



# **Single Side Belt Spacer**

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# SAFETY

## GENERAL SAFETY

Apex Filling Systems, LLC (APEX) manufactures and designs all of its products so they can be operated safely. However, the primary responsibility for safety rests with those who use and maintain these products. The following safety precautions are offered as a guide that if conscientiously followed, will minimize the possibility of accidents throughout the useful life of this equipment. The safety of personnel, equipment and plant facilities should be considered during equipment operation and with each changeover of product, or any machine modifications.

Only those who have been trained and delegated to do so and have read and understood this operator's manual should operate the equipment. Failure to follow the instructions, procedures and safety precautions in this manual can result in accidents and injuries.

DO NOT modify the equipment except with written factory approval. Unauthorized equipment modifications will void the warranty.

Each day walk around the equipment and inspect for leaks, loose parts, missing or damaged components, and parts out of adjustment. Perform all recommended maintenance noted in this manual.

***EQUIPMENT SHOULD ALWAYS BE DE-ENERGIZED (POWER AND AIR) BEFORE MAKING MECHANICAL ADJUSTMENTS.***

## ELECTRICAL SHOCK

- ✓ To avoid electrical shock hazard, make sure this equipment is properly grounded.
- ✓ Dangerous voltages are present within the electrical enclosures. DO NOT operate this equipment with electrical covers open or removed.
- ✓ Keep all parts of the body, hand held tools, or other conductive objects away from exposed live-parts of the electrical system. Maintain dry footing and stand on insulating surfaces. DO NOT contact any portion of the equipment when adjusting or making repair to exposed live parts of electrical system.
- ✓ Attempt repairs only in a clean, dry, well-lighted, and ventilated area.

## CONTACT MATERIALS COMPATIBILITY

APEX endeavors to make all contact parts compatible with buyer's products, if known. Because of the wide variety of possible products, Apex Filling Systems, LLC cannot be responsible or liable for ensuring compatibility of contact material with the products. Evaluate material compatibility prior to machine use. Failure to follow this procedure can result in machine damage, fire, operator injury or death




## SAFETY COMPLIANCE LIABILITY

APEX endeavors to make machinery as safe to operate as possible. National, state and local laws related to safety in the workplace apply primarily to the responsibilities of the employer, and not the equipment manufacturer. The seller agrees to cooperate with the buyer in finding feasible answers to compliance problems. However, because APEX has little control of the many factors which may significantly affect the environment in which this equipment is installed, the seller does not warrant this equipment to be in compliance with OSHA or any like state or local laws or regulations. It is the buyer's responsibility to provide the modifications necessary to assure compliance with the laws and regulations at the point of installation.

A complete inspection of product is necessary until the machinery is proven to produce acceptable results. This should also be performed after every changeover.

## CONVENTIONS

To ensure the safety of personnel which will install, adjust, maintain and operate this equipment, it is imperative that they understand the dangers, warnings and caution notices. It is important to understand the *signal words* that may be used throughout this manual.

	Alerts to immediate hazard, which will result in death or severe personal injury, if not avoided
	Alerts to a hazard which will result in serious injury, or death in some cases, if not avoided.
	Alerts to a potential hazard that may result in a serious personal injury, if not avoided. It also alerts against an unsafe practice that will permanently damage equipment or property.
<b>IMPORTANT</b>	Indicates a suggestion as to how to use or adjust the equipment for best product results.
<b>NOTE</b>	Points out a proper use that will avoid damage to the equipment, or will extend the life of the parts.

# Machine Features and Specifications:

## Introduction:

APEX single side belt transfers utilize a belt to help facilitate correct spacing for containers.

## Features and Benefits:

- **Robust**  
Anodized aluminum frame and housing maximize the working life of your machine, and minimize maintenance costs and downtime
- **Customizable**  
Available in a right to left or left to right configuration to fit wherever is needed.
- **Easy changeover**  
Simple mechanical adjustment for different bottle sizes. Quick to changeover, simple to use and easy to clean
- **Variable Speed DC Drive**  
Flexibility to match production line speed

## Performance Specifications:

**Operating Temperature:** Up to 40 °C

## Electrical Specifications and Requirements:

**Electrical Requirements:** Standard- 120VAC / 50/60Hz / 1 $\Phi$  / 5A

**Power Consumption:** 0.8 Amps for continuous use.

# Installation and Start-Up:

## Installation Procedure:

Check the mounting bolts to ensure that they are properly tightened. Using a level, check the unit to ensure it is level from side to side of the belt. To level, loosen the bolt highlighted in green in figure 1 and adjust to the desired height. After adjusting, ensure that bolts are securely tightened down. Initial Power up of machine will require a 110v source. Make sure the speed controller is set to off before plugging it in.

## Start-up and Commissioning

This manual should be read completely before powering-up the machine. Commissioning of the machine should be performed by a trained technician only after complete understanding of the machine, and with products that match samples indicated to Apex Filling Systems, LLC if supplied. Before running production, these steps need to be followed:

- Check the machine to see if guards are in place
- Check the mechanical system for loose or missing parts
- Check that all electrical connections are square
- Keep all personal clear of machine when starting
- Run equipment for 5 min before running production

To start, flip the DC Drive ON/OFF switch to the ON position. Adjust the speed potentiometer to set the desire container spacing.

# Operation:

## Theory of Operation:

APEX single side belt transfers are versatile and easy to use, able to handle a variety of containers and designed with quick changeover in mind. Using a DC motor, the single side belt transfers use a belt to help properly space containers.

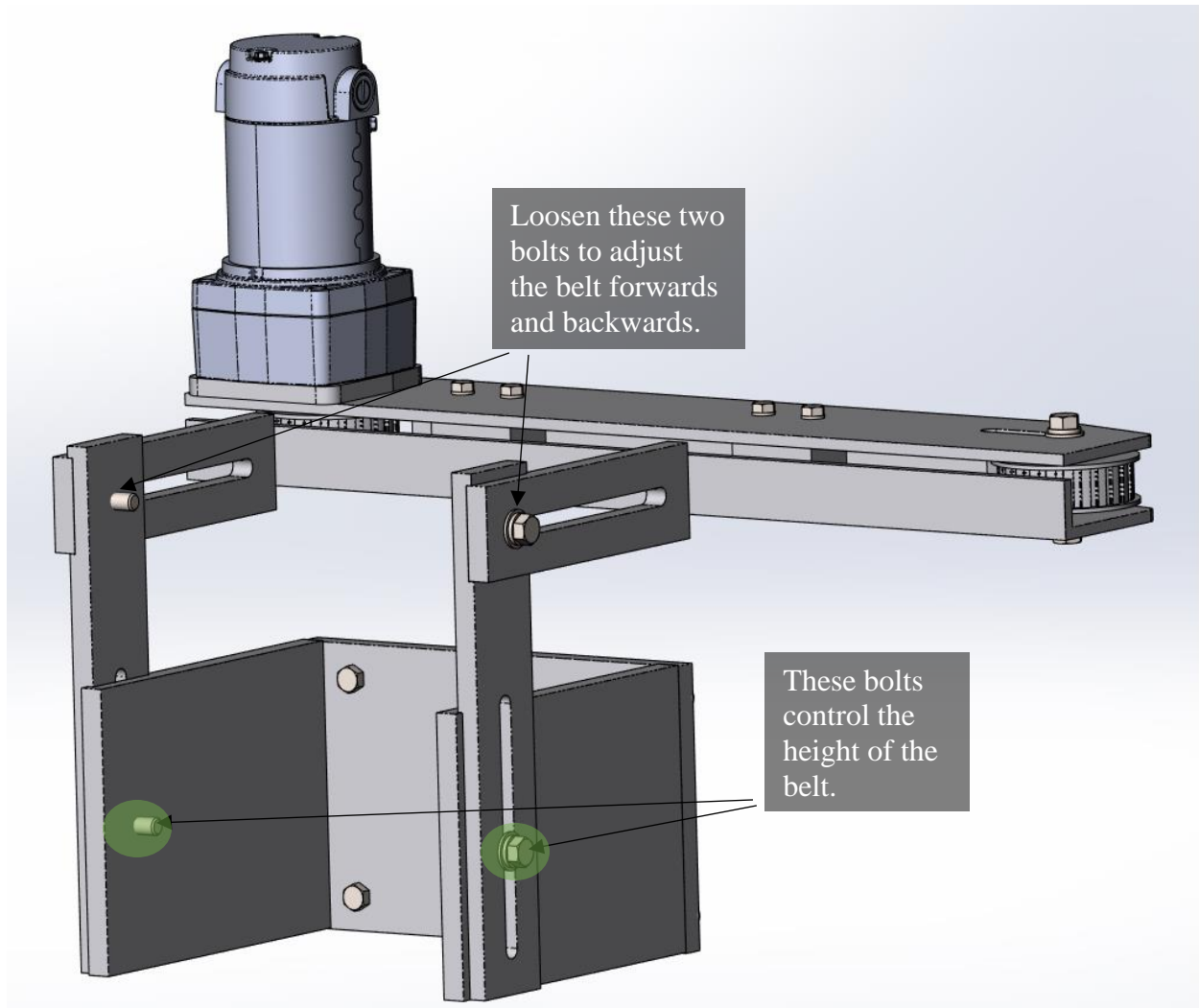
## Controls:

The control box for the single side belt transfer is the same control box used for conveyors. It is typically mounted within a couple feet of the spacer on the conveyor.

## Single Side Belt Spacer:

The single side belt spacer is used primarily to ensure proper spacing of containers as they enter a neck bander or a labeler.

The single side belt spacer has an identical control box to the conveyor with on/off and a knob for changing the speed of the belt.

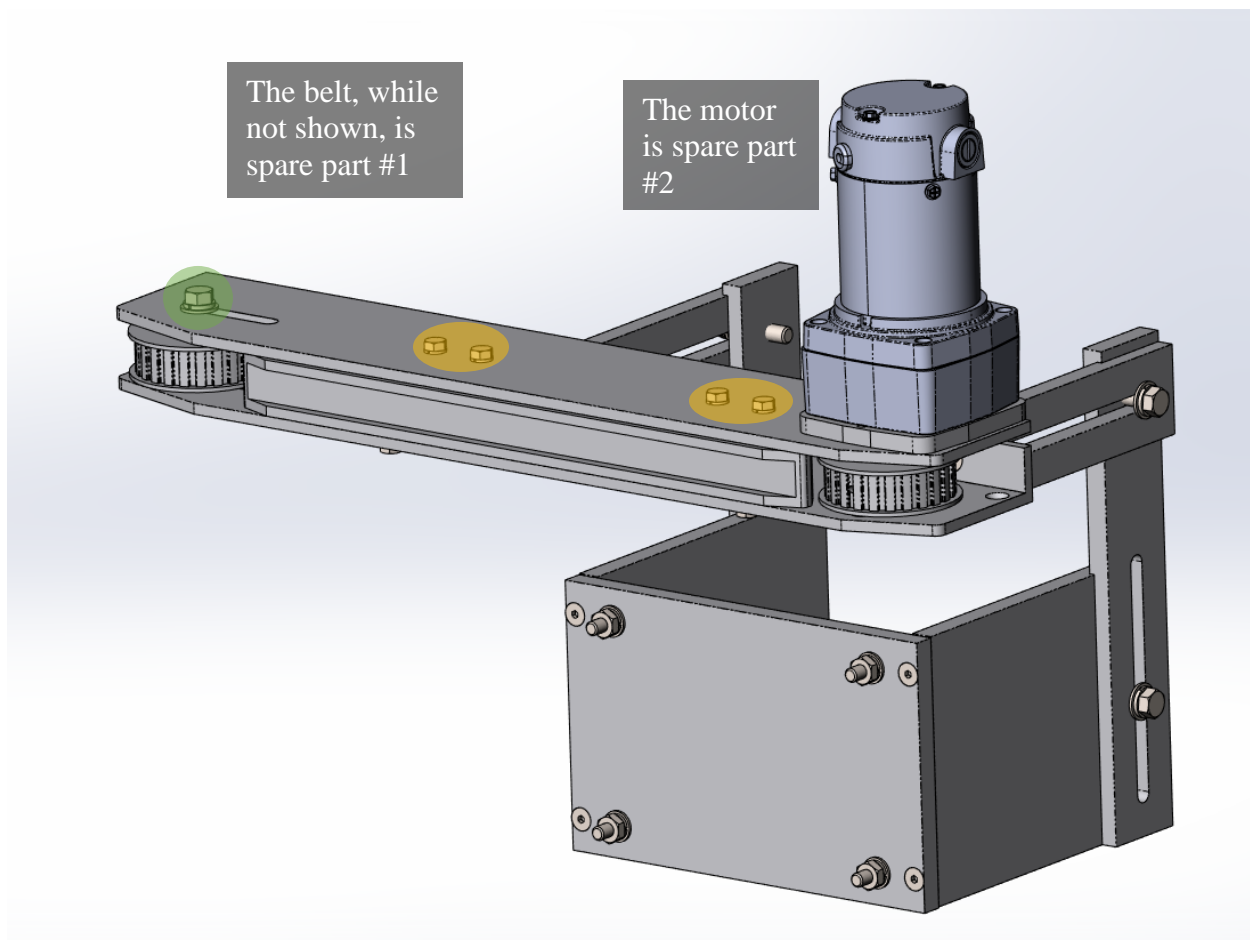


**Figure 1**

## Adjusting the belt for different containers:

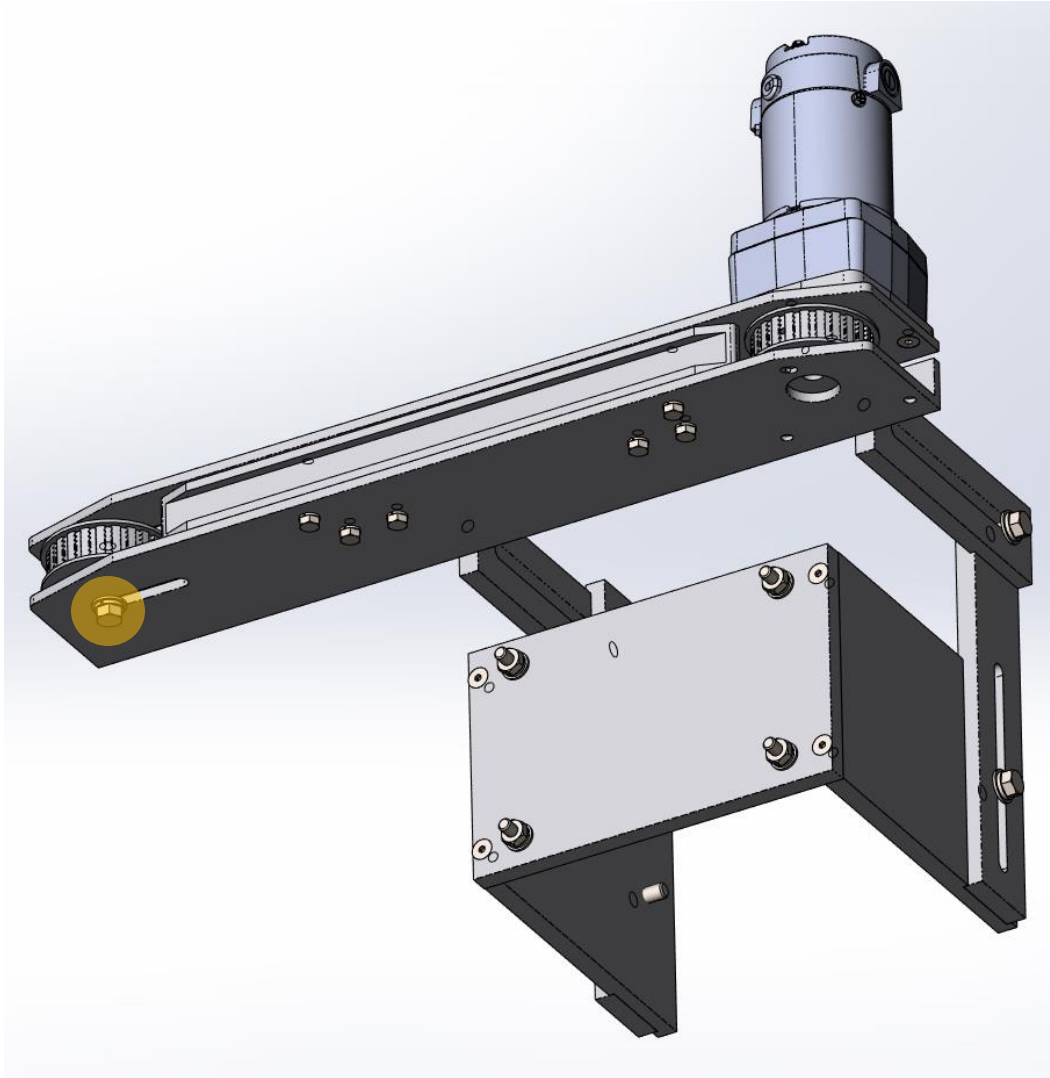
To adjust the side belt spacer for different containers, follow these steps.

1. Set the container in the middle of the conveyor and adjust the siderails appropriately.
2. Move the container to the middle of the side belt spacer.
3. Adjust the spacer until it is touching the side of the container.
4. Remove the container from the line.
5. Move the side belt spacer towards toward the middle of the conveyor an extra  $\frac{1}{2}$ " thus giving it enough grip on the container.
6. Tighten the bolts.



**Figure 2**

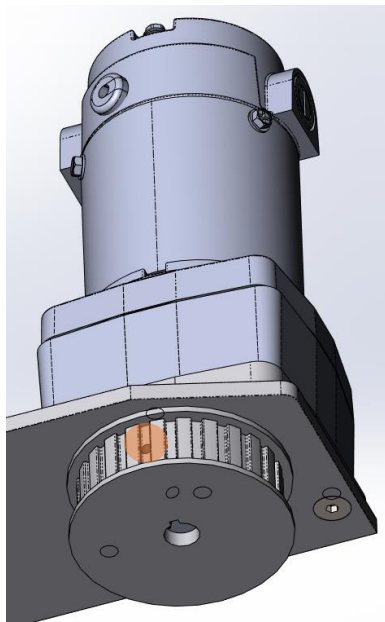




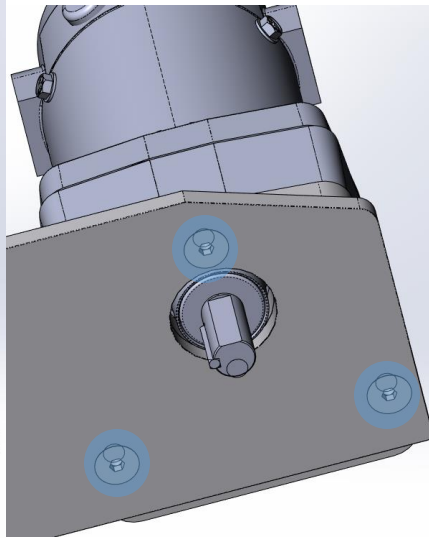
**Figure 3**

### **Changing the belt:**

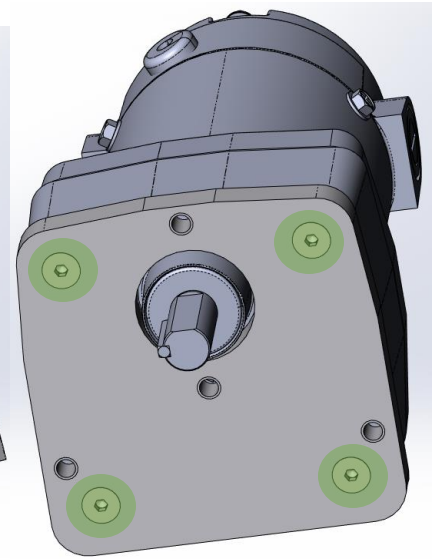
1. Remove the bolt highlighted in green in figure 2.
2. Loosen the bolt highlighted in yellow in figure 3.
3. Slide the idle pulley towards the motor to loosen tension on the belt.
4. Remove the 4 bolts highlighted in yellow in figure 2.
5. Remove the top plate taking the motor and drive pulley with.
6. Remove old belt, slide new belt around the backer bar and idle pulley and attach the top plate by reversing steps 5-1.



**Figure 4**



**Figure 5**



**Figure 6**

### **Changing the motor:**

1. Follow steps 1-5 for changing the belt.
2. Loosen the set screw highlighted in red in figure 4 and slide the drive pulley off of the motor.
3. Remove the 3 screws highlighted in blue in figure 5.
4. Remove the 4 screws highlighted in green in figure 6.
5. Attach the new motor by reversing steps 4-1.

# Servicing:

## Cleaning Procedure:

It is important that the machine is kept clean of dirt, broken glass, sand, etc. as these will reduce the wear life of the chain, wearstrips, etc. The machine should be cleaned with water or soap at regular intervals. Stronger detergents are often used in the food industry and can be corrosive on the machine components. Therefore, the machine should be washed down thoroughly immediately after cleaning with any harsh detergents.



**WARNING:** When using a high-pressure pistol with cold and hot water, as well as steam for cleaning, do not spray near any electrical enclosures.

## Recommended Maintenance and Schedules:

Itemized below are simple guidelines for maintenance. Several parts of the equipment should be inspected regularly to ensure the longest wear life possible. The following points should be controlled at the inspection:

Components	Daily	Weekly	Quarterly
Ensure that belt can run freely with no obstructions	x		
Check top and bottom for any foreign objects, cap, etc	x		
Clean single side belt spacer thoroughly once a week, more depending on environment	x	x	
Check for any loosened bolts		x	
Check belt for any amount of wear		x	
Visually inspect motor and check lubricant levels			x

## Maintenance Log

COMPONENT	REPAIR DETAILS	REPLACEMENT DETAILS	DATE

## Spare Parts List

PART DESCRIPTION	PART NUMBER
Drive Motor	10504-00007
Belt	10508-00005
KBIC Horsepower Resistor	10113-00001
Trade size 3AB, 8A, 250V AC/125 DC Fuse	10108-00004

### FACTORY TECHNICAL SUPPORT

#### **Apex Filling Systems, LLC**

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#### Spare Parts

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[parts@apexfilling.com](mailto:parts@apexfilling.com)

# TROUBLESHOOTING

## TROUBLESHOOTING RECORD

To better assist you in troubleshooting, please record the following information with the model number from the frame, the problem that is occurring, speed of application, product characteristics (i.e. Foamy Product, High Viscosity, or Special Variation).

Company Name: \_\_\_\_\_

Your Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

FAX Number: \_\_\_\_\_

Date: \_\_\_\_\_

CONTAINER	COLOR	SIZE	PROBLEM
<i>EXAMPLE: LDPE</i>	<i>Blue</i>	<i>16oz.</i>	<i>Product overflowing.</i>

## **NOTES**