

**MARATHON EQUIPMENT CO.  
SLIDERBED CONVEYOR SELECTION**

In order to match the most appropriate and economical conveyor to your baler or compactor application, we are providing you with the basic design considerations that are essential to a properly engineered compactor/baler/conveyor system.

These design steps are:

1. Determine conveyor class
2. Select belt width
3. Determine Configurations
4. Select options
5. Find model number

1. **Conveyor Class**

Proper conveyor selection for your baler is based on the material that will be baled, loading method, and the duty cycle (hrs/days) that is expected. The chart below shows the basis for the conveyor class selection for the most common applications with the loading method assumed to be a front end loader. MECO chainbelt conveyor component service factors and motor HP are based on these classifications:

MATERIAL	TPH	VOLUME %	OPERATING HOURS	
			<u>5-10 Hrs.</u>	<u>10-16 Hrs.</u>
OCC, Boxes	1 to 2	70%	Class SBW PVC belt	Class SBW Rubber belt
OCC, flat	2 to 4	70%	Class SB Rubber belt	Class SB
OCC, Paper	3 to 8	50/50	Class SB Oversize hopper & pit	Class SBH
OCC, Paper Mixed Waste Sorting	5 to 15	70/30	Class SBH	Class SBH

**Other considerations for Conveyor Class selection**

Where service factors are high and volume or operating hours are low, the service factor will always supersede, e.g., mixed waste sorting at 2 tph, 8 hrs/ day will require an SBH Class conveyor at minimum, though

the volume indicates a SBW Class conveyor.

## 2. **Conveyor Belt Width**

Though this criteria is usually determined by the bale chamber size, it is important to keep in mind minimal widths based on the type of material being run. As a factor of through-put, belt width is less significant than belt speed.

<b>MATERIAL</b>	<b>MINIMUM BELT WIDTH</b>
OCC	60 inches
Paper	48 inches
Containers	36 inches

Based on the above chart, the most versatile and economical conveyor width is 60 inches. For this reason, MECO has the widest range of conveyor products in this width from Sliderbed, B Class and A Class. Where OCC is to be baled in excess of 3 ton/hr., an SBH Class conveyor with a width of 6 feet and oversize hopper is recommended.

## 3. **Conveyor Configuration**

The basic configurations for Sliderbed conveyors are Above Grade (AG) and Below Grade (BG). This factor is easily determined, primarily by the type of baler being used and the tph requirements. An open end baler should have a Below Grade hopper (BG) whereas the smaller balers that are hand fed need only an Above Grade hopper. High through-put, being a factor of efficient loading, can only be satisfied with large BG hoppers and long, low angle conveyors. At 5 to 8 tph using an SBH with oversized BG hopper and high concrete costs for pit construction, it becomes feasible to consider a B Class Chainbelt as the appropriate choice for your baler feed conveyor.

## 4. **Options**

The primary option for Sliderbed conveyors is the Variable Frequency Drive referred to simply as "VS" for variable speed. The use of small and intermediate sized balers for multi material baling suggests the use of the VS option. Material type and the rate of feed plays the most important role in determining the hopper size as mentioned above in step 3. Regardless of hopper size, it must be remembered that the conveyor/baler system through-put is limited more by the rate of loading material on the belt than anything else.

5. **Engineering Supplies Length**

Standard applications have lengths that suite common baler arrangements, but many require engineering layout to assign a length. In most cases this can be done quickly over the phone.

6. **Determine Model Number**

This sequence of numbers establishes the model as a standard conveyor in the price list or may be used as a “custom” model number.

- Example (noted below):
1. Conveyor class is **SB**
  2. Conveyor width is **48** in
  3. Configuration is **BG**
  4. Option added is **VS** for variable speed
  5. Engineering supplies Length at **21** ft
  6. Model No. is **SB4821-BG-VS**

			Model No.						
Product Group	Application/ Service Factor		CLASS	DIMENSIONS			CONFIGURATION	OPTION	
				WIDTH (inches)	LENGTH (Ft)			APPLICATION	
<b>SLIDERBED CONVEYORS</b>									
SB	2 to 4 tph	Low volume/ low service factor	SB	48	13	-	AG	-	
			SB	48	21	-	BG	-	
SBW	1 to 2 tph	Low volume/ low service factor	SBW	30	40	-	-	-	
SBH	3 to 15 tph	Medium Volume/ Medium Service Factor	SBH	60	40	-	BG	-	

  

Step 1: Select  
Conveyor Class

Step 2: Determine  
Conveyor Width

Step 3: Determine  
Configuration

Step 4: Determine  
Configuration

Step 5:  
Contact Engineering for  
conveyor Length