

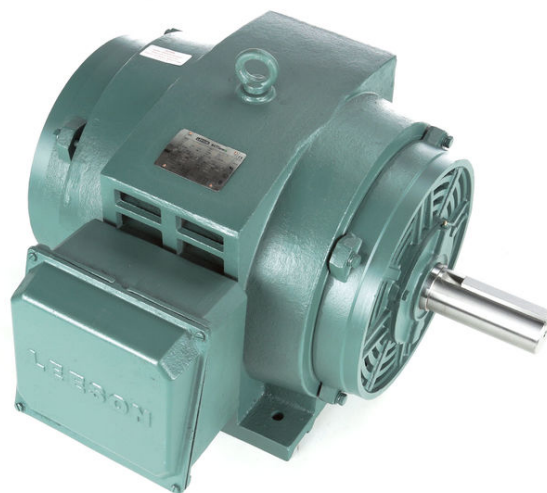
PRODUCT INFORMATION PACKET



Model No: 170149.60

Catalog No: 170149.60

WATTSaver® General Purpose Motor, 60 & 50 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V,
1200 & 1000 RPM, 404T Frame, DP



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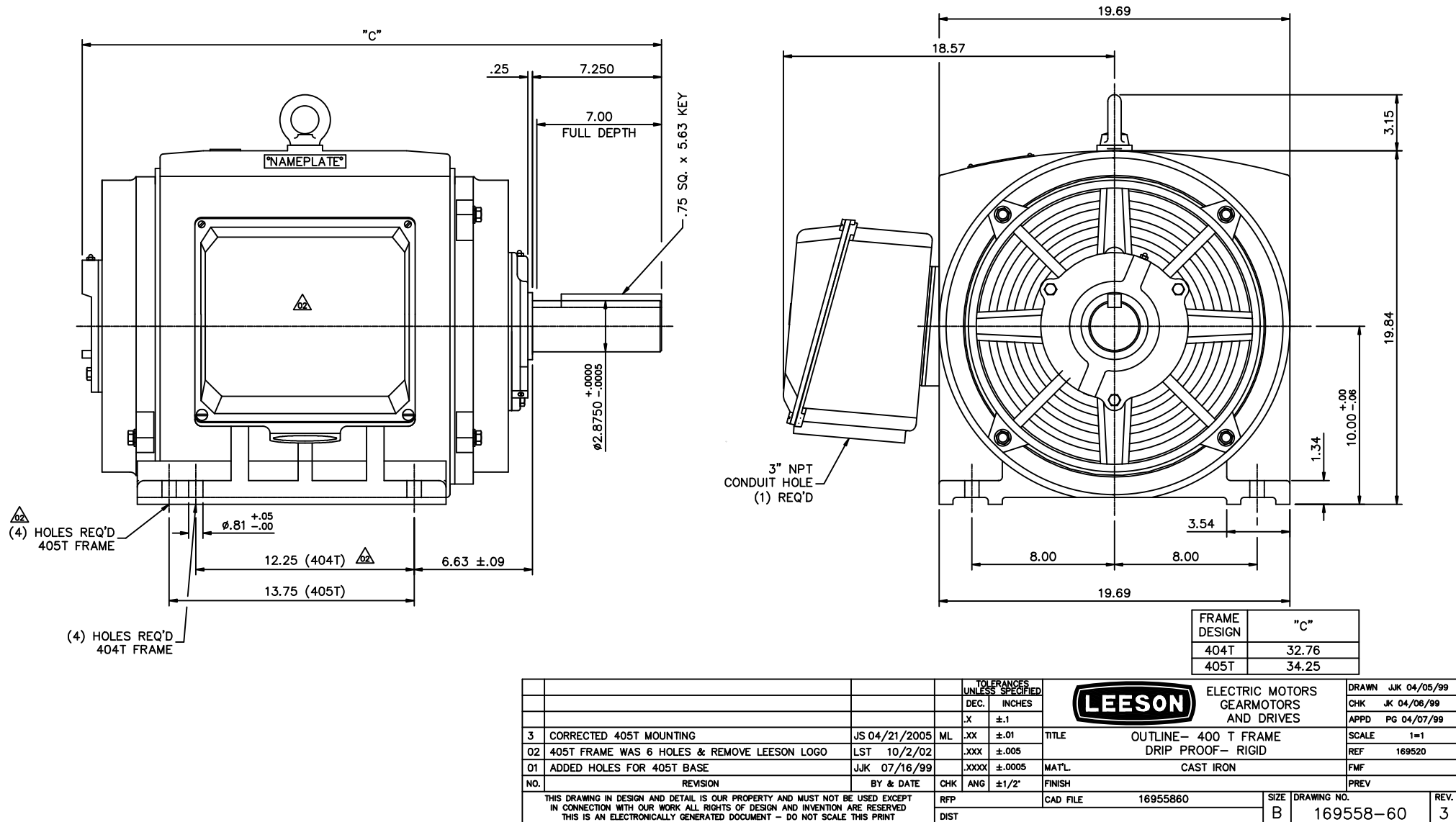


Nameplate Specifications

Phase	3	Output HP	60 & 50 Hp
Output KW	45.0 & 37.0 kW	Voltage	208-230/460 & 190/380 V
Speed	1190 & 990 rpm	Service Factor	1.25 & 1.15
Frame	404T	Enclosure	Drip Proof
Thermal Protection	No Protection	Efficiency	94.5 & 94.1 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	169-160/80 & 160/80 A	Power Factor	74.5
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	F
Drive End Bearing Size	6316	Opp Drive End Bearing Size	6314
UL	Recognized	CSA	N
CE	Y	IP Code	12
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Wye Start Delta Run Or Inverter
Poles	6	Rotation	Reversible
Resistance Main	.085 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	T	Overall Length	32.76 in
Shaft Diameter	2.875 in	Shaft Extension	7.25 in
Assembly/Box Mounting	F1/F2 CAPABLE		
Outline Drawing	169558.60	Connection Drawing	004172.01



WYE - DELTA STARTING USEABLE ON 2,4 AND 6 POLE MOTORS.

LOW VOLTAGE CONNECTION

HIGH VOLTAGE CONNECTION



REFER TO THE WYE-DELTA STARTER CONNECTION INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

PART WINDING START USABLE ON 4 & 6 POLE MOTORS
LOW VOLTAGE CONNECTION ONLY

REFER TO THE PART WINDING STARTER INSTRUCTIONS FOR PROPER CONNECTION OF POWER LINES TO STARTER.

REFER TO THE CUTLER - HAMMER OR EQUIV. FOR PROPER SELECTION OF OVERLOAD HEATER COILS.

LINE LEADS



ROTATION CAN BE REVERSED BY INTERCHANGING ANY TWO LINE LEADS
● RED LEADS OR P1, P2, FOR N/C THERMOSTAT

ACROSS THE LINE START & RUN

	LINE 1	LINE 2	LINE 3	JOIN & INSULATE SEPARATELY
HIGH VOLT	T1,T12	T2,T10	T3,T11	(T4,T7) (T5,T8) (T6,T9)
LOW VOLT	T1,T6 T7,T12	T2,T4 T8,T10	T3,T5 T9,T11	

TOLERANCES
UNLESS SPECIFIED

DEC. INCHES

.X ±.1

.XX ±.01

.XXX ±.005

.XXXX ±.0005

ANG ±1/2"



ELECTRIC MOTORS
GEARMOTORS
AND DRIVES

DRAWN WLW 09/08/77

CHK RPB 09/12/77

APPD JCW 09/12/77

SCALE 1=1

REF

FMF

PREV

NO.	REVISION	BY & DATE	CHK	ANG
03	REV'D LOW VOLTAGE CONN. LEADS PER ELEC.	BJB 06/07/00	.XX	±.01
02	ADDED T-STAT. NOTES PER ELECTRICAL	KMM 06/02/98	.XXX	±.005
01	REDRAWN TO CAD	DBT 06/02/97	.XXXX	±.0005

TITLE DELTA - WYE CONNECTION DIAGRAM

MAT'L.

FINISH

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RFP

DIST

CAD FILE 00417201

SIZE

A

DRAWING NO.

004172-01

REV.

03



CERTIFICATION DATA SHEET

**1051 CHEYENNE AVE.
GRAFTON, WI 53024
PH. 262-377-8810**

CONN. DIAGRAM: 004172.01

CATALOG #: 170149.60

OUTLINE: 169558.60

MOUNTING: F1/F2 CAPABLE

WINDING #: T19606019 3

TYPICAL MOTOR PERFORMANCE DATA

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
60&50	45.0&37.0	1200	1190&990	404T	DP	F	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	208-230/460&190/380	169-160/80&160/80	Y START D RUN OR INV	CONTINUOUS	F5	1.25/1.15	40

FULL LOAD EFF:	94.5&94.1	3/4 LOAD EFF:	94.1	1/2 LOAD EFF:	93	GTD. EFF		ELEC. TYPE
FULL LOAD PF:	74.5&75.5	3/4 LOAD PF:	69	1/2 LOAD PF:	58	93.6		SQ CAGE INV RATED

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
265 LB-FT	800 / 400	425 LB-FT 160 %	780 LB-FT 294 %	45

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
50 dBA	60 dBA	32 LB-FT^2	- LB-FT^2	20 SEC.	2	1200 LBS.

*** SUPPLEMENTAL INFORMATION ***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
STANDARD	STANDARD	RIGID	HORIZONTAL	FALSE	NONE	FALSE	NONE	GREEN - LEESON WATTSaver

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE						
BALL	BALL	POLYREX EM	T	NONE	NONE	AISI 1045 (C-240)	CAST IRON
6316	6314						

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

*

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INVERTER TORQUE: CONSTANT 2:1

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 NO BRAKE Hz

Data Sheet

Date: 2/1/2018

170149.60



Data @ 460 V

Motor Load Data

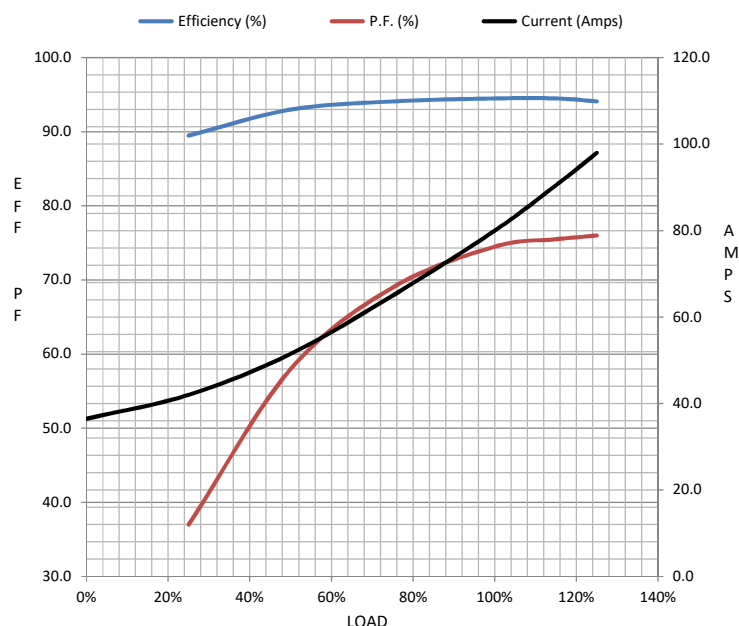
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	36.5	42.0	51.5	65.0	80.0	90.5	98.0	400	
Torque (ft-lb)	0.00	66.0	132	198	265	305	332	425	
RPM	1200	1198	1195	1193	1190	1,189	1187	0	
Efficiency (%)		89.5	93.0	94.1	94.5	94.5	94.1		
P.F. (%)	4.0	37.0	58.0	69.0	74.5	75.5	76.0	31.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	600	1150	1190	1200
Current (Amps)	400	360	265	80.0	36.5
Torque (ft-lb)	425	380	780	265	0.00

Information Block

HP	60.0			
Sync. RPM	1200			
Frame	404			
Enclosure	DP			
Construction	TDC			
Voltage	208-230/460#190/380 V			
Frequency	60 Hz			
Design	B			
LR Code letter	F			
Service Factor	1.15			
Temp Rise @ FL	45 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk²	32.0 Lb-Ft²			
Ref Wdg	T19606019 NONE			
Sound Pressure @ 1M	50 dBA			
VFD Rating	CONSTANT 2:1			
Outline Dwg	169558.60			
Conn. Diag	004172.01			
Additional Specifications:				
0				
0				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0000	0.0000	0.0000	0.0000	0.0000



Speed - Torque Curve

