



MUNICIPAL SALES
WATER & WASTEWATER

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Spur 3 Bio-Diesel Blend Component Unloading Pump
Tag 18-J-1867
Motor Data Sheet



Product Information Order

12-0004661

40HP,1770RPM,3PH,60HZ,324TC,TEFC,F1

Sales Order #:

1210700955-10

Customer Name:

**CORTECH
ENGINEERING (OEM
PUMP)**

ABB Motors and
Mechanical Inc. DATA TRANSMITTAL AND CERTIFICATION

Sales Order Number		Customer Number		Customer Order Number		P.O. Date			
1210700955-10		30883		8672322		06/05/2023			
Sold To: CORTECH ENGINEERING (OEM PUMP) 1340 N. JEFFERSON ST ANAHEIM, CA 92807 United States				DATA PROVIDED WITH THIS TRANSMITTAL AND CERTIFICATIONS IS: ☒ PRELIMINARY, DATA FOR CUSTOMER APPROVAL: The associated documents requested on this order are submitted for approval. Please reply promptly or the order could be delayed. ☐ FINAL, APPROVED FOR CONSTRUCTION OR INSTALLATION.					
Ship To: CORTECH ENGINEERING 1340 N. Jefferson St. Anaheim, CA 92807 United States				Data Source: ISSUED BY: Benjamin Robinson 06/06/2023 Baldor-Reliance Columbus					
Application General Industrial			Quantity 1.000		Frame 324TC		Motor / Gen. D.S.:		
Elec Type 40 HP		Phs 3		Hertz 60		Voltage 460		Electrical Design Motor / Gen. C.D.:	
RPM 1800		Enclosure TEFC		Time CONT		Temp 40		Leads Location Conduit Box:	
Rotation Bi-directional		DC Field Excitation		Pwr Cd		Winding Type		Mounting Base F-1	
Insulation F		Mtg F-1		Drive		Bearing Ball / Ball		S F 1.15	
Bs / RI		Model Number		B L O W E R		Motor Part #		Line Voltage PH/HZ/V	
Type		Torque		Enclosure		Insulation		Phs	
Hertz		Volts		FL Amps					

Additional Specifications:

BASIC CONFIGURATION

Partial Motor Design No
Frame Band 312
Customer Application General Industrial
Industry Spec IEEE-841
Division Div. 2
Hazardous Location Group Code D
Hazardous Location Group Code A
Hazardous Location Group Code B
Hazardous Location Group Code C
Temp Code T3C

ELECTRICAL

Ambient Minimum -25C
Winding Type Random
Starting Method Standard Start
Standard NEMA Inertia 189

MOUNTING

Mounting Flange - DE C-Face

Certified
ISO 9001

Engineered Motors

ABB Motors and Mechanical Inc. DATA TRANSMITTAL AND CERTIFICATION

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1210700955-10	30883	8672322	06/05/2023
Mounting Position	F-1		
Frame Mounting	Foot (Dual Mounting Hole)		
Foot Planarity	Standard (0.005 IN/FT)		
Drive Method	Direct		
Mounting Orientation	Horizontal		
Dowel Provisions	Yes		
Dowel Provisions Qty	4		
Vertical Jacking Provisions	Yes		
Shaft - Special Material	No		
Shaft Extension	T		
BEARINGS			
Drive End Seal	Inpro		
Opposite Drive End Seal	Inpro		
Lube Type	Grease		
Grease Type	Exxon Polyrex EM		
Grease Fittings Rqd	Yes		
Grease Fitting Type	Alemite 1610 or equal		
Grease Relief Fittings Rqd	Yes		
Relief Fitting Type	Alemite		
MECHANICAL			
Balance	Ultra-Standard (0.08 in/sec)		
Rotation Facing ODE	Bi-directional		
Fan Material	Standard		
Ingress Protection	IP56		
Paint System	Standard (C2)		
Paint Color Specification	Standard Epoxy		
Paint Color	Blue-Green		
Baldor-Reliance Paint Spec No	004824-007K / MG1025N19		
Frame Grounding Required	Yes		
Ground Pad Type	Drilled & Tapped Hole in Frame		
Ground Pad Location	Frame - same side as main CB		
Auto Drain Type	"T" Drain – Stainless Steel		
CONDUIT BOX			
Main Conduit Box	Required		
Main Conduit Box Location	Standard (side)		
Main Conduit Box Material	Cast Iron		
Main Conduit Box Size	Standard Oversize		
Terminal Panel	No		
Lead Entry Location	Toward Feet - Down		
Lugs	Yes		
Grounding	Yes		
Bus Bars / Standoffs	No		
NAMEPLATE / LABELS			
Nameplate Language	English		

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Engineered Motors

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Additional Haz Loc Marks Yes
Additional Haz Loc Text CL I, ZONE 2, GP IIC IIB IIA,
Additional heater Markings No
Label CSA Yes
Efficiency Marking DOE CC Mark Required

PACKAGING

Packaging Type Standard Packing

TESTING

IEEE841 Factory Test Non-witnessed

DOCUMENTATION

Document Unit of Measure US
Certified Dimension Sheet Yes
Performance Data/Curves Yes
Standard Connection Diagram Yes
Motor Instruction Manual Yes
Renewal Parts List Yes
Nameplate Data Yes
Documentation Format PDF

COMMERCIAL COMMENTS

Estimated Lead Time Estimated Lead Time is based on plant loading at the time of quotation and is intended to be used as a guide for our customers. This estimation includes the Engineering and Manufacturing time only. It DOES NOT include shipping time. Please contact your ABB Motors and Mechanical Inc. representative if specific delivery requirements are needed.

Certified
ISO 9001

Engineered Motors

Notes:	Class null Division null
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Nameplate NP4463									
CAT.NO.		CUST. P/N		ENCL	TEFC				
SPEC	12-0004661	CC	010A	FRAME	324TC	SER.NO.			
HP	40	CLASS	F	HZ	60	ODE BRG	6312	DE BRG	6312
R.P.M.	1770	PH.	3	DES.	B	ABMA DE BRG	60BC03X30X		
VOLTS	460	CODE	F			ABMA ODE BRG	60BC03X30X		
AMPS	46	MOTOR WT.	600			LUBRICATION	POLYREX EM		
RATING	40C AMB-CONT	MAX. KVAR	8.3			BLANK			
NEMA NOM. EFF.	94.1	NO. OF ROTOR BARS	40	SER.F.	1.15	IP	56		
GUAR.MIN.EFF	93	NO. OF STATOR BARS	48	P.F.	86				
TEMP CODE	T3C								
TEMP=	160								
VOLTS		AMPS		WATTS		MAX. SPACE HEATER TEMP.			

AC Induction Motor Performance Data

Record # 75930

Typical performance - not guaranteed values

Winding: 12WGY762-R018				Type: 1260M		Enclosure: TEFC	
Nameplate Data				460 V, 60 Hz: Single Voltage Motor			
Rated Output (HP)		40		Full Load Torque		118 LB-FT	
Volts		460		Start Configuration		direct on line	
Full Load Amps		46		Breakdown Torque		305 LB-FT	
R.P.M.		1770		Pull-up Torque		146 LB-FT	
Hz		60 Phase		3		Locked-rotor Torque	
NEMA Design Code		B KVA Code		F		Starting Current	
Service Factor (S.F.)		1.15				273 A	
NEMA Nom. Eff.		94.1 Power Factor		86		No-load Current	
Rating - Duty		45C AMB-CONT				14.3 A	
S.F. Amps						Line-line Res. @ 25°C	
						0.165 Ω	
						Temp. Rise @ Rated Load	
						62°C	
						Temp. Rise @ S.F. Load	
						77°C	
						Locked-rotor Power Factor	
						26.5	
						Rotor inertia	
						7.99 LB-FT2	

Load Characteristics 460 V, 60 Hz, 40 HP

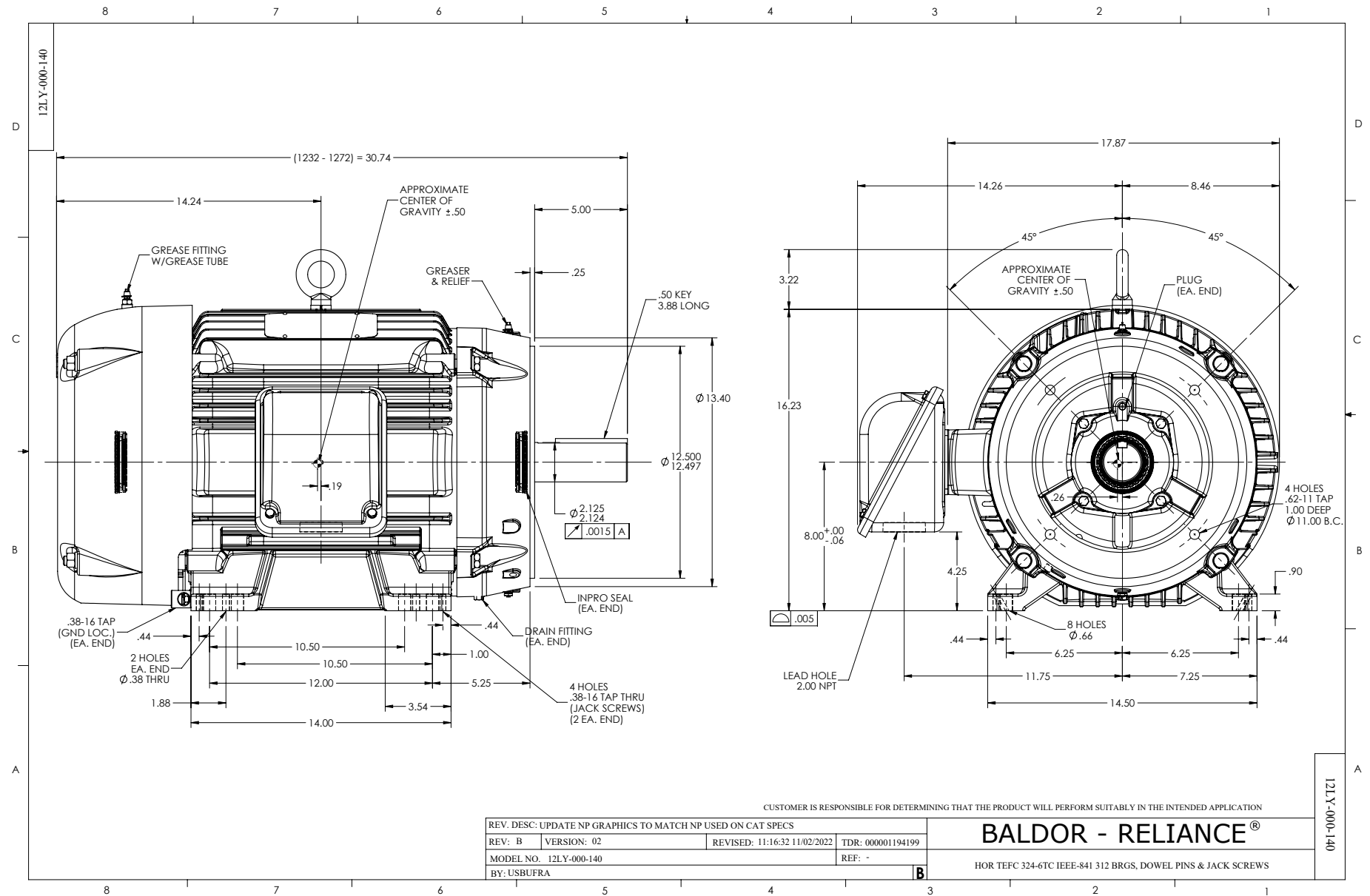
% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	58	77	84	86	87	86	87
Efficiency	92.7	94.6	94.7	94.2	93.4	92.5	93.7
Speed	1794	1788	1781	1774	1765	1757	1769
Line amperes	18.1	25.6	35.6	46.1	57.9	70.1	53.2

Parts List		
Part Number	Description	Quantity
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 EA
LC0006	CONNECTION LABEL	1.000 EA
LB1449	DIV-2/NEC WARNING LABEL	1.000 EA
LB1417	LABEL CARTON 6X4 PERFORATED BLANK ROLLS	1.000 EA
NP4463	SS IEEE841-2021 DIV-2 UL CSA-C US EEV	1.000 EA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (2100bx)4/22	1.000 EA
ML14-1E08	08 AWG, 1,BLUE	26.000 IN
WD1000B12	T&B D71, RING TERM, 8AWG, .25 STUD	3.000 EA
12SL448F	STATOR LAMINATION, SPECIAL OXIDE ANNEAL	7.500 IN
INSKIT30263	CL,3PH,CL B&F,SLOT DES112, 7.500 STK, ST	1.000 EA
MW1000A16K	16 AWG,H.MW35,NATURAL,1000 LB.SPOOL	58.800 LB
MW1000A17K	17 AWG,H.MW35,NATURAL,1000 LB.SPOOL	7.810 LB
ML14-2A08	08 AWG, 2,WHITE	26.000 IN
ML14-3J08	08 AWG, 3,ORANGE	26.000 IN
MG5024	VARNISH PEDIGREE® 8183 VT POLYESTER	0.070 GA
BG6312A01	6312 OPEN,C3,SLUSH	1.000 EA
BG6312A01	6312 OPEN,C3,SLUSH	1.000 EA
RB1099A02P	SPL RETAINER RING 312 BRG. FOR 311 SEAL	1.000 EA
HW0001X03	BALANCING KIT, DIE CAST ROTORS 312/318 F	1.000 EA
RB1099A01P	SPL RETAINER RING 312 BRG. FOR 312 SEAL	1.000 EA
MG1500Y02	WILKOPON PRIMER YELLOW	0.010 GA
12RD4K60A04	ROTOR CORE 0.39S 12ER4000	1.000 EA
12SH1A29B17	SH,TEFC,320,TC,MR3008,6312,6312	1.000 EA

Parts List (continued)		
Part Number	Description	Quantity
HW2501F50	KEY 5/16 SQ. X 7.00	1.000 EA
12SF1109A60P	STATOR FRAME NON-XP CP8 W/EPOXY PRIMER	1.000 EA
HW3201A02	5/8-11 EYEBOLT	1.000 EA
HW1002A75	WASHER, 3/4 HI-COLLAR SPRLOCKWSR	1.000 EA
HW3021L10	DRIVLOK SPRING PIN, 3/8 X 1", ROLL PIN	1.000 EA
WD1000B19	TERMINAL BURNDY L250HP	1.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	1.000 EA
80XN3816A12	SET SCREW,HEX SOCKET CUP POINT,3/8-16 X	4.000 EA
12FH1002A15LP5	FAN COVER, MACH, W/PRIMER W/MG1025L14	1.000 EA
HW1001A50	LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I	4.000 EA
XY5013A12	NUT,1/2-13,HEX,STEEL,ZINCPLATED	4.000 EA
09FN3001B03SP	EXTERNAL FAN, PLASTIC (COMES W/SCREW FRO	1.000 EA
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA
MJ1000A02	GREASE, POLYREX EM EXXON	0.200 LB
10XN3816K08	3/8-16 X .50 HEX HD CAP SCREW GRADE 5	1.000 EA
12EP1111A02LP5	FR ENDPLATE, MACH W/EPOXY PRIMER & PAINT	1.000 EA
HA3400A32	STUD, 1/2-13 X 7.38	4.000 EA
HW1001A50	LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I	4.000 EA
HW4601A55	INPRO/SEAL #1698-A-M0022-0 VBXX 312 BRG/	1.000 EA
HW5100A15	W4997-050 WVY WSHR (WB)	1.000 EA
HW4500A20	1/8NPT SL PIPE PLUG	1.000 EA
HA4017A02	.125X2.50 GREASER EXTENS.F/S	1.000 EA
HA4017A01	1/8 X 4 GREASE EXT (F/S)	1.000 EA
HW4019A01	PIPE COUPLING 1/8 NPT,STEEL,ZINC COATING	1.000 EA
10XN3118K40	5/16-18 X 2.50" HEX HD, GRADE 5	4.000 EA
RM1002A03SP	SEAL RING 311	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA

HW4500A21	1618BALEMITE FITTING 825 UNIVERSAL	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4002A03	#304 S.S. DRAIN FITTING, .125 NPT (.44 H	1.000 EA
12EP1105A99P	PU EP, MACH, PLS, INPRO W/EPOXY PRIMER	1.000 EA
HW1001A50	LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I	4.000 EA
10XN5013K28	1/2-13 X 1.75 HEX HEAD MACH SCREW,GRAD	4.000 EA
HW4601A55	INPRO/SEAL #1698-A-M0022-0 VBXX 312 BRG/	1.000 EA
HW4500A20	1/8NPT SL PIPE PLUG	1.000 EA
10XN3118K40	5/16-18 X 2.50" HEX HD, GRADE 5	4.000 EA
RM1002A04SP	SEAL RING 310 FRAME 312 BRG	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4002A03	#304 S.S. DRAIN FITTING, .125 NPT (.44 H	1.000 EA
10CB1000A203P	KOBX W/2.00 NPT & .31 GND MTG, EPOXY PRI	1.000 EA
09GS1010	GASKET, DWG, LEADWIRE SEPERATOR	1.000 EA
10XN3118K16	5/16-18 X 1" GRADE #5, STL, ZINC PLATE	4.000 EA
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	4.000 EA
WD1000B25	GND LUG, BURNDY L125HP OR T&B L125HP-BB	1.000 EA
19XW3118G08	.31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN	1.000 EA
10CB1503A01P	CONDUIT BOX LIPPED LID, MACH W/EPXY PRMR	1.000 EA
14GS1003	GASKET CONDUIT BOX LID, NEOP	1.000 EA
10XN2520K16	1/4-20 X 1" HX HD SCRW GRADE 5, ZINC P	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
MG1025N19	WILKOFAS, 778.50, RELIANCE BLUE-GREEN 8	0.125 GA
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.031 QT
MJ5002A01	SILICON RUBBER SEALANT, 732CL 10.3 OZ TU	0.025 EA
MJ5002A01	SILICON RUBBER SEALANT, 732CL 10.3 OZ TU	0.033 EA
12PA1000	PACKAGING GROUP PRINT PK1024A07	1.000 EA
HW2501H33	KEY, 1/2 SQ X 3.875	1.000 EA

MJ5004A59	ADHESIVE LOCTITE #401 MSC #88545264	0.010 EA
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Marketing maintained PDF of MN416:

<http://www.baldor.com/support/Literature/Load.ashx/MN416?ManNumber=MN416>

 	LOW VOLTAGE MOTOR (IEEE 841) DATA SHEET U.S. CUSTOMARY UNITS APPLICABLE MOTOR SPECIFICATION A8KM-PP-000-50670-A		Contract: A8KM	Rev	
			Item No: 18-J-1867		
			Revision: D		Date: 1-Feb-23
			Unit: Rail Car Unloading & Loading		
			RFQ / P.O. No.: 4-624-PO		
		Sheet 5			

1	APPLICABLE TO ☐ PROPOSAL ☒ PURCHASE ☐ AS BUILT		
2	CLIENT: WORLD ENERGY PARAMOUNT	SERVICE: Rail Car Unloading & Loading	
3	PLANT: WORLD ENERGY RENEWABLES PLANT	MOTOR TAG NO. / NO. REQ'D: 18-J-1867M / 1	
4	SITE: PARAMOUNT, CA	DRIVEN EQUIPMENT TYPE / TAG NO.: SLIDING VANE PUMP / 18-J-1867	

DESIGN DATA AND ACCESSORY EQUIPMENT									
6	NAMEPLATE	40	HP	1.15	S.F	1770	RPM	POWER (VOLTAGE/PHASE/HERTZ)	460 / 3 / 60
7	ROTATION (WHEN FACING MOTOR OPPOSITE DRIVE END): ☐ CW ☐ CCW Fans shall be bi-directional								
8	INSULATION CLASS: ☐ B ☒ F ☐ H ☐ VPI TEMP. RISE CLASS B / °C over 40 °C AMBIENT								
9	AREA CLASSIFICATION: ☒ CLASS I , GROUP BCD DIV. 2 ☒ T-RATING T3C / °F								
10	☐ UNCLASSIFIED								
11	LOCATION: ☐ INDOOR ☒ OUTDOOR ☐ SHELTERED UNUSUAL CONDITIONS: ☐ DUST ☐ OTHER								
12	AMBIENT TEMPERATURE: MAX 104 °F / MIN. 35 °F ALTITUDE 69 ft								
13	ENCLOSURE: ☒ TOTALLY-ENCLOSED FAN-COOLED ☐ TOTALLY-ENCLOSED NONVENTILATED ☐ EXPLOSION PROOF								
14	MOUNTING METHOD: ☒ FOOT ☐ FLANGE, TYPE:								
15	MOUNTING ARRANGEMENT: ☒ HORIZONTAL ☐ VERTICAL SHAFT DOWN ☐ VERTICAL SHAFT UP								
16	BEARING TYPE: ☒ BALL ☐ ROLLER BEARING LUBRICATION: ☒ GREASE ☐ OIL ☐ PURE OIL MIST								
17	CONNECTION TO LOAD: ☒ DIRECT CONNECTED ☐ V-BELT ☒ THROUGH GEAR ☐ CLOSE COUPLED								
18	EQUIPMENT OPERATION: ☐ CONTINUOUS ☐ SPARED CONTINUOUS ☒ INTERMITTENT-CYCLES / DAY								
19	SOUND PRESSURE LEVEL REQUIREMENTS: 85 dBA @ 3 FEET (Guaranteed to not exceed)								
20	STARTING: ☒ FULL VOLTAGE ☒ REDUCED VOLTAGE, 80 % OF VOLTAGE Starting Voltage Dip Allowance								
21	☐ UNLOADED ☒ LOADED ☐ CAPACITORS FOR POWER FACTOR CORRECTION								
22	☐ SPACE HEATERS V PHASE °F MAX. TEMP								
23	☒ OVERSIZE TERMINAL BOX ☒ DRAIN PLUGS								
24	☒ SS NAMEPLATE ☐ AUXILIARY NAMEPLATE								
25	TEST ☒ ROUTINE ☐ COMPLETE ☒ VIBRATION ☒ REPORT ☒ FOOT FLATNESS								
26	REMARKS: 5.1) This data sheet applies to motors 1/2 hp through 500 hp with anti-friction bearings.								
27	5.2) IP55 degree of protection is required.								
28	5.3) Average relative humidity is 54%.								

INFORMATION BELOW TO BE COMPLETED BY VENDOR									
31	MOTOR MFR.	Baldor	MODEL	CECP84110T-4	SERIAL NO.				
32	NAMEPLATE HP	40	FULL LOAD RPM	1770	FRAME	324TC	WEIGHT	629	LB
33	MOTOR OUTLINE DRAWING NO. 12LY-000-140								
34	ROTOR CAGE MATERIAL OF CONSTRUCTION				MOTOR WINDING MATERIAL				
35	BEARING MANUFACTURER				SIZE				
36	VERTICAL MOTOR THRUST BEARING:		TYPE		CAPACITY: UP		LBS DOWN		LOCATION
37									
38	LOAD	FULL	3/4	1/2	OTHER	LOCKED ROTOR AMPS*		AMPS	
39	AMPERES	46.1	35.6	25.6		FULL LOAD TORQUE*		FT-LB	
40	EFFICIENCY, %	94.2	94.7	94.6		LOCKED ROTOR TORQUE*		%	
41	POWER FACTOR	86	84	77		PULL UP TORQUE*		%	
42	SPEED, RPM	1774	1781	1788		BREAKDOWN TORQUE*		%	
43						ACCEL. TIME W/ LOAD (0 TO FULL SPEED)*		SEC.	
44	SOUND LEVEL: GUARANTEED <85 dBA / EXPECTED dBA					STALL TIMES AT ZERO RPM* - HOT / COLD		SEC.	
45	FAN MATERIAL (NON-SPARKING)					NUMBER OF CONSECUTIVE STARTS*			
46						* INDICATED AT RATED VOLTAGE			

INFORMATION BELOW TO BE PROVIDED BY VENDOR AFTER PURCHASE (REFER TO RFQ/PO DOCUMENTS)									
48	☒ SAFE TIME - CURRENT CURVE MAX. SURFACE TEMP. DURING NORMAL STARTING OR OPERATION OF:								
49	☒ SPEED - TORQUE CURVE ☐ ROTOR °F ☐ STATOR °F ☐ ENCLOSURE °F								
50	☒ SAFE LOCKED ROTOR TIME HOT COLD								
51	NOTES:								
52	5.4 Motor nameplate shall indicate service factor, area classification and T-rating. T-rating relates to both external and internal components.								
53	5.5 Provide accessory loads on submittal documents, e.g. Volts, HP, kVA, etc.								
54	5.6 Motor is rated for Class 1, Div 2, BCD, T3C. Motors are certified by an NRTL (CSA, UL, etc) recognized by OSHA.								
55	Certificate and Nameplate marking to be included.								
56	5.7 Oversized motor termination boxes and grounding provisions inside the box and outside on frame.								
57	5.8 18-J-1867 is VFD (VFD by others) driven. Motor is suitable for inverter-duty.								
58									

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