CONAIR

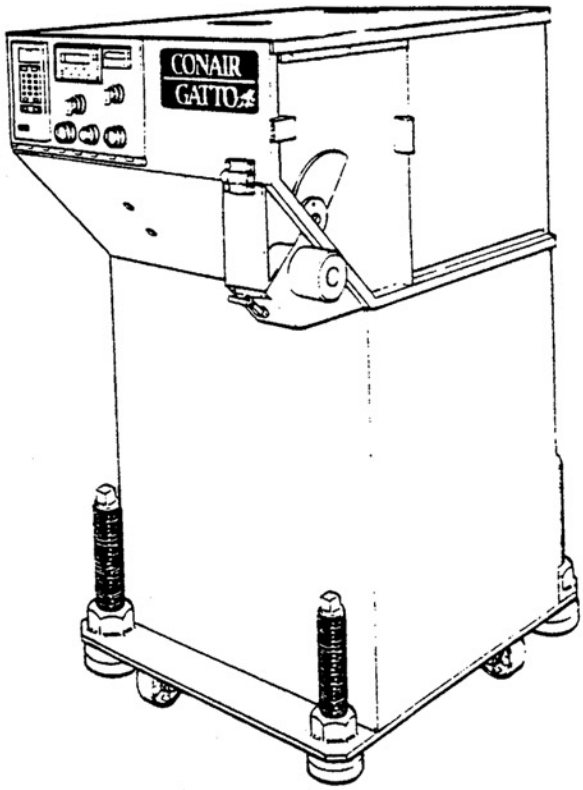
JETRO/GATTO

Part of The Conair Group

UGE004/0995

CONAIR GATTO CUTTERS

PSC AND ESC



⚠ **WARNING - Reliance on this Manual Could Result in Severe Bodily Injury or Death!**

This manual is out-of-date and is provided only for its technical information, data and capacities. Portions of this manual detailing procedures or precautions in the operation, inspection, maintenance and repair of the product forming the subject matter of this manual may be inadequate, inaccurate, and/or incomplete and cannot be used, followed, or relied upon. Contact Conair at info@conairgroup.com or 1-800-654-6661 for more current information, warnings, and materials about more recent product manuals containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

CONAIR
GATTO

Part of The Conair Group

Instructional Manual

CONAIR GATTO CUTTER

MODELS

PSC-20A, PSC-20D, PSC-30A, PSC-30D

ESC-20A, ESC-30A

Model _____

Serial Number _____

Date _____

Voltage _____

Inspected by _____

Date _____

TABLE OF CONTENTS

UNCRATE AND INSPECT

This machine has been carefully crated to assure safe arrival to your plant. It is important that you immediately inspect the equipment upon arrival and report to the truck driver, any possible damage that may have occurred in transit.

It is suggested that you uncrate the equipment as soon as possible so that any concealed damage may be discovered.

Compare the packing list with items received, and in turn, cross-check the items with your purchase order and report any discrepancies immediately to Conair Gatto at the address or phone number listed below.

CONAIR JETRO/GATTO
400 Harry S. Truman Pkwy.
Bay City, MI 48706
(517) 686-6600
(517) 686-4444 fax

*****WARNING*****

ENSURE THAT ALL PERSONNEL INVOLVED IN THE INSTALLATION, OPERATION AND MAINTENANCE OF THIS MACHINE, AS WELL AS THOSE PERSONS WHO WILL ACT AS SUPERVISORY PERSONNEL FOR THOSE LISTED ABOVE, HAVE READ AND FULLY UNDERSTAND THESE INSTRUCTIONS AND THOSE CONTAINED IN THE ACCOMPANYING SUPPLIER'S MANUAL AND INSTRUCTION SHEETS BEFORE ATTEMPTING TO INSTALL, OPERATE OR PERFORM MAINTENANCE ON THIS MACHINE.

****

INTRODUCTION TO ROTARY KNIFE CUTTERS

Conair Gatto has introduced a series of rotary knife cutters to add a new degree of cut length accuracy and performance for extruded tubing and profiles. These include the Electra-Stop clutch/brakes or the precision pneumatic clutch/brakes. Either unit is offered within a unique, easy-to-use frame that is available in 2 1/4" or 3 1/4" bushing sizes.

The Electra-Stop cutters feature a proprietary positive stop clutch with specialized electronics. These cutters include a standard 2 HP motor and are capable of up to 200 cuts per minute with up to four times the torque of ordinary on-demand cutters. This cutter has been designed as a low-cost, no frills work horse that is easily field repairable and accessible. The clutch/brake that is utilized has been licensed with PAE Technology and has been specially upgraded to absorb the high load impacts of on-demand cutting. In addition, the clutch/brake has been successfully field tested in over twenty different machines during the past three years.

The pneumatic clutch series features a pneumatic clutch/brake that has been designed and manufactured by the very same people that designed and built the vacuum clutch/brake. This pneumatic series offers many of the same features of the vacuum clutch, but is far less costly and can be field repaired. (Vacuum units must be exchanged with the factory.)

Note: A spare friction disc is even provided with the cutter. Although the theoretical accuracy of the vacuum unit is somewhat better than the pneumatic, in real world trials, the on-demand cutting results are all the same.

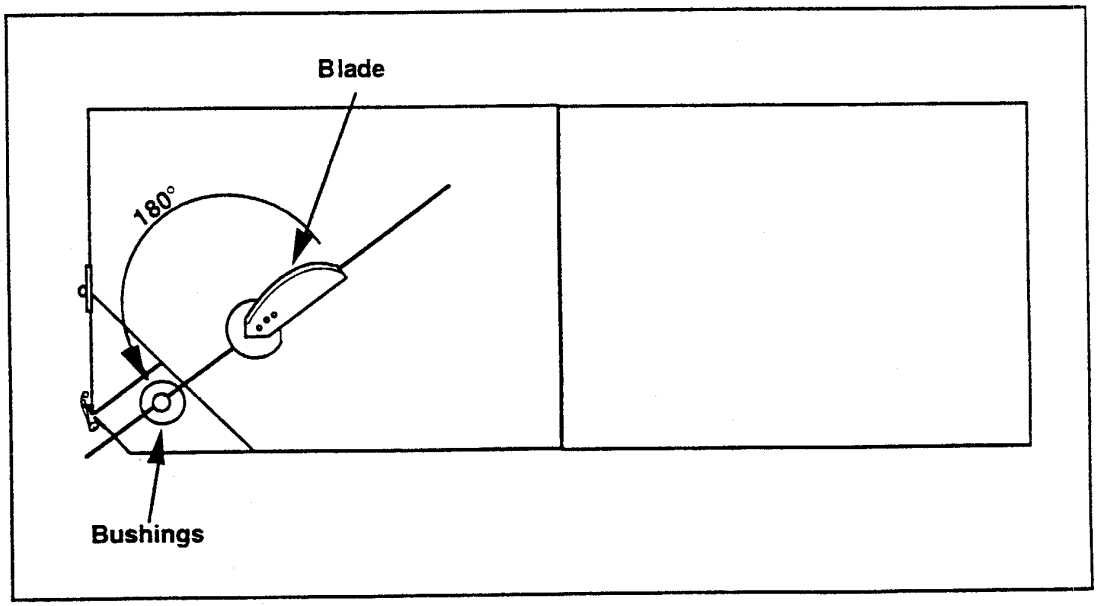
Note: Vacuum clutch repeatability at the clutch is .3 milliseconds which must be doubled or tripled due to pulley ratio speed ups for blade speed which give actual variation of .007" - .020" per 60 feet per minute. The pneumatic clutch repeatability at the clutch is .5 milliseconds with a 1.8:1 speed up which is responsible for .010" - .011" per 60 feet per minute. In this way, the pneumatic clutch series offers the majority of processors a vacuum alternative at reasonable prices.

THE IMPORTANCE OF THE PARK POINT POSITION

If we consider the process of cutting product on a continuous basis, one of the most important considerations in cut length accuracy is the reproducibility of the "timed" cut sequence, when the blade is activated from an external source, i.e., ON-DEMAND.

If we envision the location of the product to be cut as being in the nine o'clock position and the blade waiting for the signal to cut as being in the 3 o'clock position, it takes a finite amount of time for the blade to accelerate and travel around to slice the product.

If after the first revolution, the blade stops at the 2:45 o'clock position, the time that it takes to accelerate the travel around to slice the product will be shorter and, hence, produce a smaller cut. If the blade then stops at the 3:15 o'clock position, the acceleration and travel time will be longer and produce a larger cut. When this condition exists, it is extremely difficult to obtain any reasonable degree of consistency, and the result is an increase in cut length variation.



Section I

INTRODUCTION

INTRODUCTION

This *Rotary Knife Cutter* is an extremely versatile piece of equipment that has the capability of running in several basic modes of operation to enable one to cut almost any type of product at both low and high speeds with a known degree of precision.

This cutter, depending on whether the DC option was purchased, can be operated completely independent of any external device (MASTER) or can be tied into several different types of external measuring devices and also into the puller speed that may be controlled by laser or other types of product monitoring equipment (SLAVE).

In the "MASTER" mode (DC option only), the cutter blade rpm's can be established independently of any other piece of equipment and will maintain those settings and control regardless of product line speed. This mode is often used for extrusion operations that are long runs of the same dimension products and runs of the same constant line speed. In addition, it is a very useful feature should off line cutting be required.

In the "SLAVE" mode (DC option only), the continuous cutter action will follow an external signal as the puller line speed or the product line speed changes, by accepting information from an externally mounted encoder or digital pick-up device. Consequently, one can maintain excellent cut length stability and accuracy while the line speed is changing. This feature then enables one to set up a line at a slow easy speed to string line and then ramp up to very high line speeds without loosing product or having to constantly reset the cutting parameters.

DESCRIPTION OF THE EQUIPMENT

1. REAR CABINET

   Disconnect - This is a rotary and lockable disconnect which totally interrupts all power

   Receptacles - Encoder plug

2. OPERATOR SIDE - Operator control panel which contains the following:

   - Start push-button
   - Stop push-button
   - Test cut push-button
   - Digital blade rpm indicator and preset (DC only)
   - Programmable counter (Red Lion Gemini 1000 or Dynapar Max Count II)
   - Piece counter

SET-UP SEQUENCE

CUTTING MODE

A. On-Demand Timer

B. On-Demand Encoder

C. Flywheel (DC only)

D. On-Demand External (Electric Eye) - Optional

UPSTREAM SIDE

The upstream side contains the cutter blade housing, in which the wheel holding the blade is housed in a NEMA 12 electrical enclosure.

SAFETY

In order to protect the operator from possible harm from the rotating blade wheel, several safety features are built into this housing.

1. An electrical switch makes a contact between the top and the bottom of the cutter housing such that the housing MUST BE CLOSED in order to enable the blade wheel to spin.

   - This prevents someone from opening the housing and having the blade wheel spin which can cause serious injury. Tampering with this safety feature will VOID ANY RESPONSIBILITY for safety.

2. A proximity switch is positioned on both the upstream and downstream side of the bushing holder. If there are no bushings in either side, the blade will not spin.

   - This prevents someone from inserting their hands or fingers in the cutting mechanism while the blade wheel is spinning. Tampering with this feature will also VOID ANY RESPONSIBILITY for safety.

CHOICE OF CUTTING MODES AVAILABLE

The main criteria determining whether one should use the FLYWHEEL mode or the ON-DEMAND mode is related to the desired number of cuts per minute the cutter must perform.

1. FLYWHEEL (DC only)

   If the number of cuts per minute is greater than 340, then the recommended mode is the FLYWHEEL.

2. ON-DEMAND

   If the number of cuts per minute is less than 350, then the recommended mode is the ON-DEMAND, either with an electric eye (ON-DEMAND EXTERNAL) or with an encoder (ON-DEMAND ENCODER) or (ON-DEMAND TIMER).

   The main criteria on cut quality in this region is normally the squareness of the cut (i.e., minimizing the angularity of the cut edge due to blade interruption).

   - ON-DEMAND TIMER

     This enables the cut cycle to be set on a TIMED basis.

   - ON-DEMANDENCODER

     This enables the cut cycle to be set on a LENGTH basis.

   - ON-DEMANDEXTERNAL

     This enables the cut cycle to be set from an external device such as an electric eye.

For assistance in determining the optimum cutting mode for any product, please feel free to contact your Conair Gatto representative for advice and direction.

SET-UP OF THE EQUIPMENT

LOCATION OF THE CUTTER

The cutter should be located as close to the puller as possible to insure a minimum amount of space for the product between the point of exit of the puller and the inlet to the cutter bushing for most flexible products. (It may be necessary to allow some deflection space for rigid.) This will minimize product sag or excessive deflection during cutting which could affect the cut length accuracy. The equipment should be centered to the exit height of the puller to allow the product to have the straightest path into the cutter mechanism. The cutter should be locked down to prevent walking and possible out of alignment problems.

INSTALLING THE CUTTER BLADES

Even though there is a safety interlock on the cutter blade housing that will deactivate the cutter blade rotation mechanism, it is always advisable to shut off the main power when going into the cutter housing. The blade, or blades as the case may be, will fit into a wheel of some sort and installation or replacement of the blades is simply a matter of removing the screws holding in the blades, removing the old one and inserting a new one.

We always recommend that you put some protective cover on the portion of the blade you are handling, such as masking tape to help prevent getting cut during installation and to leave it on until such time that you will start and check the cutting operation.

The length that the blade extends out of the cutter blade wheel needs to be carefully checked to insure that the entire blade will pass completely through the product. This is especially important with the very first installation and can be accomplished by rotating the wheel with the blade installed manually through the bushing and visually checking to see that it will completely cover the entire bore of the bushing.

Note: ***Use Extreme Caution!*** The blades will be very sharp and since the power is off, the blade wheel can spin freely.

INSTALLING THE BUSHING AND BLADE ALIGNMENT

A. The Bushing

Generally, the bushing will be in two parts, an inlet and an outlet with the inlet bushing being tapered, or otherwise contoured, to assist in guiding the product into the cutter mechanism. It is extremely crucial to the success of the cutting process that bushing bores be exact and in perfect alignment with each half.

B. Installation of The Bushing

1. Open the front, hinged cover (orange) to expose the top of the bushing holder.

2. Using the two locking bolts positioned facing the operator, turn them counter clockwise to loosen and remove the bushing.

3. Replace with the desired bushings and tighten the two bolts just enough to barely be able to move the bushings.

4. Rotate the blade wheel until the blade enters the space between the two bushings.

5. Move the outlet bushing in until you can barely feel the blade scrape along the inside of the bushing.

6. Move the inlet bushing inward until there is about .001 to .003 clearance between the blade and the outlet bushing.

7. Tighten the two bolts in the housing to lock in the bushings.

8. Rotate the blade wheel by hand such that the blade passes through the space between the two bushings to insure that it will clear without hitting either bushing and passes through the space with little effort.

C. Checking Alignment of Bushing to Blade

Once you are sure that the blade will easily clear the bushings as it goes through the space, you should then make some test cuts to insure quality.

1. Close the safety cover

2. Turn on the power (Rear main disconnect)

3. Press the "Start" button (Green)

4. Then press the "Test Cut" button

   - One complete cut cycle should occur and the blade should pass through the bushing space and not break

   Generally, the closer you can get both bushings to the blade, the better the resulting cut quality.

5. Then press the "Test Cut" button several more times to insure an easy operation.

6. Insert a piece of the product into the cutter bushings and make several more test cuts. Inspect the cut quality.

SET-UP PROCEDURE

Once the cutter blades have been installed and the bushing set and the cut quality are verified, you can then select the appropriate cutting mode.

1. FLYWHEEL MODE (DC only)

   IN THIS MODE, IT IS ONLY NECESSARY TO:

   A. Set the blade rpm's
   B. Reset the piece counter

   A. SETTING THE BLADE RPM'S

   1. Press the "Set Speed" key in the upper left hand corner of the Fenner M-Trim.

      Note: A red light will illuminate within the key.

   2. Using the numbered keys, key in the desired blade speed including the decimal point.

   3. Once the correct speed is displayed, use the "Enter" key to enter the speed.

   4. The "Up/Down" keys may be used to effect small changes from a specific set speed.

   5. To watch the actual blade speed, depress the "Tach" key.

   B. TESTING THE BLADE SPEED

   - Press the "Start" button.

   - Press the "Test Cut" button with the mode selector switch in one of the on-demand modes.

     The blade should spin around one time.

   - Press the "Test Cut" button several more times.

- Then switch the mode selector to flywheel mode and depress the "Test Cut" button and the blade wheel should begin to spin continuously at the preset rpm's.

You can now change the blade speed to any value you desire within the speed range of the cutter. (Up to 700 rpm)

C. CUT LENGTH ACCURACY CAN BE AFFECTED BY:

- Slippage of the extrudate to the belt surface
- Irregular belt surface (cracks, gouges)
- Bowing or other movement of the extrudate in the belts

2. ON-DEMAND ENCODER

This mode is recommended if a high degree of precise cutting is required and the number of cuts per minute is less than approximately 350.

This mode permits a single cut from a signal coming from a rotary pulse encoder connected to the puller or the extrudate.

Since the accuracy of the cut will depend on the accuracy of the incoming signal, extreme care needs to be exercised in the choice and location of the encoder.

To access this mode:

- Turn the mode selector switch to the encoder position

- Turn on the cutter

IN THIS MODE, IT IS NECESSARY TO SET THE FOLLOWING:

A. Blade speed (DC only)
B. Counter settings (length)

A. SETTING THE BLADE RPM'S

Press the "Set Speed" key in the upper left hand corner of the Fenner M-Trim.

Note: A red light will illuminate within the key.

Using the number keys below, key in the desired blade speed including the decimal point.

Once the correct speed is displayed, use the "Enter" key to enter the speed.

The "Up/Down" keys may be used to effect small changes from a specific set speed.

To watch the actual blade speed, depress the "Tach" key.

Note: The "Up/Down" keys can be used when in Tach mode.

To test the blade speed:

- Press the "Start" button
- Press the "Test Cut" button

  The blade should spin around one time

- Press the "Test Cut" button several more times

B. SETTING THE CUT LENGTH

Enter in the desired cut length in inches.

Refer to either the Red Lion Gemini 1000 or Dynapar Max Count II user's manuals supplied.

Note: As you can see in this mode, the blade speed, as well as the cut length, needs to be set. By being able to change the blade speed, one can optimize the cut quality.

3. ON-DEMAND EXTERNAL (Optional)

This mode allows an external input, an electric eye, to initiate a single revolution but at a preset blade rpm. Since this method of cutting is activated by an optical source actually seeing the product, it is the most accurate method of cutting ON-DEMAND. It does depend on the use of the correct type of high speed DC electric eye for the application and the proper guiding and support of the extrudate.

Since the electric eye depends on the eye signal being broken by the product, there may be problems with extremely clear parts.

The cut length is set externally by the location of the electric eye.

IN THIS MODE, IT IS ONLY NECESSARY TO SET THE FOLLOWING:

A. Blade speed (DC only)
B. Reset piece counter

A. SETTING THE BLADE SPEED (DC only)

- Put the mode selector switch in the encoder position and unplug the encoder.

- Turn on the cutter.

B. SETTING THE BLADE RPM'S (DC only)

Press the "Set Speed" key in the upper left hand corner of the Fenner M-Trim.

Note: A red light will illuminate within the key.

Using the number keys below, key in the desired blade speed including the decimal point.

Once the correct speed is displayed, use the "Enter" key to enter the speed.

The "Up/Down" keys may be used to effect small changes from a specific set speed.

To watch the actual blade speed, depress the "Tach" key.

Note: The "Up/Down" keys can be used when in Tach mode.

C. TESTING THE BLADE SPEED

- Press the "Start" button
- Press the "Test Cut" button

  The blade should spin around one time

- Press the "Test Cut" button several more times

D. TESTING THE CUT

- Insert a piece of the product in the cutter bushings
- Press the "Start" button
- Press the "Test Cut" button

One complete cut cycle should occur.

E. TESTING THE OPERATION

- Insert a piece of the product in the cutter bushings
- Using your hand, trip the eye and insure that a complete cut cycle occurs.

4. ON-DEMAND TIMER

The mode enables one to set the "timer" in seconds between cuts.

TO SET THE "TIME"

- Put the Selector switch in time mode
- Turn on cutter
- Refer to the counter user's manual for time entry.

PRODUCT SUPPORT

Cutting of rubber, plastics or other material with the rotary knife cutters requires a device to support the material while the cut is in progress.

Cutting dies or bushings used with Conair Gatto On-Demand Cutters are cylindrical metal devices which have been bored or otherwise machined to match the cross sectional profile of the material to be cut. Clearance must be provided to allow the material to slide through the opening smoothly without binding. However, the clearance must not be great enough to permit excessive lateral motion of the material.

Cutting dies serve the following functions:

1. Guide the product to the cut plane
2. Provide support for the material
3. Guide and support the knife

****IMPORTANT****

ALTHOUGH FREQUENTLY IGNORED, CUTTING DIES ARE EXTREMELY IMPORTANT IN OBTAINING A CLEAN CUT ON PROFILES.

BORING THE BUSHING

1. The first step to precise cutting is to have the cutting dies, or bushings, machined or bored to suit the products cross sectional profile. Clearance must be provided to permit the material to freely slide through the opening.

******CAUTION******

EXCESSIVE CLEARANCE WILL ALLOW THE MATERIAL TO MOVE LATERALLY AND MAY CAUSE IRREGULAR OR ANGULAR CUTS.

******IMPORTANT******

THE OPENING IN A PAIR OF BUSHINGS SHOULD BE CONTINUOUS. ANY MISALIGNMENT WILL CAUSE FEEDING PROBLEMS.

2. Do not enlarge the entrance of the downstream bushing unless the product is hanging up on the edge at each cut. The more square the entrance, the better the cut quality. To facilitate sliding bushings in and out of bushing holders, it is recommended that a $1/16$", 60 degree chamfer be placed on the end edges of each bushing.

   The face of each bushing closest to the blade should be beveled about 5 degrees off vertical to within $1/2$" of opening to assist in guiding the blade to the cut point.

INSTALLATION OF BUSHINGS

1. With power off, rotate the blade to the cutting position between the bushing holes and carefully insert the left hand or downstream bushing, as seen from a front view of the cutter, into the bushing holder hole.

2. Keep the beveled face toward the blade and the machined flat on the side of the bushing toward the front of the machine to provide engagement with the locking screw.

3. When the gap between the knife and the bushing face closes to within 1/16", turn the locking screw finger tight. The bushing should be able to move freely but with a little drag.

4. Continue closing gap slowly. Check for knife interference by carefully rotating the knife cutter head by hand. The knife should rotate freely without contacting the bushing face.

5. The ideal clearance should be about .001" - .002". A feeler gage or shim stock can be used to test clearance.

6. Repeat same procedure with right hand or upstream bushing. The knife should pass freely through the gap between the bushings, without interference. A clearance gap of .002" - .004" wider than the knife's thickness is acceptable.

******CAUTION******

THIS CHECK ASSUMES THAT THE BUSHINGS HAVE BEEN SET UP SYMMETRICALLY. IF THIS IS NOT THE CASE, THE KNIFE MAY INTERFERE WITH THE BUSHING FACE CAUSING THE BLADE TO BREAK.

7. With the knife out of the way, hand feed some material through the bushings. The transition must be smooth and constant from upstream to downstream bushing.

8. If some binding does occur, the alignment of one bushing with respect to another may be out of phase.

9. Tighten the locking screws and recheck bushing clearance gap.

The cutter will operate as long as the knife guard is closed and both bushings are in place.

Note: If all bushings are in place and the knife guard is closed and the green start button stays on, check:

   a. Are all the interlock switches closed?

   b. Is 12 VDC present in circuit?

   c. Is safety relay functioning?

Section II

ENCODER

ENCODER

MOUNTING AND GENERAL INFORMATION ON ENCODERS

Do not apply excessive axial or radial thrust on encoder shaft (rated for 13 lbs. axial thrust).

Do not press or drive gears or pinions on the encoder shaft.

Encoders are an instrument containing an accurately positioned electronic system.

Parts should slide freely on the shaft prior to securing with a clamp or set screw. (.001 slide fit).

Excessive clearance in mounting hole can lead to inaccuracy.

If encoder is taken apart, the warranty is invalidated. (Seal broken).

Encoder wheel should not exceed .001 TIR.

If mounting encoder and wheel assembly on belt or roller:

- Tighten bracket to facilitate no vertical movement.
- Apply encoder wheel to surface to be measured in position that will not allow slippage, but confirms to above warnings.

Alternatives to above mounting of encoder:

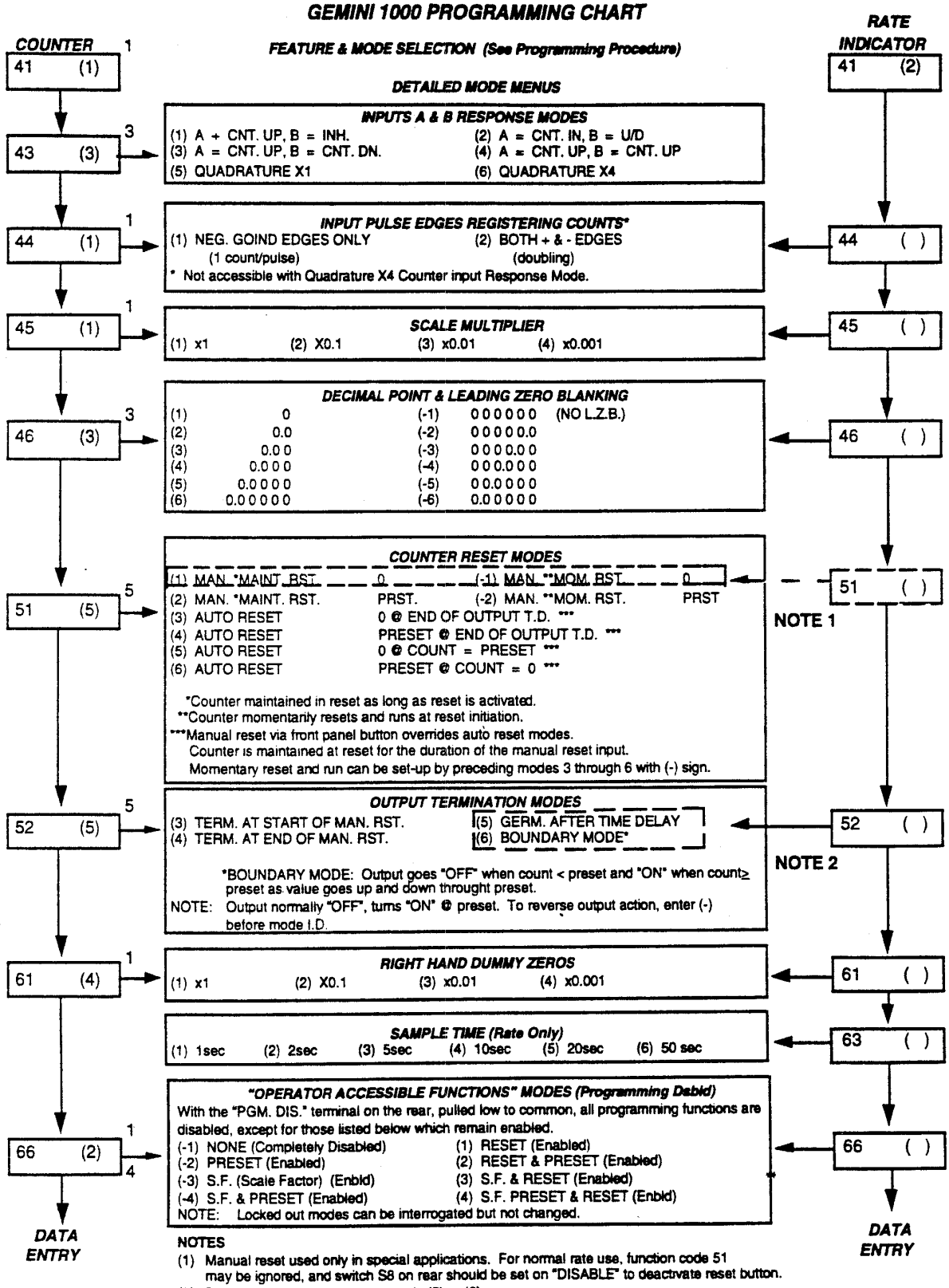
- Direct drive through solid (precision bored) coupling to encoder on output side of any type gear box to remove error due to backlash in gears.
- Use O-ring as a drive belt from belt sheave to encoder wheel. (Items must be machined on mandrels or actual mounting shafts to facilitate precision TIR to obtain best accuracy).

SETTING LENGTH (TIMER OR ENCODER INPUT)

RED LION GEMINI 1000

- To reset count, depress "R" button.
- To change length:
  - Depress button under desired digit
  - Each time you depress the button, the count will change in a positive count (0-9)
  - Once the number is correct, depress the "E" button for enter
- To change the scale factor:
  - Depress the "SF" button
  - Depress the button under the digit until the desired number is displayed
  - Depress the "E" button to enter the new number

GEMINI 1000 PROGRAMMING CHART



NOTES

(1) Manual reset used only in special applications. For normal rate use, function code 51 may be ignored, and switch S8 on rear should be set on "DISABLE" to deactivate reset button.

(2) Rate applications normally use only (5) or (6).

SETTING LENGTH (TIMER OR ENCODER INPUT)

DYNAR MAX COUNT 2

- To change cut length:
  - Use ▲ or ▼ button until the display in the upper left shows "Pi".
  - Press "Key" button.
  - Enter new length using number buttons.
  - Press "Key" button to enter new length.
- To set set batch:
  - Use ▲ or ▼ button until display upper left "Bt".
  - Press "Key" button.
  - Enter new batch number.
  - Press "Key" button to enter new batch.

TYPICAL CUTTING PROBLEMS AND CAUSES

PROBLEM	POSSIBLE CAUSE
1. Hairs/strings on edge	1. Blade speed too slow 2. Blade too thick 3. Blade design incorrect 4. Buildup on blade 5. Dull cut edge
2. Burrs on cut edge	1. Improper bushing support 2. Excessive space between the brushings 3. Bushing cut surface not sharp 4. Blade speed too slow 5. Blade too thick 6. Improper blade design 7. Extrudate temperature too high
3. Cracks at the cut	1. Extrudate temperature too low 2. Blade speed too high 3. Brushings not supported properly 4. Blade too sharp
4. Cut is not square	1. Blade speed too slow 2. Improper blade design 3. Blade not properly installed in holder 4. Excessive gap between bushings 5. Bevel on knife not equal
5. Excessive cut length variation FLYWHEEL	1. Cutter speed inconsistent 2. Cut supply signal not consistent 3. Angular cutting of product 4. Loss of product support between the puller and cutter
ON-DEMAND	1. Park position not consistent 2. Cut supply signal not consistent 3. Belt puller variations 4. Encoder or eye malfunctions

PREVENTATIVE MAINTENANCE RECOMMENDATIONS

	30 Days	60 Days	90 Days
1. Bolt tightness			
--motor mounts	X		
--bearing mounts	X		
--traverse bearing mounts	X		
--blade wheel	X		
--Blade holders	(Every time blades are changed)		
2. Electrical connections			
--terminals		X	
--plugs/switches	X		
--electronic connections		X	
3. Belt tension	X		
4. Lights		X	
5. Bearings			
--grease fittings			X
6. Pulleys			
--tightness			X
7. Motor brushes (DC only)			X
8. Air filters	X		
9. Tighten proximity switches		X	

SPARE PARTS

1540-00359	Redlion Programmable Counter	
1545-30016	Encoder Assembly *1200 Pulse*	
1590-30168	Square D Controller	
1545-00594	Encoder Wheel	
5510-30000	Filter 5 Micron	*PSC Model Only*
5510-30008	Filter 3 Micron	*PSC Model Only*
5548-30000	Regulator Valve	*PSC Model Only*
3550-30008	Pneumatic Clutch	*PSC Model Only*
3552-30000	Replacement FrictionDisc For Pneumatic Clutch	

BLADES

2" STRAIGHT

3515-30016	Straight Blade .025 Thick
3515-30096	Straight Blade .015 Thick
3515-30104	Straight Blade .020 Thick
3515-30088	Straight Blade .010 Thick

3" STRAIGHT

3515-30024	Straight Blade .025 Thick
3515-30128	Straight Blade .020 Thick
3515-30136	Straight Blade .031 Thick

2" CURVED

3515-30032	Curved Blade .025 Thick
3515-30064	Curved Blade .010 Thick
3515-30072	Curved Blade .015 Thick
3515-30080	Curved Blade .020 Thick

3" CURVED

3515-30120	Curved Blade .031 Thick
3515-30112	Curved Blade .020 Thick
3515-30040	Curved Blade .025 Thick

OPTIONS AVAILABLE

BLADE LUBRICATION BOTTLE

It sometimes becomes necessary to add a little lubrication to the blade to assist in cutting the product cleanly and to extend the blade life, especially with very abrasive polymers. The cutter housing then can come equipped with a bottle that can meter in a controlled amount of a lubricant (many times just plain water). This has been found to help the cutting of very flexible materials.

BLADE HEATERS

Many rigid materials or very brittle materials can shatter easily during the cutting cycle, especially at high line speeds. This cutter can be easily equipped with a system to warm up the blades prior to each cut cycle and help slice through materials without chipping or shattering the cut edge.

CUTTER BLADE DESIGN

The purpose of any profile extrusion cutting knife is to pass as much of the edge as possible through the product to achieve a true slicing, rather than a chopping action. In this regard, there are general three types of blade shapes that can be used.

The are the following:

1. Straight edge
2. Curved edge
3. Special profile blade

Basically, there is little difference between the first two as both encourage a slicing action through the product. Curved blades have a slight advantage over the straight edge but are generally much more expensive and more difficult to resharpen in the field.

In addition to the two basic designs, Conair Gatto can assist in the design of whatever special blade may be required to perform any job.

CUTTER QUALITY CONTROL REPORT

Customer Name: _____ Job No.: _____

Inspected By: _____ Date: _____

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1. Check that the specification of the cutter matches the customer order:

   - Cutter Model # _____
   - Bushing outside diameter _____
   - Drive type _____
   - Cuts per minute:

   On-Demand

   _____ cpm up to _____ rpm blade speed
   _____ cpm up to _____ rpm blade speed

   Continuous

   _____ cpm maximum (# of blades ____) variable

   - Polycarbonate blade observation window
     Yes ____ No ____ If no, what material_____

   - Type of blades: <u>Razor Blades</u>
     shick injector _____
     potato chip _____
     scraper _____
     techni-edge _____
     <u>Custom</u>
     Drawing # _____
     Drawing # _____

   - Cutter head type: Drawing # _____

- Input Device:
  - Bi-directional encoder 1200 pulse/rev
    Model # _____
  - Electric eye Yes _____ No _____

    If yes, Model # _____
- Modes of operation:
  - Flywheel (DC only)
  - On-Demand encoder
  - On-Demand external (optional)
  - On-Demand timer
- Center line height:

  42 plus/minus 2 inches
  Other than above _____
- Voltage: 240/1/60 460/1/60
  240/3/60 460/3/60
  Other than above _____
- Right to left operation: Yes _____ No _____

Notes: Any special features not mentioned Yes _____ No_____
If yes, please list:
- Paint, etc.
- _____
- _____

Listed options:
- Discharge conveyor Yes _____ No _____
  If yes, check Length _____ Width _____ HP_____
  What is the top speed of the belts? _____
- Parts ejection system Yes _____ No _____
  If yes, with SS tray Yes _____ No _____
  If yes, FDS white belts Yes _____ No _____

- Custom bored cutter bushings Yes _____ No _____
  If yes, note bore size _____
  If yes, are they of stainless steel construction? _____
  If yes, do they get the lubrication bottle? _____

- Blade wipe system Yes _____ No _____
  List Model # _____
  List drawing # for blade heater _____

2. Fit set of blank or bored bushings in the cutter to check for proper fit.

3. Verify that all components are installed in accordance with assembly drawings. Make sure that all bolts on the cutter are tightened.

4. Check that all wiring is in conformance to electrical codes, and that all wiring covers are in place.

5. Turn main disconnect on, this is located at the rear of the lower electrical enclosure.

6. Counter display should be fully illuminated.

7. Rotate the mode selector switch to any on-demand position.

8. Press the green start button. The fan cooling the cutter motor should be operational at this time.

9. If the knife guard or either cutter bushings are removed, the drive motor should immediately shut off.

10. Set the cut mode to on-demand cutting mode. If a DC model, adjust the blade speed to maximum. (700 rpm)

11. Depress the test cut button. The blade should make a single revolution and come to a stable home position. There after, every time the home cycle button is depressed, a cut should occur at the programmed blade speed. Adjust the blade speed in increments up to the maximum list on the specification.

12. At this point, set the blade speed to 700 rpm's and the length to 1 second. Switch the selector switch to the lengths and parts position. The cutter should now be automatically cutting once every second. Let it run for a period not less than 4 hours, with regular checks for operation and clutch temperature.

    Note: Attach strip chart recording of park position test.

13. Plug the encoder able into the plug on the side of the cutter cabinet. Program the cutter for the on-demand encoder mode with a blade speed of 700 rpm's and a cut length of 12 inches. With the selector switch in the lengths and parts position, rotate the encoder shaft in the correct direction of operation.

    Note: Be sure direction of operation is noted. Adjust the scale factor in the counter such that one revolution of the encoder shaft equals (1) cut activation.

14. Program the cutter for flywheel (DC only) mode with a blade speed of 500 rpm's. Rotate the selector switch back and forth between lengths and off to check for proper home position. Also, while in the lengths position, open the knife guard to make sure that interlock system shuts down the system properly. Program the blade speed throughout the entire speed range to check for proper operation.

15. If the cutter has the electric eye supplied as an option, plug it in the labeled outlet on the side of the cutter. Program the cutter for on-demand encoder with a blade speed of 750 rpm's.

Note: Be sure to unplug the encoder first. When the selector switch is in the lengths position, the initial breakage of the beam should activate a cut. Adjust the delay time in this mode to check for proper operation.

16. Check the unit for visibility. i.e.: paint

17. Check to ensure the four (4) jacking bolts are fitted with leveling pads and jam nuts. Be sure that all threads are clean.