



Technical

CALCULATING HORSEPOWER - ROLLER BED

- ROLLER BED BELT CONVEYORS**
- + Product (Total Live Load)
- + Belt Weight (see below)
- + Roller Weight (see below)
- + 250 Drive Weight
- = Subtotal
- x .05 Friction Factor
- x 1.25 Contingency Factor
- = Effective Belt Pull
- x Speed of Conveyor
- + 33,000 Horsepower Factor
- + .95 Chain Reductions
- + .85 GRE/Reducer Losses
- = Horsepower

BELT WEIGHTS				
BELT WIDTH	6"	12"	18"	24"
BELT	BELT WEIGHTS (lbs.) PER FOOT OF BELTING (Not Conveyor)			
PVC-120 (CxFS)	.51	1.02	1.53	2.04
PVC-120 (FSxFS)	.24	.48	.72	.96
PVC RUFF TOP	.45	.90	1.35	1.80

NOTE: PVC-150 (CxFS) is .241 #/ft. with 2-1/4" belt width.

BELT WEIGHTS				
BELT WIDTH	30"	36"	42"	48"
BELT	BELT WEIGHTS (lbs.) PER FOOT OF BELTING (Not Conveyor)			
PVC-120 (CxFS)	2.55	3.06	3.57	4.08
PVC-120 (FSxFS)	1.20	1.44	1.68	1.92
PVC RUFF TOP	2.25	2.70	3.15	3.60

NOTE: PVC-150 (CxFS) is .241 #/ft. with 2-1/4" belt width.

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	