

SERIES 860FA12-PBEZ
FULLY-AUTOMATIC WINDER STRETCH
WRAP SYSTEM WITH CONVEYORS



OPERATORS
MANUAL

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Introduction

Congratulations! Your purchase of a Kalamazoo Series 800 Horizontal Winder Stretch Wrap System will provide you with years of efficient stretch wrapping service. Your investment will ensure that your products will arrive cleaner, with less damage and pilferage at their destination at a lower cost to you.

Kalamazoo Packaging Systems products carry a LIMITED LIFETIME WARRANTY on all K.P.S. manufactured components; all parts not manufactured by Kalamazoo Packaging Systems will be subject to the original manufacturer's warranty.

Warranty

Kalamazoo Packaging systems, Inc. (KPS) agrees to furnish the purchaser, without charge, F.O.B. the factory, any part found to be defective in either material or workmanship within one (1) year from date of shipment, provided the purchaser gives immediate notice of any defect and description of that defect to KPS. KPS reserves the right to inspect any defective part to verify the defect and to determine probable cause of same.

The liability of KPS under this warranty is limited to furnishing replacements for defective parts, and unless otherwise agreed to in writing, the purchaser shall bear the expense of installation.

Failure of equipment or parts due to abuse, misuse, neglect, incorrect operating techniques or power line drops or surges shall not constitute failure because of defective material or workmanship, and are expressly excluded from this warranty.

The above is the only warranty with no other guarantees which extend beyond the above and the seller disclaims any implications including but not limited to a warranty of merchantability.

Assembly

Your Horizontal Winder has been assembled and tested at our manufacturing plant and released for shipment by a qualified technician. If the unit was shipped via common carrier or by our truck it may not be crated. **Any damage done in transit should be reported to the carrier immediately.** All our shipments are sent F.O.B. Grand Rapids, Michigan, therefore; the customer is responsible to settle any damage claims with the transportation company. Kalamazoo Packaging Systems will do everything possible to assist you in these matters.

Place the Winder in it's location.

Move the INPUT 2 conveyor into place and install the locking pins.

(the INPUT 2 conveyor has the film holder attached to the conveyor and is installed on the same side as the film door on the winder.)

Plug in the INPUT 2 conveyor into the control cabinet.

Move the INPUT 1 conveyor into place and install the locking pins.

(the INPUT 1 conveyor has the EZ-loader attached to the conveyor and is installed on the same side as INPUT 1 conveyor.)

Plug in the INPUT 2 conveyor into the control cabinet.

Plug in the air supply.

Move the OUTPUT conveyor into place and install the locking pins.

(the OUTPUT conveyor is installed on the opposite side as the film door on the winder)

Plug in the output conveyor into the control cabinet.

Move the slide table drop to the end of the OUTPUT conveyor.

Plug in the Winder into the control cabinet.

Wire in the main power drop cord 460/3/60hz. 30 AMP. into the control cabinet.

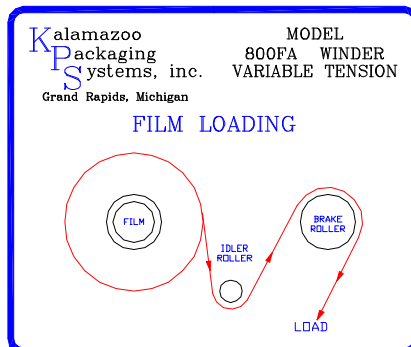
(see wiring diagram.)

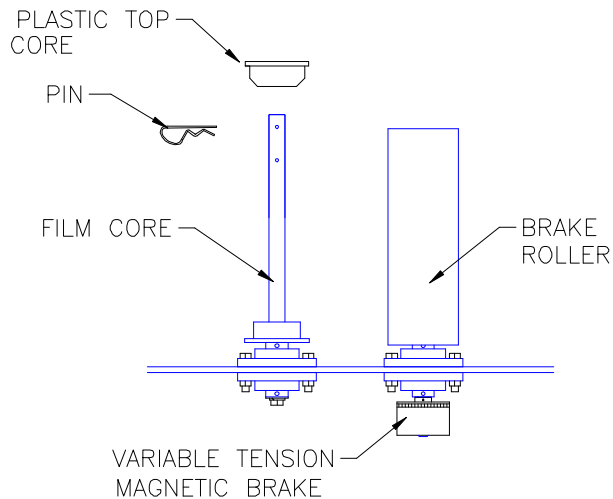
Air Source required 80 P.S.I.

The System is now ready for operation.

Loading Film

Your wrapper is equipped with a Kalamazoo Variable Tension Film Delivery System. Place a roll of 10-12" stretch film on the film core holder and thread the film as shown on the diagram below. Once the film is loaded and the desire film tension is arrived at the film tension need not be adjusted again until the brand of film or the film thickness is changed.





FILM LOADING AND TENSIONING

Place a roll of 20" film onto the film holder so the film unwinds clockwise, then slide the plastic top core into place and install the pin into the hole.

(note: The film core does not change the film tension.)

Thread the film as shown on the diagram.

Adjust the variable tension magnetic brake to the film tension you desire. Loosen the two set screws in the brake with a 5/64" allen wrench adjust the tension and retighten the set screws.

OPERATING CONTROLS

- 1 **POWER ON:** Green lighted push button; turns on the machine power and lights up the button.
- 2 **POWER OFF:** Red push button; turns off the machine power.
- 3 **EMERGENCY STOP:** Red (push off/ turn to reset); turns off all motors, air cylinders and hot wire.
- 4 **CYCLE STOP:** Red mushroom push button; stops the wrap cycle.
- 5 **CYCLE ENABLE:** Green push button; enables the wrap cycle.
- 6 **PRODUCT LOAD:** Starts the wrap cycle.
- 7 **LOAD FILM:** Blue push button; opens the film cutter air cylinder.
- 8 **RESET:** White push button; reset the machine. Moves the winder ring to home, Closes the film cutter, and moves the hold downs up.
- 9 **WINDER RING Auto/Manual:** 2-position selector switch; Manually runs the Winder ring. Disengaged in the wrap cycle program.
- 10 **LIFT CONV. Raise/Auto/Lower:** 3-position selector switch; Manually raises and lowers the Lift Conveyor. Disengaged in the wrap cycle program.
- 11 **LIFT CONV. Fwd./Auto/Rev.:** 3-position selector switch; Manually runs the Lift Conveyor. Disengaged in the wrap cycle program.
- 12 **INPUT 1 CONV. Fwd./Auto/Rev.:** 3-position selector switch; Manually runs the Lift Conveyor. Disengaged in the wrap cycle program.
- 13 **INPUT 2 CONV. Fwd./Auto/Rev.:** 3-position selector switch; Manually runs the Lift Conveyor. Disengaged in the wrap cycle program.
- 14 **OUTPUT CONV. Fwd./Auto/Rev.:** 3-position selector switch; Manually runs the Lift Conveyor. Disengaged in the wrap cycle program.

(If the Winder and/or Conveyors are in the manual mode the system will not Cycle Start)

OPERATING INSTRUCTIONS

START UP

- 1 Turn the control cabinet disconnect to ON.
- 2 Check to make sure you have 80 P.S.I. air to the machine.
- 3 Push the POWER ON Green lighted push button. The green power on light will come on.

FILM LOADING

- 1 Push the blue LOAD FILM button. (The film holder will open)
- 2 Open the film door and load the film as shown in the diagram on page #4.
- 3 Pull the film out and lay it across the film holder.
- 4 Close the film loading door.
- 5 Push the POWER ON button (the Power On button will light up.)
- 6 Push the white RESET button. (The film holder will close.)
- 7 The system is now ready for the first load.

WRAP CYCLE

- 1 Push the green CYCLE ENABLE push button.
- 2 Load the window onto the LIFT CONVEYOR. Make sure window is in the center of the conveyor.
- 3 Push the black PRODUCT LOAD push button.
- 4 If the system is ready the LIFT CONVEYOR will raise the window to the horizontal position.
- 5 The LIFT and INPUT CONVEYORS will come on and move the window into the WINDER.
- 6 The WINDER will automatically start wrapping the window.
- 7 The INPUT and OUTPUT CONVEYORS will come on and move the product through the WINDER.
- 8 Once the back edge of the window clears the INPUT 1 CONVEYOR photo-eye the LIFT CONVEYOR will lower and the next window can be loaded. After loading the next window push the black PRODUCT LOAD button and when the system is ready it will load the window.
- 9 After the window is wrapped the film will be automatically cut.
- 10 After the film is cut the OUTPUT CONVEYOR will come on and remove the window from the WINDER.
- 11 End of wrap cycle.

GENERAL MAINTENANCE

Warning!!

MAKE SURE THAT POWER SUPPLY AND AIR SUPPLY IS DISCONNECTED BEFORE ATTEMPTING TO SERVICE ANY COMPONENTS. IF THE POWER DISCONNECT OR AIR DISCONNECT IS OUT OF SIGHT, LOCK IT IN THE OPEN POSITION AND TAG IT TO PREVENT UNEXPECTED APPLICATION OF POWER.

Cleaning

Periodically clean dirt accumulations from machine, especially around moving parts and drive components, preferably by vacuuming.

General

- Check and tighten any loose fasteners.
- Check all electric connections and replace any worn or frayed cords.
- Check all fuses and AC controllers.
- Make sure the air is on.

Lubrication

Bearings

- The bearings have been greased at the factory and are ready to run. It is recommended that all mounted bearings and support wheels be relubricated with #3 lithium base grease every three months.

Chains

- Clean, lubricate and adjust chains every month. Chain should be lubricated with a penetrating type commercial chain lube.

Gear Reducers

- For new reducers, change the oil 120 hours after the reducer starts operating (based on 8 hours per day of operation). After the first oil change, change oil every 2000 operating hours, or every six months, whichever occurs first.

Temperature	Lubricant
25° - 125° F	AGMA #8
15° - 60° F	AGMA #7

Certain conditions (dust, water, etc.) may require a change of lubricating periods as dictated by experience.

Adjustments

This is automatic system. Do not make adjustments without contacting Kalamazoo Packaging Systems.

TOUBLESHOOTING

When any problem develops, review the operating instructions. Diagnose specific problems and review the options below.

Machine not running at all.

1. Check wall receptacle for power.
2. Check the air supply.
3. Check all cord for cut. (Fork Lift Trucks damage cords.)
4. Check all fuses and/or breakers.
5. Check AC drive for faults.
6. Check all limit switches and sensors for damage, sticking or internal shorts.
7. Open cabinet and check that all relays are firmly seated in their bases.
8. Visually inspect for loose wires and for any signs of arcing or burning of any of the components.
9. The film door must be shut before the winder will run.
10. Winder ring noises, use taping wax around ring edge.
11. It is advisable to call for technical assistance at this time. (616) 534-2600.

Technical and Customer Service is available from Kalamazoo Packaging Systems, Inc., Monday thru Friday 7:30 A.M. to 4:00 P.M. (EST). Stock is maintained on parts to allow us to ship the same day on most orders.

If you have a problem, we want to know about it! Please call and report any difficulties you may encounter.

- **Local - (616) 534-2600**
- **National - (800) 253-4625**

Telemecanique ATV31 AC Drive Programming

WINDER

ACC.	3.0
dEC.	0.3
SFr	2.0
tCC.	2C
SP2	10HZ
rFr	ENTER
tUn	YES
UFr	50
UFt	L
bFr	60

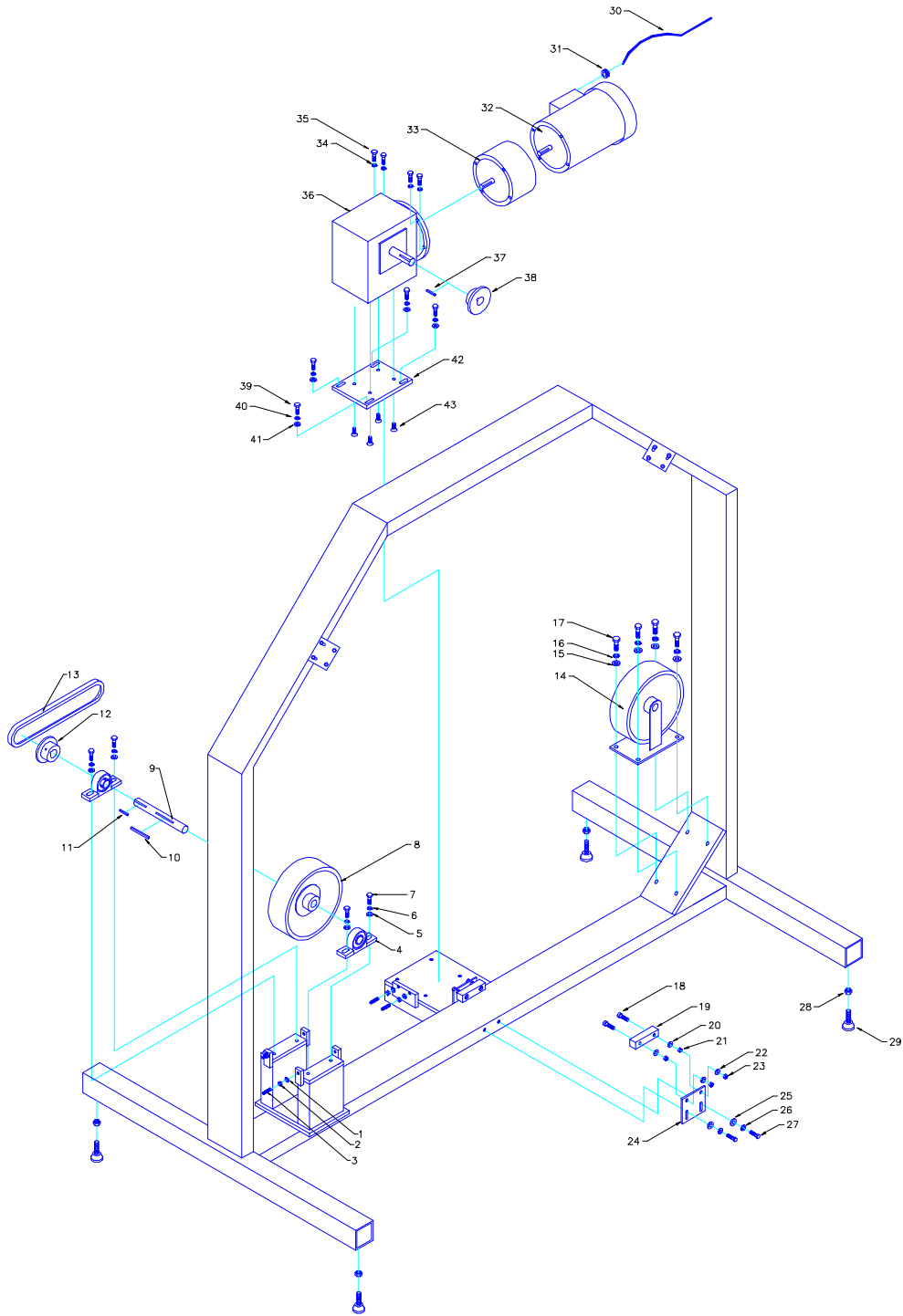
CONVEYORS

ACC.	0.1
dEC.	0.1
SFr	2.0
tCC.	2C
StA	10
rFr	ENTER
tUn	YES
bFr	60

PARTS MANUAL: 860FA12-PBEZ LAYOUT

ITEM	PART/DWG.#	DESCRIPTION	PAGE#	QTY
1	860FA12-F	WINDER BASE FRAME	12-14	1
2	213265	PHOTO-EYE POLARIZED 10-30v DC		3
2	213264	PHOTO-EYE CABLE 30'		3
3	212381	2.2" PHOTO-EYE REFLECTOR		3
4	800-12-BR	12" VARIABLE TENSION FILM HEAD	15-17	1
4	800-12-CORE-P	10-12" FILM CORE w/ PIN	15-7	1
5	213180	BANNER T18 POLARIZED SENSOR		1
5	213261	CABLE FOR ABOVE		1
6	212383	3" PHOTO-EYE REFLECTOR		2
7	860FAC-12-R	WINDER RING	15-17	1
8	860FA12-CC	CONTROL CABINET	18-19	1
8	860FA12-SUB	SUBPANEL	20-22	1
9	860FA12-PBEZ-SC	START CONSOLE	23	
10	860FAC-12-SHD	PRODUCT HOLD DOWNS	24	1
11	860PBL50-EZ-07	INPUT LIFT CONVEYOR	27-28	1
12	860PB60-I-1	INPUT 1 CONVEYOR	25-26	1
13	860PB60-I-2	INPUT 2 CONVEYOR	29-30	1
13	860FA12-PBEZ-AIR SYSTEM	AIR SYSTEM LAYOUT	36-37	1
14	860PB60-FORKS	FILM HOLDER, HOT WIRE, AND MANUAL FORKS	31-33	1
15	860PB48-O	OUTPUT CONVEYOR	34-35	1

Kalamazoo Packaging Systems Model #800v w/ MOTOR BRAKE Horizontal Winder Base



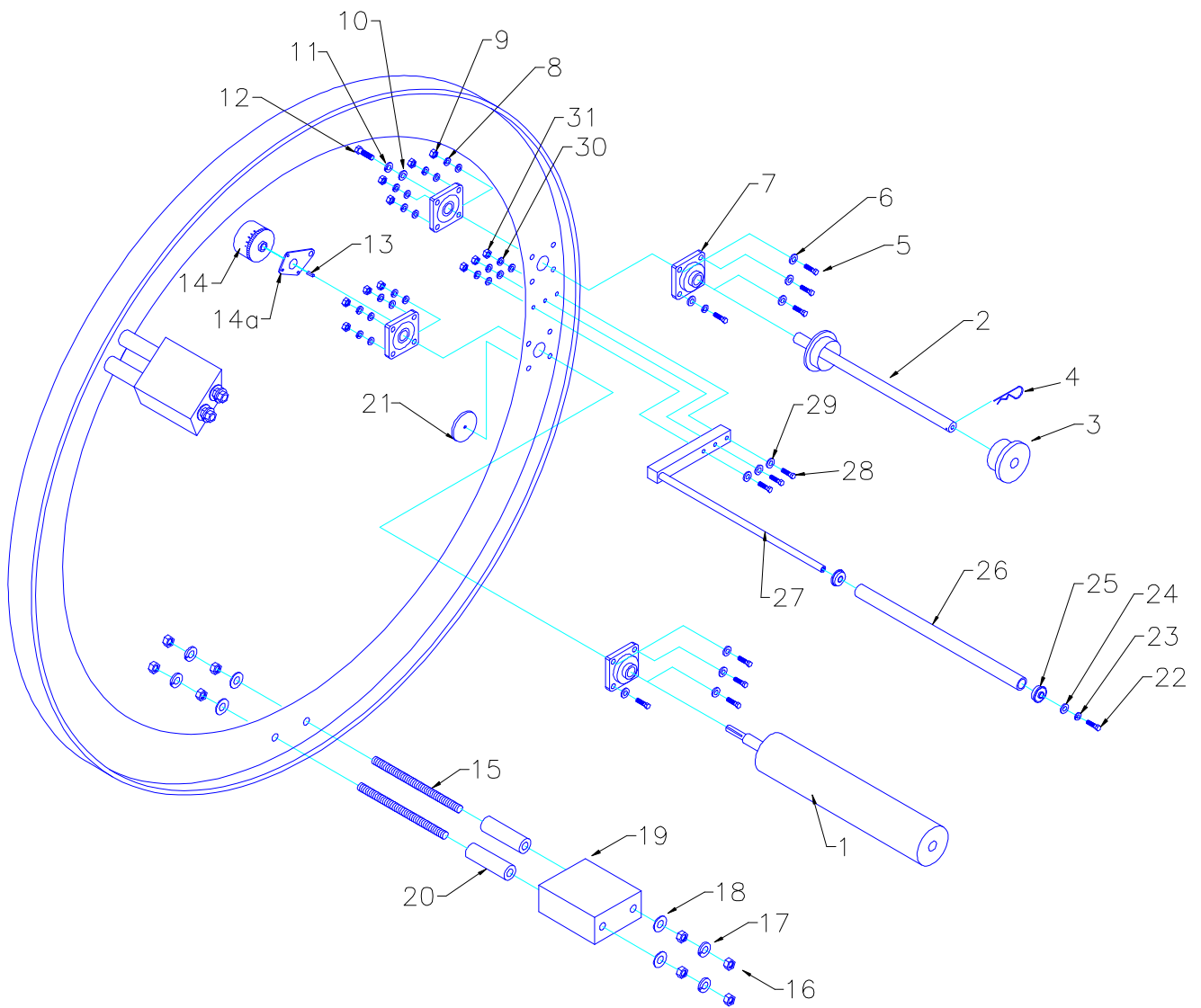
PARTS MANUAL: 800V HORIZONTAL WINDER

ITEM	PART #	GRAINGER	DESCRIPTION	QTY
1	L48		5/16 USS WASHER	4
2	L47		5/16 LOCK WASHER	4
3	L54		5/16-18x 1-1/2" SET SCREW	4
4	121250	5X692	1" PILLOW BLOCK BEARING	2
5	L65		3/8 USS WASHER	4
6	L64		3/8 LOCK WASHER	4
7	L83		3/8-16x 1-1/2" HEX HEAD CAP SCREW	4
8	122809		10"x 3" DRIVE WHEEL w/ HUB	1
9	250200		800V DRIVE SHAFT	1
10	L3		1/4"x 1/4"x 2-1/2" KEYWAY	1
11	L3		1/4"x 1/4"x 1" KEYWAY	1
12	108114		DRIVEN SPROCKET 50BT14	1
12	108131		1008x 1" BUSHING FOR ABOVE	1
13	108500	6L074	# 50 CHAIN	1
14	122800		10"x 3" IDLER WHEEL w/ TAPERED BEARINGS	1
15	L96		7/16 USS WASHER	4
16	L95		7/16 LOCK WASHER	4
17	L99		7/16-14 x 1-1/2" HEX HEAD CAP SCREW	4
18	L73		3/8-24 x 1-1/2" ALLEN HEAD CAP SCREW	12
19	250100		800 SLIDE	6
20	L48		5/16 USS WASHER	12
21	L61		3/8-24 NYLOCK JAM NUT	12
22	L48		5/16 USS WASHER	12
23	L61		3/8-24 NYLOCK JAM NUT	12
24	250101		800 SLIDE HOLDER	6
25	L65		3/8 USS WASHER	12

PARTS MANUAL: 800V HORIZONTAL WINDER

ITEM	PARTS #	DESCRIPTION	QTY
26	L64	3/8 LOCK WASHER	12
27	L71	3/8-24x 1-1/4" HEX HEAD CAP SCREW	12
28	L125	1/2-13 NUT	4
29	122851	1/2-13 RUBBER FEET	4
30	20990	14/3 SJ CORD	1
31	210340	CORD GRIP	1
32	105537R	3hp 230-460/3/60hz XEX MOTOR 145CT FACE	1
33	107304	MOTOR BRAKE 230v 56C	1
34	L64	3/8 LOCK WASHER	4
35	L80	3/8-16 x 1" HEX HEAD CAP SCREW	4
36	106603T	5:1 R/A REDUCER 2.0CD 140C FACE (WINDER)	1
37	L3	1/4"x 1/4"x 1" KEYWAY	1
38	108120	DRIVE SPROCKET 50BL20	1
38	108132	1610x 1" BUSHING FOR ABOVE	1
39	L82	3/8-16 x 1-1/2" HEX HEAD CAP SCREW	4
40	L64	3/8 LOCK WASHER	4
41	L65	3/8 USS WASHER	4
42	860FA12-MM	800 MOTOR MOUNT	1
43	L50	5/16-18 x 1" FLAT HEAD	4

Kalamazoo Packaging Systems Model #800FA-RING Variable Tension Ring w/ Pined Top Core



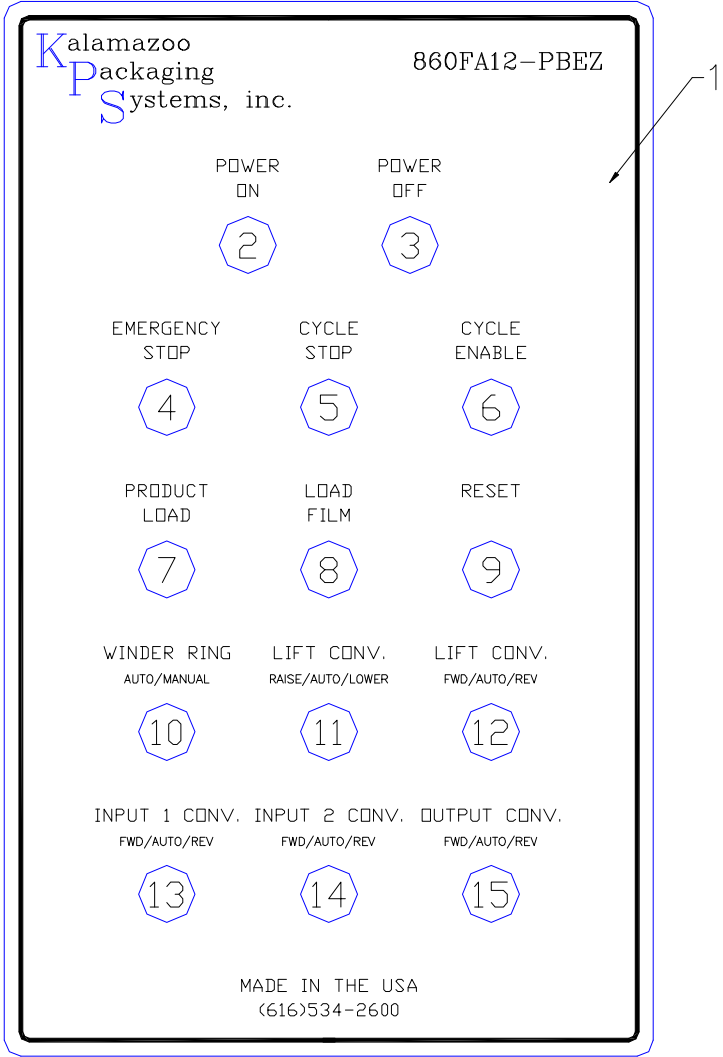
PARTS MANUAL: 860FA-12 WINDER RING

ITEM	PART/DWG.#	DESCRIPTION	QTY
1	623070	4" DIA. x 12" WINDER VARIABLE TENSION BRAKE ROLLER	1
2	623072	12" WINDER VARIABLE TENSION FILM HOLDER w/ PINED TOP CORE	1
3	623078	3" PLASTIC TOP CORE	1
4	623079	3/16" STEEL HITCH PIN CLIP	1
5	L102	7/16-20 x 2-1/4" HHCS	8
6	L97	7/16 SAE WASHER	16
7	121140	1" 4-BOLT FLANGE BEARING	4
8	L95	7/16 LOCK WASHER	8
9	L165	7/16-20 NYLOCK NUT	8
10	L111	1/2" USS WASHER	1
11	L110	1/2" LOCK WASHER	1
12	L128	1/2-13 x 1" HHCS	1
13	L2	3/16"x 3/16"x 3/4" KEYWAY	1
14	130550	5/8" FINISH BORE MAGNETIC BRAKE (MC 4)	1
14	130650	5/8" FINISH BORE MAGNETIC BRAKE (MC 5.5)	1
15	L162x11	3/4-10 x 11.0" THREADED ROD (12" FILM)	4
15	L162x19.5	3/4-10 x 19.5" THREADED ROD (20" FILM)	4

PARTS MANUAL: 860FA-12 WINDER RING

ITEM	PART #/DWG. #	DESCRIPTION	QTY
16	L157	3/4-10 NUT	16
17	L158	3/4" LOCK WASHER	8
18	L159	3/4" USS WASHER	8
19	800CW-12	COUNTER WEIGHT (12" FILM)	2
19	800CW-20	COUNTER WEIGHT (20" FILM)	2
20	800CW-20	COUNTER WEIGHT SPACERS (20" FILM ONLY)	4
21	212383	3" PHOTO-EYE REFLECTOR	1
22	L80	3/8-16x 1" HHCS	1
23	L64	3/8" LOCK WASHER	1
24	L65	3/8" USS WASHER	1
25	120600	5/8" I.D. x 1-3/8" O.D. FLANGED BEARING	2
26	537125	PVC 1-1/4 TUBE sch.40 x 13-3/8" (12" FILM)	1
26	537125	PVC 1-1/4 TUBE sch.40 x 21-3/8" (20" FILM)	1
27	623075	12" BRAKE IDLER ROLLER MOUNT	1
27	623077	20" BRAKE IDLER ROLLER MOUNT	1
28	L57	5/16-18x 2" HHCS	3
29	L48	5/16 USS WASHER	6
30	L47	5/16" LOCK WASHER	3
31	L45	5/16-18 NYLOCK NUT	3

Kalamazoo Packaging Systems
Model #860FA12-PBEZ
Control Cabinet Decal



PARTS MANUAL: 860FA12-PBEZ CONTROL CABINET

ITEM	PART #	DESCRIPTION	QTY
1	860FA12-PBEZ DECAL	860FA-12-PBEZ CONTROL CABINET DECAL	1
2	207069	GREEN LIGHTED PUSH BUTTON (POWER ON)	1
3	207055	RED BUTTON (POWER OFF)	1
4	207110	PUSH OFF/ TURN TO RESET (E-STOP)	1
5	207055	RED PUSH BUTTON (CYCLE STOP)	1
6	207001	GREEN PUSH BUTTON (CYCLE ENABLE)	1
7	207060	BLACK PUSH BUTTON (PRODUCT LOAD)	1
8	207056	BLUE PUSH BUTTON (FILM LOAD)	1
9	207057	WHITE PUSH BUTTON (RESET)	1
10	207100	2-POS. SELECTOR (WINDER AUTO/MANUAL)	1
11	207103	3-POS. SELECTOR (LIFT CONV. RAISE/AUTO/LOWER)	1
12	207103	3-POS. SELECTOR (LIFT CONV. FWD/AUTO/REV)	1
13	207103	3-POS. SELECTOR (INPUT 1 CONV. FWD/AUTO/REV)	1
14	207103	3-POS. SELECTOR (INPUT 2 CONV. FWD/AUTO/REV)	1
15	207103	3-POS. SELECTOR (OUTPUT CONV. FWD/AUTO/REV)	1

PARTS MANUAL: 860FA12-PBEZ SUBPANEL

ITEM	PART #	DESCRIPTION	QTY
1	6036P	SUBPANEL	1
2	220188	mitsubishi PLC 64 I/O	1
3	211011	1 AMP BREAKER (PLC)	1
4	211131	13 AMP. BREAKER (SECONDARY)	1
5	211102	10 AMP. 2-POLE BREAKER (PRIMARY)	1
6	209108	TRANSFORMER 1500VA	1
7	131201	PAYNE CONTROL (HOT WIRE)	1
8	211022	2 AMP. 2-POLE BREAKER (WINDER BRAKE)	1
9	208250	2PDT RELAY (HOT WIRE POWER)	1
9	208260	8-PIN BASE	1
10	208250	2PDT RELAY (WINDER BRAKE POWER)	1
10	208260	8-PIN BASE	1
11	208450	4PDT RELAY (POWER ON RALEY)	1
12	208090	40 AMP MAIN CONTROL RELAY	1
13	210757	DISCONNECT 4 N.O. 30 AMP	1
13	210759	DISCONNECT SHAFT	1
13	210758	DISCONNECT SELECTOR HANDLE	1
14	211403	40 AMP 3-POLE BRAKER (MAIN)	1

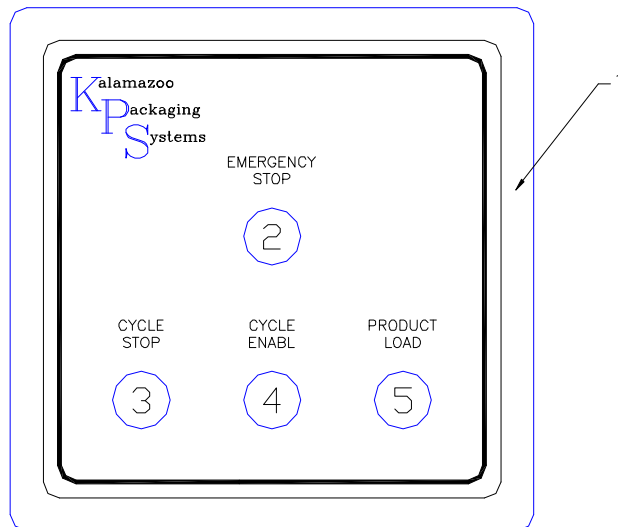
PARTS MANUAL: 860FA12-PBEZ SUBPANEL

ITEM	PART #	DESCRIPTION	QTY
15	211033	3 AMP. 3-POLE BREAKER (LIFT CONVEYOR)	1
16	131872	1hp. AC DRIVE 460/3/60hz. (LIFT CONVEYOR)	
17	211033	3 AMP. 3-POLE BREAKER (INPUT 1 CONVEYOR)	1
18	131872	1hp. AC DRIVE 460/3/60hz. (INPUT 1 CONVEYOR)	
19	211033	3 AMP. 3-POLE BREAKER (INPUT 2 CONVEYOR)	1
20	131872	1hp. AC DRIVE 460/3/60hz. (INPUT 2 CONVEYOR)	
21	211083	8 AMP. 3-POLE BREAKER (WINDER)	1
22	131875	2hp. AC DRIVE 460/3/60hz. (WINDER)	
23	211033	3 AMP. 3-POLE BREAKER (OUTPUT CONVEYOR)	1
24	131872	1hp. AC DRIVE 460/3/60hz. (OUTPUT CONVEYOR)	
25	209700	12 POLE TERMINAL STRIP	5

PARTS MANUAL: 860FA12-PBEZ-SC START CONSOLE

ITEM	PART #	DESCRIPTION	QTY
1	D-860FA12-PBEZ-SC	860FA12-PBEZ-SC START CONSOLE DECAL	1
2	207110	RED PUSH OFF TURN TO RESET (E-STOP)	1
3	207055	RED PUSH BUTTON (CYCLE STOP)	1
4	207001	GREEN PUSH BUTTON (CYCLE ENABLE)	1
5	207060	BLACK PUSH BUTTON (PRODUCT LOAD)	1

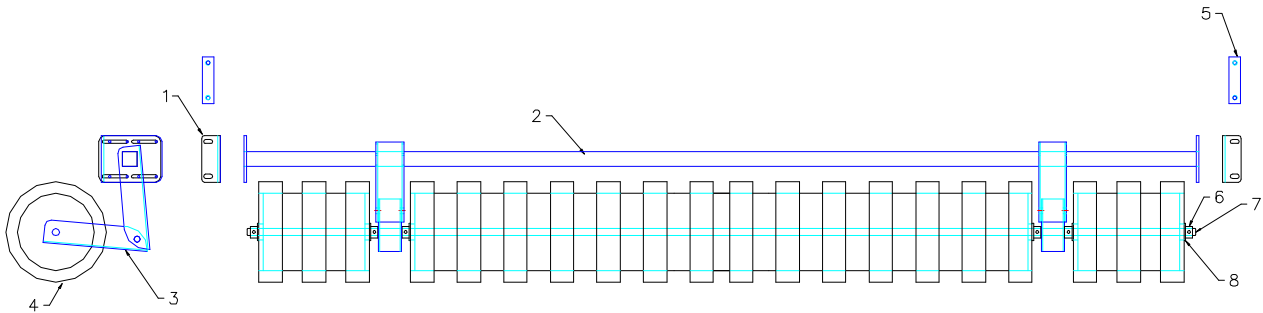
Kalamazoo Packaging Systems
Model #860FA12-PBEZ-SC
Start Console Decal

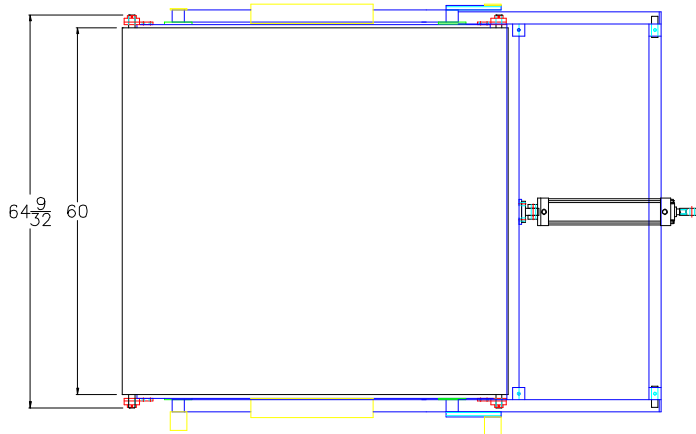


PARTS MANUAL: 800 HORIZONTAL WINDER SPRING HOLD DOWN ROLLER

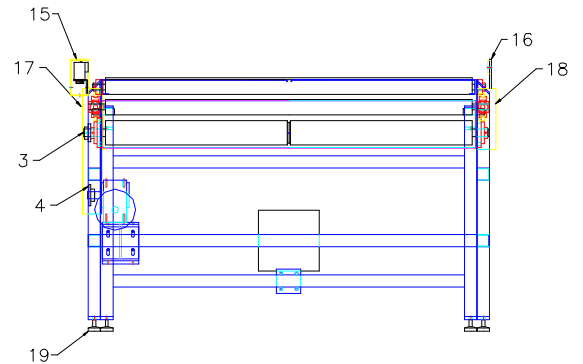
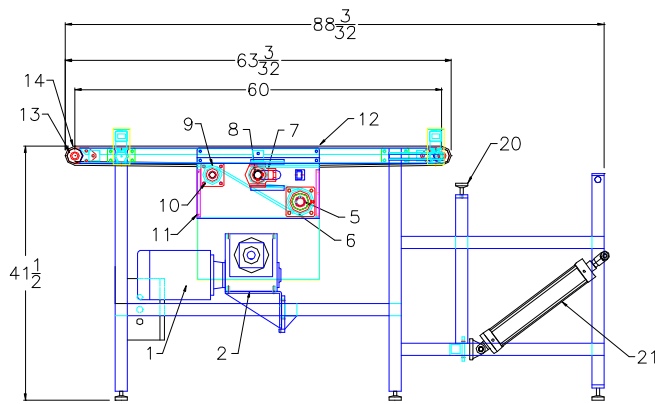
ITEM	PARTS #	DESCRIPTION	QTY
1	800-SHD-04	SPRING HOLD DOWN ADAPTER PLATE	2
2	860FAC-12-SHD	CROSS BAR	1
3	800-SHD-01	LOWER SPRING HOLD DOWN BRACKET	2
4	538023	1"x 2"x 23.75 FOAM RUBBER GLUE & TAPED	15
5	850FAC-SHD-05	MOUNTING BRACKET	2
6	121500	5/8" SHAFT COLLARS	6
7	MODEL#	5/8" SHAFT	1
8	120600	5/8x 1-3/8 FLANGE BEARING	6

Kalamazoo Packaging System
Model # 800-SHD
6" SPRING HOLD DOWN ROLLERS





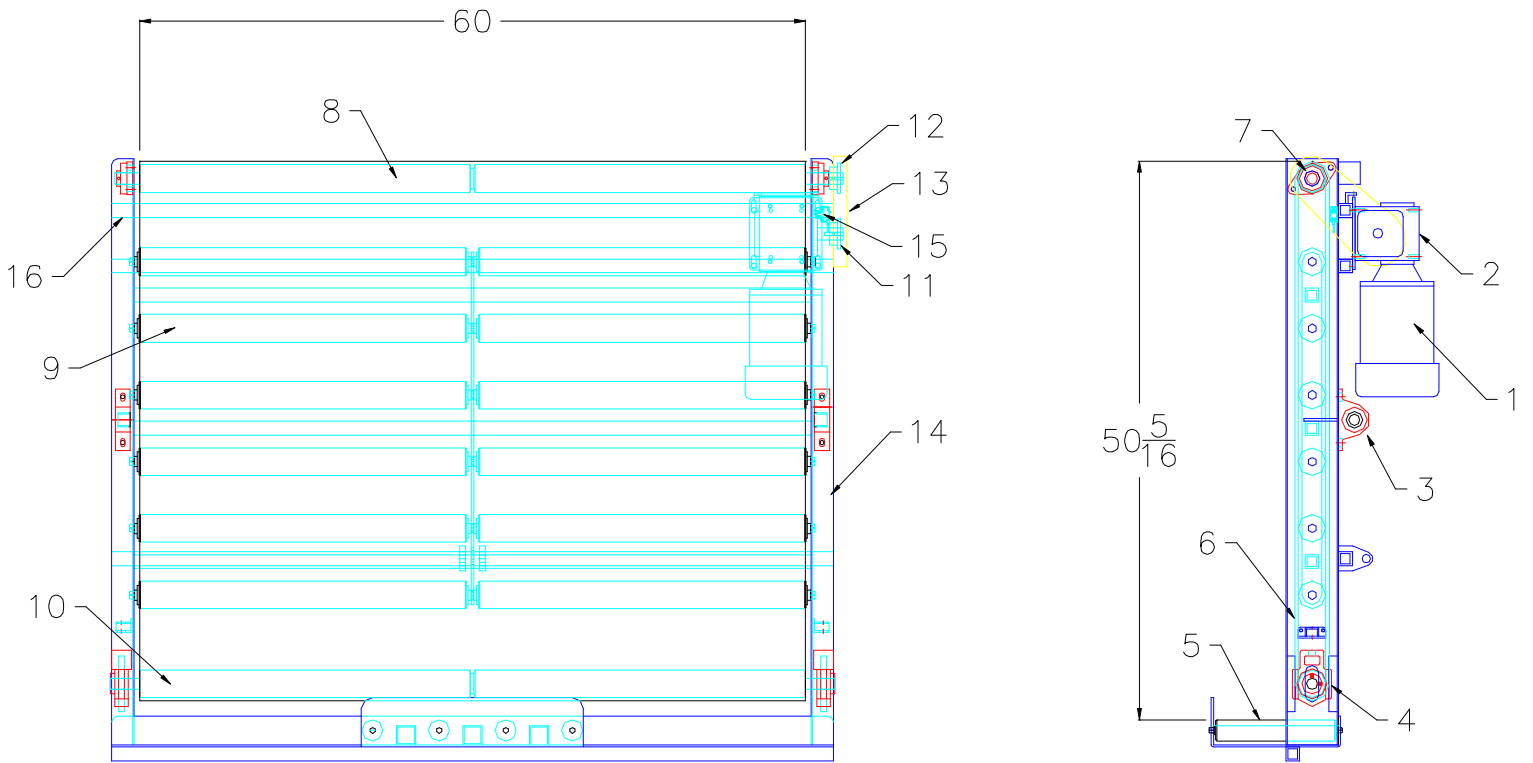
Kalamazoo
Packaging
Systems
MODEL # 860PBEZ60-1
60" WIDE x 60" LONG POWERED
BELT CONVEYOR WITH POWERED
BELT EZ-LOADER CONVEYOR STAND.



Kalamazoo Packaging Systems
PARTS MANUAL: 860PBEZ60-I
INPUT 1 POWERED BELT CONVEYOR WITH
POWERED BELT EZ-LOADER CONVEYOR STAND

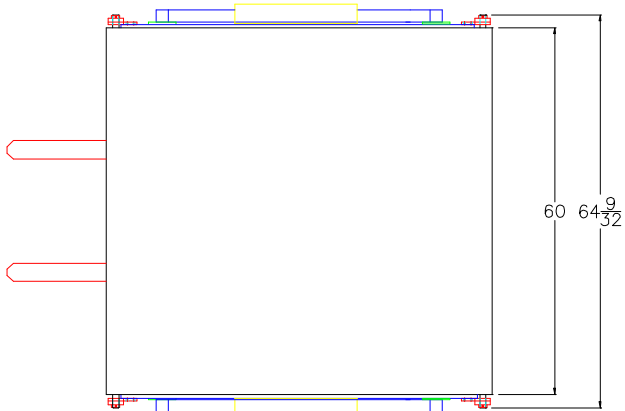
ITEM	PART #	DESCRIPTION	QTY
1	105338	RELIANCE 1HP. 230-460/3/60HZ. AC MOTOR 56TC FACE	1
2	106360	TIGEAR R/A REDUCER 40:1 2.3CD 56C FACE	1
3	108016-1.25	DRIVEN SPROCKET 50B16x1-1/4"	1
4	108016-1.125	DRIVE SPROCKET 50B16x1-1/8"	1
5	121150	1-1/4" 4-BOLT FLANGE BEARING	2
6	860PB60-21	4" DRIVE ROLLER	1
7	860PB60-16	2-1/2" TAKE-UP ROLLER	1
8	121062	1" TAKE-UP BEARING	2
9	860PB60-16	850PB 2-1/2" IDLER ROLLER	1
10	121140	1" 4-BOLT FLANGE BEARING	2
11	860PB-120-05	DRIVE ROLLER END COVER	2
12	860PB60-BELT	850PB-72 BELT (BLACK RUFF TOP)	1
13	121054	1" CHEVRON BEARING	4
14	860PB60-17	2-1/2" END ROLLER	2
15	213265	PHOTO-EYE POLARIZED 10-30v DC	2
15	213004	BRACKET	2
15	213261	CABLE	2
15	213265G	Q45 PHOTO-EYE GUARD	2
16	212381	2.2" PHOTE-EYE REFLECTOR	2
16	213182M	2" REFLECTOR TARGET MOUNT	2
17	860PB60-06	DRIVE SIDE GUARD	1
18	860PB60-07	DRIVEN SIDE GUARD	1
19	122848	1/2-13 2" PLASTIC MOUNTING FEET	8
20	122851	1/2-13 2" RUBBER FEET	2
21		LIFT CONVEYOR CYLINDER (see page 37-38)	

Kalamazoo Packaging Systems
 Model# 860PBL50-EZ
 POWERED LIFT BELT CONVEYOR

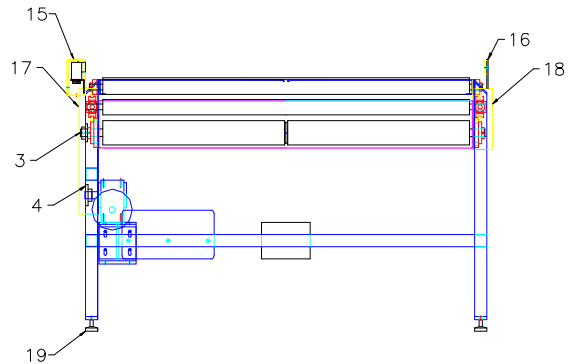
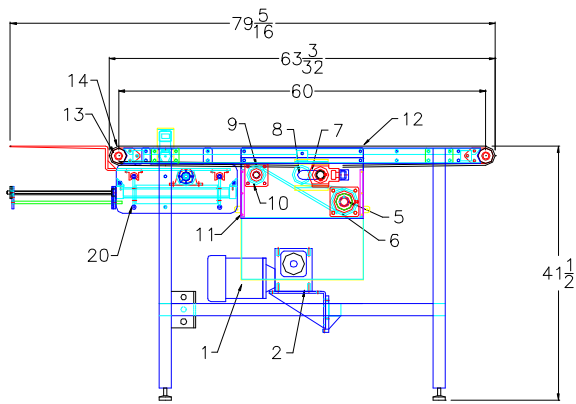


Kalamazoo Packaging Systems
PARTS MANUAL: 860PBL50-EZ
POWERED LIFT BELT CONVEYOR

ITEM	PART #	DESCRIPTION	QTY
1	105317	1/2HP 230-480/3/60HZ.AC MOTOR 56C FACE	1
2	106319	R/A REDUCER 40:1 1.7CD 56C FACE	1
3	121250	1" PILLOW BLOCK (1-7/16" CD)	2
4	121062	1" TAKE-UP BEARING	2
5	860PBL50-EZ-15	1.9" LOAD ROLLER	4
6	860PBL50-EZ-BELT	860PBL50 LIFT CONVEYOR BELT (BLACK RUFF TOP)	1
7	121055	1" 2-BOLT FLANGE BEARING	2
8	860PBL50-EZ-12	860PBL50-EZ LIFT 2-1/2" DRIVE ROLLER	1
9	860PBL50-EZ-11	860PBL50-EZ LIFT 2-1/2" IDLER ROLLER	12
10	860PBL50-EZ-13	860PBL50-EZ LIFT 2-1/2" TAKE-UP ROLLER	1
11	108013	860PBL50-EZ LIFT DRIVE SPROCKET 50B15x 7/8"	1
12	108015	860PBL50-EZ LIFT DRIVEN SPROCKET 50B15x 1"	1
13	850PB-EZ-10	850PB-EZ LIFT CHAIN GUARD	1
14	860PBL50-EZ-07	860PBL50-EZ LIFT FRAME	1
15	213178	BANNER LASER SENSOR (NOT USED)	1
15	213179	BANNER REFLECTOR (NOT USED)	1



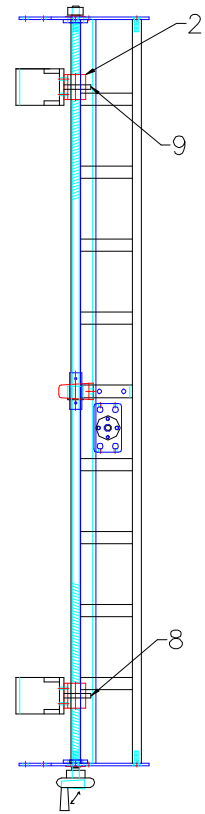
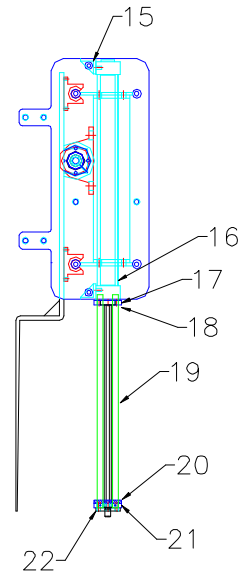
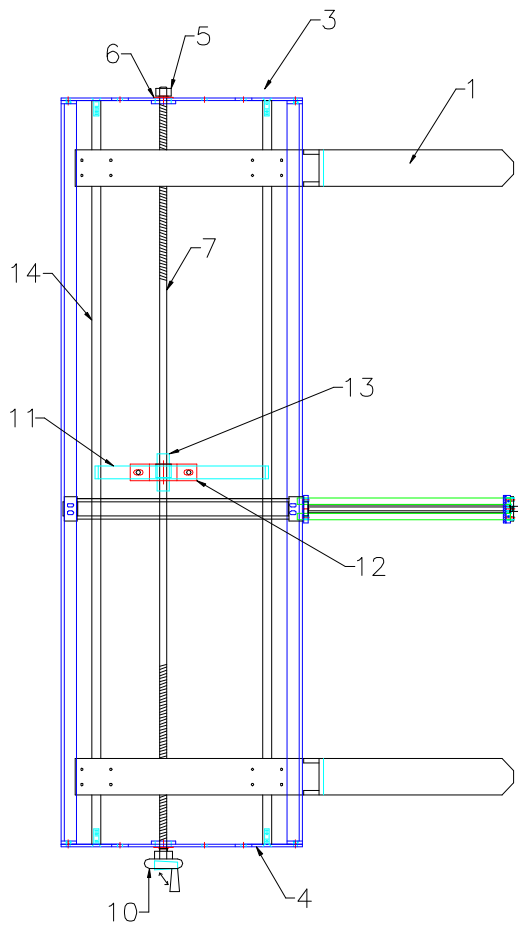
Kalamazoo
Packaging
Systems
MODEL # 860PB60-1
60" WIDE x 60" LONG POWERED
BELT CONVEYOR WITH FILM CUTTER
AND MANUAL PRODUCT FORKS.



Kalamazoo Packaging Systems
PARTS MANUAL: 860PB60-I
INPUT 2 POWERED BELT CONVEYOR WITH FILM
CUTTER AND MANUAL PRODUCT FORKS.

ITEM	PART #	DESCRIPTION	QTY
1	105338	RELIANCE 1HP. 230-460/3/60HZ. AC MOTOR 56TC FACE	1
2	106360	TIGEAR R/A REDUCER 40:1 2.3CD 56C FACE	1
3	108016-1.25	DRIVEN SPROCKET 50B16x1-1/4"	1
4	108016-1.125	DRIVE SPROCKET 50B16x1-1/8"	1
5	121150	1-1/4" 4-BOLT FLANGE BEARING	2
6	860PB60-21	4" DRIVE ROLLER	1
7	860PB60-16	2-1/2" TAKE-UP ROLLER	1
8	121066	1-1/4" TAKE-UP BEARING	2
9	860PB60-16	850PB 2-1/2" IDLER ROLLER	1
10	121140	1" 4-BOLT FLANGE BEARING	2
11	860PB-120-05	DRIVE ROLLER END COVER	2
12	860PB60-BELT	850PB-72 BELT (BLACK RUFF TOP)	1
13	121054	1" CHEVRON BEARING	4
14	860PB60-17	2-1/2" END ROLLER	2
15	213265	PHOTO-EYE POLARIZED 10-30v DC	2
15	213004	BRACKET	2
15	213261	CABLE	2
15	213265G	Q45 PHOTO-EYE GUARD	2
16	212381	2.2" PHOTE-EYE REFLECTOR	2
16	213182M	2" REFLECTOR TARGET MOUNT	2
17	860PB60-06	DRIVE SIDE GUARD	1
18	860PB60-07	DRIVEN SIDE GUARD	1
19	122848	1/2-13 2" PLASTIC MOUNTING FEET	4
20	(SEE NEXT PAGE)	FILM HOLDER/CUTTER and MANUAL PRODUCT FORKS	1 set

Kalamazoo
Packaging
Systems, Inc.
Model# 860FAC12
FILM HOLDER and CUTTER with
MANUAL PRODUCT FORKS.

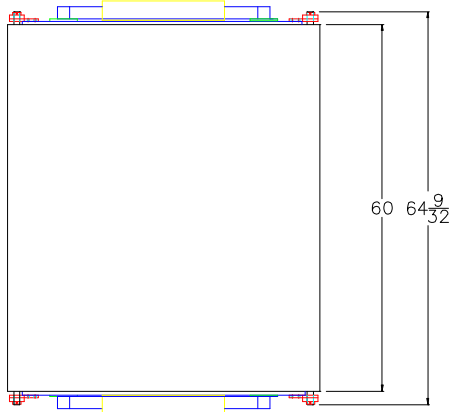


PARTS MANUAL: 860FA12 FILM HOLDER/CUTTER and MANUAL PRODUCT FORKS

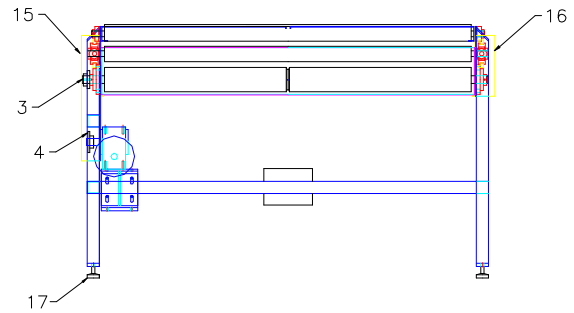
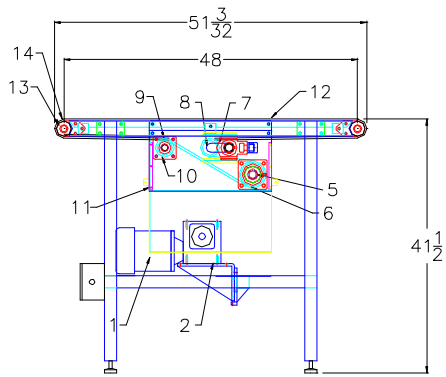
ITEM	PART# / DWG.#	DESCRIPTION	QTY
1	860PB60-FORKS-04	860FA12 PRODUCT RORKS	1set
2	121220	3/4" PILLOW BLOCK LINEAR BEARING	4
3	860PB60-FORKS-01	LEFT SIDE PLATE	1
4	860PB60-FORKS-01a	RIGHT SIDE PLATE	1
5	121500	5/8" SHAFT COLLAR	1
6	120650	5/8"x 1-3/8" FLANGED BEARING	2
7	121235	AMCE SCREW 5/8"-5 x 6' LEFT HAND	1
7a	121234	AMCE SCREW 5/8"-5 x 6' RIGHT HAND	1
8	121226	LEFT HAND HUB	1
8	121228	HUB FLANGE	1
9	121227	RIGHT HAND HUB	1
9	121228	HUB FLANGE	1
10	121230	4" HAND WHEEL w/ FOLD AWAY HANDLE	1
11	860PB60-FORKS-07	FORK CENTER BEARING SUPPORT	1
12	121250	1" PILLOW BLOCK (1-7/16")	1
13	860PB60-FORKS-09	FORK SCREW COUPLER	1
14	860PB60-FORKS-02	FORK BEARING RAIL	2
15	860PB60-FORKS-05	FILM HOLDER FRONT MOUNT	1
15	860PB60-FORKS-06	FILM HOLDER BACK MOUNT	1

PARTS MANUAL: 860FA12 FILM HOLDER/CUTTER and MANUAL PRODUCT FORKS

ITEM	PART# / DWG.#	DESCRIPTION	QTY
16		CUTTER CYLINDER (see page 37-38)	1
17	800-ACF-01	FILM CUTTER 4-ROD CYLINDER FRONT PLATE	1
18	131209	4-1/2" TUBE HOT WIRE	1
18	820FAC-20-FC5	HOT WIRE MOUNTING BRACKET	1
19	800071	5/8" TEFLON SHAFT x 18.0"	4
20	800-ACF-04	1/4" FOAM RUBBER PAD	1
21	800-ACF-02	FILM CUTTER 4-ROD CYLINDER ROD CAP	1
22	800-ACF-03	FILM CUTTER CYLINDER END CAP	1

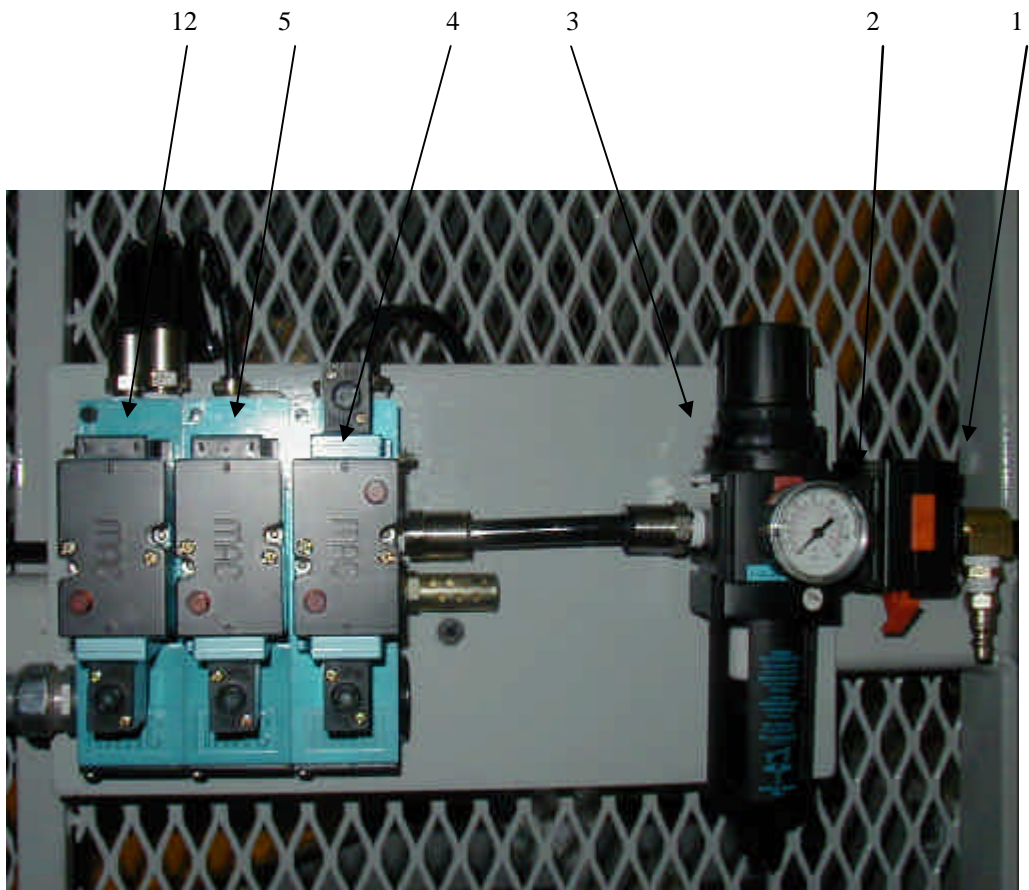


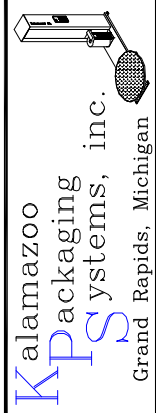
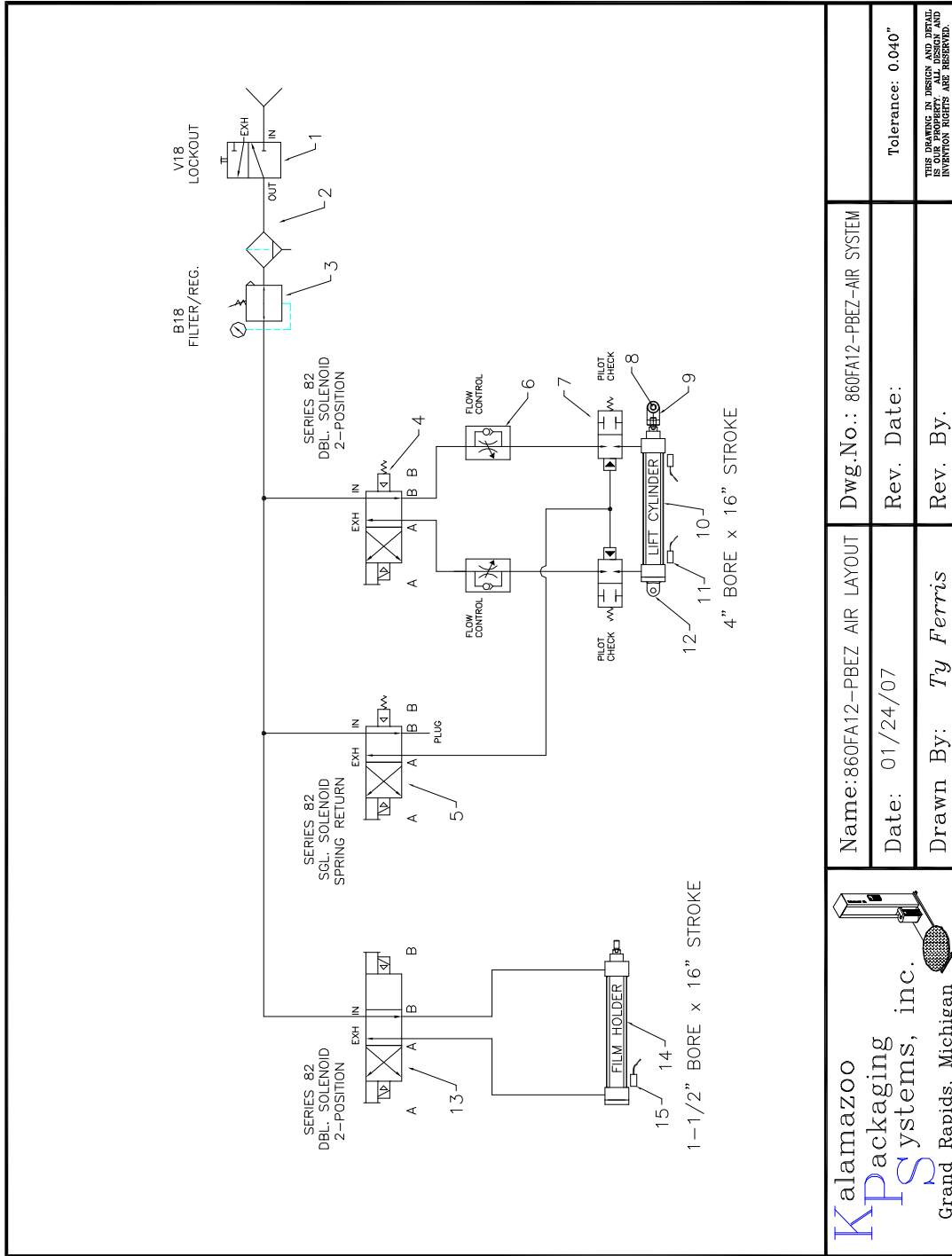
Kalamazoo
 Packaging
 Systems
 MODEL # 860PB48-0
 60" WIDE x 48" LONG POWERED
 BELT CONVEYOR.



Kalamazoo Packaging Systems
PARTS MANUAL: 860PB48-O OUTPUT POWERED
BELT CONVEYOR .

ITEM	PART #	DESCRIPTION	QTY
1	105338	RELIANCE 1HP. 230-460/3/60HZ. AC MOTOR 56TC FACE	1
2	106360	TIGEAR R/A REDUCER 40:1 2.3CD 56C FACE	1
3	108016-1.25	DRIVEN SPROCKET 50B16x1-1/4"	1
4	108016-1.125	DRIVE SPROCKET 50B16x1-1/8"	1
5	121150	1-1/4" 4-BOLT FLANGE BEARING	2
6	860PB60-21	4" DRIVE ROLLER	1
7	860PB60-16	2-1/2" TAKE-UP ROLLER	1
8	121066	1-1/4" TAKE-UP BEARING	2
9	860PB60-16	850PB 2-1/2" IDLER ROLLER	1
10	121140	1" 4-BOLT FLANGE BEARING	2
11	860PB-120-05	DRIVE ROLLER END COVER	2
12	860PB60-BELT	850PB-72 BELT (BLACK RUFF TOP)	1
13	121054	1" CHEVRON BEARING	4
14	860PB60-17	2-1/2" END ROLLER	2
15	860PB60-06	DRIVE SIDE GUARD	1
16	860PB60-07	DRIVEN SIDE GUARD	1
17	122848	1/2-13 2" PLASTIC MOUNTING FEET	4





Kalamazoo
Packaging
Systems, Inc.
Grand Rapids, Michigan

Name: 860FA12-PBEZ AIR LAYOUT
Date: 01/24/07
Drawn By: Ty Ferris

Dwg.No.: 860FA12-PBEZ-AIR SYSTEM
Rev. Date:
Rev. By:

Tolerance: 0.040
THIS DRAWING IN DESIGN AND DETAIL AND INVENTION RIGHTS ARE RESERVED.

PARTS MANUAL: 860FA12-PBEZ Air System

ITEM	PART # / DWG. #	DESCRIPTION	QTY
1	270190	LOCK OUT/ SHUT OFF UNIT	1
2	270191	JOINER KIT	1
3	270192	FILTER REGULATOR UNIT	1
4	280018	MAC 82 SGL. SOLENOID SPRING RETURN	1
5	280018	MAC 82 SGL. SOLENOID SPRING RETURN	1
6	280016	1/2" INLINE FLOW CONTROL	2
7	280019	LOCKOUT VALVE	2
8	280013	ROD EYE	1
9	280012	PIN	2
10	280010	4" BORE x 16" STROKE CLINDER	1
11	280014	LIMIT SWITCH	2
11	280015	LIMIT SWITCH BRACKET	2
12	280011	EYE BRACKET	1
13	280017	MAC 82 DBL. SOLENOID 2-POSITION	1
14	270129	1-1/2" BORE x 16" STORKE NON-ROTATING CYLINDER	1
15	270131	LIMIT SWITCH	1
15	270132	LIMIT SWITCH BRACKET	1

460/3/60HZ, 30AMP.

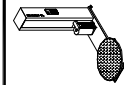
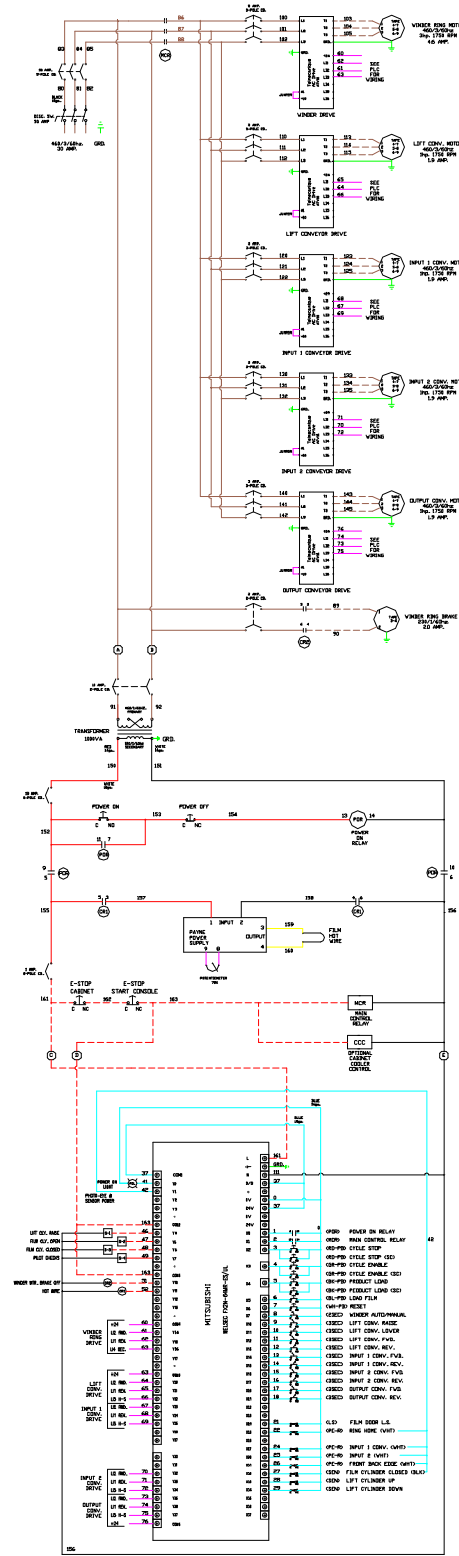
- 110V L1 14ga. BLUE
- 110V L2 14ga. WHITE
- 110V L1 CONTROLS 16ga. RED
- 460V 12ga. BLACK
- 460V MOTOR 14ga. BLACK
- 300VES 16ga. BLUE
- HST V-BRC 16ga. ORANGE
- GROUND 10ga. YELLOW
- 14ga. GREEN

- 0.5-PS) LIGHTED GREEN PUSH BUTTON
- 0.5-PS) RED PUSH BUTTON
- 0.5-PS) RED MICHIGAN PUSH BUTTON
- 0.5-PS) GREEN PUSH BUTTON
- 0.5-PS) BLACK PUSH BUTTON
- 0.5-PS) WHITE PUSH BUTTON
- 0.5-PS) BLUE PUSH BUTTON
- 0.5-PS) 2-POSITION SELECTOR
- 0.5-PS) 3-POSITION SELECTOR
- 0.5-PS) LIMIT SWITCH
- 0.5-PS) CYLINDER SENSOR
- 0.5-PS) PHOTO-EYE RETROREFLECTIVE

- PHOTO-EYE WIRING
- 42 BROWN
- 9 BLACK
- SIGNAL WHITE

- FILM CYLINDER SENSOR WIRING
- 42 BROWN
- 9 BLUE
- SIGNAL BLACK

- LIFT CYLINDER SENSOR WIRING
- 9 BLUE
- SIGNAL BROWN



Kalamazoo
Packaging Systems, Inc.
 Grand Rapids, Michigan

Name: 860FA12 FULLY-AUTOMATIC CONVEYORIZED WINNER

Date: 01/05/07

Drawn By: Ty Ferris

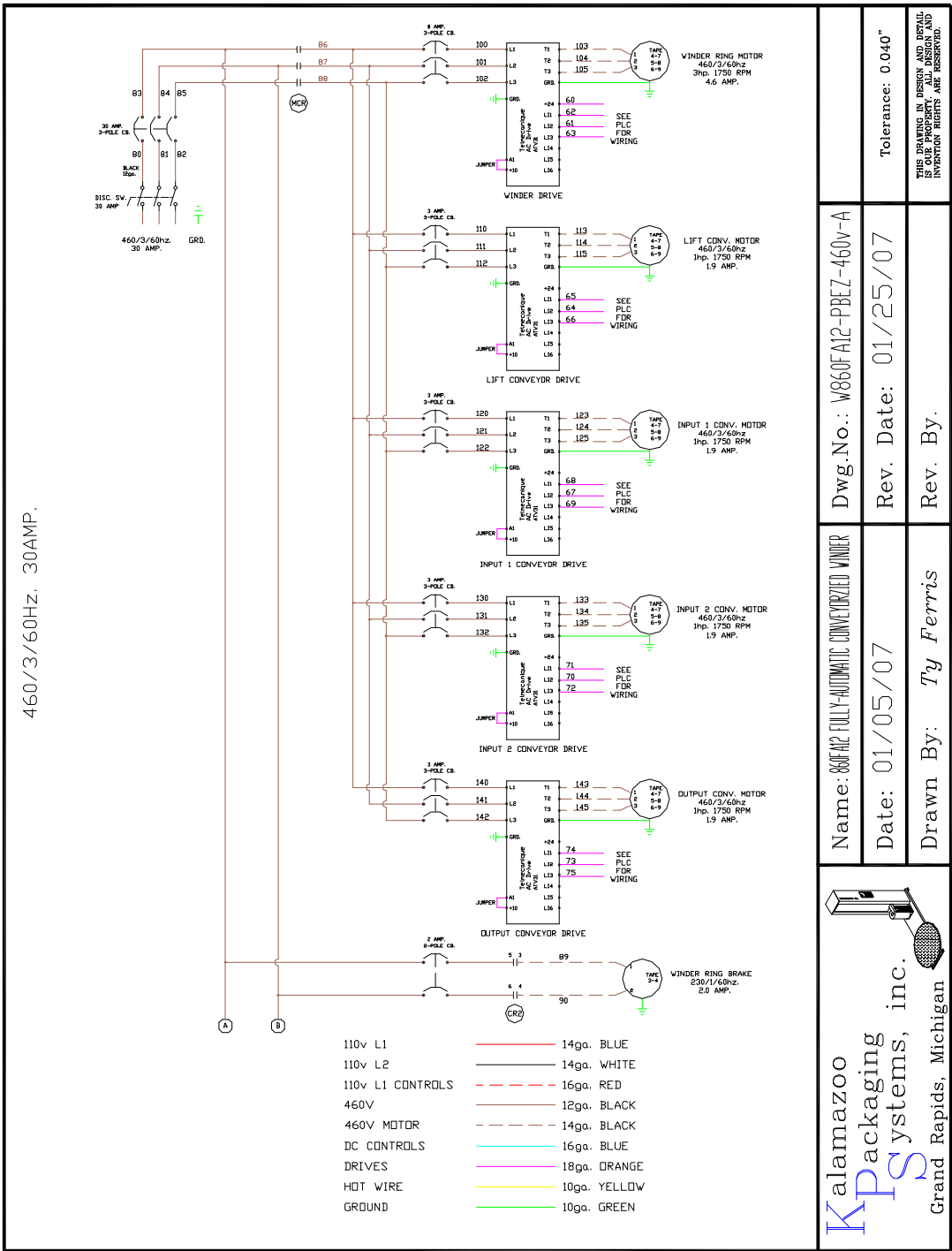
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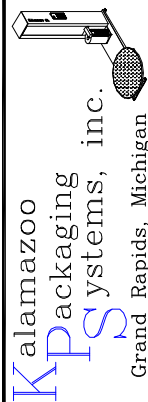
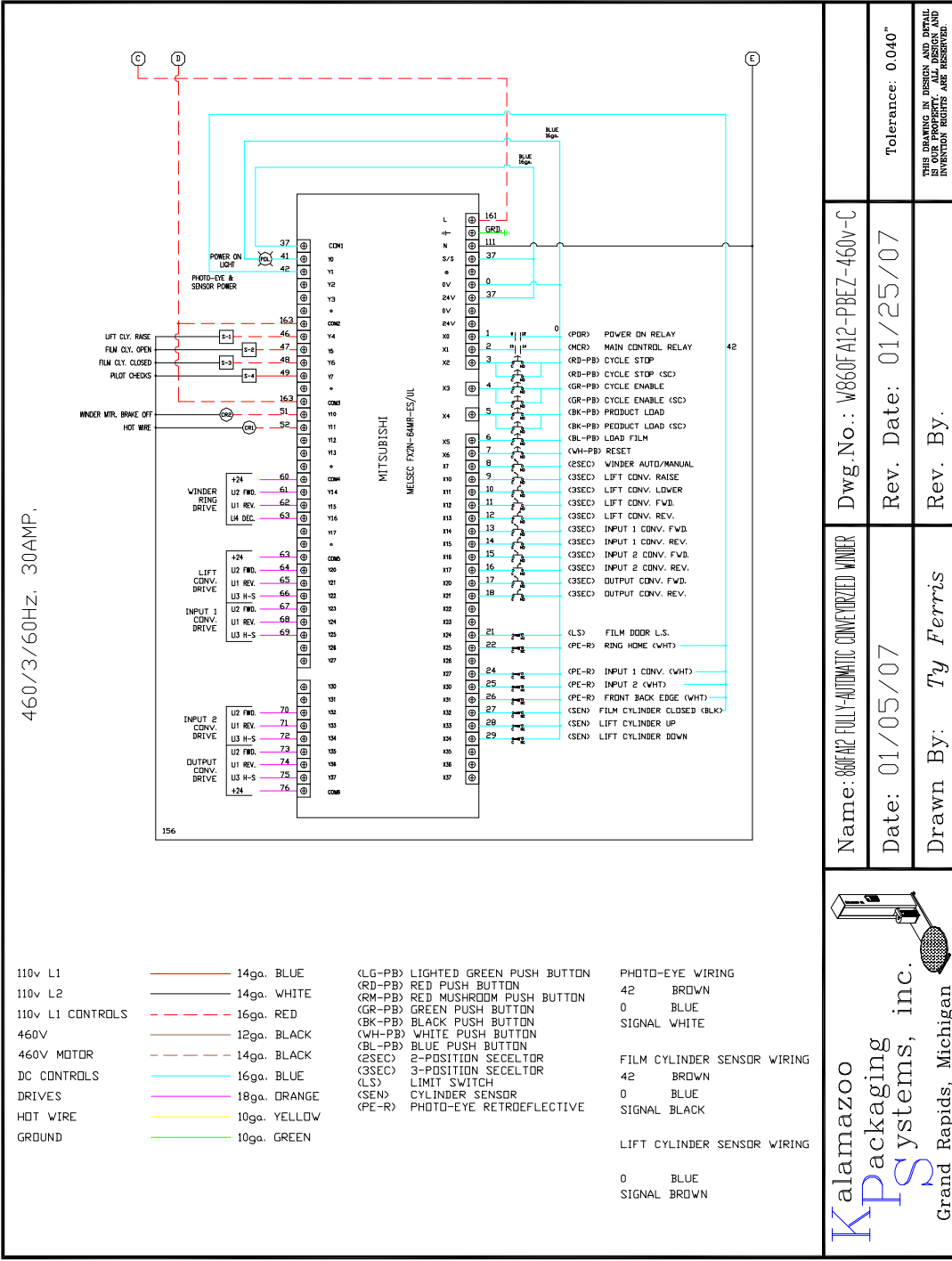
Rev. Date: 01/25/2007

Rev. By: Jamey Moore

Tolerance: 0.040"

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