INSTALLATION, OPERATION AND MAINTENANCE MANUAL

for:

MT10 MAGSEP™ SEPARATOR

Mayfran International, Incorporated
P.O. Box 43038
6650 Beta Drive
Cleveland, Ohio 44143
(440) 461-4100 tel.
(440) 461-5565 fax

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CONVEYOR / SYSTEM INFORMATION

MACHINE INFO

Customer:			
Machine Type:			
Mfg. Year:		Serial No:	
Voltage/Phase		Cycle:	
Inspected by:			

YOUR WARRANTY PERIOD

Mayfran's Warranty is given on the following page.

Your Warranty period: Date shipped_____ through _____

CUSTOMER SERVICE / PARTS ORDERS

If you have any questions or need to order parts, please contact Mayfran International at:
(440) 461-4100 Fax: (440) 461-5565 8:00 a.m. to 5:00 p.m. (EST)

THIS GUIDE IS COPYRIGHTED

WARRANTY STATEMENT

(a) Material and Workmanship. Mayfran International Inc. ("Mayfran") warrants that the equipment to be provided by it shall be of the design and construction described in its Proposal and shall be free of defects in workmanship or materials. Should any failure to conform to this warranty appear within the first 2000 hours of operation, but not later than one (1) year after shipment, Mayfran will, upon prompt notification thereof and substantiation that the equipment has been installed, maintained and operated in accordance with good industry practice and with any specific recommendations, correct such nonconformity, including nonconformity to the specifications in Mayfran's Proposal, by in-place repair or, at its option, by furnishing a replacement part F.O.B. shipping point. Labor and equipment necessary to effect in-place repairs or component replacement are to be provided by the Buyer. Mayfran will only provide instructions and supervision to support each in-place repair. The effects of misuse, abuse, neglect, lack of proper maintenance (e.g. lubrication), corrosion, operation at other than design condition, or normal wear are specifically excluded from Mayfran's warranty.

(b) Performance. The only performance warranties extended by Mayfran are contained on the pages entitled "Performance Warranties" in Mayfran's Proposal, if any. Any through-put rates contained on the Performance Warranties pages are based upon continuous operation of the equipment over the period specified without regard to whether such operation will meet Buyer's needs. Mayfran disclaims all liabilities and responsibility with respect to Buyer's needs.

Mayfran's total responsibility under this performance warranty shall be considered fulfilled and the equipment accepted if performance tests show that the equipment meets the conditions of performance specified by the Performance Warranties, if any, or if the equipment is not tested within 180 days of initial operation. In the event the equipment fails to meet the specified conditions of performance after properly conducted and evaluated tests, Mayfran reserves the right to make such alterations as may be necessary to meet the specified conditions free of charge to Buyer.

(c) General. Mayfran shall not be held responsible nor shall allowance be made for work done, equipment furnished or repairs or replacements made by Buyer or by others unless prior written approval is given to Buyer by Mayfran.

With respect to accessory equipment and other vendor furnished apparatus included in its Proposal, Mayfran shall be responsible for the proper selection and specification requirements to the suppliers. Warranties for such items are limited to those extended to Mayfran by the manufacturers.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXCEPT THAT OF TITLE, WHETHER WRITTEN, ORAL OR IMPLIED, IN FACT OR IN LAW (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE). Correction of nonconformities whether patent or latent, in the manner and within the period of time provided above, shall constitute the fulfillment of all liabilities of Mayfran with respect to the equipment, whether based on contract, tort, strict liability or other legal theory.

In no event shall Mayfran or its contractors, subcontractors, vendors or suppliers, be liable in contract, tort, warranty, strict liability or other legal theory for any special, indirect, incidental or consequential damages such as, but not limited to, loss of anticipated profits or revenue, non-operation or increased expense of operation of other equipment, or costs of capital. The remedies of Buyer set forth herein are exclusive and the liability of Mayfran with respect to its contract or anything done in connection therewith whether in contract, tort, warranty, strict liability or other legal theory shall not exceed the purchase price of the equipment upon which liability is based. Buyer (if it will not be the ultimate owner or user of the equipment) shall obtain from the owner a written agreement that the owner will be bound by the remedies provided for herein. Buyer will also obtain from the owner a written release from consequential damages to the extent provided for herein in favor of Mayfran and its contractors, subcontractors, vendors and suppliers.

SAFETY INFORMATION

THE SAFETY INFORMATION CONTAINED HEREIN MUST BE COMMUNICATED BY THE CUSTOMER, OWNER, OR END USER TO ALL PERSONNEL WHO WILL ACTUALLY OPERATE, MAINTAIN, REPAIR, OR ADJUST THIS MACHINERY, OR WHO ARE ASSIGNED TO WORK IN THE VICINITY OF THIS MACHINERY.

ADJUSTMENT, MAINTENANCE, CLEANING AND LUBRICATION SHOULD BE CARRIED OUT ONLY BY PERSONNEL TRAINED BY THE OWNER OR END USER IN THE OPERATION OF ALL ASSOCIATED CONVEYORS AND PROCESS EQUIPMENT. PERSONNEL SHOULD BE TRAINED IN OSHA COMPLIANT LOCK-OUT / TAG-OUT AND ELECTRICAL SAFETY PROCEDURES. RECORDS OF TRAINING SHOULD BE MAINTAINED BY THE OWNER OR END USER. RECORDS OF TRAINING FOR THE SAFE OPERATION OF THIS MACHINERY MUST ALSO BE MAINTAINED. NEVER SHOULD ADJUSTMENT, MAINTENANCE, CLEANING OR LUBRICATION BE PERFORMED WITHOUT FOLLOWING PROPER SAFETY PROCEDURES.

DO NOT operate any machinery without reading and understanding this manual completely.

DO NOT operate any machinery unless fully trained and qualified by the owner or end user.

DO NOT operate any machinery (or any portion of this machinery) unless all personnel are clear of any rotating or moving parts (or parts that may potentially move or rotate).

DO NOT operate any machinery unless all guards and/or emergency stops are in place and functioning as designed by Mayfran.

DO NOT perform any maintenance, repairs or adjustments on this machinery without first locking out all electrical controls.

DO NOT perform any maintenance on moving conveyor parts.

DO NOT lubricate any machinery without first locking out all electrical controls.

DO NOT clean this machinery or the areas adjacent to or below the machinery without first locking out all electrical controls.

DO NOT touch any moving conveyor parts.

DO NOT remove any covers or guards without locking out all electrical controls.

DO NOT perform any maintenance or repairs on power lines feeding this machinery without first locking out power at the source.

DO NOT remove or cover any warning labels.

DO NOT wear loose clothing or uncovered long hair that can get caught in moving parts.

DO NOT repair or replace electrical, hydraulic, or pneumatic devices without power or air off.

DO NOT remove jammed product with conveyor running. OSHA compliant lock-out / tag-out procedures must be followed prior to clearing a jam of any type.

DO NOT operate a conveyor equipped with rope pull safety switches if the rope pull switches are not functioning properly.

DO NOT cross over a conveyor, whether or not it is operating, other than on an elevated walkway that provides safe access and prevents contact with the conveyor.

DO NOT climb on the components of a conveyor.

DO NOT ride or walk on any conveyor.

DO NOT touch moving conveyor parts.

DO NOT walk under conveyor where product can fall.

DO NOT operate conveyor without a visual or audible “all clear”.

SAFETY INFORMATION, CONTINUED

- If the entire conveyor cannot be seen from the operating station, an audible and/or visual warning shall be provided to warn of conveyor actuation.
- Conveyors should be used to transport only the material for which they were specifically designed.
- No conveyor shall be used in excess of its maximum rated speed and capacity.
- Casings, guards, safety switches, and other safety devices shall not be removed, bypassed, or disengaged during conveyor operation.
- Only trained operators shall be permitted to operate conveyors.
- All necessary guards, switches and other safety devices shall be installed so that a loss of power to the conveyor shall not render the guards, switches or safety devices inoperative.
- Each conveyor shall be kept free of accumulations of material that could inhibit its safe operation.
- Emergency controls shall be installed so that they cannot be overridden from other locations.
- Guards shall be kept in place at all times unless the electrical power is off and the conveyor is locked out
- All repairs and services shall be performed only by qualified personnel. Before repairs, tests or services are begun, all power controls shall be locked out in accordance with OSHA compliant procedures.
- Do not work near a conveyor without knowing where and how to shut it off.
- After a conveyor has been repaired, tested or serviced, it shall not be operated until all guards and safety devices have been reinstalled, all maintenance equipment has been removed and a visual inspection of the conveyor and immediate area has been completed.
- Material should not be discharged onto a conveyor that is not operating. Conversely, when stopping a conveyor or conveyor system, stop discharge of material onto initial receiving conveyor first, then continue stopping conveyors in succession after each has been cleared of its load.
- When working on the conveyor, be sure to turn the electrical disconnect OFF and LOCK OUT the power to the conveyor.
- Operators should be instructed to report any impairment of guards, emergency stop, or safety switches to their supervisors.

MAYFRAN INTERNATIONAL, INCORPORATED WILL NOT BE RESPONSIBLE FOR ANY WORK PERFORMED, OR ALTERATIONS MADE TO ANY OF ITS PRODUCTS UNLESS PRIOR APPROVAL HAS BEEN GRANTED IN WRITING BY AN AUTHORIZED MAYFRAN REPRESENTATIVE. ANY OTHER WORK WILL VOID ANY AND ALL WARRANTIES AND LIABILITIES. ALL WARRANTIES AND LIABILITIES SHALL ALSO BE VOID IF PARTS MANUFACTURED BY MAYFRAN INTERNATIONAL ARE REPLACED WITH PARTS OBTAINED FROM A SOURCE OTHER THAN MAYFRAN INTERNATIONAL.

PARTS ORDERING INSTRUCTIONS

When ordering parts, please specify the following information:

1. **Serial number:** This is a seven-digit alpha numeric designation with the following form: (*96S3000*). The first two digits indicate the year of manufacture, and the remaining five is a Mayfran identification number for that particular conveyor. Note: This is also the Mayfran order, or job number.

2. **Part Number**: Specify the Mayfran part number as given in this manual or as found on the drawings for the particular conveyor.

3. **Quantity:** Specify how many are required.

4. **Name of Part:** Use the proper description or title, given in the owners manual.

5. **Shipping Instructions:** Specify complete shipping instructions: Such as parcel post, truck, 2nd day air freight, or overnight air freight, along with the required ship date. When no instructions are given, shipping method will be best way, depending on nature of part and urgency of repair. Freight costs will be paid by customer.

6. **Return Address:** When ordering parts, always include your complete address with phone number. Keep in mind that parts cannot be delivered to a Post Office box.

7. **Returned Parts:** New parts returned to the factory will be subject to a restocking charge incurred, unless parts were sent by mistake from the factory. No part may be returned to the factory without prior written authorization from Mayfran (RGT #).

8. **Shortage:** If any parts are missing, other than parts marked back ordered, call the factory immediately.

P.O. BOX 43038
6650 BETA DRIVE
CLEVELAND, OHIO 44143

PHONE: (440) 461-4100
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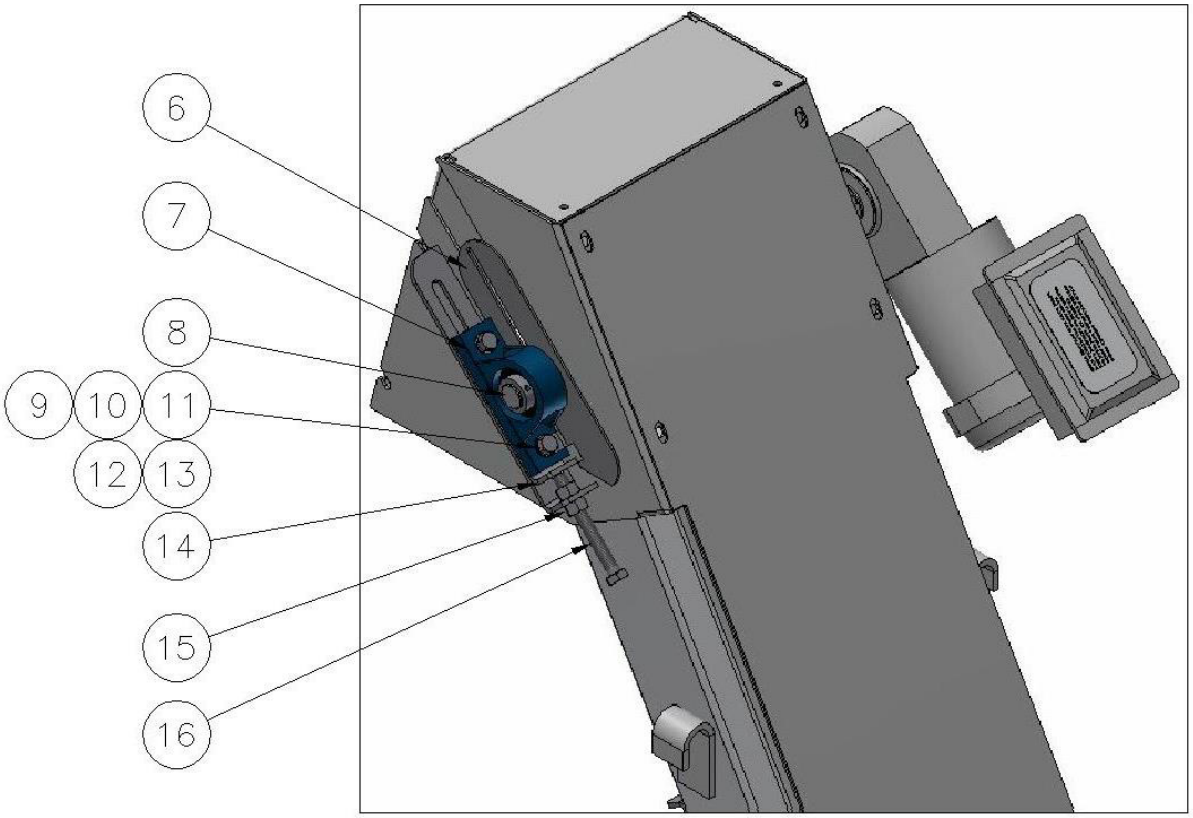
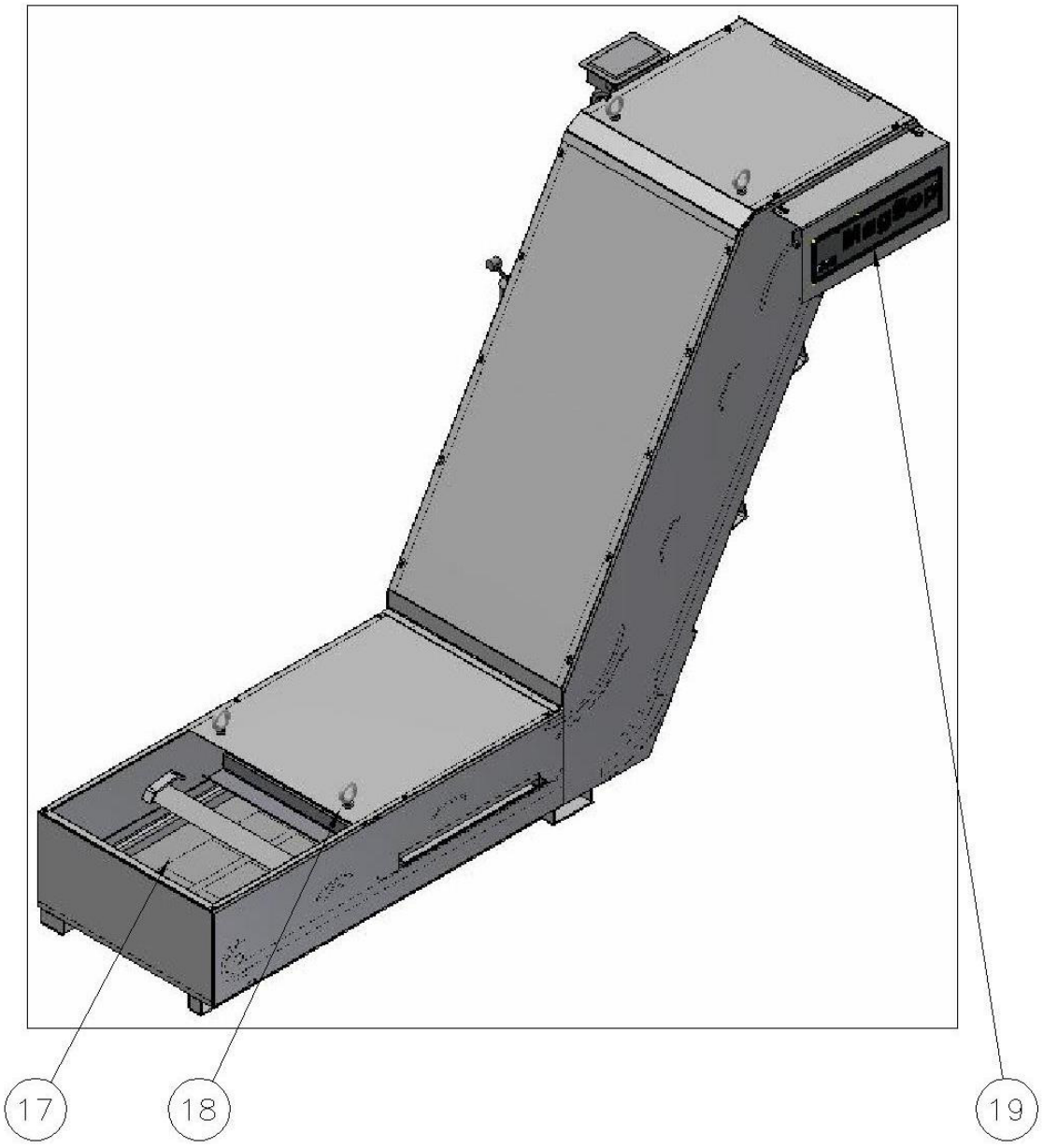
LOW PROFILE MT10 MAGSEP™ PARTS LISTING

LOW PROFILE MT10 MAGSEP™ PARTS LISTING

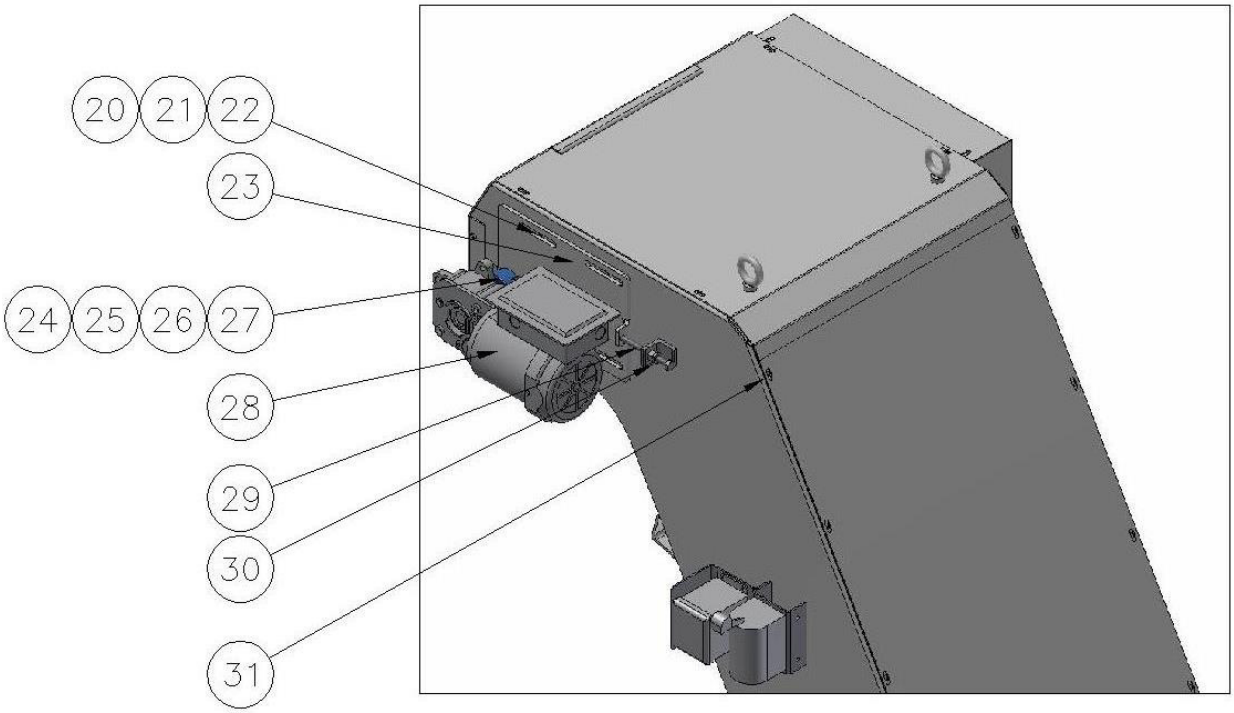


LOW PROFILE MT10 MAGSEP PARTS LIST				
Item	Component Part No.	Description	Qty Per	UOM
1	530065	URETHANE SHEET 1/8 X 2 5/8 X _W_	2	L x W
2	570614- _W_	BELT AY, DRAG SS _W_ 1 1/4"P W/A2 ATTACHMENTS RIVETED FORMED SS CLEATS	*	PI
	139106	CONN LINK C2050 1 1/4P W/SPRING CLIP	2	EA
3	136259	CASTER 3" SWIVEL N/BRAKE 325 LB CAPACITY	2	EA
4	99-9429181	NUT-HEX JAM 3/4-10 GRADE 8 PHS	2	EA
5	GEARMOTOR	*	1	EA
6	MT10-30202	COVER-SHAFT SLOT 25MM SHAFT	2	EA
7	068231	BRG PB 25MM LT LD-NORM DTY-LW CTR HT	2	EA
8	MT10-30105-_W_	HEAD SHAFT AY-8X7 KEY _W_ MT10	1	EA
9	99-11500933	BOLT-HEX M10-1.5 X 45 HHCS	2	EA
10	99-11500222	WASHER-LOCK M10 PHS	4	EA
11	99-11500324	WASHER, FLAT M10	4	EA
12	99-11500424	NUT-HEX M10-1.5 GRADE 8 PHS	4	EA
13	99-11500782	HEX BOLT M10-1.50 x 55	2	EA
14	CT20-34403	BRACKET-BEARING TAKE-UP MT10/CT20	2	EA
15	99-11501060	NUT HEX M12-1.75	2	EA
16	99-11500796	BOLT-HEX M12-1.75 X 100 FULL THREAD	2	EA
	_w_	Width is based on conveyor belt width		
	*	Job Specific Item. Call for Part Number, Quantity and Availibility		

HEAVY DUTY MT10 MAGSEP™ PARTS LISTING



HEAVY DUTY MT10 MAGSEP™ PARTS LISTING



HEAVY DUTY MT10 MAGSEP PARTS LIST				
Item	Component Part No.	Description	Qty Per	UOM
17	576604-_W_	BELT AY, DRAG SS _W_ 1 1/4"P W/A2 ATTACHMENTS RIVETED ANGLE CLEATS	*	PI
	139106	CONN LINK C2050 1 1/4P W/SPRING CLIP	2	EA
18	MCM3040T15	BOLT EYE M12 X 24MM SHANK ZINC PLATED	4	EA
18	MEYES10C20Z	BOLT EYE M10 X 24MM SHANK ZINC PLATED	4	EA
19	*	GUARD, HEAD END TAKE UP	1	EA
20	99-11500829	BOLT-HEX M10-1.50 X 25	6	EA
21	99-11500222	WASHER-LOCK M10 PHS	6	EA
22	99-11500324	WASHER, FLAT M10	6	EA
23	*	BEARING MOUNT PLATE	1	PR
24	*	3 BOLT FLANGE BEARING, 25MM DIA.	2	EA
25	99-11500817	SCREW HEX HEAD CAP M8-1.25 X 25 ZINC	6	EA
26	99-11500306	WASHER FLAT M8 REG 25 OD ZINC PLATED	6	EA
27	99-11500221	WASHER, M8 LOCK	6	EA
28	GEARMOTOR	*	1	EA
29	99-11500837	BOLT HEX M10-1.5 X 100 DIN 933 GRADE 8	2	EA
30	99-11500376	NUT-HEX JAM 10-1.50 PHOSPHATE COATED	2	EA
31	99-11503869	SCREW HEX SOC BUTT HD FLANGED M6-1 X 25	*	EA
	_w_	Width is based on conveyor belt width		
	*	Job Specific Item. Call for Part Number, Quantity and Availibility		

INSTALLATION

UNLOADING

Upon receipt of the equipment on site, a thorough inspection should be performed to spot any damage that may have occurred during transit. It is the responsibility of the installer to check and sign for all items contained on the shipment, as well as verify that all items have arrived, and are in good condition.
The packing slip, which accompanies the shipment, will contain a detailed listing, with descriptions, of all of the items on a particular shipment. All items should be checked against this list.

REPORTING DISCREPANCIES OR DAMAGE ITEMS

Any damage, however slight, should be noted on the bill of lading. Any discrepancies between the packing list and received items, or, any pieces damaged, must be reported immediately to Mayfran International. Pictures of damaged equipment while still on the truck are helpful. Notify the Traffic Manager at Mayfran International at: 440.461.4100

If accepted damaged, and not noted on the bill of lading, the customer is responsible to file a damage claim within 15 days of acceptance of the conveyor with the trucking company.

LIFTING GUIDELINES FOR CONVEYORS

Unloading should be performed in a safe and professional manner to protect both workers and the equipment. Rigging cables, slings, chains, or chokers should be of correct size and in good condition and placed on the equipment in a way that minimizes structural and paint damage. Care must be taken when lifting CS1 MAGSEP™ ™ conveyor to prevent distortion. Avoid impacts to frames that might cause distortion and misalignment problems during installation. Lifting hooks are normally provided on Mayfran conveyors and tanks. Only use hooks that are designated for lifting. Be sure that slings will not deform conveyor parts. A spreader must be used if it appears that side panels, guards, etc. may be deformed by the sling.

STORAGE OF EQUIPMENT AWAITING INSTALLATION

Any outside storage (exposed to weather) of conveyor equipment must be approved in writing by an authorized Mayfran representative. Conveyor components awaiting installation should be protected from moisture and the elements. Steel belting will oxidize rapidly if exposed to moisture, which will affect the appearance and flexibility of the belt. Painted surfaces can become dull in appearance if exposed to sunlight, even for a short period of time.

MATCH MARKING

In most instances, **CS1 MAGSEP™ ™** will be shipped in one piece. If the conveyors frames have to be shipped in separate pieces, the sections will be marked as per the following.
All shipping items for field installation should have a match mark number (such as “96M3000-1-2") either stamped or stenciled, in a conspicuous place on the item. The first portion of the number is an equipment identifier, usually the Mayfran serial number. If the piece is an interior frame section, it will have two dashes. The joints are numbered from the conveyor’s tail end to its head end. The number after the first dash is the joint number toward the tail end of the conveyor, and the number after the second dash is the joint number toward the head end of the conveyor. Only head and tail frame sections will have one joint number, all other interior frame sections will have two

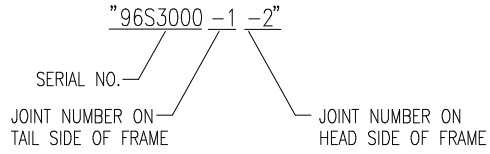


Figure 1: Match mark number breakdown.

numbers. Every mark number is shown on the conveyor installation drawing. If any piece is found without a mark number, contact the engineer on the inspection sticker for identification. See the following figures for typical match marking schemes, and locations where found on the conveyor sections.

BOLTED FRAME SPLICE JOINTS

To connect any two frame sections together, line up the adjacent frame ends and insert bolts through the punched holes in the splice angles and tighten. Verify that the proper frame sections are being joined in the correct sequence by the mark numbers.
The quantity of bolts required for each frame splice joint is determined by the width of the conveyor frame. Refer to the conveyor installation drawings or shipping lists for bolt sizes and quantities. All fasteners for frame splice joints with gasket (if necessary) are located in one set of holes. Watertight splices need to be sealed with silicone along with the gasket.

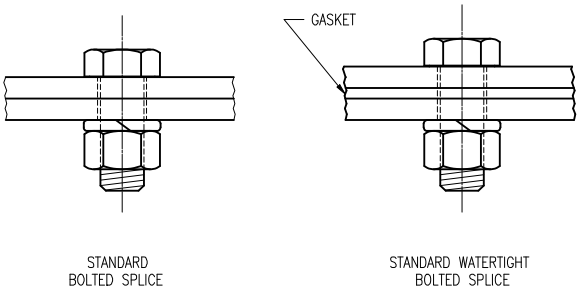


Figure 2: Bolted joints through (a) standard, and (b) watertight.

INSTALLATION DRAWINGS

General arrangement drawings used for installation have been sent to the equipment purchaser. Should there be any instances where information contained in this manual conflicts with the general arrangement drawings specific to this job, the information on the drawings will govern. If there are any questions, please contact Mayfran and provide the serial number of the equipment so that your call can be directed to the appropriate department to provide assistance. Electrical Installation
All wiring and controls must be installed in accordance with local codes. All work must be performed by licensed electricians. When a conveyor system includes controls, wiring diagrams are normally found in a pocket on the inside of the control box door. Motor wiring diagrams are usually found on the motor nameplate or on the conduit box cover.

OPERATION

The **MT10 MAGSEP™** ™ is designed to remove small steel and cast iron chips and fines from a stream of coolant. Coolant and chips enter the conveyor in the lower horizontal and are then dragged out of the conveyor by the drag chain that continuously moves along the bottom of the conveyor.

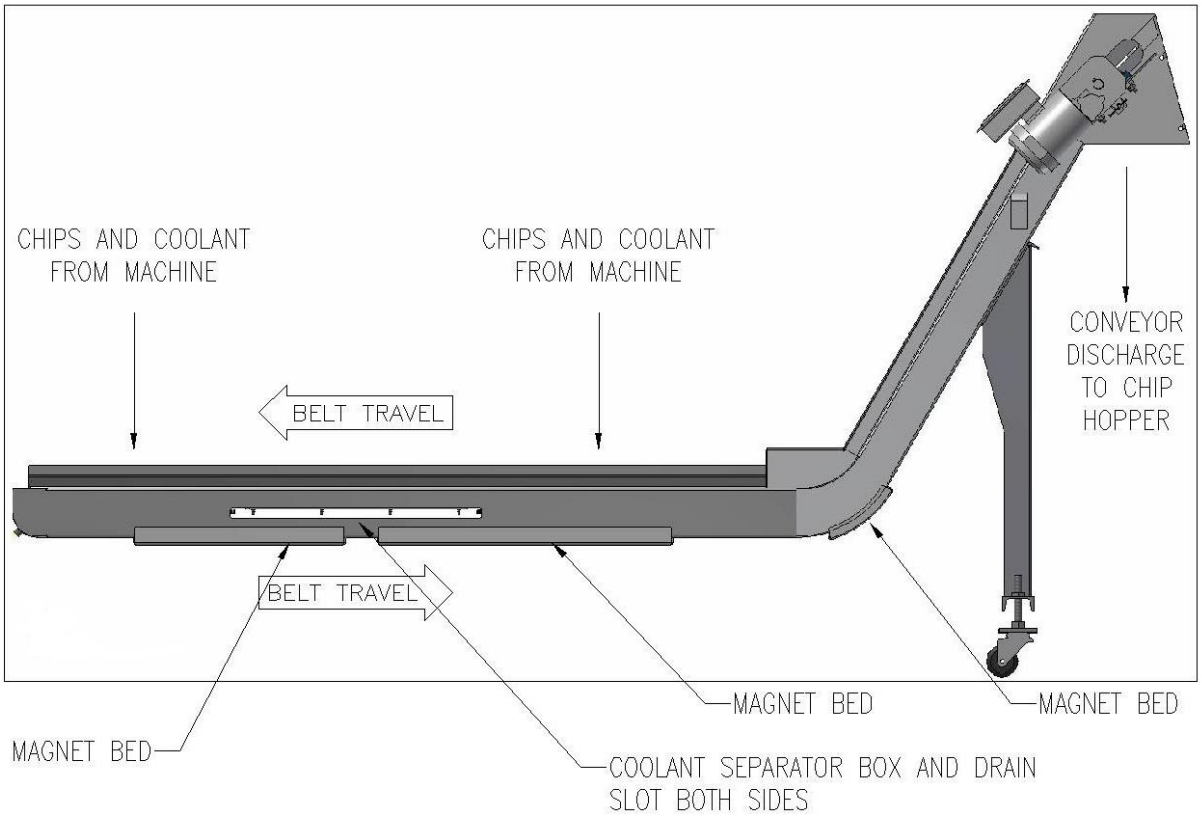


Figure 3: Conveyor Operation

OPERATION

The separation of the small chips and fines occurs as the coolant carrying the chips and fines is directed down by an under flow barrier to allow the magnetic field to capture these chips and fines on top of the magnet bed. Chips and fines are. Coolant exits the conveyor between the two under flow barriers through the separator box.

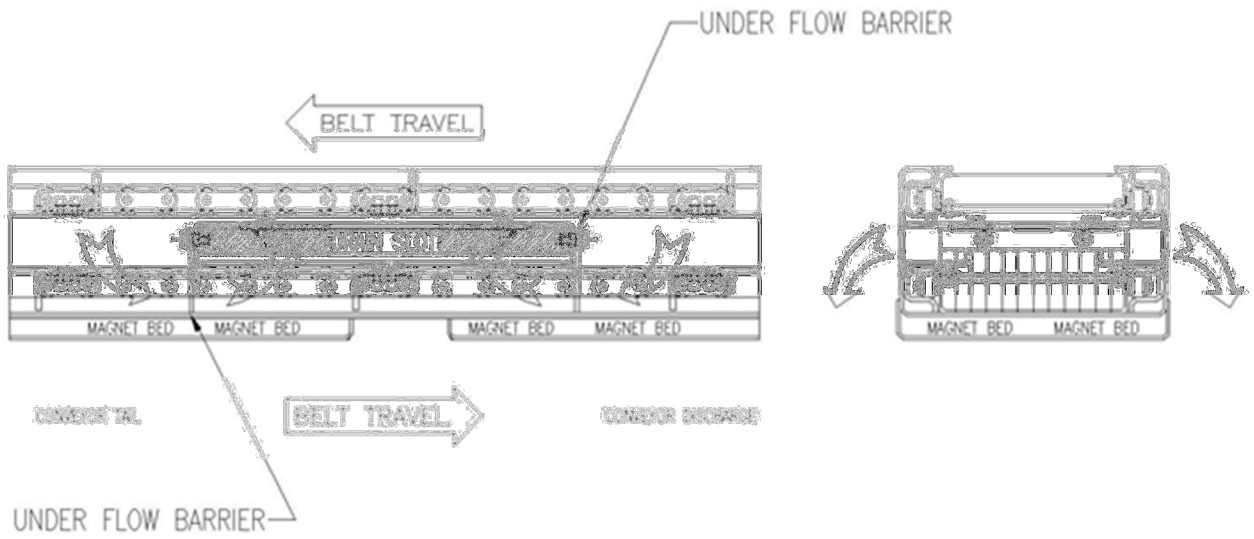


Figure 4: Low Profile MT10 MAGSEP Coolant Flow

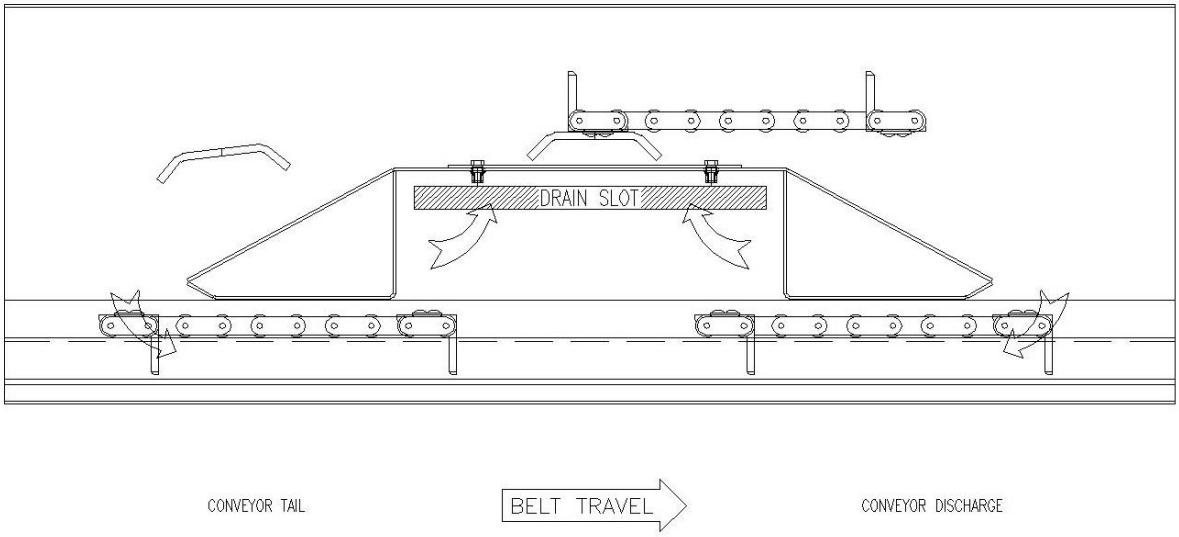


Figure 5: Heavy Duty MT10 MAGSEP Coolant Flow

START UP

MOTOR ROTATION VERIFICATION

Before starting-up system, the direction of motor rotation must be verified. The operation of the conveyor depends on the proper rotation of the motor. Next to the conveyor headshaft will be a rotation arrow sticker applied by Mayfran. To verify motor rotation, apply power momentarily to the drive by starting the conveyor in the forward direction. Observe the rotation of the driven sprocket (on the head shaft). Repeat in the reverse direction if applicable. If the direction of rotation is not correct, have a qualified electrician reverse the wires. After repairs are completed, recheck the rotation direction.

BELT TAKE-UP ADJUSTMENT

All conveyors are equipped with a belt tensioning device called a take-up. The take-up is usually located at the head end of the conveyor and is used to position the head shaft with respect to the frame of the conveyor. On all Mayfran conveyors, the take-up is designed to move a distance greater than or equal to the pitch length of the belt being used. This insures it will always be possible to properly tension the belt, with the addition or removal of an even number of pitches, even if the length of the conveyor is changed.

Proper chain tension is critical to the reliable operation of any hinged steel belt conveyor. Chains can loosen up after initial run-in on new conveyors or after long periods of time as components begin to wear. One of the sure signs of a loose chain is an observed jerking motion of the belt hinge pan when running. A chain that is too loose may jam and cause the conveyor to become inoperable. A chain that is too tight, may cause excessive wear of chain components and create overloads on the drive system.

CAUTION: Whenever the guards are removed or any adjustment is made to the take-up, power must be removed from the conveyor using OSHA approved lock-out / tag-out procedures.

TIGHTENING THE BELT

1. Remove belt sprocket covers.
2. Loosen the jam nuts and pillow block bearings on the take-up assembly.
3. Tighten the belt take-up equally on both sides of the conveyor until belt tension feels correct. Check belt tension, follow the procedure below.
4. Tighten the pillow block bearings, and the jam nuts.
5. Allow the conveyor to run for several complete revolutions.
6. Check belt tension, again.
7. The belt must be centered on the head shaft and drive shaft. Clearances between the belt sprocket and the side bars on both sides of the head shaft should be equal. If the belt is not centered, tighten the side where the sprocket is close to the outside side bar (or loosen the other side). Tighten only a couple of turns, then restart the conveyor and observe the belt for at least one complete revolution. Repeat as required until centered.
8. Ensure that all guards are properly installed.

***NOTE**: Make sure the head shaft is square to the conveyor frame. This can be checked by measuring the distance from the head shaft to the front face of the conveyor. The dimension should be the same on both sides. If the belt runs to the side, the head shaft is not square.*

CHECKING BELT TENSION

The following procedure is used to properly check the tension the belt:

1. Lock out the power to the conveyor.
2. Visually, check under the hinged end cover to see if the drag belt is sagging. Also, with gloves on, pull cleat away from the bottom pan of the conveyor.
3. If the cleat moves more than 1/4" away from the bottom pan of the conveyor, the belt is too loose. See "Tightening the Belt chain" below.
4. If the cleat moves approximately 1/4" away from the bottom pan of the conveyor and springs back into its original position, the belt chain is properly tensioned.
5. If the cleat cannot be pulled away from the bottom pan of the conveyor, the belt chain is too tight. See"Loosening the Belt chain" below.
6. Turn the power back on to the conveyor.

LOOSENING THE BELT

1. Remove belt sprocket covers.
2. Loosen the jam nuts and pillow block bearings on the take-up assembly.
3. Loosen the belt take-up equally on both sides of the conveyor until belt tension feels correct. Check belt tension, follow procedures explained above.

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8. Ensure that all guards are properly installed.

MAINTENANCE

PREVENTIVE MAINTENANCE

By far the most important preventive maintenance activity is to keep the conveyor clean. Removing excess material will prolong the life of the belt, bearings, and reducer, and ensure that limit switches and other electronic sensors will perform as they were designed. The frequency of machine cleaning depends on the type and amount of material being conveyed.

The other vital maintenance item is to insure that all components of the conveyor are well lubricated. This includes the belt chain, roller chain, bearings, take-up screw and reducer. For information on the motor, reducer, and bearings, refer to the appropriate manufacturers' publication for the type of lubricant to be used.

The only other preventive maintenance that needs to be performed is a periodic inspection and testing of the conveyor components. The following table lists recommended maintenance items and minimum intervals. It is recommended that the end users maintenance manager produce their own preventive maintenance schedule based on these minimums. Accurate records of any maintenance performed must be maintained. These are general intervals; consult the technical manuals of your specific components for exact intervals.

ITEM	DESCRIPTION	INTERVAL
1	Check condition of all labels and safety decals. Replace if missing, damaged, or difficult to read.	Daily
2	Clean conveyor and remove any debris	Daily
3	Check limit switch operation (if applicable)	Quarterly
4	Check roller chain adjustment/lubricate	Every 6 months
5	Check v-belt tension, check sheave alignment (if applicable)	Every 6 months
6	Lubricate take-up assembly	Every 6 months
7	Change gear reducer oil	Every 6 months*

* Consult the appropriate gear reducer manufacturer manual for proper intervals and break-in requirements.

BELT ASSEMBLY REMOVAL

Note the MT10 Magsep belt is comprised of stainless steel cleats.

1. Locate the master link on the belt chain. Rotate the belt to line up the master link with the center of the take-up slot at the discharge end of separator conveyor.
3. After positioning the master link, loosen the two take-up bolts on each side about 1/2" to relieve some of the belt tension.
4. Remove the master link from both sides of the conveyor belt.
5. With the belting separated, pull on the bottom strand of the belt to remove it.

Caution: Maintain some tension on the upper strand as it feeds through the conveyor frame to prevent any tendency of the belting to "run away".

DIRECTION OF BELT TRAVEL

Mayfran belting is typically designed for travel in one direction only. Reversing operation is not recommended. The direction of travel is determined by the cleat. The cleats are formed and travel in one direction. This is designed to maximize material containment.

Proper belt orientation must be verified at the beginning of belt installation. Figure 9 below shows the orientation of the carrying (lower) belt strand in the conveyor.

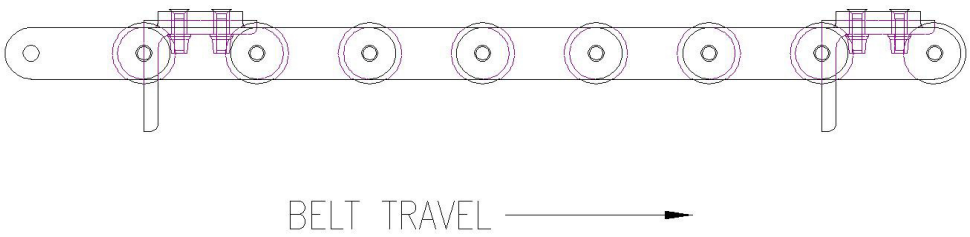

Figure 6: Belt Orientation

TROUBLESHOOTING

OVERVIEW

Mayfran conveyors are designed to be the most reliable in the industry. However, problems may occur on occasion. Problems are normally discovered in one of two ways:

- A fault is received on the main control panel. Troubleshooting for these faults is briefly discussed in the charts on the following pages. For a complete guide to troubleshooting of electrical controls, consult your Mayfran Electrical Controls Manual.
- The second indication that problems are discovered is simply by the operator noticing that there is something different about the way the conveyor is operating; usually there is some sort of unusual noise. The only way to correct this problem is to examine the conveyor and determine the source. The common sources of noise are different for new conveyors and for conveyors that have been operating properly for some time.

The following tables briefly describe faults that may appear on the conveyor control panel. Most conveyors have some type of motion sensor, and others may be equipped with a clutch limit switch used with a Mayfran Safety Clutch. All conveyors are equipped with an overload sensing device that will shut down the conveyor in the event of a motor overload. Note: this is an abbreviated listing only, please consult your Mayfran Electrical Controls manual for a complete list of diagnosis.

CONVEYOR MOTION FAULTS

The input for conveyor motion faults is the zero speed sensor discussed in previous sections. Always ensure that the sensor and actuator are clean and properly adjusted.

SYMPTOM	PROBABLE CAUSE	POSSIBLE SOLUTION
Conveyor not running: Motor not running	Breaker open	Reset Breaker
	Open circuit to motor	Correct wiring
	Bad motor	Check motor
Conveyor not running: Motor running	Clutch engaging	Clear blockage, restart conveyor
	Loose belt	Adjust take-up to tension belt
	Broken/slipping v-belts	Replace/tension v-belts
	Broken drive chain	Repair/replace drive chain

OVERLOAD FAULTS

An overload fault is caused by tripping the overload device that supplies power to the conveyor. After the overload device is reset, and any obvious cause corrected, the conveyor should be run in local mode, and the amperage draw on the motor checked. Also, check the current setting on the overload device.

SYMPTOM	PROBABLE CAUSE	POSSIBLE SOLUTION
Overload Fault	Conveyor loaded beyond rated capacity	Reduce loading
	Conveyor Jammed	Clear jam
	External drag or load	Check skirt boards, flaps, wipers, etc. properly installed
	Component failure	Check/clean/replace bearings, gearbox, and belt rollers which may be binding

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