APPLICATION WORKSHEET: Email: sales-us@rulmeca.com
Rulmeca Drum Motors Fax: 910-794-9296

Contact Person _____ **Date** _____ **Ref#** _____
Company _____
Address _____
Phone _____ **Fax** _____ **Email** _____

Standard Loading Conditions:

Conveyor Length (ft) _____
Conveyor Lift Height (ft) _____
Weight of Conveyed Product (lbs/ft of conveyor) _____
Weight of Conveyor Belt (lbs/ft of conveyor) _____
Conveyor Belt Speed (feet per minute) _____
Width of Conveyor Belt (in) _____

Operating Conditions:

Duty Cycle (Start/stops per hour) _____
Hours of Operation (hrs/day) _____
Days of Operation (days/week) _____
Is this a reversing conveyor? _____
Temperature of Conveyed Product (°F) _____
Minimum Ambient Temperature (°F) _____
Maximum Ambient Temperature (°F) _____

Slider Bed Friction Without Accumulation (Choose one):

Frictional Coefficient: bottom of belt to top of steel slider bed

- ☐ 0.2 for Impregnated Fabric Backing
- ☐ 0.3 for Brushed Backed PVC
- ☐ 0.6 for PVC Backing
- ☐ 0.65 for Rubber Belt
- ☐ Other (please specify) _____

Roller Conveyor Without Accumulation Load:

Weight of Rotating Parts (lbs/ft of conveyor) _____

Accumulation Friction Load (Choose one, if applicable):

Frictional Coefficient: top of belt to bottom of product

Cardboard Products

- ☐ 0.25 for Impregnated Urethane
- ☐ 0.35 for Urethane Cover
- ☐ 0.40 for PVC Cover
- ☐ 0.45 for Rubber Cover
- ☐ Other (please specify) _____

Plastic Products

- ☐ 0.25 for Impregnated Urethane
- ☐ 0.35 for Urethane Cover
- ☐ 0.40 for PVC Cover
- ☐ 0.45 for Rubber Cover
- ☐ Other (please specify) _____

Glass Products

- ☐ 0.20 for Impregnated Urethane
- ☐ 0.40 for Urethane Cover
- ☐ 0.50 for PVC Cover
- ☐ 0.55 for Rubber Cover
- ☐ Other (please specify) _____

Steel Products

- ☐ 0.30 for Impregnated Urethane
- ☐ 0.50 for Urethane Cover
- ☐ 0.60 for PVC Cover
- ☐ 0.65 for Rubber Cover
- ☐ Other (please specify) _____

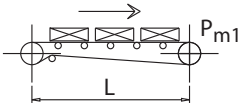
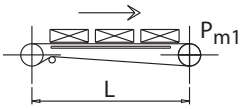
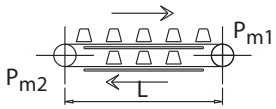
Additional Comments:

_____
_____
_____
_____

Calculation of Required Belt Pull (Force)

F	=	Belt Pull [lbs] = $F = F_0 + F_1 + F_2 + F_3$ The belt pull for each motorized pulley is given in the tables of the range of standard products. Note that available belt pull varies with nominal belt speed for each power.	
P_n	=	Belt weight per linear foot	[lb/ft]
P_{pr}	=	Weight of rotating parts of the belt conveyor per foot length (carrying and return section)	[lb/ft]
P_{m1}	=	Weight in lbs of the conveyed product on the load section, for each foot of length of the belt conveyor	[lb/ft]
P_{m2}	=	Weight in lbs of the conveyed product on the return section, for each foot of length of the belt conveyor	[lb/ft]
C_1	=	Coefficient of friction between product and belt carrying side	
C_2	=	Coefficient of friction between belt carrying side and slider bed	
C_3	=	Coefficient of friction between return belt and product	
C_4	=	Coefficient of friction between return belt side and slider bed	
L	=	Length of the conveyor in feet	[ft]
H	=	Height difference in conveyor	[ft]
F_0 to F_3	=	Forces (belt pull) required to move conveyor, as defined below.	[lb]

Calculation of Required Belt Pull (Force)

Conveying system	Force without load	Force to convey materials horizontally	Force to convey materials on incline	Accumulation
 Roller bed conveyor	$F_0 = 0.04 \cdot L \cdot (2P_n + P_{pr})$	$F_1 = 0.04 \cdot L \cdot P_{m1}$	$F_2 = H \cdot P_{m1}$	$F_3 = L \cdot P_{m1} \cdot C_1$
 Slider bed conveyor	$F_0 = 1.1 \cdot L \cdot P_n \cdot C_2$	$F_1 = 1.1 \cdot L \cdot P_{m1} \cdot C_2$	$F_2 = H \cdot P_{m1}$	$F_3 = L \cdot P_{m1} \cdot C_1$
 Double slider bed conveyor	$F_0 = L \cdot P_n \cdot (C_2 + C_4)$	$F_1 = L \cdot (P_{m1} \cdot C_2 + P_{m2} \cdot C_4)$	$F_2 = H \cdot (P_{m1} - P_{m2})$	$F_3 = L \cdot (P_{m1} \cdot C_1 + P_{m2} \cdot C_3)$