

COUNTERBALANCE EFFECT AT POLISH ROD WITH #5456-B CRANKS
STRUCTURE UNBALANCE OF 550# INCLUDED BELOW

	With #50 Main & Filler Weights	
	Pounds	
	CBE @ 54" Stroke	Actual Weight of Counterweights
Crank Only	3,150	
Crank Plus 1 Main Weight	3,970	550
Crank Plus 2 Main Weights	4,790	1,100
Crank Plus 3 Main Weights	5,610	1,650
Crank Plus 4 Main Weights	6,430	2,200
Crank Plus 4 Main Weights and 1 Filler Weight	6,850	2,485
" " 4 " " " 2 " "	7,270	2,770
" " 4 " " " 3 " "	7,690	3,055
" " 4 " " " 4 " "	8,110	3,340
" " 4 " " " 5 " "	8,530	3,625
" " 4 " " " 6 " "	8,950	3,910
" " 4 " " " 7 " "	9,360	4,195
" " 4 " " " 8 " "	9,780	4,480
" " 4 " " " 9 " "	10,200	4,765
" " 4 " " " 10 " "	10,620	5,050
" " 4 " " " 11 " "	11,040	5,335
" " 4 " " " 12 " "	11,460	5,620
" " 4 " " " 13* " "	11,880	5,905
" " 4 " " " 14* " "	12,300	6,190

*For 114 Reducer Only
Also only for Ground Level Power Assembly not for Elevated Motors.

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

STRUCTURE UNBALANCE OF 550# INCLUDED BELOW

Distance of Counterweights From Crank End	4 Main Weights Only #50	4 Main and 4 Filler Wts. #50	4 Main and 8 Filler Wts. #50	4 Main and 12 Filler Wts. #50	1 Filler Weight Only #50
0"	6,430	8,110	9,780	11,460	420
6"	5,940	7,370	8,785	10,210	355
12"	5,450	6,625	7,790	8,960	290
18"	4,965	5,883	6,795	7,715	230
24"	4,475	5,140	5,800	6,465	165
25" (Max.)	4,390	5,020	5,630	6,255	155

For 44" Stroke Multiply Above CBE Values by 1.21

For 34" Stroke Multiply Above CBE Values By 1.55

For 24" Stroke Multiply Above CBE Values By 2.17

COUNTERBALANCE EFFECT AT POLISH ROD WITH #5456-B CRANKS

STRUCTURE UNBALANCE OF 400# INCLUDED BELOW

	With #50 Main & Filler Weights	
	Pounds	
	CBE @ 64" Stroke	Actual Weight of Counterweights
Crank Only	2,630	
Crank Plus 1 Main Weight	3,340	550
Crank Plus 2 Main Weights	4,040	1,100
Crank Plus 3 Main Weights	4,750	1,650
Crank Plus 4 Main Weights	5,450	2,200
Crank Plus 4 Main Weights and 1 Filler Weight	5,810	2,485
" " 4 " " " 2 " "	6,170	2,770
" " 4 " " " 3 " "	6,530	3,055
" " 4 " " " 4 " "	6,890	3,340
" " 4 " " " 5 " "	7,250	3,625
" " 4 " " " 6 " "	7,610	3,910
" " 4 " " " 7 " "	7,960	4,195
" " 4 " " " 8 " "	8,320	4,480
" " 4 " " " 9 " "	8,680	4,765
" " 4 " " " 10 " "	9,040	5,050
" " 4 " " " 11 " "	9,400	5,335
" " 4 " " " 12 " "	9,760	5,620
" " 4 " " " 13* " "	10,120	5,905
" " 4 " " " 14* " "	10,480	6,190

*For 114 Reducer only
Also only for Ground Level Power Assemblies not for Elevated Motors.

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 #50</u>	<u>4 Main and 4 Filler Wts. #50</u>	<u>4 Main and 8 Filler Wts. #50</u>	<u>4 Main and 12 Filler Wts. #50</u>	<u>1 Filler Weight Only #50</u>
0"	5,450	6,890	8,320	9,760	360
6"	5,040	6,265	7,480	8,705	305
12"	4,625	5,640	6,640	7,650	250
18"	4,213	5,010	5,800	6,600	200
24"	3,800	4,385	4,960	5,545	145
25" (Max.)	3,720	4,280	4,820	5,370	135

For 52" Stroke Multiply Above CBE Values By 1.21

For 40" Stroke Multiply Above CBE Values By 1.55

For 28" Stroke Multiply Above CBE Values By 2.18

COUNTERBALANCE EFFECT AT POLISH ROD WITH #6468-B CRANKS

STRUCTURE UNBALANCE OF 600# INCLUDED BELOW

	<u>With #50 Main & Filler Weights</u>		<u>With #46 Main & Filler Weights</u>	
	<u>Pounds</u>		<u>Pounds</u>	
	<u>CBE</u> <u>@</u> <u>64" Stroke</u>	<u>Actual Weight</u> <u>of</u> <u>Counterweights</u>	<u>CBE</u> <u>@</u> <u>64" Stroke</u>	<u>Actual Weight</u> <u>of</u> <u>Counterweights</u>
Cranks Only	4,680		4,680	
Cranks Plus 1 Main Weight	5,570	550	5,470	475
Cranks Plus 2 Main Weights	6,470	1,100	6,255	950
Cranks Plus 3 Main Weights	7,360	1,650	7,045	1,425
Cranks Plus 4 Main Weights	8,250	2,200	7,830	1,900
Cranks Plus 4 Main Weights and 1 Filler Weight	8,710	2,485	8,230	2,150
Cranks Plus 4 Main Weights and 2 Filler Weights	9,170	2,770	8,630	2,400
Cranks Plus 4 Main Weights and 3 Filler Weights	9,620	3,055	9,030	2,650
Cranks Plus 4 Main Weights and 4 Filler Weights	10,080	3,340	9,430	2,900
Cranks Plus 4 Main Weights and 5 Filler Weights	10,540	3,625	9,830	3,150
Cranks Plus 4 Main Weights and 6 Filler Weights	10,990	3,910	10,230	3,400
Cranks Plus 4 Main Weights and 7 Filler Weights	11,450	4,195	10,635	3,650
Cranks Plus 4 Main Weights and 8 Filler Weights	11,900	4,480	11,040	3,900
Cranks Plus 4 Main Weights and 9 Filler Weights	12,360	4,765	11,440	4,150
Cranks Plus 4 Main Weights and 10 Filler Weights	12,820	5,050	11,840	4,400
Cranks Plus 4 Main Weights and 11 Filler Weights	13,270	5,335	12,240	4,650
Cranks Plus 4 Main Weights and 12 Filler Weights	13,730	5,620	12,640	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 #50	4 Main and 4 Filler Wts. #50	4 Main and 8 Filler Wts. #50	4 Main and 12 Filler Wts. #50	1 Filler Weight Only #50
0"	8,250	10,080	11,900	13,730	460
6"	7,840	9,455	11,060	12,675	410
12"	7,425	8,825	10,220	11,620	355
18"	7,015	8,200	9,380	10,570	300
24"	6,600	7,570	8,540	9,515	250
30"	6,190	6,945	7,700	8,460	195
36"	5,775	6,320	6,860	7,410	140
38" (Max.)	5,640	6,115	6,580	7,055	120

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"	7,830	9,430	11,040	12,640	400
6"	7,500	8,930	10,370	11,800	360
12"	7,140	8,380	9,625	10,865	310
18"	6,775	7,825	8,880	9,930	265
24"	6,415	7,275	8,140	9,000	215
30"	6,050	6,720	7,395	8,065	170
36"	5,690	6,170	6,650	7,130	120
38" (Max.)	5,570	5,985	6,405	6,820	100

For 54" Stroke Multiply Above CBE Values By 1.17

For 44" Stroke Multiply Above CBE Values By 1.43

For 34" Stroke Multiply Above CBE Values By 1.83