UP CUT SAW

MODELS: UC-7-24 and UC-4-18

INSTRUCTION MANUAL

⚠ **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This manual is out-of-date and is provided only for its technical information, data and capacities.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containing warnings, information, precautions, and procedures that may be more adequate than those contained in this out-of-date manual.

UGE001/0597

CONAIR GATTO UP-CUT SAW

Machine Model No. UC-7-24
UC-4-18

Machine Serial No. _____

Electrical
Schematic No. _____

GENERAL SPECIFICATIONS

The primary importance in the operation of any machinery is safety as well as proper maintenance. The following points should be observed in order to provide for safe as well as long lasting operation of Conair Gatto equipment.

1. Always replace guards.

2. Train operators to understand the operation of all moving parts.

3. Follow simple instructions regarding lubrication and preventative maintenance.

4. Keep machine clean.

THE ABOVE STEPS WILL ENSURE A SAFE AND LONG LASTING PIECE OF EQUIPMENT FOR MANY YEARS.

1.1 TECHNICAL DATA

UC-4-18 - Capacity 4 1/2" O.D. or equivalent cross section for profiles. 18" table travel

UC-7-24 - Capacity 7" O.D. or equivalent cross section for profiles. 24" table travel

1.2 APPLICATION AND MODE OF OPERATION

1.2.1 Saw Function

This saw is designed to automatically cut profile extrudate to length by actuation of a remotely positioned target switch normally placed on a run out dump table at a pre-determined length. The saw automatically cycles each time the target switch is actuated by the moving extrudate. The saw may be manually cycled by either operating the target switch or by pressing the manual cycle pushbutton on the front of the electrical control panel.

THE AUTOMATIC CYCLE OF THE MACHINE IS AS FOLLOWS:

1. The cycle is started by closure of the normally open target switch or the normally open manual cycle push-button.

2. The solenoid valves are then energized directing operating air to the product clamp and table forward cylinders. As the product is rigidly clamped, the table with the aid of a booster cylinder, is now traveling with the product.

3. The saw carriage cylinder now moves the saw blade into the product, effecting cut-off.

4. After product is cut, the saw carriage hits a limit switch, starting the reset cycle.

5. The saw carriage cylinder is de-energized allowing the saw blade to return home.

6. When the saw blade is home, the product clamp is released and the saw table returns home.

7. Upon return, the table closes a limit switch to reset for the next cycle.

The system uses low pressure pneumatics when the product is clamped and the table is moving. This is to allow a slow even travel for slow line rates. A high pressure pneumatic system equipped with quick dump valves allow the table to returns at higher than extrusion speed to provide sufficient time for reset for the next cut cycle.

1.2.2 Placement in Line

The machine should be installed in the extrusion line so that the extrudate is in line with the saw table. Adjust the height and level of the machine with the four corner adjusting screws so that the extrudate is parallel and touches the table.

1.2.3 Electrical Supply

A three phase, 4 wire power cord with a polarized plug for connecting to plant power furnished and connected to the machine. Make certain that the plant supply voltage corresponds to the voltage stamped on the machine panel. The polarized prong of the plug should be carried to the plant electrical ground so that the machine will be properly grounded. The electrical power source should be fused in accordance with the codes applicable in your plant.

NOTE: The drive motor is dual voltage and the saw may be operated at either voltage provided the motor and control transformer are properly connected for the selected voltage.

2.1 SAW TABLE

The saw table is carried on three bearings. Each bearing consists of 3 cam follower bearings at a 45 degree angle to the hardened linear shafts. This allows for better shaft capture and support with limited friction.

2.2 SAW CARRIAGE

The saw carriage is mounted to the table with two flange bearings for pivoting the blade in and out of the product. The carriage assembly is made of lightweight materials to aid in the quick smooth travel of the table.

2.3 CLAMPING SYSTEM

This system was designed for both versatility and positive clamping. When energized, the clamp cylinder pulls down on the clamp shaft and firmly holds the product just as the

table starts to move. The shape of the clamps allow the operator to use for either a profile or, when turned around, for clamping pipe. to change clamps, just remove the two holding screws and turn each one 180 degrees. Reinstall screws and secure tightly. To adjust clamp height, loosen the threaded collars on both clamp shafts and adjust accordingly.

2.4 AIR CONTROL SYSTEM

The main air filter/regulator is located on the side of the machine. Supply line should be 1/4" I.D. minimum. Main regulator should be set between 60 and 80 P.S.I.

Caution should be taken when plugging incoming air because table will return quickly to home position.

The valves on the front face of the machine are for control of the machine functions as marked.

2.5 SAW SPINDLE

On saws ordered for right to left extrusion lines, the saw spindle has a left handed thread. This is so blade rotation will aid in keeping the nut tight. Be sure of proper blade rotation before putting machine in production. Other than being extremely unsafe, blades can be permanently damaged by wrong rotation.

2.6 SAFETY FEATURES

The machine is safety-enclosed without impairing the operating efficiency. All covers are interlocked. Machine will not run without covers in place.

2.7 TARGET SWITCH

This switch is placed downstream of the saw in a position that the product activates the saw at a pre-determined length. It is equipped with a long line cord for up to 10 foot lengths.

SERVICING THE UNIT

C A U T I O N !

Disconnect all electrical power to this machine at the power source and make sure that all machine motion has stopped before opening control box panels, doors, or removing guards!

I M P O R T A N T !

Due to various design changes and up-dates, it is imperative that model and serial numbers are specified when ordering replacement parts for machinery.

3.1. AIR SYSTEM

3.1.1 Air Cleaner - Air Line Unit

The filter air cleaner on the air line unit should be blown out regularly. If water is allowed to fill the bowl, permanent damage to the air system components may result.

3.1.2 Air Line Lubricator - Air Line Unit

The lubricator bowl should be filled with a non-chlorinated oil of approximately 10 W viscosity. Set the rate at 12 drops per hour. Check bowl regularly for level.

3.1.3 Air Cylinders

The two air cylinders should be inspected regularly for air leakage on the rod end and for sluggish operation. With adequate lubrication the cylinders should give long, trouble free service before replacement of seals is required.

3.1.4 Air Valves

The one air valve should be inspected regularly for air leakage. Air leakage shows up as continuous air discharge from the exhaust. With adequate lubrication, the valve should give long, trouble-free service before replacement of seals is required.

3.2 BEARING LUBRICATION

3.2.1 Linear Ball Bearings

The linear ball bearings on the table are pre-lubricated and sealed. They should require no lubrication for the life of the machine.

3.2.2 Saw Spindle Bearings - Saw Carriage

The saw spindle bearings are roller type and the pillow blocks have lubrication fittings. Lubricate only with No. 2 lithium base ball bearing grease.

Bearings should be greased as often as necessary to maintain a slight leakage at the seals. Add grease until it shows at the seals; rotate the bearings to distribute grease. Usually high temperature accompanied by excessive leakage of grease indicates too much grease. When establishing a relubrication schedule, note that a small amount of grease at frequent intervals is preferable to large amounts at infrequent intervals.

Hours of Run Per Day	Suggested Lubrication Period In Weeks	
8	2 (Carbide)	4 (H.S.S.)
16	1 (Blade)	2 (Blades)
24	1 (3100 RPM)	1 (1900 RPM)

3.2.3 Hinge Pillow block Bearings

The hinge bearings are ball type pre-lubricated and sealed. They should not require lubrication for the life of the machine. The pillow blocks have lubrication fittings for lubrication if necessary. Use only No. 2 lithium base ball bearing grease.

3.2.4 Motor Bearings

The motor bearings are pre-lubricated and sealed with a grease supply adequate for 1000 hours of operation. The motor is furnished with provision for re-greasing as required. Re-grease with Shell Syprena #3.

3.3 DRIVE BELTS

The drive belts should be maintained under proper tension at all times. The adjustable motor base allows proper adjustment.

3.4 SHOCK ABSORBER

The shock absorber that decelerates the table return is adjusted prior to shipping the machine.

TROUBLE SHOOTING

* Pilot light does not light when saw is started:
  Check fuse, replace if blown

* Fuse blows at frequent intervals:
  Check for short circuit, defective switch, or defective coils in control circuit

* Table does not move when target switch is actuated or manual cycle pushbutton is depressed:
  Check inlet air pressure and table pressure
  Check if table is in return position
  Check for any obstructions in the table travel
  Check fuse
  Check table valve and solenoid for proper operation
  Check control relay for proper operation

* Saw carriage does not go up after it starts to move:
  Check inlet air pressure
  Check for any obstructions to carriage travel
  Check saw carriage valve for proper operation

* Saw carriage does not go down after cutting:
  Check saw carriage valve - it may be stuck in open position

* Table does not return after cutting:
  Check for any obstructions to table return
  Check table valve - it may be stuck in open position

* Saw spindle bearing runs hot (too hot to touch for more than a few seconds) accompanied by excessive grease leaking through seals:
  Excessive grease in bearing

* Noise coming from saw spindle bearings:
  Bearing needs lubrication and/or dirt entering bearing through seal
  Bearings should be greased as often as necessary to maintain a slight leakage at the seals

* Air valves stick in one position and/or erratic operation:
  Check air filter. The air filter mounted on this machine is the self-draining type. Occasionally these filters clog and the self-draining function is inoperative. If this happens, water and dirt can enter the pneumatic circuit causing damage to components and/or faulty operation
  Check lubricator. If empty, fill with SAE 10 oil

* Excessive shock to machine when table returns:
  Replace shock absorber

* Clamp bars rebound and bounce off extrudate when saw carriage returns to saw out position:
  Decrease speed of "Saw Return".

STD UC-4-18
Spare Parts
Bill of Material

Tab	Part No.	Description	Remarks
Basic Unit	3507-00664	Bearing Block	Table Motion Bearings
Basic Unit	3507-00648	Pillow Blk-3/4"	Carriage Pivot Bearings
Basic Unit	3507-00044	Pillow Blk 1"	Saw Shaft Bearings
Basic Unit	5503-02673	Cylinder C1 1/2 x 10"	Saw Cylinder
Basic Unit	5503-02681	Cylinder CD 1 1/2 x 1"	Table Assist Cylinder
Basic Unit	5503-02703	Cylinder C 1 1/8 x 18" o.s.	Table Cylinder
Basic Unit	5503-02711	CylinderC 1 1/8 x 1" o.s.	Clamp Cylinder
Basic Unit	5540-00192	Schrader Air Valve	
Basic Unit	5548-00086	Pressure Regulator	
Basic Unit	5553-30056	Valve and Solenoid w/ 6' cord (1/4 NPT)	
SHSS blade	3511-00067	Belt, Poly 280J10	Blade
SHSS blade	3517-00352	SHSS Blade 16" dia, 285 tooth	
Carbide blade	3511-00083	Belt-Poly, 260 J10	Blade
Carbide blade	3514-00025	Blade-Carbide 16" OD x 120 Tooth	
Encoder Opt.	1540-00464	Counter-S/S, 6 digit single preset	
Elec, CP	1601-30032	Relay, KM	
Elec, CP	1605-30000	Time Rly, K.M.	
Elec, CP	1619-30064	SSW, KL MLR	
Elec, CP	1593-30168	PB, KL MLR	Manual Cut
Elec, CP	1593-30160	PB, KL. MLR	Start
Elec, CP	1593-30176	PB KL MLR	Stop
Basic Unit	1577-01282	1 HP Motor,	
Basic Unit	1613-00603	Roller Arm Micro SW	Table Home, Door Covers, Table Over Travel,
Basic Unit	1613-00115	Button Micro SW	Saw Up, Saw Home, Saw Guard
Basic Unit	1615-30009	Pressure Switch,	Low Pressure Switch
Basic Unit	1613-00026	Roller Micro SW	Clamp In Position
Flag Opt.	1613-00603	Roller Arm Micro SW	Flag Switch
Encoder Opt.	1545-00527	Encoder	

Std.UC 7-24
Spare Parts
Bill of Material

Tab	Part No.	Description	Remarks
Basic Unit	5528-00039	Ace Shock Absorber	
Basic Unit	5503-02169	Table Cylinder 1 1/2" x 24"	Table Cylinder
Basic Unit	5540-00192	Schraer Air Valve	Flow Control
Basic Unit	5548-00086	Norgren Pres. Reg	
Basic Unit	5518-00871	Norgren Pres Gage	
Basic Unit	3507-00079	Pillow block - 1 1/4	Saw Shaft Bearing
Basic Unit	3507-00672	Pillow Block Brg	Table Motion Bearings
Basic Unit	84246	Bushing Assembly	Carriage - Vertical Travel
Basic Unit	5503-30040	Air Cyl 2.5" x 8"	Saw Cylinder
Basic Unit	5503-02711	Air Cyl C 1 1/8"x1"	Table Assist Cylinder
Basic Unit	5503-30037	Air Cyl. 2.5" X 2"	Clamp Cylinder
Carbide Blade	3511-00113	Poly V Belt	Blade Assembly
Carbide Blade	3514-00033	Carbide Saw Blade 20" dia 140 th 1 1/8"	
SHSS Blade	3511-00113	Poly V Belt	Blade Assembly
SHSS Blade	3517-00182	SHSS Blade 20" dia x 400 tooth	
Encoder Opt.	1545-00527	Encoder	
Encoder Opt.	1540-00464	Durant S/S Counter , 6 digit single preset	
Flag Opt.	1613-00603	Micro Switch Limit Switch	Flag Switch
Basic Unit	66054	Micro SW	Saw Up, Doors, Saw Home
Basic Unit	66052	Micro SW	Saw Guard
Basic Unit	84268	Reed SW	Clamp In Position
Basic Unit	1615-30009	Pressure Switch	Low Pressure Switch
Basic Unit	1613-00018	Micro SW	Table Home, Table Overtravel
Elec, CP	1601-30032	Relay, KM	
Elec, CP	1605-30000	Time Rly, K.M.	
Elec, CP	1619-30064	SSW, KL MLR	
Elec, CP	1593-30168	PB, KL MLR	Manual Cut
Elec, CP	1593-30160	PB, KL. MLR	Start
Elec, CP	1593-30176	PB KL MLR	Stop
Basic Unit	5553-30056	Control Valve and Solenoid w/ 6' cord (1/4 NPT)	Control Valve