

WADDINGTON

ELECTRONICS INC.

CK LC INSTALLATION

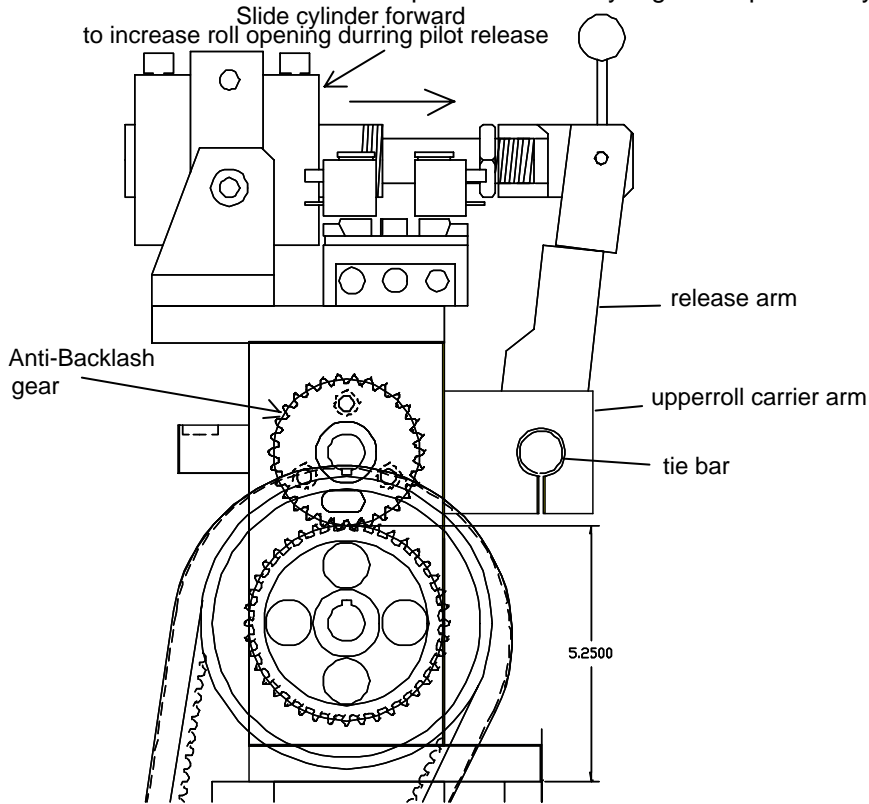
MANUAL

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THE FEED BODY

The feed body unit consists of the frame, upper and lower rolls, gearing between the rolls, and the motor and resolver assembly. Any options such as high-speed pilot release, air controlled roll pressure, anti-back-up rolls, air operated anti-backup release, etc. will be installed on the feed frame. Cascade rolls are shipped loose and are easily mounted on the feed.

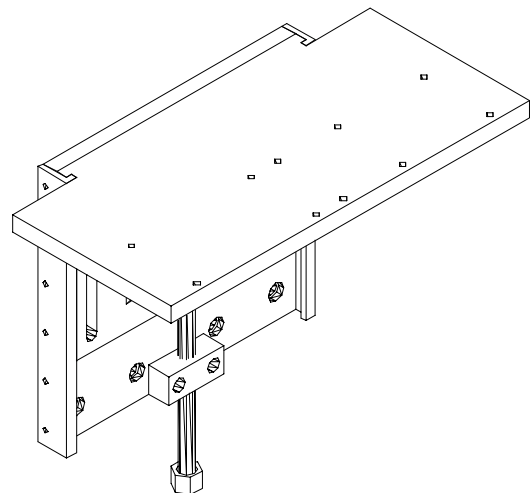
The feed body and all associated mechanical components have been sprayed with a rust preventative. It should be removed with a mild solvent and wiped clean with dry rags. This particularly applies to the feed rolls.



MOUNTING BRACKET AND FEED INSTALLATION

The feed body can be mounted to a mounting bracket. There are six mounting holes in the base plate. We recommend the use of a Waddington mounting bracket. It is the customer's responsibility to fabricate an adapter plate, if necessary, to accommodate these mounting holes. (See Diagram #1 or 2)

The feed body can also be mounted to a +/- 1.5" adjustable mounting bracket. There are four mounting holes in the adjustable mounting bracket for mounting either directly to the press or to an adapter plate.



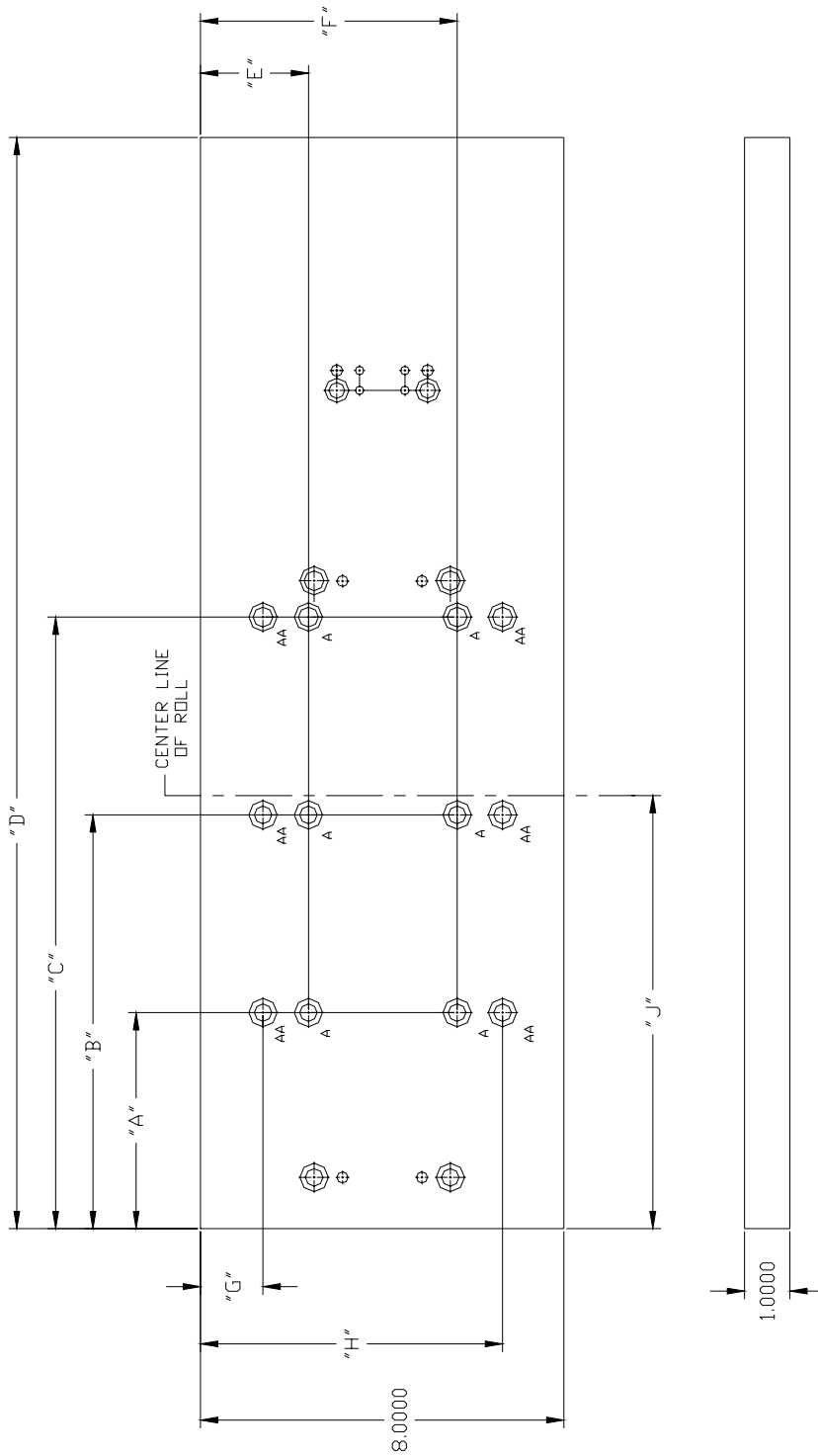


DIAGRAM #1
BASE PLATE FOR OVER-DRIVE ROLL FEED

Note: Holes Marked "A" and "AA" are available for Mounting Feed to Press. Drilled and Counterbored for 3/8-16 S.H.C.S. from top.

** "AA" Holes are only on 18", 30" & 36" Feeds.

FEED SIZE	A	B	C	D	E	F	G	H	J
6"	2.647	6.997	9.997	18.250	1.750	6.250	---	---	6.1875
9"	4.750	9.100	13.450	24.000	2.375	5.650	---	---	7.6875
12"	4.875	9.225	13.575	24.000	2.375	5.650	---	---	9.1875
18"	4.875	12.225	19.575	30.000	2.375	5.650	1.375	6.650	12.1875
24"	4.875	15.225	25.575	36.000	2.375	5.650	---	---	15.1875
30"	7.875	18.225	31.575	42.000	2.375	5.650	1.375	6.650	18.1875
36"	10.875	21.225	34.575	48.000	2.375	5.650	1.375	6.650	21.1875

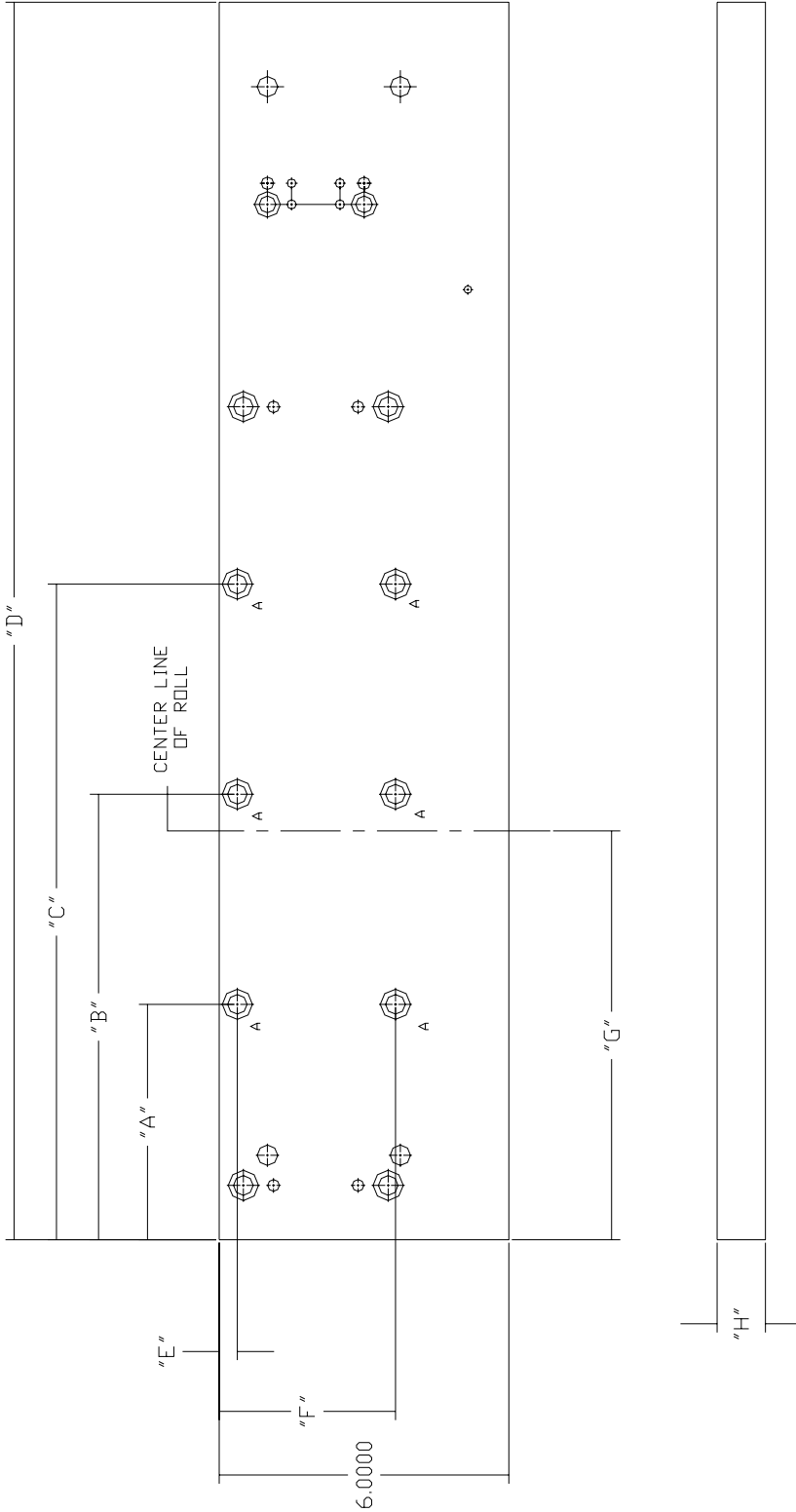


DIAGRAM #2
 BASE PLATE FOR UNDER-DRIVE ROLL
 FEED

Note: Holes Marked "A" are available
 for Mounting Feed to Press.
 Drilled and Counterbored
 for 3/8-16 S.H.C.S. from top.

FEED SIZE	A	B	C	D	E	F	G	H
3"	4.575	—	17.875	25.625	.375	3.650	4.6875	1.000
6"	4.650	—	19.350	25.625	.375	3.650	6.1875	1.000
9"	4.875	—	13.250	25.625	.375	3.650	7.6875	1.000
12"	4.875	9.225	13.575	25.625	.375	3.650	9.1875	1.000
18"	4.875	12.225	19.575	31.625	.375	3.650	12.1875	1.000
24"	4.875	15.225	25.575	37.625	.375	3.650	15.1875	1.000
30"	4.875	18.225	31.575	43.625	.375	3.650	18.1875	1.000
36"	4.875	21.225	37.575	49.625	.375	3.650	21.1875	1.000
43"	8.375	24.725	41.075	56.625	.375	3.650	24.6875	1.500
48"	10.875	27.225	43.575	61.625	.375	3.650	27.1875	1.500

OD Feed Mounting Holes

If there are no mounting pads or bosses on the side of the press, then an adapter plate must be fabricated and installed between the bracket and the press. Set the bracket for the height position, spot drill, drill and tap the mounting holes. Note: the passline of the roll feed is 5.25" to 5.5" depending on your feed model and the thickness of the bottom plate. Generally feeds 24 inches and less are 5.25" and over are 5.5" above the surface of the bracket where the feed will mount.

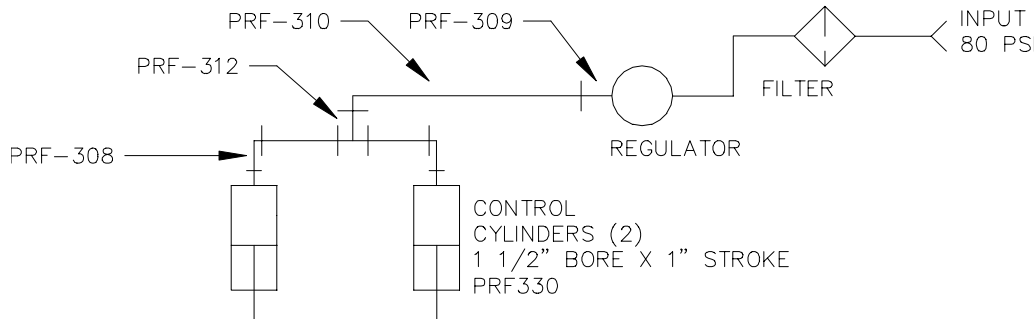
It is imperative that the feed is installed on center with the die location. The feed must be perfectly square to dies or die locators. If the feed is not square and perpendicular to the dies it feeds, "crowding" of the stock will occur, resulting in a jamming of the material, inaccurate feed lengths and feeding problems in general.

The alignment of the feed to the dies must be checked with a dial indicator and must be square better than **.001" across the width of the feed.**

The feed body is mounted to the adjustable bracket through the bottom plate of the frame. There are suitable drilled and counter bored holes for the attachment to the adjustable bracket. Use only heat-treated socket head cap screws for the attachment of the feed unit to the bracket.

All other components in the line must also be accurately aligned for the proper function of the feed, straightener and payoff.

AIR CONTROLLED UPPER ROLL PRESSURE



WATTS REGULATOR R-364-02C 1/4 NPTF
16.0 SCFM 0-125 PSIG SUPPLIED BY WEI

FILTER SUPPLIED BY CUSTOMER

DIAGRAM #3

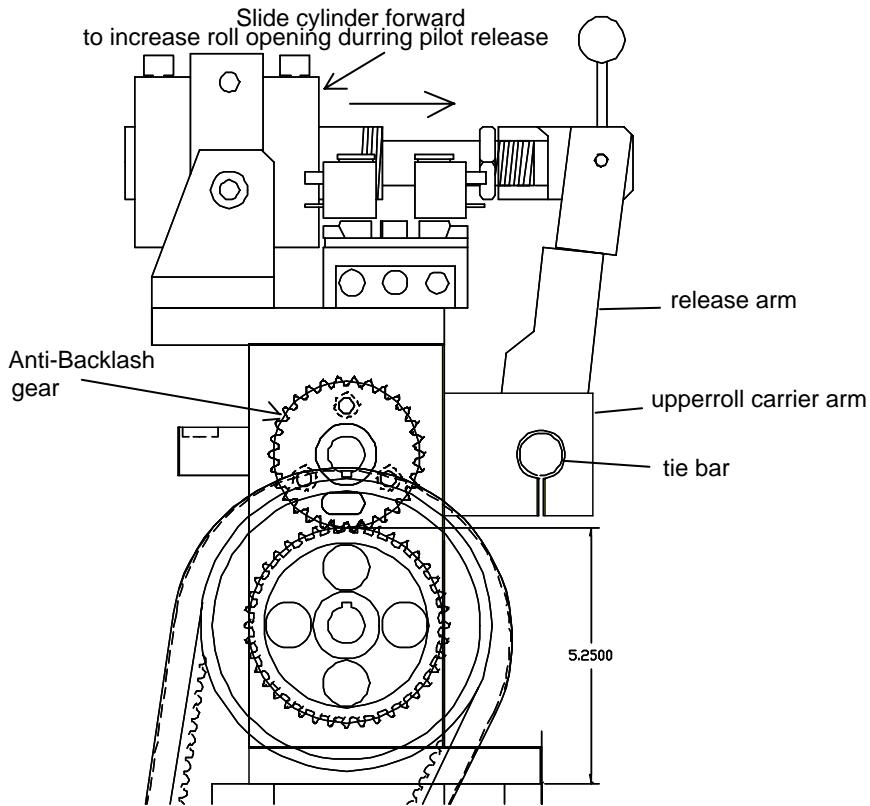
PNEUMATIC CONNECTIONS FOR AIR CONTROL UPPER ROLL

(See Diagram # 3)

Air-controlled upper roll pressure is an option that replaces the mechanical die springs normally used to affect the pinch pressure. It permits ease of adjustment, greater latitude and remote control of the roll pressure.

The piping of this option requires a regulated air supply of 0 to 90 PSI to the cylinders. No valve is required. When used with an air-operated roll-opening device, the opening device is always sufficient to overpower the roll pressure cylinders.

ADJUSTMENTS OF PILOT RELEASE ARM



Pilot release

The Pilot release mechanism should be set for the minimum amount of travel required to release the material being fed.

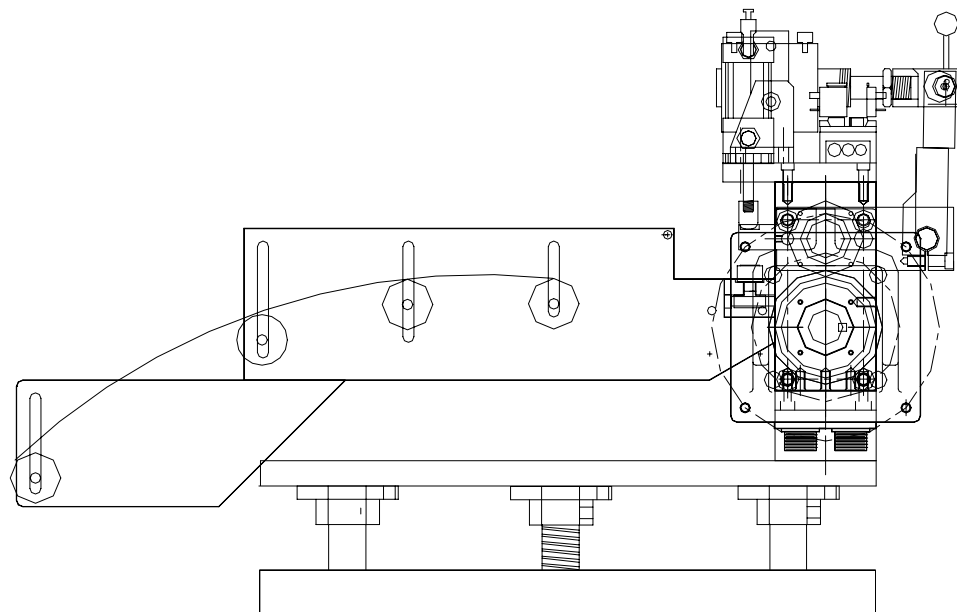
For speeds under 200 SPM setting the travel for the thickest stock to be run is usually acceptable, However for speeds above 200 SPM setting too much travel can cause timing problems, therefor the mechanism should be set for the minimum required travel. (Roll opening.)

INSTALLATION AND ADJUSTMENT OF THE CASCADE ROLLS

To install the cascade rolls to the feed, remove the four button head cap screws located on the bottom of the guide roll weldment and two on the front. Mount the cascade rolls on the weldment using all six screws.

The Cascade Rolls are used to support the material as it is fed into the digital feed at an adjustable arc that will not create a permanent curve in the material.

The arc that can be set by the individual adjustment of each of the four ball bearing rollers varies with the temper, thickness and type of material being supported. They also support the material to minimize the



back-pulling forces on the feed.

The simplest way to adjust this arc is to adjust the rolls to the drape of the material while the loop is static and held between the rolls of the feed. Loosen each end of each roller and adjust slightly to support the material. Do this for each roll.

The cascade rolls require no maintenance other than keeping them free from dirt and debris.

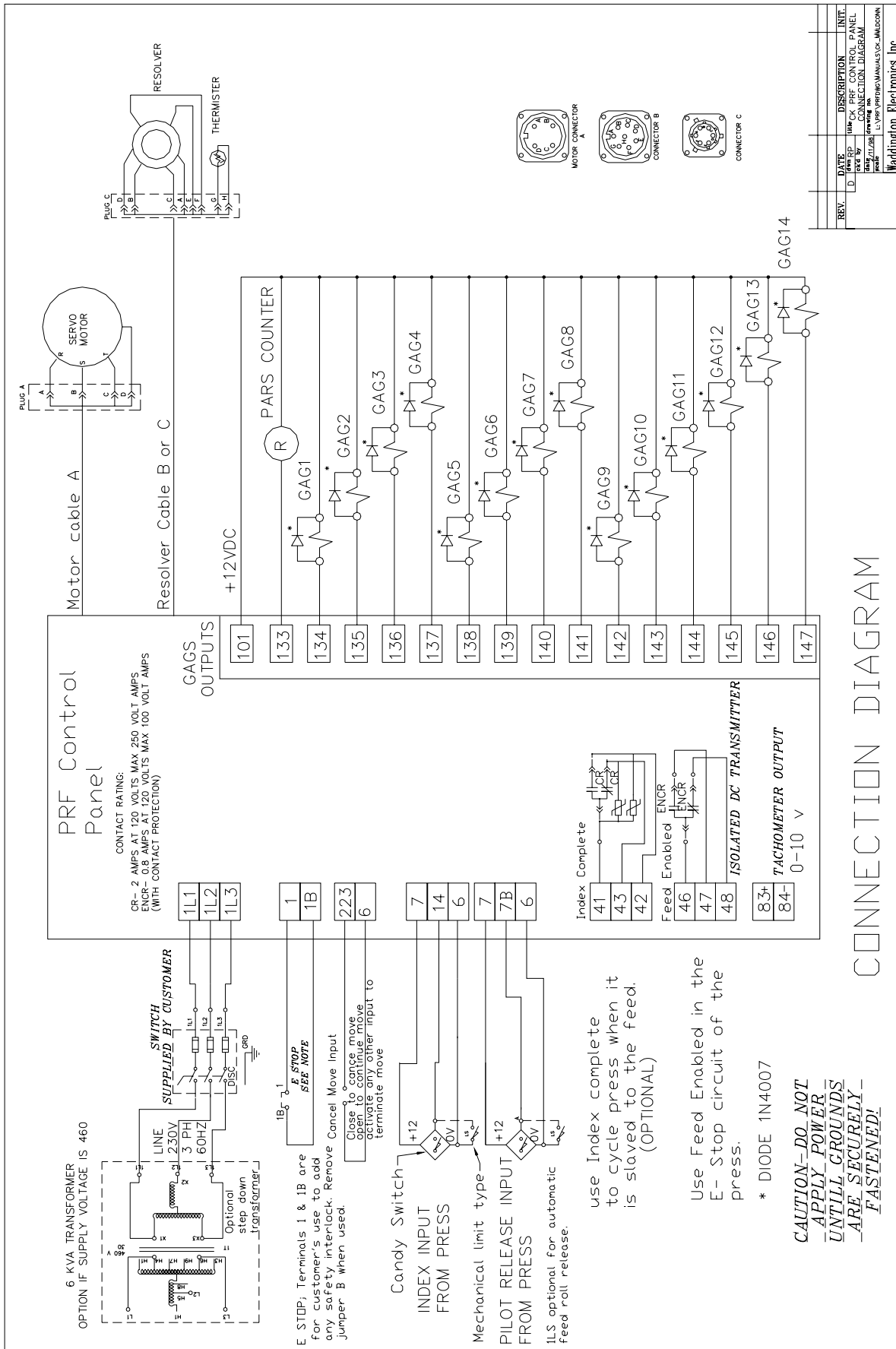
ELECTRICAL CONNECTIONS

MAIN CONSOLE

The power supply to the main cabinet should be no less than a fused disconnects rated and fused at 30 amps. If the run from the source to the feed console is long, compensate by using adequate conductors.

The power required by the main cabinet is 230 volts (+10 %, -15%), 3 phase, 60 hertz. A ground going back to earth ground is critical for the operation of the feed. If the Plant voltage is 480 volt, a 480/230-volt transformer can be supplied by Waddington Electronics, Inc. to provide the correct voltage for the main cabinet.

(See the connection diagram)



CONNECTION DIAGRAM

CONNECTIONS BETWEEN COMPONENTS

The feed body is connected to the control cabinet through three sealtite cables that exit from the side of the control cabinet.

One or Two of these cables terminate into military type cannon connectors which are plugged into the motor on the bottom or top of the feed body. These connectors are threaded and must be firmly tightened. Continue to apply pressure on the cable as the ring is tightened to insure that the connector seats all the way in to the motor.

The third cable terminates into a junction box from which exit two solenoid connectors and may also have another cannon connector.

The two-solenoid connectors are labeled and are plugged into the solenoids located on the top of the feed body.

If you have an external resolver the cannon connector is plugged into the end of the feed body. This connector is a twist lock type; once locked, it should not pull straight out.

Fasten the junction box such that there is no stress on the cables. If this is not done, problems in operation of the feed may arise and may be difficult to locate.

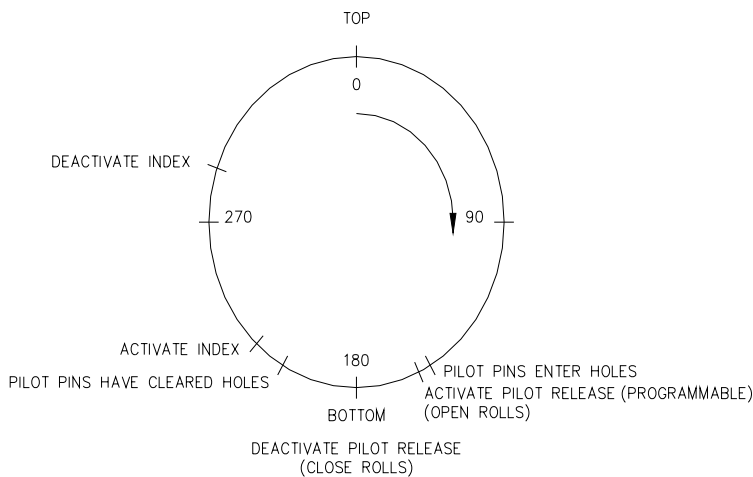
Note, all connectors are keyed and cannot be plugged in improperly.

SWITCHING DEVICES, PRESS SIGNAL FEED

(Refer to the timing diagram and the connection diagram)

Practically any switching device that gives a contact closure will signal the feed to index (feed-up the length programmed). However, the

switching device must be extremely reliable and rated to operate for many millions of cycles. The closure should be very crisp without contact bounce or slow opening.



NOTE: There is a certain amount of phase lag in the pilot release. It is, therefore, necessary to release the pilot in advance when operating at speeds greater than 60 SPM. Consult the factory for the amount of advance.

TIMING DIAGRAM

Mechanical Switched (DO NOT USE)

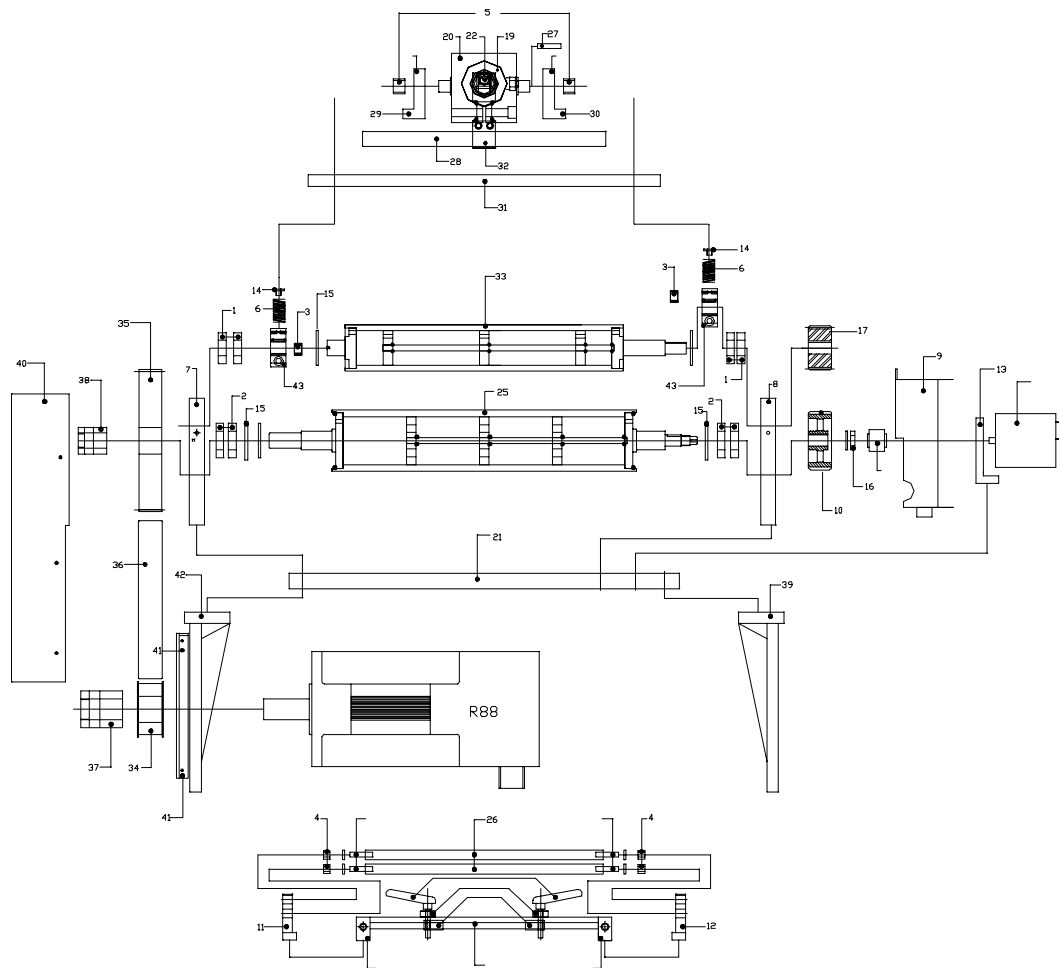
(OK to use)

Proximity switches can be used to initiate feeding. They are generally used with mechanical steel cams. Once positioned, they offer a good high quality signal with excellent repeatability. The cam lobe should be at least 1/2" wide.

The leading edge should have a small uniform radius. The cam should be mounted to a rotating device that makes one revolution with the press crank and should be adjustable radially for timing purposes.

When equipped with a high-speed pilot release, two such switches are required: one to signal the feed and the other to signal the opening of the rolls for pilot release. See the timing diagram for cam examples and proximity switch mounting.

(Preferred Method) Alternate devices for switching can be any of the purchased programmable switches that are sold for press applications.



1	PC-BRG-10000	BALL BEARING SINGLE ROW DEEP
2	PC-BRG-10001	BALL BEARING SINGLE ROW DEEP
3	PC-BRG-10002	NEEDLE ROLLER BEARING DRAWN
4	PC-BRG-10006	DRAWN CLIP NEEDLE ROLLER
5	PC-BRG-10028	DRAWN CLIP NEEDLE ROLLER
6	PC-SPR-10000	3/4" X 1 1/2" MEDIUM BLUE SPRING
7	PF-BPT-30000	LC BRIVE SIDE PLATE
8	PF-GPT-30000	LC GEAR SIDE PLATE
9	PF-GRS-30000	LC GEAR GUARD
10	PF-GRS-30000	LC SERIES STANDARD DRIVE GEAR
11	PF-FRB-30000	LC PENCIL ROLL BKT. LEFT
12	PF-FRB-30000	LC PENCIL ROLL BKT. RIGHT
13	PF-RSR-30000	LC RESOLVER MOUNTING BRACKET
14	PF-SVR-30002	LD SPRING PLUNGER CENTER
15	PF-SVR-30010	LC TOP BEARING RETAINER
16	PF-SVR-30011	LC GEAR RETAINER
17	PF-GRS-30000	LC SERIES STANDARD GEAR
18	PC-BRG-10027	CYLINDRICAL BEARING SINTERED
19	PC-PNU-40002	NON-DISSIPATIVE BURR TRUNNION
20	PC-PNU-40005	2" CYLINDER BORE TRUNNION
21	PF-BPT-30003	LCUD STANDARD BASE PLATE
22	PF-CVA-30000	2" CYLINDER FLUET FLEWAS
23	PF-GRD-30012	LC STOCK ENTRY GUARD
24	PF-GRD-30023	LCUD MOUNTING GUARD
25	PF-LRU-30003	LC LOWER ROLL
26	PF-PRU-30003	LC PENCIL ROLL
27	PF-PVT-30000	LC AIR PIVOT PIVOT PIN
28	PF-TBR-30003	TIE BAR
29	PF-TML-30000	LEFT TRUNNION BRACKET
30	PF-TMR-30000	RIGHT TRUNNION BRACKET
31	PF-TPI-30003	LC TOP PLATE
32	PF-TRA-30000	LC TOP ROLL RELEASE ARM
33	PF-URL-30003	LC UPPER ROLL
34	PF-URT-30000	MOTOR PULLEY
35	PF-URT-30001	ROLL PULLEY
36	PC-DRT-40003	GATES PDLTY CHAIN
37	PC-DRT-50002	TRANDIQUE 1" SHAFT SIZE
38	PC-DRT-50005	TRANDIQUE 1 3/8" SHAFT SIZE
39	PF-GE-S-30000	LCUD GEAR END SUPPLY
40	PF-GRD-30001	LCUD BELT GUARD
41	PF-GRD-30002	LCUD BELT GUARD BACKING PLATE
42	PF-MMT-30000	LCUD MOTOR MOUNT
43	PF-TRC-30000	TOP ROLL CARRIER ARM
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REV.	ECN NO.	DESCRIPTION	BY	DATE
		REVISIONS		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:		
FRACTIONS	DECIMALS	ANGLES
± 1/64	.XX ±.02	± 1°
	.XXX ±.005	
	.XXXX ±.0005	
MATERIAL		
FINISH		
DO NOT SCALE DRAWING		

SERIES:	
APPROVALS	DATE
DRAWN BY: APR	3/29/96
CHECKED BY:	
APPROVED BY:	
APPROVED BY:	

Waddington Electronics Inc.
 25 Webb Street, Cranston, RI 02920

TITLE	
LCUD DIS-ASSEMBLY	
SIZE	DRAWING NO.
B	\\LC\MECH\LCUD12AS
DWG SCALE 1 TO 1	PLOT SCALE 1=1
SHEET 1	OF 1

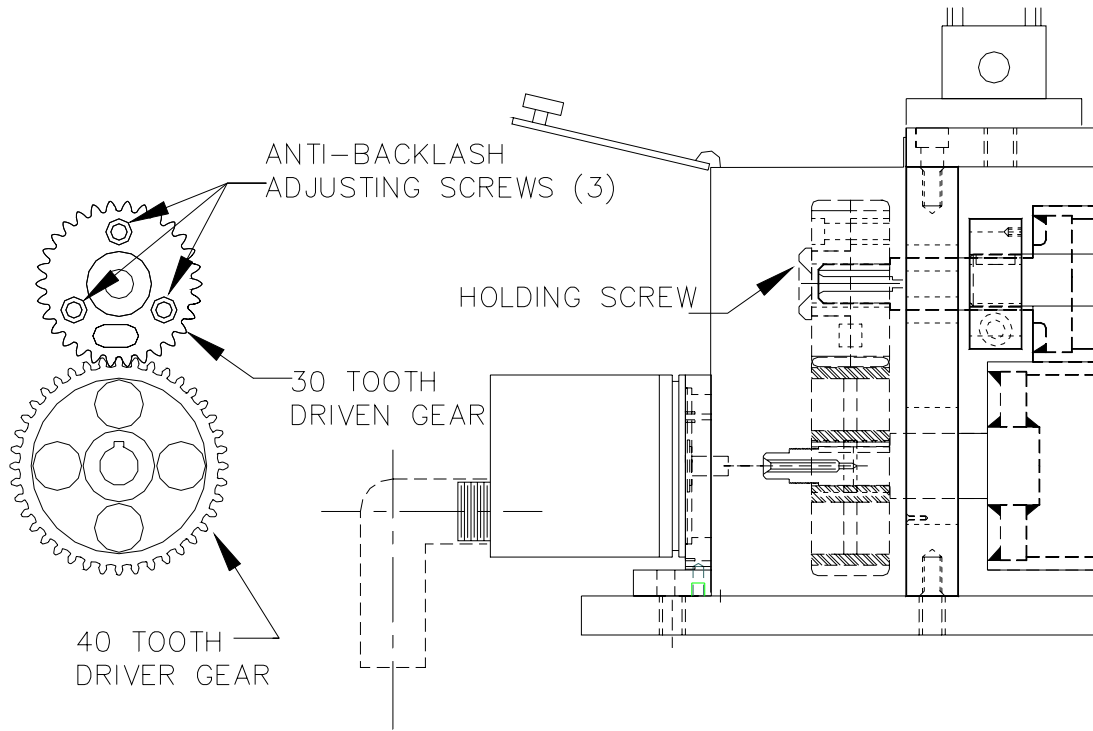


DIAGRAM #5
Top Roll Anti Backlash Adjustment