

PRODUCT INFORMATION PACKET



Model No: 170035.60

Catalog No: 170035.60

WATTSaver® General Purpose Motor, 25 & 20 HP, 3 Ph, 60 & 50 Hz, 208-230/460 & 190/380 V,
3600 & 3000 RPM, 284TS Frame, TEFC



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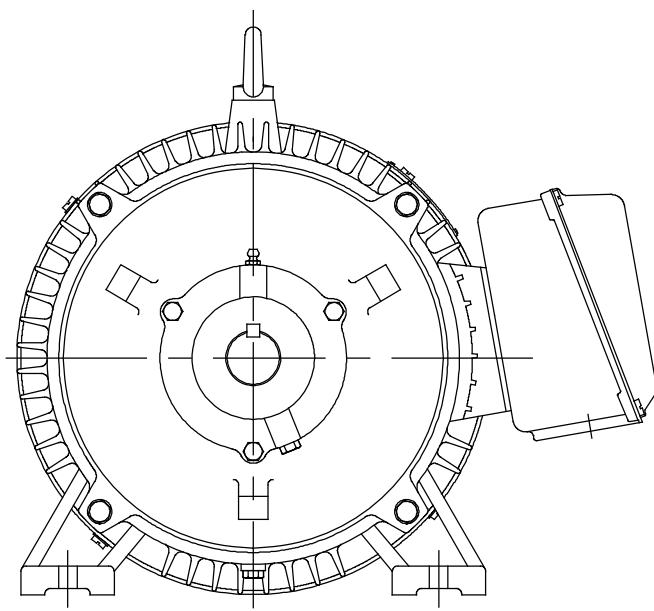
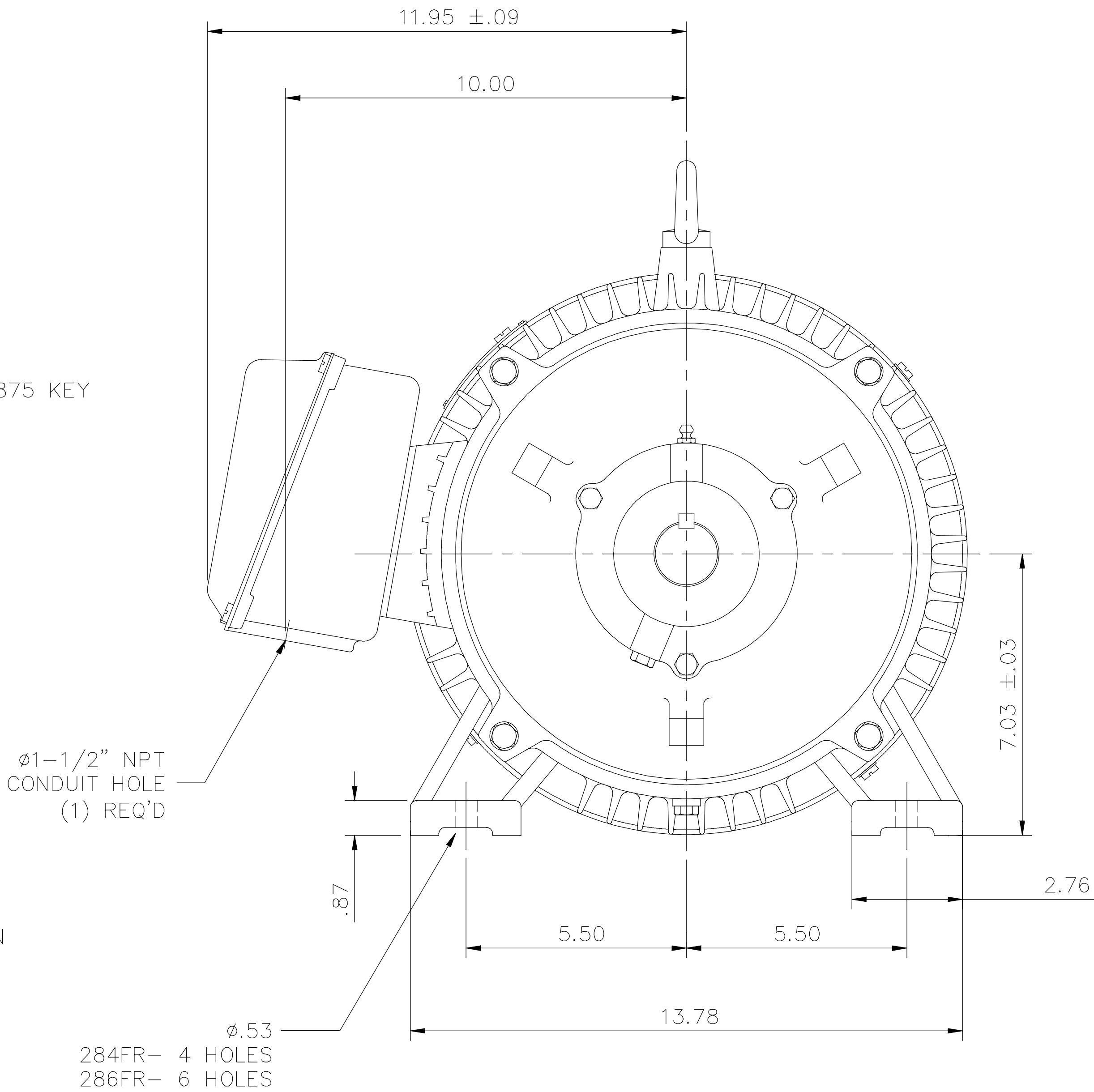
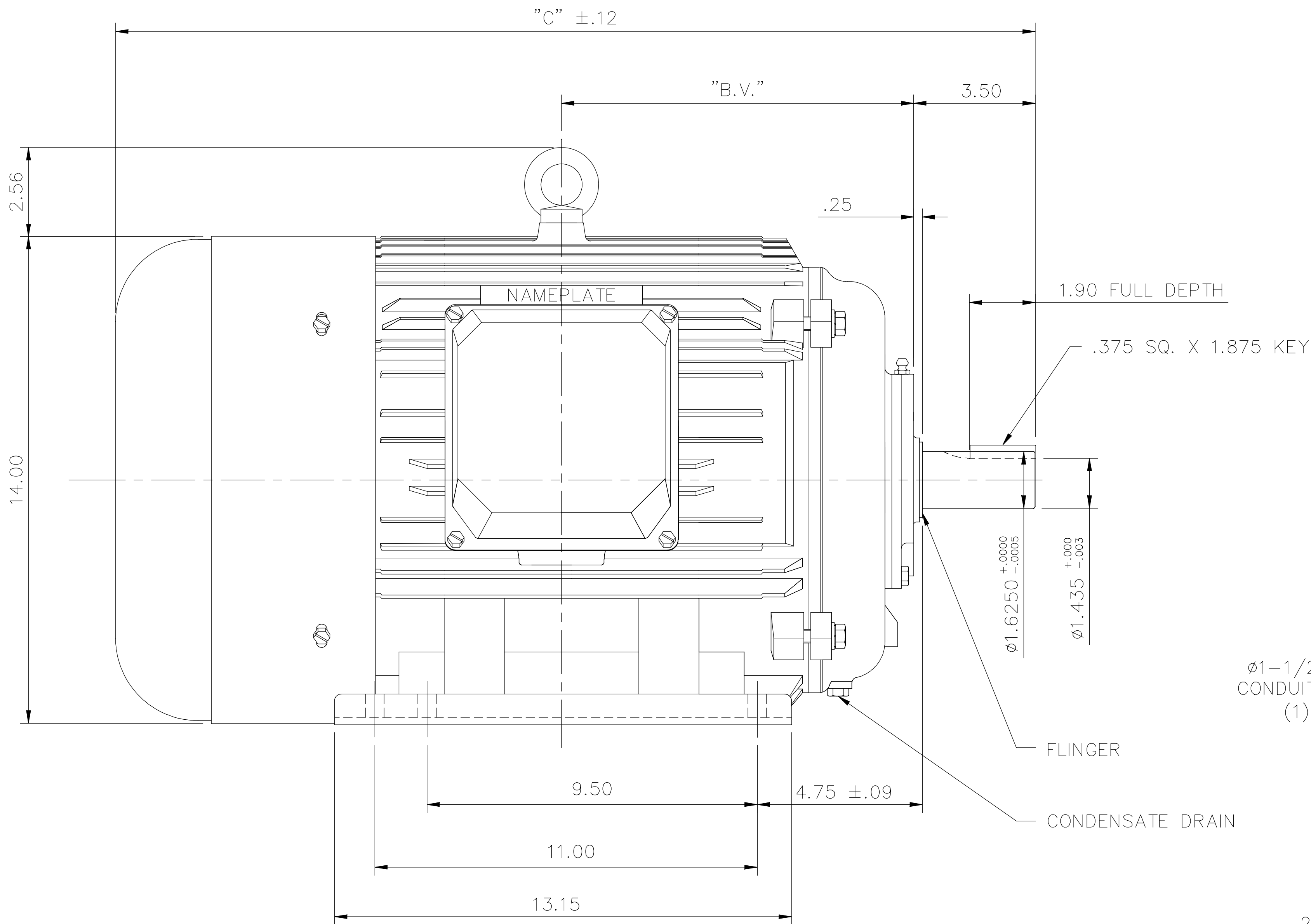
Nameplate Specifications

Phase	3	Output HP	25 & 20 Hp
Output KW	18.7 & 14.9 kW	Voltage	208-230/460 & 190/380 V
Speed	3555 & 2955 rpm	Service Factor	1.15 & 1.15
Frame	284TS	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	93 & 93 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	63-56.5/28.3 & 53.5/26.8 A	Power Factor	88
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	G
Drive End Bearing Size	6311	Opp Drive End Bearing Size	6309
UL	Recognized	CSA	Y
CE	Y	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
Resistance Main	.225 Ohms	Mounting	Rigid Base
Motor Orientation	Horizontal	Drive End Bearing	Ball
Opp Drive End Bearing	Ball	Frame Material	Cast Iron
Shaft Type	TS	Overall Length	24.88 in
Shaft Diameter	1.625 in	Shaft Extension	3.25 in
Assembly/Box Mounting	F1/F2 CAPABLE		
Connection Drawing	004172.01	Outline Drawing	16954060-284TS

169540-60



F2 VIEW

FRAME DESIGN	"C"	"BV"
284TS	24.88	4.72
286TS	26.46	3.97

NO.	REVISION	BY & DATE	CHK	ANG	TOLERANCES UNLESS SPECIFIED		FINISH	CAD FILE	SIZE	DRAWING NO.	PAGE	OF	REV.
					DEC.	INCHES							
H	ADDED F2 VIEW ECO-0134445	WGJ 11/10/2017	EMH	.X	±.1								
03	REMOVED REFERENCE TO 250 FRAME	MOL 08/15/2012		.XX	±.03								
02	REDRAWN TO CURRENT CAD STANDARDS	CJK 11/1/01		.XXX	±.005								
01	ADDED HOLES 286TS BASE	JKK 07/13/99		.XXXX	±.0005								
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								DIST					



REGAL-BELOIT CORPORATION

TITLE OUTLINE-280TS FRAME, TEFC-RIGID
NEW CONDUIT BOX

MAT'L. CAST IRON

FINISH

CAD FILE 16954060

DRAWN JJK 03/29/99

CHK

APPD PG 03/31/99

SCALE 1=4

REF

FMF

PREV

B 169540-60 H

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

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
NO.	REVISION	BY & DATE	CHK	ANG

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

CATALOG #: 170035.60

CONN. DIAGRAM: 004172.01

OUTLINE: 16954060-284TS

WINDING #: T14502016 1

MOUNTING: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

HP	kW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
25&20	18.7&14.9	3600	3555&2955	284TS	TEFC	G	B

PH	Hz	VOLTS	AMPS	START TYPE	DUTY	INSL	S.F.	AMB°C
3	60/50	208-230/460&190/380	63-56.5/28.3&53.5/26.8	Y START D RUN OR INV	CONTINUOUS	F5	1.15/1.15	40

FULL LOAD EFF:	93&93	3/4 LOAD EFF:	93	1/2 LOAD EFF:	91.7	GTD. EFF	ELEC. TYPE
FULL LOAD PF:	88&91	3/4 LOAD PF:	86.5	1/2 LOAD PF:	81	91.7	SQ CAGE INV RATED

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
37 LB-FT	364 / 182	72 LB-FT 195 %	102 LB-FT 276 %	60

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS / HOUR	APPROX. MOTOR WGT
- dBA	- dBA	1.9 LB-FT^2	- LB-FT^2	20 SEC.	-	400 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	BLUE (ENAMEL)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	ODE						
BALL	BALL						
6311	6309	POLYREX EM	TS	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
TSTATS (N/C)	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 NONE Hz

Data Sheet

Date: 1/23/2018

170035.60



Data @ 460 V

Motor Load Data

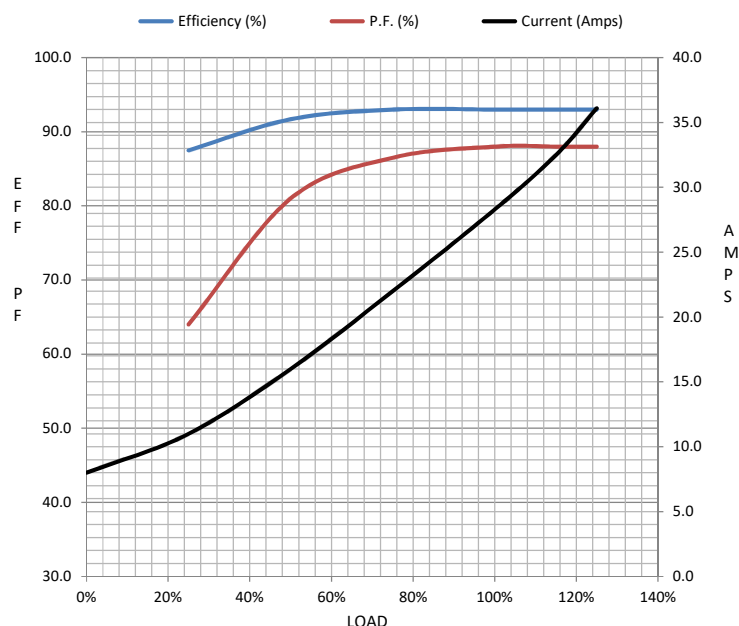
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	8.0	11.0	16.0	22.0	28.3	32.5	36.1	182	
Torque (ft-lb)	0.00	9.2	18.5	27.6	37.0	42.5	46.5	72.0	
RPM	3600	3583	3576	3568	3555	3,550	3540	0	
Efficiency (%)		87.5	91.7	93.0	93.0	93.0	93.0		
P.F. (%)	7.5	64.0	81.0	86.5	88.0	88.0	88.0	0.0	

Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3350	3555	3600
Current (Amps)	182	165	125	28.3	8.0
Torque (ft-lb)	72.0	65.0	102	37.0	0.00

Information Block

HP	25.0			
Sync. RPM	3600			
Frame	284			
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	60 °C			
Duty	CONT			
Ambient	40 °C			
Elevation	1,000 feet			
Rotor/Shaft wk²	1.90 Lb-Ft²			
Ref Wdg	T14502016 NONE			
Sound Pressure @ 1M	999 dBA			
VFD Rating	CONSTANT 2:1			
Outline Dwg	16954060			
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

