



## Technical

### CALCULATING HORSEPOWER - CHAIN DRIVEN ACCUMULATORS

#### CHAIN DRIVEN ACCUMULATOR

- + Product (1/2 of 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.)								
<b>196S</b>	<b>4.4</b>	<b>4.9</b>	<b>5.2</b>	<b>5.5</b>	<b>5.8</b>	<b>6.1</b>	<b>6.7</b>	<b>7.3</b>	<b>7.8</b>
<b>196G</b>	<b>4.6</b>	<b>5.1</b>	<b>5.4</b>	<b>5.7</b>	<b>6.0</b>	<b>6.3</b>	<b>7.0</b>	<b>7.6</b>	<b>8.1</b>
<b>192S</b>	<b>7.7</b>	<b>8.8</b>	<b>9.4</b>	<b>9.9</b>	<b>10.6</b>	<b>11.0</b>	<b>12.1</b>	<b>13.2</b>	<b>14.3</b>
<b>199S</b>	<b>9.2</b>	<b>10.5</b>	<b>11.2</b>	<b>11.8</b>	<b>12.6</b>	<b>13.1</b>	<b>14.5</b>	<b>15.8</b>	<b>17.1</b>
<b>254S</b>	<b>6.6</b>	<b>7.5</b>	<b>8.4</b>	<b>9.3</b>	<b>9.8</b>	<b>10.2</b>	<b>11.3</b>	<b>12.3</b>	<b>13.3</b>
<b>251S</b>	<b>11.4</b>	<b>12.8</b>	<b>13.5</b>	<b>14.3</b>	<b>15.0</b>	<b>15.7</b>	<b>17.1</b>	<b>18.6</b>	<b>20.0</b>
<b>297S</b>	<b>13.8</b>	<b>16.9</b>	<b>17.9</b>	<b>19.0</b>	<b>20.0</b>	<b>21.0</b>	<b>23.0</b>	<b>25.1</b>	<b>27.2</b>
<b>3509S</b>	<b>17.8</b>	<b>20.1</b>	<b>21.2</b>	<b>22.3</b>	<b>23.5</b>	<b>24.6</b>	<b>26.9</b>	<b>29.1</b>	<b>31.4</b>
<b>3530S</b>	<b>34.7</b>	<b>39.4</b>	<b>41.8</b>	<b>44.1</b>	<b>46.4</b>	<b>48.8</b>	<b>53.5</b>	<b>58.2</b>	<b>62.8</b>

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