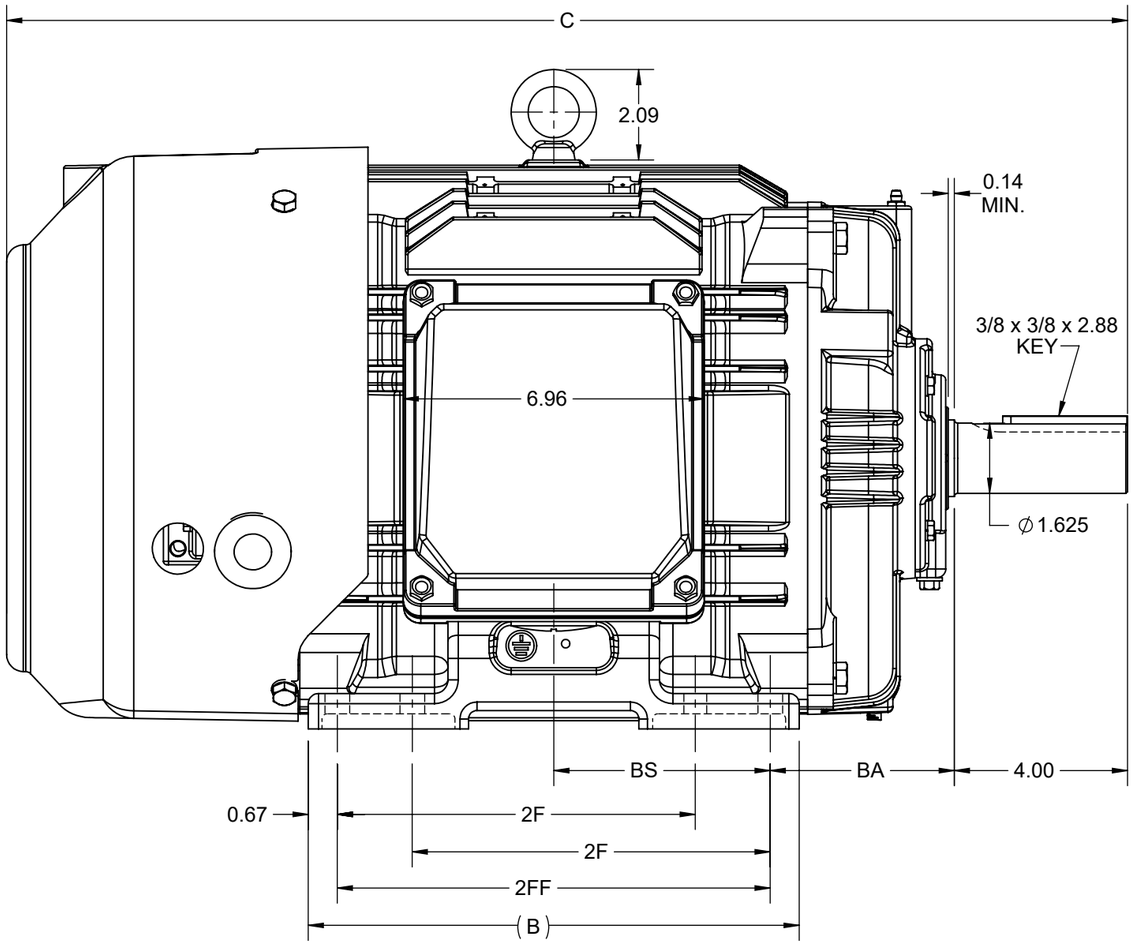
Electrical Type	**Squirrel Cage Inverter Rated**	Starting Method	**Line Or Inverter**
Poles	**2**	Rotation	**Reversible**
Resistance Main	**.561 O**	Mounting	**Rigid Base**
Motor Orientation	**Horizontal**	Drive End Bearing	**Ball**
Opp Drive End Bearing	**Ball**	Frame Material	**Cast Iron**
Shaft Type	**T**	Shaft Diameter	**1.626 in**
Assembly/Box Mounting	**F1/F2 Capable**	Inverter Load	**Constant 2:1/Variable 10:1**

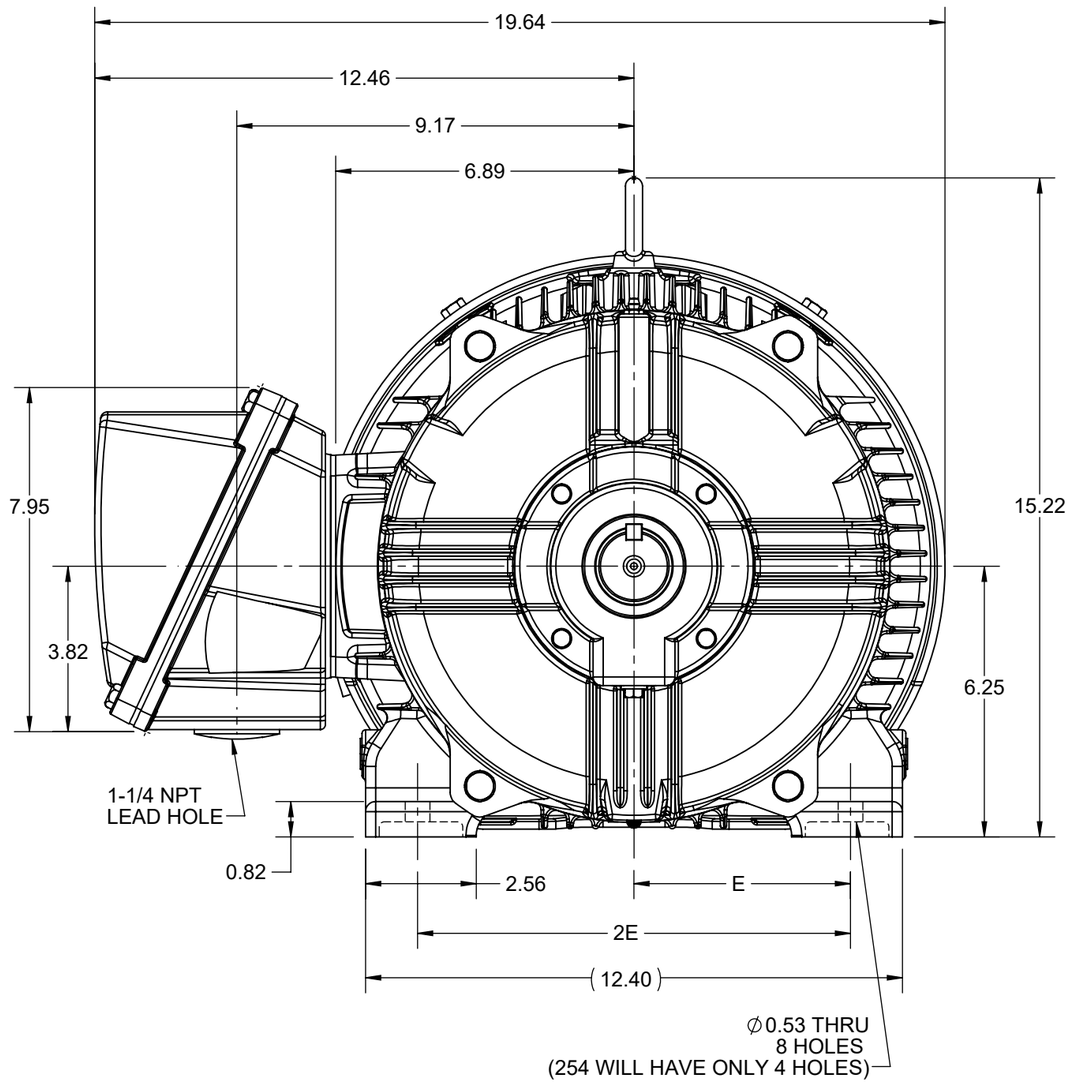
Drawings

Connection Drawing	**EE7300**	Outline Drawing	**SS208560-200**

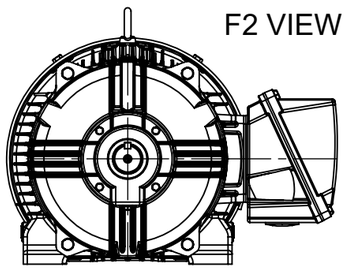
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DASH NO.	B	C	E	2E	2F	2FF	BA	BS	MOUNTING	FRAME
100	9.60	24.15	5.00	10.00	-	8.25	4.25	4.13	F1 OR F2	254T
200	11.34	25.89			8.25	10.00		5.00		254/256T





F2 VIEW



DRAWING REVISION F	REVISION BY SB	REV DATE/© DATE 07/23/2025
REQUEST NUMBER CR-0023556	APPROVED BY SBD	DATE 07/23/2025
REQUEST NUMBER DESCRIPTION: DRAWING TITLE BLOCK UPDATED		

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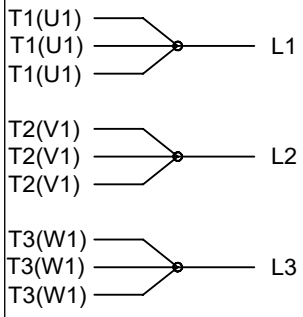
PRIMARY DIMENSIONS ARE INCH
mm DIMENSIONS IN [BRACKETS]
ARE FOR REFERENCE ONLY

DRAWN BY BISWA	marathon™	
DATE 26/09/2018	DESCRIPTION: OUTLINE 254T/256T FR-NEMA-SD & IEEE841	
APPROVED BY SBD		
DATE 26/09/2018		
REFERENCE	MATERIAL	PROCESS/FINISH
THIRD ANGLE PROJECTION	SIZE B / DRAWING NUMBER SS208560	SHEET 1 OF 1

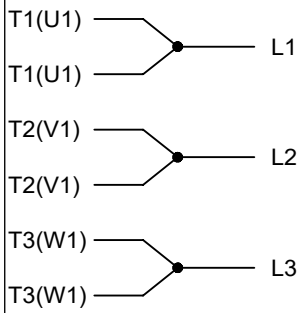
THREE PHASE - SINGLE VOLTAGE
MOTOR - CONDUIT BOX @ 'A'

TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS

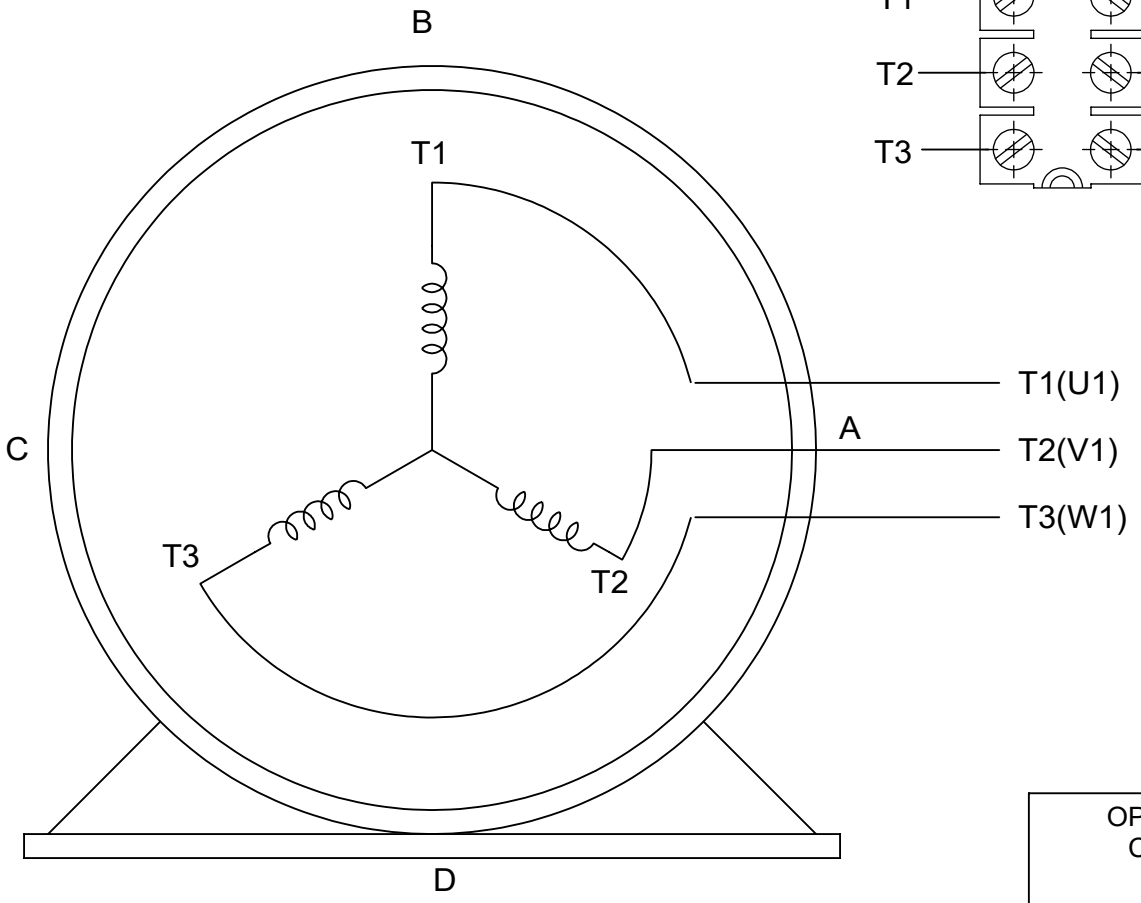
IF MOTOR HAS
9 LEADS



IF MOTOR HAS
6 LEADS



A-9806 DECAL



VIEW OF TERMINAL END

TERMINAL BLOCK WHEN SPECIFIED

OPTIONAL CORD
CONNECTION

L1	WHITE
L2	RED
L3	BLACK

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

REQUEST NUMBER DESCRIPTION
DRAWING TITLE BLOCK UPDATED

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mm DIMENSIONS IN [BRACKETS]
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DRAWN BY: DA	
DATE: 03-26-1993	
APPROVED BY: TB	
DATE: 03-26-1993	
REFERENCE	
THIRD ANGLE PROJECTION	

marathon™

DESCRIPTION
CONNECTION DIAGRAM
EXTERNAL - SINGLE VOLTAGE - 3Ø MOTOR

MATERIAL	PROCESS/FINISH

SIZE	DRAWING NUMBER	SHEET
A	EE7300	1 OF 1

Data Sheet

Date: 3/10/2020
Customer:
Attention:
Submitted by: ANUSHA M

marathon® Motors

256THFCD9001

Submittal

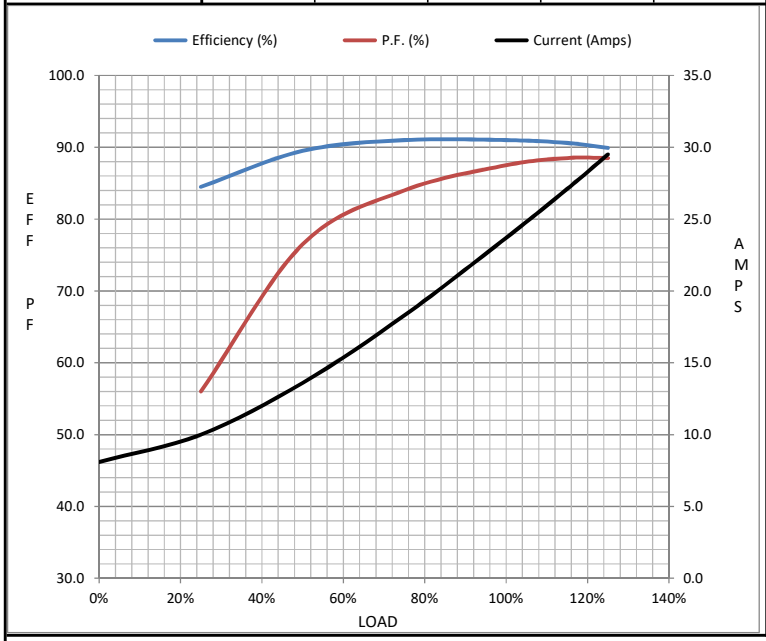
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	8.1	10.0	13.6	18.3	23.7	27.1	29.5	143	
Torque (ft-lb)	0.00	7.3	14.7	22.0	29.7	34.0	37.0	49.0	
RPM	3600	3585	3570	3555	3540	3,530	3522	0	
Efficiency (%)		84.5	89.5	91.0	91.0	90.6	89.9		
P.F. (%)	9.0	56.0	76.5	84.0	87.5	88.5	88.5	38.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3258	3540	3600
Current (Amps)	143	128	83.0	23.7	8.1
Torque (ft-lb)	49.0	41.0	74.0	29.7	0.00



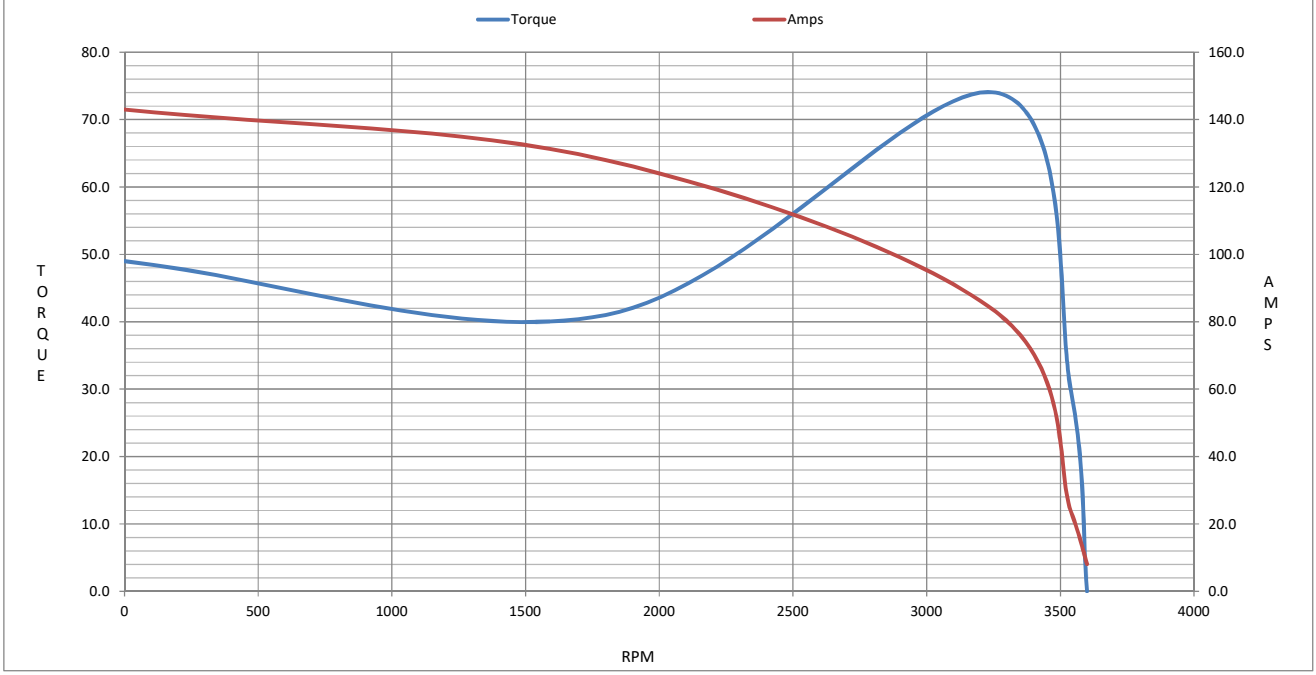
Information Block

HP	20.0
Sync. RPM	3600
Frame	256
Enclosure	TEFC
Construction	TFC
Voltage	460 V
Frequency	60 Hz
Design	B
LR Code letter	G
Service Factor	1.15
Temp Rise @ FL	60 ° C
Duty	CONT
Ambient	50 ° C
Elevation	1,000 feet
Rotor/Shaft wk²	1.35 Lb-Ft²
Ref Wdg	HE31602007 NONE
Sound Pressure @ 1M	75 dBA
VFD Rating	VARIABLE 10:1
Outline Dwg	SS208560-256T
Conn. Diag	EE7300
Additional Specifications:	
0	
0	

EQUIV CKT (OHMS / PHASE)

R1	R2	X1	X2	Xm
0.3620	0.1920	1.1220	0.9370	33.9380

Speed -Torque Curve



Uncontrolled Copy

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DATA VOLTS: 460

CERTIFICATION DATA SHEET

REFERENCE MODEL #: 256THFCD9001
CAT #: W551A

CONN. DIAGRAM: EE7300
OUTLINE: SS208560-256T
WINDING: HE31602007 NONE 5
MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC RPM	FL RPM	FRAME	ENCLOSURE	TYPE	KVA CODE	DESIGN
20	14.9	3600	3540	256T	TEFC	TFC	G	B

PH	HZ	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB (° C)	ELEV.(Ft)
3	60	460	23.7	LINE OR INVERTER	CONT	H	1.15	40	3300

F.L. EFF	91.0	3/4 LD EFF	91.0	1/2 LD EFF	89.5	GTD EFF	ELECT. TYPE
F.L. PF	87.5	3/4 LD PF	84.0	1/2 LD PF	76.5	90.2	SQ CAGE INV RATED

F.L. TORQUE	LR AMPS @ 460 V	L.R. TORQUE	B.D. TORQUE	F.L. RISE (° C)	
29.7 LB-FT	143	49.0 LB-FT 165%	74.0 LB-FT 249%	60	

SOUND PRESSURE @	SOUND	ROTOR WK²	MAX. LOAD WK²	SAFE STALL TIME	STARTS/HOUR	APROX.
75 dBA	84 dBA	1.35 LB-FT²	25 LB-FT²	20 SEC.	2	338 LB.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	MOTOR ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	DIVISION 2 T2B	NO	NONE	BLUE (EPOXY)

BEARINGS DE	BEARINGS ODE	GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
BALL 6309	BALL 6209	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON

THERMOSTATS	PROTECTORS	WDG RTD's	BRG RTD's	THERMISTORS	CONTROL	SPACE HEATERS
NONE	NOT	NONE	NONE	NONE	FALSE	NA

R1 (ohms/ph)	R2 (ohms/ph)	X1 (ohms/ph)	X2 (ohms/ph)	Xm (ohms/ph)	VIBRATION (in/sec)	FLOAT
0.362	0.192	1.122	0.937	33.938	0.080	ODE

* NOTES *

If Inverter equals NONE, contact factory for further information
INVERTER TORQUE: VARIABLE 10:1
INV. HP SPEED RANGE: NONE

ENCODER: NONE
NONE
NONE NONE **PPR**

BRAKE: NONE
NONE NONE
FT-LB: NA
VOLTAGE: NONE **HZ:**

PREPARED BY: ANUSHA M
DATE: 3/18/2020

FORM: 3531 REV_4 2/27/06
** Subject to change without notice.