

# Bethlehem PUMPING UNITS

## ENGINEERING DATA

### 114 API SIZE

114,000 In. Lbs. API Peak Torque Pumping Units

#### GEAR REDUCER DATA

#### OPTIONAL ITEMS

API Reducer Size	114	Dual Zone Polished Rod Hanger
API Peak Torque @ 20 SPM	114,000 in. lbs.	Triple Zone Polished Rod Hanger
Gear Ratio, Double Reduction	29.4 to 1	Wide Main Base (Portable Type)
Crankshaft Dia.	4 <sup>7</sup> / <sub>16</sub> "	Crank Guard Rails
V-Belt Sheave - Pitch Dia.	Std. 24.6"-3C Alternates 19.6"-29.6", Max. 33.6"	Power Assemblies for: Single Cylinder Engines, Hi-Speed Engines, Electric Motors— Elevated or Ground Level.
Diameter of Reducer Hi-Speed Shaft	1 <sup>15</sup> / <sub>16</sub> "	
Distance, Centerline Unit to Centerline Drive	11 <sup>5</sup> / <sub>8</sub> "	
Gear Reducer Oil Capacity, U. S. Gal.	17	

API Structure Size	169-64	143-64	169-54	133-54	119-54	133-48
Unit Designation	114-169-64	114-143-64	114-169-54	114-133-54	114-119-54	114-133-48
API Structure Capacity, lbs	16,900	14,300	16,900	13,300	11,900	13,300
Length of Strokes, in.	64, 54, 44, 34	64, 52, 40, 28	54, 44, 34, 24	54, 45, 36, 27	54, 45, 36, 27	48, 40, 32, 24
Walking Beam Size	24" @ 84#	18" @ 70#	18" @ 70#	18" @ 60#	18" @ 55#	16" @ 58#
Saddle Bearing Type	BUSHING TYPE, FACTORY LUBRICATED					
Projected Area, sq. in.	75	63	63	50	50	50
Tail Bearing Type	BRONZE BUSHED, FACTORY LUBRICATED					
Projected Area, sq. in.	37	37	37	27	27	27
Wrist Pin Bearing - Type	SPHERICAL ROLLER BEARING, FACTORY LUBRICATED, TAPERED PIN, REMOVED HYDRAULICALLY					
Size	4 SL	4 SL	4 SL	5 S	5 S	5 S
Pitman Size, Pipe O. D.	3 1/2" Std.	3 1/2" Std.	3 1/2" Std.	2 7/8" Std.	2 7/8" Std.	2 7/8" Std.
Wireline Hanger	1" x 19'-0"	1" x 18'-3"	1" x 16'-0"	7/8" x 16'-0"	7/8" x 16'-0"	7/8" x 14'-0"
Cranks	6468-B	5456-B	5456-B	4850-B	4850-B	4850-B
Structure Unbalance, lbs.	600	400	550	400	400	500

#### COUNTERBALANCE DATA

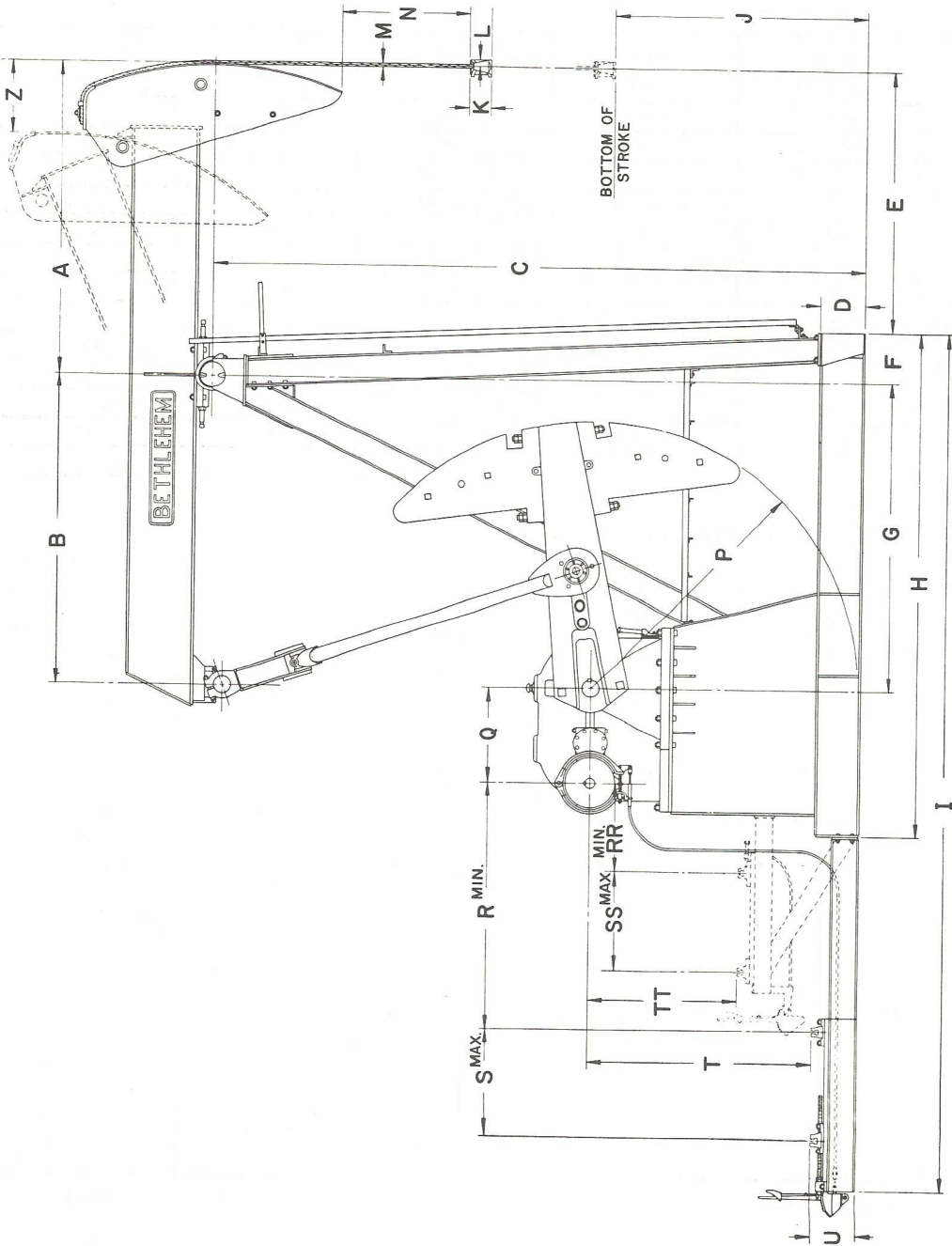
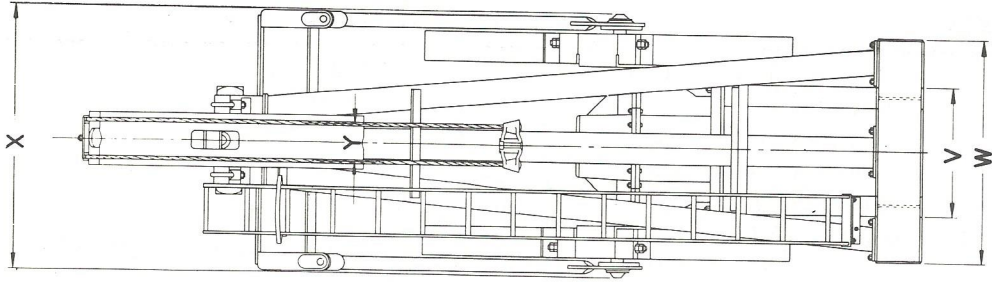
Pounds of effective Counterbalance at Polished Rod at Maximum Stroke. Includes Structure Unbalance.

Cranks Only	4,680	2,630	3,150	2,860	2,860	3,270
4 No. 50 Main Weights	8,250	5,450	6,430	5,600	5,600	6,350
4 No. 50 Filler Weights	10,080	6,890	8,110	6,980	6,980	7,910
8 No. 50 Filler Weights	11,900	8,320	9,780	8,370	8,370	9,460
12 No. 50 Filler Weights	13,730	9,760	11,460	9,750	9,750	11,020
14 No. 50 Filler Weights		10,480	12,300	10,440	10,440	
One Only Filler Weight	460	360	420	350	350	390
4 No. 46 Filler Weights	7,830			5,280	5,280	5,990
4 No. 46 Filler Weights	9,430			6,500	6,500	7,360
8 No. 46 Filler Weights	11,040			7,720	7,720	8,730
12 No. 46 Filler Weights	12,640			8,930	8,930	10,100
14 No. 46 Filler Weights				9,540	9,540	10,785
One Only Filler Weight	460			300	300	340
4 No. Main Weights						
4 No. Filler Weights						
8 No. Filler Weights						
12 No. Filler Weights						
One Only Filler Weight						

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## DIMENSIONAL DATA

114,000 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
114-169-64	7'-0"	7'-0"	14'-1"	12"	68"	16"	7'-0"	11'-3"	20'-0"	75"	5 3/4"	2 1/2"	1"	21 1/4"	68" 24"	61 3/4"	46 1/2"	55" 14"	25"	51 3/4"	51 3/4"	67 1/4"	9"	23 1/2"	23"	34 1/4"	29"	
114-143-64	7'-0"	6'-0"	12'-1 1/4"	12"	70"	14"	6'-0"	10'-1"	17'-5 1/2"	56 3/4"	"	"	"	16 3/4"	56" 24"	45 1/4"	"	43"	"	51 1/4"	"	"	"	"	19 3/4"	13 1/2"	30 3/4"	30 3/4"
114-169-54	6'-0"	6'-0"	"	12"	58"	"	"	"	"	67 1/4"	"	"	"	15 3/4"	56" 24"	"	"	"	"	"	"	"	"	"	"	"	"	"
114-133-54	6'-0"	5'-4"	10'-7 1/2"	10"	59 3/4"	12 1/4"	5'-4"	9'-3 1/4"	16'-7 3/4"	49"	"	"	7/8"	"	50" 24"	"	"	37"	"	46 1/4"	68 3/4"	"	"	"	"	"	"	24"
114-119-54	6'-0"	5'-4"	"	10"	10"	"	"	"	"	"	"	"	"	"	50" 24"	"	"	"	"	"	"	"	"	"	"	"	"	"
114-133-48	5'-4"	5'-4"	"	10"	51 3/4"	"	"	"	"	"	"	"	"	"	50" 24"	"	"	"	"	"	"	"	"	"	"	"	"	"

Note: Dimensions I, R, S, and T are for Hi-Speed Engine. Horsehead Does Not Hinge Down on 114-133-48 Models. Working Platform not used on 133-54 and smaller structures.