



Turntable Operation Manual

V1.0

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.
IMPORTANT	Indicates a suggestion as to how to use or adjust the equipment for best product results.
NOTE	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 Turntables come in multiple different styles and sizes. Loading and accumulating turntables are available in 30", 40", and 60" diameter sizes. Transfer turntables are 16" in diameter.

Loading turntables are loaded with bottles by an operator and loads the containers on to the conveyor in a single file.

Accumulating turntables are positioned at the end of the line and will fill up with filled containers that can then be put into boxes or on to pallets by an operator.

Transfer turntables are generally utilized in conveyor corners where there needs to be space saved.

Features and Benefits:

- **Robust**
Stainless steel legs, table, and housing maximize the working life of your machine, and minimize maintenance costs and downtime
- **Customizable**
Whatever the production need, APEX has a design to meet it.
- **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: Varies by option.

Electrical Specifications and Requirements:

Electrical Requirements: Standard- 120VAC / 50/60Hz / 1 Φ / 8A

Power Consumption: 4 Amps for a standard Variable Drive DC Motor

Installation and Start-Up:

Installation Procedure:

After Clearing space for the turntable, move the turntable into desired position. Using a level, check the unit to ensure it is level from side to side. To level, adjust the leveling legs by loosening the jam nut and adjusting to the desired height. If needed, wrench flats are machined into the leveling leg to assist with adjustments. After adjusting, ensure that jam nut is re-locked. 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. Ensure conveyor speed matches all other conveyors on the line.

Operation:

Theory of Operation:

APEX turntables are versatile and easy to use, able to handle a variety of containers and designed with quick changeover in mind. Typically using a DC motor, the turntables use a sheet metal circle to either move containers into a single line or to accumulate the containers for easy access at the end of the line.

Controls:

The following example is for a turntable.

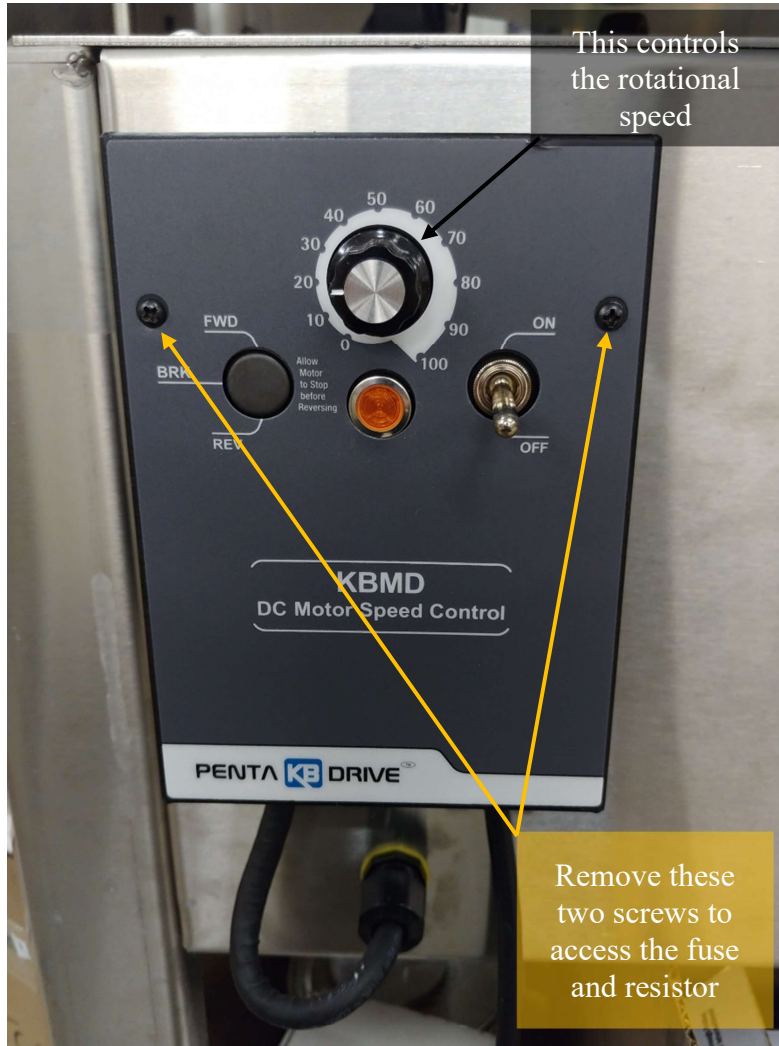
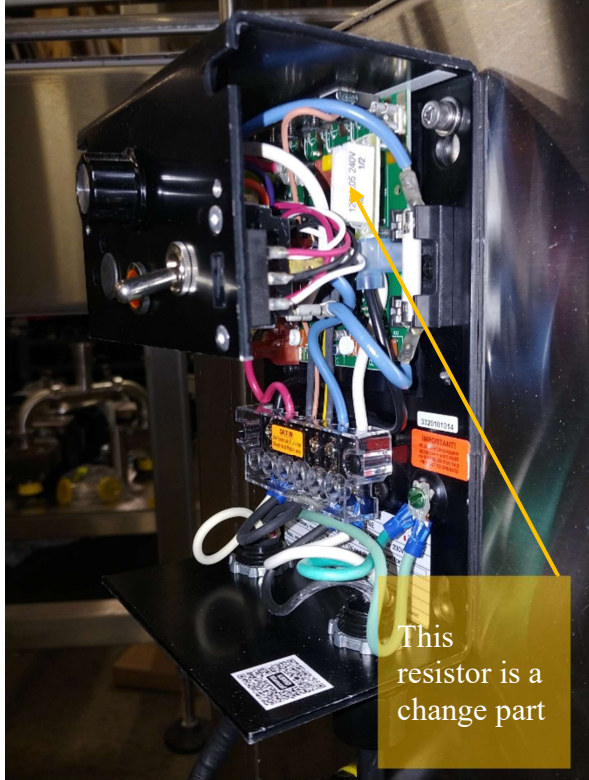


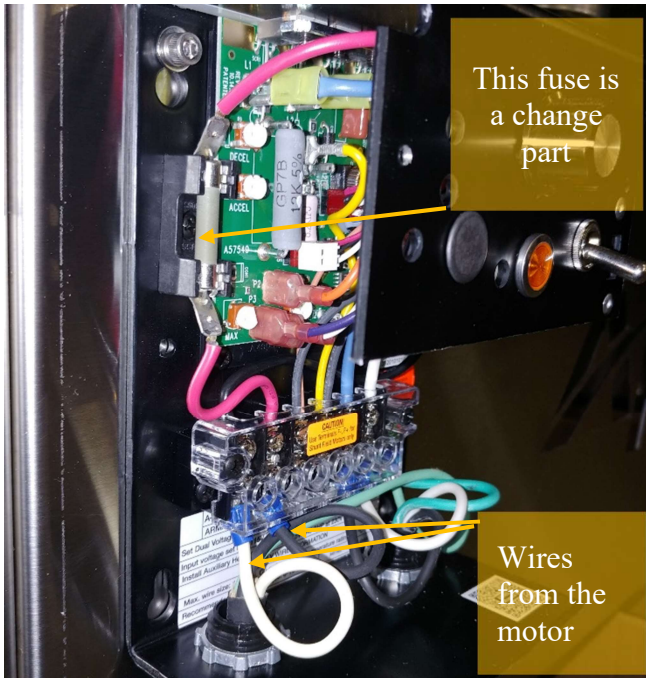
Figure 1



The front of the speed controller box is held on by two screws on the front of it. Once those are out, the front may be fitted quite snugly, wiggling it back and forth will help get it off.

The resistor for the motor is on the right side of the control box and the fuse most likely to blow is on the left side.

This resistor is a change part



This fuse is a change part

Wires from the motor

Figures 2 and 3

Reversing the rotation:

To reverse the rotation of the motor, take the front panel off of the control box and switch the white and black wires called out in figure 3.

Servicing:

Cleaning Procedure:

It is important that the machine is kept clean of dirt, broken glass, sand, etc. as these will reduce the life of the machine. 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 table top can run freely with no obstructions	x		
Check top and bottom for any foreign objects, cap, etc	x		
Clean Conveyor thoroughly once a week, more depending on environment	x	x	
Check if Jam Nuts on leveling legs are tight		x	
Check snubber plate / wearstrips 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	10505-00001
KBIC Horsepower Resistor	10113-00003
Trade size 3AB, 8A, 250V AC/125 DC Fuse	10108-00004
Single siderail clamps	10309-00003
Double siderail clamps	10309-00002
Caster Wheel	10707-00002
Flag for 30" loading turntable	11809-00010
Flag for 40" loading turntable	11809-00007
Flag for 60" loading turntable	11809-00009
Cross block	10307-00001
Snubber plate	11809-00001

6.2 FACTORY TECHNICAL SUPPORT

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Spare Parts

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