



# 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 Lagging	
<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"/>	36	<input type="checkbox"/>	D		
<input type="checkbox"/>	42	<input type="checkbox"/>	E		
<input type="checkbox"/>	48				
<input type="checkbox"/>	54				
<input type="checkbox"/>	60				
<input type="checkbox"/>	66				
<input type="checkbox"/>	72				
<input type="checkbox"/>	84				
<input type="checkbox"/>	96				
<input type="checkbox"/>	Other				
		Troughing Idler Spacing (ft)		Angle of Wrap (deg)	
<input type="checkbox"/>		<input type="checkbox"/>	3.0	<input type="checkbox"/>	180
<input type="checkbox"/>		<input type="checkbox"/>	3.5	<input type="checkbox"/>	200
<input type="checkbox"/>		<input type="checkbox"/>	4.0	<input type="checkbox"/>	210
<input type="checkbox"/>		<input type="checkbox"/>	4.5	<input type="checkbox"/>	220
<input type="checkbox"/>		<input type="checkbox"/>	5.0	<input type="checkbox"/>	240
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	360
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	
<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.**