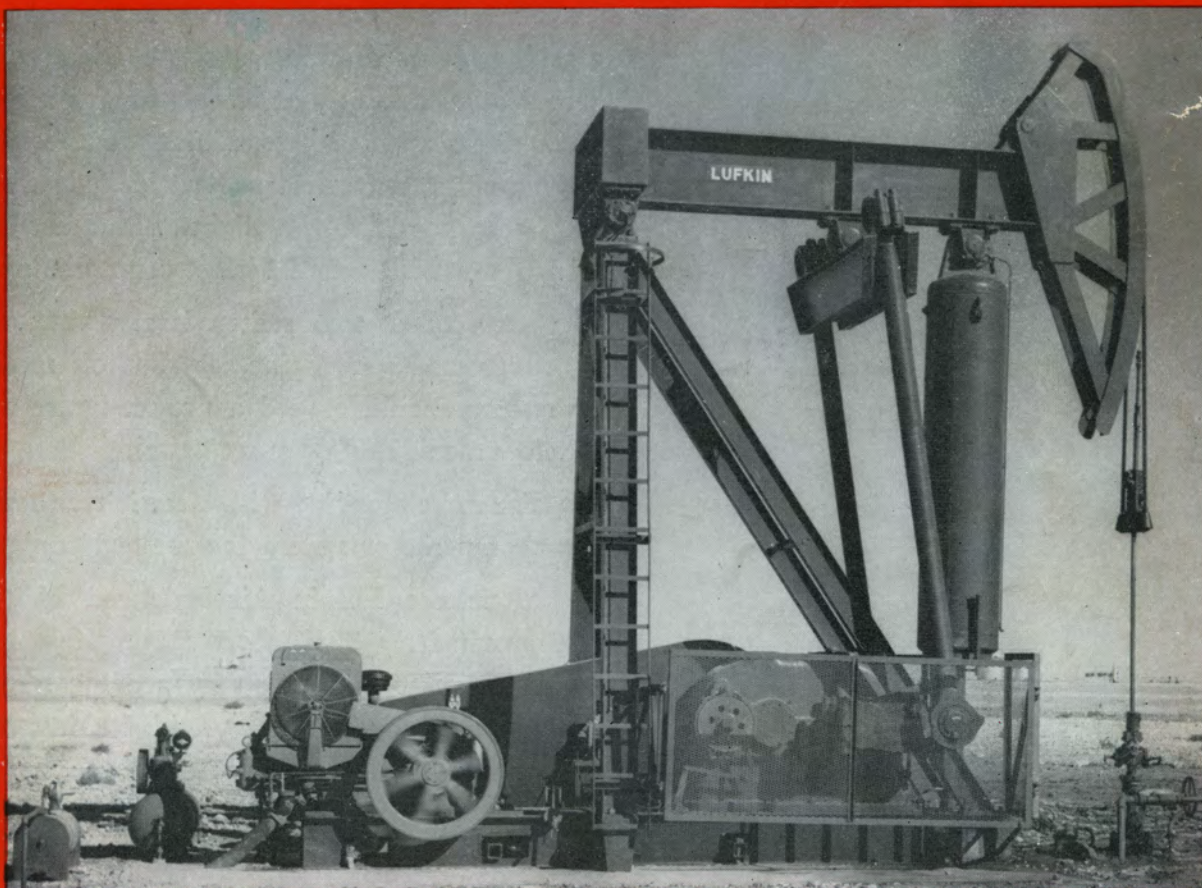


LUFKIN

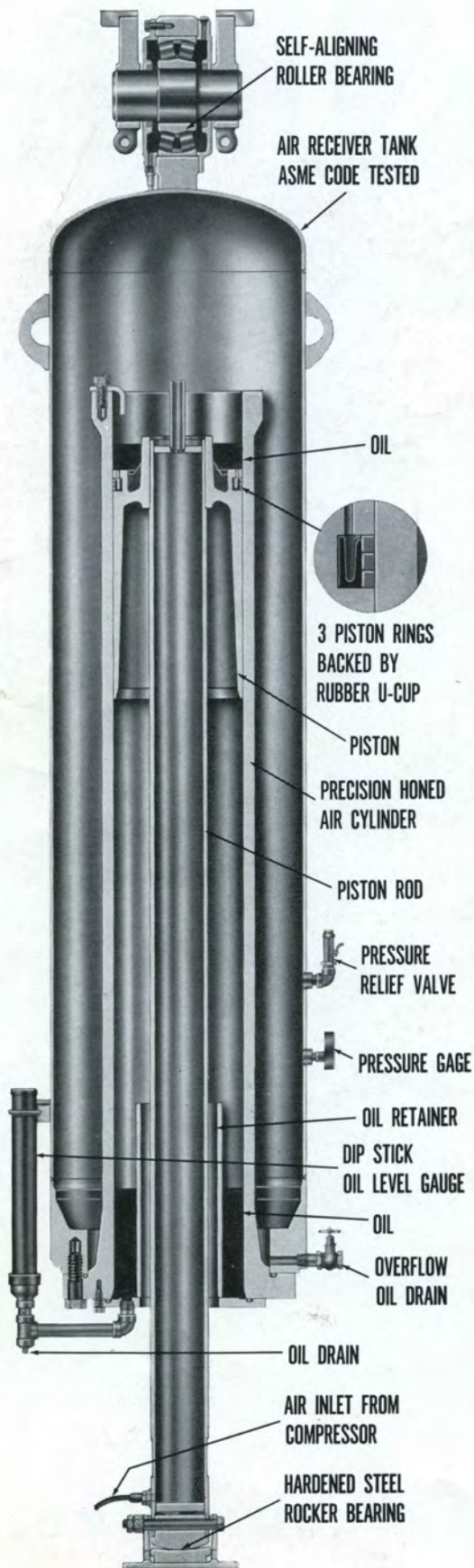
Air Balanced

PUMPING UNITS



LUFKIN FOUNDRY & MACHINE CO.
LUFKIN, TEXAS

LUFKIN *Air Balanced* PUMPING UNITS



1. Perfect counterbalance with finger-tip control.
2. Lower installation costs.
3. Compact - portable - ideal for well testing.

These are some of the outstanding advantages of the latest addition to the line of LUFKIN PUMPING UNITS. These units employ compressed air to counterbalance the well load, rather than beam weights or crank weights. The air system has been simplified until the only continuously operating parts are the balance cylinder and piston. The reservoir capacity of the cylinder is enlarged by a steel receiver that moves with the cylinder as a unit.

When the system is in need of air, an automatic regulator engages an air operated clutch and replaces any lost air. The operator sets regulator, initially, at a pressure sufficient to counterbalance well load, and this pressure is maintained automatically. Should the load change appreciably, a slight adjustment of this regulator will restore perfect counterbalance.

A safety shut-off switch is available, which will ground out engine, or shut off motor, if pressure should exceed a pre-set figure or fall below a minimum pre-set figure.

For units pumping with electricity, a separate make-up motor system is standard equipment.

Since the Lufkin Air Balanced Units are approximately 35% shorter and 40% lighter than crank-type units, they are ideal for use as portable or test units, and for installation on piling or superstructures. Since changing counterbalance effect is a matter of opening a valve, the air balanced unit is ideal for use in testing wells.

All the ruggedness and simplicity of the conventional Lufkin Pumping Units are incorporated in the design of the Lufkin Air Balanced Pumping Unit.

2041

LUFKIN AIR BALANCED PUMPING UNITS



GENERAL SPECIFICATIONS

Designation:

First Number—Gear Box Size (A.P.I. Peak Torque Rating, Thousands of Inch Lbs.)

Second Number—Maximum Stroke (Inches)

Third Number—Structural Rating (Thousands of Lbs.)

(EXAMPLE: A-456DB-100-30 Designates an Air Balanced Unit with a Gear Box of 456,000 Inch Pounds A.P.I. Peak Torque Rating, Equipped with Cranks for a 100 Inch Stroke and a Structural Rating of 30,000 Lbs.)

Crank Pin Bearings: Tapered Roller

Samson Post Bearings: Spherical Roller

Equalizer Bearing: Spherical Roller

Air Cylinder Bearing: Spherical Roller

Hanger: Hinged Horsehead, Wire Line

Air Counterbalance Pressure: 450 P.S.I. (Max.)

Upper Pitman Connection: Rubber Cushioned

GENERAL DIMENSIONS

Lufkin Air Balanced Pumping Units

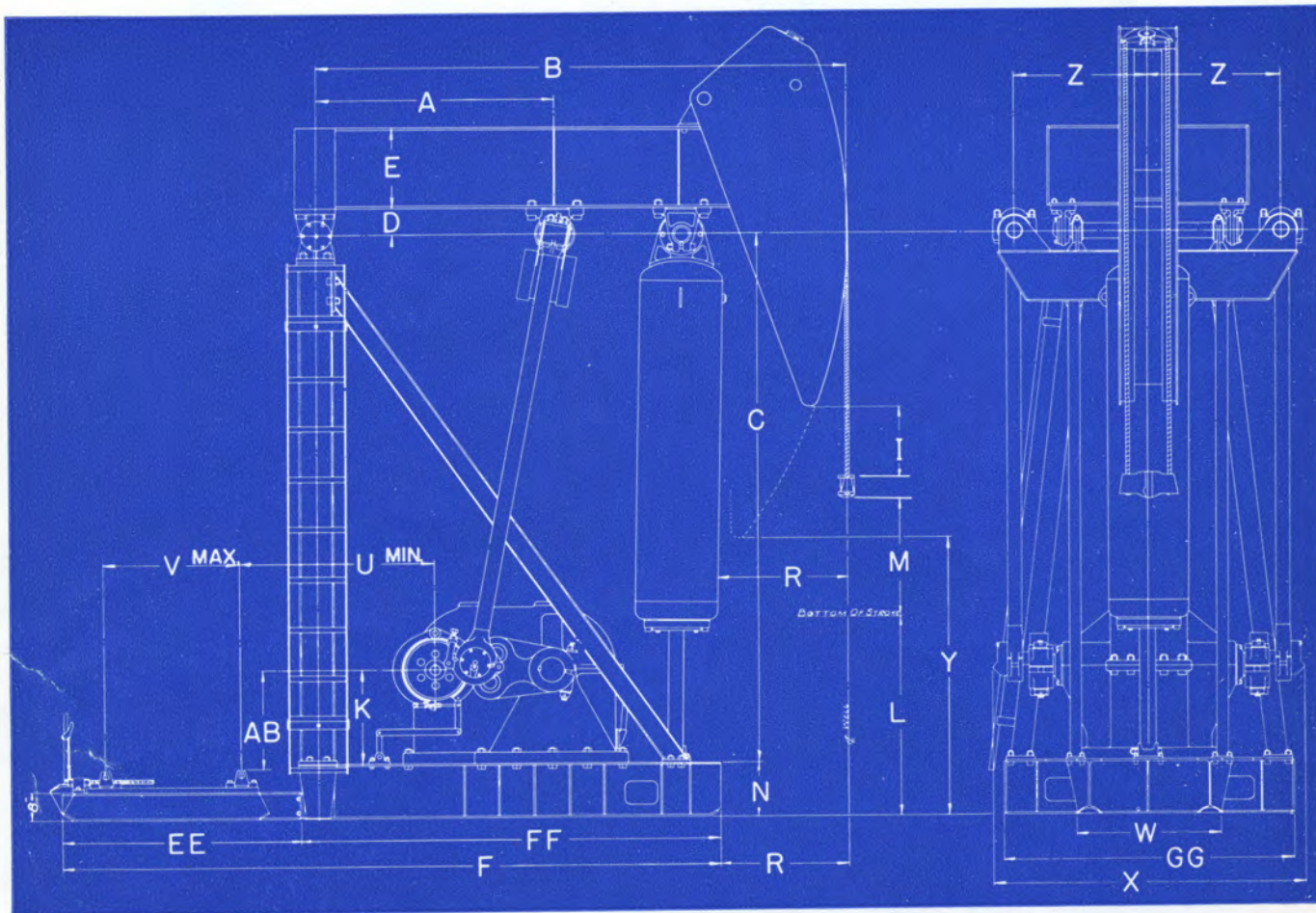
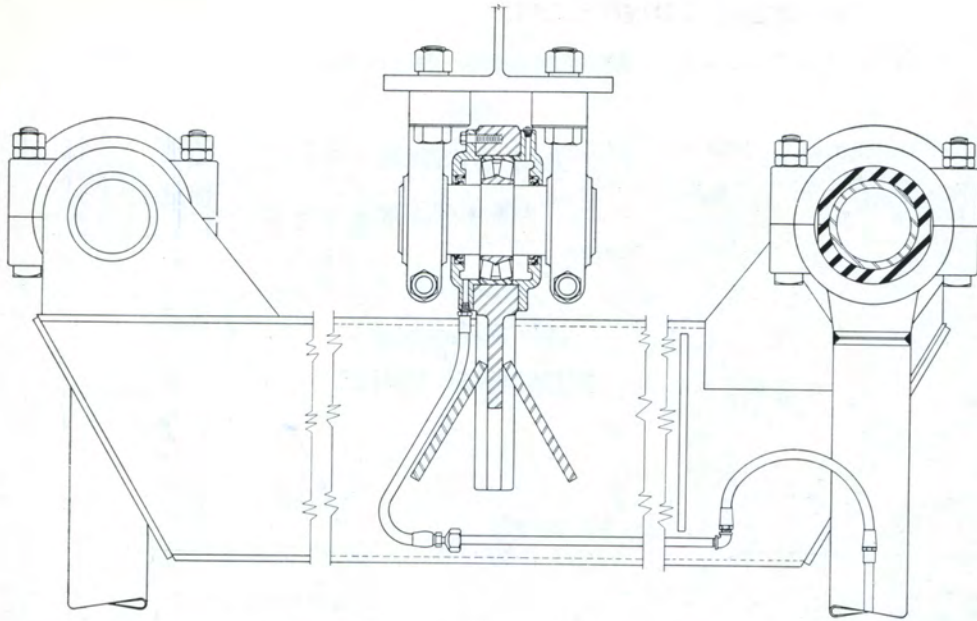


TABLE OF DIMENSIONS

UNIT	A	B	C	D	E	F	I	K	L	M	N	R	U	V	W	X	Y	Z	AB	EE	FF	GG
A-114DA-54-16.....	48"	9'-7"	11'-0"	6 1/2"	16"	14'-5 3/4"	257 3/8"	18"	49 1/2"	27"	9 3/4"	36"	64"	42"	25 1/4"	66 3/8"	7'-0"	29"	13 1/2"	7'-0 1/2"	7'-5 1/2"	61 3/4"
A-114DA-64-16.....	48"	9'-7"	11'-0"	6 1/2"	16"	14'-5 3/4"	257 3/8"	18"	44 1/2"	32"	9 3/4"	36"	64"	42"	25 1/4"	66 3/8"	6'-7"	29"	13 1/2"	7'-0 1/2"	7'-5 1/2"	61 3/4"
A-160D-64-20.....	50"	10'-0"	11'-9"	6 1/2"	18 1/2"	14'-6 1/4"	175 3/8"	27"	53 3/4"	32"	9 3/4"	36"	60"	40"	32"	69 3/4"	6'-11"	30 1/2"	22"	6'-7 3/4"	7'-10 1/2"	68 3/4"
A-228D-74-20.....	50"	10'-0"	11'-9"	6 1/2"	18 1/2"	14'-6 1/4"	175 3/8"	27"	48 3/4"	37"	9 3/4"	36"	60"	40"	32"	69 3/4"	6'-7"	30 1/2"	22"	6'-7 3/4"	7'-10 1/2"	68 3/4"
A-228D-74-23.....	56"	10'-11"	12'-5"	6 3/8"	20 1/8"	15'-0 1/4"	337 3/8"	27"	46 3/8"	37"	16 1/8"	36"	47"	50"	37 1/4"	6'-8 3/8"	7'-8"	35 1/2"	28 3/8"	6'-9"	8'-3 3/4"	6'-11 1/2"
A-320D-86-23.....	56"	10'-11"	12'-5"	6 3/8"	20 1/8"	15'-0 1/4"	213 3/8"	27"	46 3/8"	43"	16 1/8"	36"	47"	50"	37 1/4"	6'-8 3/8"	6'-10"	35 1/2"	28 3/8"	6'-9"	8'-3 3/4"	6'-11 1/2"
A-320D-86-27.....	70"	12'-11"	13'-4"	7 3/8"	24"	17'-8 1/4"	361 3/8"	28"	44 3/8"	43"	16 1/8"	39"	6'-6"	41"	43 1/4"	7'-3 3/8"	7'-7"	39"	29 3/8"	7'-8"	10'-0 1/4"	7'-11 1/2"
A-320D-100-27.....	70"	12'-11"	13'-4"	7 3/8"	24"	17'-8 1/4"	187 3/8"	28"	46 1/8"	50"	16 1/8"	39"	6'-6"	41"	43 1/4"	7'-3 3/8"	6'-7"	39"	29 3/8"	7'-8"	10'-0 1/4"	7'-11 1/2"
A-456DB-100-30.....	6'-5"	14'-7"	15'-7"	7 3/8"	24 1/2"	18'-1 3/4"	423 3/4"	28"	49 3/8"	50"	16 1/8"	47 1/2"	6'-2"	41"	40 3/4"	8'-4 1/8"	8'-10"	45"	29 3/8"	7'-2"	10'-11 3/8"	7'-6"
A-456DB-120-30.....	6'-5"	14'-7"	15'-7"	7 3/8"	24 1/2"	18'-1 3/4"	191 3/8"	28"	51 3/8"	60"	16 1/8"	47 1/2"	6'-2"	41"	40 3/4"	8'-4 1/8"	7'-5"	45"	29 3/8"	7'-2"	10'-11 3/8"	7'-6"
A-640DB-120-30.....	6'-5"	14'-7"	15'-7"	7 3/8"	24 1/2"	18'-1 3/4"	191 3/8"	28"	51 3/8"	60"	16 1/8"	47 1/2"	71"	41"	40 3/4"	8'-4 1/8"	7'-5"	45"	29 3/8"	7'-2"	10'-11 3/8"	7'-6"
A-640DB-120-35.....	7'-4"	16'-8"	17'-10"	9 1/8"	24 3/4"	19'-5 1/2"	45"	28"	54 1/2"	60"	16 1/8"	59"	7'-0"	41"	46 3/4"	8'-4 1/8"	9'-5"	45"	29 3/8"	7'-2"	12'-3 1/2"	7'-11"
A-640DB-144-35.....	7'-4"	16'-8"	17'-10"	9 1/8"	24 3/4"	19'-5 1/2"	191 3/8"	28"	55"	72"	16 1/8"	59"	7'-0"	41"	46 3/4"	8'-4 1/8"	7'-10"	45"	29 3/8"	7'-2"	12'-3 1/2"	7'-11"
A-912D-144-35.....	7'-4"	16'-8"	17'-10"	9 1/8"	24 3/4"	19'-5 1/2"	191 3/8"	30"	55"	72"	16 1/8"	59"	6'-4"	41"	50"	8'-4 1/8"	7'-10"	45"	31 3/8"	7'-2"	12'-3 1/2"	7'-11"

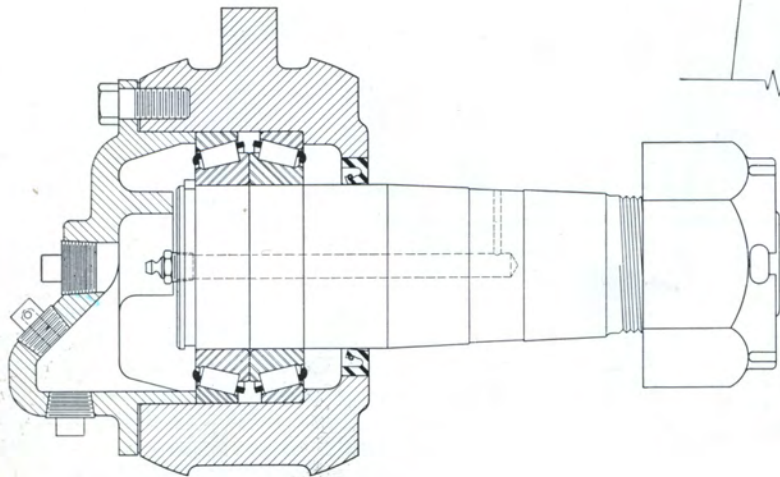
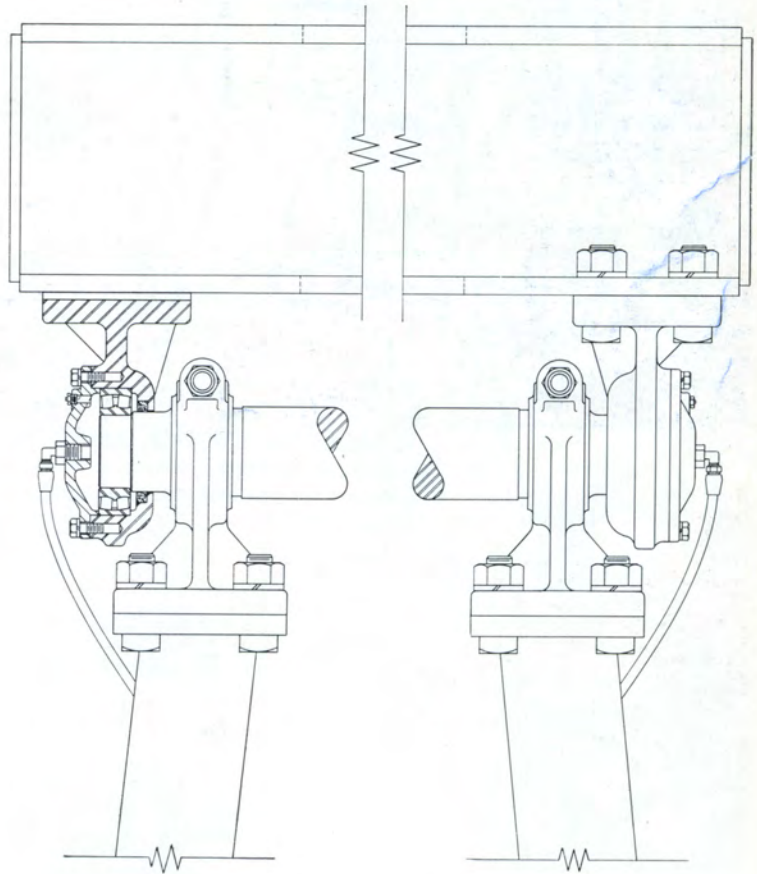
RATING CHART

UNIT	Peak Torque Rating-In. Lbs.	Stroke Inches	Polished Rod Load Class-Lbs.	Max. Effective Cbl., Lbs.	Gear Ratio	Weight Lbs.
A-114DA-54-16.....	114,000	54-44	16,000	10,685	29.4	11,000
A-114DA-64-16.....	114,000	64-54	16,000	10,685	29.4	11,000
A-160D-64-20.....	160,000	64-54	20,000	17,085	28.67	13,100
A-160D-74-20.....	160,000	74-64	20,000	17,085	28.67	13,100
A-228D-74-23.....	228,000	74-64-54	23,000	17,170	28.45	18,000
A-228D-74-23.....	228,000	86-74-64	23,000	17,170	28.45	18,500
A-228D-86-23.....	320,000	86-74-64	27,000	21,255	30.12	24,500
A-320D-86-27.....	320,000	100-86-74	27,000	21,255	30.12	24,800
A-320D-100-27.....	456,000	100-86-74	30,000	23,775	29.04	28,500
A-456DB-100-30.....	456,000	120-100-86	30,000	23,775	29.04	29,500
A-456DB-120-30.....	456,000	120-100-86	30,000	23,775	28.6	31,500
A-640DB-120-30.....	640,000	120-100-86	35,000	27,065	28.6	36,900
A-640DB-120-35.....	640,000	144-120-100	35,000	27,065	28.6	37,900
A-640DB-144-35.....	640,000	144-120-100	35,000	27,065	28.72	39,700
A-912D-144-35.....	912,000	144-120-100	35,000	27,065	28.72	39,700



PITMAN EQUALIZER
 showing self-aligning roller bearing at center and rubber cushions at upper Pitman connections. Bearing is lubricated through flexible oil line at lower end of Pitman.

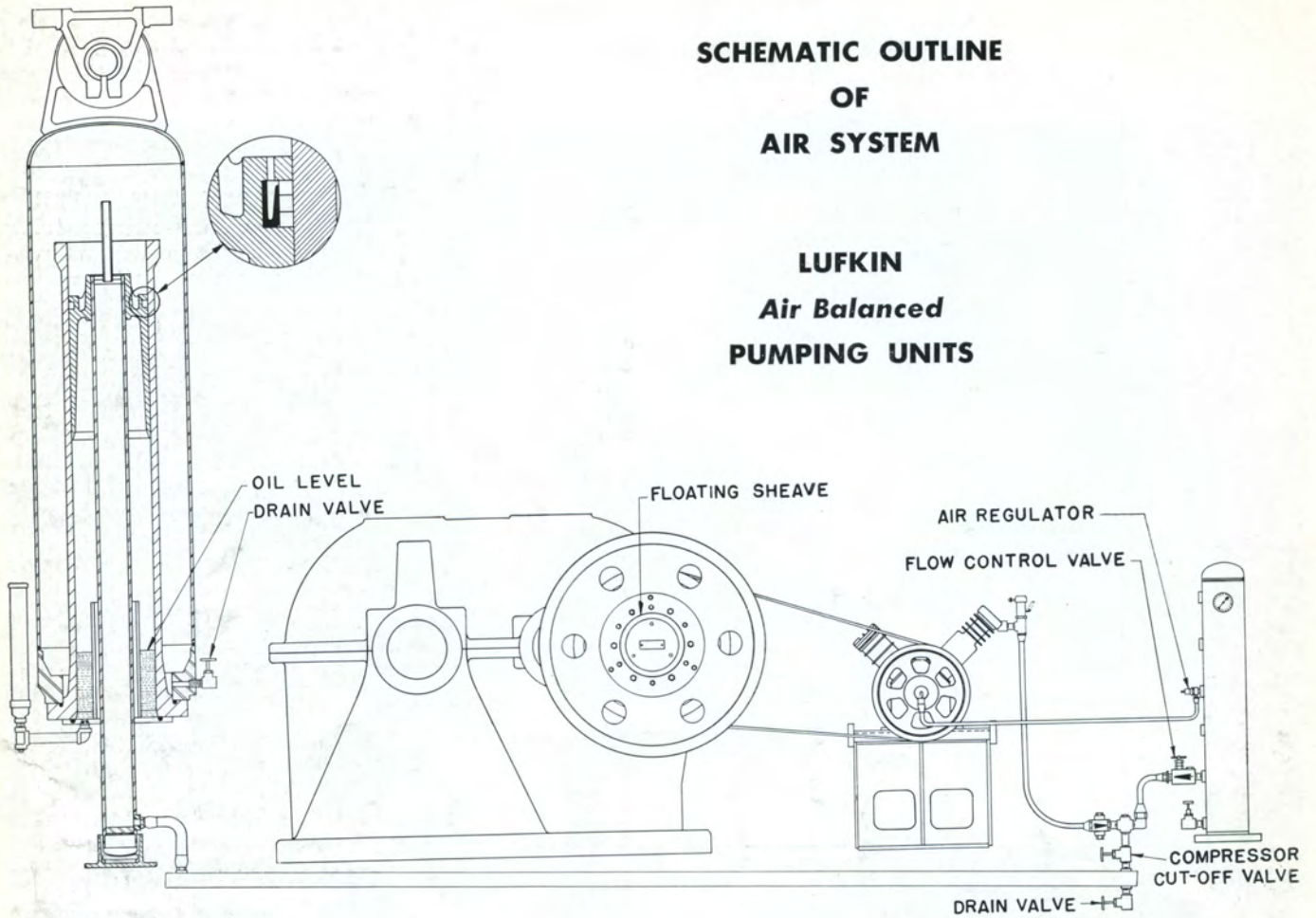
SAMSON POST BEARING ASSEMBLY
 featuring self-aligning roller bearings. Note flexible oil lines going down Samson Post legs for easy lubrication at ground level.



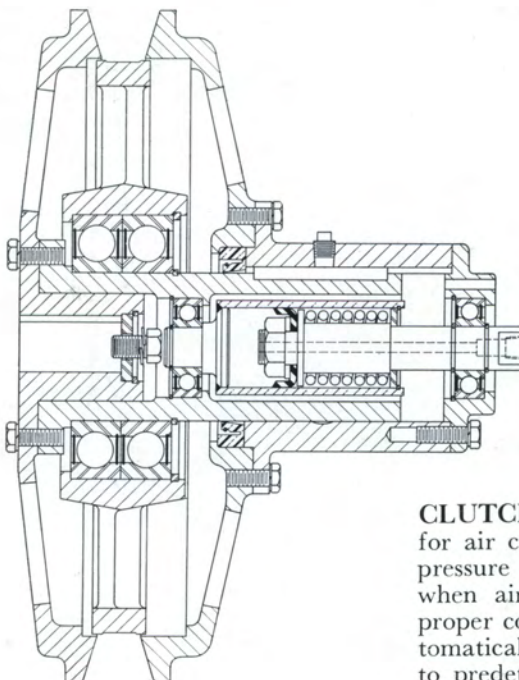
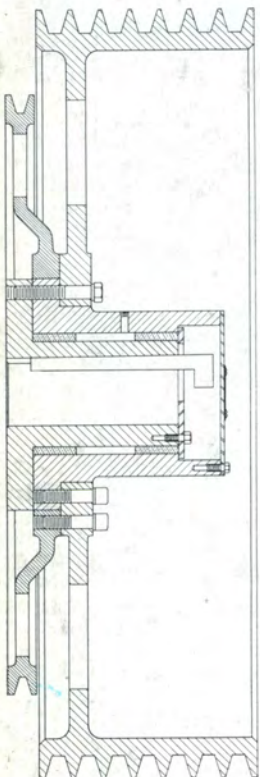
CRANK PIN BEARING ASSEMBLY
 with double tapered roller bearings. Note grease fitting and drilled holes in pin to facilitate pin removal.

SCHEMATIC OUTLINE OF AIR SYSTEM

LUFKIN Air Balanced PUMPING UNITS



FLOATING SHEAVE ASSEMBLY
for Gear Reducer which permits running air compressor at initial starting without operating gear reducer.

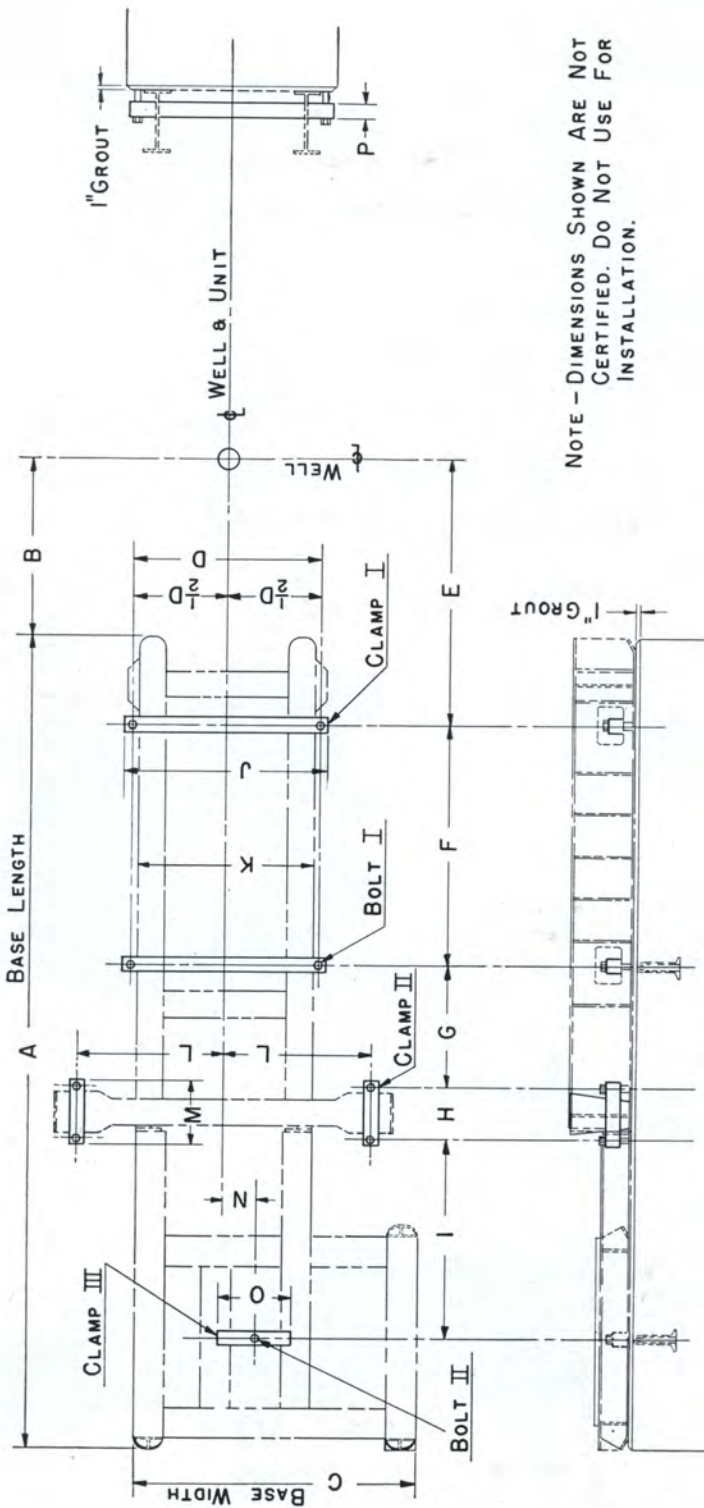


CLUTCH
for air compressor—engages by spring pressure at initial starting and also when air pressure drops too low for proper counterbalance—disengages automatically when air pressure builds up to predetermined setting.

LUFKIN AIR BALANCED PUMPING UNITS

JOINED BASE, GAS ENGINE DRIVE

FOUNDATION BOLT & CLAMP SCHEDULE



NOTE - DIMENSIONS SHOWN ARE NOT CERTIFIED. DO NOT USE FOR INSTALLATION.

UNIT	A		B		C		D		E		F		G		H		I		J		K		L		M		N		O		P		CLAMP I		CLAMP II		CLAMP III		BOLT I		BOLT II		ANCHOR NUT								
	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.	NO. RQD.	DRWG. NO.									
A-114DA-54-16	14'-5 3/4"	36	49	28	53	34 1/2	22	11	64	32	25 1/4	26 3/4	15	0	17	3 1/2	2	BI5890	2	BI5935	1	BI1185	8	1/4 x 8 1/2	8	8	1/4 x 8 1/2	8	8	1/4 x 6 1/2	8	8	1/4 x 8 1/2	2	BI5890	2	BI5935	1	BI1185	8	1/4 x 8 1/2	8	8	1/4 x 6 1/2	8	8	1/4 x 8 1/2	9	AI2858	9	AI2858
A-114DA-64-16	14'-5 3/4"	36	49	28	53	34 1/2	22	11	64	32	25 1/4	26 3/4	15	0	17	3 1/2	2	BI5890	2	BI5935	1	BI1185	8	1/4 x 8 1/2	8	8	1/4 x 8 1/2	8	8	1/4 x 6 1/2	8	8	1/4 x 8 1/2	2	BI5890	2	BI5935	1	BI1185	8	1/4 x 8 1/2	8	8	1/4 x 6 1/2	8	8	1/4 x 8 1/2	9	AI2858	9	AI2858
A-160D-64-20	14'-6 1/4"	36	56 1/2	35	53	43	18 1/2	11	55	39	32	30	15	0	22	3 1/2	2	BI5889	2	BI5935	1	BI1185	8	1/4 x 8 1/2	8	8	1/4 x 8 1/2	8	8	1/4 x 6 1/2	8	8	1/4 x 8 1/2	2	BI5889	2	BI5935	1	BI1185	8	1/4 x 8 1/2	8	8	1/4 x 6 1/2	8	8	1/4 x 8 1/2	9	AI2858	9	AI2858
A-160D-74-20	14'-6 1/4"	36	56 1/2	35	53	43	18 1/2	11	55	39	32	30	15	0	22	3 1/2	2	BI5889	2	BI5935	1	BI1185	8	1/4 x 8 1/2	8	8	1/4 x 8 1/2	8	8	1/4 x 6 1/2	8	8	1/4 x 8 1/2	2	BI5889	2	BI5935	1	BI1185	8	1/4 x 8 1/2	8	8	1/4 x 6 1/2	8	8	1/4 x 8 1/2	9	AI2858	9	AI2858
A-228D-74-23	15'-0 1/4"	36	65	40 1/2	56 1/4	45 1/2	24 1/2	10	50	44 1/2	37 1/4	29 1/2	14	4 1/2	18 1/2	4 1/2	2	BI5887	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	8	BI5887	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	9	AI2859	9	AI2859
A-228D-86-23	15'-0 1/4"	36	65	40 1/2	56 1/4	45 1/2	24 1/2	10	50	44 1/2	37 1/4	29 1/2	14	4 1/2	18 1/2	4 1/2	2	BI5887	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	8	BI5887	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	9	AI2859	9	AI2859
A-320D-86-27	17'-8 1/4"	39	71	46 1/2	61 1/4	57 1/2	31 1/4	10	61	50 1/2	43 1/4	35	14	7 1/2	18 1/2	4 1/2	2	BI5886	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	8	BI5886	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	9	AI2859	9	AI2859
A-456DB-100-30	18'-1 3/4"	47 1/2	74 3/4	50	71	64 1/2	34 1/2	10	55	54	46 3/4	37 1/2	14	9 3/8	18 1/2	4 1/2	2	BI5700	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	8	BI5700	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	9	AI2859	9	AI2859
A-456DB-120-30	18'-1 3/4"	47 1/2	74 3/4	50	71	64 1/2	34 1/2	10	55	54	46 3/4	37 1/2	14	9 3/8	18 1/2	4 1/2	2	BI5700	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	8	BI5700	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	9	AI2859	9	AI2859
A-640DB-120-30	18'-1 3/4"	47 1/2	74 3/4	50	71	64 1/2	34 1/2	10	55	54	46 3/4	37 1/2	14	9 3/8	18 1/2	4 1/2	2	BI5700	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	8	BI5700	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	9	AI2859	9	AI2859
A-640DB-120-35	19'-5 1/2"	59	74 3/4	50	84	66	42 3/4	14 1/2	55	54	46 3/4	39 1/2	18 1/2	9 3/8	18 1/2	4 1/2	2	BI5700	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	8	BI5700	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	9	AI2859	9	AI2859
A-640DB-144-35	19'-5 1/2"	59	74 3/4	50	84	66	42 3/4	14 1/2	55	54	46 3/4	39 1/2	18 1/2	9 3/8	18 1/2	4 1/2	2	BI5700	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	8	BI5700	2	BI5699	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	9	AI2859	9	AI2859
A-912D-144-35	19'-5 1/2"	59	74 3/4	53 1/4	83	67	42 3/4	14 1/2	55	57 1/4	50	39 1/2	18 1/2	9 3/8	18 1/2	4 1/2	2	BI5903	2	BI5918	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	8	BI5903	2	BI5918	1	BI1228	8	1/2 x 10 1/2	8	8	1/2 x 10 1/2	8	8	1/2 x 8	9	AI2859	9	AI2859

SALES AND SERVICE OFFICES

Oil Field Division

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Roy Lilley, Jr.

CORPUS CHRISTI, TEXAS

1201 Wilson Bldg., Phone 3-1881
Edd Terrill, Jr.

DALLAS, TEXAS

1208 Gulf States Bldg.
Phone STerling 5127
A. E. Caraway—R. C. Thompson

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Jack Gissler
R. D. Dunlop

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P. O. Box 6
Lewis W. Breeden

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T. A. Banta

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Bill Miner—Tom Bowers—
Val Gallia—Joe Randol

KILGORE, TEXAS

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B. C. Burnette
Anthony Christina

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Al McConville
Robert R. Spaulding
Glenn E. Henderson

MARACAIBO, VENEZUELA, S. A.

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Ben C. Sargent, Jr.

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Phone BARclay 7-0562
A. V. Simonson

EXECUTIVE OFFICES AND FACTORY

Lufkin, Texas, Phone 3-4421
L. A. Little, Vice President &
General Sales Manager
Cooper Richards, Ass't Sales Mgr.

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John W. Swanson, Jr.
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Phone Regent 6-7480
Charles Dyer
John D. Mettauer

SEMINOLE, OKLAHOMA

812 Eighth Street
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Newell Lynch

STERLING, COLORADO

615 Elwood Street
Phone 1459
G. W. Nichols

TULSA, OKLAHOMA

605 Thompson Bldg.
Phone 3-0204
D. A. Reid
H. H. Muller

WICHITA FALLS, TEXAS

411 Oil & Gas Bldg.
P. O. Box 2455
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Ernest Slaughter

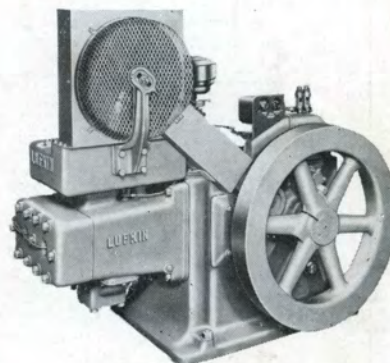
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