www.conairgroup.com

USER GUIDE

UGE083-0110

TRI

Trim Inducer

It's a good idea to record the model and serial number(s) of your equipment and the date you received it in the User Guide. Our service department uses this information, along with the manual number, to provide help for the specific equipment you installed.

Please record your equipment's model and serial number(s) and the date you received it in the spaces provided.

Please keep this User Guide and all manuals, engineering prints and parts lists together for documentation of your equipment.

Date: _____

Manual Number: UGE083-0110 _____

Serial Number(s) _____

Model Number(s): _____

DISCLAIMER: Conair shall not be liable for errors contained in this User Guide or for incidental, consequential damages in connection with the furnishing, performance or use of this information. Conair makes no warranty of any kind with regard to this information, including, but not limited to the implied warranties of merchantability and fitness for a particular purpose.

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Introduction ..... SECTION 1

Purpose of the user guide

This User Guide describes the Inducer and explains step-by-step how to install, operate, maintain and repair this equipment.

Before installing this product, please take a few moments to read the User Guide and review the diagrams and safety information in the instruction packet. You should also review manuals covering associated equipment in your system. This review won't take long, and it could save you valuable installation and operating time later.

How the guide is organized

Symbols have been used to help organize the User Guide and call your attention to important information regarding safe installation and operation.

Symbols within triangles warn of conditions that could be hazardous to users or could damage equipment. Read and take precautions before proceeding.

1 Numbers indicate tasks or steps to be performed by the user.

◆ A diamond indicates the equipment's response to an action performed by the user.

An open box marks items in a checklist.

● A circle marks items in a list.

Indicates a tip. A tip is used to provide you with a suggestion that will help you with the maintenance and the operation of this equipment.

Indicates a note. A note is used to provide additional information about the steps you are following throughout the manual.

Your responsibilities as a user

You must be familiar with all safety procedures concerning installation, operation and maintenance of this equipment. Responsible safety procedures include:

- Thorough review of this user guide, paying particular attention to hazard warnings, appendices and related diagrams.
- Thorough review of the equipment itself, with careful attention to voltage sources, intended use and warning labels.
- Thorough review of instruction manuals for associated equipment.
- Step-by-step adherence to instructions outlined in this user guide.

ATTENTION:

Read this so no one gets hurt

We design equipment with the user's safety in mind. You can avoid the potential hazards identified on this machine by following the procedures outlined below and elsewhere in the User Guide.

WARNING: Improper installation, operation, or servicing may result in equipment damage or personal injury.

This equipment should be installed, adjusted, and serviced by qualified technical personnel who are familiar with the construction, operation, and potential hazards of this type of machine.

All wiring disconnects, and fuses should be installed by qualified electrical technicians in accordance with electrical codes in your region. Always maintain a safe ground. Do not operate the equipment at power levels other than what is specified on the machine serial tag and data plate.

WARNING: Voltage hazard

This equipment is powered by three-phase alternating current, as specified on the machine serial tag and data plate.

A properly sized conductive ground wire from the incoming power supply must be connected to the chassis ground terminal inside the electrical enclosure. Improper grounding can result in severe personal injury and erratic machine operation.

Always disconnect and lock out the incoming main power source before opening the electrical enclosure or performing non-standard operating procedures, such as routine maintenance. Only qualified personnel should perform troubleshooting procedures that require access to the electrical enclosure while power is on.

How to use the lockout device

CAUTION: Before performing maintenance or repairs on this product, you should disconnect and lockout electrical power sources to prevent injury from unexpected energization or start-up. A lockable device has been provided to isolate this product from potentially hazardous electricity.

Lockout is the preferred method of isolating machines or equipment from energy sources. Your Conair product is equipped with the lockout device pictured below. To use the lockout device:

1. Stop or turn off the equipment.
2. Isolate the equipment from the electric power. Turn the rotary disconnect switch to the OFF or "O" position.
3. Secure the device with an assigned lock or tag. Insert a lock or tag in the holes to prevent movement.
4. The equipment is now locked out.

WARNING: Before removing lockout devices and returning switches to the ON position, make sure that all personnel are clear of the machine, tools have been removed, and all safety guards reinstalled.

To restore power to the panel, turn the rotary disconnect back to the ON position:

1. Remove the lock or tag.
2. Turn the rotary disconnect switch to the ON or "I" position.

SECTION

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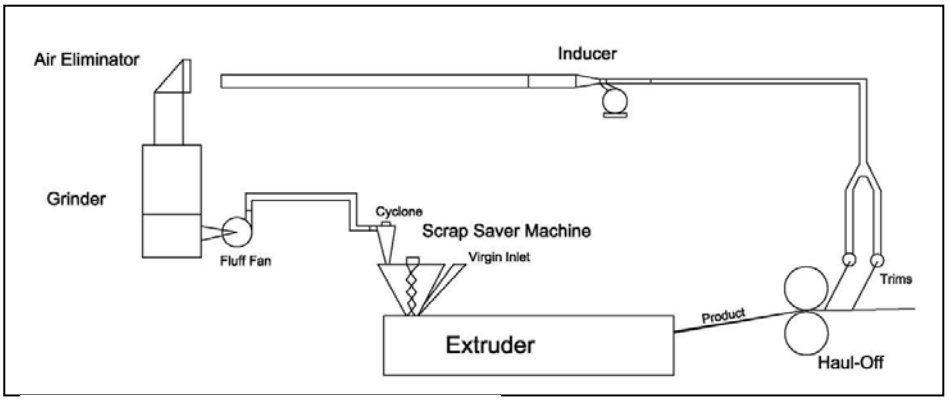
2 Description

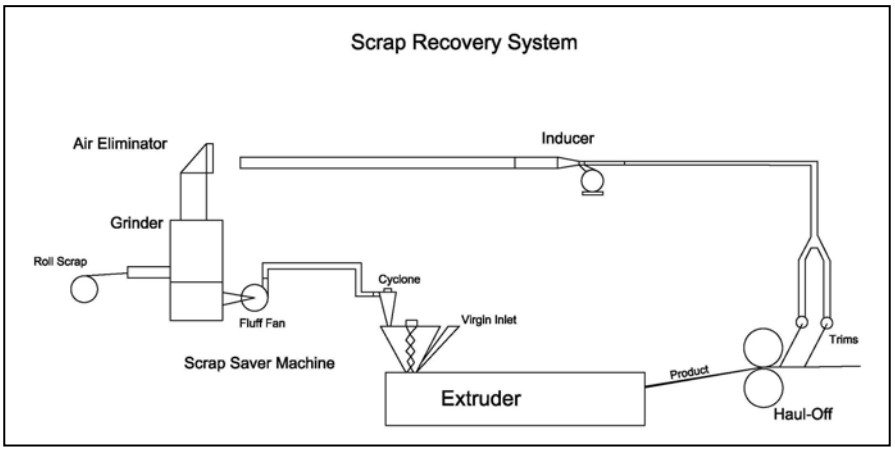
What is the Inducer machine?

Conair's Trim Removal Inducer is designed to effectively pick-up and convey thin gauge edge and/or bleed trims generated in the production of film, foam, sheet or tape extrusion lines. The Inducer conveys the trim scrap in a continuous stream to an in-line Conair granulator system or an off-line storage bin. The method of automatically conveying the edge and bleed trim scrap as continuous trims back to an in-line granulator system and then back into the extrusion process is the most efficient and effective way of re-processing the trim scrap material. The closed-loop re-processing of the trim scrap reduces the scrap handling costs and labor expenses and eliminates the risk of product contamination. It restores the trim scrap to its original feed stock value.

Typical Applications



Automatic scrap reclaim system for
recovery of trim scrap directly from a winder



Automatic scrap reclaim system for recovery of trim scrap directly from a winder, and roll scrap from a grinder roll feeder intake.

Description

How it works

High induced air to primary air ratio provides excellent trim pick-up and conveying performance. The blower performance of the trim removal inducer is maximized due to a unique nozzle adjustment feature. A simply adjustment of the venturi nozzle changes the induced air flow. This adjustable venturi feature transforms a specific volume of airflow on the vacuum side of the system into a much greater induced airflow on the pressure side. An adjustable venturi inducer design obtains improved air volumes on less horsepower than a fixed inducer design. The adjustable nozzle permits maximizing the operating point on the fan curve to allow the use of smaller horsepower blowers while still maintaining the proper system performance.

Available in three different sizes to handle any thin gauge material trim convey application. The inducers are very easy to install and adjust. The blower starter and controls are typically supplied in the granulator control panel when supplied with a complete Conair scrap recycling system or can be supplied as a stand-alone panel when used as a stand-alone trim conveying system.

- Flexible Installation
  The Inducer is designed to adapt easily to the installation requirement of any extrusion line. The unit is supplied with the venturi mounted in a horizontal arrangement above the blower, but can easily be rotated to provide an optimal venturi orientation. The venturi may also be mounted remotely from the blower using additional tubing.

- Efficient Trim Pick-ups
  Spun metal bellmouth pick-up nozzles provide a steady material flow without clogging or snagging. Stainless lined metal flex hose allows movement of the pick-up nozzles to ensure smooth trim material flow and prevent plugging in the convey lines. Optional custom manifolds for edge, bleed and/or center trims are adjustable and designed to maintain constant material conveying velocity.

- Quiet Operation
  The continuous trim removal inducer is much quieter than an in-line cutter blower or guillotine system. The blower is supplied with a silencer on the fan intake as standard. Optional silencers can be added to both the venturi inlet and/or the venturi outlet, thus reducing the noise even further. A sound enclosure can be added to the blower as well.

SECTION

3

3 Installation

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Description

Unpacking the Equipment

The TRI Inducer is attached to the pallet to prevent damage to the unit during shipment. Care must be taken when removing this machine from the pallet, in order to avoid damage to the venture unit. Installation personnel should only remove this machine from the pallet, once it is ready to be immediately placed into position.

Additional parts to be installed may include, the fluff cyclone, ScrapSaver machine and operator panel, grinder relief head, grinder with optional roll feeder, grinder fluff conveying fan, trim pickup manifold and all required interconnection trim or fluff material convey tubing.

Preparing for installation

The TRI Inducer and associated components are designed to be installed using specifically quoted convey distances and orientations. The installer is to make every effort to maintain the maximum or minimum convey distances and maximum number of elbows quoted for the trim and fluff convey lines. Failure to do so may compromise the quoted performance of the entire scrap reclaim system.

Mounting the TRI Inducer panel

The TRI Inducer motor starter is operated from one of two places. Normally the motor starter for the Inducer is located within the grinder control panel, and is energized when the grinder panel is power on. In other cases a stand-alone panel, with a start stop switch, is shipped with the Inducer. This type of panel should be conveniently located for easy operator access.

Positioning the trim removal TRI Inducer

The trim removal inducer is designed to be installed using specifically quoted trim convey distances and orientations. The installer is to make every effort to maintain the convey distances and number of elbows quoted for the trim convey line. Failure to do so may compromise the quoted performance of the scrap trim removal system.

In general, the trim removal inducer is placed as close as possible to the trim pickup manifold, attached to the winder. Additionally, the trim inducer outlet should be oriented to convey the trim toward the grinder trim receiver inlet, minimizing elbows and elevation changes.

Mounting the trim pickup manifold on the winder

The trim pickup manifold is designed to be positioned directly onto the film winder assembly. During the production of film, the edge and/or bleed trims are induced into this manifold. The trim inlets on the manifold must be positioned very close to the knife

that separates the trims from the film web. The outlet of the trim manifold is positioned toward the inlet of the trim removal inducer unit, in order to minimize the number of elbows and elevation changes of the trim convey line. Failure to do so may compromise the quoted performance of the scrap trim removal system.

Installing the trim and fluff convey tubing

The trim and fluff convey lines have specified diameters and distances. The maximum number of elbows and the minimum elbow radius are also specified in the quotation process. The installer is to make every effort to maintain convey distances and maximum number of elbows quoted for the trim and fluff convey lines.

Care should be taken to de-bur any cut tubing. Metal burrs within the convey lines will create snag points for the trim and fluff, so removal of burrs is required.

Connecting all field wiring

Interconnection of the TRTI Inducer to the grinder control panel or the stand-alone TRI control panel is very straightforward.

One conduit is run from the TRI Inducer to the control panel for the specified 3 phase motor voltage.

For exact terminal numbers and wire termination information, refer to the TRI Inducer stand-alone panel, or the grinder control panel interconnection schematics.

Connecting the main power

The main power is connected to the grinder control panel or the stand-alone TRI control panel using a 3-phase AC service, with ground. These wires are terminated directly to the line side of the TRI Inducer motor starter. Refer to the TRI Inducer stand-alone panel, or the grinder control panel schematic for voltage and amperage supply requirements.

Testing the installation

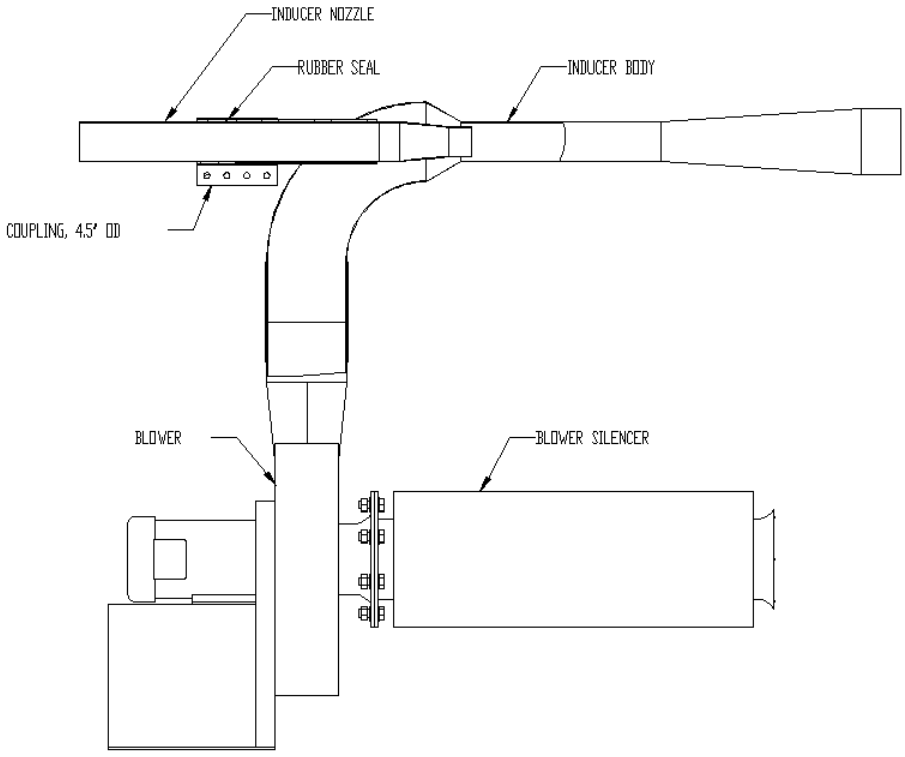
Once all the interconnections, electrical and mechanical, are completed, the system test is ready to begin. This section describes the functional test of the TRI Inducer start/stop control circuit.

1. Locate and actuate the Inducer motor starter and check the rotation of the Inducer blower. Viewed from the motor end, the blower rotation should be clockwise.
2. The amperage drawn by the TRI Inducer motor should be at or below the full load amperage shown on the motor nameplate.

Adjusting the venturi vacuum tube

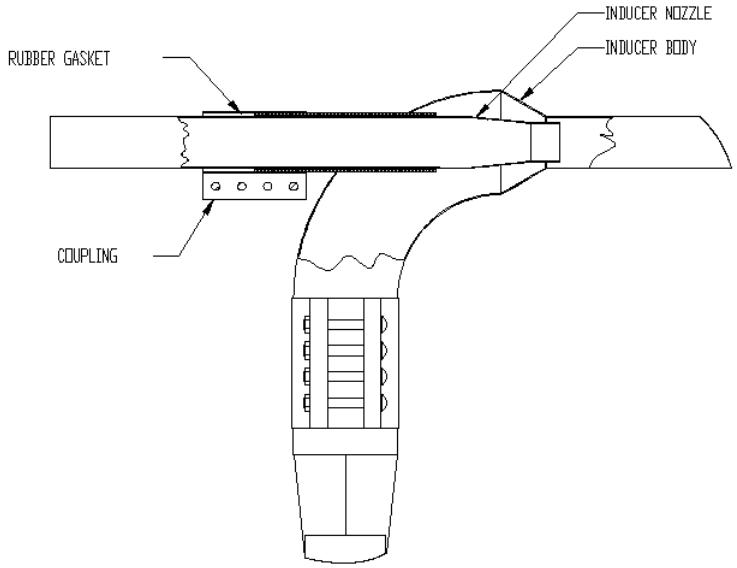
Refer to the TRI Inducer control panel electrical schematic for the following procedure. All amperage measurements in this section are located within the TRI Inducer electrical control cabinet.

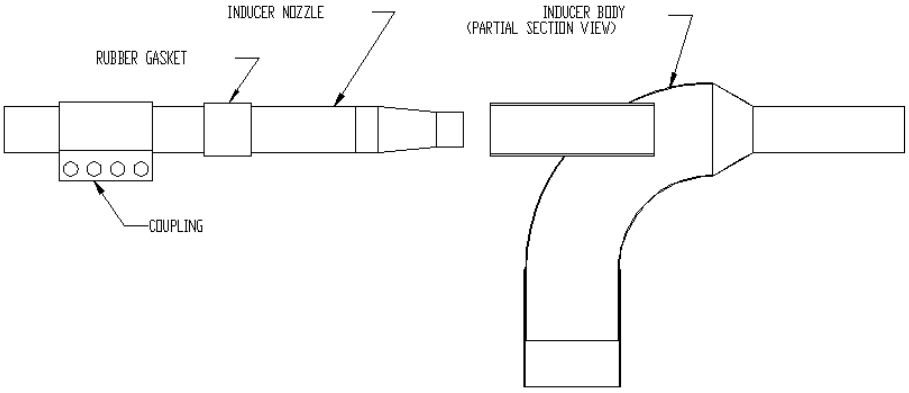
Adjustments to the venturi vacuum tube are made directly at the TRI Inducer unit.



To increase the trim suction, loosen the coupling, and pull the inducer nozzle outward, in 1/8 inch increments. A good rule of thumb is to push the nozzle totally inward first, then pull it out in 1/8 inch increments until maximum suction is obtained. A small adjustment is all that is needed to create additional suction on the trim. CAUTION : Ensure the motor nameplate current is not exceed while making this adjustment. Also, ensure the rubber seal is properly positioned before tightening down the coupling.

To decrease the trim suction, loosen the coupling, and push the inducer nozzle inward, in 1/8 inch increments. A good rule of thumb is to push the nozzle totally inward first, then pull it out in 1/8 inch increments until a minimum or desired suction is obtained. A small adjustment is all that is needed to reduce suction on the trim inlet. CAUTION : Ensure the motor nameplate current is not exceed while making this adjustment. Also, ensure the rubber seal is properly positioned before tightening down the coupling.


INDUCER NOZZLE
INDUCER BODY
RUBBER GASKET
COUPLING


INDUCER NOZZLE
INDUCER BODY
(PARTIAL SECTION VIEW)
RUBBER GASKET
COUPLING

SECTION

4

4 Operation

The TRI Inducer Control Panel

The TRI Inducer control panel is operated using the start switch located on the grinder control panel, or alternatively by using the start switch located on the optional stand-alone TRI Inducer control panel. Simply depress the start or stop switch on the appropriate panel.

To Start Feeding Film Scrap

Scrap material introduced into the TRI Inducer originates from the winder pickup manifold located nearby the film winder on the production extrusion line. This scrap is commonly referred to as edge trims or bleed trims. The trims are conveyed into the trim removal inducer fan and conveyed to the granulator. These trims can be introduced into the system at any time after system has been started.

To Stop Feeding Film Scrap

To stop feeding film trim scrap, the operator must eliminate the introduction of edge trims into the trim scrap removal inducer unit. This is done by cutting the trims at a position prior to the trim pickup manifold.

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5 Maintenance

5-1 Maintenance

Preventative maintenance schedule

After the first 100 hours of operation, inspect all electrical and mechanical connection on the TRI Inducer unit and the electrical control panels.

The AC motor for the system is a continuous duty motor, and requires no adjustment or maintenance. The venturi vacuum tube adjustment performed in the above section is done only one time and is considered a permanent and one-time adjustment as well.

SECTION

6

6 Troubleshooting

6-1 Troubleshooting

Before beginning

You can avoid most problems by following the recommended installation, operation and maintenance procedures outlined in this user guide. If you do have a problem, this section will help you determine the cause and tell you how to fix it.

Before you begin troubleshooting:

- Find the wiring diagrams and other schematics that were shipped with your equipment. These diagrams are the best reference for correcting a problem. The diagrams also will note any custom features, such as special wiring or control options, not covered in this user guide.
- Verify that you have all instructional materials related to the TRI Inducer, its control systems and its components.

Additional details about troubleshooting and repairing specific components are in these manuals.

- Verify that you have manuals for equipment located upstream and downstream from the TRI Inducer. Solving problems related to material conveyed to the TRI Inducer or to extrusion quality may require troubleshooting malfunctions or incorrect operating procedures on other pieces of equipment on the extrusion line.

A few words of caution

WARNING: This machine should be adjusted and serviced only by qualified technical personnel who are familiar with the construction and operation of this type of equipment.

DANGER: Voltage hazard.

Always disconnect and lock out the main power supply before opening the TRI Inducer electrical enclosure.

Troubleshooting procedures that require access to the electrical enclosure while the power is on should be performed only by qualified electrical technicians who know how to use electrical testing equipment and understand the hazards involved.

DIAGNOSTICS

How to identify the cause of a problem

To find the cause of a problem, review the correct installation of your TRI Inducer, especially with respect to vertical and horizontal distances, the venture vaccum tube adjustment and the maximum amperage drawn for the TRI Inducer motor.

Trim hang-ups within the trim manifold located at the winder are most often caused by burrs located within these convey tubes. Inspection for and removal of such burrs may be necessary.

REPAIR

Replacing fuses

This procedure covers the factory-installed fuses inside the TRI Inducer electrical control panel. If you have installed an electrical disconnect or emergency stop switch, additional fuses and/or breakers may have been used elsewhere in the main power circuit.
Located inside the this panel are fuses. Inspection and replacement of these fuses may be necessary.

To replace a blown fuse:

Disconnect and lockout the main power.

Open the electrical enclosure door.

Turn the screws on the front panel counterclockwise to open.

Replace the fuse. The fuses are located inside the control cabinet and are labeled and identified on the subpanel and the electrical print.

Close the electrical enclosure and restart the unit.

SECTION

Frequently Asked Questions

FAQ

Q

What do I do when the edge trim material hangs up inside the relief head positioned above the granulator?

A

Position the trim conveys tube farther away from the granulator relief head inlet. A distance up to 18 inches may be required to allow excessive air to dissipate, prior to the trim entering into the relief head.

Q

What do I do when the trims are not being picked up properly at the trim pickup point on the manifold?

A

Check the trim pickup tubing for burrs or snag points. Minimize the number of elbows, as well as the suction distance the trims have to be conveyed. This is the distance from the trim pickup manifold to the inducer venturi/fan assembly. Verify the proper adjustment of the TRI venturi vacuum tube.

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We're Here to Help

Conair has made the largest investment in customer support in the plastics industry. Our service experts are available to help with any problem you might have installing and operating your equipment. Your Conair sales representative also can help analyze the nature of your problem, assuring that it did not result from misapplication or improper use.

Additional manuals and prints for your Conair equipment may be ordered through the Customer Service or Parts Department for a nominal fee. Most manuals can be downloaded free of charge from the product section of the Conair website. www.conairgroup.com

How to Contact Customer Service

To contact Customer Service personnel, call:

✎ **NOTE:** Normal operating hours are 8:00 am - 5:00 pm EST. After hours emergency service is available at the same phone number.

From outside the United States, call: 814-437-6861

You can commission Conair service personnel to provide on-site service by contacting the Customer Service Department. Standard rates include an on-site hourly rate, with a one-day minimum plus expenses.

Before You Call...

If you do have a problem, please complete the following checklist before calling Conair:

- ❒ Make sure you have all model, control type from the serial tag, and parts list numbers for your particular equipment. Service personnel will need this information to assist you.
- ❒ Make sure power is supplied to the equipment.
- ❒ Make sure that all connectors and wires within and between control systems and related components have been installed correctly.
- ❒ Check the troubleshooting guide of this manual for a solution.
- ❒ Thoroughly examine the instruction manual(s) for associated equipment, especially controls. Each manual may have its own troubleshooting guide to help you.
- ❒ Check that the equipment has been operated as described in this manual.
- ❒ Check accompanying schematic drawings for information on special considerations.

Equipment Guarantee

Conair guarantees the machinery and equipment on this order, for a period as defined in the quotation from date of shipment, against defects in material and workmanship under the normal use and service for which it was recommended (except for parts that are typically replaced after normal usage, such as filters, liner plates, etc.). Conair's guarantee is limited to replacing, at our option, the part or parts determined by us to be defective after examination. The customer assumes the cost of transportation of the part or parts to and from the factory.

Performance Warranty

Conair warrants that this equipment will perform at or above the ratings stated in specific quotations covering the equipment or as detailed in engineering specifications, provided the equipment is applied, installed, operated and maintained in the recommended manner as outlined in our quotation or specifications.

Should performance not meet warranted levels, Conair at its discretion will exercise one of the following options:

- Inspect the equipment and perform alterations or adjustments to satisfy performance claims. (Charges for such inspections and corrections will be waived unless failure to meet warranty is due to misapplication, improper installation, poor maintenance practices or improper operation.)
- Replace the original equipment with other Conair equipment that will meet original performance claims at no extra cost to the customer.
- Refund the invoiced cost to the customer. Credit is subject to prior notice by the customer at which time a Return Goods Authorization Number (RGA) will be issued by Conair's Service Department. Returned equipment must be well crated and in proper operating condition, including all parts. Returns must be prepaid.

Purchaser must notify Conair in writing of any claim and provide a customer receipt and other evidence that a claim is being made.

Warranty Limitations

Except for the Equipment Guarantee and Performance Warranty stated above, Conair disclaims all other warranties with respect to the equipment, express or implied, arising by operation of law, course of dealing, usage of trade or otherwise, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.