



Technical

CALCULATING HORSEPOWER - CHAIN DRIVEN LIVE ROLLERS

CHAIN DRIVEN LIVE ROLLERS

- + Product (Total Live Load)**
- + Roller Weight (see below)**
- + Sprocket and Chain Weight (add 3 lbs./roller, see chart below)**
- + Drive Weight (250#)**
- = Subtotal**
- x .06**
- x 1.25 (25% Contingency Factor)**
- = Effective Belt Pull**
- x Speed of Conveyor**
- ÷ 33,000 Horsepower Factor**
- ÷ .95 Chain Reductions**
- ÷ .85 GRE / Reducer Losses**
- = Horsepower**

ROLLER WEIGHTS									
BF	7"	11"	13"	15"	17"	19"	21"	23"	25"
MODEL	ROLLER WEIGHTS (lbs.)								
196S	1.6	2.2	2.5	2.7	2.9	3.3	3.6	3.8	4.1
196G	1.6	2.3	2.6	2.8	3.0	3.4	3.7	3.9	4.3
192S	2.3	3.4	3.8	4.5	5.2	5.6	6.0	6.6	7.2
199S	2.6	4.0	4.5	5.3	6.1	6.6	7.1	7.8	8.5
254S	2.1	3.0	3.4	3.9	4.4	4.8	5.2	5.7	6.2
251S	4.2	5.6	6.4	7.1	7.8	8.5	9.2	9.9	10.7
297S	4.6	6.7	7.6	8.7	9.8	10.8	11.8	12.3	13.8
3509S	6.5	8.8	9.9	11.0	12.1	13.3	14.4	15.6	16.7
3530S	11.2	15.9	18.3	20.6	23.0	25.3	27.6	30.0	32.3

ROLLER WEIGHTS									
BF	27"	31"	33"	35"	37"	39"	43"	47"	51"
MODEL	ROLLER WEIGHTS (lbs.)								
196S	4.4	4.9	5.2	5.5	5.8	6.1	6.7	7.3	7.8
196G	4.6	5.1	5.4	5.7	6.0	6.3	7.0	7.6	8.1
192S	7.7	8.8	9.4	9.9	10.6	11.0	12.1	13.2	14.3
199S	9.2	10.5	11.2	11.8	12.6	13.1	14.5	15.8	17.1
254S	6.6	7.5	8.4	9.3	9.8	10.2	11.3	12.3	13.3
251S	11.4	12.8	13.5	14.3	15.0	15.7	17.1	18.6	20.0
297S	13.8	16.9	17.9	19.0	20.0	21.0	23.0	25.1	27.2
3509S	17.8	20.1	21.2	22.3	23.5	24.6	26.9	29.1	31.4
3530S	34.7	39.4	41.8	44.1	46.4	48.8	53.5	58.2	62.8

CHAIN WEIGHTS (lbs.) PER FOOT OF CHAIN (NOT CONV.)			
CHAIN SIZE	CONVEYOR SPEED	CHAIN WT./FT.	LOAD RATING
No. 40	25 FPM	.41	443
No. 40	50 FPM	.41	432
No. 50	25 FPM	.68	690
No. 50	50 FPM	.68	675
No. 60	25 FPM	.96	995
No. 60	50 FPM	.96	970
No. 80	25 FPM	1.7	1770
No. 80	50 FPM	1.7	1730
No. 100	25 FPM	2.7	2760
No. 100	50 FPM	2.7	2690