

PUMP DIMENSION												
LINE NO.	DISCH.	SUCTION	CASING SIZE	ASA-150*FF		ASA-300*RF		C		D	E	PUMP WEIGHT
				A	B	A	B	X*	Y*			
1	1-1/2	2	7	7-1/2	7-1/2	7-3/4	7-3/4	11-1/2	13-1/4	4	2-5/8	115LB
2	2	3	7	7-1/2	7-1/2	7-3/4	7-3/4	11-3/4	13-1/2	4	2-7/8	130
3	1-1/2	2	8	8-1/2	8-1/2	8-3/4	8-3/4	11-1/2	13-1/4	4	2-5/8	135
4	2	3	8	8-1/2	8-1/2	8-3/4	8-3/4	11-3/4	13-1/2	4	2-7/8	140
5	3	4	9	11	11	11-3/8	11-3/8	13-1/4	14	5	3-3/8	220
6	4	5	9	12	12	12-1/4	12-1/4	13	14-3/4	7	3-7/8	265
7	2	3	11	10	10	10-1/4	10-1/4	11-3/4	13-1/2	5	2-7/8	235
8	3	4	11	12	12	12-3/8	12-3/8	13-1/4	14	5-1/4	3-3/8	280
9	4	5	11	14	14	14-1/2	14-1/2	13	14-3/4	6	2-7/8	350

ASA 150 LB FF FLANGES						ASA 300 LB RF FLANGES					
I.D.	O.D.	BOLT CIRCLE	NO. OF HOLES	SIZE OF HOLES	THICK	I.D.	O.D.	BOLT CIRCLE	NO. OF HOLES	SIZE OF HOLES	THICK
1-1/2	6	3-3/8	4	5/8	11/16	1-1/2	6-1/8	4-1/2	4	7/8	13/16
2	6	4-3/4	4	3/4	3/4	2	6-1/2	5	6	3/4	7/8
3	7-1/2	6	4	3/4	15/16	3	8-1/4	6-5/8	8	3/8	1-1/8
4	9	7-1/2	8	3/4	15/16	4	10	7-7/8	8	7/8	1-1/4
5	11	9-1/2	8	7/8	1	6	12-1/2	10-5/8	12	7/8	1-1/2

AUXILIARY CONNECTION (NPT)					
NO.	SIZE	PURPOSE	NO.	SIZE	PURPOSE
1	1/2	CASING DRAIN CACKETED	e	1/2	SEAL GLAND-VENT & DRAIN
2	3/8	SEAL FLUSH RETURN	f	3/8	WATER COOLING IN AND OUT
3	1/2	STUFFING BOX - IN -	g	3/8	STUFFING BOX OUT
4	1/2	GAGE CONNECTION DISCHARGE	h	1/2	CASING DRAIN

STUFFING BOX DATA	
SIZE: 1-1/2 DIA SHAFT X 2-1/4 DIA BORE X 2-5/8 DEEP	
FLUSHING ARRANGEMENT	SEALING ARRANGEMENT
NONE DEAD ENDED BOX	1-1/2 DIA MECHANICAL SEAL
STUFFING BOX TO SUCTION	TYPE: 8B1
DISCHARGE TO STUFFING BOX	CODE: X F51 1D1
EXTERNAL FLUSH TO STUFFING BOX	MAKE: John Crane
EXTERNAL FLUSH IN & OUT	PACKING
SPECIAL:	SIZE: 5 RINGS 3/8 x 3/8
	MATERIAL:

MOTOR DATA AND DIMENSIONS										
LINE NO.	FRAME	R.P.M.	H.P.	AA	AC	AF	AG	BV	P	WEIGHT
1	324LP	3600	40	2	10.94	3.63	30.10	11.75	17.75	520 LB
2										
3										

NOTES:
* X = 10" BD Y = 12" & 16-1/2" BD
DIMENSIONS ARE IN INCHES

REMARKS:

CUSTOMER ITEM NO.	UNION PUMP SERIAL NO.	DIMENSION LINE PUMP	MOTOR	SERVICE
	880227-	5	1	
	101/2			

CONTRACTOR: Colorado Interstate Gas ORDER NO. 88-12962

FOR: CIG Tablerock Processing Plant

LOCATION: Rock Springs, WY

CERTIFIED FOR CONSTRUCTION BY: LLB DATE: 05/09/88

UNION
PUMP COMPANY
BATTLE CREEK, MICHIGAN U.S.A.

UNICHEM®
VERTICAL INLINE PROCESS PUMP

DRWG NO.
OC A 880227

0489 - 2M

Rev. mtr. frame and dims., add cust order no. 5/19/88.

E - 200

106232

#

106233

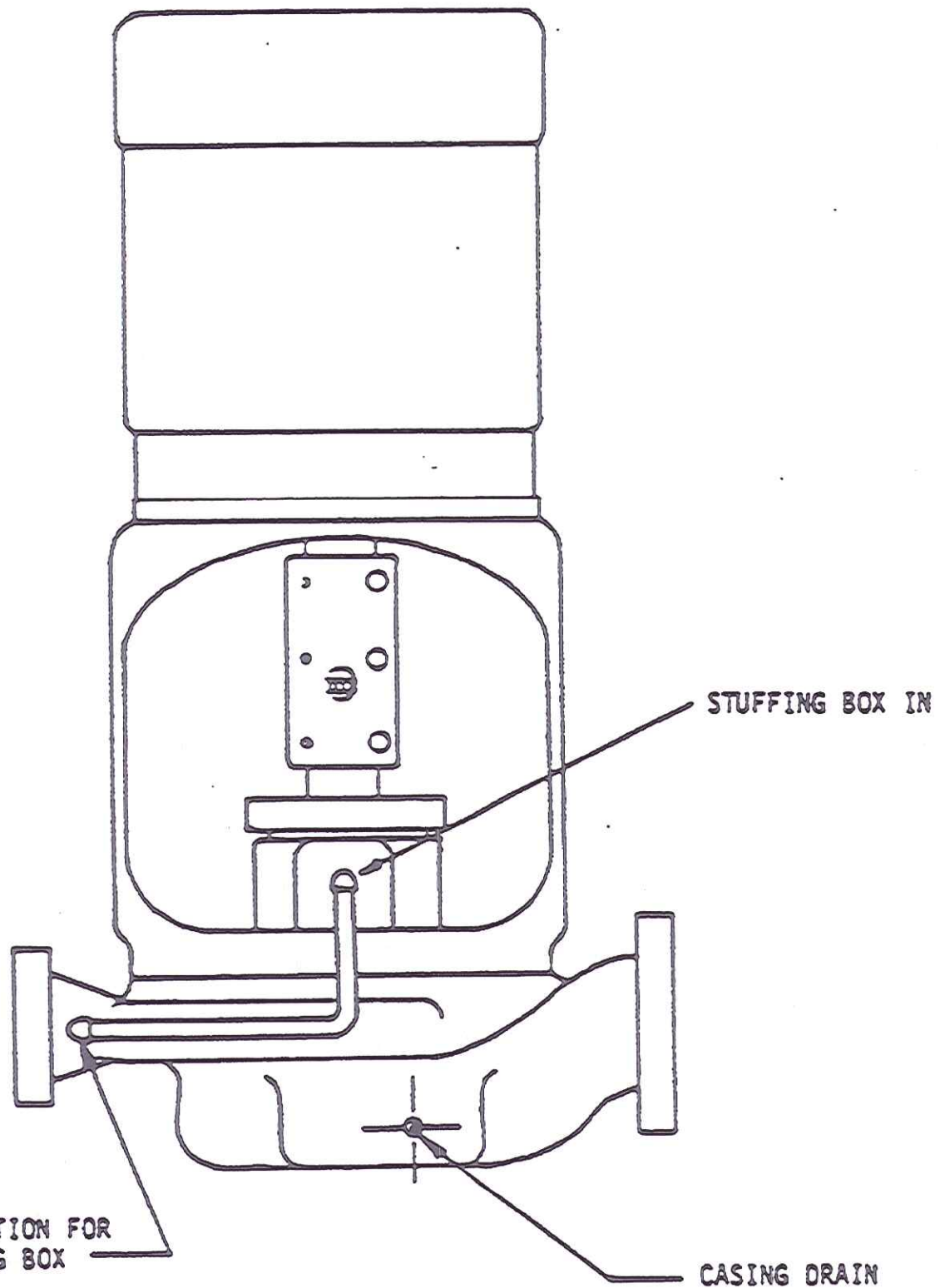
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SUPERSEDES ALL
PREVIOUS ISSUES

UNION PUMP CO.
BATTLE CREEK, MICHIGAN

SF-A 880227

DISCHARGE TO STUFFING BOX



PIPING MATERIAL: Stn. Stl. Tubing/Stl. Fittings

CUSTOMER: Colorado Interstate Gas Tablerock Processing Plant
LOCATION: Rock Springs, WY
P.O. NO.: 88-12962 PUMP SERIAL NO.: 880227-101/102

CERTIFIED BY: LLB

DATE: 05/09/88

SF-A 880227

UNION

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DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

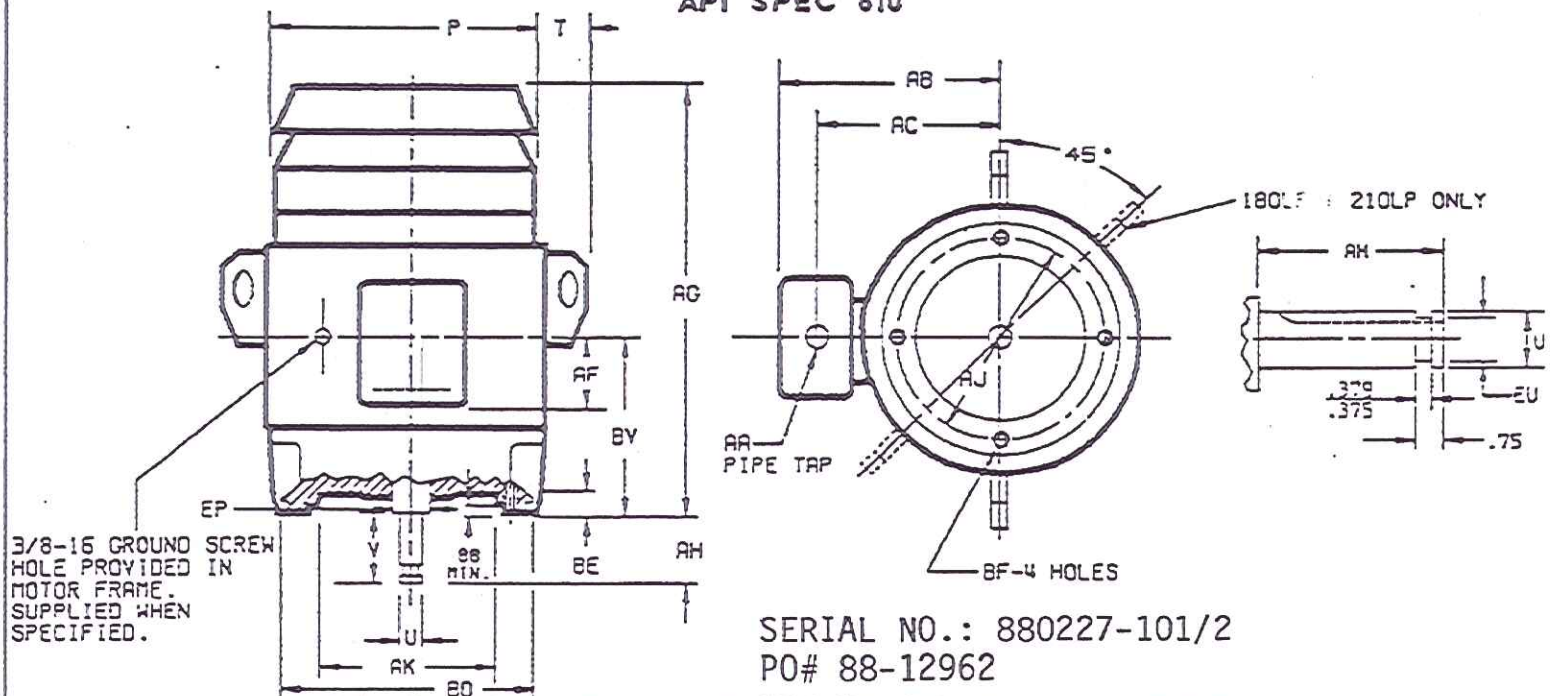
ENCLOSURE: TOTALLY ENCLOSED

COOLING: FAN COOLED

MOUNTING: NEMA LP & LPH IN-LINE - SOLID SHAFT

NEMA FRAMES 180LP THRU 440LP

API SPEC 810



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

FRAME	P	T	CAST IRON TERMINAL BOX				AJ	AK(2)	BB	BD	BE	BF	RECOMM. BOLT
			AA	AB	AC	AF							
182LP - 184LP	10.25	1.44	3/4	7.75	6.31	1.94	9.12	8.250	.19	10.00	.52	.44	3/8 X 1.50
213LP - 215LP	11.62	1.44	1	9.75	7.75	2.50	9.12	8.250	.19	10.00	.52	.44	3/8 X 1.50
254LP - 256LP	13.88	2.25	1-1/4	10.19	8.22	2.50	9.12	8.250	.19	10.00	.52	.44	3/8 X 1.50
284LP - 286LP	15.50	2.25	1-1/2	12.00	9.56	3.00	9.12	8.250	.25	10.00	.59	.44	3/8 X 1.50
284LPH-286LPH	15.50	2.25	1-1/2	12.00	9.56	3.00	14.75	13.500	.25	16.50	.88	.59	5/8 X 2.00
324LP - 326LP	17.75	2.25	2	14.69	10.94	3.53	14.75	13.500	.25	16.50	.88	.59	5/8 X 2.00
364LP - 366LP	20.50	2.25	3	17.94	13.75	4.13	14.75	13.500	.25	16.50	.88	.59	5/8 X 2.00
404LP - 406LP	22.62	2.50	3	19.19	15.00	4.13	14.75	13.500	.25	16.50	.94	.59	5/8 X 2.00
444LP - 446LP	25.50	2.50	3	22.13	17.37	5.00	14.75	13.500	.25	16.50	1.06	.59	5/8 X 2.25
(S)													

FRAME	AG		AH(4)	BY		SHAFT AND KEY							WT. LBS.	
	STD	LG(S)		STD	LG(S)	V	U(1)	EU(3)	EP(MIN)	LOTH	SQ. KEY	STD. LG(S)		
182LP - L182LP	16.75	18.25	2.750	6.12	6.88	2.75	1.1250	.975	1.16	1.28	.250	120	157	
184LP - L184LP	17.75	19.25	2.750	6.52	7.38	2.75	1.1250	.875	1.16	1.28	.250	130	170	
213LP - L213LP	19.12	20.68	2.750	7.76	8.63	2.75	1.6250	1.250	1.75	1.28	.375	175	234	
215LP - L215LP	20.62	21.50	2.750	8.50	8.94	2.75	1.6250	1.250	1.75	1.28	.375	200	255	
254LP	25.35	--	2.750	9.44	--	2.75	1.6250	1.250	1.75	1.28	.375	250	--	
256LP	25.35	--	2.750	9.44	--	2.75	1.6250	1.250	1.75	1.28	.375	280	--	
284LP	27.91	--	4.500	10.44	--	4.00	2.125	1.750	2.25	3.03	.500	300	--	
286LP	27.91	--	4.500	10.44	--	4.00	2.125	1.750	2.25	3.03	.500	350	--	
284LPH	30.48	--	4.500	13.00	--	4.00	2.125	1.750	2.25	3.03	.500	325	--	
286LPH	30.48	--	4.500	13.00	--	4.00	2.125	1.750	2.25	3.03	.500	375	--	
324LP	30.10	--	4.500	11.75	--	4.00	2.125	1.750	2.25	3.03	.500	520	--	
326LP	30.10	--	4.500	11.75	--	4.00	2.125	1.750	2.25	3.03	.500	560	--	
364LP	32.75	--	4.500	12.75	--	4.00	2.125	1.750	2.25	3.03	.500	750	--	
366LP	32.75	--	4.500	12.75	--	4.00	2.125	1.750	2.25	3.03	.500	800	--	
404LP	37.52	--	4.500	14.62	--	4.00	2.125	1.750	2.25	3.03	.500	1030	--	
406LP	37.52	--	4.500	14.62	--	4.00	2.125	1.750	2.25	3.03	.500	1185	--	
444LP	43.07	--	4.500	17.50	--	4.00	2.125	1.750	2.25	3.03	.500	1410	--	
446LP	43.07	--	4.500	17.50	--	4.00	2.125	1.750	2.25	3.03	.500	1560	--	
(S)														

- (1) "U" VARIES UP TO 2.125 +.0000. -.0005.
2.125 AND LARGER +.000. -.001.
(2) "AK" VARIES 180LP - 250LP +.003. -.000.
280LPH - 440LP +.005. -.000.
FACE RUNOUT AND 182LP - 445LP .004 MAX. T.I.R.
ECCENTRICITY
(3) "EU" VARIES +.000. .005.
(4) "AH" VARIES +.030. -.030.
(5) FRAMES PREFIXED BY "L".
(6) SPECIAL DIMENSION APPLYING TO THIS ORDER ON THIS LINE.

MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED
AT END OF SHAFT EXTENSION IS .001 MAX. T.I.R.
IF MOUNTING CLEARANCE IS REQUIRED.
CONSULT FACTORY.

FRAME- 324LP TYPE- PB CERTIFIED FOR- UNION PUMP COMPANY
ORDER- 13628 ITEM- 40 HP- 40 RPM- 3600 PH- 3 HZ- 60 VOLTS 400
RELANCE SALES ORDER- 1 APPROVED BY- RELANCE ELECT. DATE 06/01/88
DR. BY R. BRYANT
CK. BY L. J. FOURNIER
APP. BY J. H. PONTZER
DATE 7-18-83
DIMENSION 602531-805
SHEET SHEET 1
ISSUE DATE OCTOBER 23, 1984
CLEVELAND, OHIO 44117 U.S.A.

C/R 283687

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