



IMPERIAL
ELECTRIC
The Driving Force In Motion

AC Traction Elevator Hoist Motor

Polyphase squirrel cage induction motor designed for use with VVVF drives, low slip (2% Nominal) with high breakdown torque (250% Minimum), or high slip (10% Nominal) with high starting torque (275% Minimum).

Mechanical construction with cast iron frame & brackets, hot rolled steel shaft, regreaseable ball bearings, open drip-proof, totally enclosed fan cooled, or totally enclosed non-ventilated enclosures.

If required, motor shall be supplied with motor mounted shaft driven optical encoder rated at 1,024 pulses per revolution.

Insulation system shall be standard class B or optional class F with stator winding of copper insulated magnet wire. Insulation processing shall include minimum of 2 dips and bakes of polyester varnish.

Duty for VVVF applications shall be 60 minute for low slip and 30 minute for high slip designs at name plate rating. Motor temperature rise in a 40°C maximum room ambient at nameplate rating shall be:

Open Drip-Proof	60°C by resistance
Totally Enclosed Fan Cooled	60°C by resistance
Totally Enclosed Non-Ventilated	65°C by resistance

Laminations to be fully processed core plated electrical grade steel of suitable gage.

Rotor shall be of die cast aluminum construction.

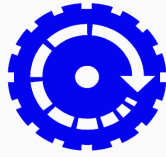
Motors shall comply with all applicable NEMA standards per publication MG-1 latest edition and revisions. Motors shall be CSA listed and have appropriate CSA marking on the motor nameplate.

For other mechanical and electrical configurations, consult factory.

Imperial Electric
1503 Exeter Road
Akron, OH 44306
Phone: (330) 734-3600
Fax: (330) 734-3601
www.ImperialElectric.com

Contact: Dennis Rhodes
Elevator Sales Engineer
Rhodesd@ImperialElectric.com
Ext. 206

10/17/2002 REV A



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AC VVVF Elevator Hoist Motor 1200 RPM Standard Amp Ratings

Low Slip, Single Speed, Ball Bearings, Elevator End Play, 50°C Rise, 1200RPM, 60 Minute Duty, Open Construction

HP	5	7.5	10	12.5	15	20	25	30	40	50	60	75
Frame	256T	256T	256T	284T	284T	286T	324T	326T	365T	365T	405T	405T
200 V	15.4	24.5	30.8	34.1	43.8	58.3	70.0	80.4	113.0	132.2	152.0	189.0
208 V	14.8	23.5	29.6	32.7	41.9	55.2	67.0	78.4	108.0	129.3	147.0	182.0
220 V	14.2	21.5	26.6	30.9	39.3	52.4	65.8	72.5	104.0	122.0	139.0	172.0
230 V	13.5	21.6	26.4	29.5	39.0	49.8	61.0	70.4	98.2	116.2	132.2	164.0
240 V	13.6	20.4	26.5	28.9	36.0	47.6	58.6	68.6	95.4	114.2	127.0	156.8
440 V	7.1	10.8	13.3	15.6	19.7	26.2	32.9	36.7	52.0	61.0	69.3	86.0
460 V	6.8	10.8	13.2	14.8	19.5	24.9	30.5	35.2	49.1	58.1	66.1	82.0
480 V	6.4	10.2	13.3	14.2	18.0	23.8	29.3	34.3	47.7	57.1	63.5	78.4
575 V	5.4	8.5	10.5	11.9	15.2	20.1	24.8	28.4	38.6	46.5	53.0	65.5
Efficiency	87.1%	86.9%	88.0%	88.9%	89.0%	89.7%	89.5%	90.8%	90.0%	90.4%	91.4%	91.1%
P/F	79.8%	75.8%	72.4%	88.8%	83.1%	82.6%	85.9%	87.9%	85.1%	88.6%	92.7%	94.2%
BTU/HR	566	864	1,042	1,192	1,416	1,754	2,240	2,322	3,395	4,056	4,312	5,596

Bold Numbers are Calculated

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 Ext. 206
www.ImperialElectric.com

03/09/2005



AC VVVF Elevator Hoist Motor 900 RPM Standard Amp Ratings

Low Slip, Single Speed, Ball Bearings, Elevator End Play, 50°C Rise, 1200RPM, 60 Minute Duty, Open Construction

HP	5	7.5	10	12.5	15	20	25	30	40	50	60	75
Frame	256T	256T	284T	286T	286T	324T	326T	365T	365T	405T	405T	405T
200 V	18.2	31.0	32.0	45.0	48.4	67.0	82.0	97.0	126.0	142.0	166.0	210.0
208 V	17.4	28.6	31.0	40.3	48.5	62.0	79.4	91.3	122.3	136.0	160.0	202.0
220 V	16.8	29.2	31.6	39.6	45.0	57.7	72.7	85.6	111.2	130.0	152.0	192.0
230 V	4.0	28.0	29.2	36.7	43.2	55.0	67.6	80.4	111.0	120.4	141.0	184.0
240 V	16.2	27.3	26.5	37.4	40.0	55.2	68.0	80.6	105.0	118.0	138.0	175.0
440 V	8.4	14.6	15.8	19.8	22.5	28.9	36.3	42.8	55.6	65.0	76.0	96.0
460 V	8.0	14.0	14.6	18.9	21.6	27.5	33.8	40.2	55.3	60.2	70.2	92.0
480 V	7.6	13.7	13.3	18.7	20.0	27.6	34.0	40.3	52.4	59.0	69.0	87.4
575 V	6.4	11.4	11.8	15.6	17.7	23.0	28.5	33.8	44.0	50.0	58.0	73.0
Efficiency	84.9%	85.0%	87.5%	87.2%	88.1%	89.0%	89.5%	89.1%	89.6%	90.5%	91.2%	91.2%
P/F	69.6%	62.2%	76.1%	73.3%	72.5%	76.3%	73.8%	76.4%	79.3%	85.8%	85.9%	84.5%
BTU/HR	679	1,011	1,091	1,401	1,548	1,888	2,240	2,803	3,546	4,009	4,422	5,527

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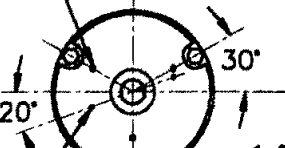
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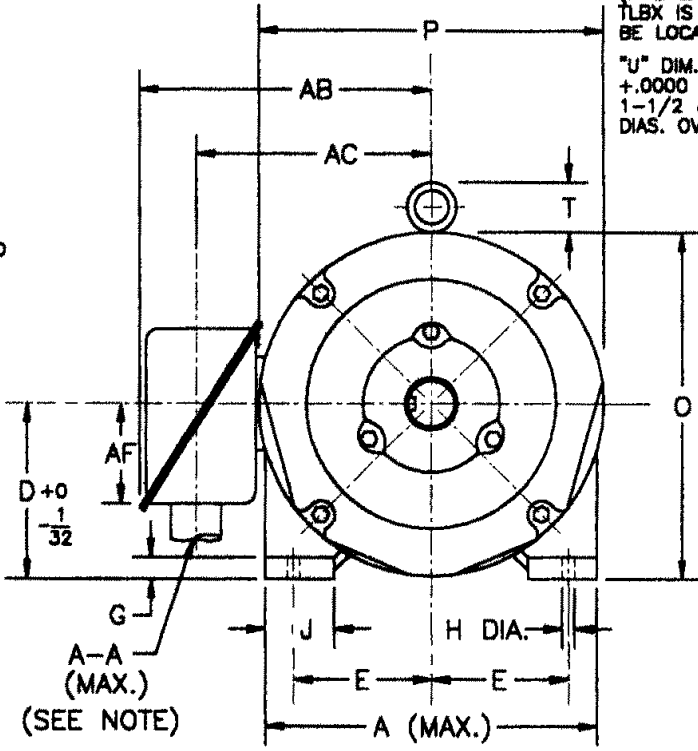
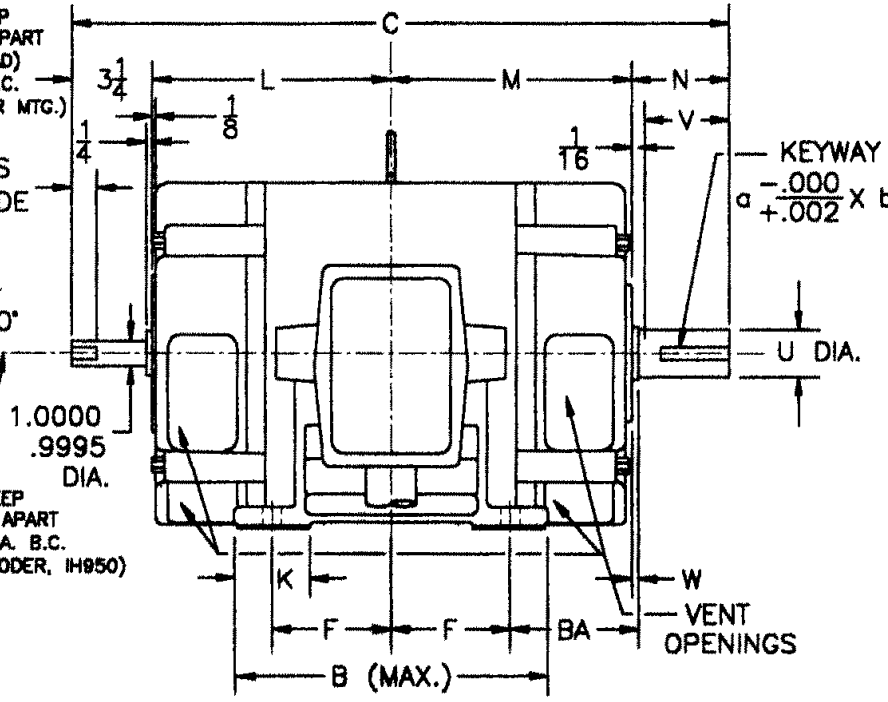
END VIEW FOR CUST. MTG OF HOHNER ENCODER MODEL NO. 88-1382A-1024
 AFTER MTG. MOTOR TO GEARED MACHINE, OR WHEN INDUSTRIAL ENCODER (IH950 SERIES)
 IS MTD. BY CUST. OR IMPERIAL ELEC. FACTORY MTD. (SEE AUX. DIM. DWG. 1-1900-0082.)

(3) #8-32 x 3/8 DEEP
 TAPPED HOLES, 120° APART
 (FULL EFFECTIVE THREAD)
 ON A 3-45/64 DIA. B.C.
 (FOR HOHNER ENCODER MTG.)

1" LG. FLATS
 .880/.870 WIDE



(2) #6-32 x 1/2 DEEP
 TAPPED HOLES, 180° APART
 ON A 3.460/3.470 DIA. B.C.
 (FOR INDUSTRIAL ENCODER, IH950)



STANDARD TLBX MTG. © F-1
 (F-2 & TOP MTG. AVAILABLE).
 TLBX IS MTD. SO CONDUIT CAN
 BE LOCATED IN 90° INCREMENTS.
 "U" DIM. ON SHAFT VARIES FROM
 +.0000 TO -.0005 FOR DIAS. TO
 1-1/2 & +.000 TO -.001 FOR
 DIAS. OVER 1-1/2.

FRAME	A	B	BA	C	D	E	F	G	H	J	K	L	M	N	O	P	T	U	V	W	a	b	AA	AB	AC	AF	WT
215T	10 1/2	9	3 1/2	20 8/16	5 1/4	4 1/4	3 1/2	5 3/8	13 3/32	1 3/4	2	6 15/16	6 7/8	3 1/2	10 5/16	10 1/8	—	1 3/8	3 1/8	1 3/8	5 5/16	5 3/32	1	8 9/16	6 15/16	2 3/4	125
254T	12 1/2	10 3/4	4 1/4	23 7/8	6 1/4	5	4 1/8	3 3/4	17 3/32	2 1/4	2 1/2	8 3/8	8 1/4	4 1/8	12 5/16	12 1/8	2 3/8	1 5/8	3 3/4	1 3/8	3 3/8	3 1/8	1 1/2	11	8 3/4	4	200
256T	12 1/2	12 1/2	4 1/4	25 5/8	6 1/4	5	5	3 3/4	17 3/32	2 1/4	2 1/2	9 1/4	9 1/8	4 1/8	12 5/16	12 1/8	2 3/8	1 5/8	3 3/4	1 3/8	3 3/8	3 1/8	1 1/2	11	8 3/4	4	225
284T	14	12 1/2	4 3/4	26 7/8	7	5 1/2	4 3/4	7 3/8	17 3/32	2 3/4	3	9 1/2	9 3/8	4 3/4	13 13/16	13 3/4	2 3/8	1 7/8	4 3/8	1 3/8	1 1/2	1 1/4	1 1/2	11 3/4	9 1/2	4	300
284TS	14	12 1/2	4 3/4	25 1/2	7	5 1/2	4 3/4	7 3/8	17 3/32	2 3/4	3	9 1/2	9 3/8	3 3/8	13 13/16	13 3/4	2 3/8	1 5/8	3	1 3/8	3 3/8	3 1/8	1 1/2	11 3/4	9 1/2	4	300
286T	14	14	4 3/4	28 3/8	7	5 1/2	5 1/2	7 3/8	17 3/32	2 3/4	3	10 1/4	10 1/8	4 3/4	13 13/16	13 3/4	2 3/8	1 7/8	4 3/8	1 3/8	1 1/2	1 1/4	1 1/2	11 3/4	9 1/2	4	325
286TS	14	14	4 3/4	27	7	5 1/2	5 1/2	7 3/8	17 3/32	2 3/4	3	10 1/4	10 1/8	3 3/8	13 13/16	13 3/4	2 3/8	1 5/8	3	1 3/8	3 3/8	3 1/8	1 1/2	11 3/4	9 1/2	4	325
324T	16	14	5 1/4	29 1/2	8	6 1/4	5 1/4	1	21 3/32	3 1/4	3 1/2	10 1/2	10 3/8	5 3/8	15 13/16	15 5/8	2 3/8	2 1/8	5	1 3/8	1 1/2	1 1/4	2	12 3/4	10 1/2	4	400
324TS	16	14	5 1/4	28	8	6 1/4	5 1/4	1	21 3/32	3 1/4	3 1/2	10 1/2	10 3/8	3 7/8	15 13/16	15 5/8	2 3/8	1 7/8	3 1/2	1 3/8	1 1/2	1 1/4	2	12 3/4	10 1/2	4	400
326T	16	15 1/2	5 1/4	31	8	6 1/4	6	1	21 3/32	3 1/4	3 1/2	11 1/4	11 1/8	5 3/8	15 13/16	15 5/8	2 3/8	2 1/8	5	1 3/8	1 1/2	1 1/4	2	12 3/4	10 1/2	4	450
326TS	16	15 1/2	5 1/4	29 1/2	8	6 1/4	6	1	21 3/32	3 1/4	3 1/2	11 1/4	11 1/8	3 7/8	15 13/16	15 5/8	2 3/8	1 7/8	3 1/2	1 3/8	1 1/2	1 1/4	2	12 3/4	10 1/2	4	450

CUSTOMER NAME _____ BY _____
 CUSTOMER ORDER NO. _____ DATE _____
 IMPERIAL ELEC. ORDER NO. _____ VOLTS _____
 FRAME _____ HP _____ RPM _____ PH _____ HZ _____

SCALE 1/4"=1, 284
 DESIGN BY 5-2000-1087
 DRAWN BY R. FOX 4/8/99
 DATE _____
 DATE _____
 DATE _____

TITLE A.C. MOTOR
 DRIPPROOF, "T,TS" EXT.
 BALL BRG., W/FEET
 SPL. ENCODER MTG.-FE

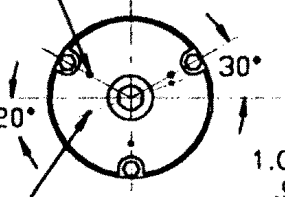
IMPERIAL ELECTRIC CO. IMP. NO. 5-2000-1109-1

FRAME NO. 210-320
 P. NO.
 DWG. NO.

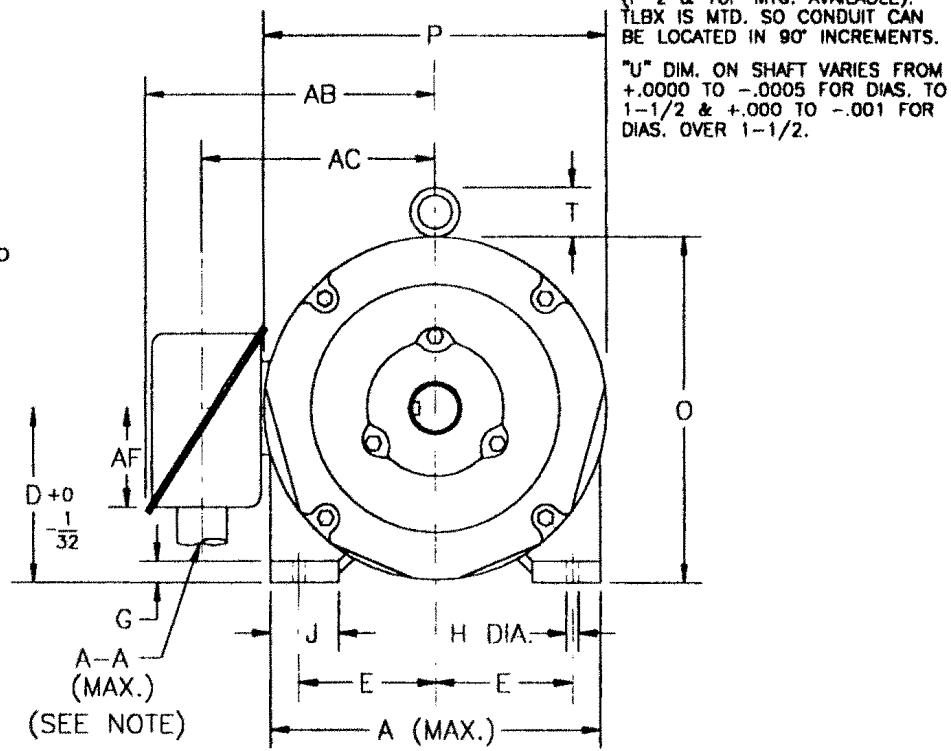
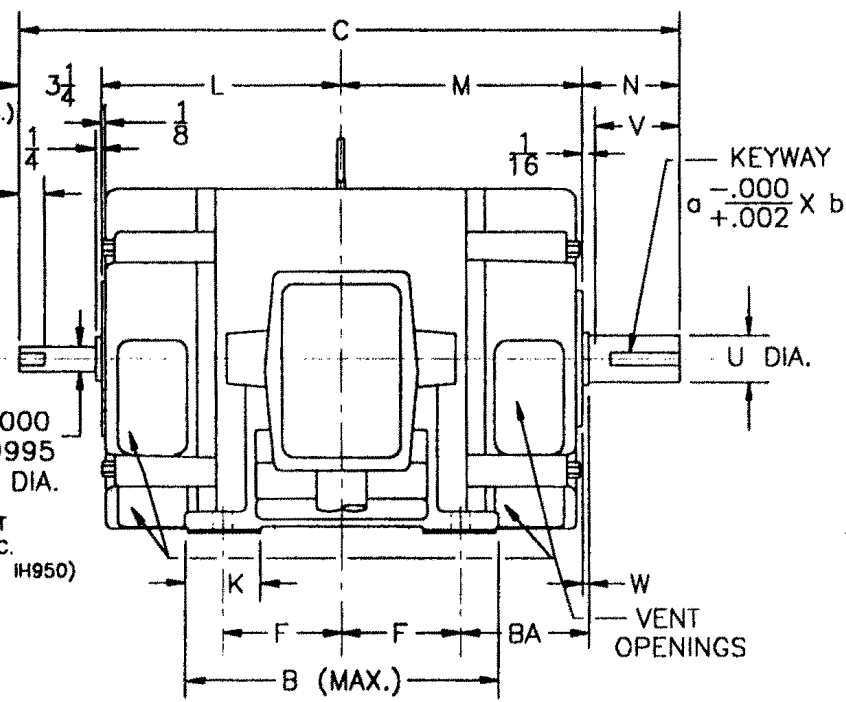
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 AFTER MTG. MOTOR TO GEARED MACHINE, OR WHEN INDUSTRIAL ENCODER (IH950 SERIES)
 IS MTD. BY CUST. OR IMPERIAL ELEC. FACTORY MTD. (SEE AUX. DIM. DWG. 1-1900-0082.)

(3) #8-32 x 3/8 DEEP
 TAPPED HOLES, 120° APART
 (FULL EFFECTIVE THREAD)
 ON A 3-45/64 DIA. B.C.
 (FOR HOHNER ENCODER MTG.)

1" LG. FLATS
 .880/.870 WIDE



(2) #8-32 x 1/2 DEEP
 TAPPED HOLES, 180° APART
 ON A 3.460/3.470 DIA. B.C.
 (FOR INDUSTRIAL ENCODER, IH950)



STANDARD TLBX MTG. ● F-1
 (F-2 & TOP MTG. AVAILABLE).
 TLBX IS MTD. SO CONDUIT CAN
 BE LOCATED IN 90° INCREMENTS.
 "U" DIM. ON SHAFT VARIES FROM
 +.0000 TO -.0005 FOR DIAS. TO
 1-1/2 & +.000 TO -.001 FOR
 DIAS. OVER 1-1/2.

FRAME	A	B	BA	C	D	E	F	G	H	J	K	L	M	N	O	P	T	U	V	W	a	b	AA	AB	AC	AF	WT
364T	18	15 1/4	5 7/8	32	9	7	5 5/8	1	21/32	2 1/2	3	11 3/8	11 3/8	6	17 13/16	18 5/8	2 3/4	2 3/8	5 5/8	1 8/16	5/8	5/16	3	15 7/8	12 13/16	4 1/2	550
364TS	18	15 1/4	5 7/8	29 7/8	9	7	5 5/8	1	21/32	2 1/2	3	11 3/8	11 3/8	3 7/8	17 13/16	18 5/8	2 3/4	1 7/8	3 1/2	1 8/16	1/2	1/4	3	15 7/8	12 13/16	4 1/2	550
365T	18	16 1/4	5 7/8	33	9	7	6 1/8	1	21/32	2 1/2	3	11 7/8	11 7/8	6	17 13/16	18 5/8	2 3/4	2 3/8	5 5/8	1 8/16	5/8	5/16	3	15 7/8	12 13/16	4 1/2	610
365TS	18	16 1/4	5 7/8	30 7/8	9	7	6 1/8	1	21/32	2 1/2	3	11 7/8	11 7/8	3 7/8	17 13/16	18 5/8	2 3/4	1 7/8	3 1/2	1 8/16	1/2	1/4	3	15 7/8	12 13/16	4 1/2	610
404T	20	16 1/4	6 5/8	36	10	8	6 1/8	1	13/16	3	3 1/2	12 3/4	12 5/8	7 3/8	19 13/16	19 5/8	2 3/4	2 7/8	7	1 8/16	3/4	3/8	3	15 7/8	12 7/8	4 1/2	780
404TS	20	16 1/4	6 5/8	33	10	8	6 1/8	1	13/16	3	3 1/2	12 3/4	12 5/8	4 3/8	19 13/16	19 5/8	2 3/4	2 1/8	4	1 8/16	1/2	1/4	3	15 7/8	12 7/8	4 1/2	780
405T	20	17 3/4	6 5/8	37 1/2	10	8	6 7/8	1	13/16	3	3 1/2	13 1/2	13 3/8	7 3/8	19 13/16	19 5/8	2 3/4	2 7/8	7	1 8/16	3/4	3/8	3	15 7/8	12 7/8	4 1/2	865
405TS	20	17 3/4	6 5/8	34 1/2	10	8	6 7/8	1	13/16	3	3 1/2	13 1/2	13 3/8	4 3/8	19 13/16	19 5/8	2 3/4	2 1/8	4	1 8/16	1/2	1/4	3	15 7/8	12 7/8	4 1/2	865
445T	22	20 1/2	7 1/2	43 1/4	11	9	8 1/4	1	13/16	3	4 1/8	15 3/4	15 5/8	8 5/8	22 11/16	23 3/8	3 1/4	3 3/8	8 1/4	1 8/16	7/8	7/16	3	18 5/8	15 5/8	4 1/2	1205
445TS	22	20 1/2	7 1/2	39 1/2	11	9	8 1/4	1	13/16	3	4 1/8	15 3/4	15 5/8	4 7/8	22 11/16	23 3/8	3 1/4	2 3/8	4 1/2	1 8/16	5/8	5/16	3	18 5/8	15 5/8	4 1/2	1205

CUSTOMER NAME _____		BY _____		SCALE 1/4=1, 284		TITLE A.C. MOTOR		FRAME NO. 360-440	
CUSTOMER ORDER NO. _____		DATE _____		DESIGN REF. 5-2000-1097		DRIPPROOF, "T,TS" EXT.		M- _____	
IMPERIAL ELEC. ORDER NO. _____		VOLTS _____		DRAWN R.FOX		BALL BRG., W/FEET		N- _____	
FRAME _____		HP _____		RPM _____		SPL. ENCODER MTG.--FE		I- _____	
				PH _____		IMPERIAL ELECTRIC CO. DWG. NO. 5-2000-1109-2		DATE _____	
				HZ _____		INS'P. DATE _____			