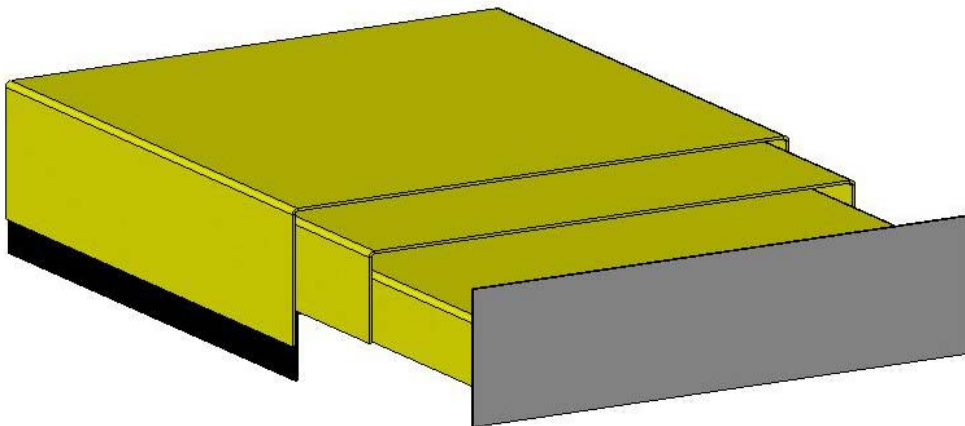
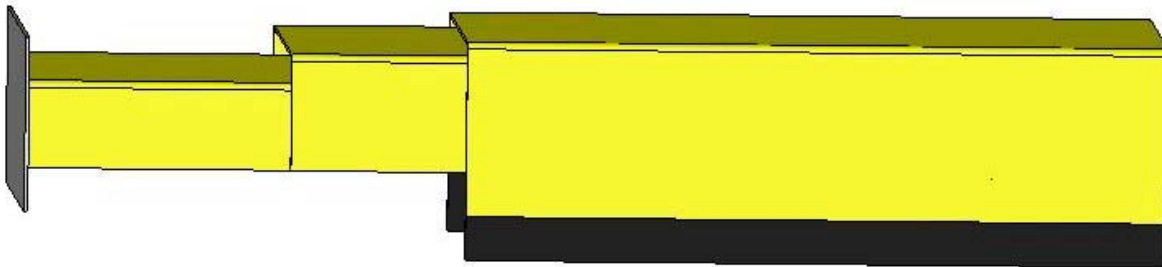
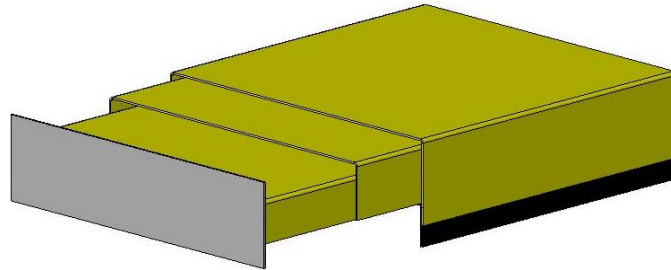




**METZGAR**  
CONVEYORS

# M50/50 Series Sortation Device Installation and Maintenance Manual





# SAFETY PRECAUTIONS

**WARNING: DO NOT ATTEMPT MAINTENANCE ON ANY CONVEYOR WHILE IT IS IN OPERATION.**

**BEFORE STARTING MAINTENANCE:**

1. Maintenance functions are to be performed while the conveyor is off. The main power switch to the conveyor should be locked in the off position. This will prevent anyone from applying power to the system while maintenance personnel are at work.
2. Never work on a conveyor while it is running, unless maintenance procedure requires operation. When a conveyor must be operating to perform the maintenance; allow only properly trained maintenance personnel to work on the conveyor.

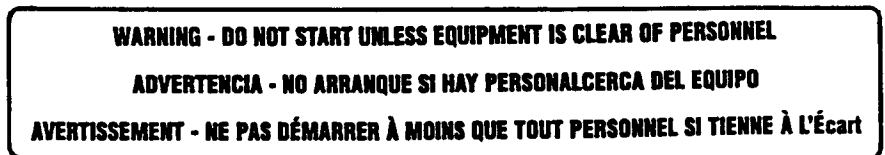
**DURING MAINTENANCE:**

1. Do not wear loose clothing while performing maintenance on operating equipment.
2. Be aware of hazardous conditions, such as sharp edges and protruding parts.
3. When using hoists, cables or other mechanical equipment to perform maintenance, use care to not damage conveyor components. Mis-aligned parts are dangerous as conveyor is started after maintenance is completed.
4. Keep area clean. Clean up lubricants and other materials before starting conveyor.

**AFTER MAINTENANCE:**

1. Before starting any conveyor after maintenance is completed, walk around the equipment and make certain all safety devices and guards are in place, pick up tools, maintenance equipment and clear any foreign objects from equipment-
2. Make certain all personnel are clear of the conveyor and made aware that the conveyor is about to be started.
3. Only authorized personnel should be permitted to start any conveyor following maintenance or emergency shut-off.

**PLEASE RECOGNIZE ALL WARNING STICKERS AND OBEY ANY SAFETY INSTRUCTIONS  
WARNING STICKERS ARE PLACED FOR YOUR SAFETY – PLEASE DO NOT REMOVE**



**CONDITIONS DO EXIST ON ANY CONVEYOR THAT CAN CAUSE INJURY TO PERSONNEL. NO MANUAL CAN COVER ALL THE HAZARDOUS CONDITIONS THAT MIGHT DEVELOP. THEREFORE, PERSONNEL INVOLVED SHOULD BE CONSTANTLY ON THE ALERT FOR UNSAFE CONDITIONS AND USE ALL POSSIBLE CARE, ALONG WITH COMMON SENSE AND STRICT ADHERENCE TO ACCEPTED SAFETY STANDARDS TO ESCAPE INJURY.**



**Initial Inspection:**

- 1) Sub-assemblies are packaged for shipment using combinations of wood, corrugated cardboard and steel strapping. After unpacking, please inspect all hoses for loose connections or damage that may have occurred during shipment. Tighten any loose bolts and nuts.
- 2) Check to be certain that the following components are included: solenoid operated air valve with electrical cord, mounting hardware package and covers with caution labels.  
(Note: certain orders may include filter-regulator unit with shut off valve)
- 3) An adapter bracket may also be included on the unit, depending on the style of side frame used on the conveyor.
- 4) The Metzgar Model M 50/50 unit may include a floor support leg. If included, be certain that the support leg has an adjustable boot with floor mounting flange.
- 5) Once inspection has been completed, you are ready to install the Metzgar Model M50/50 sortation device.

**Mechanical Installation:**

- 1) If your unit requires the Adaptor Mounting Channel, you will need to use 3/8-16 hardware to attach the Mounting Channel to the side channel of the conveyor. The Adaptor Mounting Channel has three (3) hole/slot combinations on the face. Rotate the Mounting Channel so that the three holes are in the "high position", (i.e., the holes are closer to the top of the mounting channel). Also, the Mounting Channel will need to be attached so that the predrilled holes are positioned "away" from the side of the conveyor (i.e., so that there is clearance between the Mounting Channel and side of the conveyor to allow room for the mounting hardware). Position the Mounting Channel so that the legs of the channel fit snugly inside the legs of the side channel of the conveyor. The Adaptor Mounting Channel should be secured to the conveyor with a minimum of two (2) bolts each on the top and bottom. The Mounting Channel flange holes will line up with existing holes in the conveyor bottom flange; the mounting holes need to be spotted and drilled in the conveyor top flange.
- 2) The Metzgar M50/50 Unit can now be mounted to the Adaptor Mounting Channel.
- 3) Attach the rear floor support leg to the base of the Metzgar M50/50 Pusher.
- 4) Before tightening the mounting bolts, verify that the aluminum face of the pusher has a minimum of 1/8" clearance (preferably 1/4") above the top surface of the belt or lacing.
- 5) Confirm the unit is level before anchoring.
- 6) Mount the air filter regulator (if provided) as close to the solenoid valve as possible.
- 7) Use 1/2" O.D. tubing to supply air from the regulator outlet to the air valve inlet. Do not use fittings that will reduce the air volume. It is important to supply dry air at consistent pressure to the regulator to achieve good performance from your Metzgar sortation device.
- 8) Start cycling the unit at 40 PSI. After several cycles, increase the pressure to a maximum of 90 PSI. During test cycling, you may need to adjust the unit in order to achieve smooth operation.
- 9) **IMPORTANT:** The signal to return the cycle should be given just prior to the cylinders bottoming out. However, it is **EQUALLY IMPORTANT** that the unit utilizes the maximum stroke prior to bottoming out. Cycling units partially out will create a rapid return and possible cylinder damage.
- 10) After operating the unit for several cycles, recheck all fittings and bolted connections.

**Electrical Installation:**

The Metzgar Model M 50/50 units are equipped with a single solenoid two position air valve (120 volt AC standard or 24 volt DC optional).

An electrical signal to the valve coil will cause the M50/50 arm to extend across the conveyor and the removal of the electrical signal will cause the M50/50 face to return to the home position. Therefore, the time duration of this signal will control the stroke of the arm within its maximum physical limits.

The Model M50/50 is designed to rapidly push the product off of the conveyor into some other form of transportation or accumulation at right angles as the product passes; therefore the divert signal will need to be given as the product approaches the center of the arm/chute, and removed just prior to the cylinders bottoming out, for the smoothest and highest cycle rates.

**Cycling units at too short of a signal will create a rapid, uncushioned return and may cause damage to the cylinders.**



**Mechanical Maintenance:**

Item	Schedule	Service
Fasteners	Every 3 Months	Verify all nuts and bolts are tight
Rod Ends	Every 3 Months	Lubricate with light oil where the bolt passes thru
Upper and Lower Bearings	Every 3 Months	Lubricate with all purpose grease
Rod End Connector	Every 3 Months	Lubricate with all purpose grease
Air Cylinder and Valve	Every 3 Months	Check for wear and air leaks
Internal Bumpers	Every 3 Months	Check for cracks or wear.

Note:  
The Sortation units are rated for a high cycle rate at 90 PSI, extended life may be obtained by operating at lower pressures.

**Electrical Maintenance:**

**WARNING: DISCONNECT ALL POWER BEFORE PERFORMING THE FOLLOWING MAINTENANCE. ONLY A QUALIFIED ELECTRICIAN OR AN ELECTRICAL TECHNICIAN SHOULD PERFORM THE FOLLOWING MAINTENANCE.**

Item	Schedule	Service
Control Panels and Pushbutton Enclosures	Always	Enclosures should be Clean and Dry
	100 Hours and 2000 Hours	Check if components have Vibrated Loose Check Door/Power interlocks and Latches
	At Start-up, Monthly or if any problems Occur.	Check for Loose or Discolored Wires (Discolored Wires Indicate an Excessive Current Draw)
Photoeyes	At Start-up and 2000 Hours	Dust, Oil and Foreign Objects should be wiped from lens and Reflectors
Limit Switches	100 Hours and 2000 Hours	Check Arms for Adjustment and Tightness
Pushbuttons	100 Hours and 2000 Hours	Check Wires and Terminals for Tightness
Emergency Stop Devices	100 Hours and 2000 Hours	Check for Proper Operation
Conduit and Conduit Hangers	2000 Hours	Check for alignment and Damage, Exposed Wiring
Wiring	At Start-up, Monthly or if any problems Occur.	Check for Exposed Cords and Wires for Damage, Replace as Necessary

**Review Spare Parts:**

Review Usage - Excessive Use of parts or replacing the same part several times indicates excessive wear.

**Electrical:**

Unit Operates Sporadically	Check Photoeyes	Clean Lens and Check for Proper Alignment
	Check Reflectors	Clean and Check for Proper Alignment
	Limit or Proximity Switches	Check Location and Tightness
	Solenoids	Check Pressure at the Valve and air leaks
	Loose Connections	Check Wire Nuts and Terminal Strip

**DO NOT ATTEMPT MAINTENANCE ON ANY CONVEYOR WHILE IT IS IN OPERATION**



**Sortation Device Replacement Parts:**

To Order

Locate the device serial number on the unit (Located on the bottom of the frame).

Identify the parts required from the list below.

**M50/50**

Item	Description	Part Number	Recommended Spare On Hand
1	Air Valve	M5050-VAL86140/86220*	One
2	Muffler for Valve	M5050-VAL86180	One
3	Air Cylinder	M5050-CYL380**3D-K	One
4	Guide Block	M5050-GUI58040	Two
5	Guide Bearing 2-5/8"	M5050-BER14020	Four
6	Bumper GBR-6	M5050-BMP26000	One
7	Bumper Back Plate GBR-4	M5050-BMP26020	One
8	Bumper Cylinder GBR5	M5050-BMP26010	One

**Note:**

\*-Standard 120vac Model add "-24vdc" for 24vdc Coil on the Valve.

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18" Unit = -08

24" Unit = -11

30" Unit = -14

36" Unit = -17