PRODUCT INFORMATION PACKET

Model No: 170160.60
Catalog No: 170160.60
WATTSAVER® General Purpose Motor, 100 & 75 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V, 3600 & 3000 RPM, 405TS Frame, TEFC

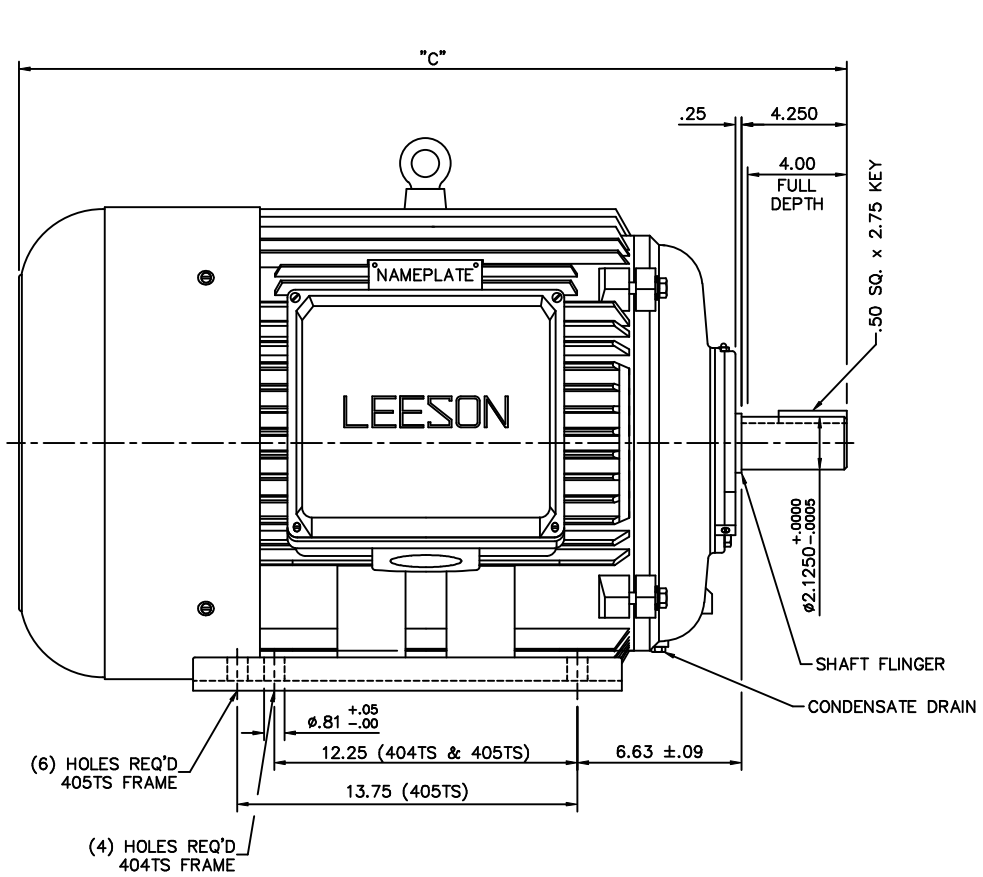
Nameplate Specifications

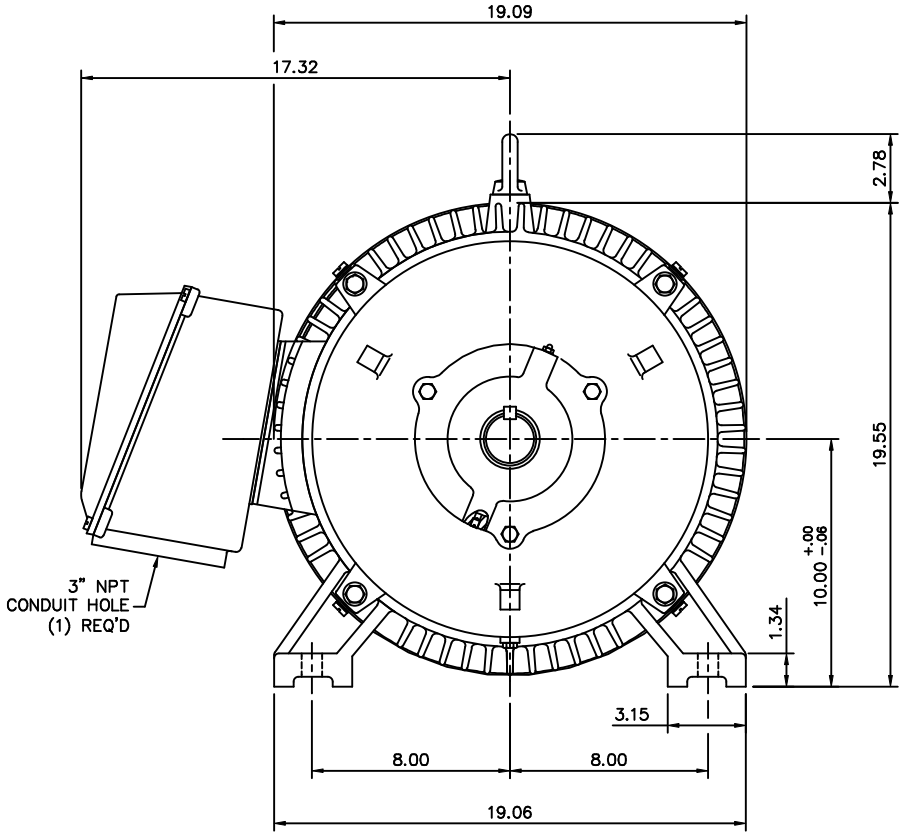
Phase	3	Output HP	100 & 75 Hp
Output KW	75.0 & 56.0 kW	Voltage	208-230/460 & 190/380 V
Speed	3565 & 2980 rpm	Service Factor	1.15 & 1.15
Frame	405TS	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	Thermostat	Efficiency	95 & 94.1 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	278-248/124 & 197/98.5 A	Power Factor	90
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Drive End Bearing Size	6316	Opp Drive End Bearing Size	6314
UL	Recognized	CSA	Y
CE	N	IP Code	43
Number of Speeds	1		

Technical Specifications

Electrical Type	Squirrel Cage Inverter Rated	Starting Method	Wye Start Delta Run Or Inverter
Poles	2	Rotation	Reversible
Mounting	Rigid Base	Motor Orientation	Horizontal
Drive End Bearing	Ball	Opp Drive End Bearing	Ball
Frame Material	Cast Iron	Shaft Type	TS
Overall Length	34.92 in	Shaft Diameter	2.125 in
Shaft Extension	4.25 in	Assembly/Box Mounting	F1 ONLY
Inverter Load	CONSTANT 10:1		
Connection Drawing	004172.01	Outline Drawing	16954660-405TS

169546-60





FRAME DESIGN	"C"
404TS	33.43
405TS	34.92

NO.	REVISION	BY	DATE
01	ADDED BASE HOLES FOR 405TS FRAME	JJK	07/16/99

TOLERANCES UNLESS OTHERWISE SPECIFIED

DECIMALS

.00	± .06
.000	± .005
.0000	± .0005
FRACTIONS	± 1/64
ANGLES	± 1/2°
INCH/MM	

LEESON ELECTRIC CORPORATION

DRAWN JJK 03/30/99
CH'K'D.
APPR. PG 03/31/99
SCALE 1=5
REF. 169506
FMF

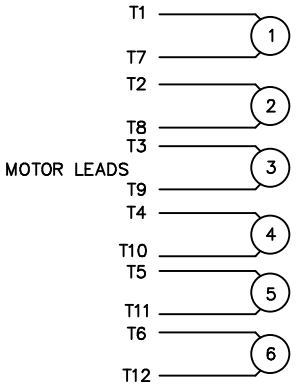
TITLE: OUTLINE – 400TS FRAME TEFC – RIGID
MAT'L.: CAST IRON
FINISH:
SIZE: B
DRAWING NO.: 169546-60

```
ERROR: syntaxerror
OFFENDING COMMAND: --nostringval--

STACK:

/initialize
-dictionary-
/Pscript_WinNT_Compat
-dictionary-
```

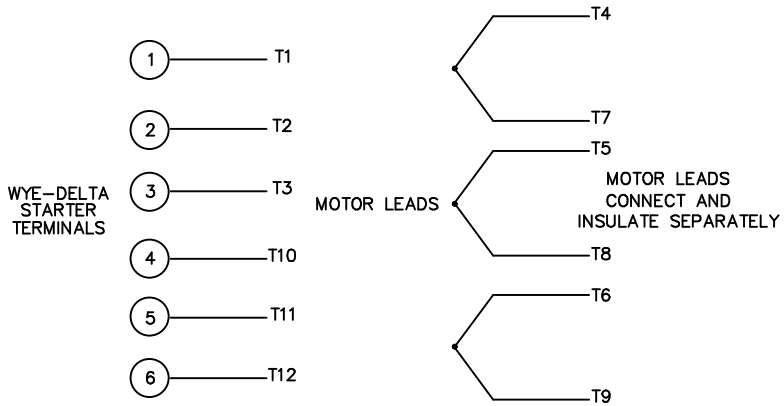
004172-01

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

LOW VOLTAGE CONNECTION

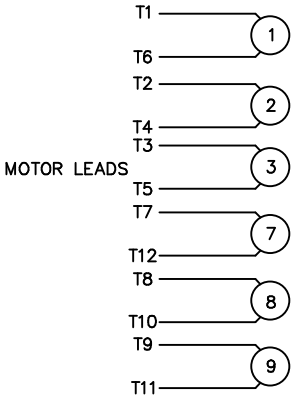


HIGH VOLTAGE CONNECTION



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

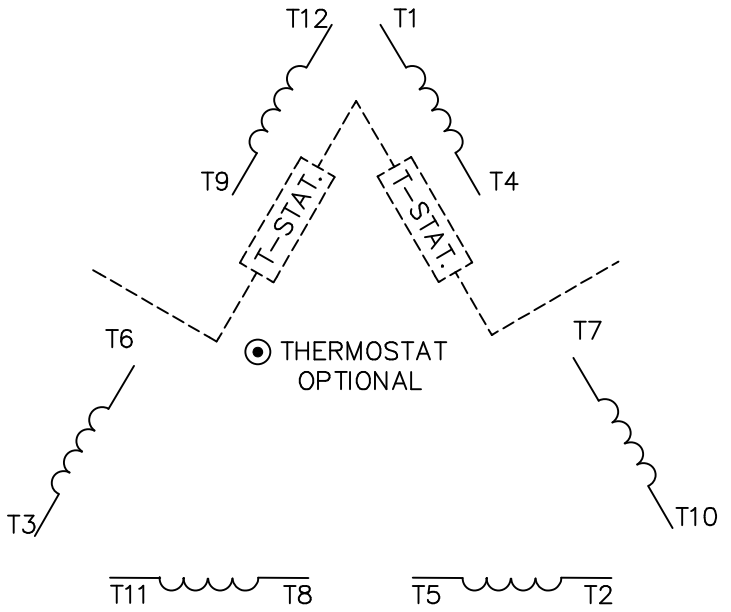
PART WINDING START USABLE ON 4 & 6 POLE MOTORS
LOW VOLTAGE CONNECTION ONLY



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	

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

TOLERANCES UNLESS SPECIFIED

DEC.	INCHES
.X	±.1
.XX	±.01
.XXX	±.005
.XXXX	±.0005
ANG	±1/2°

LEESON ELECTRIC MOTORS GEARMOTORS AND DRIVES

TITLE DELTA – WYE CONNECTION DIAGRAM

MAT'L.

FINISH

CAD FILE 00417201

RFP

DIST

DRAWN	WLW 09/08/77
CHK	RPB 09/12/77
APPD	JCW 09/12/77
SCALE	1=1
REF	
FMF	
PREV	

SIZE A | DRAWING NO. 004172–01 | REV. 03

6/28/2007 3:22:15 PM -

Data Sheet

Date: 1/30/2018

170160.60

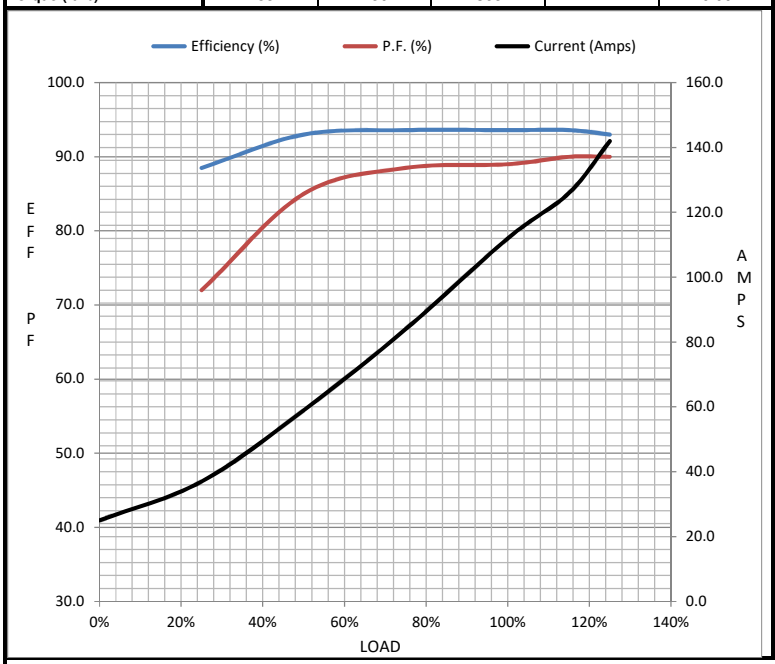
Data @ 460 V

Motor Load Data

Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	25.0	37.0	59.0	84.0	112	126	142	725	
Torque (ft-lb)	0.00	36.5	73.2	110	147	169	184	285	
RPM	3600	3592	3585	3575	3565	3,560	3555	0	
Efficiency (%)		88.5	93.0	93.6	93.6	93.6	93.0		
P.F. (%)	10.5	72.0	85.0	88.5	89.0	90.0	90.0	0.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3450	3565	3600
Current (Amps)	725	650	425	112	25.0
Torque (ft-lb)	285	250	365	147	0.00



Information Block

HP	100.0	
Sync. RPM	3600	
Frame	405	
Enclosure	TEFC	
Construction	TFC	
Voltage	208-230/460#190/380	V
Frequency	60	Hz
Design	A	
LR Code letter	G	
Service Factor	1.15	
Temp Rise @ FL	70	° C
Duty	CONT	
Ambient	40	° C
Elevation	1,000	feet
Rotor/Shaft wk²	11.5	Lb-Ft²
Ref Wdg	T19602004 FR	
Sound Pressure @ 1M	999	dBA
VFD Rating	CONSTANT 10:1	
Outline Dwg	16954660	
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