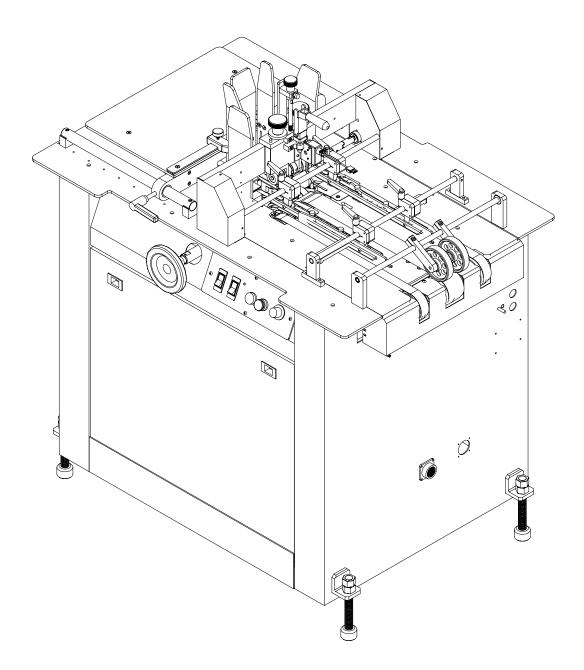


BK425 Feeder Base



BK425 Feeder Base User's Guide

Published by:

Buskro Ltd. 1738 Orangebrook Court, Unit #1 Pickering, ON, L1W 3G8 Canada Tel.: (905) 839-6018 Fax: (905) 839-6023

All Rights Reserved. No part of this book may be used or reproduced in any form or by any means, electronic or mechanical, or stored in a database or retrieval system, without prior written permission of Buskro Ltd. except in case of brief quotations embodied in critical articles or reviews. Making copies of any part of this book for any purpose other than your own personal use is a violation of copyright laws.

Copyright © 2005, Buskro Ltd.

First Edition, 2004

Printed in Canada

This manual is sold as is, without warranty of any kind, either express or implied, respecting the contents of this manual, including but not limited to implied warranties for the manual's quality, performance, merchantability, or fitness for any particular purpose. Neither Buskro Ltd. nor its dealers or distributors shall be liable to the purchaser nor any other person or entity with respect to any liability, loss, or damage caused or alleged to be caused directly or indirectly by this manual.

Manual History

Version	Date	Description	ECO No.
1.0	27-Jan-04	Manual Released.	N/A
1.1	03-Feb-05	Manual Released.	662

BK425 Feeder Base

Table Of Contents

1.0	Gei	neral Information	1-0
1.1	D	escription	
1.2		eatures	
1	.2.1	Vacuum Shuttle Feeder	
1	.2.2	Complete Instrument Panel	
1.2.3		Downstream Compatibility	
1	.2.4	Maintenance Considerations	
1.3	Sp	pecifications	
1.4	Fe	eeder System Drawings	
1	.4.1	BK425 Feeder Base Drawing	
2.0	Op	erator Instructions	2-0
2.1	In	strument Panel Functions	
2	.1.1	Power Rocker Switches	
2	.1.2	Machine Pushbuttons	
2	.1.3	Production Dial	
2.2	Fe	eder Setup Instructions	
2	.2.1	Vacuum Plate Selection and Installation	
2	.2.2	Upper Feed Roller and Material Gate Adjustment	
2	.2.3	Feeder Side Guide and Rear Guide Adjustment	
2	.2.4	Feeder Rear Pusher Setting	
2.3	Μ	aterial Side Guide Adjustments	
2.4	V	acuum System Adjustments	
2	.4.1	Feeder Vacuum Level Setting	
2	.4.2	Feeder Spool Valve Adjustments	
2.5	Μ	aintenance Schedule	

Appendix A – Assembly Drawings

Appendix B – Electrical Drawings

General Information

Chapter

1.1 Description

The Buskro BK425 Feeder Base is a mailpiece feeding and transportation system comprised of a feeder station that is controlled via a centrally located operator control panel

The feeder, capable of separating and dispensing a wide variety of mailpieces from single sheets to publications, is of a vacuum shuttle style equipped with adjustable side and rear guides to accommodate various mailpiece sizes, a movable material gate and upper feed rollers for thickness adjustments, and vacuum control in the form of differing feed plates assisted by a regulating valve.

Operator control of the feeder base is provided by a series of electrical switches and buttons displayed on a clear unhindered control panel centrally positioned at the front of the base. The control panel consists of circuit breaker switches for the Main and Pump power; a resetable LCD piece totalizing counter; rotary dial potentiometer for the feeder, and Start/Stop pushbutton controls for machine operation.

All these features, in addition to the manufacturing quality and innovative product design, add up to an extremely functional feeder base capable of years of reliable, trouble-free operation.

1.2 Features

1.2.1 Vacuum Shuttle Feeder

The Buskro Feeder Base features a vacuum shuttle feeder capable of feeding a wide variety of mailpieces from single sheets to thick publications. The feeder is equipped with adjustable side and rear guides, variable height material gate and upper feed rollers, and various feed plates and a valve for vacuum regulation. If needed, the shuttle plate also comes with two rear pushers which provide feeding assistance for heavy mailpieces. In addition, the unique vacuum plate construction enhances the separating capabilities of the feeder.

1.2.2 Complete Instrument Panel

All necessary controls required to operate the feeder base are easily accessible to the operator on a central instrument panel. The control panel comes complete with circuit-breaker equipped rocker switches, large pushbuttons for all machine functions, variable speed potentiometers for machine speed regulation.

1.2.3 Downstream Compatibility

The feeder base is downstream compatible with a *BK730 Tabber* and *BK7IB Inkjet Base* allowing full integration between the two machines. This downstream compatibility allows stop/start capability from either the BK425 Feeder base or from the downstream machine. Connection is made through a 57-pin circular plastic connector located at the feeding end of the base.

1.2.4 Maintenance Considerations

The Buskro feeder base is designed to facilitate maintenance should it be required. The front upper panel and tabletops are easily removable in order to expose all the mechanical components. Electrically, all of the base's controls are centrally located in the electrical box making troubleshooting simple.

1.3 Specifications

 Table 1.1 – BK425 Feeder Base specifications

1.3.1 Product handlin	ng		
	Minimum	3.0" X 5.0"	76 mm X 127 mm
	Maximum	16.0" x 17.0"	405 mm X 432mm
	Thickness	Single Sheet to 1 1/8"	Up to 28 mm
1.3.2 Physical			
	Overall Length	42.15"	1071 mm
	BK 425 Overall Height Tabletop Height	46.09" 35.5" to 37.0"	1170 mm 901 mm to 940 mm
	Overall Width	30.50"	775 mm
	Weight (crated)	400 lbs	181 kg
1.3.3 Production rate			
	Belt Speed	0 to 600 ft/min	0 to 3.05 m/s
	Cycle Speed	0 to 30,000 pph	
	Cycle Pitch	3.0" to 17.0"	76 to 432 mm
1.3.4 Electrical requir	rements		
	Line Voltage	220 ± 15% VAC	
	Line Current	7 Amps	
	Power	1.6 KVA	
	Base Motors	1/2 H.P., 180 VDC @ 2.8	BA
	Feeder Pump	3/4 H.P., 220 VAC @ 4.8 1.8 CFM @ 20" Hg	A
1.3.5 Operator contro	bls		
Circuit-Breaker Sw	Circuit-Breaker Switch		
	Machine Pushbuttons		
Potentiome		Production	
1.3.6 System connec	tors		
	Inline Remote	57 pin, 23-57 receptacle	
	Main Power	3 pin, 250 VAC @ 20A	
		NEMA L6-20P	

1.4 Feeder System Drawings

1.4.1 BK425 Feeder Base Drawing

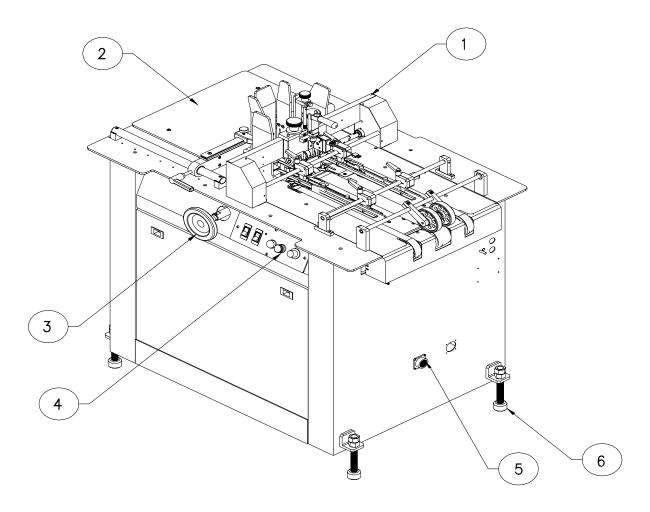


 Table 1.2 – BK425 Feeder Base Operator Controls, Features, and Installation Points.

Item	Description	Reference
1	Feeder Bridge	Page A-12
2	Rear Table	Page A-24
3	Handwheel	
4	Instrument Panel	Page A-41
5	Inline Connector	Page B-8, B18
6	Base Mounting Foot	

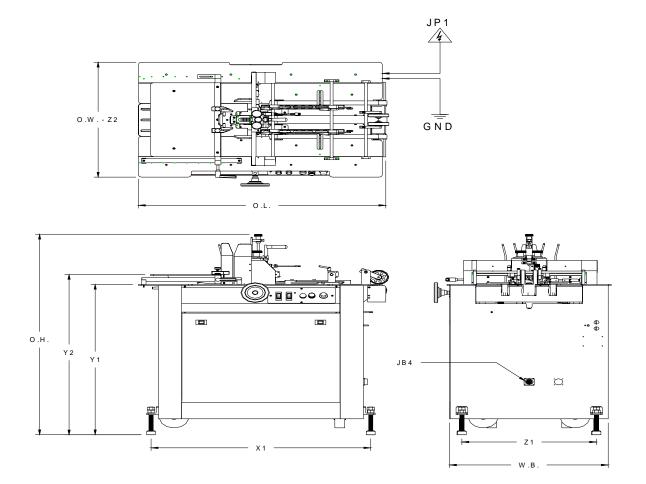


Table 1.3 – BK425 Feeder System Dimensions and Interface Specifications

Symbol	Symbol Description		Dimensions	
O.W.	Overall Width		30.50"	775 mm
0.L.	Overall Length		42.15"	1071 mm
O.H.	Overall Height		46.09"	1170 mm
W.B.	Overall Base Width		30.00"	762 mm
X1	Leveling Foot Length		37.43"	951 mm
Y1	Tabletop Height		35.5" to 37"	901 mm to 940 mm
Y2	Rear Table Height		38.00"	965 mm
Z1	Leveling Foot Width		26.00"	660 mm
Z2	Tabletop Width		30.50"	775 mm
JP1	Base Power Connector	(see Appendix B)	Twist-Lock Plug, 20A, 250V	(HUBBELL P/N. 2321CN)
JB4	Inline Connector	(see Appendix B)	37 pin CPC Receptacle	male (AMP P/N 206306-1)

Operator Instructions



2.1 Instrument Panel Functions

The Buskro BK425 Feeder base is equipped with a centrally located instrument panel, which displays all the necessary controls to operate the system. The controls can be sub-divided into three distinct classes of functions, which are:

- Main and Vacuum Power Rocker Switches
- Machine **Pushbutton**
- A Production **Dial**

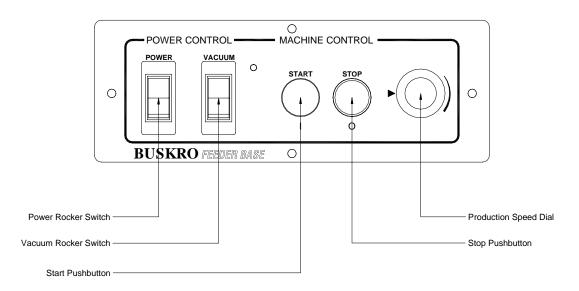


Figure 2.1- BK425 Base Instrument Panel illustrating operator controls including power switches, speed regulation dial, and start and stop pushbuttons.

2.1.1 Power Rocker Switches

The power rocker switches, the two switches located closest to the left side of the control panel, provide power to the feeder base (**Power**) and the feeder pump (**Vacuum**). These switches are equipped with resetable circuit breakers to protect against overload conditions.

Power Rocker Switch

Switch which turns on the main power to the inkjet base. The switch is marked with a "**I**", which when exposed, indicates that power is ON. The power is turned OFF when the switch is placed to the "**0**" indication. The circuit breaker is rated at 15 Amps @ 220 VAC for the BK425 feeder base.

Note : When working in the electrical box, disconnect the inlet plug for complete safety. Turning the **Power** rocker switch OFF will not disengage all 220 VAC circuitry.

Vacuum Rocker Switch

Switch which applies power to the feeder pump and the transport blower. When the switch is ON, it should illuminate indicating that power is available to the feeder pump and the transport blower. The circuit breaker is rated at 10 Amps @ 220 VAC for the BK425 feeder base.

2.1.2 Machine Pushbuttons

The pushbutton and selector knob located on the instrument panel permit control of the machine. The **Start** (*green*) and **Stop** (*red*) pushbuttons allow engagement and suspension of the feeder operation.

Stop Pushbutton

The red mushroom-button which suspends operation of the feeder base by interrupting the power to the machine relays. This button is used mostly as an emergency stop since pressing it will cause the machine to stop immediately regardless of the printing status

Note : The Stop pushbutton has a locking feature, which when engaged, will prevent the system from functioning. Should this condition occur, twist and release the locking mechanism to allow base operation.

Start Pushbutton

The green Pushbutton engages the feeder. When this button is pressed, the machine should cycle provided that the following conditions have been met:

- The machine **Stop** button is not locked in a depressed condition
- With a downstream device <u>not</u> present, the *Downstream switch S2* is set to <u>Disable</u> (Up).

2.1.3 Production Dial

The speed regulation dial for the base (**Production**) is situated to the right of the machine pushbuttons and to the right of the instrument panel respectively. This dial permits adjustment of transport belt speeds in the following manner; a clockwise rotation of the **Production** speed dial corresponds to a speed increase. Conversely, a counter-clockwise rotation of the dial results in a speed decrease.

Production Dial

The **Production** dial adjusts the speed of the transport. The speed settings range from 0 (0) to 3.00 m/s. A clockwise rotation of the dial corresponds to a speed increase of the transport belts. Conversely, a transport belt speed decrease is observed for a counter-clockwise rotation of the **Production** dial.

2.2 Feeder Setup Instructions

The feeder setup instructions comprise all the adjustments necessary to properly separate and feed any mailpiece which conforms to the specifications outlined in *Chapter 1 - 1.3.1 Product handling*, this being a minimum size of $3" \ge 5"$ (76 X 127 mm) and a maximum size 16" $\ge 16" \ge 17"$ (405 X 432 mm). With the feeder bridge in its normal position, the product thickness handled is from a single sheet to 5/8" (16 mm). For pieces thicker than 5/8", the feeder bridge can be adjusted to handle products up to $1 \frac{1}{8}"(28.6 \text{ mm})$. Proper feeder setup will include the following :

- The selection of an appropriate feed plate, and possibly, the regulation of vacuum in the event of thin materials.
- An upper feed roller and gate adjustment for material thickness.
- Side and Rear guide adjustments to accommodate product size.
- The use of feeder pushers to assist feeder vacuum for thick pieces.
- Adjustment of material side guides to correct material skew prior to entry in the inkjet region.

2.2.1 Vacuum Plate Selection and Installation

The selection of an appropriate vacuum plate for the mailpiece being processed is central to the proper operation of the feeding system. In most instances the concave plate should be used first as most mailpieces are of a pliable nature and can conform to the surface of this plate. For thicker pieces such as magazines, a flat plate is ideal. For open-ended mailpieces it is best to attempt the concave plate initially, however if the upper page separates from the lower one(s) and interferes with the material gate, the convex plate should be employed.

Convex Plate

The convex plate is used primarily with open-ended mailpieces whose leading edge must be bent to ensure that all its individual pages are compressed together into a single edge. The plate's lead five holes are threaded (8-32 UNF) to permit the installation of set screws in the event that vacuum leakage occurs.

Concave Plate

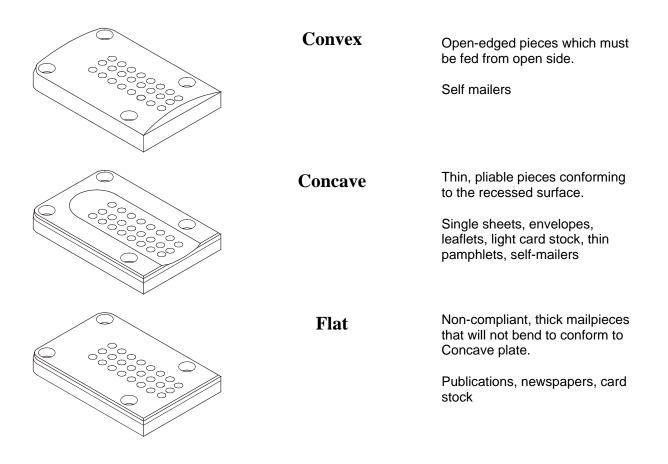
The concave plate, also known as a dish plate, is the polyurethane covered vacuum plate with a depression in the center. This plate is used with thin pliable mailpieces capable of being "sucked down" to conform to the recessed surface. The plate's lead five holes are threaded (8-32 UNF) to permit the installation of set screws preventing vacuum leakage for certain materials. Mailpieces used with this plate could include : single sheets, envelopes, leaflets, light cardstock, thin pamphlets, self mailers, etc.

Flat Plate

The flat plate, is used for those mailpieces which cannot bend and conform to the concave plate's surface usually thick, rigid materials. The plate's lead five holes are threaded (8-32 UNF) to permit the installation of set screws in the event of vacuum leakage. Typical mailpieces which can be processed are thick publications, newspapers, cardstock, etc.

To Select the Vacuum Feed Plate

There are three vacuum feed plates provided with the inkjet base which include a flat plate, convex plate, and concave plate. Select one of the following plates based on the following criteria:



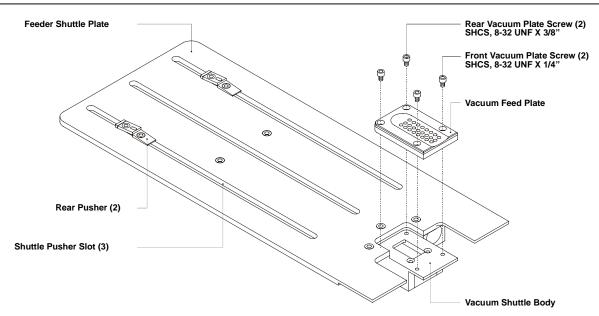


Figure 2.2 - Shuttle feed plate illustrating all adjustments points including the feed plate and pushers.

To Install a Vacuum Feed Plate (see Figure 2.2)

Upon selecting a feed plate following the instruction *To Select the Vacuum Feed Plate*, the plate will have to be installed in the vacuum shuttle body.

- 1. Raise the Material Gate using the quick-release handle (*see Figure 2.2*) to more readily access the vacuum plate and to prevent interference with the tip of the material gate during installation.
- 2. With the handwheel, rotate the machine so that the feeder shuttle plate is fully back, exposing most of the vacuum feed plate.
- 3. With a 9/64" hex key, loosen and remove all four 8-32 UNF vacuum plate screws. Remove the vacuum feed plate.
- 4. Place the required vacuum feed plate into position and replace the vacuum plate screws. Ensure that the 8-32 UNF X ¹/₄" screws are installed at the front of the vacuum plate (*see Figure 2.2*). Do not over-tighten these screws as it may result in the threads being stripped in the vacuum shuttle body.
- **Note:** Do not over-tighten the vacuum plate screws as it may result in stripped threads located in the vacuum shuttle body.
 - Ensure that the 8-32 UNF X ¼" screws are installed at the front of the vacuum plate to prevent interference with the lower hopper mechanism.

Cycle the system manually with the handwheel to ensure that the vacuum plate does not interfere with the material gate tip.

2.2.2 Upper Feed Roller and Material Gate Adjustment

Upper feed roller and material gate adjustment must be done to accommodate differing mailpiece thicknesses. A successful adjustment of these items will result in a single mailpiece being deposited onto the transport belts without any hint of skewing.

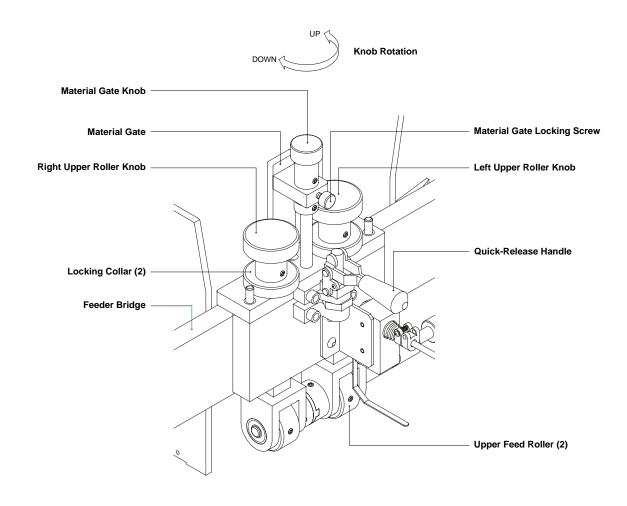


Figure 2.3 - *Feeder material gate and upper feed roller details indicating adjustment points located on the feeder bridge assembly.*

To Set the Upper Feed Rollers (see Figure 2.3)

When feeding a new mailpiece, it may be necessary to adjust the upper feed rollers to accommodate the mailpiece's thickness. Adjustment should be made so that there is just enough tension on a mailpiece between the upper and lower feed rollers such that it cannot be removed by pulling it. Adjustment of the left and right upper feed roller should be done evenly to prevent the mailpiece from skewing upon exit from the rollers.

- 1. Loosen the material gate locking screw. Then loosen the locking collars by rotating them counterclockwise.
- 2. Raise the material gate sufficiently so that a single mailpiece easily clears its tip. This is done by turning the material gate knob counterclockwise.
- 3. Raise both the left and right upper feed rollers until a single mailpiece clears both rollers. This is accomplished by turning the feed roller knobs in a counterclockwise direction.
- 4. Ensure that the lower feed rollers are fully upward. This can be accomplished by rotating the handwheel until the shuttle plate is fully forward.
- 5. Place the desired mailpiece in between the upper and lower feed rollers. Grip the rear of the mailpiece with one hand and lower the left upper feed roller onto it until firm pressure is applied. (*when it becomes impossible to pull away the mailpiece from under the rollers*). A clockwise rotation of the left upper roller knob corresponds to a lowering of the feed roller.
- 6. Repeat *step 5* for the right upper feed roller.
- 7. When the proper upper feed roller setting has been attained for the mailpiece, tighten the locking collars of the feed roller by rotating them clockwise until they lock against the gate adjuster plate.

Note:	An improper setting of the upper feed rollers will result in skewed or delayed mailpieces.
	not over-tighten the upper feed rollers as this will result in rapid wearing of the upper and lower feed rollers as well as placing an excessive load on the hopper roller cam assembly. This condition is usually detected when the feed rollers make a "clunking" noise when they meet. ways make sure that the lower feed rollers are up when making this adjustment,
	otherwise the aforementioned wear condition may occur.

To Set the Material Gate

- 1. Ensure that the material gate is in a raised position as described in the previous instructions entitled *To Set the Upper Feed Rollers*.
- 2. Turn ON the feeder pump by engaging the **Vacuum** switch on the instrument panel.
- 3. Place a mailpiece centrally in the hopper and advance the feeder shuttle plate until the lead edge has passed by the material gate. This is accomplished by rotating the handwheel clockwise.
- 4. Now place a second mailpiece over the first one and lower the material gate onto it by rotating the material gate knob clockwise. Grip the rear of the top mailpiece and pull it away from the material gate; a slight resistance should be present.
- 5. After removing the top mailpiece, lower the material gate slightly by incrementally rotating the material gate knob clockwise. <u>Do not</u> lower the material gate excessively causing the remaining mailpiece to be pinched.
- 6. After the proper setting has been attained, tighten the material gate locking screw.
 - **Note:** An improper gate setting will result in multiple mailpieces being dispensed if the gate is too high. Conversely, damaged or unfed mailpieces will result if the gate is too low.
 - In the event that a very thin mailpiece is used with a concave plate; it may be necessary to regulate the vacuum flow in addition to adjusting the material gate to obtain the desired result.
 - When changing feed plates, ensure that the material gate is raised up since interference may occur between the new vacuum feed plate and the material gate. This would result in damage to the vacuum feed plate and possibly the material gate. Adjustments for mailpieces thicker than 5/8" must be done by screw re-adjustment on the feeder.

To Set the Feeder Bridge for material thicker than 5/8" (16mm)

- 1. Loosen off the 4 bridge ¹/₄-20 UNC cap screws with a *3/16" hex* key. (see *Figure 2.4*). Remove them from the upper holes of the bridge.
- 2. Carefully lift the bridge assembly up until the lower bridge mount holes line up with the ¹/₄-20 UNC threaded holes.
- 3. Place a cap screw in one of the holes and with the *3/16" hex* key, gently re-tighten it. Do the same for the other 3 cap screws. Once all screws are in place, tighten them all securely.
- 4. Follow the instructions in ^{CP} *To Set the Upper Feed Rollers* to adjust the upper rollers for the material.
- 5. Follow the instructions in *F To Set the Material Gate* for a proper material gate setting.

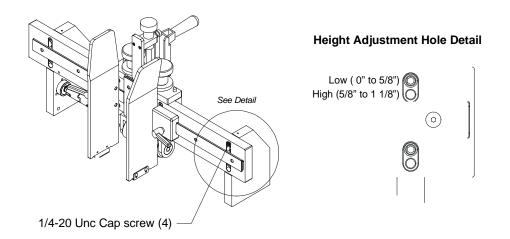


Figure 2.4 - *Feeder bridge assembly identifying the location of the four bridge mounting screws and the hole settings for a low and high height adjustment range.*

2.2.3 Feeder Side Guide and Rear Guide Adjustment

The feeder guides must be set to accommodate differing mailpiece sizes. This adjustment, though quite simple, requires some attention since a setting, which is too tight or too loose, may cause ineffective material feeding. Typically, a rear table guide which is set loosely causes material misfeeds because the mailpiece oscillates back and forth within the shuttle preventing the vacuum from securing and advancing the front of the mailpiece. As well, side guides which are tight causes the material to be pinched and prevents the mailpiece stack from dropping onto the shuttle plate. In addition, it is often necessary to remove the side guide bottom plates for thin, narrow mailpieces as these hold up the material and prevents it from being sucked down by the vacuum feed plate.

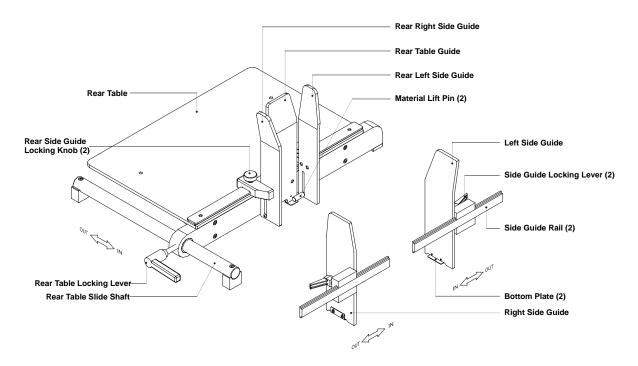


Figure 2.5 - *Rear table and side guide illustration indicating the various adjustment points of the feeder.*

Installation of the vacuum feed plate (See 🖙 To Install a Vacuum Feed Plate

(see Figure 2.2) and adjustment of the feed rollers (See 🌮 To Set the Upper Feed

Rollers (see Figure 2.3) and material gate (See ^{CP} To Set the Material Gate) should

be done prior to setting the material guides as the guides are usually moved when performing the aforementioned setup steps.

To Set the Feeder Side Guides (see Figure 2.5)

The feeder's side guides, mounted on slide rails on the feeder, are used to align the mailpiece stack centrally in the feeder hopper such that the mailpiece is transported evenly on the transport belts.

- 1. Rotate the *rear table locking lever* counter-clockwise to loosen the rear table assembly. Loosen and remove the *rear table locking knob*. Slide the rear table assembly back to a fully open position.
- 2. Loosen both *left* and *right rear side guide locking knobs* and slide both outward to a fully open position.
- 3. Loosen both *left* and *right side guide locking levers* and slide both outward to a fully open position.
- 4. Place the desired mailpiece centrally in the hopper.
- 5. Slide the *left* and *right side guides* inward until both are 1/16" to 1/8" (1.5 mm) from the side edges of the mailpiece. Ensure that both *side guide bottom plates* (if used) are underneath the mailpiece and then re-tighten *the side guide locking levers*.

Note : If the guides are closed too tightly against the mailpiece, proper feeding will be affected due to mailpiece pinching.

In the event that the mailpiece is thin and narrow, it is probably best to remove the side guide bottom plates as these sometimes hinder the separating and feeding operation.

Occasionally, due to the edge of the mailpiece which is presented to the material gate, it is better to offset the mailpiece slightly along the centerline in order to improve the feeding operation.

To Set Rear Table Assembly (see Figure 2.5)

The rear table assembly must be properly set to control the rear of the mailpiece stack such that the it does not oscillate with the feeder shuttle's motion. In addition rear guides and lift pins are available to prevent product skew and assist feeding respectively.

- 1. Ensure that the rear table assembly is fully backward as described in *[=] To Set the Feeder Side Guides*.
- 2. Place a mailpiece in the feeder hopper.
- 3. Slide the rear table assembly forward until the *rear guide* is approximately 1/16" (1.5 mm) from the rear of the mailpiece. Ensure that the rear guide bottom plate and/or the *material lift pins* are underneath the mailpiece.
- 4. Re-tighten the *rear table locking lever*. Place the *rear table locking knob* in the nearest threaded hole located in the base's tabletop and tighten it by rotating it in a clockwise fashion.

Note : A loose adjustment of the rear table assembly will result in oscillation of the mailpieces resulting in intermittent feeding.

2.2.4 Feeder Rear Pusher Setting

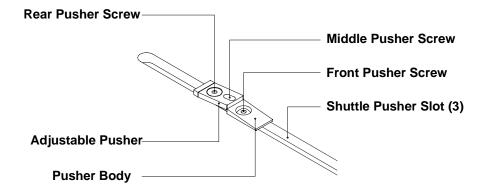


Figure 2.6 - Rear pusher details indicating the location of the various adjustment points.

To Set Rear Pushers for Thick Mailpieces (see Figure 2.6)

Rear pushers are to be used if the vacuum feed plate is not sufficient to advance the mailpiece into the feed rollers. This condition may present itself with thick, heavy mailpieces. Adjustment of the rear pushers may best be accomplished with the rear table fully back.

- 1. Rotate the handwheel in a clockwise direction until the shuttle plate is fully back.
- 2. With a *3/32" hex* key, loosen the *front* and *rear pusher screws* until the pusher assembly is just loose. If both pushers are used, loosen the screws for the second pusher assembly.
- 3. Slide the pusher(s) fully back in the slots of the shuttle plate.
- 4. Place a mailpiece in the feeder hopper.
- 5. Advance the *pusher(s)* until it is up against the rear of the mailpiece. With the *3/32" hex* key, set the height of the pusher just below the top surface of the mailpiece, by rotating the *middle pusher screw*. A clockwise rotation corresponds to a lowering of the pusher.
- 6. After the proper height has been attained, set the pusher(s) so that the pusher is approximately 1/8'' (3 mm) from the rear edge of the mailpiece.
- 7. Tighten both the *front* and *rear pusher screws* using the 3/32" hex key.
- 8. Set the rear table as per instructions provided in $\square To Set Rear Table$. Ensure that the rear pushers do not remain under the mailpiece stack when the shuttle plate is fully back. If the pushers do in fact remain under the bottom mailpiece, repeat *steps 2 to 7*.

- **Note :** Two pushers are provided with the BK425 feeder base. In the case of a narrow piece, only one pusher in the central pusher slot may be required. An improper pusher setting will result in a damaged or jammed mailpiece if the pusher
 - is set too high. Conversely, a pusher which is set too low or too far away will have no effect on feeding performance.

2.3 Material Side Guide Adjustments

Proper adjustment of the material side guides will permit dependable and accurate feeding of the mailpieces so that they are correctly aligned when presented under the printhead(s). The objective of this section of the transport base is to straighten out any mailpiece which may come out of the feeder in a skewed manner such that when the printheads produce the image, it will be placed properly and accurately onto the mailpiece. When adjustment of the side guides is performed, it is imperative that they not squeeze and retard the advancing mailpiece as this would result in incorrect print positioning.

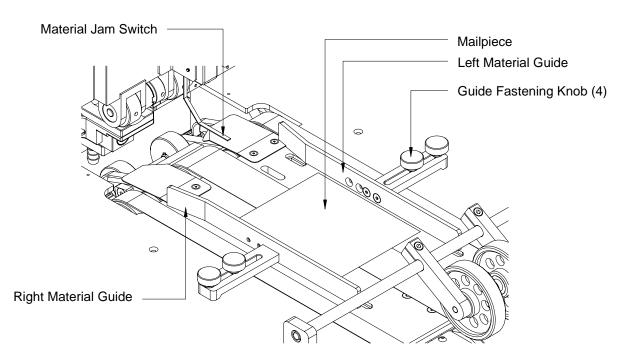


Figure 2.7 - Outfeed section of the feed rollers illustrating the material side guides.

To Adjust the Material Side Guides (see Figure 2.7)

The material side guides, used to correct mailpiece skew, must be set correctly to ensure that the mailpieces are directed in a straight fashion into the inkjet imaging area

- 1. Loosen and remove the fastening knob(s) present on each *material side guide*.
- 2. Turn the vacuum pump ON and place mailpieces in the feed hopper. Rotate the handwheel in a clockwise fashion to cycle the machine and dispense a mailpiece onto the transport belts. Stop the rotation the instant the trailing edge of the mailpiece has cleared the feed rollers.
- 3. Place the *left* and *right side guides* about 1/16" to 1/8" from the corresponding edge of the mailpiece. Ensure that the guides <u>do not</u> pinch the mailpiece anywhere along its edges.
- 4. Replace the fastening knob(s) in the nearest threaded holes located in the base's tabletop, and by turning them in a clockwise fashion, re-tighten them.
- 5. Dispense another mailpiece onto the transport belts by rotating the handwheel and check that the mailpiece's path is unobstructed by the material side guides. If so repeat *steps 1 to 4*.

Note : If the material side guides are improperly set, the mailpiece may become trapped between them and/or cause a jam at the output of the feed rollers. The Material Jam switch may trigger resulting in a system stoppage if the material side guides are incorrectly set.

Because there are no threaded holes in the vacuum tabletop, only one fastening knob may be used for #10 envelopes.

2.4 Vacuum System Adjustments

The vacuum system consists of a **Vacuum** circuit-breaker switch, a centrifugal pump for the feeder, and a regenerative blower for the transport belts. In addition, the feeder pump system is equipped with a vacuum distribution block featuring a relief valve and vacuum gauge, and a hose leading to the feeder vacuum plate. Vacuum flow through the hose is regulated with a shutoff valve for light mailpieces (*see Figure 2.8*).

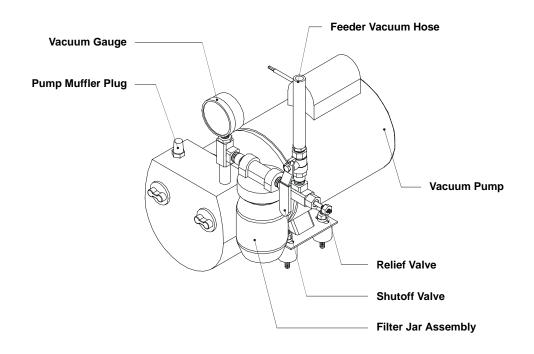


Figure 2.8 - *Feeder vacuum pump system illustrating vacuum relief valve, shutoff valve, filter jar assembly, vacuum gauge and hose location.*

2.4.1 Feeder Vacuum Level Setting

Adjustments to the vacuum system are simple and accomplished quite readily by an operator. Most adjustment points are situated on the distribution block with filter replacement being done at the filter jar assembly. Vacuum pressure regulation in the range of 20 to 25 in. Hg is provided by the vacuum relief valve and is observed at the vacuum gauge. Should vacuum pressure remain persistently low even after filter replacement and relief valve adjustment, it may be necessary to replace the pump vanes which should only be performed by the factory or an authorized dealer.

To Set Vacuum Level (25 in. Hg) (see Figure 2.8)

Peak feeder performance is achieved when the vacuum level is set to its maximum which is in the 20 - 25 in. Hg range. Adjustment is made via the vacuum relief valve located on the distribution block.

- 1. Remove the front panel door to expose the vacuum pump and distribution block.
- 2. Close the shutoff valve by rotating it fully clockwise so that the valve handle points to the right (away from the vacuum pump).
- 3. Turn the vacuum pump ON with the **Vacuum** switch located on the instrument panel (*see Figure 2.1*).
- 4. Take a vacuum level reading from the vacuum gauge. If it appears low (< 20 in. Hg.), an adjustment of the vacuum relief valve will be required.
- 5. Place a flat screwdriver in the vacuum relief valve slot, and, with the other hand, rotate the nut in a clockwise direction in order to compress the spring. Keep rotating downward until maximum pressure (25 In. Hg.) has been attained.

Note : If after this adjustment has been completed, the vacuum level is still below acceptable values (< 20 In. Hg.) and the filter has been replaced, it may be necessary to replace the vacuum pump vanes. This should only be done by an authorized technician.

If it appears that the vacuum pump vanes are worn, please contact your dealer or the factory for assistance.

2.4.2 Feeder Spool Valve Adjustments

The spool valve which controls the vacuum flow to the vacuum feed plate must be properly set to ensure optimum performance of the feeder station. The correct vacuum setting is such that when the shuttle plate is completely back, the vacuum is fully ON. Conversely, it must just go OFF when the leading edge of the mailpiece is 1/4" (6 mm) past the feed rollers.

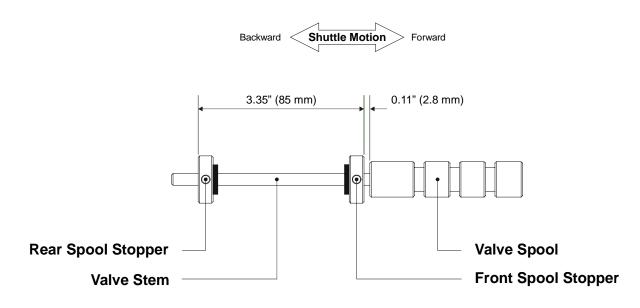


Figure 2.9 - Spool valve assembly illustrating the initial settings for the front and rear spool stoppers. Arrow indicates shuttle feed plate movement.

The spool valve controls the sequencing of the vacuum supply to the vacuum feed plate permitting proper mailpiece separation and dispensation. The front spool stopper regulates the vacuum turn-ON time which occurs when the shuttle feed plate is fully back causing the vacuum feed plate to "pull down" (separating) the next mailpiece from the stack. Vacuum supply just begins when the shuttle feed plate is 1/8" (3mm) from the fully back position and is completely supplied at the fully back position. Once the vacuum is ON, it remains so until the rear spool stopper disengages it 1/4" past the center of the feed rollers.

Improper setting of the front spool stopper will cause a partially obstructed vacuum port resulting in insufficient vacuum being supplied to the feeder.

The rear spool stopper's task is to shut-OFF the vacuum after the front of the vacuum feed plate has past the center of the feed rollers by 1/4" (6 mm) with the objective being to keep the vacuum supply ON until the shuttle feed plate has brought the separated mailpiece into the feed rollers whereupon it is dispensed onto the transport belts. If vacuum is maintained too long, the mailpiece may be damaged as the feed rollers would attempt to advance it while the vacuum would continue to "hold it down" acting as a brake. Conversely, if the vacuum is not maintained ON long enough, the mailpiece might slip with its lead edge not being deposited between the feed rollers resulting in a misfeed.

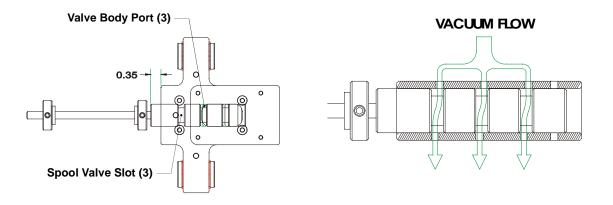


Figure 2.10 - Feeder vacuum valve assembly illustrating the location of the spool assembly when the shuttle feed plate has attained its fully back position. Side view shows vacuum flow from the top to the lower valve body port when spool valve slots are properly centered along the ports. End port shown is the vent port which is completely blocked by the spool. To Adjust the Front Spool Stopper (Vacuum ON setting)

This adjustment is best accomplished by removing the vacuum feed plate in order to view the spool valve slot alignment with respect to the valve body ports (3) (*see Figure 2.2*).

- 1. Remove the vacuum feed plate as per $\boxed{=}$ To Install a Vacuum Feed Plate.
- 2. With a *3/32" hex* key, loosen both the front and rear spool stoppers. The spool stopper screws should be accessed through the central pusher slot of the shuttle feed plate *If the screws are not aligned with the pusher slot, The feeder plate will have to be removed to access and rotate the spool such that the screws are visible from the top.*
- 3. Adjust the front spool stopper as per the initial setting illustrated in *Figure 2.9*. Tighten lightly onto the valve stem with a *3/32" hex* key. Repeat for the rear spool stopper.
- 4. Rotate the handwheel until the shuttle feed plate is fully back. Observe the position of the spool valve's slot with respect to the corresponding valve body's port. The spool valve's slot should be centered over the upper and lower ports with no slot edges showing (*see Figure 2.10*). If this is not so, the front spool stopper will have to be adjusted; proceed to *step 5*.
- 5. Loosen the front spool stopper screw with a 3/32'' hex key.
- 6. Insert the *3/32" hex* key in the rear spool stopper screw, and proceed to move the complete spool valve assembly until the spool valve's slot is centered over the upper and lower valve body ports. No spool valve slot edges should be visible.
- 7. With a *3/32" hex* key, tighten the front spool stopper screw against the valve stem ensuring that the rubber washer and front spool stopper are resting against the Shuttle Slide Shaft Mount (*P/N 330605*).
- 8. Repeat *step 4* to ensure that the front spool stopper is properly set. You can double-check this setting by measuring the distance by which the spool protrudes from the rear of the valve body. This measurement should be 0.35" (8.9 mm) as per *Figure 2.10*.

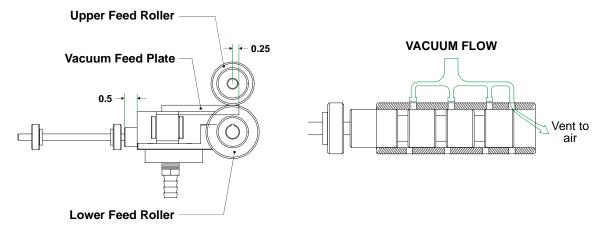


Figure 2.11 - Feeder vacuum valve assembly illustrating the location of the spool assembly when the shuttle feed plate is 1/4" past the center of the feed rollers. Side view shows vacuum flow from the top to the exhaust port when vacuum is released. End port shown is the vent port which is fully open.

To Adjust the Rear Spool Stopper (Vacuum OFF setting)

- 1. Once the proper position has been achieved for the front spool stopper, it is now necessary to adjust the rear spool stopper such that the vacuum shuts off the instant the lead edge of the vacuum feed plate is 1/4" (6 mm) past the center of the feed rollers. With the initial rear spool stopper setting as per *Figure 2.9*, rotate the handwheel slowly until the vacuum is just OFF and is no longer supplied to the vacuum feed plate. Measure the position of the lead edge of the vacuum feed plate with respect to the center of the feed rollers.
- 2. If the vacuum shuts OFF too soon (*the front of the vacuum feed plate position is* < 1/4''), then the rear spool stopper moved backward the distance necessary to cause vacuum shutoff at 1/4".

- OR -

- 2. If the vacuum shuts OFF too late (*the front of the vacuum feed plate position is* > 1/4''), then the rear spool stopper will have to be moved forward the distance necessary to cause vacuum shutoff at 1/4''.
- 3. Once you have determined the amount of movement necessary and the direction in which the rear spool stopper should be moved as per *step 2*, loosen the rear spool stopper screw with a 3/32'' hex key.
- 4. Hold the spool valve assembly stationary by placing a *3/32" hex* key in the front spool stopper screw.

- 5. Place another 3/32" hex key in the rear spool stopper screw and move it according to the distance calculated in *step 2*. Ensure that the rubber washer and rear spool stopper are resting against the Shuttle Slide Shaft Mount (*P/N 330605*) and retighten the screw in the rear spool stopper when the distance has been achieved.
- 6. Cycle the machine by rotating the handwheel until the vacuum supply is just OFF. Observe the position of the lead edge of the vacuum feed plate with respect to the center of the feed rollers. The distance measured should be about 1/4". If this is not so, the rear spool stopper will have to be re-adjusted by repeating *steps 1 to 5*.
- 7. Replace the vacuum feed plate.
- 8. Cycle the machine with the handwheel and ensure that the vacuum sequencing is correct. If not "fine-tune" the settings as per the previous instructions until proper sequencing is achieved.

Note: Valve spool setting is very important to the smooth operation of the feeder station. Incorrect placement of the front and/or rear spool stopper will result in inconsistent or complete failure of the feeding operation.

An improper front spool stopper setting results in insufficient vacuum being supplied to the vacuum feed plate. The resulting lack of optimal vacuum supply may cause inconsistent material feeding because the vacuum feed plate may not be able to "pull down" and "hold onto" the bottom mailpiece. If the rear spool stopper is improperly set, it will result in inconsistent or no material feeding since the vacuum feed plate is not depositing the front of the mailpiece between the feed rollers. Damage of the mailpiece may also occur if the vacuum holds on too long to a mailpiece after the feed rollers have engaged.

2.5 Maintenance Schedule

The maintenance schedule table presented below applies to equipment which is operated daily on an 8 hour basis. If the equipment is to be used more frequently than the aforementioned operating standard, please adjust your schedule accordingly.

 Table 2.1 - Maintenance Schedule Table

Period	Maintenance Function
Daily	Wipe table surface clean of paper dust and other accumulated debris.
	Remove the front door and clean any debris, which may have fallen into the machine.
	Check the vacuum filters. If they appear to be clogged, remove them from the jars and clean them. If they are beyond cleaning, replace the vacuum filters (<i>P/N 802036</i>).
Monthly	The following operations should be performed with the shuttle feed plate removed for access. (See item #8 & #18 - 325342A, Tabletop Assembly)
	Remove vacuum feed plate and clean the vacuum valve assembly removing any dust, which may be present. This may best be accomplished with a small compressor. (See To Install a Vacuum Feed Plate (Figure 2.5))
	Remove the feeder shuttle plate and clean the exposed shuttle mechanism assembly. Apply a few drops of light oil to the hardened shuttle slide shafts along the contact area of the linear bearings. (See item #1 & #8 - 100340A - Shuttle feeder Assembly)
	Using a grease gun with a flexible nozzle, apply grease to the rod ends. (See item #2 - 100340A - Shuttle feeder Assembly)
	Clean vacuum lines and fittings with compressed air.
Semi-Annually	The following operations should be performed with the Vacuum Belt Tabletop Assembly removed for access. (See item #14 – 325341A, Base Mechanical Assembly)
	Grease the two bearings holding the transport driveshaft. These bearings are equipped with grease nipples. Use any commercially available grease. (See item #11 & #12 - 100320A - Mainshaft Assembly)
	Examine all mechanical drive components for wear. Replace if necessary.
	Examine the table belts and feed rollers for wear. Replace if necessary.

Note: Acquiring a small air compressor is recommended. Compressed air is useful in removing debris and is indispensable in cleaning out the vacuum systems.

BK425 Assembly Drawings

Appendix A

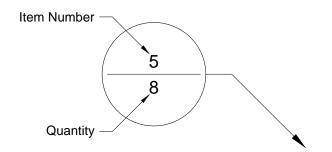
List of Figures

Figure A-1: Left Inline Feeder System (BK425LS)
Figure A-2: Right Inline Feeder System (BK425RS)A-4
Figure A-3: Outfeed Roller Shaft Assembly (100314A)
Figure A-4: Mainshaft Assembly (100320A)A-6
Figure A-5: Shuttle Feeder Assembly (100340A)
Figure A-6: Table Belt Takeup Roller Assembly (106323A)
Figure A-7: Idler Shaft Assembly (120401A)
Figure A-8: Left Material Guide Assembly (212300A)
Figure A-9: Right Material Guide Assembly (212301A)
Figure A-10: Feeder Bridge Assembly (300327A)
Figure A-11: Right Sideframe Assembly (300340A)
Figure A-12: Left Sideframe Assembly (BK425) (300341A)
Figure A-13: Rear Table Assembly (310340A)
Figure A-14: Vacuum Belt Tabletop Assembly (325340AA)
Figure A-15: Base Mechanical Assembly (BK425) (325341A)
Figure A-16: Tabletop Assembly (BK425) (325342A)
Figure A-17: Skidbar Assembly (330340A)
Figure A-18 : Knob Assembly, 10-32 UNF x 1 ¹ / ₄ " (438110A)
Figure A-19: Terminal Block 2 Assembly (615334A)
Figure A-20: Terminal Block 1 Assembly (615335A)
Figure A-21: Base Cabinet Assembly (700425A)
Figure A-22: Instrument Panel Assembly (BK425) (706341A)
Figure A-23: Base Control Board Assembly (706425A)
Figure A-24: Electrical Box Assembly (706426A)
Figure A-25: Motor Assembly (800002A)
Figure A-26: Vacuum Distributor Assembly (802072A)

List of Tables

Table A-1: Left Inline Feeder System (BK425LS)	A-1
Table A-2: Right Inline Feeder System (BK425RS)	A-3
Table A-3: Outfeed Roller Shaft Assembly (100314A)	A-5
Table A-4: Mainshaft Assembly (100320A)	A-6
Table A-5: Shuttle Feeder Assembly (100340A)	A-7
Table A-6: Table Belt Takeup Roller Assembly (106323A)	A-9
Table A-7: Idler Shaft Assembly (120401A)	A-10
Table A-8: Left Material Guide Assembly (212300A)	A-12
Table A-9: Right Material Guide Assembly (212301A)	A-13
Table A-10: Feeder Bridge Assembly (300327A)	A-14
Table A-11: Right Sideframe Assembly (300340A)	A-17
Table A-12: Left Sideframe Assembly (BK425) (300341A)	A-19
Table A-13: Rear Table Assembly (310340A)	
Table A-14: Vacuum Belt Tabletop Assembly (325340A)	A-23
Table A-15: Base Mechanical Assembly (BK425) (325341A)	A-24
Table A-16: Tabletop Assembly (BK425) (325342A)	A-26
Table A-17: Skidbar Assembly (330340A)	A-28
Table A-18: Knob Assembly, 10-32 UNF x 1 ¼" (438110A)	A-29
Table A-19: Terminal Block 2 Assembly (615334A)	A-30
Table A-20: Terminal Block 1 Assembly (615335A)	A-31
Table A-21: Base Cabinet Assembly (700425A)	A-33
Table A-22: Instrument Panel Assembly (BK425) (706341A)	A-35
Table A-23: Base Control Board Assembly (706425A)	A-37
Table A-24: Electrical Box Assembly (706426A)	A-38
Table A-25: Motor Assembly (800002A)	A-39
Table A-26: Vacuum Distributor Assembly (802072A)	A-40

Balloon Annotation and Parts Listing



Item	Part Number	Quantity	Description	Reference
1				
2				

The following is a description of how to interpret the information in this section:

Item:

This column indicates the item number used for each unique part in an assembly drawing. It is matched with the top number in the balloon pointing at the associated part.

Part Number:

This column represents the Buskro part number.

Quantity:

This represents the total number of a given part in an assembly. It is matched with the bottom number in the balloon pointing at the associated part.

Description:

This column contains a brief description of the part.

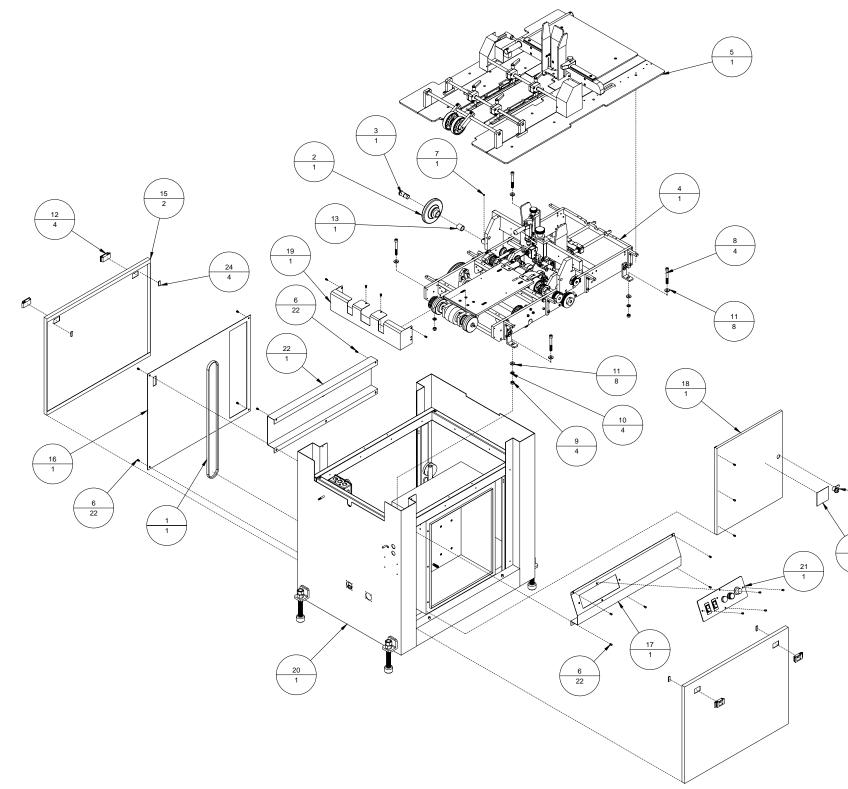
Reference:

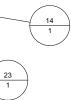
This column indicates the page location for sub-assemblies.

Item	Part Number	Quantity	Description	Reference
1	120362	1	V Belt, A55	
2	127004	1	Handwheel	
3	127301	1	Handwheel Shaft	
4	325341A	1	Base Mechanical assembly (BK425)	Page A-24
5	325342A	1	Tabletop Assembly (BK425)	Page A-26
6	404520	22	Screw, BHCS, 10-32 UNF x 3/8"	
7	404805	1	Screw, SHSS, 10-32 UNF x 1/8"	
8	407290	4	Screw, SHCS, 3/8-16 UNC x 3"	
9	420020	4	Nut, 3/8-16 UNC	
10	439020	4	Lockwasher, 3/8" I.D.	
11	440020	8	Washer, 3/8" I.D.	
12	446000	4	Side Latch – A3	
13	500213	1	One Way Bearing, ³ / ₄ " I.D. x 1" O.D.	
14	615313	1	Cam Lock, 5/8"	
15	700043	2	Cabinet Door (BK425)	
16	700047	1	Protective Screen (BK425)	
17	700336	1	Feeder Instrument Panel, Left (BK425)	
18	700337	1	Electrical Box Door (BK425)	
19	300339	1	Table End Cover	
20	700425A	1	Base Cabinet Assembly (BK425)	Page A-33
21	706341A	1	Instrument Panel Assembly (BK425)	Page A-35
22	713339	1	Rear Top Cover, Right	-
23	803020	1	Electrical Warning Label	
24	9101644	4	Sponge Rubber WeatherStrippiing, 1"	

Table A-1: Left Inline Feeder System (BK425LS)

Figure A-1: Left Inline Feeder System (BK425LS)

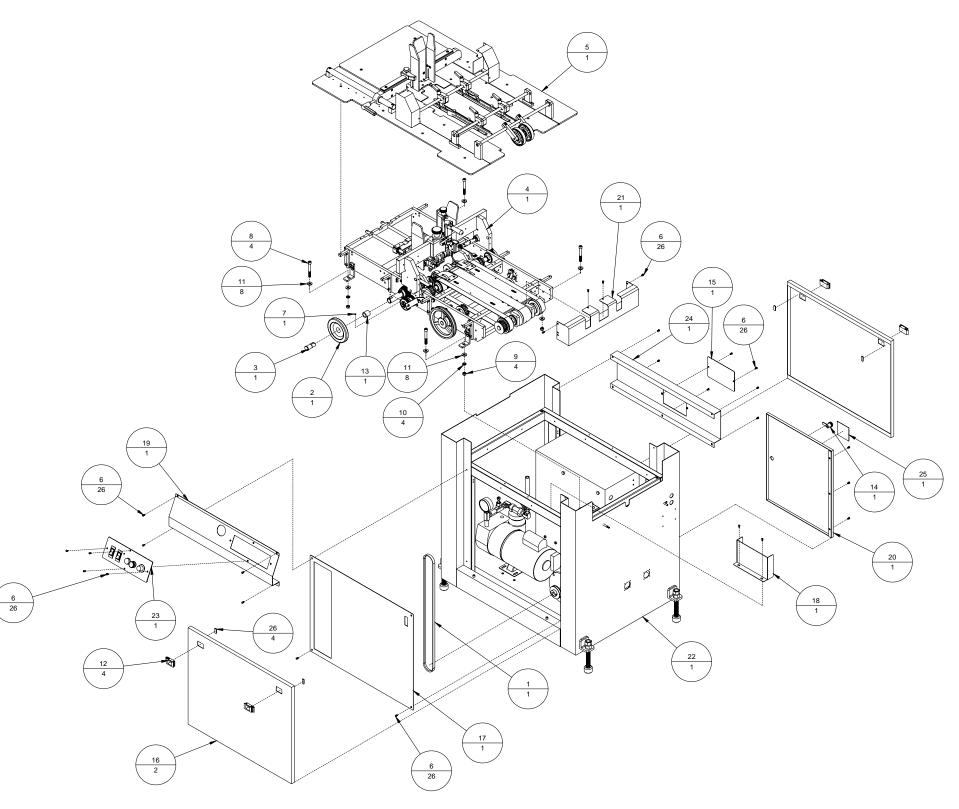




Item	Part Number	Quantity	Description	Reference
1	120362	1	V Belt, A55	
2	127004	1	Handwheel	
3	127301	1	Handwheel Shaft	
4	325341A	1	Base Mechanical assembly (BK425)	Page A-24
5	325342A	1	Tabletop Assembly (BK425)	Page A-26
6	404520	26	Screw, BHCS, 10-32 UNF x 3/8"	
7	404805	1	Screw, SHSS, 10-32 UNF x 1/8"	
8	407290	4	Screw, SHCS, 3/8-16 UNC x 3"	
9	420020	4	Nut, 3/8-16 UNC	
10	439020	4	Lockwasher, 3/8" I.D.	
11	440020	8	Washer, 3/8" I.D.	
12	446000	4	Side Latch – A3	
13	500213	1	One Way Bearing, ¾" I.D. x 1" O.D.	
14	615313	1	Cam Lock, 5/8"	
15	700030H	1	Rear Gear Cover	
16	700043	2	Cabinet Door (BK425)	
17	700047	1	Protective Screen (BK425)	
18	700333	1	Pulley Guard Cover	
19	700335	1	Feeder Instrument Panel, Right (BK425)	
20	700337	1	Electrical Box Door (BK425)	
21	300339	1	Table End Cover	
22	700425A	1	Base Cabinet Assembly (BK425)	Page A-33
23	706341A	1	Instrument Panel Assembly (BK425)	Page A-35
24	713337	1	Rear Top Cover, Right	
25	803020	1	Electrical Warning Label	
26	9101644	4	Sponge Rubber WeatherStrippiing, 1"	

Table A-2: Right Inline Feeder System (BK425RS)

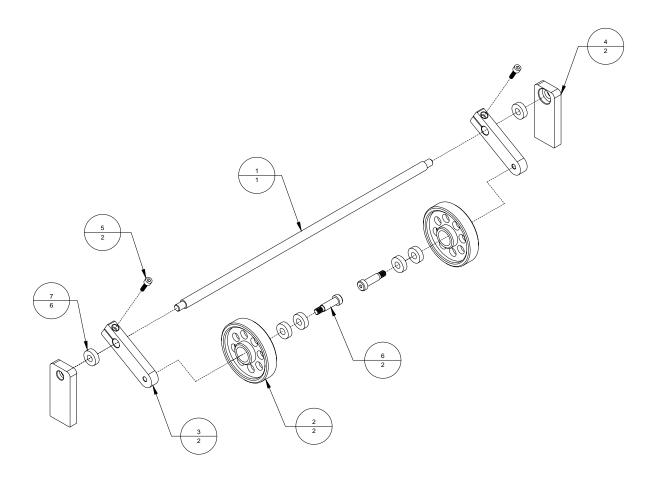
Figure A-2: Right Inline Feeder System (BK425RS)



Item	Part Number	Quantity	Description	Reference
1	100314	1	Outfeed Roller Shaft	
2	106182	2	Pressure roller	
3	203302	2	Outfeed Roller Arm	
4	330309	2	Outfeed Roller Bracket	
5	405250	2	Screw, SHCS, ¼-20 UNC x ¾"	
6	416170	2	Shoulder Bolt, 3/8" x 1", (5/15-18)	
7	500020	6	Bearing, 3/8" ID	

Table A-3:	Outfeed	Roller Shafe	t Assembly	(100314A)
------------	---------	--------------	------------	-----------

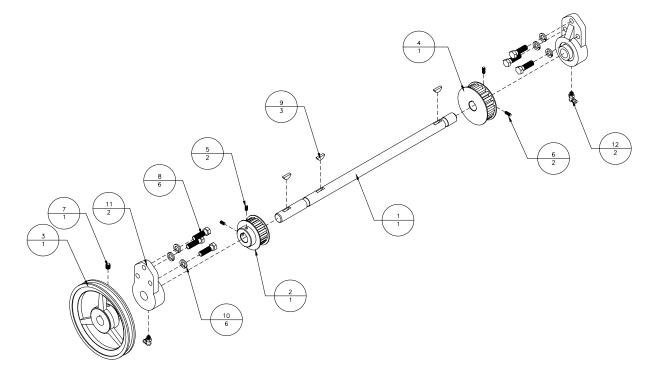
Figure A-3: Outfeed Roller Shaft Assembly (100314A)



Item	Part Number	Quantity	Description	Reference
1	100320	1	Mainshaft	
2	116301	1	Pulley, 18LB075 x ¾"	
3	116305	1	Sheave, AK64 x ¾"	
4	116308	1	Pulley, 22LB075 x ¾"	
5	404820	2	Screw, SHSS, 10-32 UNF x 3/8"	
6	404830	2	Screw, SHSS, 10-32 UNF x ½"	
7	406820	1	Screw, SHSS, 5/16-18 UNC x 3/8"	
8	407675	6	Screw, HHMS, 3/8-16 UNC x 1 ¼"	
9	430250	3	Woodruff Key, #606, 3/16" x ¾"	
10	439020	6	Lockwasher, 3/8" ID	
11	500300	2	Bearing, UCFK204-12S, 3/4" ID	
12	802204	2	Grease Fitting, 90 Deg., 1/4-28	

Table A-4: Mainshaft Assembly (100320A)

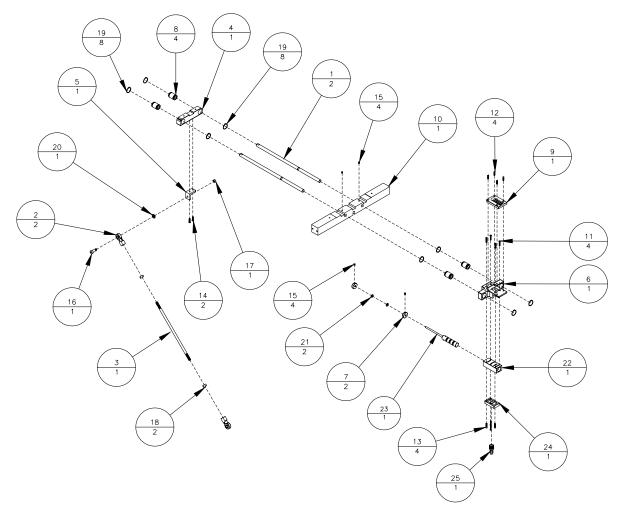
Figure A-4: Mainshaft Assembly (100320A)



Item	Part Number	Quantity	Description	Reference
1	100340	2	Shuttle Slide Shaft (BK425)	
2	200009	2	Rod End, 3/8" ID	
3	200010H	1	Shuttle Crank Link	
4	212002H	1	Rear Shuttle Block	
5	212003H	1	Rear Shuttle Bracket	
6	212004H	1	Vacuum Shuttle Body	
7	212012	2	Shuttle Stopper	
8	212030	4	Linear Bearing	
9	310034H	1	Concave Feed Plate	
10	330001H	1	Shuttle Slide Shaft Mount	
11	403050	4	Screw, FHCS, 8-32 UNC x ³ / ₄ "	
12	403230	4	Screw, SHCS, 8-32 UNC x ½"	
13	403250	4	Screw, SHCS, 8-32 UNC x ³ / ₄ "	
14	404550	2	Screw, BHCS, 10-32 UNF x ¾"	
15	404810	4	Screw, SHSS, 10-32 UNF x ¼"	
16	416140	1	Shoulder bolt, 3/8" x 5/8"	
17	420015	1	Nut, 5/16-18 UNC	
18	420025	2	Nut, 3/8-24 UNF	
19	437088	8	Retaining Ring, 7/8 ID, External	
20	439020	1	Lockwasher, 3/8" ID	
21	440510	2	Rubber Washer, ¼" ID	
22	802004H	1	Vacuum Valve Body	
23	802005HA	1	Vacuum Valve Plunger	
24	802007H	1	Vacuum Fitting Block	
25	802058	1	Barb Vacuum Hose Fitting, 3/8" NPT x 1/2"	

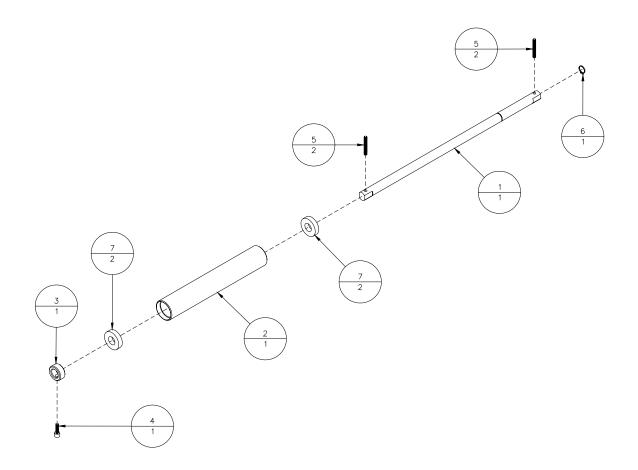
Table A-5: Shuttle Feeder Assembly (100340A)

Figure A-5: Shuttle Feeder Assembly (100340A)



Item	Part Number	Quantity	Description	Reference
1	100325	1	Table Belt Takeup Shaft	
2	106323	1	Table Belt Takeup Roller	
3	131040	1	Collar, 5/8" ID	
4	405250	1	Screw, SHCS, ¼-20 UNC x ¾"	
5	405885	2	Screw, SHSS, ¼-20 UNC x 2"	
6	437063	1	Retaining Ring, 5/8" ID, External	
7	500040	2	Bearing, R10, 5/8" ID	

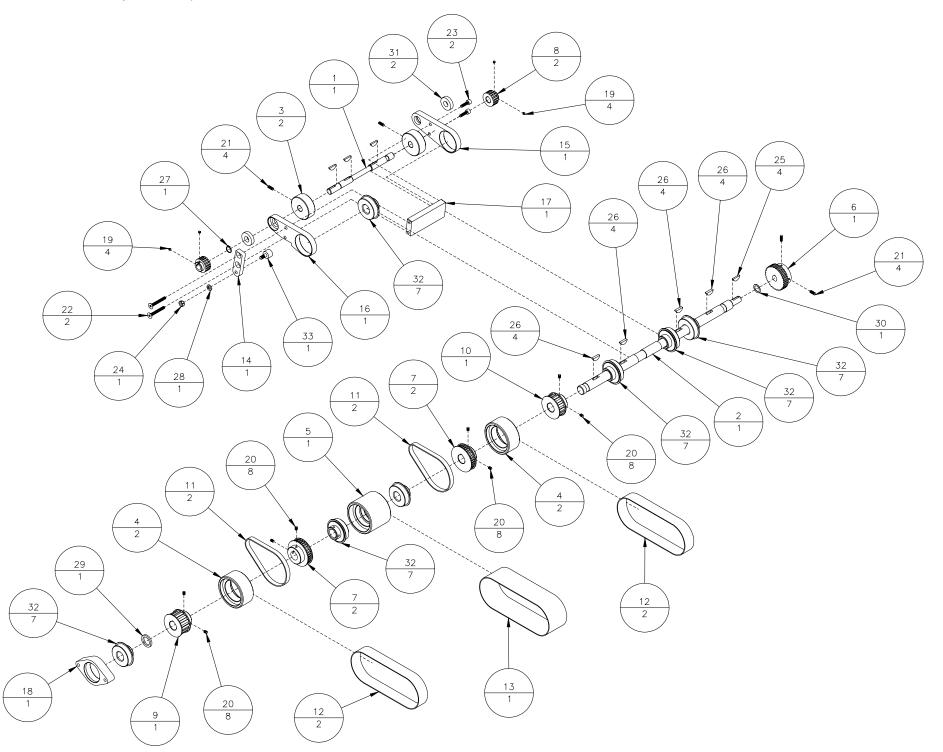
Figure A-6: Table Belt Takeup Roller Assembly (106323A)



	5	5.(
Item	Part Number	Quantity	Description	Reference
1	100304	1	Lower Feed Roller Shaft	
2	100321	1	Idler Shaft	
3	106300	2	Lower Feed Roller	
4	106320	2	Vacuum Belt Idler Roller	
5	106322	1	Vacuum Belt Idler Roller	
6	110005H	1	Gear, NSS1632, ½" ID	
7	116005H	2	Pulley, 32XL037 x ¾"	
8	116009H	2	Pulley, 18XL037 x 1/2"	
9	116306	1	Pulley, 15LF075 x ¾"	
10	116320	1	Pulley, 15LF050 x ¾"	
11	120212	2	Timing Belt, 120XLB037	
12	120401	2	Table Belt 1"	
13	120402	1	Table Belt 2"	
14	203005H	1	Hopper Extension Arm	
15	203308	1	Left Hopper Arm	
16	203309	1	Right Hopper Arm	
17	320006H	1	Hopper Arm Spacer	
18	330042_2H	1	Bearing Housing, UBR204	
19	403805	4	Screw, SHSS, 8-32 UNC x 1/8"	
20	404810	8	Screw, SHSS, 10-32 UNF x ¼"	
21	404830	4	Screw, SHSS, 10-32 UNF x 1/2"	
22	405080	2	Screw, FHCS, ¼-20 UNC x 1 ½"	
23	405250	2	Screw, SHCS, ¼-20 UNC x ¾"	
24	420012	1	Nut, 1/4-28 UNF	
25	430150	4	Woodruff Key, #406, 1/8" x ¾"	
26	430250	4	Woodruff Key, #606, 3/16" x ¾"	
27	437050	1	Retaining Ring, ½" ID, External	
28	439010	1	Lockwasher, ¼" ID	
29	440050	1	Washer. 34"	
30	445015	1	Spacer Washer, 1/2" ID x 0.015"	
31	500030	2	Bearing, R8, 1/2" ID	
32	500055	7	Bearing, UBR204-12S, 3/4 ID	
33	510040	1	Cam Follower, ½" ID	
		1		

 Table A-7: Idler Shaft Assembly (120401A)

Figure A-7: Idler Shaft Assembly (120401A)



Item	Part Number	Quantity	Description	Reference
1	212300	1	Left Material Guide	
2	330321	1	Side Guide Bracket	
3	404030	2	Screw, FHCS, 10-32 UNF x ¹ / ₂ "	

Figure A-8: Left Material Guide Assembly (212300A)

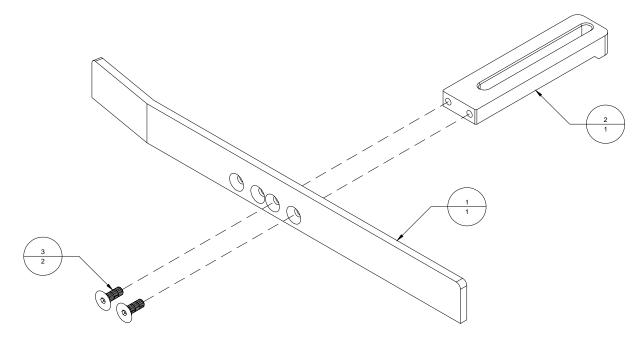
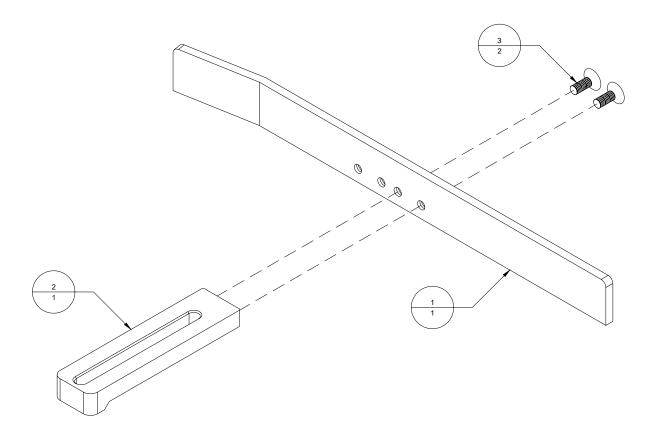


Table A-9: Right Material	Guide Assembly (212301A)
---------------------------	--------------------------

Item	Part Number	Quantity	Description	Reference
1	212301	1	Right Material Guide	
2	330321	1	Side Guide Bracket	
3	404030	2	Screw, FHCS, 10-32 UNF x ½"	

Figure A-9:	Right Material	Guide Assembly	(212301A)
-------------	----------------	----------------	-----------

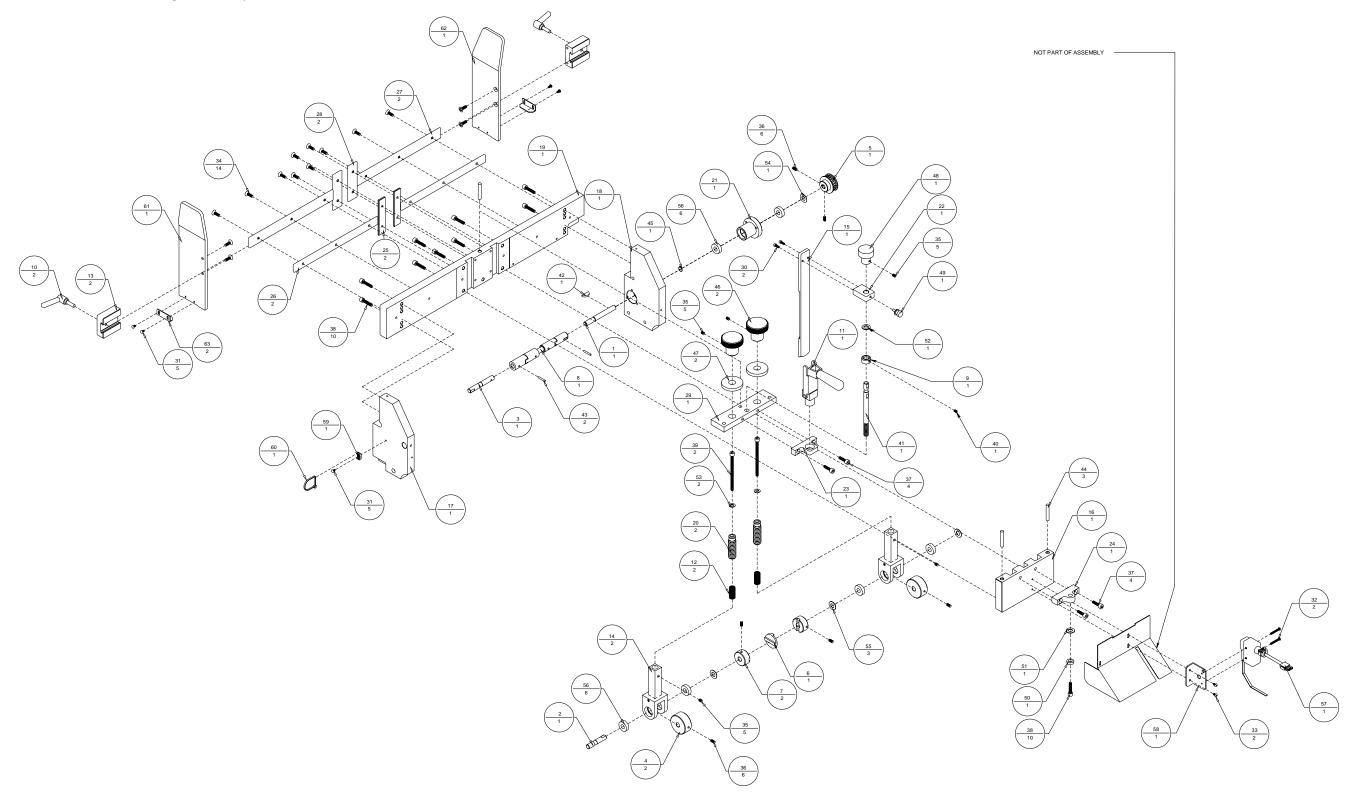


		-		
Item	Part Number	Quantity	Description Referenc	е
1	100018H	1	Upper Roller Drive Shaft	
2	100019H	1	Right Upper roller Shaft	
3	100020H	1	Left Upper Roller Shaft	
4	106007H	2	Upper Feed Roller	
5	116310	1	Pulley, 20 Tooth, 3/8" ID	
6	122006	1	Coupling Spider	
7	122007H	2	Coupling Collar	
8	122010HA	1	Universal Assembly	
9	131020	1	Collar, 3/8" ID	
10	206010	2	Side Guide Locking Lever	
11	206200	1	Release Lever	
12	209007	2	Upper Feed Roller Spring	
13	212006	2	Side Guide Clamp Block	
14	212009H	2	Upper Roller Holder	
15	212011H	1	Material Gate	
16	212600	1	Bridge Slide Mount	
17	300329	1	Right Feeder Frame	
18	300601	1	Left Bridge Frame	
19	310600	1	Feeder Bridge	
20	330007H	2	Upper Roller Adjuster	
21	330008H	1	Bridge Bearing Block	
22	330011H	1	Material Gate Block	
23	330604	1	Quick Release Bracket	
24	330610	1	Quick Release Anchor	
25	340006H	2	Material Gate Slide Space, 3/4" x 1/8"	
26	340007H	2	Side Guide Rail Spacer, ³ / ₄ " x 1/8"	
27	340008H	2	Side Guide Rail, 1" x 1/8"	
28	340009H	2	Material Slide Guide	
29	340600	1	Gate Adjuster Plate	
30	402230	2	Screw, SHCS, 6-32 UNC x 1/2"	
31	402310	5	Screw, PHMS, 6-32 UNC x ¼"	
32	402370	2	Screw, PHMS, 6-32 UNC x 1"	
33	402520	2	Screw, BHCS, 6-32 UNC x 3/8"	
34	404030	14	Screw, FHCS, 10-32 UNF x ½"	
35	404810	5	Screw, SHSS, 10-32 UNF x ¼"	
36	404820	6	Screw, SHSS, 10-32 UNF x 3/8"	
37	405250	4	Screw, SHCS, ¼-20 UNC x ¾"	
38	405270	10	Screw, SHCS, ¼-20 UNC x 1"	
39	405295	2	Screw, SHCS, ¼-20 UNC x 3 ½"	
40	405805	1	Screw, SHSS, ¼-20 UNC x 1/8"	
40	429009H	1	Gate Adjustment Screw	
42	430150	1	Woodruff Key, #406, 1/8" x ³ / ₄ "	
43	436050	2	Spring Pin, 1/8" Dia. X 3/4"	
43	436315	3	Dowel Pin, 1/4" Dia. X 1 ½"	
44	437038	1	Retaining Ring, 3/8" ID, External	
45	438007H	2	Upper Roller Knob	
40	438007 H	2	Upper Roller Locknut	
47	438010	1	Gate Adjustment Knob	
40	4381717	1	Thumbscrew, 10-32 UNF x 3/8"	
49 50	439010	1	Lockwasher, ¼"	
50	440015	1	Washer, 5/16"	
51	440010		Washel, 0/10	

 Table A-10: Feeder Bridge Assembly (300327A)

52	440021	1	Brass Washer, 3/8" ID
53	442530	2	Spacer Washer, ¼" ID x 0.032" thk
54	443815	1	Spacer Washer, 3/8" ID x 0.015" thk
55	443830	3	Spacer Washer, 3/8" ID x 0.032" thk
56	500020	6	Bearing, 3/8" ID
57	603020A	1	Jam Stop Microswitch Assembly
58	615005	1	Microswitch Bracket
59	615101	1	Tie Mount
60	615140	1	Lashing Tie
61	707007H	1	Right Side Guide
62	707008H	1	Left Side Guide
63	707009	3	Side Guide Bottom Plate

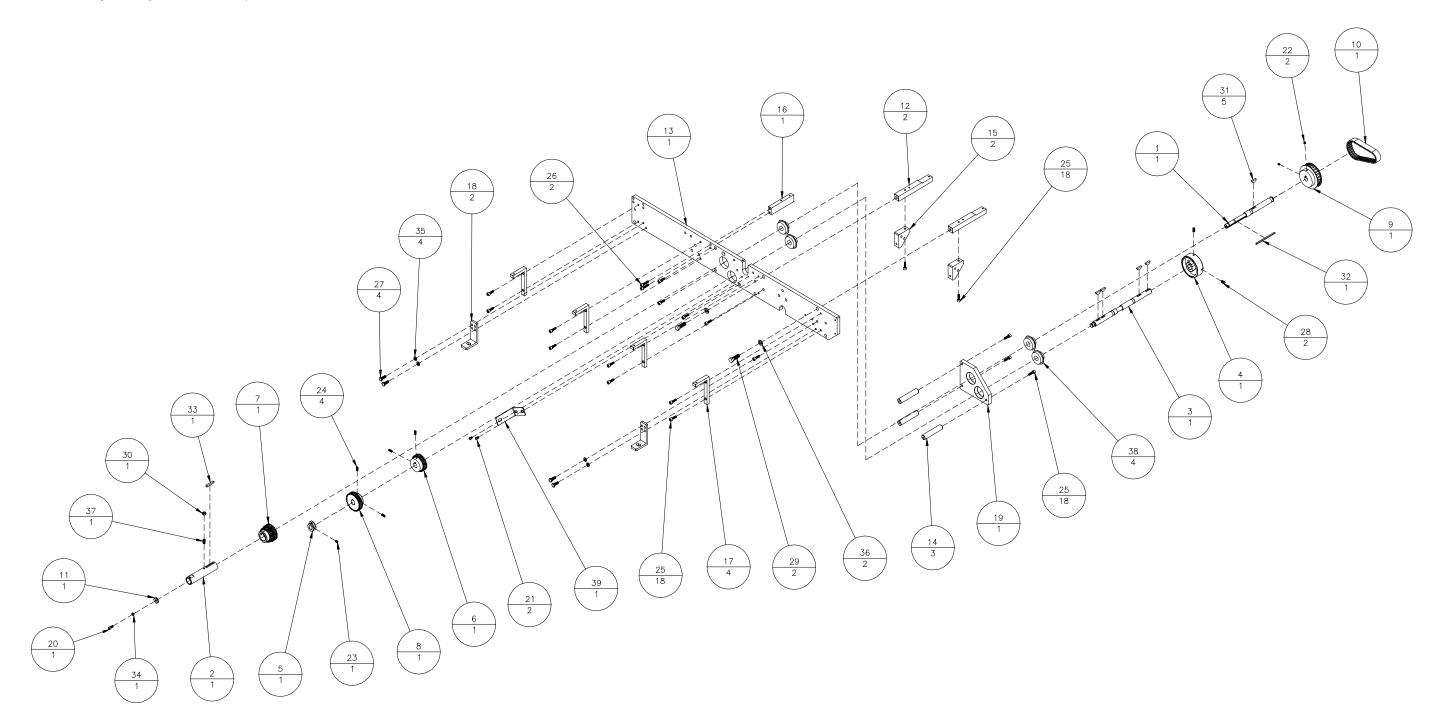
Figure A-10: Feeder Bridge Assembly (300327A)



Item	Part Number	Quantity	Description	Reference	
1	100322	1	Intermediate Shuttle Shaft	Reference	
2	100323	1	Disconnect Member		
3	100324	1	Shuttle Crankshaft		
4	109010H	1	Lower Roller Hopper Cam		
5	109050	1	Sensor Cam		
6	110321	1	Gear, 32 Tooth, 5/8" ID		
7	110322A	1	Drive Gear Assembly		
8	110323	1	Gear, 36 Tooth, 5/8" ID		
9	116321	1	Pulley, 24 Tooth, 5/8" ID		
10	120314	1	Timing Belt, 150L050		
11	127003	1	Retention Washer		
12	300332	2	Tabletop Support		
13	300340	1	Right Feeder Frame (BK425)		
14	310320	3	Gear Plate Spacer		
15	310322	2	Angle Bracket		
16	320003H	1	Tabletop Rib		
17	330013	4	Skirt Support		
18	330023H	2	Frame Mounting Foot		
19	330320	1	Variable Pitch Gear Plate		
20	404230	1	Screw, SHCS, 10-32 UNF x 1/2"		
21	404520	2	Screw, BHCS, 10-32 UNF x 3/8"		
22	404807	2	Screw, SHSS, 10-32 UNF x 3/16"		
23	404810	1	Screw, SHSS, 10-32 UNF x ¼"		
24	404830	4	Screw, SHSS, 10-32 UNF x 1/2"		
25	405250	18	Screw, SHCS, ¼-20 UNC x ¾"		
26	405270	2	Screw, SHCS, ¼-20 UNC x 1"		
27	405650	4	Screw, HHMS, ¼-20 UNC x ¾"		
28	405830	2	Screw, SHSS, ¼-20 UNC x ½"		
29	407675	2	Screw, HHMS, 3/8-16 UNC x 1 ¼"		
30	420010	1	Nut, ¼-20 UNC		
31	430250	5	Woodruff Key, #606, 3/16" x ¾"		
32	432000	3.25"	Keystock, 1/8" x 1/8"		
33	433000	1.25"	Keystock, 3/16" x 3/16"		
34	439009	1	Lockwasher, No. 10		
35	439010	4	Lockwasher, ¼" ID		
36	439020	2	Lockwasher, 3/8" ID		
37	455030	1	Ball Plunger, ¼-20 UNC x ½"		
38	500045	4	Bearing, 5/8" ID		
39	615325	1	Cycle Switch Brakcet		

Table A-11:	Right	Sideframe	Assembly	(300340A)
-------------	-------	-----------	----------	-----------

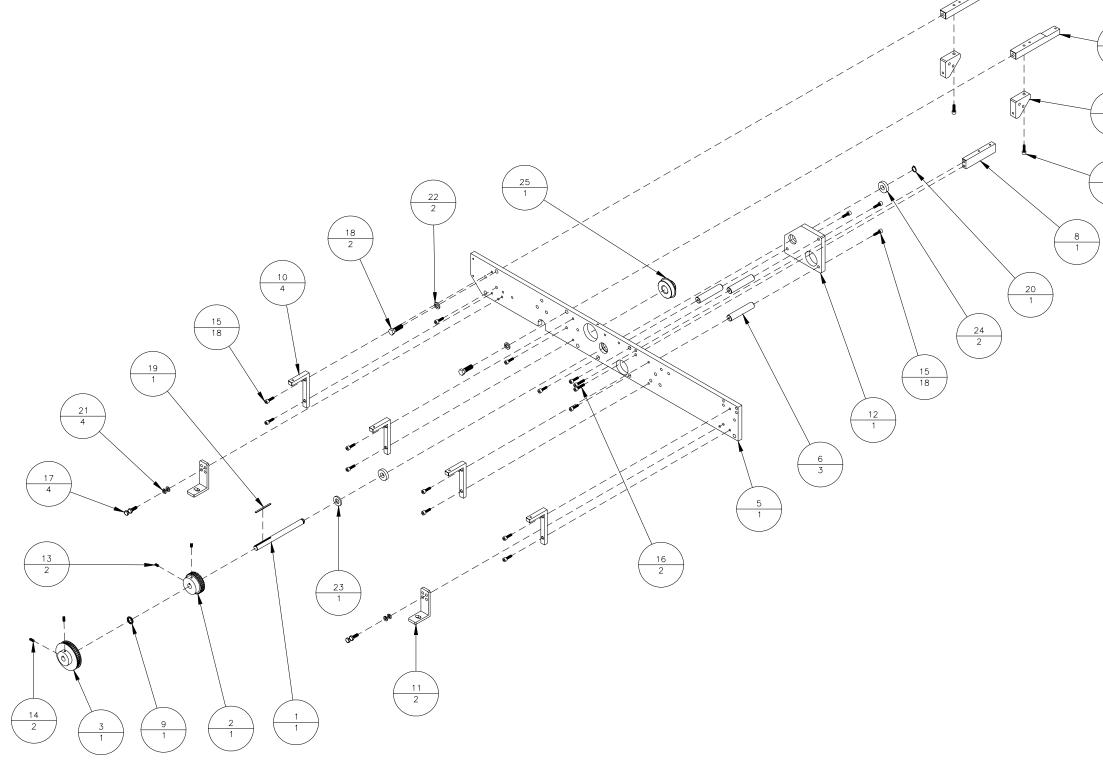
Figure A-11: Right Sideframe Assembly (300340A)

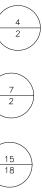


Item	Part Number	Quantity	Description	Reference
1	100341	1	Upper Roller Driveshaft	
2	110005H	1	Gear, 16 Tooth, ½" ID	
3	116300	1	Pulley, 42 Tooth, 1⁄2" ID	
4	300332	2	Tabletop Support	
5	300341	1	Left Feeder Frame	
6	310320	3	Gear Plate Spacer	
7	310322	2	Angle Bracket	
8	320003H	1	Tabletop Rib	
9	320305	1	Driveshaft Arbor Spacer	
10	330013	4	Skirt Support	
11	330023H	2	Frame Mounting Foot	
12	330340	1	Counterbalance Plate	
13	404820	2	Screw, SHSS, 10-32 UNF x 3/8"	
14	404830	2	Screw, SHSS, 10-32 UNF x ½"	
15	405250	18	Screw, SHCS, ¼-20 UNC x ¾"	
16	405270	2	Screw, SHCS, ¼-20 UNC x 1"	
17	405650	4	Screw, HHMS, 3/8-16 UNC x ¼"	
18	407675	2	Screw, HHMS, 3/8-16 UNC x 1 ¼"	
19	432000	2"	Keystock, 1/8" x 1/8"	
20	437050	1	Retaining Ring, ½" ID, External	
21	439010	4	Lockwasher, ¼" ID	
22	439020	2	Lockwasher, 3/8" ID	
23	440030	1	Washer, ½" ID	
24	500030	2	Bearing, 1/2" ID	
25	500055	1	Bearing, 3/4" ID	

Table A-12.	Left Side	^r rame Assen	nbly (BK42:	5) (<i>300341A</i>)
-------------	-----------	-------------------------	-------------	-----------------------

Figure A-12: Left Sideframe Assembly (BK425) (300341A)

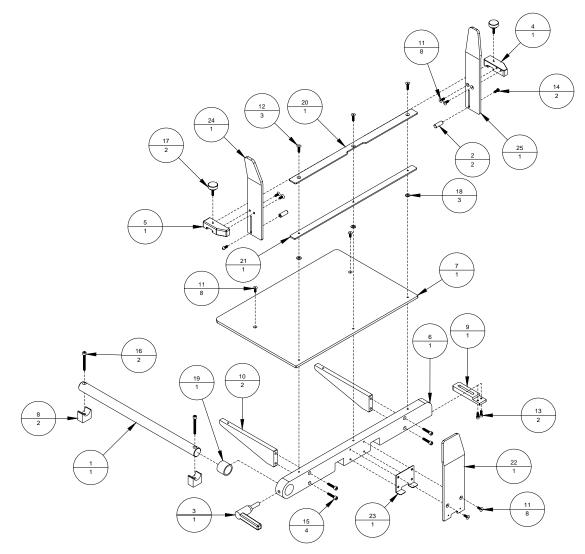




Item	Part Number	Quantity	Description	Reference
1	100344	1	Rear Table Shaft	
2	100606	2	Material Lift Pin	
3	206011	1	Rear Table Locking Lever	
4	212606	1	Left Side Guide Block	
5	212607	1	Right Side Guide Box	
6	310340	1	Rear Table Crossmember	
7	325345	1	Rear Table	
8	330341	2	Rear Table Shaft Block	
9	330342	1	Rear Table Clamp Block	
10	330344	2	Rear Table Support	
11	404030	8	Screw, FHCS, 10-32 UNF x 1/2"	
12	404050		Screw, FHCS, 10-32 UNF x ¾"	
13	404230	3	Screw, SHCS, 10-32 UNF x ½"	
14	404530	2	Screw, BHCS, 10-32 UNF x ½"	
15	405270	24	Screw, SHCS, ¼-20 UNC x 1"	
16	405285	2	Screw, SHCS, ¼-20 UNC x 2"	
17	438110A	2	Side Guide Knob Assembly	Page A-29
18	442530	3	Spacer Washer, ¼ ID x 0.32" thk	
19	505061	1	Bushing, 1" ID x 1 ¼" OD x 1" Long	
20	706342	1	Rear Table Rail	
21	706343	1	Tear Table Tail Spacer	
22	707011H	1	Rear Table Guide	
23	707341	1	Rear Table Material Guide	
24	707600	1	Right Rear Side Guide	
25	707601	1	Left Rear Side Guide	

Table A-13: Rear Table Assembly (310340A)

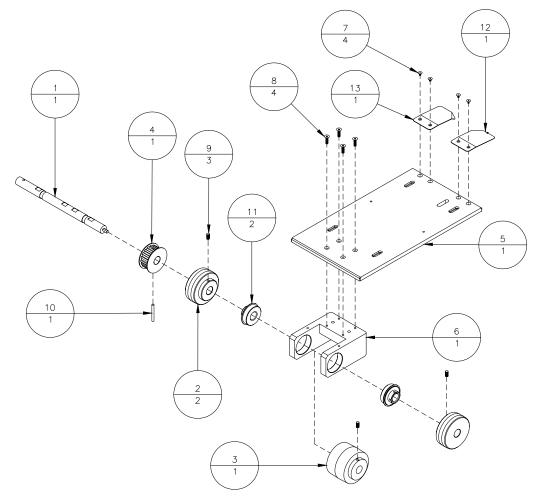
Figure A-13: Rear Table Assembly (310340A)



Item	Part Number	Quantity	Description	Reference
1	100301	1	Vacuum Belt Driveshaft	
2	106301	2	Vacuum Belt Drive Pulley	
3	106321	1	Vacuum Belt Pulley, 2"	
4	116309	1	Pulley, 18 Tooth, ¾" ID	
5	325340	1	Belt Tabletop (BK425)	
6	330306	1	Drive Pulley Block	
7	402010	4	Screw, FHCS, 6032 UNC x ¼"	
8	404050SS	4	Screw, FHCS, 10-32 UNF x ¾", SS	
9	405830	3	Screw, SHSS, ¼-20 UNC x ½"	
10	436049	1	Pin, Spring, 3/16" OD x 1 7/8"	
11	500055	2	Bearing. ¾" ID	
12	707020H	1	Material Side Guide, Right	
13	707021H	1	Material Side Guide, Left	

 Table A-14: Vacuum Belt Tabletop Assembly (325340A)

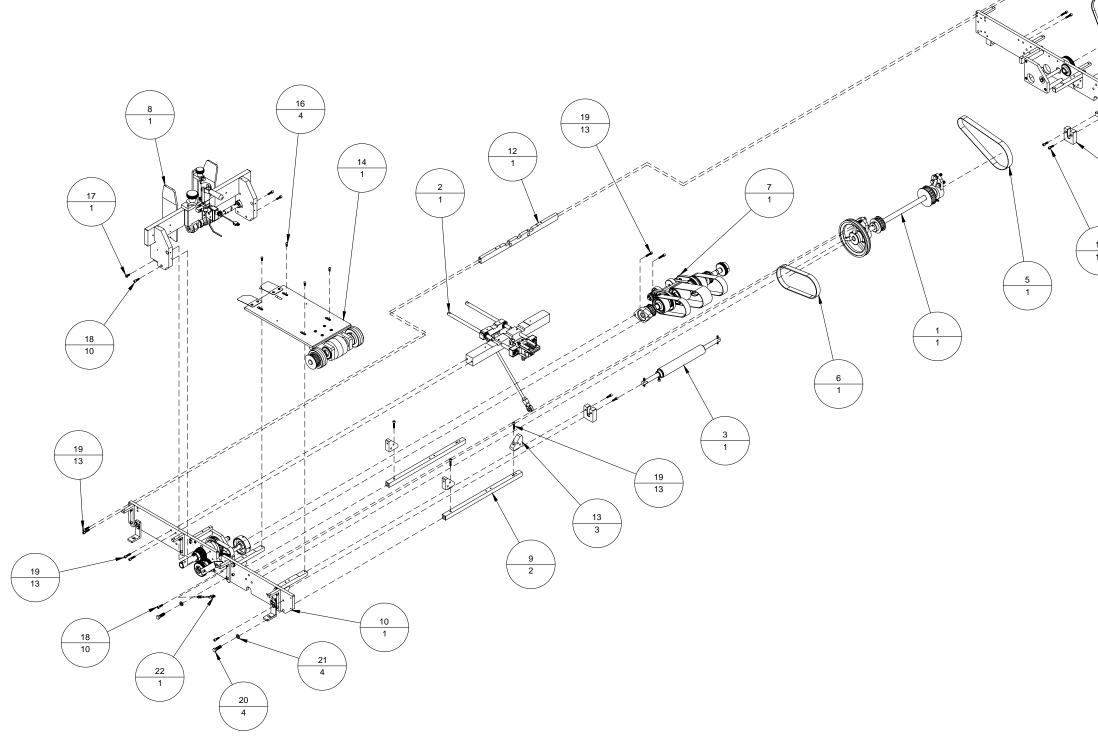
Figure A-14: Vacuum Belt Tabletop Assembly (325340AA)

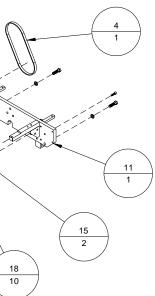


Item	Part Number	Quantity	Description	Reference
1	100320A	1	Mainshaft Assembly	Page A-6
2	100340A	1	Shuttle Feeder Assembly (BK425)	Page A-7
3	106323A	1	Table Belt Takeup Roller Assembly	Page A-8
4	120214	1	Timing Belt, 140XLB037	
5	120327	1	Timing Belt, 210L075	
6	120328	1	Timing Belt, 285L075	
7	120401A	1	Idler Shaft Assembly (BK425)	Page A-9
8	300327A	1	Feeder Bridge Assembly	Page A-14
9	300331	2	Inline Base Crossmember	
10	300340A	1	Right Sideframe Assembly (BK425)	Page A-17
11	300341A	1	Left Sideframe Assembly (BK425)	Page A-19
12	300342	1	Rear Frame Assembly	
13	310322	3	Angle Bracket	
14	325340A	1	Vacuum Belt Tabletop Assembly (BK425)	Page A-23
15	330215	2	Takeup Roller Block	
16	404530	4	Screw, BHCS, 10-32 UNF x ½"	
17	405030	1	Screw, FHCS, ¼-20 UNC x ½"	
18	405250	10	Screw, SHCS, ¼-20 UNC x ¾"	
19	405270	13	Screw, SHCS, ¼-20 UNC x 1"	
20	407675	4	Screw, HHMS, 3/8-16 UNC x 1 ¼"	
21	439020	4	Lockwasher, 3/8 ID	
22	630004A	1	Cycle Proximity Switch Assembly	

Table A-15: Base Mechanical Assembly (BK425) (325341A)

Figure A-15: Base Mechanical Assembly (BK425) (325341A)

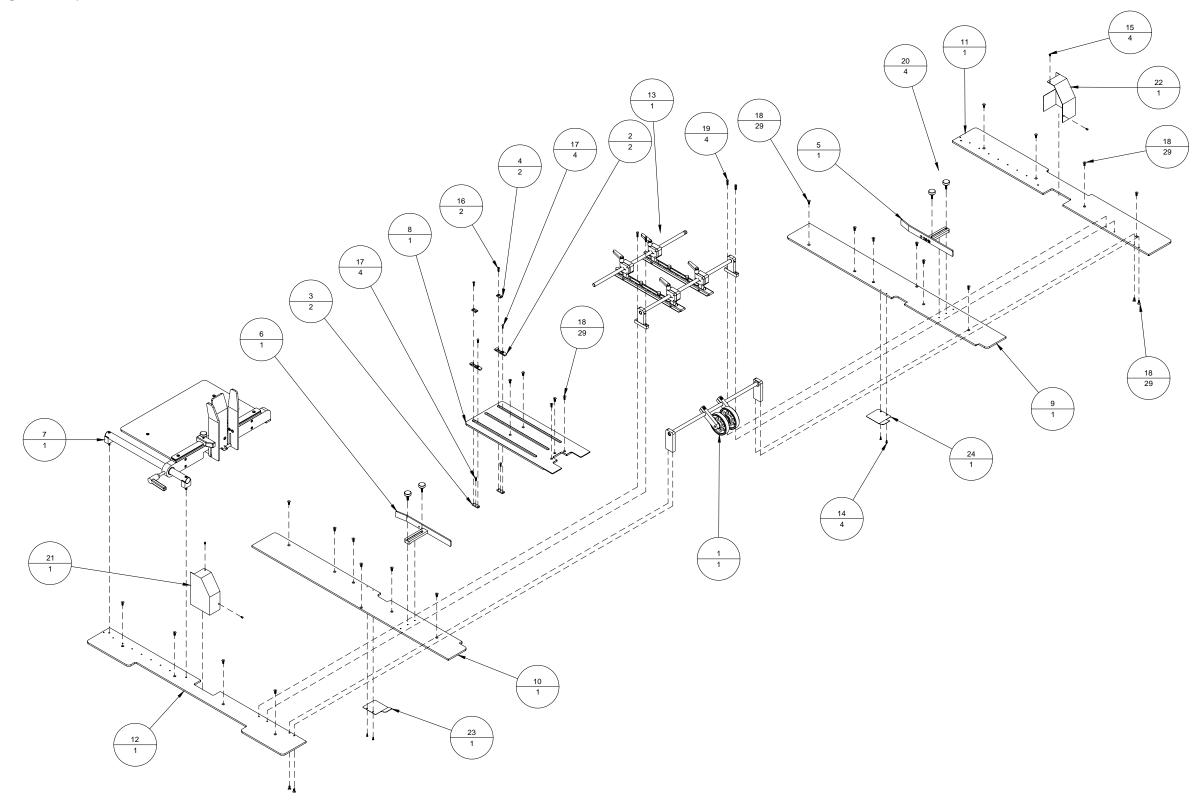




Item	Part Number	Quantity	Description	Reference
1	100314A	1	Outfeed Roller Shaft Assembly	Page A-5
2	206005	2	Pusher Body	
3	206006	2	Plate, Pusher Screw	
4	206007	2	Adjustable Pusher	
5	212300A	1	Left Material Guide Assembly	Page A-12
6	212301A	1	Right Material Guide Assembly	Page A-13
7	310340A	1	Rear Table Assembly	Page A-21
8	325005H	1	Feeder Shuttle Plate	
9	325341	1	Left Tabletop (BK425)	
10	325342	1	Right Tabletop (BK425)	
11	325343	1	Left Table Skirt (BK425)	
12	325344	1	Right Table Skirt (BK425)	
13	330340A	1	Skidbar Assembly (BK425)	Page A-28
14	402320	4	Screw, PHMS, 6-32 UNC x 3/8"	
15	402510	4	Screw, BHCS, 6-32 UNC x ¼"	
16	403030	2	Screw, FHCS, 8-32 UNC x ¹ / ₂ "	
17	403530	4	Screw, BHCS, 8-32 UNC x ½"	
18	404030	29	Screw, FHCS, 10-32 UNF x ½"	
19	404550	4	Screw, BHCS, 10-32 UNF x ¾"	
20	438110A	4	Knob Assembly, 10-32 UNF x 1 ¼"	Page A-29
21	700009H	1	Right Bridge Cover	
22	700614	1	Left Bridge Cover	
23	706344	1	Right Lower Feed Roller Guard	
24	706345	1	Left Lower Feed Roller Guard	

Table A-16: Tabletop Assembly (BK425) (325342A)

Figure A-16: Tabletop Assembly (BK425) (325342A)



Item	Part Number	Quantity	Description	Reference
1	100021H	2	Front Skidbar Shaft	
2	100026	4	Hollow Skidbar Shaft	
3	203003	4	Skidbar Arm	
4	209003	4	Spring, ¹ / ₂ ", Extension	
5	330018H	4	Skidbar Holder Block	
6	330301	2	Skidbar Body	
7	330302	2	Skidbar Bracket	
8	330304	2	Skidbar Bracket Base	
9	343006	4	Skidbar Holder Clamp	
10	403260	8	Screw, SHCS, 8-32 UNC x 7/8"	
11	404250	4	Screw, SHCS, 10-32 UNF x ¾"	
12	404570	4	Screw, BHCS, 10-32 UNF x 1"	
13	404820	2	Screw, SHSS, 10-32 UNF x 3/8"	
14	436030	4	Spring Pin, 1/8" x ½"	
15	436050	4	Spring Pin, 1/8" x ¾"	
16	438171	6	Thumbscrew, 10-32 UNF x 3/8"	
17	500211	16	Skidbar Ballbearing, ¾" OD	
18	505003	4	Bushing, 3/16" x 5/16" OD x ½" Long	
19	505004	4	Bushing, ¾" ID x 7/8" OD x ½" Long	
20	707312	2	Ball Retention Spring Plate, 3.4" x 3/8"	
21	707313	2	Ball Retention Spring Plate. 9" x 3/8"	
22	9100485	4	Lever Handle, ¼-20 UNC x 1 ½"	

 Table A-17: Skidbar Assembly (330340A)

Figure A-17: Skidbar Assembly (330340A)

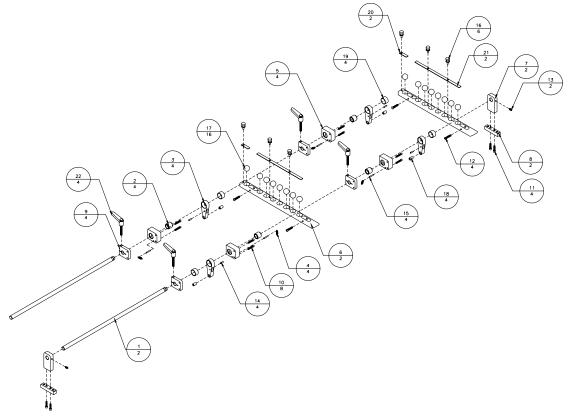
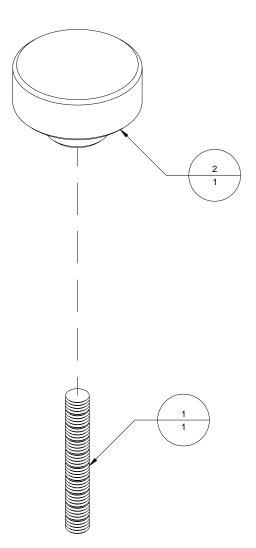


 Table A-18: Knob Assembly, 10-32 UNF x 1 ¼" (438110A)

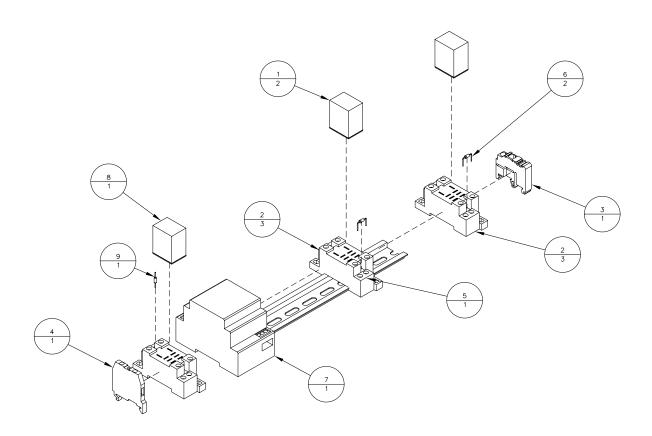
ltem	Part Number	Quantity	Description	Reference
1	404875	1	Screw, SHSS, 10-32 UNF x 1 ¼"	
2	438110	1	Side Guide Knob	

Figure A-18: *Knob Assembly*, 10-32 UNF x 1 ¹/₄" (438110A)



Item	Part Number	Quantity	Description	Reference
1	610102	2	Relay, 12V	
2	615004	3	Relay Base	
3	615016	1	End Stop, BAM, 9.1mm	
4	615017	1	Terminal, EK2.5/35, Ground	
5	615021	1	T-Rail, DIN, 8" Long	
6	640301	2	Diode	
7	9100298	1	Relay, 240 VAC	
8	9102371	1	Resistor,10 Ohms, 5W, wirewound	

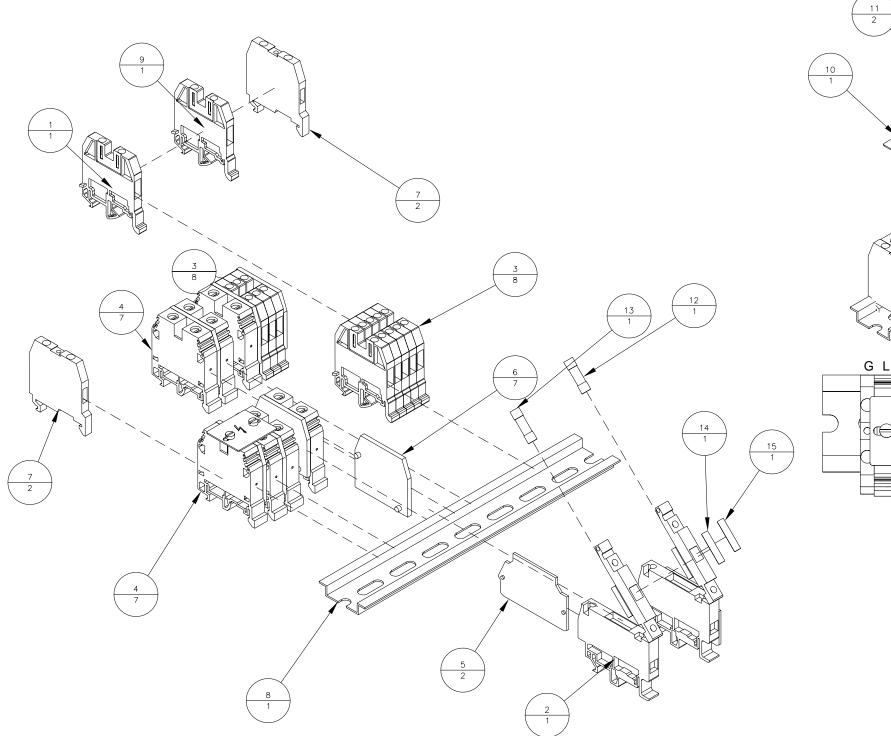
Figure A-19: <i>Terminal Block 2 Assembly (615334A)</i>

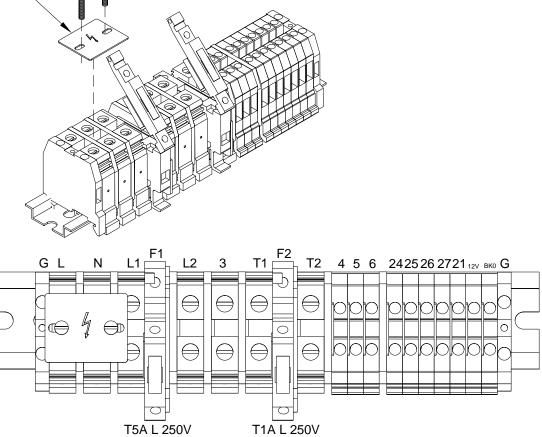


Item	Part	Quantity	Description	Reference
	Number			
1	615000	1	Terminal Block, M4/6.N, Blue 6mm	
2	615001	2	Fuse Holder, M4/8, SF2 Grey, 8mm 6.3A	
3	615002	8	Terminal Block, M4/6, Grey, 6mm	
4	615003	7	Terminal Block, M10/10, Grey, 10mm 7.5 A	
5	615011	2	End Section, FEM8S, Grey, 1.5mm	
6	615012	7	End Section, FEM6, Grey, 2.5mm	
7	615017	2	Terminal, EK2.5/35, Ground	
8	615021	1	T Rail, DIN, 8" Long	
9	615025	1	Terminal Block, M4/6, Black, 6mm	
10	615027	1	Label, High Voltage, Terminal Block, EP8	
11	615028	2	Screw, Marker Card	
12	646005	1	Fuse, 1A, 5 X 20 mm	
13	9103605	1	Fuse, 5A, 5 x 20 mm	
14	9101903	1	Label, Fuse, T5A L 250V	
15	9101911	1	Label, Fuse, T1A L 250V	

Table A-20: Terminal Block 1 Assembly (615335A)

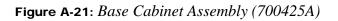
Figure A-20: Terminal Block 1 Assembly (615335A)

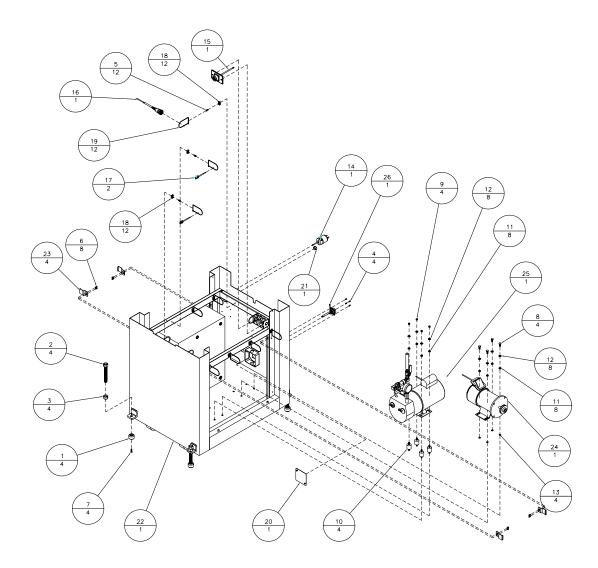




Item	Part	Quantity	Description	Reference
	Number			
1	343010	4	Base Mounting Foot	
2	343015	4	Base Mounting Leg	
3	343016	4	Jam Nut, 3/4-10 UNC	
4	402320	4	Screw, PHMS, 6-32 UNC x 3/8"	
5	404331	12	Screw, PHMS, 10-32 UNC 1/2" Rolling Thread	
6	404520	8	Screw, BHCS, 10-32 UNF x 3/8"	
7	405250	4	Screw, SHCS, 1/4-20 UNC x 3/4"	
8	406650	4	Screw, HHMS, 5/16-18 UNC x 3/4"	
9	420015	4	Nut, 5/16-18 UNC	
10	426302	4	Anti-Vibration Mount, 5/16-18 x 13/16	
11	439015	8	Lockwasher, 5/16 ID	
12	440015	8	Washer, 5/16" ID	
13	440510	4	Rubber Washer, 1/4" ID	
14	614015A	1	Cable, Base Power Assembly (230 VAC)	
15	614050A	1	Main Power Cable	
16	614052A	1	Instrument Control Cable	
17	614062A	2	Jam Stop/Cycle Switch Cable (425)	
18	615102	12	Tie Mount	
19	615141	12	Lashing Tie	
20	615153	1	Box Cover, 4" x 4"	
21	615425	1	Hole Plug, 7/8" ID	
22	706426A	1	Electrical Box Assembly (BK425)	Page A-38
23	717050	4	Base Door Catch	
24	800002A	1	Motor Assembly	Page A-39
25	802072A	1	Vacuum Distributor Assembly	Page A-40
26	9102084A	1	Inline Remote Cable, 23-57	

Table A-21: Base Cabinet Assembly (700425A)

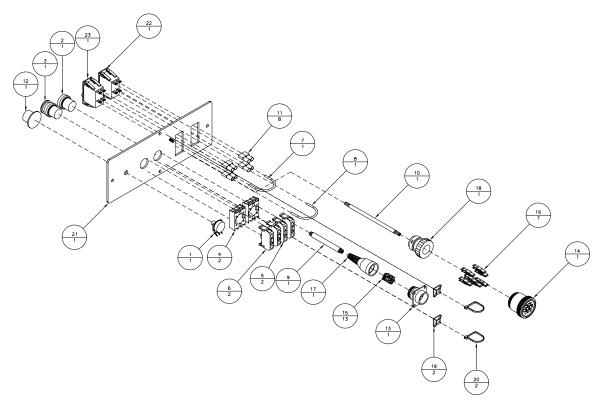




Item	Part	Quantity	Description	Reference
	Number			
1	600011	1	Potentiometer, w/Dart 600005	
2	603120	1	Switch, Green Push Button	
3	603121	1	Switch, Red Mushroom, Push Button	
4	603125	2	Switch Locking Collar	
5	603126	2	Block, N.O. Contact	
6	603127	2	Block, N.C. Contact	
7	606008	1	Wire, #14, White, Hook-Up, 6"	
8	606010	1	Wire, #14, Black, Hook-Up, 6"	
9	606016	1	Cable, #22-15, Shielded, 32"	
10	606052	1	Cable, #14-7, Unshielded, 32"	
11	609113	8	Terminal	
12	613002	1	Knob, 36 mm Skirted	
13	614101	1	Receptacle, 17-16	
14	614105	1	Receptacle Plug, 23-7	
15	614107	13	Male Contact, Pin, Yellow	
16	614109	7	Male Contact, Pin	
17	614111	1	Cable Boot, Flexible	
18	614113	1	Cable Clamp	
19	615100	2	Adhesive Backed Tie Mount	
20	615140	2	Lashing Tie	
21	706341	1	Instrument Control Panel (BK425)	
22	9102206	1	Switch, Breaker, 5A, 2 Pole, Illuminated Green	
23	9103602	1	Switch, Breaker, 10A, 2 Pole, Illuminated Green	

Table A-22: Instrument Panel Assembly (BK425) (706341A)

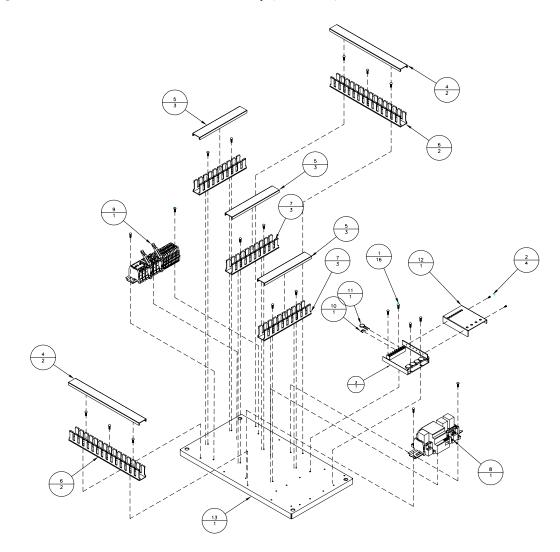
Figure A-22: Instrument Panel Assembly (BK425) (706341A)



Item	Part	Quantity	Description	Reference
	Number			
1	403510	16	Screw, BHCS, 8-32 UNC x 1/4"	
2	403520	4	Screw, BHCS, 8-32 UNC x 3/8"	
3	600005	1	DC Controller, 90 VDC	
4	615210	2	Wiring Duct, 1" x 1", 12" Long	
5	615210	3	Wiring Duct Cover, 1", 8" Long	
6	615220	2	Wiring Duct, 1" x 1", 12" Long	
7	615220	3	Wiring Duct Cover, 1"	
8	615334A	1	Terminal Block 2 Assembly (BK425)	Page A-30
9	615335A	1	Terminal Block 1 Assembly (BK425)	Page A-31
10	640301	1	Diode	
11	640302	1	Metal Oxide Varistor, 250 VAC	
12	700321	1	Cover, Dart Control	
13	706331	1	Base Control Board	

 Table A-23: Base Control Board Assembly (706425A)

Figure A-23: Base Control Board Assembly (706425A)



Item	Part	Quantity	Description	Reference
	Number			
1	420020	4	Nut, 3/8-16 UNC	
2	439020	4	Lockwasher, 3/8" I.D.	
3	440020	4	Washer, 3/8" ID	
4	603200	1	Toggle Switch, Single Pole	
5	606531	1	Cable, #22-2, Shielded, 30" Long	
6	615015	1	Head Switch Bracket	
7	615131	11	Cable Clamp, 3/8", Metal	
8	706425A	1	Base Control Board Assembly	Page A-37
9	713334A	1	Base Cabinet Shell Assembly	

Figure A-24: Electrical Box Assembly (706426A)

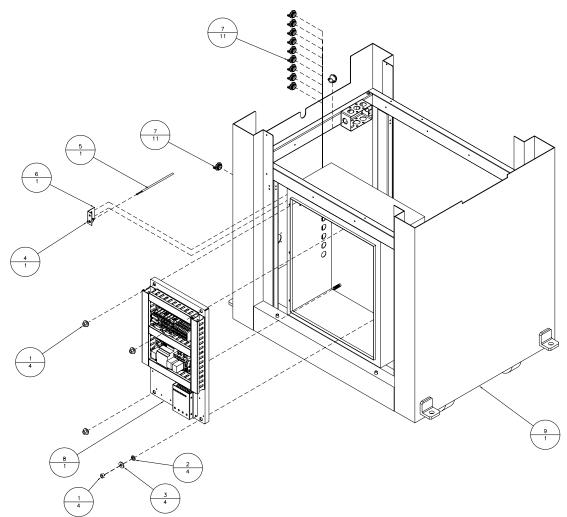
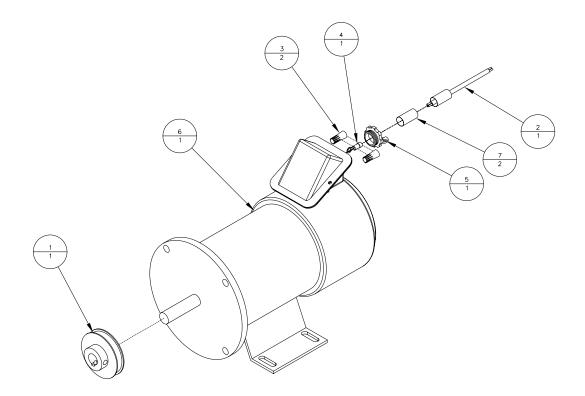


Table A-25: Motor Assembly (800002A))
--------------------------------------	---

Item	Part Number	Quantity	Description	Reference
1	116007	1	SHEAVE, AK25 X 5/8"	
2	606033	1	Cable, #14-3, SJOW-A, 40" LG	
3	609101	2	MARETTE, ORANGE, 14-22	
4	609111	1	Terminal, Ring, #10, 16-14 AWG, Blue	
5	615131	1	Cable Clamp, 3/8", Metal	
6	800002	1	MOTOR, 1/2 H.P., 90 VDC	
7	9102247	2	Shrink Wrap, 1/2" I.D.	

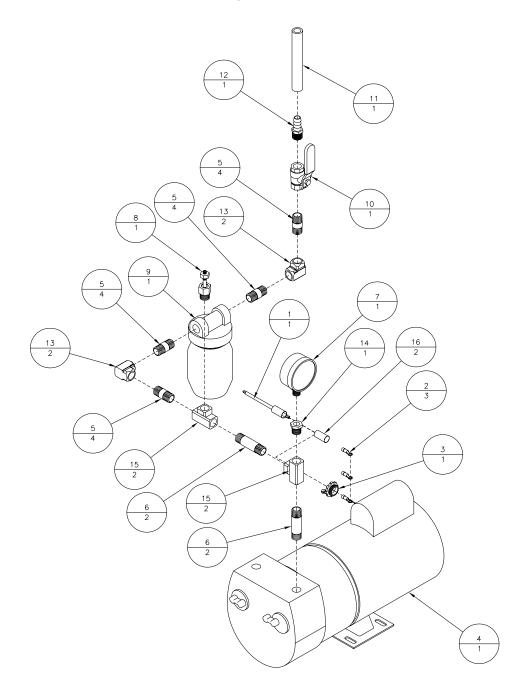
Figure A-25:	Motor	Assembly	(800002A)
--------------	-------	----------	-----------



Item	Part	Quantity	Description	Reference
	Number			
1	606033	1	Cable, #14-3, SJOW-A, 40" LG	
2	609111	3	Terminal, Ring, #10, 16-14 AWG, Blue	
3	615131	1	Cable Clamp, 3/8", Metal	
4	801102	1	Vacuum Pump	
5	802010	4	Extension Pipe, 3/8" NPT x 1 1/2"	
6	802013	2	Extension Pipe, 3/8" NPT x 2 1/2"	
7	802030	1	Vacuum Gauge, 1/4" NPT	
8	802035	1	Vacuum Relief Valve, 3/8" NPT	
9	802036	1	Filter Assembly, AB 599	
10	802045	1	Shuttle Feeder Valve, 3/8" NPT	
11	802046	1	Hose, Clearflex, 1/2" ID	
12	802058	1	Barb Vacuum Hose Fitting, 3/8" NPT x 1/2"	
13	802060	2	Elbow Fitting, Female, 3/8" NPT	
14	802065	1	Reducing Bushing, 3/8" - 1/4" NPT	
15	802071	2	Pipe Tee, 3/8" NPT	
16	9102247	2	Shrink Wrap, 1/2" I.D.	

Table A-26: Vacuum Distributor Assembly (802072A)

Figure A-26: Vacuum Distributor Assembly (802072A)

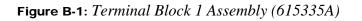


BK425 Electrical Drawings



List of Figures

Figure B-1: Terminal Block 1 Assembly (615335A)	B-1
Figure B-2: Terminal Block 2 Assembly (615334A)	
Figure B-3: Feeder Base Schematic 1	B-3



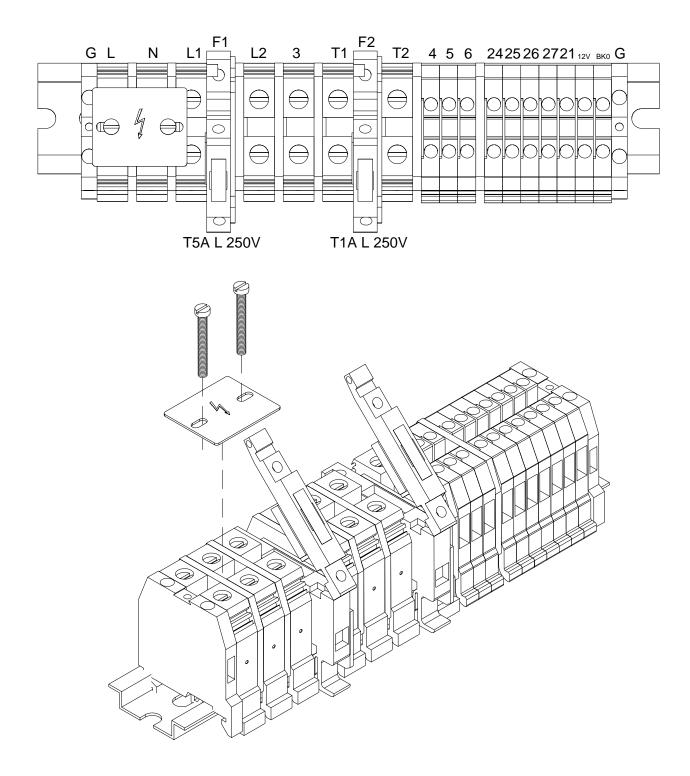
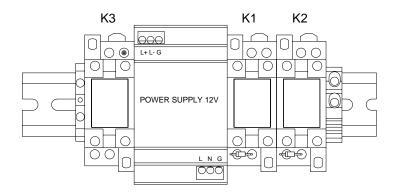
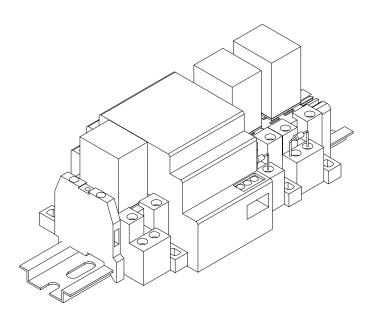
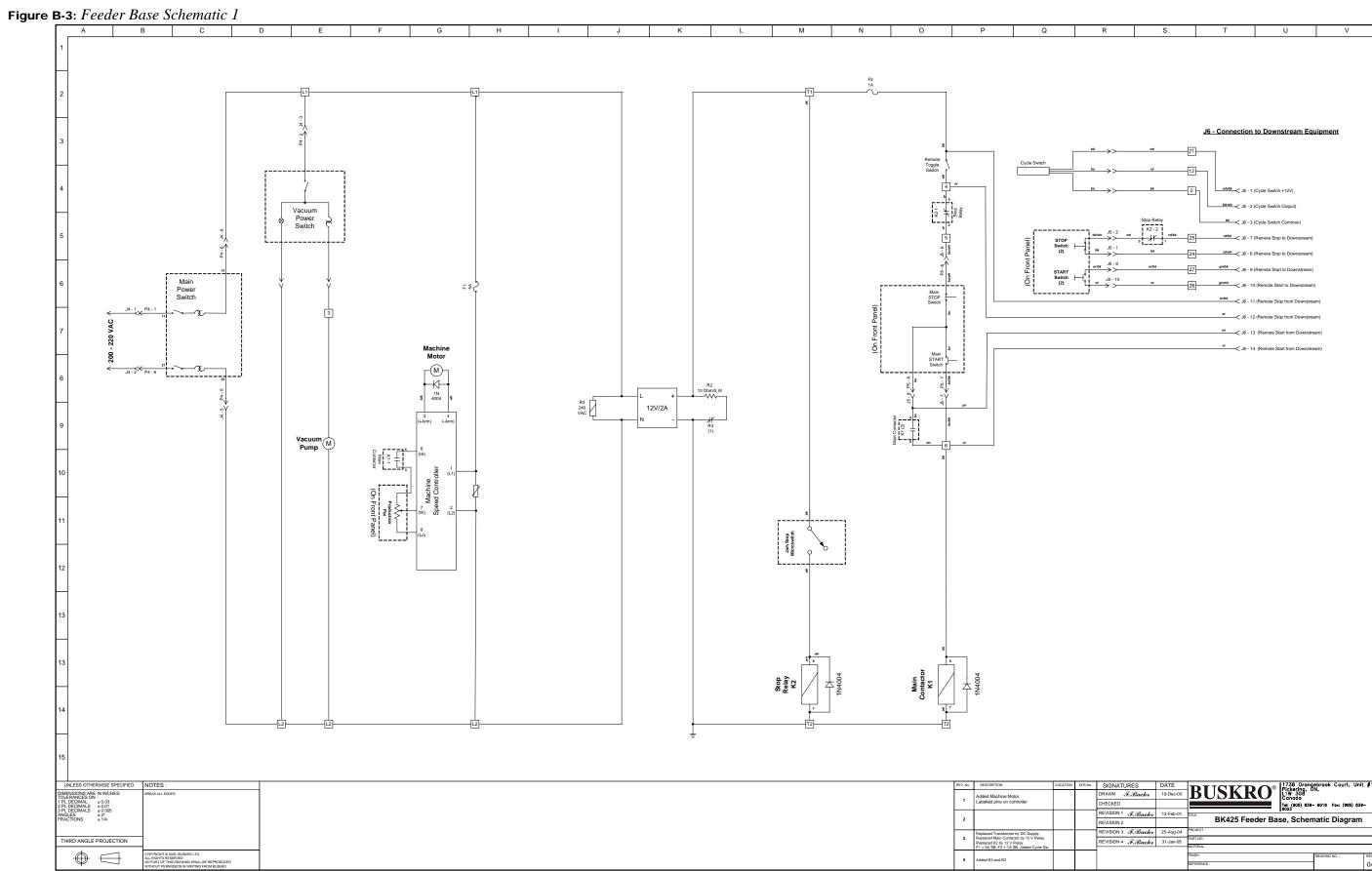


Figure B-2: *Terminal Block 2 Assembly* (615334A)







R No.	SIGNATURES	DATE		ebrook Court, Unit N,	#1
	DRAWN F.Bachr	19-Dec-00	BUSKRO [®] Pickering, O		
	CHECKED			6018 Fax: (906) 839	-
	REVISION 1 F. Bachr	12-Feb-01	TITLE -		
	REVISION 2		BK425 Feeder Base, Schen	hatic Diagram	
	REVISION 3 F.Bachr	25-Aug-04	PROJECT:		
	REVISION 4 F. Bachr	31-Jan-05	PART NO. :		
			MATERIAL :		
			FNISH :	DRAWING NO. :	REV.
			REFERENCE :		04