

06018
CENTRAL ILLINOIS
ETHANOL PLANT
CANTON, ILLINOIS

CROSS REFERENCE FILE FORM

EQUIPMENT TAG NUMBER:	PC-9550A
INFORMATION/DRAWINGS FILED WITH TAG NUMBER:	PC-2101



SUPPLIER DOCUMENTS INDEX

TO: LURGI PSI INC ATTN: JADWIGA MILLER 1790 KIRBY PARKWAY MEMPHIS, TN 38138	SERIAL NO.: 729F507-1-2 CUSTOMER: LURGI PSI INC P.O. NO.: 6018-70750 PUMP ITEM NO.: PC-9550 A&B SERVICES: CIP DRAIN PUMP END USER : CENTRAL ILLINOIS ENERGY, L.L.C. PROJECT# : 2003-01 LOCATION : CANTON, ILLINOIS	SUPPLIER INFORMATION: GOWDS PUMPS, INC. 240 FALL STREET SENECA FALLS, NY, 13148 CONTRACT ADMINISTRATOR: Carl Sangiacomo CONTRACT MANAGER: Dave Spruill DATE: 12/06/06 MAILED VIA: REGULAR MAIL	SUPPLIER DOCUMENT TITLE	SUPPLIER DOC. # / REVISION NO.	REVIEW QTY.	FINAL QTY.	DATE APPROVED	SUB#	DUE DATE	SUBMIT DATE	RETURN DATE	REF. CODE
			Pump Documents Required									
			* Pump Outline			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			* Tapped Openings			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			* Pump CDS Curve			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			* Cross Sectional			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			* 3196 Pump Instruction Manuals			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			* Plan 53 With Finned Tubing			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			Seal Documents Required									
			* Seal Drawing			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			Motor Documents Required									
			* Motor Outline			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			* Motor Wiring Diagram			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			* Motor Electrical/Performance			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			* Motor Instructions - (Reliance)			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			Q.A. Documents Required									
			* Comp. Hydrostatic Test Report			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	
			Tank Data Required									
			* Tank Drawing			6P	0/00/00	01	12/06/06	12/06/06	0/00/00	

(*) Denotes Documents in this Submittal.

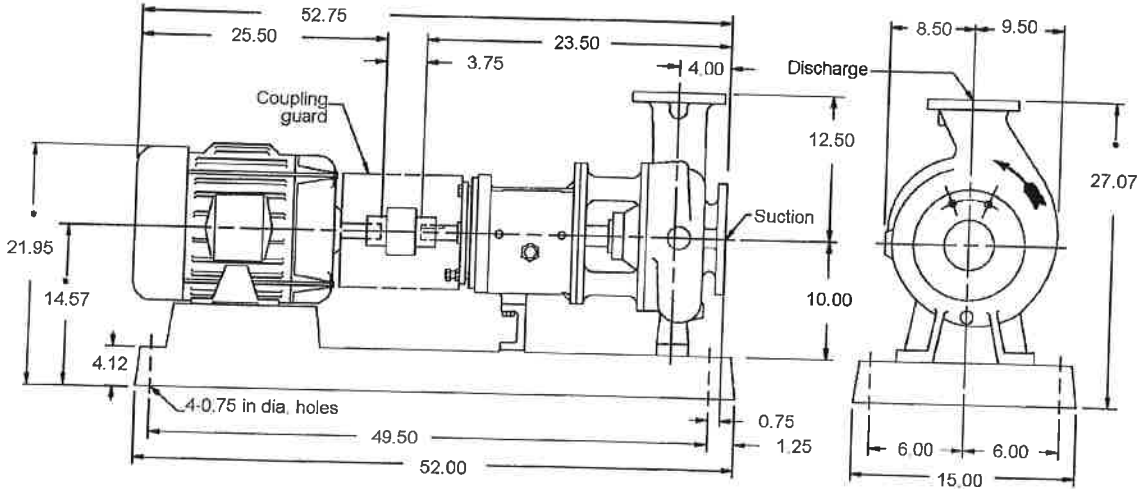
— Your complete Approval is required before order is scheduled and released to manufacturing. Please forward Approval by / / .

** The above literature is for your information and records. It does not require your approval. Retain literature as your final distribution.

Note: Any Changes may affect Quoted Price and Shipping Details.

06018
CIE: ETHANOL
Canton, Illinois
RECEIVED DEC 13 2005
File: PC-9550 A/B
0180013043

*** End of Report ***



Pump specification

SUCT.FLANGE SIZE 4"	DRILLING ANSI 150#	FACING FF	FINISH SERRATED
DISCH.FLANGE SIZE 3"	DRILLING ANSI 150#	FACING FF	FINISH SERRATED
PUMP ROTATION (LOOKING AT PUMP FROM MOTOR)		CW	
TYPE OF LUBRICATION FLOOD OIL		COOLED NO	
TYPE OF STUFFING BOX TAPER BORE PLUS WITH VPE		COOLED NO	
TYPE OF SEALING MECHANICAL SEAL			

Weights and Measurements

PUMP	350.0 lb
MOTOR/CPLG	370.0/8.2 lb
BASEPLATE	155.0 lb
TOTAL	883.2 lb
GR.VOLUME w/BOX	25.4 ft ³
GR.WEIGHT w/BOX	1,010.2 lb

Motor specification

MOTOR BY PUMP MFG	MOUNT BY PUMP MFG	MFG. RELIANCE
FRAME 284T	POWER 25.0 hp	RPM 1800
PHASE 3	FREQUENCY 60 HZ	VOLTS 460
INSULATION F	S.F. 1.15	
ENCLOSURE TEFC-XEX		

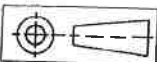
Notes and References

- MTR DIMENSIONS ARE APPROXIMATE
- INSTALL FOUNDATION BOLTS IN PIPE SLEEVES
- ALLOW FROM 0.75 to 1.50in. FOR GROUTING. SEE INSTRUCTION BOOK FOR DETAILS.
- *Tolerance Is +0 -0.5

Auxiliary specification

COUPLING BY PUMP MFG	CPLG TYPE REXNORD OMEGA REX ELASTOMER- ES-5 (STANDA
CPL GUARD BY PUMP MFG.	CPLG GUARD MATL CARBON STEEL
BASEPLATE CAST IRON CAMBER TOP D00057A (*)	
MECH.SEAL JOHN CRANE - 5620PR - X(18)O(58)IX(18)O(58)H / XF(55)IXO(58)H	

(*) Baseplate is sized to accommodate 284T/284TS/286T/286TS future motor size



All dimensions are in inches.
Drawing is not to scale
Weights (lbs) are approximate

DIMENSIONS ARE CERTIFIED FOR CONSTRUCTION BY:

Andrew Young

DATE December 6, 2006

Customer: LURGI PSI INC
Goulds Serial No: 729F507-1-2
Customer P.O. No: 6018-70750
Item No: PC-9550 A&B
Service: CIP DRAIN PUMP
End User: CENTRAL ILLINOIS ENERGY, L.L.C.
Project#: 2003-01
Location: CANTON, ILLINOIS

DRAWING NO A7295070

Rev. 0

Date: December 6, 2006

SUPERSEDES ANY PREVIOUS DRAWINGS

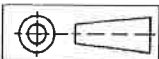
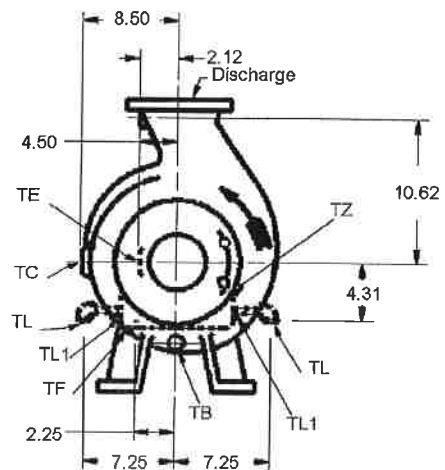
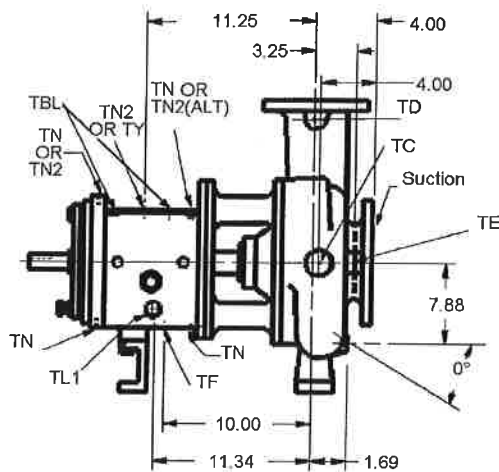


GOULDS PUMPS TAPPED OPENINGS Model 3196 MTX Size 3x4-13



TAPPED OPENINGS MODEL 3196 MTX 3x4-13 A.N.S.I.NO. A40

NO.	SIZE	QTY.	PURPOSE	FURNISHED		NO.	SIZE	QTY.	PURPOSE	FURNISHED	
				YES/NO	YES/NO					YES/NO	YES/NO
TB	1/2	1	CASING DRAIN	YES		TL1	---	2	FRAME COOLER ACCESS	YES	
TC	1/2	1	BY-PASS CONNECTION	NO		TN	1/4	4	GREASE FITTING	YES	
TD	3/8	1	DISCH. GAUGE CONNECTION	NO		TN2	1/4	2	OIL MIST INJECTION PORT	YES	
TE	3/8	1	SUCTION GAUGE CONNECTION	NO		TY	1/2	1	OIL FILL	YES	
TF	3/8	1	BEARING FRAME DRAIN	YES		TZ	1/4	1	BOTTLE OILER CONN.	YES	
TL	1/2	2	FRAME COOLING CONNECTION	NO		TBL	1/4	2	VIB./TEMP. CONN.	YES	



All dimensions are in inches.
Drawing is not to scale

DIMENSIONS ARE CERTIFIED FOR CONSTRUCTION BY:

Andrew Young

DATE December 6, 2006

Customer: LURGI PSI INC
Goulds Serial No: 729F507-1-2
Customer P.O. No: 6018-70750
Item No: PC-9550 A&B
Service: CIP DRAIN PUMP
End User: CENTRAL ILLINOIS ENERGY, L.L.C.
Project#: 2003-01
Location: CANTON, ILLINOIS

DRAWING NO A729507T

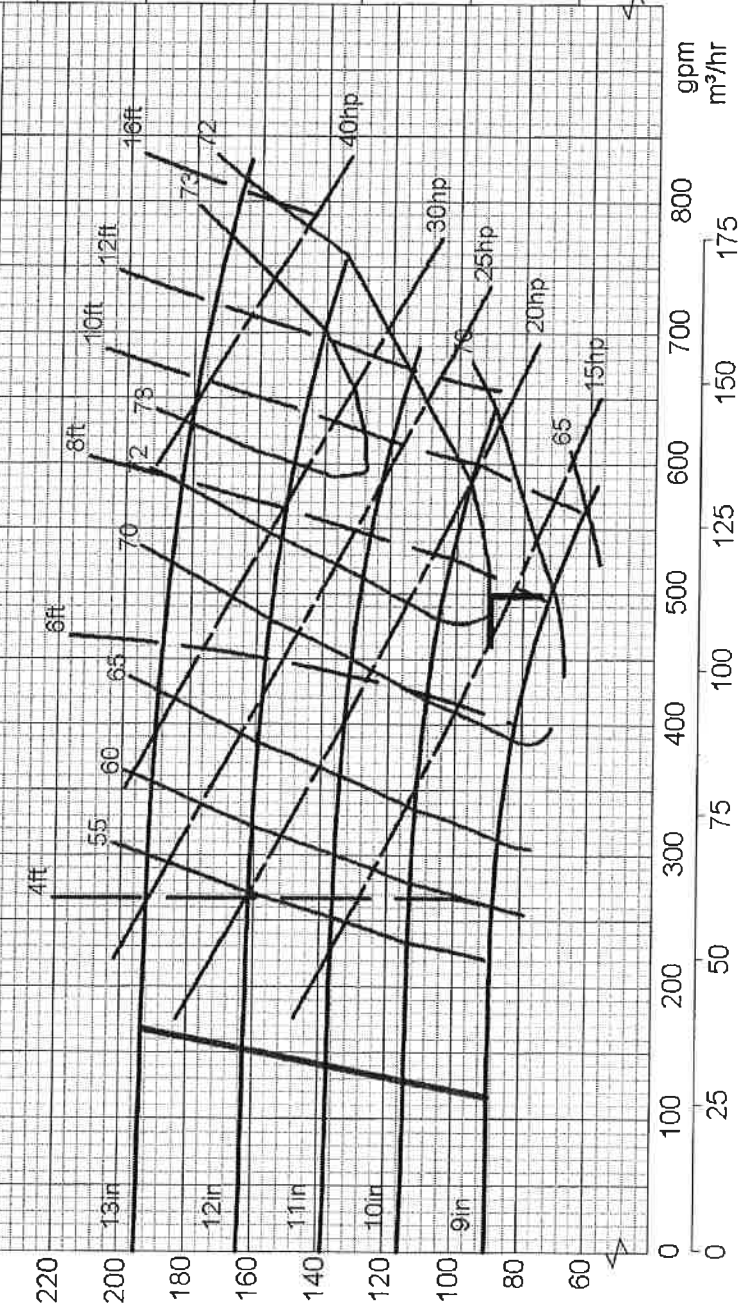
Rev. 0 Date: December 6, 2006

FORM # ED0274/5

SUPERSEDES ANY PREVIOUS DRAWINGS

GOULDS PUMPS CENTRIFUGAL PUMP CHARACTERISTICS

CDS 2335-4
RPM 1775
 Model: 3196/HT3196
 Size: 3X4-13
 Imp. Dwg: B10541 / B10542
 Pattern: 56693 / 56849
 Eye Area: 14.2 in²
6 VANES



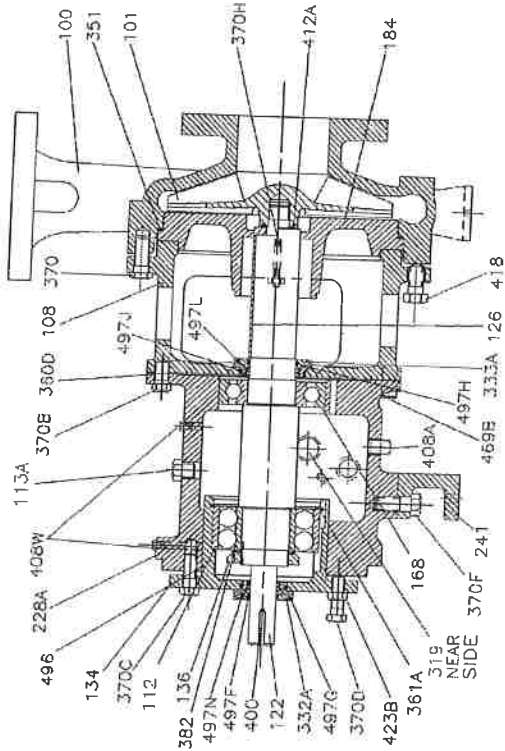
Rated Flow: 500.0 gpm
 Rated TDH: 90.0 ft
 Imp. Diam.: 9.6250 in
 Certified By: Andrew Young

Customer: LURGH PSI INC
 Goulds Serial No: 729F507.1-2
 Customer P.O. No: 6018-70750
 Item No: FC-9550 A&B
 Service: CIP DRAIN PUMP
 End User: CENTRAL ILLINOIS ENERGY, L.L.C.
 Project#: 2003-01
 Location: CANTON, ILLINOIS





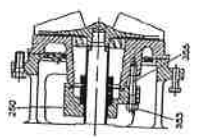
FLOOD OIL LUBRICATION



* Recommended spare parts
Items not illustrated

SEAL CHAMBER

TAPER BORE-TM PLUS



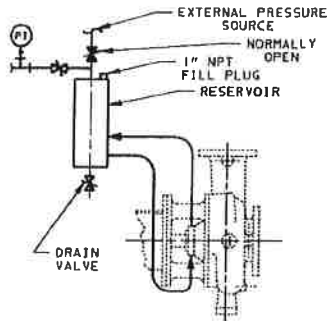
REFER TO SEAL DRAWING NO. HSP-38070
FORM # ED0334 +336

ITEM	QTY	PART NAME	MATERIAL	ASTM#
100	1	CASING W/DREN	316SS	CF A743, A744
100A	1	IMPELLER COVER	316SS	CF A743, A744
101	1	FRAME ADAPTER	DUCTILE IRON	CF A743, A744
108	1	BALL BEARING	CARBON STEEL GR B	DI 60 A536-84
112	1	PIPE PLUG OIL FILL	CAST IRON	A307 A276-91A
113A	1	SHAFT	CAST IRON	A46
134	1	BEARING HOUSING	316SS	CF A743, A744
168	1	BEARING LOCK NUT	BRONZE	A48
184	1	BEARING HOUSING	BRONZE	A48
228A	1	ST BOX COVER	316SS	CF A743, A744
241	1	FRAME	CAST IRON	A48
288A	1	IMPELLER	CAST IRON	A48
319	1	IMPELLER	CAST IRON	A48
332A	1	LAB SEAL O.B.	BRONZE	A48
333A	1	LAB SEAL O.B.	BRONZE	A48
351	1	CASE GASKET	NON/ASB	
353	1	GLAND STUD	304SS	A276-95
354	4	GLAND WASHER	304SS	A276-95
355	4	HEX NUT (GLAND STUD)	304SS	A276-95
356	4	NUT HEX (COVER TO ADAPT)	304SS	A276-95
359	1	GLAND PLUG	316SS	A276-95
360D	1	GASKET ADAPTER	VELLUNOID P33138	D-1170
361A	1	RETAINING RING BRG HSG	304SS	A276-95
370A	16	H CAP SCREW (CASE)	CARBON STEEL GR B	A307
370B	4	H CAP SCREW (FRAME-ADPTR)	CARBON STEEL GR B	A307
370C	3	H CAP SCREW (BRG HSG-FRA)	CARBON STEEL GR B	A307
370D	3	H CAP SCREW (IMPLR ADJ)	CARBON STEEL GR B	A307
370E	2	STUD (COVER)	CARBON STEEL GR B	A307
370F	2	BEARING LOCK WASHER	CARBON STEEL GR B	A307
370G	1	MECHANICAL SEAL (ORDERED)	CARBON STEEL 1018/1020	A108
370H	1	SO END KEY (PLG)	CARBON STEEL GR B	A307
382	1	PIPE PLUG (OIL DRAIN)	TEFLON	A3651
383	1	PIPE PLUG (OIL MIST CONN)	304SS	A276-95
400	4	PIPE PLUG (OILER PLUG)	CARBON STEEL GR B	A307
408A	1	PIPE PLUG (FRAME CLG IN)	CARBON STEEL GR B	A307
408B	1	O-RING IMPLR	TEFLON	A3651
408J	3	IMPLR BOLT	CARBON STEEL GR B	A307
408K	2	IMPLR BOLT (BRG HSG)	BUNA-N	A3651
408L	2	IMPLR BOLT (FRAME-ADPTR)	VTON	A3651
408M	1	O-RING BRG HOUSING	BUNA-N	A3651
408N	1	O-RING LAB SEAL	VTON	A3651
408O	1	O-RING LAB SEAL	BUNA-N	A3651
408P	1	O-RING LAB SEAL	VTON	A3651
408Q	1	O-RING LAB SEAL	BUNA-N	A3651
408R	1	O-RING LAB SEAL	VTON	A3651
408S	1	O-RING LAB SEAL	BUNA-N	A3651
408T	1	O-RING LAB SEAL	VTON	A3651
408U	1	O-RING LAB SEAL	BUNA-N	A3651
408V	1	O-RING LAB SEAL	VTON	A3651
408W	1	O-RING LAB SEAL	BUNA-N	A3651
408X	1	O-RING LAB SEAL	VTON	A3651
408Y	1	O-RING LAB SEAL	BUNA-N	A3651
408Z	1	O-RING LAB SEAL	VTON	A3651
409	1	WASHER PLAIN FRAME FOOT	VTON	A3651
410	1	MAINTENANCE KIT	VTON	A3651
411	1	OIL PUMP REPAIR KIT	VTON	A3651
412	1	POWER END	VTON	A3651

Customer: LURGI PSI INC
Goulds Serial No: 729F507-1-2
Customer P.O. No: 6018-70750
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End User: CENTRAL ILLINOIS ENERGY, L.L.C.
Project#: 2003-01
Location: CANTON, ILLINOIS

BARRIER FLUID PLAN 53 DESCRIPTION EXTERNAL FLUID RESERVOIR, PRESSURIZED; THERMOSYPHON OR FORCED CIRCULATION, AS REQUIRED.

CPI Plan 7353 316SS tubing



CONSTRUCTION

316SS TUBING
2 SECTIONS OF FINNED TUBING
JOHN CRANE LEMCO 3 GALLON 316LSS
RESERVOIR

Customer: LURGI PSI INC
Goulds Serial No: 729F507-1-2
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Item No: PC-9550 A&B
Service: CIP DRAIN PUMP
End User: CENTRAL, ILLINOIS ENERGY, L.L.C.
Project#: 2003-01
Location: CANTON, ILLINOIS

Rev. 0 Date: Nov 22, 2006

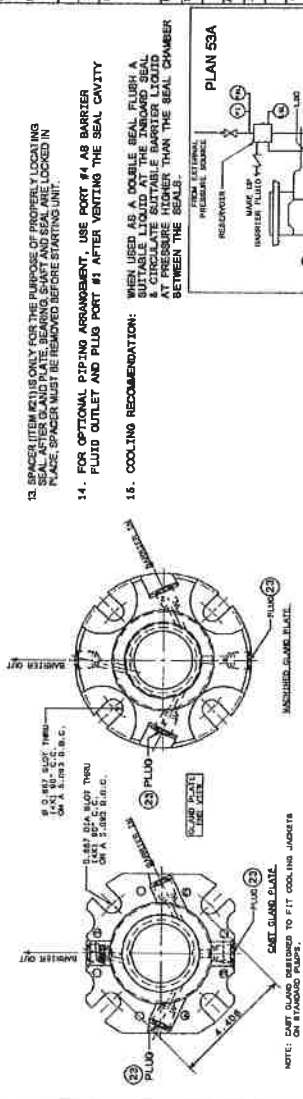
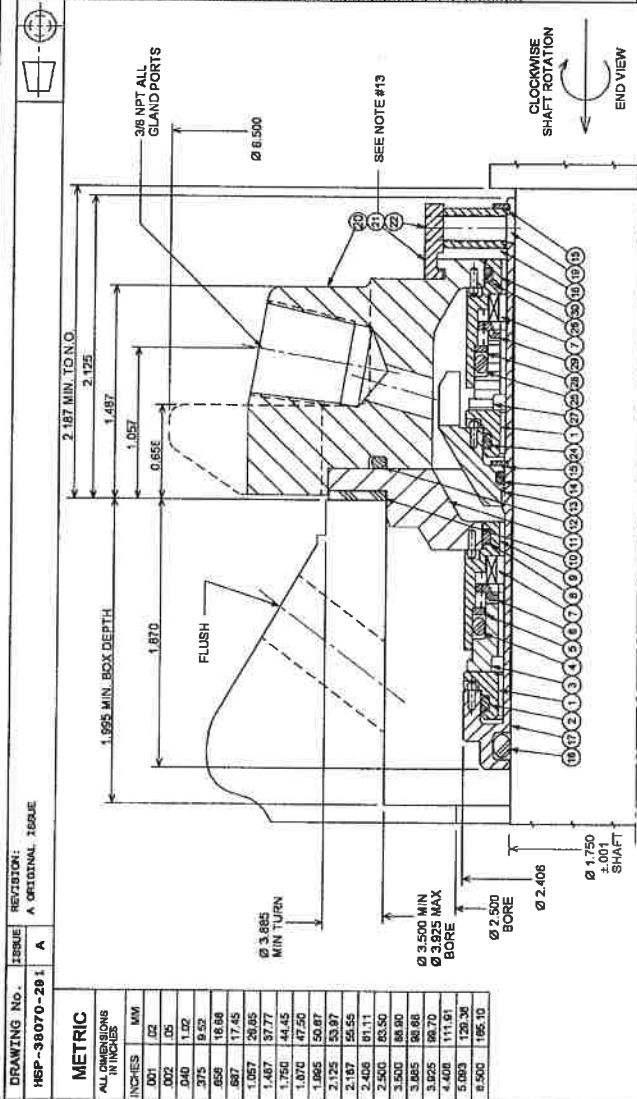
FORM#

ED0616

SUPERSEDES ANY PREVIOUS DRAWINGS

COMPONENT	DESCRIPTION	MATERIAL	QUANTITY
1	MATING RING	SILICON CARBIDE	2
2	O-RING	AFILAS	1
3	PRIMARY RING	SILICON CARBIDE	1
4	O-RING	AFILAS	1
5	EXTENSION RING	316 S.S.	1
6	DRIVE RING	316 S.S.	1
7	SPRING	HAST C	2
8	O-RING	AFILAS	1
9	RETAINER	O.F. DHELDON	1
10	GASPET	O.F. DHELDON	1
11	GLAND ADAPTER ASS'Y	316 S.S.	1
12	O-RING	FLUOROCARBON	1
13	PLATING RING ASS'Y	316 S.S.	1
14	O-RING	FLUOROCARBON	2
15	SNAP RING	16-9 S.S.	1
16	O-RING	AFILAS	1
17	BLEED VALVE	316 S.S.	1
18	SEAL O-RING	316 S.S.	1
19	SPACER	316 S.S.	1
20	GLAND PLATE ASS'Y	316 S.S.	4
21	SPACER	SINTERED 316 S.S.	4
22	SOCKET HEAD CAP SCREW	316 S.S.	4
23	3/8" NPT PLUG	316 S.S.	2
24	O-RING	FLUOROCARBON	1
25	O-RING	FLUOROCARBON	1
26	O-RING	FLUOROCARBON	1
27	PRIMARY RING	CARBON	1
28	ANTI-EXTENSION RING	316 S.S.	1
29	DRIVE RING	316 S.S.	1
30	RETAINER	316 S.S.	1
31			
32			
33			
34			
35			

* H 1751 909 (MACHINED GLAND PL'T ASS'Y)



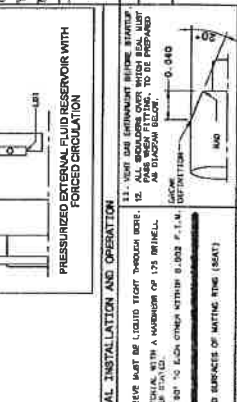
Item No.	Part No.	Size	Material	Notes
1	PC-5502	5/8"	AFILAS	
2	PC-5503	5/8"	AFILAS	
3	PC-5504	5/8"	AFILAS	
4	PC-5505	5/8"	AFILAS	
5	PC-5506	5/8"	AFILAS	
6	PC-5507	5/8"	AFILAS	
7	PC-5508	5/8"	AFILAS	
8	PC-5509	5/8"	AFILAS	
9	PC-5510	5/8"	AFILAS	
10	PC-5511	5/8"	AFILAS	
11	PC-5512	5/8"	AFILAS	
12	PC-5513	5/8"	AFILAS	
13	PC-5514	5/8"	AFILAS	
14	PC-5515	5/8"	AFILAS	
15	PC-5516	5/8"	AFILAS	
16	PC-5517	5/8"	AFILAS	
17	PC-5518	5/8"	AFILAS	
18	PC-5519	5/8"	AFILAS	
19	PC-5520	5/8"	AFILAS	
20	PC-5521	5/8"	AFILAS	
21	PC-5522	5/8"	AFILAS	
22	PC-5523	5/8"	AFILAS	
23	PC-5524	5/8"	AFILAS	
24	PC-5525	5/8"	AFILAS	
25	PC-5526	5/8"	AFILAS	
26	PC-5527	5/8"	AFILAS	
27	PC-5528	5/8"	AFILAS	
28	PC-5529	5/8"	AFILAS	
29	PC-5530	5/8"	AFILAS	
30	PC-5531	5/8"	AFILAS	
31	PC-5532	5/8"	AFILAS	
32	PC-5533	5/8"	AFILAS	
33	PC-5534	5/8"	AFILAS	
34	PC-5535	5/8"	AFILAS	
35	PC-5536	5/8"	AFILAS	

13. SPACER ITEM IS ONLY FOR THE PURPOSE OF PROPERLY LOCATING THE SEAL AND PLATE BEARING SHAFT AND SEAL ARE LOCKED IN PLACE. SPACER MUST BE REMOVED BEFORE STARTING UNIT.

14. FOR OPTIONAL PIPING ARRANGEMENT, USE PORT #1 AS BARRIER FLUID OUTLET AND PLUG PORT #1 AFTER VERIFYING THE SEAL CAVITY.

15. COOLING RECOMMENDATION: WHEN USED AS A DOUBLE SEAL FLUSH A SUITABLE LIQUID AT THE TANGENTIAL SEAL POINTS. THE LIQUID SHOULD BE AT PRESSURE HIGHER THAN THE SEAL CAVITY BETWEEN THE SEALS.

16. COOLING RECOMMENDATION: WHEN USED AS A DOUBLE SEAL FLUSH A SUITABLE LIQUID AT THE TANGENTIAL SEAL POINTS. THE LIQUID SHOULD BE AT PRESSURE HIGHER THAN THE SEAL CAVITY BETWEEN THE SEALS.



17. SEAL CAVITY IS SUPPLIED THROUGH STUPPING BOX. BLEED MAY BE LIQUID OR AIR. CHECK FOR LEAKS. ALL SEALS MUST BE PROPERLY SEATED. ALL SEALS MUST BE PROPERLY SEATED. ALL SEALS MUST BE PROPERLY SEATED.

18. ALL SEALS MUST BE PROPERLY SEATED. ALL SEALS MUST BE PROPERLY SEATED. ALL SEALS MUST BE PROPERLY SEATED.

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Customer: LURGI PSI INC
Customer P.O. No.: 6018-70750
Item No.: PC-950 A&B
Service: CIP DRAIN PUMP
End User: CENTRAL ILLINOIS ENERGY, L.L.C.
Project: 2003-01
Location: CANTON, ILLINOIS

Customer: JOHN CRANE INC
International Sealing Systems
 6400 DeLeon Street
 Morton Grove, IL 60053, U.S.A.

Seal Type: 8228R DOUBLE CARTRIDGE
Seal Size: 81-760
Seal Type: 8228R DOUBLE CARTRIDGE

Customer: JOHN CRANE INC
International Sealing Systems
 6400 DeLeon Street
 Morton Grove, IL 60053, U.S.A.

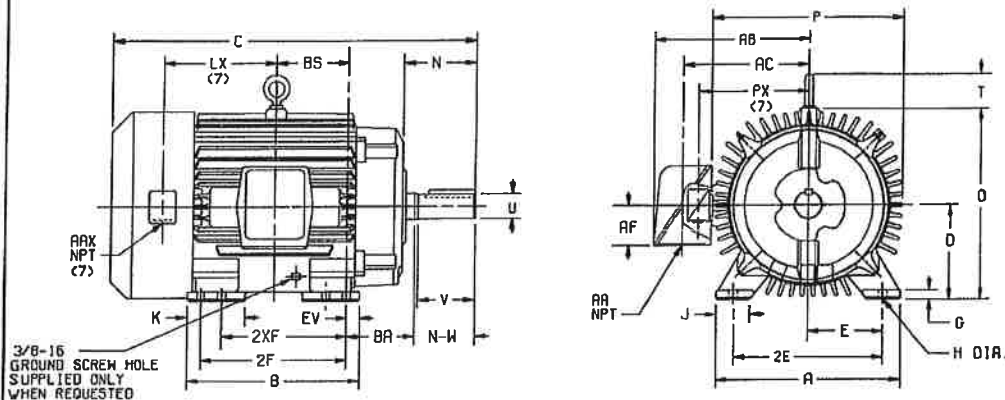
DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
CAST IRON CONSTRUCTION

ENCLOSURE: TOTALLY ENCLOSED
MOUNTING: FOOT

COOLING: FAN COOLED

FRAMES 250T THRU 440T



DIMENSIONS ARE IN INCHES; SEE SHEET 2 FOR DIMENSIONS IN MILLIMETERS

FRAME	A	D(2)	E	G	H	J	K	O	P	T	CAST IRON TERMINAL BOX (7)			AUX. CONDUIT BOX		BA	EV		
											AA	AB	AC	AF	AX			LX (7)	PX (7)
254T-256T	12.50	6.25	5.00	.75	.56	2.50	---	13.25	13.25	2.44	1-1/4	10.81	8.81	2.50	3/4	6.31	9.31	4.25	1.00
284T-286TS	13.75	7.00	5.50	.75	.56	2.50	---	14.75	14.88	2.44	1-1/2	12.62	10.19	3.00	3/4	6.88	10.50	4.75	1.00
324T-326TS	15.50	8.00	6.25	.88	.69	2.75	4.50	16.69	17.00	2.44	2	15.44	11.69	3.62	3/4	8.00	10.50	5.25	1.38
364T-365TS	17.00	9.00	7.00	.88	.69	2.75	3.88	18.50	19.50	2.94	3	18.00	13.81	4.12	3/4	8.38	11.62	5.88	1.38
404T-405TS	19.00	10.00	8.00	1.12	.81	3.25	4.62	21.31	22.50	2.94	3	19.25	15.06	4.12	3/4	9.62	14.44	6.62	1.13
444T-445TS	21.00	11.00	9.00	1.12	.81	3.25	5.25	23.38	25.25	3.25	3	22.19	17.44	6.00	3/4	11.12	15.25	7.50	1.25

(1)

FRAME SIZE	C	BS	B	2F	(4) 2XF	N	SHAFT AND KEY					WEIGHT LBS. (5)
							N-W(6)	UK(3)	V	SO.	LGTH.	
254T	24.56	5.00	12.00	---	8.25	4.12	4.00	1.625	3.75	.375	2.88	335
256T	24.56	5.00	12.00	10.00	---	4.12	4.00	1.625	3.75	.375	2.88	345
284T	27.44	5.50	13.00	---	9.50	5.00	4.62	1.875	4.38	.500	3.25	475
284TS	26.06	5.50	13.00	---	9.50	3.62	3.25	1.625	3.00	.375	1.88	475
286T	27.44	5.50	13.00	11.00	---	5.00	4.62	1.875	4.38	.500	3.25	490
286TS	26.06	5.50	13.00	11.00	---	3.62	3.25	1.625	3.00	.375	1.88	490
324T	30.44	6.00	14.75	---	10.50	5.62	5.25	2.125	5.00	.500	3.88	590
324TS	28.94	6.00	14.75	---	10.50	4.12	3.75	1.875	3.50	.500	2.00	590
326T	30.44	6.00	14.75	12.00	---	5.62	5.25	2.125	5.00	.500	3.88	630
326TS	28.94	6.00	14.75	12.00	---	4.12	3.75	1.875	3.50	.500	2.00	630
364T	33.44	6.12	15.00	---	11.25	6.25	5.88	2.375	5.62	.625	4.25	865
364TS	31.31	6.12	15.00	---	11.25	4.12	3.75	1.875	3.50	.500	2.00	859
365T	33.44	6.12	15.00	12.25	---	6.25	5.88	2.375	5.62	.625	4.25	890
365TS	31.31	6.12	15.00	12.25	---	4.12	3.75	1.875	3.50	.500	2.00	884
404T	38.31	6.88	16.00	---	12.25	7.50	7.25	2.875	7.00	.750	5.62	1220
404TS	35.31	6.88	16.00	---	12.25	4.50	4.25	2.125	4.00	.500	2.75	1211
405T	38.31	6.88	16.00	13.75	---	7.50	7.25	2.875	7.00	.750	5.62	1260
405TS	35.31	6.88	16.00	13.75	---	4.50	4.25	2.125	4.00	.500	2.75	1251
444T	44.62	8.25	19.00	---	14.50	8.94	8.50	3.375	8.25	.875	6.88	1670
444TS	40.88	8.25	19.00	---	14.50	5.19	4.75	2.375	4.50	.625	3.00	1654
445T	44.62	8.25	19.00	16.50	---	8.94	8.50	3.375	8.25	.875	6.88	1860
445TS	40.88	8.25	19.00	16.50	---	5.19	4.75	2.375	4.50	.625	3.00	1844

(1)

- (1) SPECIAL DIMENSIONS APPLYING TO THIS ORDER ON THIS LINE.
 - (2) *D* VARIES $\left\{ \begin{array}{l} 250T - 320T +.00, -.03. \\ 360T - 440T +.00, -.06. \end{array} \right.$
 - (3) *U* VARIES $\left\{ \begin{array}{l} \text{UP TO 1.625 DIA. } +.0000, -.0005 \\ 1.625 \text{ AND LARGER } +.000, -.001. \end{array} \right.$
 - (4) ALL FRAMES HAVE EIGHT MOUNTING HOLES FOR DUAL MOUNTING.
 - (5) MOTOR WEIGHTS MAY VARY BY 15% DEPENDING UPON RATING.
 - (6) *N-W* VARIES +.00, -.25.
 - (7) AUXILIARY CONDUIT BOX SUPPLIED WHEN SPECIFIED
- CONDUIT BOXES LOCATED ON OPPOSITE SIDE WHEN F-2,W-1, W-4,W-5,W-7, OR C-1 MOUNTING IS SPECIFIED.
- IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.
- MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STD. SHAFT EXTENSION IS .002 T.I.R. UP TO AND INCLUDING 1.625 DIA. AND .003 T.I.R. 1.625 DIA. TO 5 INCH DIA.

FRAME _____ TYPE _____ CERTIFIED FOR _____
 ORDER _____ ITEM _____ HP _____ RPM _____ PH _____ HZ _____ VOLTS _____
 RELIANCE SALES ORDER _____ APPROVED BY _____ DATE _____

RELIANCE ELECTRIC
CLEVELAND, OHIO 44117 U.S.A.

DR. BY R. BRYANT
CK. BY L. T. FOURNIER
APP. BY J. H. PONTZER
DATE 12-08-89

DIMENSION SHEET 611740-501
SHEET 1 OF 2
ISSUE DATE: JUNE 20, 1990

Customer: LURGH PSI INC
 Goulds Serial No: 720F507-1-2
 Customer P.O. No: 6018-70750
 Item No: FC-9550 A&B
 Service: CIP DRAIN PUMP
 End User: CENTRAL ILLINOIS ENERGY, L.L.C.
 Project#: 2003-01
 Location: CANTON, ILLINOIS

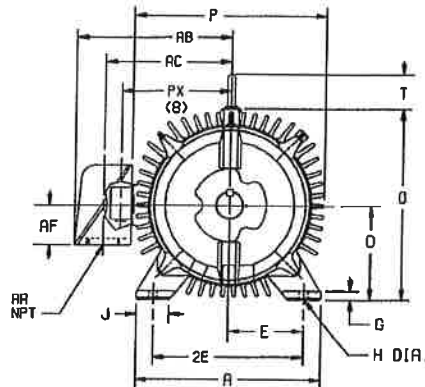
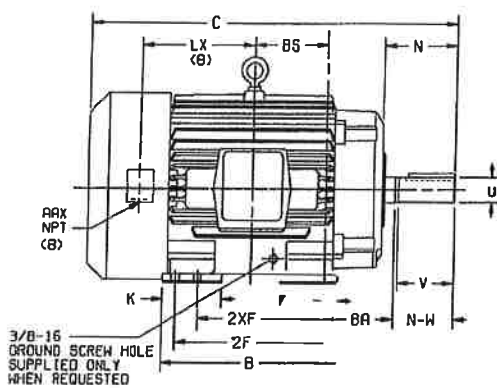
DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
CAST IRON CONSTRUCTION

ENCLOSURE: TOTALLY ENCLOSED
MOUNTING: FOOT

COOLING: FAN COOLED

FRAMES 250T THRU 440T



DIMENSIONS ARE IN MILLIMETERS; SEE SHEET 1 FOR DIMENSIONS IN INCHES

FRAME	A	DK(2)	E	G	H	J	K	D	P	T	CAST IRON TERMINAL BOX						EV		
											AA(7)	AB	AC	AF	AA(7)	LX (B)		PX (B)	BA
254T-256T	317.5	159.8	127.0	19.0	14.2	63.5	---	336.5	336.5	62.0	1-1/4	274.6	223.8	63.5	3/4	160.3	236.5	108.0	25.4
284T-286T	349.2	177.8	139.7	19.0	14.2	63.5	---	374.6	378.0	62.0	1-1/2	320.5	258.8	76.2	3/4	174.8	266.7	120.7	25.4
324T-326T	393.7	203.2	158.8	22.4	17.5	69.9	114.3	423.9	431.8	62.0	2	392.2	296.9	91.9	3/4	203.2	266.7	133.3	35.1
364T-365T	431.8	228.6	177.8	22.4	17.5	69.9	98.6	469.9	495.3	74.7	3	457.2	350.8	104.6	3/4	212.9	295.1	149.4	35.1
404T-405T	482.6	254.0	203.2	28.4	20.6	82.5	117.3	541.3	571.5	74.7	3	488.9	382.5	104.6	3/4	244.3	366.8	168.1	28.7
444T-445T	533.4	279.4	228.6	28.4	20.6	82.5	133.3	593.9	641.3	82.5	3	563.6	443.0	152.4	3/4	282.4	387.3	190.5	31.7

(1)

FRAME SIZE	C	BS	B	2F	(4)	2XF	N	SHAFT AND KEY				WEIGHT KGS. (5)
								N-W(6)	U(3)	V	SD	
254T	623.8	127.0	304.8	---	209.6	104.6	101.6	41.27	95.3	9.52	73.2	151
256T	623.8	127.0	304.8	254.0	---	104.6	101.6	41.27	95.3	9.52	73.2	156
284T	697.0	139.7	330.2	---	241.3	127.0	117.3	47.63	111.3	12.70	82.5	215
284TS	661.9	139.7	330.2	---	241.3	91.9	82.5	41.27	76.2	9.52	47.8	213
286T	697.0	139.7	330.2	279.4	---	127.0	117.3	47.63	111.3	12.70	82.5	222
286TS	661.9	139.7	330.2	279.4	---	91.9	82.5	41.27	76.2	9.52	47.8	222
324T	773.2	152.4	374.6	---	266.7	142.7	133.3	53.97	127.0	12.70	98.6	267
324TS	735.1	152.4	374.6	---	266.7	104.6	95.3	47.63	88.9	12.70	50.8	267
326T	773.2	152.4	374.6	304.8	---	142.7	133.3	53.97	127.0	12.70	98.6	285
326TS	735.1	152.4	374.6	304.8	---	104.6	95.3	47.63	88.9	12.70	50.8	285
364T	849.4	155.4	381.0	---	285.7	158.8	149.4	60.33	142.7	15.88	108.0	392
364TS	795.3	155.4	381.0	---	285.7	104.6	95.3	47.63	88.9	12.70	50.8	389
365T	849.4	155.4	381.0	311.1	---	158.8	149.4	60.33	142.7	15.88	108.0	403
365TS	795.3	155.4	381.0	311.1	---	104.6	95.3	47.63	88.9	12.70	50.8	400
404T	973.1	174.8	406.4	---	311.1	190.5	184.1	73.02	177.8	19.05	142.7	553
404TS	896.9	174.8	406.4	---	311.1	114.3	108.0	53.97	101.6	12.70	69.9	549
405T	973.1	174.8	406.4	349.2	---	190.5	184.1	73.02	177.8	19.05	142.7	571
405TS	896.9	174.8	406.4	349.2	---	114.3	108.0	53.97	101.6	12.70	69.9	567
444T	1133.3	209.6	482.6	---	368.3	227.1	215.9	85.72	209.6	22.22	174.8	757
444TS	1038.4	209.6	482.6	---	368.3	131.8	120.7	60.33	114.3	15.88	76.2	750
445T	1133.3	209.6	482.6	419.1	---	227.1	215.9	85.72	209.6	22.22	174.8	843
445TS	1038.4	209.6	482.6	419.1	---	131.8	120.7	60.33	114.3	15.88	76.2	836

(1) SPECIAL DIMENSIONS APPLYING TO THIS ORDER ON THIS LINE.

(2) "D" VARIES — 250T - 320T +.0, -.8.
360T - 440T +.0, -1.5.

(3) "U" VARIES — UP TO 41.27 DIA. +.000, -.013
41.27 AND LARGER +.00, -.03.

(4) ALL FRAMES HAVE EIGHT MOUNTING HOLES FOR DUAL MOUNTING.

(5) MOTOR WEIGHTS MAY VARY BY 15% DEPENDING UPON RATING.

(6) "N-W" VARIES +.0, -6.4.

(7) DIMENSIONS ARE IN INCHES.

(8) AUXILIARY CONDUIT BOX SUPPLIED WHEN SPECIFIED.

CONDUIT BOXES LOCATED ON OPPOSITE SIDE WHEN F-2,V-1, W-4,W-5,W-7, OR C-1 MOUNTING IS SPECIFIED.

IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.

MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STD. SHAFT EXTENSION IS .05 T.I.R. UP TO AND INCLUDING 41.27 DIA. AND .08 T.I.R. 41.27 DIA. TO 127 MILL.DIA.

FRAME _____ TYPE _____ CERTIFIED FOR _____
 ORDER _____ ITEM _____ HP _____ RPM _____ PH _____ HZ _____ VOLTS _____
 RELIANCE SALES ORDER _____ APPROVED BY _____ DATE _____

RELIANCE ELECTRIC
CLEVELAND, OHIO 44117 U.S.A.

DR. BY R. BRYANT
CK. BY L. T. FOURNIER
APP. BY J. H. PONTZER
DATE 12-08-89

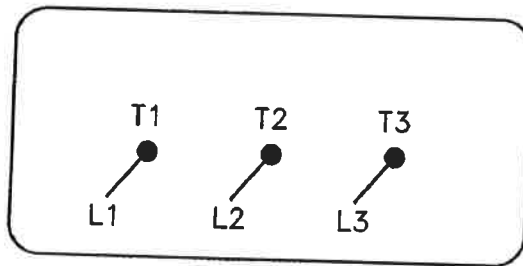
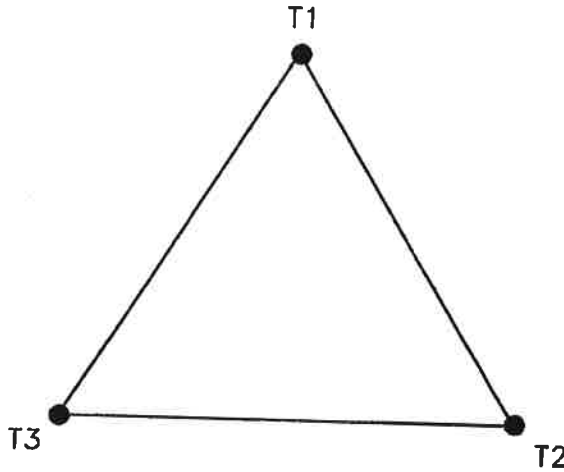
DIMENSION SHEET 611740-501
ISSUE DATE: JULY 11, 1990
SHEET 2 OF 2

C/R AC0350

10-541-05

Customer: LURCH PSI INC
 Goulds Serial No: 729507-1-2
 Customer P.O. No: 6018-70750
 Item No: PC-9550 A&B
 Service: CIP DRAIN PUMP
 End User: CENTRAL ILLINOIS ENERGY, L.L.C.
 Project#: 2003-01
 Location: CANTON, ILLINOIS

A-C MOTOR
 CONNECTION DIAGRAM
 STANDARD 3 LEAD DELTA CONNECTED



(N.P. 1575-BA)

Customer: LURGI PSI INC
 Coulds Serial No: 729F507-1-2
 Customer P.O. No: 6018-70750
 Item No: PC-9550 A&B
 Service: CIP DRAIN PUMP
 End User: CENTRAL ILLINOIS ENERGY, L.L.C.
 Project#: 2003-01
 Location: CANTON, ILLINOIS

CUSTOMER _____

CUSTOMER
 ORDER NO. _____

RELIANCE
 S.O. NO. _____

**RELIANCE
 ELECTRIC**
 CLEVELAND, OHIO 44117

DR. BY...NFJ
 CK. BY...GS
 APP. BY...HEJ
 DATE...10/8/76

CONNECTION
 DIAGRAM

416820-25

ISSUE DATE APRIL 7, 1977

E:\W-DIAG\416820\025

RAG

10-541-04

C/R

REL. S.O.	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS
	284T	25	P	3/60	1770	460
AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.
29.7	CONT	40/F	1.15	B	G	FCXE
E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES. @25 °C OHMS (BETWEEN LINES)		
487239	418139-37ME	---	---	.334		
PERFORMANCE						
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY	
NO LOAD	0	8.7	1800	5.34	0	
1/4	6.27	11.2	1793	57.0	91.7	
2/4	12.5	16.2	1786	76.9	94.1	
3/4	18.7	22.5	1778	82.8	94.2	
4/4	25.0	29.7	1770	84.3	93.6	
5/4	31.3	37.4	1760	84.5	92.6	
SPEED TORQUE						
	RPM	TORQUE % FULL LOAD	TORQUE LB.-FT.	AMPERES		
LOCKED ROTOR	0	196	145	181		
PULL UP	720	175	130	170		
BREAKDOWN	1660	250	185	98.0		
FULL LOAD	1770	100	74.1	29.7		
<p>AMPERES SHOWN FOR 460. VOLT CONNECTION. IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE</p> <p>REMARKS: XE MOTOR-TYPICAL DATA-NEMA NOM. EFF. 93.6 PCT. GUARANTEED MIN. EFF. 93.0 PCT.</p>						
Rockwell Automation		DR. BY	C.R. THOMPSON		A-C MOTOR PERFORMANCE E09877-A-A015 DATA ISSUE DATE 06/09/95	
		CK. BY	K. W. KANOUFF			
APP. BY	K. W. KANOUFF					
DATE	06/09/95					

Customer: LURGI PSI INC
 Gould Serial No: 729F507-1-2
 Customer P.O. No: 6018-70750
 Item No: FC-9550 A&B
 Service: CIP DRAIN PUMP
 End User: CENTRAL ILLINOIS ENERGY, L.L.C.
 Project#: 2063-01
 Location: CANTON, ILLINOIS



ITT

Engineered for life

SENECA FALLS, NEW YORK 13148

HYDROSTATIC TEST REPORT

PUMP SERIAL NO. 729F507-1-2

MODEL 3196MTX

SIZE 3X4-13

PART NAME Case
& Cover

Customer Data

Customer: LURGI PSI INC
 Goulds Serial No: 729F507-1-2
 Customer P.O. No: 601E-70750
 Item No: PC-9550 A&B
 Service: CIP DRAIN PUMP
 End User: CENTRAL ILLINOIS ENERGY, L.L.C.
 Project#: 2003-01
 Location: CANTON, ILLINOIS

HYDROSTATIC TESTING PERFORMED AT STATED PRESSURE AND AMBIENT TEMPERATURE IN ACCORDANCE WITH THE REFERENCED QUALITY CONTROL PROCEDURE:

Quality Control Procedure Number: QCP 550 REV 19

Pressure: 413 PSIG Duration: 10 MIN
2848 kPa

Additional Information:

GOULDS Q.A. REPRESENTATIVE: *Patti Shaw*
 Patti Shaw QA Auditor

CUSTOMER WITNESS: Non-Witness

CERTIFICATION DATE: November 27, 2006