

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 286TSTDR16002

Catalog No: E1010

XRI® General Purpose General Purpose Motor, 40 & 30 HP, 3 Ph, 60 & 50 Hz, 230/460 & 200/400 V,  
3600 & 3000 RPM, 286TS Frame, DP



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**RegalRexnord**

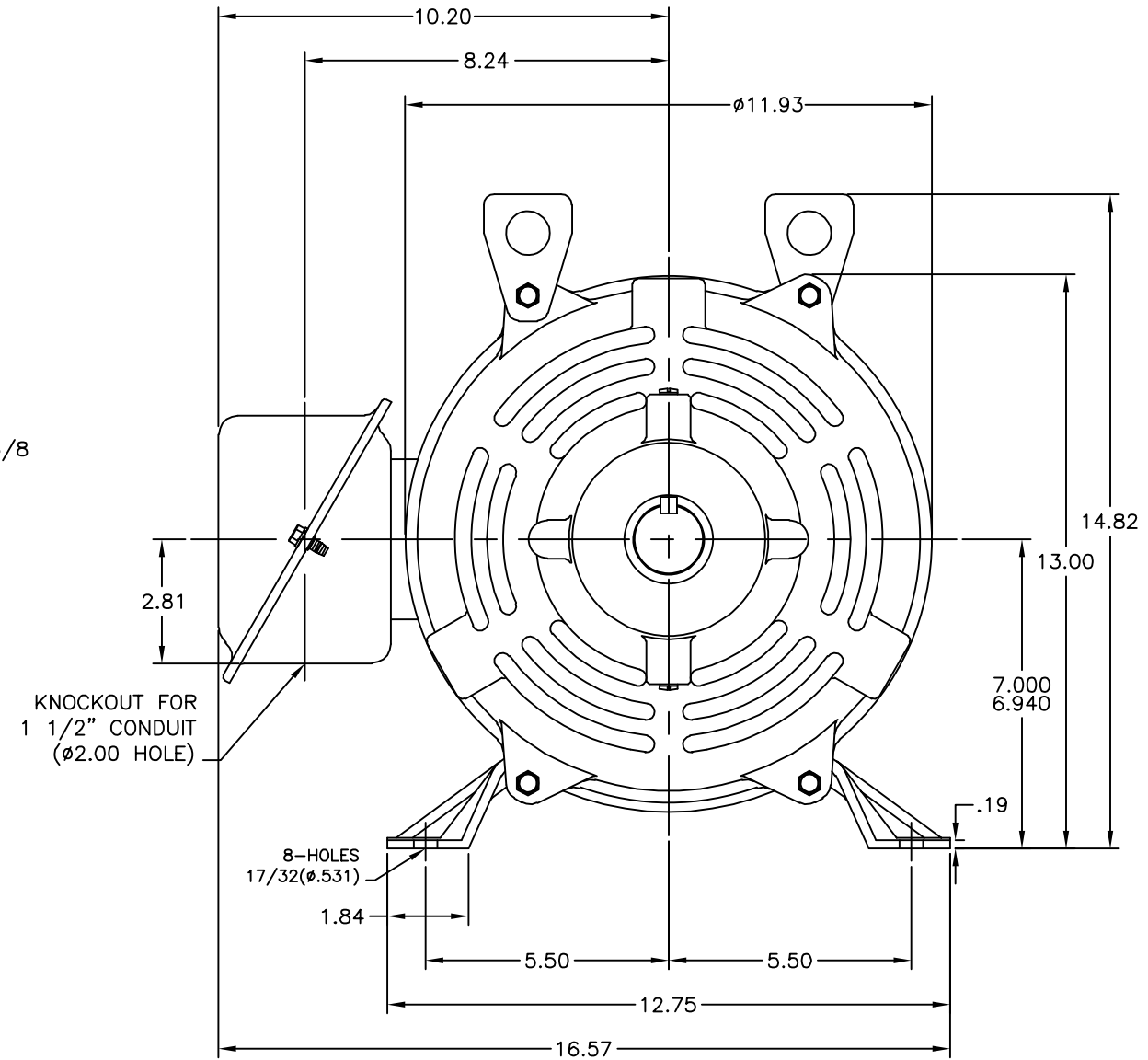
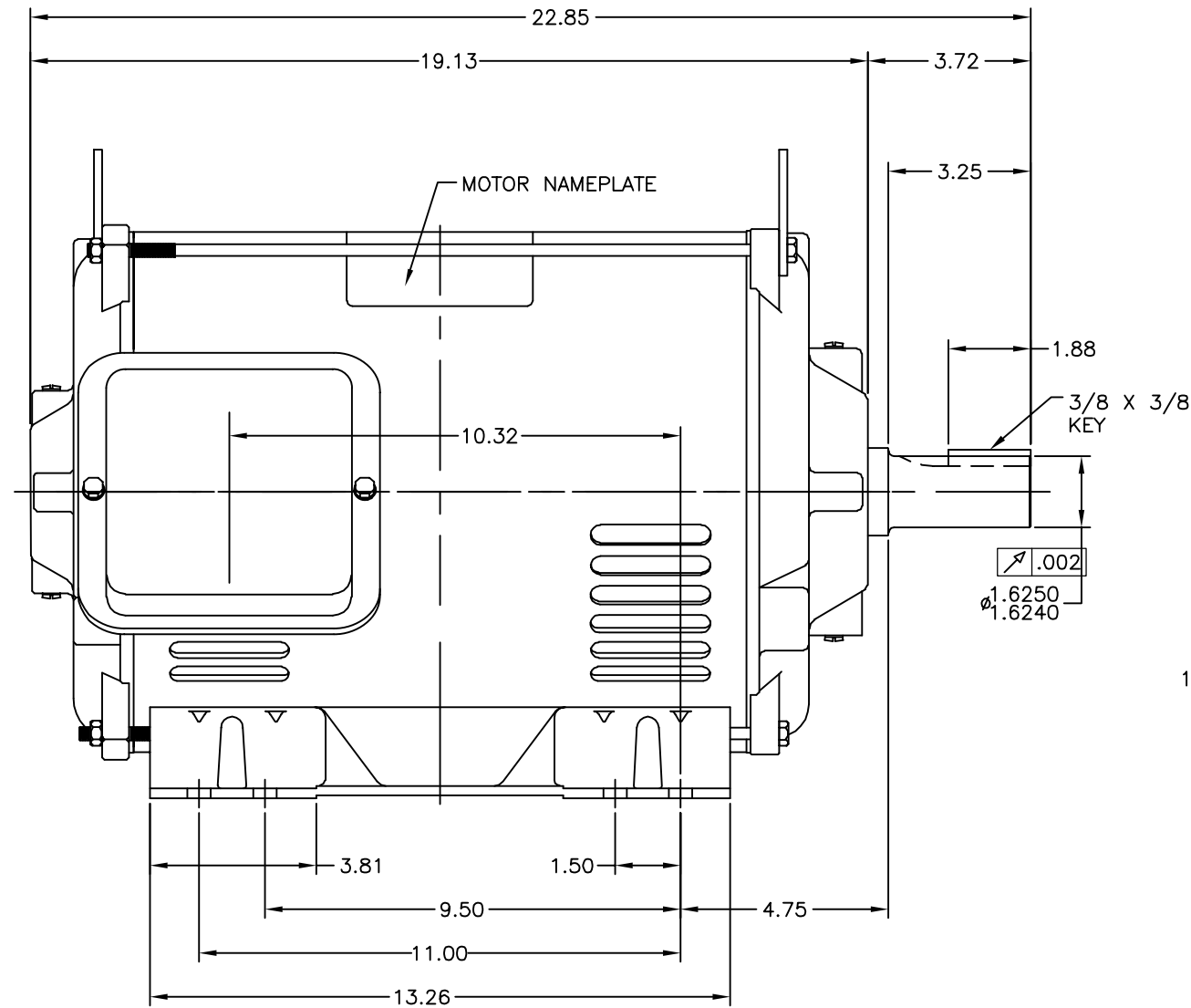
### Nameplate Specifications

Phase	<b>3</b>	Output HP	<b>40 &amp; 30 Hp</b>
Output KW	<b>30.0 &amp; 22.4 kW</b>	Voltage	<b>230/460 &amp; 200/400 V</b>
Speed	<b>3540 &amp; 2925 rpm</b>	Service Factor	<b>1.15 &amp; 1.15</b>
Frame	<b>286TS</b>	Enclosure	<b>Drip Proof</b>
Thermal Protection	<b>No Protection</b>	Efficiency	<b>92.4 &amp; 91.0 %</b>
Ambient Temperature	<b>40 °C</b>	Frequency	<b>60 &amp; 50 Hz</b>
Current	<b>90/45 &amp; 105/52.5 A</b>	Power Factor	<b>90.1</b>
Duty	<b>Continuous</b>	Insulation Class	<b>F</b>
Design Code	<b>B</b>	KVA Code	<b>F</b>
Drive End Bearing Size	<b>6213</b>	Opp Drive End Bearing Size	<b>6207</b>
UL	<b>Recognized</b>	CSA	<b>Y</b>
CE	<b>N</b>	IP Code	<b>22</b>
Number of Speeds	<b>1</b>		

### Technical Specifications

Electrical Type	<b>Squirrel Cage Induction Run</b>	Starting Method	<b>Across The Line</b>
Poles	<b>2</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>0 Ohms</b>	Mounting	<b>Rigid Base</b>
Motor Orientation	<b>Horizontal</b>	Drive End Bearing	<b>Ball</b>
Opp Drive End Bearing	<b>Ball</b>	Frame Material	<b>Rolled Steel</b>
Shaft Type	<b>TS</b>	Overall Length	<b>22.85 in</b>
Shaft Diameter	<b>1.625 in</b>	Shaft Extension	<b>3.25 in</b>
Assembly/Box Mounting	<b>F1/F2 CAPABLE</b>		
Outline Drawing	<b>18722701-001-S01</b>	Connection Drawing	<b>80022801</b>

REV	ECO	REV BY	DATE	APPD	DATE
B	0003531	K.PALOMO	01-07-09	C.CONTRERAS	01-07-09

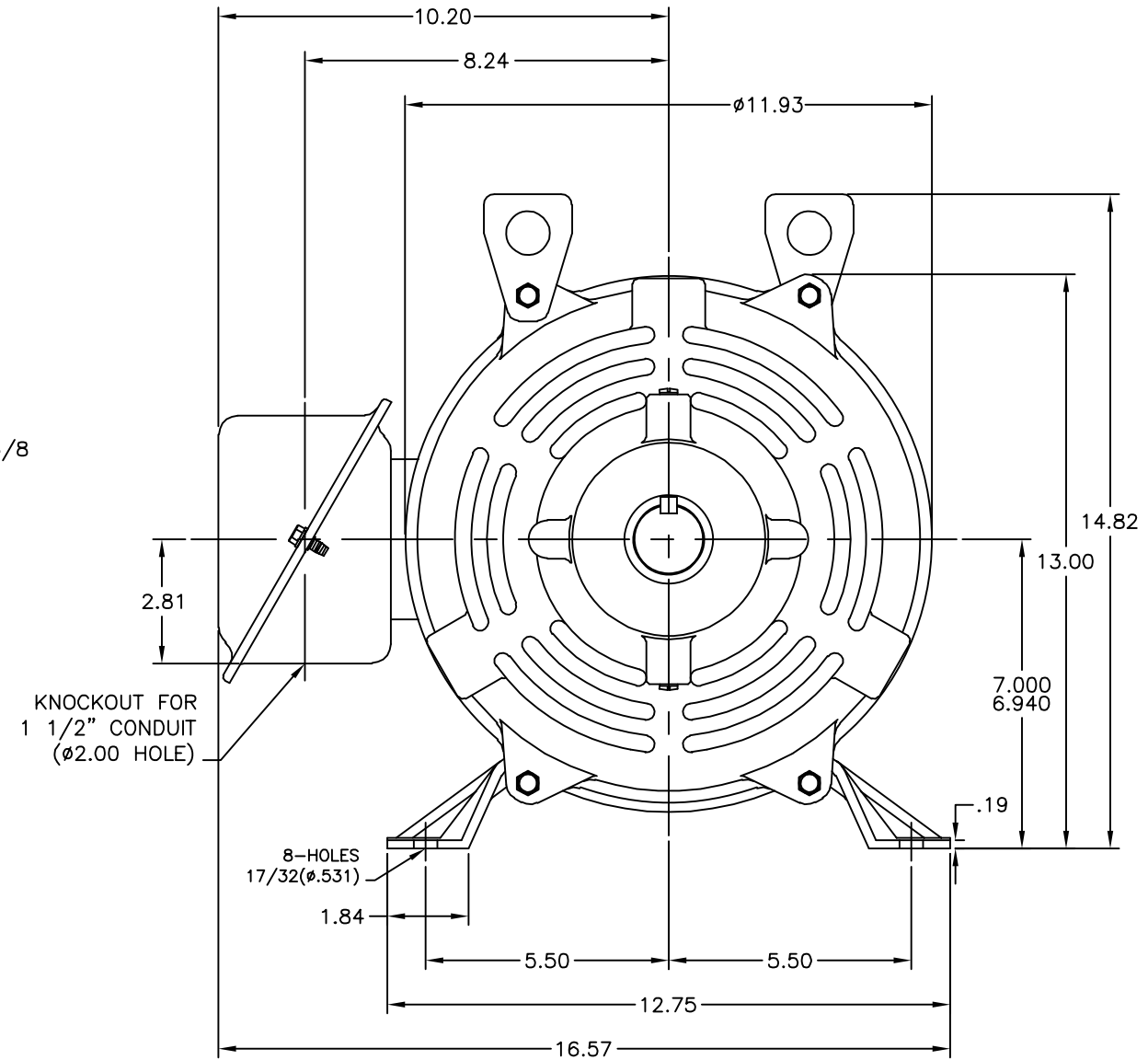
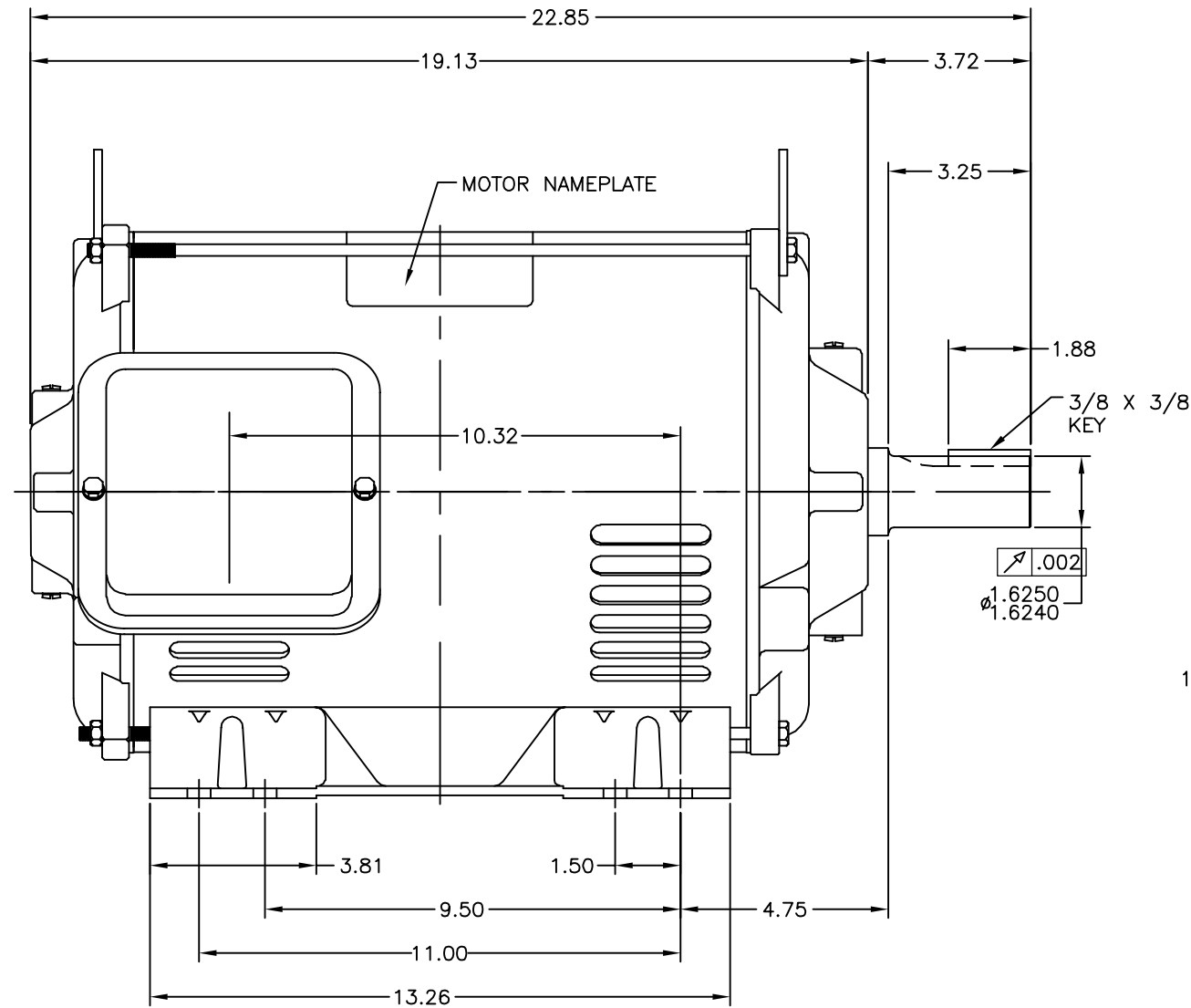


- NOTES:
- 1- CONDUIT BOX MAY BE ROTATED IN 90° INCREMENTS.
  - 2- MOTOR IS SUITABLE FOR FIELD CONVERSION FROM AN F1 TO AN F2 CONDUIT BOX LOCATION.
  - 3- MOTOR VENTILATION: AIR INTAKE THROUGH OPENINGS IN THE FACE OF EACH BRACKET AND EXHAUSTED THROUGH THE VENT SLOTS ON EACH END OF THE SHELL.

MOTOR DESCRIPTION:  
 3 PHASE OPEN DRIPPROOF STEEL SHELL 284TS OR 286TS MOUNTING.  
 OTHER MOUNTING ORIENTATIONS ARE ACCEPTABLE; HOWEVER WHEN MOUNTED OTHER THAN HORIZONTAL; MOTOR WILL NOT BE DRIPPROOF AS DEFINED BY NEMA.

GEOMETRIC CHARACTERISTICS & SYMBOLS ▽ FLATNESS — STRAIGHTNESS ∠ ANGULARITY ⊥ PERPENDICULARITY (SQUARENESS) // PARALLELISM ○ ROUNDNESS (CIRCULARITY) ⌀ CYLINDRICITY ≡ PROFILE OF ANY SURFACE ⤴ PROFILE OF ANY LINE ⤵ RUNOUT ⊕ TRUE POSITION ⊙ CONCENTRICITY = SYMMETRY	UNLESS OTHERWISE SPECIFIED DIM. TOLERANCES ARE AS FOLLOWS: INCH ± .1 ±.02 ±.005 ±.0005 mm ±0.5 ±0.13 ±0.013 ANG. ±.50 DEG REMOVE BURRS & BREAK SHARP EDGES: INCH .003-.015 mm 0.1-0.4 CORNER FILLETS TO: INCH .020 mm 0.5 MACHINE SURFACES: INCH 125 mm 3.2 METRIC DIMS. SHOWN IN [BRACKETS]	DR BY: AJB	01-19-04	AC Smith Innovation has a name. ELECTRICAL PRODUCTS COMPANY A DIVISION OF A. O. SMITH CORPORATION
		APPD: DVB	01-19-04	
		THIRD ANGLE PROJECTION	EDS DATE EDS DATE FORMAT REV F	SIZE D DWG NO 18722701-001
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REVISION: ECO	REVISADO POR: K.PALOMO	FECHA: 01-07-09	APROBADO POR: C.CONTRERAS	FECHA: 01-07-09
B	0003531			

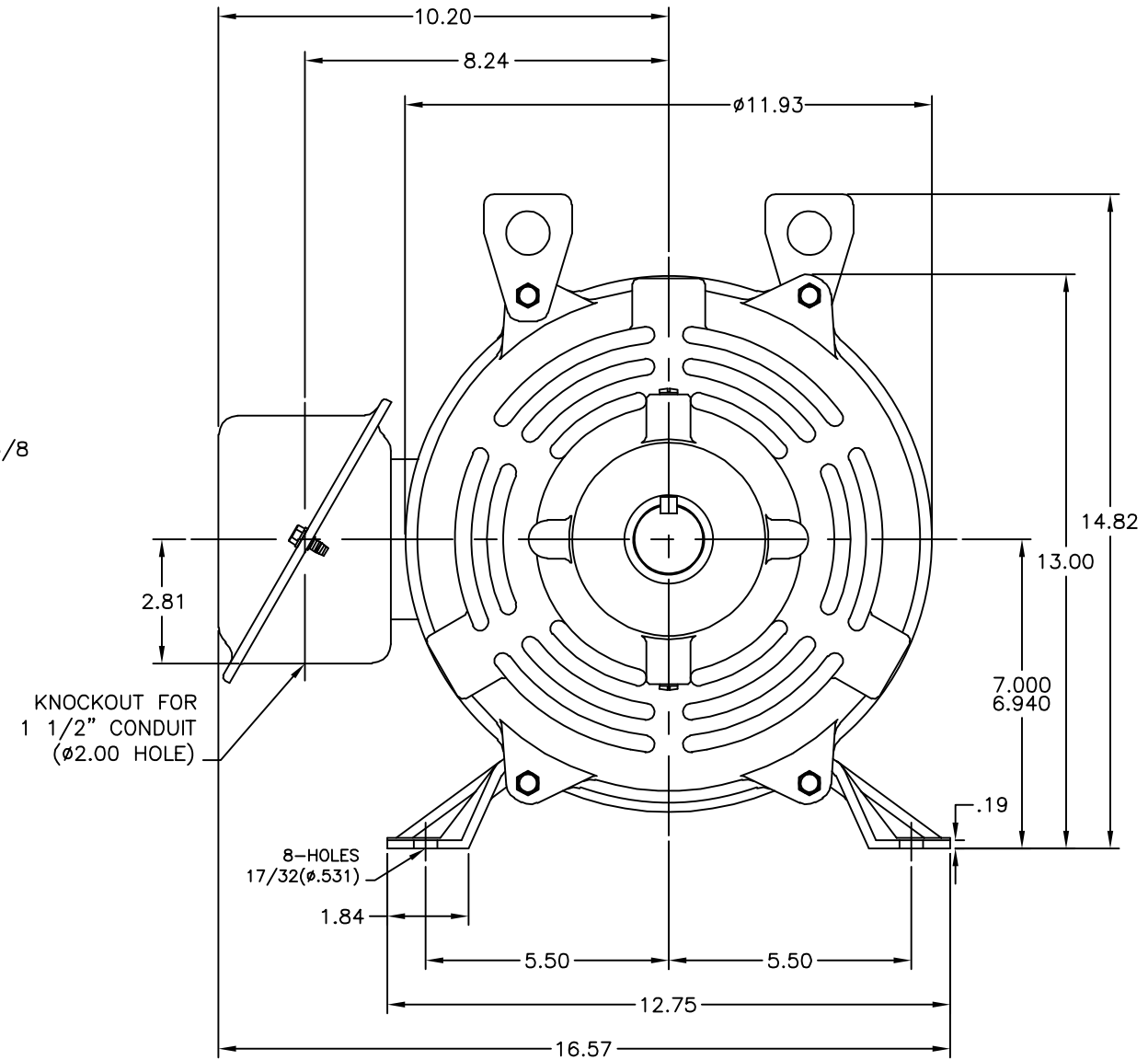
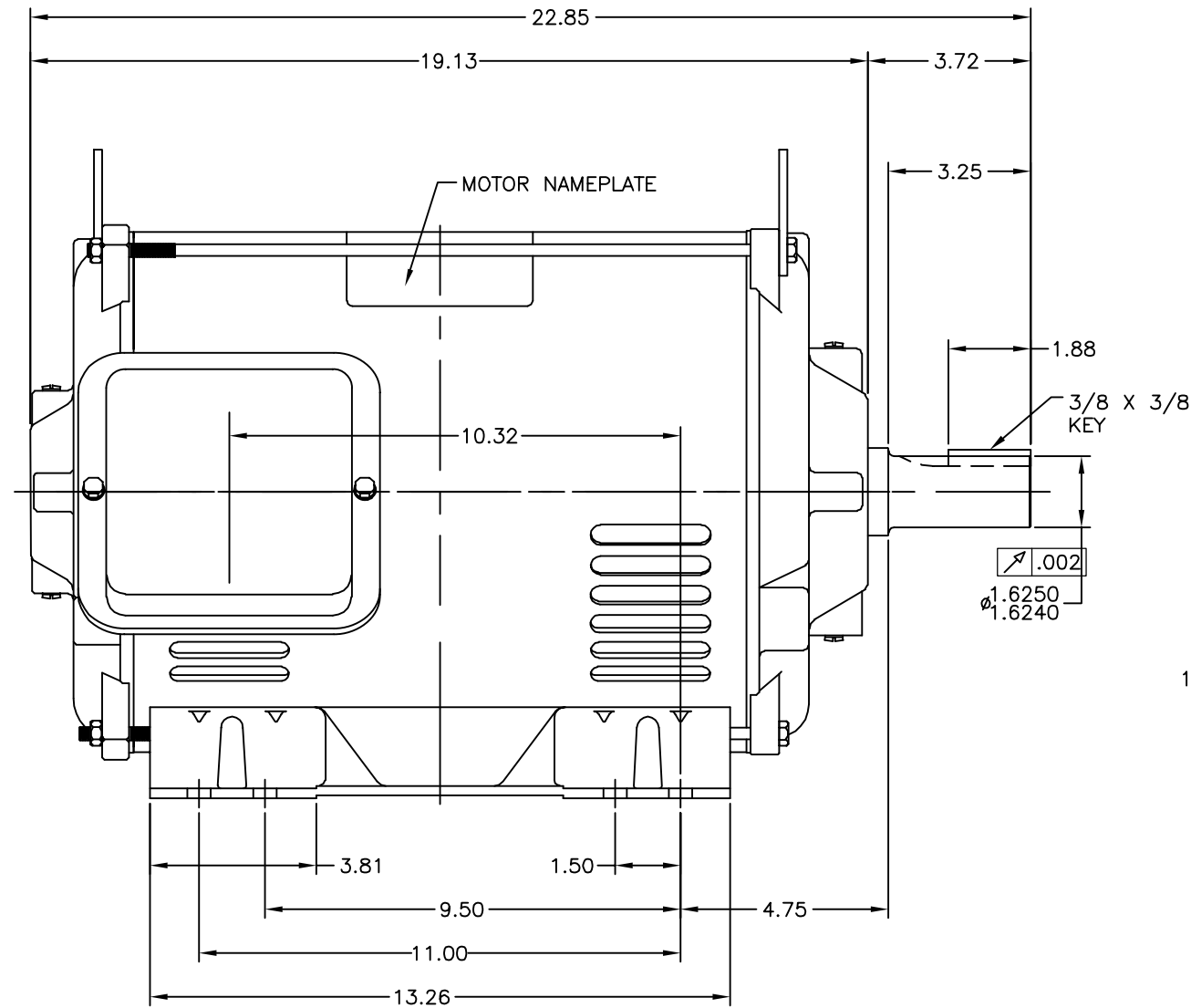


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CARACTERISTICAS DE GEOMETRIA Y SIMBOLOS: □ PLANICIDAD — RECTITUD ∠ ANGULARIDAD ⊥ PERPENDICULARIDAD (A ESCUADRA) // PARALELISMO ○ REDONDEZ (CIRCULARIDAD) ∅ CILINDRICIDAD ∩ PERFIL DE CUALQUIER SUPERFICIE ∩ PERFIL DE CUALQUIER LINEA † VARIACION ⊕ POSICION REAL ⊙ CONCENTRICIDAD = SIMETRIA	A MENOS QUE SE ESPECIFIQUE DE OTRA MANERA, LAS TOLERANCIAS DE LAS DIMS, SON LAS SIGUIENTES: PULG. X XX XXX XXXX mm ±0.5 ±0.13 ±0.013 PULG. ±.1 ±.02 ±.005 ±.0005 ANG. ±.50 GRADOS ELIMINAR REBABAS Y ORILLAS FILOSAS DEL BORDE. PULG. .003-.015 mm 0.1-0.4 FILETEAR ESQUINA: PULG. .020 mm 0.5 MAQUINAR SUPERFICIES PULG. 125 mm 3.2 DIMS METRICAS MOSTRADAS [PARENTESIS]	DIBUJADO POR: AJB	01-19-04	DESCRIPCION: OUTLINE
		APROBADO POR: DVB	01-19-04	
TERCER ANGULO DE PROYECCION		FECHA EDS: EDS DATE REV. FORMATO: F	ESCALA: NONE	HOJA: 1

版本	ECO	编制	日期	批准	日期
B	0003531	K.PALOMO	01-07-09	C.CONTRERAS	01-07-09



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形位公差 □ 平面度 ⊥ 垂直度 ∠ 倾斜度 // 平行度 ⊙ 圆度 ○ 圆柱度 ⊖ 面轮廓度 ⊖ 线轮廓度 ⊕ 圆跳动 ⊕ 位置度 ⊕ 同轴度 ⊕ 对称度	除另有注明 尺寸公差如下: 英寸 X XX XXX XXXX 毫米 ±.1 ±.02 ±.005 ±.0005 毫米 ±0.5 ±0.13 ±0.013 角度 ±.50 度 清理毛刺和尖棱 英寸 .003-.015 毫米 0.1-0.4 内圆角 英寸 .020 毫米 0.5 表面粗糙度 英制 125 米制 3.2 米制尺寸显示在 [ ]	绘图: AJB 批准: DVB 第三角投影	01-19-04 01-19-04 图纸格式发布日期 EDS DATE 图纸格式版本 F	<b>AC Smith</b> Innovation has a name. <b>ELECTRICAL PRODUCTS COMPANY</b> A DIVISION OF A. O. SMITH CORPORATION	名称 OUTLINE 图幅 D 图号 18722701-001 比例 NONE 页号 1
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**CERTIFICATION DATA SHEET**

**Model#:** 286TSTDR16002 AA  
**CONN. DIAGRAM:** 80022801  
**OUTLINE:** 18722701-001

**WINDING#:** BJR2T01 NONE 3  
**ASSEMBLY:** F1/F2 CAPABLE

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
40&30	30&22.4	3600	3540&2925	286TS	DP	F	B

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	60/50	230/460#200/ 400	90/45&105/52. 5	ACROSS THE LINE	CONTINUOU S	F4	1.15/1.15	40	3300

FULL LOAD EFF: 92.4&91.0	3/4 LOAD EFF: 94.9	1/2 LOAD EFF: 93.8	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 90.1&90.2	3/4 LOAD PF: 84.3	1/2 LOAD PF: 77.2	92.4	SQ CAGE IND RUN	20 / 10

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
59 LB-FT	580 / 290	95 LB-FT 161	190 LB-FT 322	-

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
80 dBA	90 dBA	0 LB-FT^2	- LB-FT^2	20 SEC.	2	0 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	POLYREX EM	TS	NONE	NONE	AISI 1045 (C-240)	ROLLED STEEL
6213	6207						

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

\*  
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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: 06/27/2017 02:00:20 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.

**Data Sheet**

**Date:** 19-06-2017  
**Customer:** \_\_\_\_\_  
**Attention:** \_\_\_\_\_  
**Submitted by:** FAREEDA DUDEKULA



286TSTDR16002

**Submittal**

Data @ **460 V**

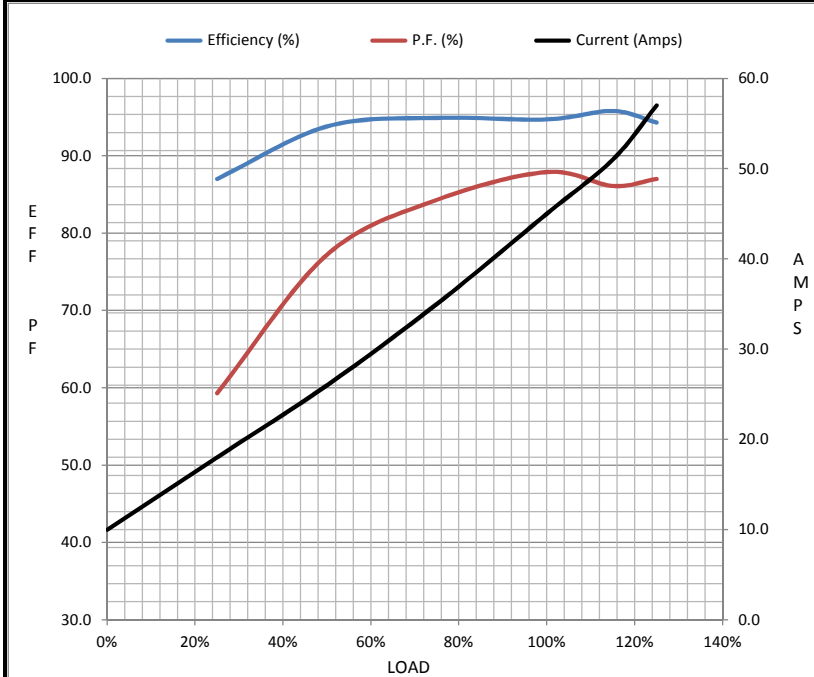
**Motor Load Data**

Load	0%	25%	50%	75%	100%	115%	125%	LR
Current (Amps)	10.0	18.0	26.0	35.0	45.0	51.0	57.0	290
Torque (ft-lb)	0.00	14.5	29.5	44.0	59.0	66.5	74.0	95.0
RPM	3600	3590	3580	3570	3560	3,550	3545	0
Efficiency (%)		87.0	93.8	94.9	94.7	95.8	94.3	
P.F. (%)	12.4	59.3	77.2	84.3	87.9	86.1	87.0	32.0

**Motor Speed Data**

	LR	Pull-Up	BD	Rated	Idle
Speed (RPM)	0	1800	3305	3560	3600
Current (Amps)	290	267	205	45.0	10.0
Torque (ft-lb)	95.0	80.8	190	59.0	0.00

Information Block				
HP	40.0			
Sync. RPM	3600			
Frame	286			
Enclosure	DP			
Construction	TDR			
Voltage	230/460#200/40(V)			
Frequency	60 Hz			
Design	A			
LR Code letter	F			
Service Factor	1.15			
Temp Rise @ FL	40 ° C			
Duty	CONT			
Ambient	40 ° C			
Elevation	1,000 feet			
Rotor/Shaft wk <sup>2</sup>	0.00 Lb-Ft <sup>2</sup>			
Ref Wdg	BJR2T01 NONE			
Sound Pressure @ 1M	80 dBA			
VFD Rating	NONE			
Outline Dwg	18722701-001			
Conn. Diag	80022801			
Additional Specifications:				
0				
365THFS8036				
EQUIV CKT (OHMS / PHASE)				
R1	R2	X1	X2	Xm
0.0000	0.0000	0.0000	0.0000	0.0000



**Speed - Torque Curve**

