

# Bethlehem PUMPING UNITS

## ENGINEERING DATA

### 640 API SIZE

640,000 In. Lbs. API Peak Torque Pumping Units

#### GEAR REDUCER DATA

#### OPTIONAL ITEMS

<p>API Reducer Size <span style="float: right;">640</span></p> <p>API Peak Torque @ 20 SPM <span style="float: right;">640,000 in. lbs.</span></p> <p>Gear Ratio, Double Reduction <span style="float: right;">28.6 to 1</span></p> <p>Crankshaft Dia. <span style="float: right;">7"</span></p> <p>V-Belt Sheave — Pitch Dia. <span style="float: right;">Std. 34.3"- 6D</span></p> <p style="padding-left: 150px;">Alternates 51.3", Max. 55.3"</p> <p>Diameter of Reducer Hi-Speed Shaft <span style="float: right;">3<math>\frac{7}{16}</math>"</span></p> <p>Distance, Centerline Unit to Centerline Drive. <span style="float: right;">20<math>\frac{3}{4}</math>"</span></p> <p>Gear Reducer Oil Capacity, U. S. Gal. <span style="float: right;">70</span></p>	<p>Dual Zone Polished Rod Hanger</p> <p>Triple Zone Polished Rod Hanger</p> <p>Wide Main Base (Portable Type)</p> <p>Crank Guard Rails</p> <p>Power Assemblies for: Single Cylinder Engines, Hi-speed Engines, Electric Motors— Elevated or Ground Level.</p>
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#### STRUCTURE DATA

	356-144	304-144	365-120
API Structure Size	640-356-144	640-304-144	640-365-120
Unit Designation	35,600	30,400	36,500
API Structure Capacity, lbs.	144, 124, 106, 88	144, 124, 106, 88	120, 105, 90, 74
Length of Strokes, in.	33' @ 220#	33" @ 200#	30" @ 190#
Walking Beam Size	BUSHING TYPE, FACTORY LUBRICATED		
Saddle Bearing Type	150	150	150
Projected Area, sq. in.	BRONZE BUSHED, FACTORY LUBRICATED		
Tail Bearing Type	110	80	80
Projected Area, sq. in.	SPHERICAL ROLLER BEARING, FACTORY LUBRICATED, TAPERED PIN, REMOVED HYDRAULICALLY		
Wrist Pin Bearing - Type	1 SL	1 SL	1 SL
Size	5" x Heavy	5" x Heavy	5" x Heavy
Pitman Size, Pipe O. D.	1 $\frac{1}{4}$ " x 35'-0"	1 $\frac{1}{4}$ " x 35'-0"	1 $\frac{1}{4}$ " x 34'-0"
Wireline Hanger	94110-B	94110-B	94110-B
Cranks	500	-370	750
Structure Unbalance, lbs.			

#### COUNTERBALANCE DATA

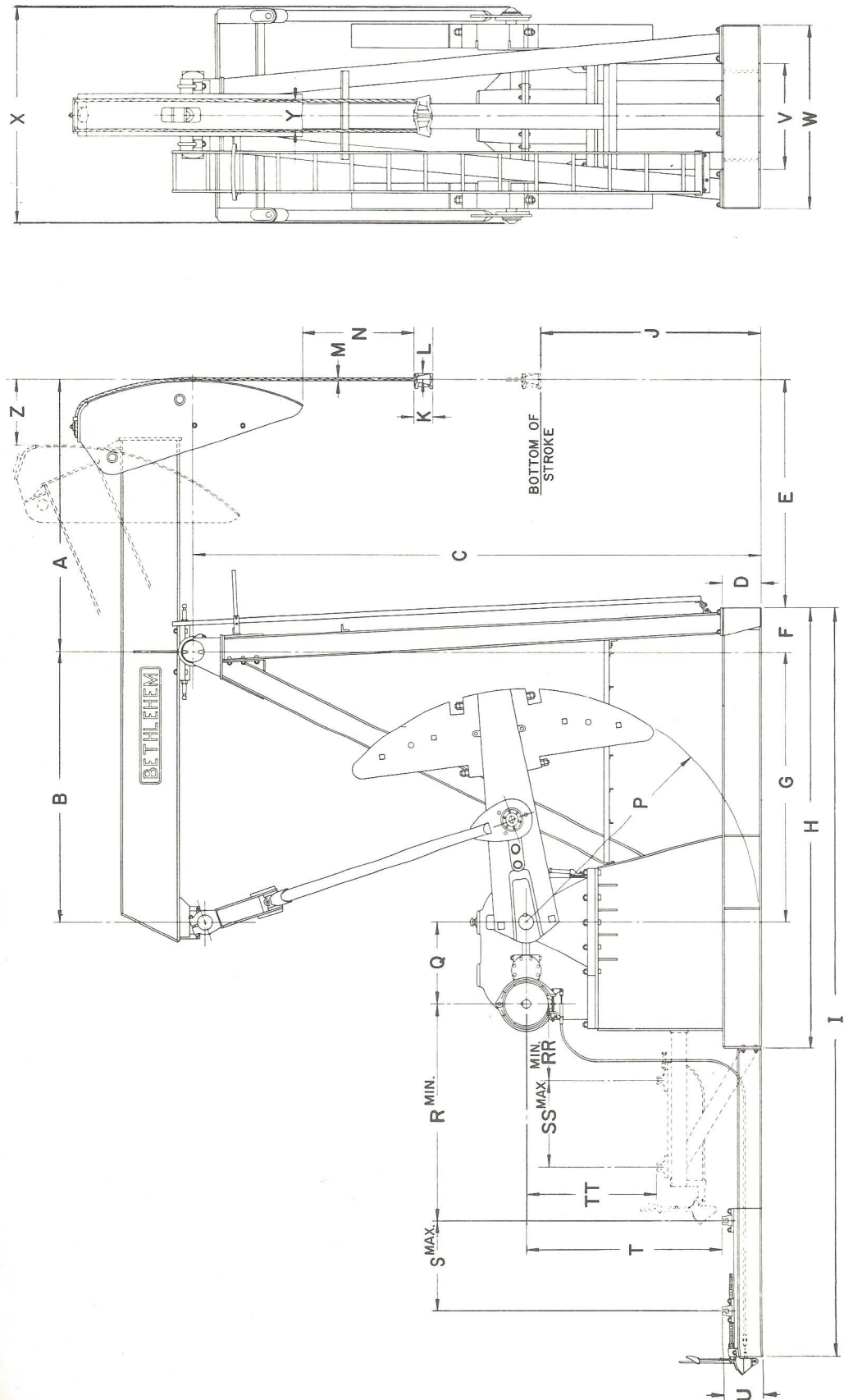
Pounds of effective Counterbalance at Polished Rod at Maximum Stroke, Includes Structure Unbalance.

	6,070	6,200	8,530
Cranks Only	12,220	12,350	15,810
4 No. 95 Main Weights	14,800	14,930	18,860
4 No. 95 Filler Weights	17,370	17,500	21,910
8 No. 95 Filler Weights	19,950	20,080	24,960
12 No. 95 Filler Weights	22,520	22,650	28,010
16 No. 95 Filler Weights	645	645	760
One Only Filler Weight			13,470
4 No. 78 Main Weights			15,970
4 No. 78 Filler Weights			18,470
8 No. 78 Filler Weights			20,970
12 No. 78 Filler Weights			23,470
16 No. 78 Filler Weights			625
One Only Filler Weight	18,990	19,120	23,830
4 No. OARO Main Weights	21,300	21,430	26,570
4 No. OL Aux. Weights	22,990	23,120	28,570
4 No. OAS Aux. Weights	26,990	27,120	33,310
4 No. OAD Aux. Weights			

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## DIMENSIONAL DATA

640,000 In. Lbs. Peak Torque Pumping Units



Unit	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	RR	SS	TT
356-168																												
305-168																												
427-144																												
356-144	15'-0"	10'-0"	22'-0 1/2"	16"	12'-11"	25"	10'-0"	16'-10 1/2"	27'-5"	82"	8"	1 3/16"	1 1/4"	26"	110"	41 1/2"	7'-2 1/4"	48 1/2"	93"	18'	46 3/4"	6'-8"	8'-3 1/4"	16"	36"	26 3/4"	97 3/4"	66 3/8"
304-144	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
253-144																												
427-120																												
365-120	12'-8"	"	"	"	10'-7"	"	"	"	"	80 1/2"	7 1/2"	2 1/2"	"	5 1/2"	"	"	"	"	"	"	"	"	12"	33"	"	"	"	
304-120																												
365-100																												

Note: Dimensions I, R, S and T are for Hi-Speed Engine