

Bethlehem PUMPING UNITS

ENGINEERING DATA

320 API SIZE

320,000 In. Lbs. API Peak Torque Pumping Units

GEAR REDUCER DATA

OPTIONAL ITEMS

API Reducer Size	320	Dual Zone Polished Rod Hanger
API Peak Torque @ 20 SPM	320,000 in. lbs.	Triple Zone Polished Rod Hanger
Gear Ratio, Double Reduction	30.12 to 1	Wide Main Base (Portable Type)
Crankshaft Dia.	6-7/16"	Crank Guard Rails
V-Belt Sheave - Pitch Dia.	Std. 24.6" 6-C	Power Assemblies for: Single Cylinder Engines,
	Alternates 19.6" or 29.6", Max. 47" 6-C	Hi-Speed Engines, Electric Motors—
Diameter of Reducer Hi-Speed Shaft	2-15/16"	Elevated or Ground Level.
Distance, Centerline Unit to Centerline Drive	18 1/2"	
Gear Reducer Oil Capacity, U. S. Gal.	50	

STRUCTURE DATA

API Structure Size	256-120	213-120	298-100	256-100	298-86	246-86	212-86	246-74
Unit Designation	320-256-120	320-213-120	320-298-100	320-256-100	320-298-86	320-246-86	320-212-86	320-246-74
API Structure Capacity, lbs.	25,600	21,300	29,800	25,600	29,800	24,600	21,200	24,600
Length of Strokes, in.	120, 102, 85, 67	120, 102, 85, 67	100, 85, 70, 56	100, 85, 70, 56	86, 74, 61, 48	86, 74, 61, 48	86, 74, 62, 51	74, 64, 54, 44
Walking Beam Size	27" @ 160#	27" @ 145#	27" @ 160#	27" @ 145#	24" @ 145#	24" @ 120#	24" @ 100#	24" @ 100#
Saddle Bearing Type	Bushings Type, Factory Lubricated							
Projected Area, sq. in.	125	125	125	125	125	125	97.5	97.5
Tail Bearing Type	Bronze Bushed, Factory Lubricated							
Projected Area, sq. in.	61	61	61	61	61	48	48	48
Wrist Pin Bearing - Type	Spherical Roller Bearing, Factory Lubricated. Tapered Pin, Removed Hydraulically.							
Size	2SL	2SL	2SL	2SL	2SL	3SL	3SL	3SL
Pitman Size, Pipe O. D.	4 1/2" Ex. Hvy.	4 1/2" Ex. Hvy.	4 1/2" Ex. Hvy.	4 1/2" Ex. Hvy.	4 1/2" Ex. Hvy.	4" Std.	4" Std.	4" Std.
Wireline Hanger	1 1/8" x 29'-0"						1" x 23'-0"	1" x 22'-0"
Cranks	8495B	8495B	8495B	8495B	8495B	8495B	7478B	7478B
Structure Unbalance, lbs.	200	200	700	700	1000	950	500	900

COUNTERBALANCE DATA

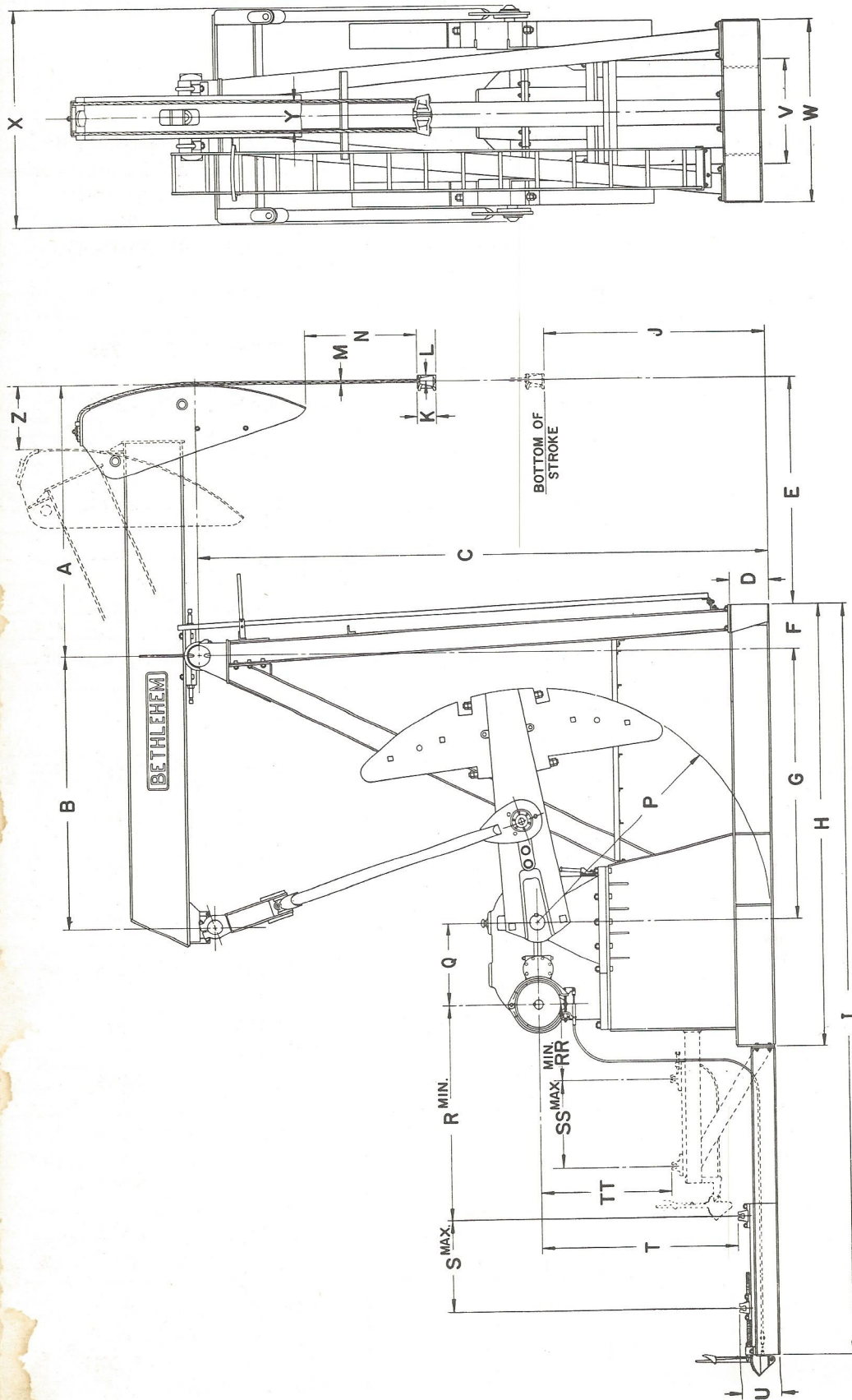
Pounds of effective Counterbalance at Polished Rod at Maximum Stroke, Includes Structure Unbalance.

Cranks Only	5,740	5,740	7,350	7,350	8,730	8,680	4,780	5,850
4 No. 95 Main Weights	11,930	11,930	14,790	14,790	17,380			
4 No. 95 Filler Weights	14,520	14,520	17,900	17,900	20,990			
8 No. 95 Filler Weights	17,110	17,110	21,010	21,010	24,610			
12 No. 95 Filler Weights	19,700	19,700	24,120	24,120	28,220			
14 No. 95 Filler Weights	21,000	21,000	25,680					
One Only Filler Weight	650	650	780	780	900			
4 No. 78 Main Weights	9,950	9,950	12,410	12,410	14,610	14,560	9,350	11,140
4 No. 78 Filler Weights	12,080	12,080	14,970	14,970	17,580	17,530	11,660	13,810
8 No. 78 Filler Weights	14,200	14,200	17,520	17,520	20,550	20,500	13,960	16,470
12 No. 78 Filler Weights	16,330	16,330	20,070	20,070	23,510	23,460	16,270	19,140
14 No. 78 Filler Weights	17,390	17,390	21,350	21,350	24,990		17,430	20,480
One Only Filler Weight	535	535	640	640	745	740	580	670
4 No. 68 Main Weights	9,680	9,680	12,080	12,080	14,230	14,180	9,080	10,820
4 No. 68 Filler Weights	11,260	11,260	13,970	13,970	16,430	16,380	10,780	12,790
8 No. 68 Filler Weights	12,830	12,830	15,870	15,870	18,630	18,580	12,940	14,760
12 No. 68 Filler Weights	14,410	14,410	17,760	17,760	20,380	20,780	14,200	16,740
14 No. 68 Filler Weights	15,200	15,200	18,700	18,700	21,930		15,060	17,720
One Only Filler Weight	400	400	470	470	550	550	425	495
4 No. 50 Main Weights						12,770		
4 No. 50 Filler Weights						14,870		
8 No. 50 Filler Weights						16,980		
12 No. 50 Filler Weights						19,080		
One Only Filler Weight						525		

Bethlehem PUMPING UNITS

DIMENSIONAL DATA

320,000 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
320-256-120	12'-11"	9'-3"	19'-4 1/2"	16"	11'-5"	18"	9'-3"	15'-1"	25'-5"	80"	7 1/2"	2 1/2"	1 1/8"	22"	95"	34"	86"	48 1/2"	80"	16"	43"	6'-3 3/4"	7'-4"	12"	29"	30 1/2"	34 1/4"	53"
320-213-120	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
320-298-100	10'-9"	"	"	"	9'-3"	"	"	"	"	79"	"	"	"	43"	"	"	"	"	"	"	"	"	"	"	28 1/2"	"	"	"
320-256-100	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
320-298-86	9'-3"	"	"	"	7'-9"	"	"	"	"	"	"	"	"	55"	"	"	"	"	"	"	"	"	7'-4"	"	"	"	"	"
320-246-86	"	"	"	"	"	"	"	"	"	"	"	"	"	21 1/2"	78"	"	"	"	"	"	"	7'-2 1/4"	"	"	"	"	"	"
320-212-86	8'-0"	"	16'-4 3/4"	"	7'-10"	17"	8'-0"	13'-9"	22'-8"	78"	"	"	1"	21 1/2"	78"	"	69"	"	63"	"	"	57 3/4"	"	9"	25 1/2"	"	"	36"
320-246-74	8'-0"	"	"	"	6'-7"	"	"	"	"	82"	5 3/4"	"	"	31 1/2"	"	"	"	"	"	"	"	"	"	"	"	"	"	"

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