

PlastiTrak Model to Model Benefit Comparison

FEATURE	COMMENTS & BENEFITS	MODEL 1000	MODEL 2000
Frame Gauge	A thicker wall, and deeper frame can support greater live loads and the stress of larger products. A heavier frame is also capable of handling more daily abuse in the manufacturing environment. (There is a lesser probability of structural damage if a forklift were to hit a heavier, walled, deeper frame unit.)	12 ga.	10 ga.
Frame Depth		6-11/16"	7-5/8"
Frame Spreaders	The Model 2000 10 gauge spreaders and the increased strength of a formed channel design provides the durability needed for larger and heavier products with greater live loads.	12 ga. angled	10 ga. formed
Belts	The typical M1000 chains have become more of a commodity priced item and are commonly cheaper per square foot.	Limited to narrow widths	More belt width choices
Frame Widths	The M2000's additional 3/8" overall width doubles the amount of internal clearance on the belt return. More clearance means fewer jam ups resulting in a smoother running, more productive machine.	BW + 1/2"	BW + 7/8"
Shafts	A larger shaft provides increased strength and greater torque capacity. Shaft deflection from smaller shafts may prevent sprockets from engaging properly resulting in "jumping" and jam ups. A square shaft is stronger than conventional round shafts and allows for the higher horsepower needed for heavier loads.	1-3/16" round	1-1/2" square
Return Rollers	A larger roller reduces roller resistance and roller speed resulting in a smoother running and longer lasting conveyor and conveyor parts. Larger return rollers also allow for increased conveyor speeds.	2"	2-1/2"
Wear Strips	Customized wearstrip design and materials will reduce the sliding friction between the belt and frame increasing the useful life of the wear strip and belt.	See Chart Below	
ACT System	The Model 2000 includes New London's exclusive ACT System (Application Change Technology). This system provides the end user with the flexibility to exchange the existing belt with another if the application or product changes in the future. The safety and flexibility of this feature has the potential to save the end user thousands of dollars in future conveyor purchases.	See Photo Below	

MODEL	FRAME GAUGE / DEPTH	BELT WIDTHS	FRAME WIDTHS	FRAME SPREADER	SHAFTS	RETURN ROLLERS	WEAR STRIPS (SEE PHOTOS BELOW)
1000	12 gauge 6-11/16" deep	Narrow widths (Typically 12" and less)	BW + 1/2"	12 gauge formed angle (one bend)	1-3/16" round shafts	2" x 7/16" hex	Longitudinal Clip on UHMW only
2000	10 gauge 7-5/8" deep	Wider widths (Widths range from 12" up to 100+)	BW + 7/8"	10 gauge formed channel (two bends)	1-1/2" square shafts	2-1/2" x 11/16" hex	Longitudinal Clip on UHMW Or Chevron Style Clip on UHMW Or Valu Guide Wear Strip Options

Wear Strips



Key features of photo on the left include:

- Square Drive Shaft
- Formed Channel Frame Spreaders
- Longitudinal Style Wear Strips

Wear Strips



Chevron style wear strips are shown on the photo to the left. (The UHMW has been removed for illustration purposes.)

PlastiTrak Model Summary

Our plastic belt line includes two model classifications:

MODEL	PRODUCT CLASS	COMMENTS
1) Model 1000	Narrow widths, lighter weight products	These units are typically used to convey lighter products like bottles and cans. Since the live loads for these applications are typically lighter, lighter construction features including a 12-gauge frame are standard for this unit. This conveyor is common in bottling operations, dairies and pharmaceutical plants. The Model 1000 chains are also ideal for multiple strand applications.
2) Model 2000	Wider widths, heavier and larger products	These units are typically used to convey larger items like boxes and cases as well as heavier products like stacks of lumber or loaded pallets. This unit's durable construction and design includes a 10-gauge frame capable of handling heavier and larger products.
	ACT System	The Model 2000 includes New London's exclusive ACT System (Application Change Technology). This system provides the end user with the flexibility to exchange the existing belt with another if the application or product changes in the future. The safety and flexibility of this feature has the potential to save the end user thousands of dollars in future conveyor purchases. (See photo below)

PlastiTrak – Model 1000 and Model 2000 Comparison Chart

MODEL	FRAME GAUGE / DEPTH	BELT WIDTHS	FRAME WIDTHS	FRAME SPREADER	SHAFTS	TYPICAL PRODUCTS	RETURN ROLLERS	COMMON INDUSTRY DEFINITIONS
1000	12 gauge	Narrow widths (Typically 12" and less)	BW + 1/2"	12 gauge formed angle (one bend)	1-3/16" round shafts	Cans & bottles (Bottling plants)	2" x 7/16" hex	Table top
	6-11/16" deep							Chains
2000	10 gauge	Wider widths (Widths range from 12" up to 100+)	BW + 7/8"	10 gauge formed channel (two bends)	1-1/2" square shafts	Cases, boxes and pallets (Production & Manufacturing Operations)	2-1/2" x 11/16" hex	Mat top
	7-5/8" deep							Belts

To further identify a PlastiTrak conveyor, we have introduced a letter identification system. A letter identification will follow the model number to add definition to the application and to simplify future and current reference activities. These letters will also aid our engineering and manufacturing departments during the construction and design phases. For example, a model number such as 1000-C simply means this tabletop chain application has a left or right hand curve. Following is a chart with definitions to the letter identifications:

PlastiTrak Letter Identification Definitions

LETTER	QUICK DEFINITION	DETAILED DEFINITION	MODELS
C	Curved Conveyors	The letter "C" means the application has right hand or left hand curves.	1000-C 2000-C
F	Flighted Conveyors	These units use flighted (cleated) belts to carry products up an incline.	2000-F*
CF	Curved and Flighted Applications	The letters "CF" means the application has either right hand or left hand curves as well as a flighted (cleated) belt. These units always include at least one upper or lower curve. (I.E. – the curve at the horizontal to incline transition)	2000-CF*
N	Nose Over Conveyors	These units use belts with a friction top surface to carry boxes and packages up an incline. These units include a nose over (N) feature at the discharge end designed to provide the boxes with a smooth transition as they move from the incline to a horizontal position.	1000-N 2000-N
S	Straight Conveyors	The letter "S" means the application is straight running. Any straight running conveyor will include the "S" letter identifier.	1000-S 2000-S

*The typical Model 1000 applications do not include products that require a flighted (cleated) belt thus it would be highly uncommon to have a Model 1000-F or 1000-CF.



New London's exclusive ACT System (Application Change Technology) provides the end user with the safety and flexibility to exchange the existing belt if the application or product changes. The system is designed to provide the room and clearance for various sprocket and belt styles. All you have to do is loosen the bolts on the shafts "floating" assembly mechanism and then align the arrows to the designated belt number.

Chordal Action

As a belt engages in the driving sprockets, a pulsation-like motion will occur. This pulsation is due to the chordal action, which is the rise and fall of the belt as it rotates **around** and **in** the teeth of a sprocket. It is a characteristic of all sprocket-driven belts. The amount of pulsation is inversely proportional to the amount of space between the belt and teeth of the sprockets. The smaller the space, the less pulsation there is. Thus the smaller the pitch, the less space there is between the pitches so there is less chordal action. Chordal action can also be reduced by increasing the number of teeth on a sprocket. The more teeth the less space there is for the belt to move around and in a sprocket. For example, a belt driven by a six-tooth sprocket has a pulsating speed variation of 13.4%, while a belt driven by a 19-tooth sprocket has a pulsation speed variation of only 1.36%. In conclusion, if your application requires a smooth transfer or product tipping or breaking is a concern, choose the smallest pitch belt available combined with the sprocket with the most teeth.

Pitch

The pitch is the center-to-center distance between hinge rods in an assembled belt. A smaller pitch belt reduces the amount of chordal action. Smaller pitches also wrap the discharge sprockets more tightly reducing the gap at the discharge transfer points. For these two reasons, smaller pitch belts are recommended for applications with small and delicate products where product transfers and product tipping are a concern. Because smaller pitch belts have less chordal action they run smoother so they are also recommended for high-speed applications.

**Price Relativity Overall

The \$ (dollar sign) system is designed to help you compare the cost of a square foot of belt from one application to a square foot of belt in another application. Belts are divided into 6 different groups with one dollar sign being the least expensive and six dollar signs being the most expensive.

\$ – The least expensive belt.

\$\$\$\$\$\$ – The most expensive belt.

Price Relativity Within This Table – this column compares the belts listed on that page's table to one another.

Polypropylene – Polyethylene – Acetal

CHARACTERISTIC	POLYPROPYLENE – PP	POLYETHYLENE – PE	ACETAL – A
Accumulation	Good accumulation properties	Not recommended for accumulation applications	Excellent accumulation and side-to-side transfer properties
Price	Less costly than the other two	Moderately priced versus the others	Costly compared to the others
Release	Good release characteristics	Excellent release characteristics	Excellent release characteristics
Strength	Good balance between moderate strength and lightweight material	Overall not as strong and lacks the pull strength of the polypropylene and acetal	Considerably stronger than polypropylene or polyethylene. Acetal is very hard making it relatively cut and scratch resistant.
Temperature	+ 45 degrees to + 220 degrees F Excellent in high temp applications	– 100 degrees to + 150 degrees F A good alternative to the costly acetal in low temperature applications.	– 50 degrees to + 200 degrees F Good impact strength even at low temperatures
Disadvantages	Becomes very brittle and weak below 45 degrees	Scratches and gouges easily The rods tend to wear out quickly when exposed to abrasive particles.	Considerably heavier than the others which causes more belt wear and limits its use in longer run applications.



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THE TOP 10 BENEFITS of PlastiTrak

Plasti-Trak Low Maintenance Plastic Belt Conveyors from New London Engineering

	BENEFIT	PLASTI-TRAK PLASTIC BELT SOLUTIONS
1.	Reduced maintenance and maintenance related costs.	<ul style="list-style-type: none"> - Since Plasti-Trak belts are positively driven with sprockets rather than pulleys, belt tracking and belt tensioning tasks are eliminated. More importantly, costly ongoing roller replacement costs and time costs to repair dead zones* in roller conveyors are virtually eliminated. - Plastic belts require reduced maintenance – Just plug it in and let it spin!
2.	More satisfied customers because more promised delivery dates are met	<ul style="list-style-type: none"> - Unscheduled shutdowns are a primary reason promised delivery dates are not met. With Plasti-Trak, unscheduled shutdowns are virtually eliminated: <ol style="list-style-type: none"> 1. Belts are positively driven with sprockets rather than pulleys so they will not walk, slip or mis-track and jam the production line. 2. The system will not have to be shut down to repair unexpected dead zones*. 3. Improved product orientation provides more consistent product spacing resulting in fewer line jams eliminating line jam related shutdowns.
3.	Improved production line flexibility (No Roller Spacing Issues)	<ul style="list-style-type: none"> - On a traditional roller conveyor, product sizes are limited by the spacing of the rollers. If the product size changes, the line is shut down to re-space or re-place the rollers. These costly line changes are totally eliminated with Plasti-Trak because a Plasti-Trak belt is one smooth surface capable of handling various sizes and types of products on the same line.
4.	Increased productivity	<ul style="list-style-type: none"> - A Plasti-Trak belt acts as one continuous piece and not a series of individual rollers so there are no dead zones*. Dead zones* can lead to slugs*. Slugs can lead to jams, photo eye mis-reads, and inaccurate case counts which all lower productivity. - Since system jams are reduced, plant productivity increases because cases do not have to re-circulate through the system. - Since jams are virtually eliminated the labor cost to manually un-jam the system is also eliminated.
5.	Reduced product loss and product damage	<ul style="list-style-type: none"> - Unlike rollers and rubber belts, glue and tapes from boxes typically do not stick to plastic belts so product loss due to adhesion issues are reduced or eliminated. - Since slugs* and dead zones* have been eliminated, product damage from cases bumping into one another are also eliminated.
6.	Replacement part costs are reduced	<ul style="list-style-type: none"> - Since the belts are modular, only the damaged module needs to be replaced rather than the entire belt. - Since you are replacing only a small module, belts do not have to be re-tracked so the time to replace and to re-track an entire new belt is saved. - Since belts can't "walk" and cause trim edge damage they last longer. A plastic belt will typically last 3 times longer than a traditional rubber belt in the same application.
7.	Reduced insurance claims and Lost Time Accidents	<ul style="list-style-type: none"> - Safety is improved because employees will have a smooth, flat platform to walk on versus the unsafe, moving and rolling surface of a roller conveyor.
8.	ACT System Technology	<ul style="list-style-type: none"> - The Model 2000 includes New London's exclusive ACT System (Application Change Technology). This system provides the end user with the flexibility to exchange the existing belt with another if the application or product changes in the future. The safety and flexibility of this feature has the potential to save the end user thousands of dollars in future conveyor purchases. (See page 135)
9.	Quiet, more worker friendly environment	<ul style="list-style-type: none"> - As roller bearings wear they have a tendency to make a "humming" or "whistling" noise that can be irritating. This noise is eliminated with Plasti-Trak.
10.	Opportunity	<ul style="list-style-type: none"> - With your skilled maintenance department spending less time maintaining your system, their time can be dedicated to other productivity opportunities.

How Much Can You Save With a Plasti-Trak Conveyor?

Choosing a conveyor system based on a lower initial price can prove costly over the life of the system. The initial price for a powered roller or gravity roller system might be lower than Plasti-Trak but expenses add up quickly taking into account maintenance, loss of production and product damage. Research completed by a leading plastic belt manufacturer concluded the annual expenses to operate a roller conveyor system can be as high as \$50/foot of conveyor.

*Dead zones – dead zones occur when rollers stop turning typically due bearing failures.

*Slugs – slugs are large groups of cases lumped together rather than being evenly spaced along the line.