

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 449TSTDN16004

Catalog No: U795

XRI® General Purpose General Purpose Motor, 450 & 400 HP, 3 Ph, 60 & 50 Hz, 460 & 380 V,  
3600 & 3000 RPM, 449TS Frame, DP



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**RegalRexnord**

### Nameplate Specifications

Phase	3	Output HP	450 & 400 Hp
Output KW	340.0 & 300.0 kW	Voltage	460 & 380 V
Speed	3570 & 2965 rpm	Service Factor	1.15 & 1.15
Frame	449TS	Enclosure	Drip Proof
Thermal Protection	No Protection	Efficiency	96.2 & 95.4 %
Ambient Temperature	40 °C	Frequency	60 & 50 Hz
Current	485 & 530 A	Power Factor	90
Duty	Continuous	Insulation Class	F
Design Code	B	KVA Code	F
Drive End Bearing Size	6314	Opp Drive End Bearing Size	6314
UL	Recognized	CSA	Y
CE	Y	IP Code	12
Number of Speeds	1		

### Technical Specifications

Electrical Type	Squirrel Cage Induction Run	Starting Method	Part Wdg Start & Wye Start Delta Run
Poles	2	Rotation	Reversible
Resistance Main	.0086 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	44.50 in
Frame Length	29.38 in	Shaft Diameter	2.375 in
Shaft Extension	5.02 in	Assembly/Box Mounting	F1/F2 CAPABLE
Outline Drawing	B-SS516498-2938	Connection Drawing	A-EE7300BH

4

3

Uncontrolled Copy

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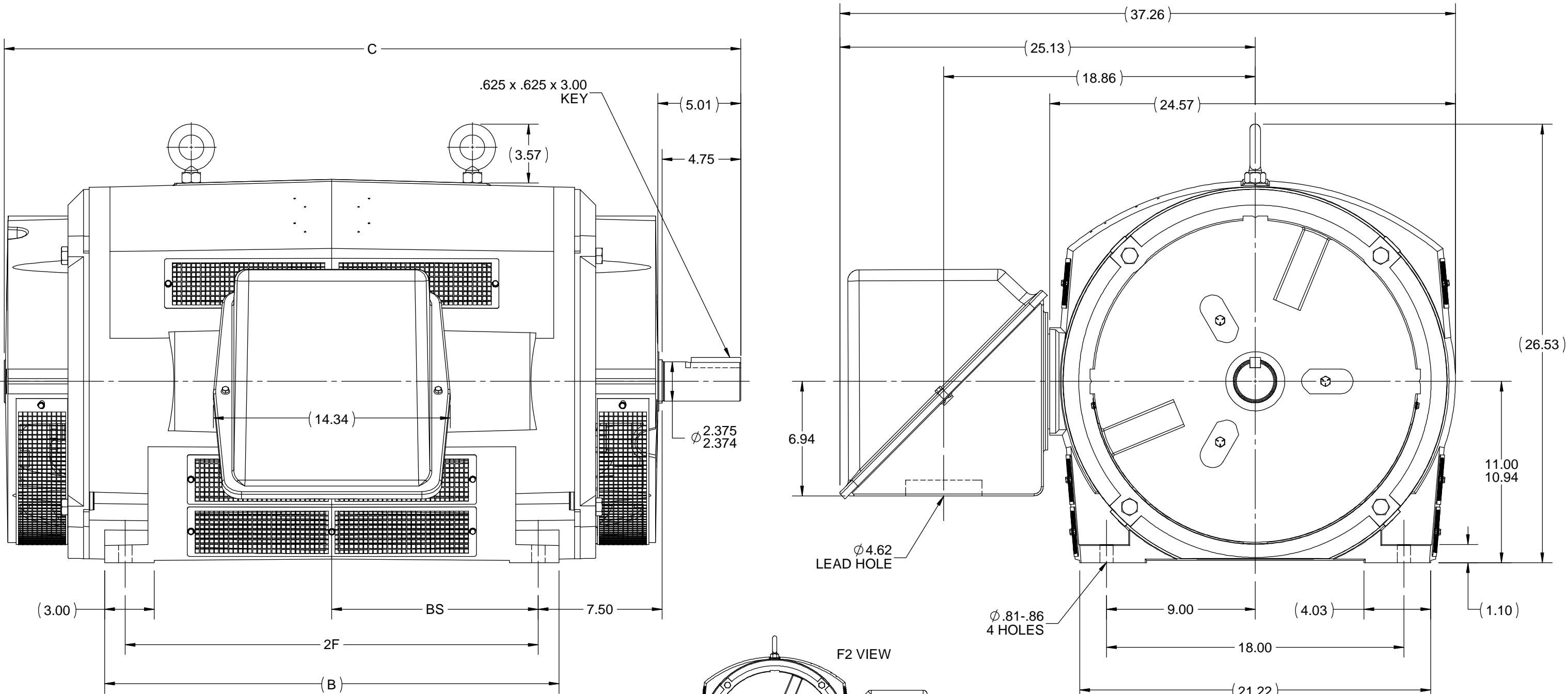
1

B

B

A

A





- NOTES:
1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.
  2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.
  3. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

DASH	FRAME	B	C	2F	BS
2438	447TS	22.50	39.58	20.00	10.00
2938	449TS	27.50	44.58	25.00	12.50

DRAWING REVISION C	REVISION BY JP	DATE 07-17-2018
ECO ECO-0149010	APPROVED BY JHA	DATE 07-17-2018
ECO DESCRIPTION MADE CONDUIT BOX SQAURED TO FRAME COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.		

TOLERANCES UNLESS OTHERWISE SPECIFIED:			
DEC.	INCH	mm	ANGLE
.X	±0.1	[±2.5]	±7° 30"
.XX	±0.03	[±0.76]	
.XXX	±0.005	[±0.127]	
.XXXX	±0.0005	[±0.0127]	
REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [.076/.381] X 45°			
CORNER FILLETS: R.02 [.51]			
MACHINED SURFACES: 200 INCH/mm 5.1			
mm SHOWN IN [BRACKETS]			

DRAWN BY KL	 Regal Beloit America, Inc.		
DATE 03-30-1998			
APPROVED BY DJK	DESCRIPTION OUTLINE		
DATE 03-30-1998	447/449TS FR - DR. PR. - SCREENED		
REFERENCE	MATERIAL	PROCESS/FINISH	
THIRD ANGLE PROJECTION 	SIZE B	DRAWING NUMBER SS516498	SHEET 1 OF 1



				TOLERANCES UNLESS SPECIFIED		 REGAL-BELOIT CORPORATION	DRAWN RJW 02-11-2005						
				DEC.	INCHES		CHK	ML	02-11-2005				
				.X	±.1		APPD	GK	02-11-2005				
				.XX	±.02	TITLE CONNECTION DIAGRAM 12 LEAD- SINGLE VOLTAGE		SCALE					
D	CHANGED TO REGAL TITLE BLOCK	ECO-0108299	WGJ 08/22/2016	EMH	.XXX			±.005	REF				
1	ADDED IEC TERMINAL MARKINGS	CN 41429	JJB 05/24/2007	ML	.XXXX	±.0005	MAT'L.		FMF				
NO.	REVISION		BY & DATE	CHK	ANG	±7'30"	FINISH		PREV				
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT				RFP		02-11-2005	CAD FILE ee7300bh		SIZE	DRAWING NO.	PAGE	OF	REV.
				DIST		LB			A	EE7300BH			

## CERTIFICATION DATA SHEET

**Model#:** 449TSTDN16004 CA  
**CONN. DIAGRAM:** A-EE7300BH  
**OUTLINE:** B-SS516498-2938

**WINDING#:** T4492128 NONE 1  
**ASSEMBLY:** F1/F2 CAPABLE

## TYPICAL MOTOR PERFORMANCE DATA

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
450&400	340&300	3600	3670&2965	449TS	DP	F	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60/50	460#380	485&530	PWS & YDRUN	CONTINUOU S	F1	1.15/1.15	40	3300

FULL LOAD EFF: 96.2&95.4	3/4 LOAD EFF: 96.2	1/2 LOAD EFF: 95.8	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 90&90	3/4 LOAD PF: 88	1/2 LOAD PF: 84	95.8	SQ CAGE IND RUN	115

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
662 LB-FT	2650	840 LB-FT 125	1550 LB-FT 230	65

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
85 dBA	95 dBA	46.5 LB-FT^2	190 LB-FT^2	10 SEC.	1	2500 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	OPE						
BALL	BALL						
6314	6314	POLYREX EM	TS	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON

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

* N O T E S *	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	

DATE: 06/21/2017 06:46:52 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.

## Data Sheet

Date: 29-06-2017

Customer:

Attention:

Submitted by: FAREEDA DUDEKULA



449TSTDN16004

Submittal

Data @ 460 V

## Motor Load Data

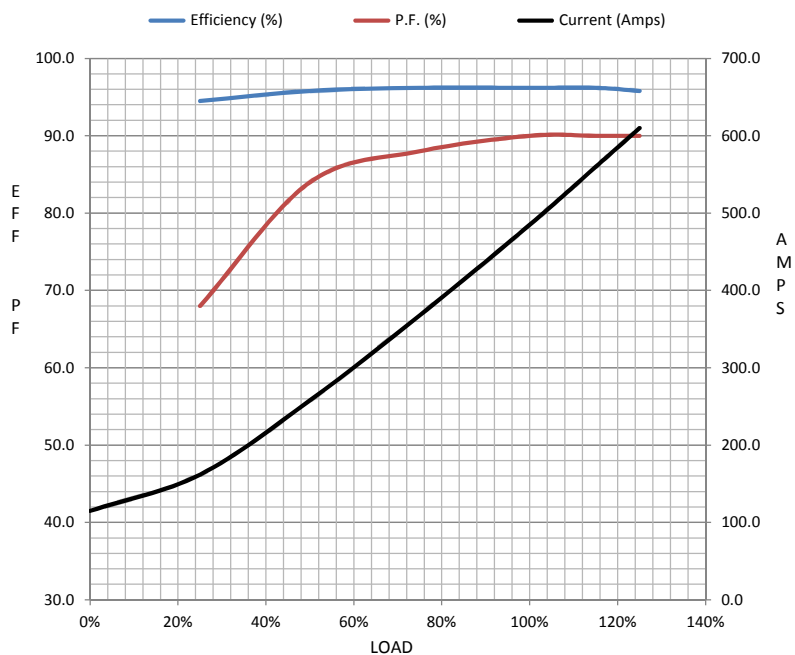
Load	0%	25%	50%	75%	100%	115%	125%	LR	
Current (Amps)	115	162	258	368	485	560	610	2,650	
Torque (ft-lb)	0.00	165	330	495	662	762	829	840	
RPM	3600	3592	3585	3578	3570	3,565	3560	0	
Efficiency (%)		94.5	95.8	96.2	96.2	96.2	95.8		
P.F. (%)	4.0	68.0	84.0	88.0	90.0	90.0	90.0	28.0	

## Motor Speed Data

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3435	3570	3600
Current (Amps)	2,650	2,300	1,700	485	115
Torque (ft-lb)	840	725	1,550	662	0.00

## Information Block

HP	450.0			
Sync. RPM	3600			
Frame	449			
Enclosure	DP			
Construction	TDN			
Voltage	460#380 V			
Frequency	60 Hz			
Design	B			
LR Code letter	F			
Service Factor	1.15			
Temp Rise @ FL	65 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	46.5 Lb-Ft <sup>2</sup>			
Ref Wdg	T4492128 NONE			
Sound Pressure @ 1M	85 dBA			
VFD Rating	NONE			
Outline Dwg	B-SS516498-2938			
Conn. Diag	A-EE7300BH			
Additional Specifications:				
0				
365THFS8036				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0050	0.0050	0.0630	0.0570	2.3690



## Speed -Torque Curve

