



APPLICATION WORKSHEET - BULK MATERIALS HANDLING

Motorized Pulleys

Complete this form and submit to Rulmeca for a power calculation and Motorized Pulley recommendation.

Contact Person _____ Date _____ Ref # _____

Company _____

Address _____

Phone _____ Fax _____ Email _____

Standard Loading Conditions:

Conveyor Length (ft) _____
 Tonnage Rate (tph) _____
 Belt Speed (fpm) _____
 Material Lift Height (ft) _____
 Ambient Temperature (°F) Min _____
 Ambient Temperature (°F) Max _____
 Initial Velocity of Material (fpm) _____
 Number of Belt Cleaners _____
 Number of Belt Plows _____
 Length of Skirt Zone (ft) _____
 Depth of Material in Skirt Zone (in) _____
 Number of Non-driven Pulleys _____

Elevation (ft)		Idler Roll Diam. (in)		Type of Llagging	
<input type="checkbox"/>	3,300	<input type="checkbox"/>	3	<input type="checkbox"/>	Full
<input type="checkbox"/>	5,000	<input type="checkbox"/>	4	<input type="checkbox"/>	Partial
<input type="checkbox"/>	6,600	<input type="checkbox"/>	5	<input type="checkbox"/>	None
<input type="checkbox"/>	6,600	<input type="checkbox"/>	6	<input type="checkbox"/>	
Belt Width (in)		CEMA Type		Type of Take-up	
<input type="checkbox"/>	18	<input type="checkbox"/>	A	<input type="checkbox"/>	Automatic
<input type="checkbox"/>	24	<input type="checkbox"/>	B	<input type="checkbox"/>	Manual
<input type="checkbox"/>	30	<input type="checkbox"/>	C	<input type="checkbox"/>	
<input type="checkbox"/>	36	<input type="checkbox"/>	D	<input type="checkbox"/>	
<input type="checkbox"/>	42	<input type="checkbox"/>	E	<input type="checkbox"/>	
<input type="checkbox"/>	48	Troughing Idler Spacing (ft)		Angle of Wrap (deg)	
<input type="checkbox"/>	54				
<input type="checkbox"/>	60	<input type="checkbox"/>	180	<input type="checkbox"/>	
<input type="checkbox"/>	66	<input type="checkbox"/>	200	<input type="checkbox"/>	
<input type="checkbox"/>	72	<input type="checkbox"/>	210	<input type="checkbox"/>	
<input type="checkbox"/>	84	<input type="checkbox"/>	220	<input type="checkbox"/>	
<input type="checkbox"/>	96	<input type="checkbox"/>	240	<input type="checkbox"/>	
<input type="checkbox"/>	Other	<input type="checkbox"/>	360	<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>	3.0	<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>	3.5	<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>	4.0	<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>	4.5	<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>	5.0	<input type="checkbox"/>	
Type of Belt					
<input type="checkbox"/>	1 ply, 160 piw				
<input type="checkbox"/>	2 ply, 225 piw				
<input type="checkbox"/>	3 ply, 330 piw				
<input type="checkbox"/>	4 ply, 440 piw				
Belt Carcass					
<input type="checkbox"/>	fabric				
<input type="checkbox"/>	steel cord				

Material (frictional coefficient)	
<input type="checkbox"/>	ashes, coal, dry 0.0571
<input type="checkbox"/>	bauxite, ground 0.1881
<input type="checkbox"/>	cement, Portland, dry 0.2120
<input type="checkbox"/>	cement clinker 0.1228
<input type="checkbox"/>	clay, ceramic, dry fines 0.0924
<input type="checkbox"/>	coal, bituminous mined 0.0754
<input type="checkbox"/>	coke, ground fine 0.0452
<input type="checkbox"/>	cullet (broken glass) 0.0836
<input type="checkbox"/>	grains, wheat, corn, rye 0.0433
<input type="checkbox"/>	gravel, bank run 0.1145
<input type="checkbox"/>	iron ore, 200 lbs/cu ft 0.2760
<input type="checkbox"/>	limestone, pulverized dry 0.1280
<input type="checkbox"/>	phosphate rock, dry 0.1086
<input type="checkbox"/>	salt, common, dry fine 0.0814
<input type="checkbox"/>	sand, dry, bank 0.1378
<input type="checkbox"/>	wood chips 0.0095

Material Bulk Density (pcf)	
<input type="checkbox"/>	ashes, coal, wet 50
<input type="checkbox"/>	bagasse 10
<input type="checkbox"/>	bark, wood 20
<input type="checkbox"/>	bauxite, ground, dry 68
<input type="checkbox"/>	bauxite, crushed 85
<input type="checkbox"/>	beans, navy, dry 48
<input type="checkbox"/>	beets, whole 48
<input type="checkbox"/>	borax, 3" & under 70
<input type="checkbox"/>	cement, portland 99
<input type="checkbox"/>	clay, ceramic, dry, fines, 80
<input type="checkbox"/>	clay, dry, fines 120
<input type="checkbox"/>	coal, bituminous 55
<input type="checkbox"/>	coal, lignite 45
<input type="checkbox"/>	coke, 45
<input type="checkbox"/>	corn, ear, 56
<input type="checkbox"/>	cullet, 120
<input type="checkbox"/>	gravel, bank run, 100
<input type="checkbox"/>	iron ore, 200 130
<input type="checkbox"/>	iron ore pellets 130
<input type="checkbox"/>	limestone, crushed 90
<input type="checkbox"/>	paper pulp stock 60
<input type="checkbox"/>	phosphate rock 85
<input type="checkbox"/>	potash salts 80
<input type="checkbox"/>	rock, crushed, 145
<input type="checkbox"/>	rock, soft, 110
<input type="checkbox"/>	rye, 46
<input type="checkbox"/>	sale, common dry, fine, 80
<input type="checkbox"/>	sand, bank, damp, 130
<input type="checkbox"/>	sand, bank, dry, 110
<input type="checkbox"/>	sand, foundry, 100
<input type="checkbox"/>	sawdust 13
<input type="checkbox"/>	sewage sludge, moist, 55
<input type="checkbox"/>	soybeans, whole, 50
<input type="checkbox"/>	sugar, raw, cane, 65
<input type="checkbox"/>	taconite pellets 130
<input type="checkbox"/>	traprock, 2-3" lumps, 110
<input type="checkbox"/>	wheat, cracked, 45
<input type="checkbox"/>	wood chips 30

Operating Conditions:

Duty Cycle (Start/stops per hour) _____
 Hours of Operation (hrs/day) _____
 Days of Operation (days/week) _____
 Is this a reversing belt? _____
 Additional Comments: _____

Special Loading Conditions:

Hopper Feeder Parameters:

Hopper Opening Width (in) _____
 Hopper Opening Length (in) _____

Slider Bed Parameters:

Slider Bed Length (ft) _____

Slider Bed Material (frictional coefficient)		
<input type="checkbox"/>	steel	0.90
<input type="checkbox"/>	UHMW polyethylene	0.545
<input type="checkbox"/>	urethane	0.88
<input type="checkbox"/>	wood	1.00

Sidewall & Cleated Belt Parameters:

Sidewall & cleat height (in) _____
 Thickness of sidewall (in) _____
 Distance between cleats (in) _____
 Thickness of cleats (in) _____

Tripper Design Parameters:

Tripper Length (ft) _____
 Tripper Material Lift Height (ft) _____
 Number of Tripper Belt Cleaners _____
 Tripper Skirt Zone Length (ft) _____
 Depth of Material in Skirt Zone (in) _____
 No. of Tripper Non-driven Pulleys _____

For free conveyor drive power calculation program, complete with definitions of all terminology, contact: sales-us@rulmeca.com.