



Low Profile Aluminum (LPA2)



IMPORTANT! PLEASE READ INSTRUCTIONS CAREFULLY

Failure to install and operate MAC products according to our specified instructions could result in equipment malfunction or serious injury. In addition, your warranty may be void if our instructions have not been followed.

Questions? Call Tool-Free 1-800-435-6979

MAC Automation Concepts, Inc., 1760 Kilkenny Ct., Woodstock, IL 60098

Congratulations



**1760 Kilkenny Ct.
Woodstock, IL 60098
Phone: 815-337-3000
Fax: 815-337-3020**

Dear Valued Customer,

Congratulations on your purchase of a new MAC Automation Concepts Low Profile Aluminum Conveyor (LPA), Quick Change Rails and Quick Change Containment package. We're glad that you have chosen us as your exclusive parts handling equipment supplier.

The first step in getting your machine up and running quickly and easily is to read this instruction manual. In it you will find detailed drawings illustrating the parts and components along with information explaining how to properly assemble them. Please read these instructions carefully before attempting to assemble your machine.

Your machine is covered by our 2 Year Limited Warranty. Be sure to read our maintenance schedule for proper care of your machine. If you do experience a problem, please call us toll free at 1-800-435-6979.

Remember to call us for all your replacement part needs! MAC Automation sells all of the products and supplies required to maintain your machine!

Thanks again for choosing MAC Automation Concepts!

Sincerely,

Frank Eltvedt

Frank Eltvedt
President and CEO
MAC Automation Concepts, Inc.

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System Information & Features

Exclusive Series features

Frame: Extruded aluminum frame with extruded cross member and stainless slider bed

Take up Assemblies: Unique and innovative take-up design for tracking adjustments and quick belt changes

Belt Tensioning: Located at the idle end makes fine tuning changes simple

Pulleys: 1 3/8" with sealed bearings

Frame sizes: 2.312" (standard), and 1.875" (optional)

Motor Starter: Includes rocker switch with thermal overload

Exterior T-slots: Allow for mounting of additional modular components

Warranty: Two year limited

Low Profile Aluminum Conveyor, "MAC Trac 100", series

The "MAC Trac 100" belt conveyor series is a profile that is used for light weight finished part applications. This conveyor is ideally suited for under-the-press application of small to medium sized injection molding machines, general purpose light weight parts. This design can be used in conjunction with MAC's exclusive quick change mounting packages or can be used in aisle based on the floor applications.

Technical Information

- **Frame:** 2.312" frame height, extruded aluminum, with extruded cross member and stainless bed plate.
Optional frame height of 1.875" – allows belt to be higher than frame.
- **Side Rails:** None as standard: Frame is .437" taller than belt surface as a standard
- **Belts:** B2: white, 2 ply P.U. cover with endless finger splice, other urethane belts available
- **Belt Widths:** 2.75"-20" on 1 inch increments
- **Lengths:** 2' to 12' on 1' increments (standard)
- **End Drive:** Located at any one of the four corners, dependent upon length and application.
- Positions M3,M4 are preferred, M1,M2, are available if applicable,
- Side mounted drive M7,M8, M5, M6 are also available as an option.
- Standard drives are 120VAC/1/60 HZ motors.
- **Speeds:** 20 FPM (standard), 54 FPM – is available at no charge
- **Pulleys:** 1 3/8 "drive and tail pulleys are both machined with trapezoidal crowns, shafts are 5/8" diameter and bearings are sealed self-aligning type bearings
- **Take-up Assembly:** Allows for 1 inches of take-up of belt adjustment
- **Electrical Control:** manual motor starter with thermal overload protection and 12' of SJ 16/3 cord with plug for 120VAC input power as standard.
- **Supports:** Various extruded leg styles with adjustable heights available – **Please inquire**

This manual provides guidelines and procedures for installing, operating, and maintaining your conveyor. A complete parts list is provided with recommended spare parts highlighted in gray. Important safety information is also provided throughout the manual. For safety to personnel and for proper operation of your conveyor, it is recommended that you read and follow the instructions provided in this

• RECEIVING AND UN-CRATING

1. Check the number of items received against the bill of lading
2. Examine condition of equipment to determine if any damage occurred during shipment.
3. Move all crates to area of installation
4. Remove crating and check for optional equipment that may be fastened to the conveyor. Make sure parts (or any foreign pieces) are removed.

INSTALLATION

- **Installation Safety Precautions
For conveyors and related equipment**

GUARDS AND GUARDING

Interfacing of Equipment. When two or more pieces of equipment are interfaced, special attention shall be given to the interfaced area to insure the presence of ade-

• SUPPORT INSTALLATION

1. Determine primary direction of product flow.
2. Refer to “Match-Mark” numbers on ends of conveyor sections.
3. Attach supports to both ends of drive section and to one end of intermediate or tail sections. Hand tighten bolts only at this time.
4. Adjust elevation to required height.

• CONVEYOR SET-UP

1. Mark a chalk line on floor to locate center of the conveyor. (floor mounted conveyors only)
2. Place the drive section in position.(If applicable when conveyor is broken down in pieces)
3. Install remaining sections.
4. Fasten all sections together , hand tighten bolts only.
5. Check to see that all sections and conveyor is level across the width of and length of unit. Adjust support legs as necessary to desired height.
6. Tighten all hardware, bolts, support legs.
7. Install electrical and motor wires. (If applicable)
8. Install belt (if applicable), center belt, and tighten or tension belt. See page 7 for belt tracking.

• ELECTRICAL EQUIPMENT

Warning

Electrical controls shall be installed and wired by a qualified electrician. Wiring information for the motor and controls are furnished by the equipment manufactured.

Controls:

- A) Controls stations should be so arranged and located that the operation of the equipment is visible from them, and shall be clearly marked or labeled to indicate the function controlled.
- B) A conveyor which would cause injury when started shall not be started until employees in the area alerted by a signal or by a designated person that the conveyor is about to start.
- C) Remotely and automatically controlled conveyors, and conveyors where operator are not manned or are beyond voice and visual contact from drive areas, loading areas, transfer points, and other potentially hazardous locations or areas on the conveyors path not guarded by location, position, or guards, shall be furnished with emergency stop buttons, pull cords, limit sensors or switches, or similar emergency stop devices.

The emergency stop device shall act directly on the control of the conveyor concerned and shall not depend on the stopping of any other equipment or system. The emergency stop switch shall be installed so that they cannot be overridden from other locations.

Operation

• Operation Safety Precautions

- A) Only trained employees should be permitted to operate conveyors. Training shall include instruction in operation under normal conditions and emergency situations.
- B) Where employees safety is dependent upon stopping and/or starting conveyors, they shall be kept free of obstructions to permit ready access.
- C) No person should ride conveyors under any circumstances unless the person is specifically authorized by owner of employer to do so. Under those circumstances, such employee shall ride a conveyor which incorporates within its supporting structure, platforms or control stations specifically designed for carrying personnel. Under no circumstances shall any person ride on any element of a vertical conveyor. Owners of conveyors should affix warning devices to the conveyor reading **Do Not Ride Conveyor**.
- D) Employees or personnel working on or near a conveyor shall be instructed as to the location and operation of pertinent stopping devices or switches.
- E) A conveyor should be used only to transport material it is capable of handling safely.
- F) Under no circumstances shall be the safety characteristics of the conveyor be altered if such alterations would endanger employees or personnel near conveyor.
- G) Routine inspections should be performed to insure conveyor is running to specifications, and corrective maintenance programs shall be conducted to insure that all safety features or devices are function properly.
- H) As a general rule, conveyors should not be cleaned while in operation. Where proper cleaning requires the conveyor to be in motion and a hazard exists, personnel or employees should be made aware of the associated hazard.

• CONVEYOR START-UP

Before conveyor is turned on, check for foreign objects that may have been left inside the conveyor during installation. These objects causes serious damage during start-ups.

After conveyor has been turned on and is operating, check motors, reducers, and moving part to make sure they are working properly and freely.

CAUTION!

Because of the many moving parts on the conveyor, all personnel in the area of the conveyor need to be warned that the conveyor is about to

BELT TRACKING

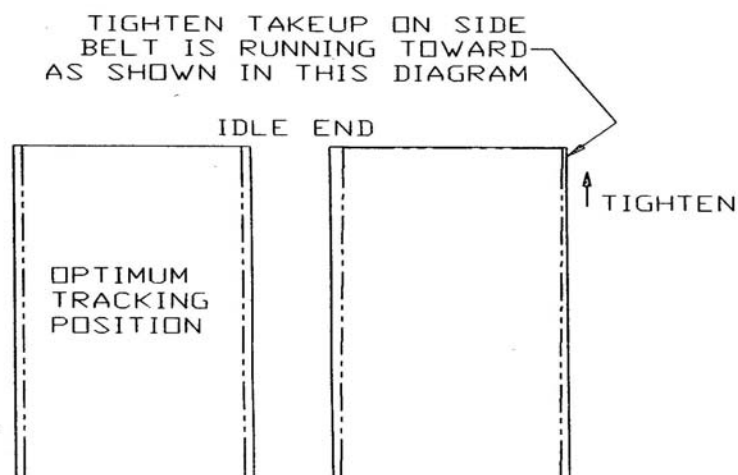
MAC uses the most highly recommended pulley design by belt manufacturers. It is a trapezoidal style crown. The monofilament backed belt we use has a high resistance to belt stretch which results in minimal maintenance. If your conveyor comes:

A) Completely assembled with belt installed:

We recommend that upon initial power up, the belt be monitored for a short period of time to ensure nothing has loosened up during shipment, and the belt remains centered on the pulleys.

B) Requiring belt installation:

- 1) *Square up drive pulley with frame.*
- 2) *Install belt according to assembly instructions guide.*
- 3) *Center the belt on the idle pulley.*
- 4) *Tighten up the idle pulley and maintain belt center.*
- 5) *Turn on power. If belt tracks off center of idle pulley follow the diagram below.*



Oil Chain/Sprockets

6 weeks	12 weeks	18 Weeks	24 Weeks	30 Weeks	36 weeks
42 weeks	48 weeks	54 weeks	60 weeks	66 weeks	72 weeks
78 weeks	84 weeks	90 weeks	96 weeks	104 weeks	110 weeks

Oil Change Reducer

250 hrs	2500 hrs	5000 hrs	5500 hrs	6000 hrs	6500 hrs
7000 hrs	7500 hrs	8000 hrs	8500 hrs	9000 hrs	9500 hrs
10000 hrs	10500 hrs	1100 hrs	1150 hrs	1200 hrs	1250 hrs

Checked Belt Tracking

6 weeks	12 weeks	18 Weeks	24 Weeks	30 Weeks	36 weeks
42 weeks	48 weeks	54 weeks	60 weeks	66 weeks	72 weeks
78 weeks	84 weeks	90 weeks	96 weeks	104 weeks	110 weeks

Trouble Shooting


TROUBLE WITH DRIVES	CAUSE	SOLUTION
Conveyor will not start or motor quits frequently.	1) Motor is overloaded or drawing to much current.	1) Check for overloading of conveyor. 2) Check heater or circuit breaker and change if necessary.
Drive Chain and sprockets wear excessively.	1) Lack of lubrication on chain may have caused to stretch and created an improper chain to sprocket mesh. 2) Sprockets are out of alignment. 3) Loose Chain.	1) Replace chain and sprockets: Note: if problem reoccurs, a chain take-up may be required. 2) Align sprockets. 3) Tighten chain.
Loud popping or grinding noise.	1) Defective bearing. 2) Loose set screws. 3) Loose drive chain	1) Replace bearing. 2) Tighten set screw. 3) Tighten chain.
Motor or reducer overheating	1) Conveyor is overloaded 2) Low voltage to motor 3) Low lubricant level in reducer	1) Check capacity of conveyor and reduce load to recommended level. 2) Have electrician check and correct as necessary. 3) Relubricate, per manufacture's recommendations.
Belt doesn't move, but drive runs	1) Conveyor is overloaded 2) Belt is too loose.	1) Reduce load. 2) Use belt take-up to tighten belt.
TROUBLE WITH BELT TRACKING	CAUSE	SOLUTION
Entire length of belt creeps at one spot only.	1) Idle or drive ends are out of line. 2) One conveyor section is not level or square. 3) Material build-up on pulleys or idles.	1) Adjust idles or drive pulleys as necessary. Please refer to belt tracking instructions. 2) Make necessary adjustment to leg supports. 3) Remove residue from idle or drive pulleys. Install belt , cleaners, or scrapers if possible.
Belt creeps to one side of tail pulley.	1) Idle pulley not properly aligned or square with bed.	1) Adjust an necessary . See belt tracking information.
Entire belt creeps to one side	1) Conveyor not straight. 2) Conveyor not level correctly. 3) Material build-up on idle , and drive pulleys.	1) Re-align bed or sections as necessary. 2) Correct as necessary. 3) Remove residue and install cleaners or scrapers if possible.

• How to order replacement parts for LPA 2 Series

Included in this manual are parts drawings with complete replacements parts list. Minor fasteners, such as nuts and bolts, are not included.

When ordering replacement parts

1. Contact factory from whom conveyor was purchase.
2. Give conveyor Model Number and Serial Number or Order number.
3. Give type of part number and complete descriptions form parts list.
4. If you are in a breakdown situation, tell us.

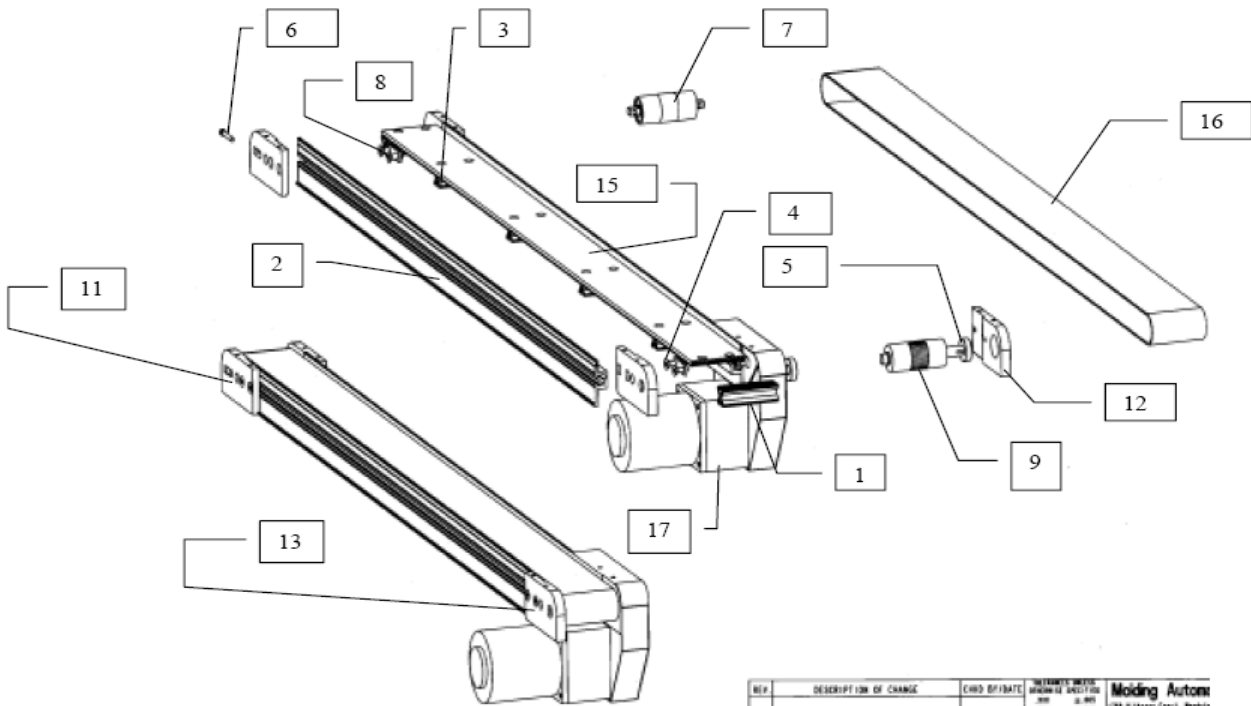
	MAC automation Concepts, Inc. 1760 Kilkenny Court Woodstock, Illinois 1-815-337-300	
Model Number	<input type="text"/>	
Serial Number	<input type="text"/>	
Volts <input type="text"/>	Phase <input type="text"/>	Amps <input type="text"/>

MAC Model Number and Serial Number

LPA Explosion View

1	*	Extrusion X-Member End, LPA	6105-T5	2
2	*	Extrusion , Frame, LPA	6105-T5	2
3	*	Extrusion, X-Member End LPA	6105-T5	4
4	46572	Capscrew, ¼-20x3/4" SS FH	N/A	8
5	47296	Nsk Bearing, R8ZZVV, ½ id X 1 1/8 od	N/A	2
6	49061	Capscrew, 10-24 x 1 3/8, SS SH	Steel	2
7	See Pulley Chart	Assembly, Idle Pulley LPA2	Assy	1
8	49347	Nut,2 Hole ¼-20 1.25" Centers	Steel	5
9	See Pulley Chart	Drive Pulley , LPA2	SS Rnd	1
10	45202201	Take Up Plate,LPA2,LFT	½ ALM	1
11	45202202	Take Up Plate, LPA2-RHT	½ ALM	1
12	45202203	Drive Plate, LPA2, RHT	½ ALM	1
13	45202204	Drive Plate, LPA2, LHT	½ ALM	1
14	*	Slider BED2,LPA2	14 Ga. SS	1
15	*	Slider BED, LPA2	3/16 UHMW	1
16	*	Belt	????	1
17	*	Assy, Motor Package	????	1

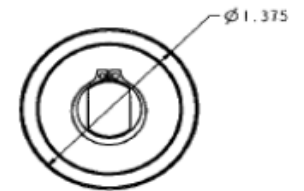
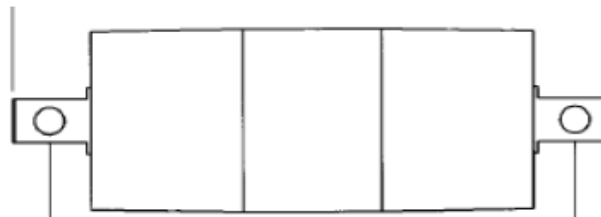
* = Varies with width and length, fixed speed or VS Speed. Need to call for verification



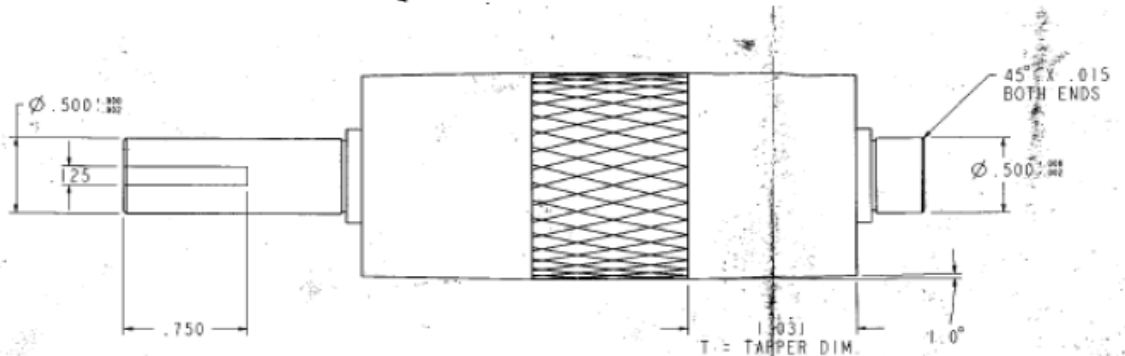
REV	DESCRIPTION OF CHANGE	CHG BY/DATE	INTERVIEW WITH DRAWING DESIG FOR	Moding Autom

LPA2 IDLE AND DRIVE PULLEY CHART

ASSY NUMBER	DESCRIPTION
00047495	ASSY, IDLE PULLEY, LPA2, 2.75W
00049340	ASSY, IDLE PULLEY, LPA2, 3W
00049341	ASSY, IDLE PULLEY, LPA2, 4W
00049342	ASSY, IDLE PULLEY, LPA2, 5W
00049343	ASSY, IDLE PULLEY, LPA2, 6W
00049344	ASSY, IDLE PULLEY, LPA2, 8W
00049345	ASSY, IDLE PULLEY, LPA2, 10W
00049346	ASSY, IDLE PULLEY, LPA2, 12W
00047499	ASSY, IDLE PULLEY, LPA2, 18W



PART NUMBER	T (TAPPER LENGTH)	X (LENGTH)
00049350	1.031	3.000
00049351	1.031	4.000
00049352	1.281	5.000
00049353	1.531	6.000
00049354	2.031	8.000
00049355	3.031	10.000
00049356	3.031	12.000



Two Year Limited Warranty

Molding Automation Concepts, Inc. warrants that all products manufactured by it to be free of defects in workmanship and materials when used under normal operating conditions. Use or service with abrasive or corrosive chemicals or materials or in a corrosive or abrasive atmosphere shall not be deemed normal. This warranty shall be in effect for a period of twenty-four months from date of purchase. Molding Automation Concepts, Inc. obligations under this warranty are limited to repairing making repairs at our Molding Automation Concepts, Inc. Factory or furnishing a replacement for any part, or correcting any workmanship, which shall be demonstrated to Molding Automations Concepts, Inc. satisfaction to have been defective at the time of delivery and with respect to which a written claim specifying the particular within two (2) years from the date of delivery to the original purchaser.

No other warranty, whether expressed or implied (including any warranty of merchantability or fitness), shall exist in connection with the sale or use of any Molding Automation Concepts, Inc. product.

Molding Automation Concepts, Inc. liability under this warranty shall be solely limited to repair or replacement of Molding Automation Concepts, Inc. products within the warranty period and Molding Automation Concepts, Inc. shall not be liable, under any circumstances for any consequential, incidental, direct, special, indirect damage or expenses associated with warranty products including, without limiting the generality of the foregoing liability for loss production, or any damage to persons or property.

Molding Automation Concepts, Inc. does not warrant equipment manufactured by others, but will submit the manufacturer's warranty to purchase upon request.

Molding Automation Concepts, Inc. will make no allowances for repairs, alterations or other work done unless specifically agreed to in writing. Purchaser agrees that purchaser's sole remedy for liability of any kind, including negligence with respect to the equipment and services furnished by Molding Automation Concepts, Inc. shall be limited to remedies provided herein.



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