

Data Sheet

Pulleys:Weight of weight pan: $w_p = 12.2$ gwt $S_{in} = 100$ cm $S_{out} = 16.5$ cm

$$IMA = \frac{S_{in}}{S_{out}} = \frac{100}{16.5} = 6.06$$

IMA = # of strings supporting lower pulley = 6

Percent difference = 1 %

F_{in}	W_{in}	F_{out}	W_{out}	AMA	% Efficiency
gwt	gwt·cm	gwt	gwt·cm		%
16 28.2	2820	50	825	1.77	29.3%
21 33.2	3320	55	907.5	1.66	27.3%
26 38.2	3820	60	990	1.57	25.9%
31 43.2	4320	65	1072.5	1.50	24.8%

Inclined Plane: $w_p = 11.5$ gwt $w_c = 397.8$ gwt $F_{out} = 897.8$ gwt $F_{out} = 897.5$

θ	S_{in}	F_{in}	W_{in}	S_{out}	W_{out}	IMA	AMA	% Eff.
deg	cm	gwt	gwt·cm	cm	gwt·cm			%
10	25	211.5	5287.5	4	3591.2	6.25	4.24	424%
15	25	270.5	6762.5	7.5	6731.2	3.33	3.32	332%
20	25	311.5	7787.5	13	7787.5	1.92	2.88	288%
45	25	711.5	17787.5	16	17787.5	1.56	1.26	126%