

COUNTERBALANCE EFFECT AT POLISH ROD WITH #4246-B CRANKS

STRUCTURE UNBALANCE OF 600# INCLUDED BELOW

	<u>With #46 Main & Filler Weights</u>	
	<u>Pounds</u>	
	<u>CBE</u> <u>@</u> <u>42" Stroke</u>	<u>Actual Weight</u> <u>of</u> <u>Counterweights</u>
Cranks Only	2,660	
Cranks Plus 1 Main Weight	3,345	475
Cranks Plus 2 Main Weights	4,030	950
Cranks Plus 3 Main Weights	4,715	1,425
Cranks Plus 4 Main Weights	5,400	1,900
Cranks Plus 4 Main Weights and 1 Filler Weight	5,745	2,150
Cranks Plus 4 Main Weights and 2 Filler Weights	6,090	2,400
Cranks Plus 4 Main Weights and 3 Filler Weights	6,435	2,650
Cranks Plus 4 Main Weights and 4 Filler Weights	6,780	2,900
Cranks Plus 4 Main Weights and 5 Filler Weights	7,120	3,150
Cranks Plus 4 Main Weights and 6 Filler Weights	7,465	3,400
Cranks Plus 4 Main Weights and 7 Filler Weights	7,807	3,650
Cranks Plus 4 Main Weights and 8 Filler Weights	8,150	3,900
Cranks Plus 4 Main Weights and 9 Filler Weights	8,495	4,150
Cranks Plus 4 Main Weights and 10 Filler Weights	8,840	4,400
Cranks Plus 4 Main Weights and 11 Filler Weights	9,185	4,650
Cranks Plus 4 Main Weights and 12 Filler Weights	9,530	4,900

COUNTERBALANCE EFFECT AT POLISH ROD AT MAXIMUM STROKE
AS WEIGHTS ARE MOVED TOWARD CRANKSHAFT FROM END OF CRANK

STRUCTURE UNBALANCE OF 600# INCLUDED BELOW

Distance of Counterweights From Crank End	4 Main Weights Only #46	4 Main and 4 Filler Wts. #46	4 Main and 8 Filler Wts. #46	4 Main and 12 Filler Wts. #46	1 Filler Weight Only #46
0"	5,400	6,780	8,150	9,530	345
6"	4,860	5,855	7,035	8,130	275
12"	4,315	5,125	5,920	6,730	200
16" (Max.)	3,950	4,570	5,180	5,800	155

For 32" Stroke Multiply Above CBE Values By 1.28

For 22" Stroke Multiply Above CBE Values By 1.83

COUNTERBALANCE EFFECT AT POLISH ROD WITH #4246-B CRANKS

STRUCTURE UNBALANCE OF 400# INCLUDED BELOW

	<u>With #46 Main & Filler Weights</u>	
	<u>Pounds</u>	
	<u>CBE</u> <u>@</u> <u>48" Stroke</u>	<u>Actual Weight</u> <u>of</u> <u>Counterweights</u>
Cranks Only	2,200	
Cranks Plus 1 Main Weight	2,800	475
Cranks Plus 2 Main Weights	3,400	950
Cranks Plus 3 Main Weights	4,000	1,425
Cranks Plus 4 Main Weights	4,600	1,900
Cranks Plus 4 Main Weights and 1 Filler Weight	4,900	2,150
Cranks Plus 4 Main Weights and 2 Filler Weights	5,200	2,400
Cranks Plus 4 Main Weights and 3 Filler Weights	5,500	2,650
Cranks Plus 4 Main Weights and 4 Filler Weights	5,800	2,900
Cranks Plus 4 Main Weights and 5 Filler Weights	6,100	3,150
Cranks Plus 4 Main Weights and 6 Filler Weights	6,405	3,400
Cranks Plus 4 Main Weights and 7 Filler Weights	6,710	3,650
Cranks Plus 4 Main Weights and 8 Filler Weights	7,010	3,900
Cranks Plus 4 Main Weights and 9 Filler Weights	7,310	4,150
Cranks Plus 4 Main Weights and 10 Filler Weights	7,610	4,400
Cranks Plus 4 Main Weights and 11 Filler Weights	7,910	4,650
Cranks Plus 4 Main Weights and 12 Filler Weights	8,210	4,900
Cranks Plus 4 Main Weights and 13* Filler Weights	8,510	5,150
Cranks Plus 4 Main Weights and 14* Filler Weights	8,810	5,400

*For 80 Reducer Only

BETHLEHEM API UNIT - 80-109-48
 57-109-48
 80-95-48
 57-95-48

COUNTERBALANCE EFFECT AT POLISH ROD AT MAXIMUM STROKE
 AS WEIGHTS ARE MOVED TOWARD CRANKSHAFT FROM END OF CRANK

STRUCTURE UNBALANCE OF 400# INCLUDED BELOW

<u>Distance of Counterweights From Crank End</u>	<u>4 Main Weights Only #46</u>	<u>4 Main and 4 Filler Wts. #46</u>	<u>4 Main and 8 Filler Wts. #46</u>	<u>4 Main and 12 Filler Wts. #46</u>	<u>1 Filler Weight Only #46</u>
0"	4,600	5,800	7,010	8,210	300
6"	4,150	5,075	6,035	6,960	235
12"	3,650	4,350	5,060	5,760	175
16" (Max.)	3,335	3,870	4,410	4,945	135

For 37" Stroke Multiply Above CBE Values By 1.29

For 25" Stroke Multiply Above CBE Values By 1.85