

PUMP DATA SHEET

PURCHASER	Fluor Engineers, Inc.
LOCATION	-
INGERSOLL-RAND ORDER	002-33342
PUMP APPLICATION	Boiler Feed
LIQUID PUMPED	Feed Water
SPECIFIC GRAVITY	0.95
PUMP SIZE	3X8DA-8
DRIVER	U.S. Motors 250 H.P.
PUMP RATING	250 GPM - 3560 RPM
NET POSITIVE SUCTION HEAD REQUIRED	8 Feet
NET POSITIVE SUCTION HEAD AVAILABLE	15 Feet
TOTAL HEAD	2400 Feet
PUMP EFFICIENCY	68%
BRAKE HORSEPOWER	211.7(design)/246.3(max.)
PUMP ROTATION	CCW (HI)
HYDROTEST PRESSURE	1800 PSIG
PUMP HOLD-DOWN TORQUE	For Torque Values, Refer To Pump Assy. Dwg. 62344791, Sheet
DRIVER HOLD-DOWN TORQUE	1 Of 4, In Section 7 Of This Manual.

APPROXIMATE WEIGHTS (LBS)

PUMP	2,540
BEDPLATE	1,900
DRIVER	
TOTAL	

CURVE NO. 61781
DATE 18JAB8

CURVES ARE APPROXIMATE PUMP GUARANTEED FOR ONE SET OF
CONDITIONS. CAPACITY, HEAD AND EFFICIENCY GUARANTEES ARE
BASED ON SHOP TEST AND WHEN HANDLING CLEAR, COLD, FRESH
WATER AT A TEMPERATURE OF NOT OVER 85°F AND NOT OVER 10 FOOT
SUCTION LIFT.

IMPELLER EYE AREA - 10.00 SQ. IN.

8.75" MAX

IMPELLER PART NO.

3XBDA3A

8.75" DIA

DIFFUSOR PART NO.

3X10DA3BA/BB

7.50" MIN

BHP - SP. GR. = 1.00

BHP - SP. GR. = .95

This will certify that curve
61781 is based on a
performance test on the pump
with serial no. 0587079 on
Ingersoll-Rand order 002-33342

William A. Williams 18JAB8

NPSH (TYPICAL)

BRAKE HORSE POWER

TOTAL HEAD IN FEET

EFFICIENCY

TOTAL HEAD

PER CENT EFFICIENCY

CUSTOMER - FLUOR ENGINEERS INC.

CUST. ORD. 814101-4-6006

CUST. IT. - P5A

SERVICE - BOILER FEED

CHARACTERISTIC CURVE

NO 3XB

TYPE DA-8

3560 R.P.M.

PUMP

PUMP NO. 0587079

ORDER NO.

002-33342

INGERSOLL-RAND

GALLONS PER MINUTE

PUMPS

132826

CURVE 61781

41016-0408

Cameron Pump Division		INGERSOLL-RAND COMPANY				Performance Test Record			
HEAD	Gage No.	4.616T							
	Back. Hd.	At Read	1725.5	2016.7	2234.2	2401.9	2512	2588.6	2632.5
	Elev. Corr.	Corrected Gage & Elev.							
	Gage No.	Suction At Read	-7.6	-6.5	-5.7	-5.1	-4.6	-4.2	-3.9
	Elev. Corr.	Corrected Gage & Elev.							
CAPACITY	Pipe Size	4x3							
	Change Velocity Hd.	3.9	2.8	2.0	1.3	.8	.4	.1	0
POWER	TOTAL HEAD - FT	1737	2026	2241.9	2408.3	2517.4	2593.2	2636.5	2652.1
VIBRATION	TOTAL GPM	423.5	357.3	301.2	242.5	196	140.1	79.1	0
	WATER H.P.	185.8	182.8	170.5	151.1	124.6	91.7	52.7	~
	Instrument	As Read	5560	4760	4300	3920	3520	3200	2920
	Test Stand #4	RPM	3560	3560	3560	3560	3560	3560	3560
	BRAKE H.P.	314.2	269.0	243.0	221.5	198.9	180.2	165.0	159.3
SPECS	EFFICIENCY %	59.1	68	70.2	68.2	62.6	50.7	31.9	0
Driver		250 HP MOTOR				S/N		0587079	
Liquid		WATER				Pump Desc.		3X8 DA-8	
Gravity		Temp.				N.Y.O.		002-33342	
Tested By		Vib.				Customer		FLUOR ENGR	
Approved By		CUSTOMER - NON WITNESS TEST				G.P.M.		250	
						T.D.H.		2400	
						R.P.M.		3560	
						Impeller		Dia.	
								2.75	

41016-0408

TITAN LINE HORIZONTAL MOTORS

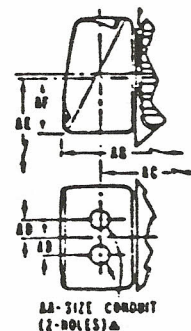
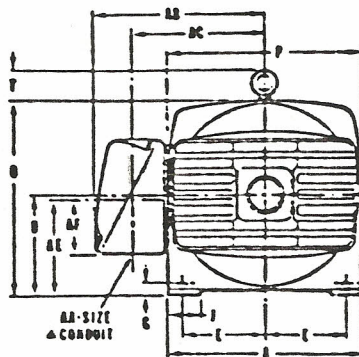
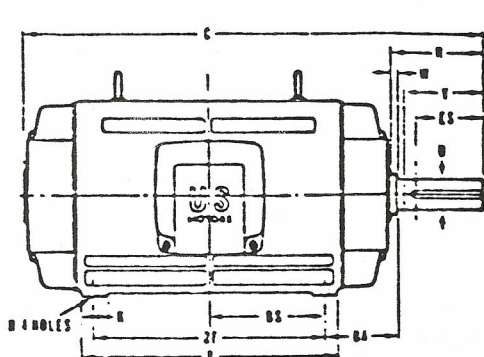


DIMENSIONS

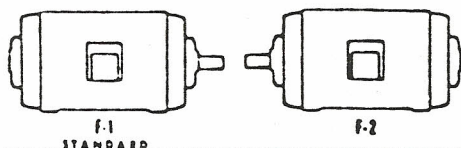
002-33342-00

FRAMES 5005 THRU 6811MS — TYPE H (DRIPPROOF) — WEATHER PROTECTED TYPE I

STANDARD ASSEMBLY F-1 ILLUSTRATED



OPTIONAL ASSEMBLY POSITIONS



FRAME	AB	AC	AD	AF
5809MS	31-7/16	24-9/16	3	10-1/8
5811MS	31-5/16	24-7/16	3	10-1/8

Use for frame 5809MS, 460 volt, 600 HP — 6 pole, and 700 HP — 4 pole. Also frame 5811MS, 460 volt, 600 HP — 8 pole. All other dimensions shown below.

ALL DIMENSIONS ARE IN INCHES

FRAMES	A	D	E	2E	G	H	J	K	O
5005, 5005S, 5007, 5007S	24-7/8	12-1/2	10	20	1-1/2	15/16	4-15/16	4-7/8	25-7/8
5009, 5009S, 5010, 5010S	23	12-1/2	10	20	1-1/8	15/16	3-3/4	4	24-15/16
5807, 5807S, 5809, 5809S, 5809MS	28-3/4	14-1/2	11-1/2	23	1-3/4	1-3/32	6	5	29
5810, 5810MS, 5811, 5811MS	27-3/8	14-1/2	11-1/2	23	1-3/8	1-3/32	5	4	29-1/8
6809, 6809S	33-3/4	17	13-1/2	27	2	1-3/8	6-3/4	5-1/2	34-1/8
6810S, 6810MS, 6811S, 6811MS	31	17	13-1/2	27	1-5/8	1-3/8	5	4	34-1/8

FRAMES	P*	T	AA	AB	AC	AD	AE	AF	BA
5005, 5005S, 5007, 5007S	25-1/8	3-1/4	3-1/2	23-1/4	17-3/4	—	12-1/2	8-1/16	8-1/2
5009, 5009S, 5010, 5010S	24-7/8	3-1/4	3-1/2	23	17-1/2	—	11-1/8	3-1/16	8-1/2
5807, 5807S, 5809, 5809S, 5809MS	29	4-1/8	3-1/2	25-1/4	19-3/4	—	14-1/2	8-1/16	10
5810, 5810MS, 5811, 5811MS	29-1/4	4-1/8	3-1/2	24-7/8	19-5/8	—	13	8-1/16	10
6809, 6809S	34-1/4	5-1/4	3-1/2	34-1/4	27-1/8	3	17	10-15/16	11-1/2
6810S, 6810MS, 6811S, 6811MS	34-1/4	5-1/4	3-1/2	34-1/8	27	3	17	10-15/16	11-1/2

SHAFT DIMENSIONS

BASIC FRAME	N	U - .001	V MIN.	W	ES MIN.	SQ. KEY
5000	12	3-7/8	11-1/4	3/8	10	1
5000S	6-1/8	2-7/8	5-1/2	3/8	4-1/8	3/4
5800	15	4-7/8	14-1/4	3/8	12-7/8	1-1/4
5800S	7-1/8	3-3/8	6-1/2	3/8	5-1/4	7/8
5800MS	8-1/8	3-7/8	7-1/2	3/8	5-5/8	1
6800	15-7/8	5-1/8	15-1/8	1/2	13-3/8	1-1/4
6800S	8-1/4	3-7/8	7-1/2	1/2	5-5/8	1
6800MS	8-1/4	4-3/8	7-1/2	1/2	5-5/8	1

Dimension "D" will never be exceeded, but may be less than values shown. When exact dimensions are required, shims up to 1/16" may be necessary.

* Largest motor width.

Conduit box can be located on either side and opening may be located in steps of 90 degrees regardless of location. Standard as shown with conduit opening down.

▲ The conduit box has qty. 1 hole on frame 5811 and smaller. Larger frames have qty. 2 holes, except the following 460 volt units, which have qty. 2 holes.

FRAME	HP	POLE	FRAME	HP	POLE	FRAME	HP	POLE
5809MS	600	6	5809MS	700	4	5811MS	600	8

FRAME	B	C	2F	BS
5005	22-3/4	46-3/8	18	9
5005S	22-3/4	40-5/8	18	9
5007	26-3/4	50-1/2	22	11
5007S	26-3/4	44-5/8	22	11
5009	32-1/4	56-3/8	28	14
5009S	32-1/4	50-1/2	28	14
5010	36-1/4	60-3/8	32	16
5010S	36-1/4	54-1/2	32	16
5807	29-1/2	59-3/8	25	12-1/2
5807S	29-1/2	51-1/2	25	12-1/2
5809	36-1/2	66-3/8	32	16
5809S	36-1/2	58-1/2	32	16
5809MS	36-1/2	59-1/2	32	16
5810	40	70-3/8	36	18
5810MS	40	63-1/2	36	18
5811	44	74-3/8	40	20
5811MS	44	67-1/2	40	20
6809	44-1/2	78	40	20
6809S	44-1/2	70-3/8	40	20
6810S	48-5/8	75-3/8	45	22-1/2
6810MS	48-5/8	75-3/8	45	22-1/2
6811S	53-5/8	80-3/8	50	25
6811MS	53-5/8	80-3/8	50	25

All rough dimensions may vary by 1/4" due to casting variations

INGERSOLL-RAND CO.
CAMERON DIVISION (CCMS)
PHILLIPSBURG PLANT

ENGINEERING PARTS LIST

REPORT NO. 02990
RUN 31 MAY 87
SHEET 2 OF 4

PARENT REV D
PART NO. LVL A PT SIZE SYMBOL NOUN
62344791 00 Y AY 3X8-8 DA-B 500
CODE CODE PL MATL SPEC

RELEASE
DATE

<-----DRAWING NUMBER-----><MATL SPEC><LIST #>

FND CLASS D	NO. SPARE A	QUANTITY	UM	COMP	PART NO.	PT SIZE	SYMBOL	NOUN	CODE	PL	MATL SPEC	DESCRIPTION	IN-OUT	ECN	REV	
							CODE	CODE					ST	DATE	NO.	LVL
001	3 C	1	PC	62344858	AY	3X8-8	DA-B	184				ROTOR ASSEMBLY				
002	2 3 C	1	PC	62324801	MP	581	D	006	655			CASING RING				
003	2 3 C	1	PC	62324819	MP	519	D	006	655			CASING RING				
004	C	6	PC	62293006	PP	3X10	DA	060	CB	905		CHANNEL RING				
005	2 3 C	1	PC	62325758	MO	3X10	DA	407	B	905		CENTER BUSHING				
006	2 3 C	1	PC	62344841	MP	3X10	DA	441	655			THROTTLING BUSH				
007	2 3 C	2	PC	62019930	MP	242	D	088	20			STUFF BOX BUSHING				
008	2 3 Y	18	PC	62189816	PP	.12X.38	TYPE H	029	AISI	316		GROOVE PIN				
009	3 Y	2	PC	62197702	PP	SEEREMARK	881	429	XF101			JOHN CRANE				
010	3	2	PC	109A2A5				318				SET SCR .25X.50				
011	3 X	1	PC	1430164AX1				9				CPLG NUT				
012	V	2	PC	62125232	AY	250	B	095				TRICO OILER ASSY				
013	C	2	PC	62233580	MP	250	B	159	N	204		BEARING HOUSING				
014	C	1	PC	62119888	MP	250	B	158	A	204		END COVER MACH				
015	3 C	2	PC	62110242	PP	250	B	157	673			FLINGER				
016	3 C	1	PC	62110259	PP	250	B	157	673			FLINGER				
017	2 3 C	1	PC	62119128	PP	7309/10	B	135	9			JOURNAL SLEEVE				
018	2 3 C	1	PC	62119110	PP	6211	B	135	9			JOURNAL SLEEVE				
019	C	1	PC	62118625	MP	250	B	160	J	204		END COVER MACH				
020	C	1	PC	62119862	MP	250	B	160	204			END COVER				

D
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INGENSOULL-RAND CO.
CAMERON DIVISION (CCMS)
PHILLIPSBURG PLANT

ENGINEERING PARTS LIST

REPORT NO. 02990
RUN 31 MAY 87
SHEET 3 OF 4

RELEASE
DATE

PARENT REV D
PART NO. LVL A PT SIZE SYMBOL NOUN
62344791 00 Y AY 3X8-8 DA-B 500

<-----DRAWING NUMBER-----><MATL SPEC><LIST #>

FND CLASS D NO. SPARE A	QUANTITY	UM	COMP PART NO. PT SIZE	SYMBOL CODE	NOUN CODE PL MATL SPEC	DESCRIPTION	IN-OUT ST DATE	ECN NO.	REV LVL
021 C	1	PC	62118617 HP 250	B	160 J 204	END COVER MACH			
022 2 3 C	2	PC	62109939 PP 500	B	031 673	OIL RING			
023 2 3 Y	1	PC	95200903 PP N 09	NONE	240 STEEL	BRG LOCKNUT			
024 1 2 3 Y	1	PC	95201000 PP W 09	NONE	241 STEEL	BRG LOCKWASHER			
025 2 3 Y	1	PC	95200929 PP N 11	NONE	240 STEEL	BRG LOCKNUT			
026 1 2 3 Y	1	PC	95201026 PP W 11	NONE	241 STEEL	BRG LOCKWASHER			
027 2 3 X	1	PC	SKF-6211			BEARINGS			
028 2 3 Y	2	PC	62082953 PP SKF-7309	BYG05	204 45BTO3MXX07	BRG BALL THRUST			
029 1 2 3 X	2	PC	91A11-S-152-E-216		669	SHIM			
030 1 2 3 X	1	PC	91A11-S-152-H-216		669	SHIM			
031 1 2 3 X	1	PC	91A11-S-152-K-216		669	SHIM			
032 3	9	PC	109A2A7		318	SET SCR .25X.75			
033 1 2 3 X	1	PC	20A11-C-M-250		BUNA-M	O-RING			
034 1 2 3 Y	3	PC	62125216 PP 250	B	257 669	SHIM			
035 1 2 3 Y	3	PC	62125224 PP 250	B	257 669	SHIM			
036	10	PC	30A7S5		STEEL	PLUG .50			
038 Y	2	PC	62344015 AY 250-350	PIPING	321 CARB STEEL	COOLING TUBE ASSY			
040	8	PC	112A2A90			SET SCR .50X.75			
042 3	1	PC	11A9-C-202		266	KEY .50X3.25			
043 C	1	PC	62344809 MD 3X8-8	DA-B	183 AA 931	CASING MACH FINAL			

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INGERSOLL-RAND CO.
CAMERON DIVISION (CCMS)
PHILLIPSBURG PLANT

ENGINEERING PARTS LIST

REPORT NO. 02990
RUN 31 MAY 87
SHEET 4 OF 4

RELEASE
DATE

PARENT PART NO.	REV LVL	D A	PT SIZE	SYMBOL CODE	NOUN CODE	PL	MATL SPEC
62344791	00	Y	AY 3X8-8	DA-B	500		

<-----DRAWING NUMBER-----><MATL SPEC><LIST #>

FND CLASS D NO. SPARE A	QUANTITY	UM	COMP PART NO.	PT SIZE	SYMBOL CODE	NOUN CODE	PL	MATL SPEC	DESCRIPTION	IN-OUT ST DATE	ECN NO.	REV LVL
044	2	PC	30A7S3					STEEL	PLUG .25			
045	8	PC	62A3J394					314	STUD .62X3.50			
046	8	PC	38A4K7					377	NUT .62			
047	8	PC	12A5C8					STEEL	WASHERS 5/8"			
048	X	4	PC	13A13-C-110				STEEL	#9X3.00 TAPER PIN			
049	4	PC	38A4C5					175	NUT .50			
050	8	PC	35A2C377						SCREW .75X1.75			
051	8	PC	35A2C217					175	SCREW .50X1.00			
052	0	4	PC	14A5C102					LOCKWASHER			
053	8	PC	35A2C111					175	SCREW .38X1.00			
055	X	2	PC	BW-20-4053					SIGHT GLASS			
056 1 2 3	1	PC	91A11-S-152-L-216					669	SHIM			
057 1 2 3 Y	1	PC	62143656 PP 1.81X2.25 .06 THK			257	669		SHIM			
100 1 2 3	1	PC	251A11X1X2100X5100			6107			GASKET			

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