Advanced Conveyors & Bulk Handling Systems

The SMART Conveyor™ Company

FEWER DRAG CONVEYORS FEWER PROBLEMS

We've written many times about how the design of BE&E's drag chain conveyors reduces maintenance, but we haven't explained how SMART Conveyors™ achieve this by reducing the number of maintenance points at your plant. Simply put, one SMART Conveyor™ has the potential to replace multiple machines. This is possible because they're capable of more configurations and longer runs than many drag conveyors on the market.

Drag Conveyor Configurations

Of all your requirements for a drag conveyor, its ability to achieve varied configurations may not have crossed your mind. Yet a conveyor with a versatile design is advantageous. Rather than installing multiple conveyor makes and brands to cover the gamut of bends, inclines, and runs at your plant, you can work with one conveyor. A single conveyor style means your maintenance personnel need only familiarize themselves with one machine. Maintenance costs go down, too, because you need fewer spare parts. It also means operations personnel must only interact with one manufacturer.

With these benefits being said, it's worth stating that not all drag conveyors offer the same range of configurations. Some models are designed only for straight runs. Others can achieve a single bend. Fewer can achieve two.

A drag conveyor that can achieve two bends provides the most versatility for your operation. With it, you should be able to incorporate straight runs and, with the same conveyor, inclines greater than those possible with a single curve. (Drag conveyors cannot discharge material at an angle greater than 45°, so any conveyor with a higher incline angle must include a second curve to reduce the head angle.) A conveyor's ability to achieve high inclines is advantageous because it can fit in tight spaces where two conveyors—a straight conveyor and bucket elevator—would otherwise be needed. Depending on how high the rise is, it may even be possible for one dual-curved conveyor to replace the distribution conveyor after the elevator, bringing the total number of machines it can swap out to three.

Such possibilities SMART Conveyors™ can achieve. Moreover, they allow more configurations than most drag chain conveyors on the market. Like others, they're available in straight runs, L-shapes with a single curve, and S-shapes with two bends. They're also capable of *incline angles up to 90°*. And they can be designed with short cantilevers, giving you unparalleled options for how to mount them.

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Drag Conveyor Runs

The other way SMART Conveyors™ differ from other chain conveyors is the run length of which they're capable, a characteristic that also gives them the potential to replace multiple chain conveyors.

SMART Conveyors™ are designed with low internal friction, so chain loads result primarily from the material they carry. Other drag conveyors heavily load their chains with friction from the chains and paddles they drag on the floors and sidewalls. The difference means the chains in BE&E's SMART Conveyors™ have more capacity to accept additional loads than other systems.

Below are real-world examples of SMART Conveyors™ listed with their lengths, model information, and throughput rates. Remember that these conveyors run at different speeds and with different materials, which affects the chain loads. Other factors also affect the load, so the examples shouldn't be taken as comparisons.

LENGTH	SPECS	TPH
295'	36"-wide M-Series SMART Conveyor™	50
235'	36"-wide M-Series SMART Conveyor™	56
220'	36"-wide M-Series SMART Conveyor™	50
180'	24"-wide S-Series SMART Conveyor™	8.5
140'	48"-wide T-Series SMART Conveyor™	40
138'	48"-wide T-Series SMART Conveyor™ with an 11' rise	440
140'	18"-wide S-Series SMART Conveyor™	7
134'	36"-wide M-Series SMART Conveyor™ with a 57' rise	60
121'	24"-wide S-Series SMART Conveyor™ with a 44' rise	13

While 295' is the longest chain conveyor we've built to date, it isn't the longest we could design. We could potentially make a 500' S-Series SMART Conveyor™ hauling 25 tons of biomass per hour at 100 feet per minute. If we were to speed up the conveyor or change the material's density and throughput rate, we could make the conveyor even longer.

How many of your current conveyors would you need to run 500'?

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SMART Conveyors™ provide unparalleled versatility and run lengths that can reduce complexity at your facilities, thereby keeping operational dollars as low as possible. So, contact us today if you're looking to replace multiple chain conveyors at your operation. We can help, and we very well may do it with fewer machines.

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