Technical Data

Each of the myriad of applications that exist requires certain performance characteristics from the conveyor. QC Industries has developed a sizing system that condenses all of these parameters into a common factor, namely equivalent load.

A conveyor application that is accumulating a 5-pound load, for example, demands the conveyor to carry more than 5 pounds. As such, we have developed certain factors to add to the load that the conveyor needs to carry.

Follow the five steps below to determine the equivalent load your application requires. The result will then be used to help choose the gearmotor arrangement that will provide the correct torque.

1. Nominal Load 1. _____

Enter the total load in pounds the conveyor must carry. For example, (12) cartons weighing 10 pounds each would have a total nominal load of 120 lbs. Use Figure 10-A to cross-reference the width conveyor you desire with the nominal load you need to carry (to ensure it can carry the load). Each conveyor width listed shows a total load carrying capacity for both drive pushing and drive pulling applications. Enter nominal load (in pounds) on Line One.

2. Accumulation 2. _____

If the application does not have an accumulating load, enter zero on Line Two. Otherwise, multiply the nominal load from Line One times an accumulation factor. (0.2 for accumulation belts listed on page 20 and 0.3 for MAA standard urethane). Enter result on Line Two.

3. Incline/Decline [Factor] x [Load] = 3. _____

Some applications require an incline or decline. If the application does not require an incline or decline, enter zero on Line Three. For inclining or declining applications, choose a factor from Figure 10-B based upon the angle of incline then multiply that factor by the total nominal load from Line One. Enter result on Line Three.

4. Side Seals 4. _____

If the application does not call for side rails with seals to prevent small parts from getting under the rail, enter zero on Line Four. Otherwise, multiply the conveyor length in feet by 5. The side rails can be found on page 22. Example: 96" long conveyor with side seals would have a factor of 40 (8 x 5). Enter result on Line Four.

****Verify Load Capacity:**
After adding lines one through four together, please reference Figure 10-A to ensure that the conveyor width you desire will carry the sum of Lines One through Four. If the sum is greater than the load capacity listed for the width you have chosen, please choose a wider conveyor or consult factory.

5. Conveyor Friction 5. _____

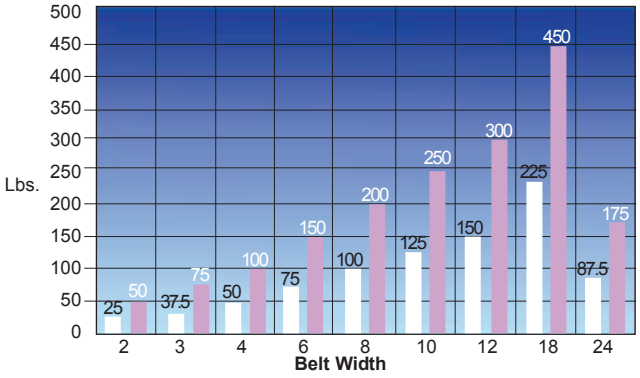
All conveyors have a certain amount of friction that must be added to the nominal load. To determine how much additional load must be factored in, add 4 to the conveyor width in inches, then multiply by 6, or simply choose the value from Figure 10-C. Enter result on Line Five.

Equivalent Load (lbs) SUM (1-5) _____ lbs.

Write down the equivalent load on your application assistance form (pages 116-117). The equivalent load will be needed to properly size a gearmotor for the conveyor. (See pages 30-37)

Next, proceed to the next page to construct the conveyor part number.

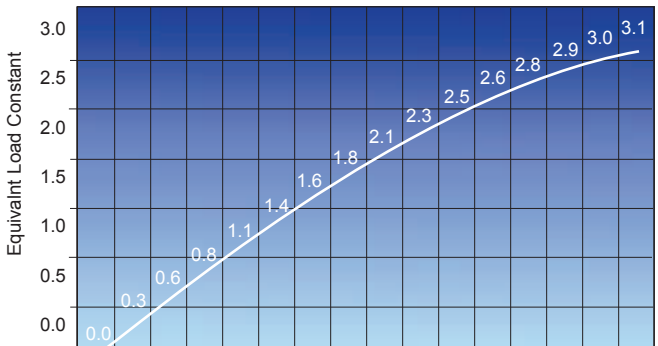
Load Carrying Capacity - Figure 10-A



Note: See page 11

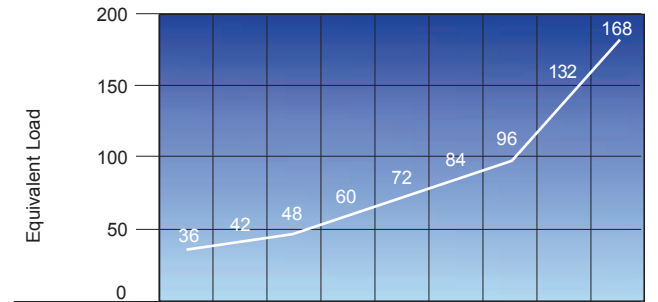
Above load carrying capacities are for both drive pushing and pulling applications. Note: for drive pushing applications, decrease load capacity of conveyor by 1/2.

Incline/Decline Load Factors - Figure 10-B



Angle	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
Factor	0.0	0.3	0.6	0.8	1.1	1.4	1.6	1.8	2.1	2.3	2.5	2.6	2.8	2.9	3.0	3.1

Conveyor Friction - Figure 10-C



Conveyor Width	2	3	4	6	8	10	12	18	24
Frictional Load	36	42	48	60	72	84	96	132	168