

MV938B12-993

WARRANTY INFORMATION

Chore-Time Equipment warrants each new product manufactured by it to be free from defects in material or workmanship for one year from the date of initial installation by the original purchaser. If such a defect is found by Chore-Time to exist within the one year period, Chore-Time will, at its option, (a)repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement.

Additional extended warranties are herewith provided to the original purchaser as follows:

- 1. RLX Fans, less motors, for three years from date of installation.
- *2. Poultry feeder pans that become unusable within five years from date of installation. Warranty prorated after three years usage.
- 3. MEAL-TIME® Hog Feeder pans that become unusable within five years of installation.
- 4. Rotating centerless augers, excluding applications involving High Moisture Corn (exceeding 18%), for ten years from date of installation. Note: MULTIFLO® and applications involving High Moisture Corn are subject to a one year warranty.
- 5. Chore-Time manufactured roll-formed steel auger tubes for ten years from date of installation.
- *6. Laying cages that become unusable within ten years. Warranty prorated after three years usage.
- 7. ULTRAFLO® Auger and ULTRAFLO® Feed Trough (except ULTRAFLO® Trough Liners) are warranted for a period of five (5) years from date of original purchase against repeated breakage of the auger or wear-through of the feed trough.

Conditions and limitations:

- 1. The product must be installed and operated in accordance with instructions published by Chore-Time or warranty will be void.
- 2. Warranty is void if all components of a system are not supplied by Chore-Time.
- 3. This product must be purchased from and installed by an authorized Chore-Time dealer or certified representative thereof, or the warranty will be void.
- Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under this warranty.
- 5. This warranty applies only to systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this warranty.

Chore-Time shall not be liable for any consequential or special damage which any purchaser may suffer or claim to have suffered as a result of any defect in the product. "Consequential" or "special damages" as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.

THIS WARRANTY CONSTITUTES CHORE-TIME'S ENTIRE AND SOLE WARRANTY AND CHORE-TIME EXPRESS-LY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IM-PLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Any exceptions to this warranty must be authorized in writing by an officer of the company. Chore-Time reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

*See separate "WARRANTY ADDITION" as to these products

CHORE-TIME EQUIPMENT, A Division of CTB, Inc. P.O. Box 2000, Milford, Indiana 46542-2000 U.S.A.

SAFETY INFORMATION CHORE-TIME is concerned about the safety of its customers. Caution, Warning and Danger Decals have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety signs. Safety-Alert Symbol This is a safety-alert symbol. When you see this symbol on your equipment, be alert to the potential for personal injury. **Signal Words** Signal words are used in conjunction with the safety-alert symbol to identify DANGER the severity of the warning. DANGER.....identifies immediate hazards which WILL result in severe personal injury or death. ARNING WARNING identifies hazards or unsafe practices which COULD result in severe personal injury or death. CAUTIONidentifies hazards or unsafe practices which CAUTION COULD result in minor personal injury or product or property damage. 🛆 DANGER **DANGER--ROTATING PARTS** Rotating Parts! Do not operate with This decal is placed on the Anti-Reverse Switch Bracket of the Winch. covers removed! Severe personal injury will result if the equipment is Disconnect electrical power before working on system. operated without covers properly installed. equipment may start automatically. Otherwise severe personal injury will result. 2527-10 MV841.32 3/90 DANGER DANGER--ELECTRICAL HAZARD Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise. ELECTROCUTION HAZARD Ground all electrical equipment for safety.

All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes.

Ground all non-current carrying metal parts to guard against electrical shock.

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THANK-YOU

The employees of CHORE-TIME thank you for your recent purchase of the TURBO-HOUSE Air Inlet System. We are certain the equipment you have purchased, when properly installed, will provide years of trouble free service. If a problem should arise, your CHORE-TIME distributor can supply the necessary information to get your system operating properly.

Please read the Safety Information on page 3 and the installation instructions in this manual prior to beginning the installation. This manual is designed to give necessary information on the installation of your TURBO-HOUSE Air Inlet System.

Please pay special attention to the electrical wiring notes, they are there for your protection.

Important Note: When referring to lumber in the installation section, **2 x 4** represent the industry standard 1-3/4" x 3-1/2" (45 x 90 mm) boards.

TOOLS NEEDED FOR INSTALLATION

Open End Wrenches (3/8", 7/16") Side Cutters Nut Driver (3/8", 7/16") Standard Socket & Ratchet Set Electric Drill and Bits Tape Measure Flathead Screwdriver Level Channel-Lock Pliers Hammer Cable Cutters

Introduction

The Chore-Time TURBO-HOUSE Air Inlet is designed for use in confinement poultry buildings where the attic is used as an intake plenum. The TURBO-HOUSE Air Inlet system allows fresh air to enter through the ceiling for better air quality and temperature distribution.

The TOTAL area of ALL eave and/or ridge openings MUST be equal to or greater than the total area of the slots in the ceiling for the TURBO-HOUSE Inlet. See your building plans or measure the existing dimensions to check this requirement.

UNDERSIZED VENTILATION OPENINGS WILL RESTRICT AIRFLOW AND WILL RESULT IN PRODUCTION LOSSES AND/OR MORTALITY LOSSES.

Installation

Chore-Time recommends insulation in BOTH the ceiling and the roof line of the attic for best year-round air system performance and temperature distribution control. **Figure 1** shows a cross-section of the TURBO-HOUSE Air Inlet ceiling construction options for blown insulation and rigid styrofoam board insulation.

IMPORTANT: Installation of a mounting board (2 x 4) must allow room to secure ramp hanger shown in **Figure 1** to the outside face of the 2 x 4 (45 x 90 mm) board.

For best results, the ceiling slot length should be an even increment of 8 feet (2.43 m). The 2 x 4 (45 x 90 mm) mounting board should extend an additional 2 feet (610 mm) beyond the ends of the slot to accommodate the last Hanger and Ramp assembly and to avoid trimming 8 foot (2.43 m) parts (Inlet Curtain Assemblies and Side Rails). Therefore, the total length of the 2 x 4 (45 x 90 mm) mounting board should be as follows:

Mounting Board Length = Slot Length + 2 feet (610 mm).

The additional two feet (610 mm) of inlet should extend beyond the cage row toward the end where the Inlet Power Unit will be located.

Ramp Hangers

Figure 2 shows the location of the Ramp Hangers on the mounting board. The Ramp Hangers are paired in sets of two. The second Ramp Hanger is placed every 21 1/4" (54 cm) behind the first. The next set of Hangers should be 96" (2.43 m) on center from the previous set of Hangers.

Mounting and Assembly of Inlet Components

Begin the installation with the Ramp Hanger at the end of the slot nearest the system power unit (winch). The power unit may be located on either end wall of the building, but the cables connecting the power unit to the inlet rows MUST NOT interfere with fill system tubes, water pipes, or electrical conduits.



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Ramps

Figure 3 shows the location of the Ramps. The Ramps are mounted inside of the mounted Hangers with the 3/8" hex head nuts. The nuts on the Ramps should not be fully tightened to allow for adjustment of ramps after the entire Inlet is mounted and the power unit is connected. For more information, see section titled "FINAL ADJUSTMENT" on page 10.

Curtain Seal Assemblies

Refer to Figures 4 through 7 when installing the Curtain Seal Assemblies.

Starting from one end, install (1) 29339-1 and (1) 29339-2 End Curtain Inlet Assembly, as shown in Figure 5. The heat-sealed edge of the end curtain must be toward to the starting end of the row to retain the curtain tubes used for weight.

Each End Curtain Assembly has either a male or a female end, as shown in **Figure 6**. These ends are used to overlap with the main curtain (P/N 29280) to form a continuous curtain inlet. To install, insert the male end inside the female opening so there is approximately 3" (76 mm) of overlap and 1/2" (12 mm) of gap between the two curtain mounts, as shown in **Figure 6**. The 1/2" gap is required to allow for thermal expansion or contraction of adjacent parts. To control position and curtain length differences, always make sure the joining location of the two curtain assemblies is approximately centered within the distance between the two sets of hangers as shown in **Figure 4**.

Continue installing the main curtain assemblies until the curtains have reached the last set of hangers. At this point, install (1) 29339-1 and (1) 29339-2 End Curtain Inlet Assembly to finish each row, similar to the starting end.

Before installing Curtain Cap End Assemblies, measure the slot width between the 2x4 mounting board. This width should be approximately 6" (152 mm) unless additional lumber was used to retain the attic insulation material. Install a wood block of this length across the opening of the inlet at the front & back of the row. See Figure 7.

Secure one Curtain Cap End Assembly (P/N 29240) to each 2x4 block with (2) #10x1" screws. See Figures 5 & 7.



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Carriages And Side Rails

Figure 8 shows the placement of the Carriages and the Side Rails. The Side Rails will be locked onto the Carriage by closing the tabs. Use channel-lock pliers through the large square holes in the carriage to bend tabs. These tabs should be bent to limit motion between the Side Rails and the Carriage on the first two and last two carriages in each row.

End Connectors

Figure 8 shows the placement of the End Connectors. An End Connector is required at both ends of the Inlet row and fastens to the end carriage with two tabs, two #10-24 x 3/8 flathead machine screws, two #10-24 nuts, as shown in Detail "A".

Side Rail Support

Position one Side Rail Support per 8' (2.43 m) section in the mid-span of the side rail.

Deflector Boards

The styrofoam board used in the TURBO-HOUSE Inlet must be purchased (and cut to width, if necessary) by the customer. Figure 9 gives the critical dimensions for the board. The boards may be added as the row is built or after the whole row is installed.

The board should be placed such that the ends meet above the carriages.

Chore-Time recommends 1" (25 mm) thick styrofoam board with doublesided aluminum foll backing.

Securing Deflector Boards

The styrofoam boards are to be secured to the carriages with two Clips as shown in **Figure 10**. To install, puncture a hole through the board using the 1/4" (6mm) hole in the carriages as a guide. After location of hole is made, press Clip down through the styrofoam board and into the carriage to fasten.







Power Unit Hook-Up

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When properly installed, the TURBO-HOUSE Inlet requires approximately **7 lbs (3.17 kg) per 8 foot section** of pull to close the inlet completely against the seal. The power unit must match the load requirements of the Inlet system. Two Chore-Time power units are available for use with the TURBO-HOUSE Inlet: the Light Duty Winch and the Heavy Duty Winch.

See Figure 11 for the recommended layout of the inlet and power unit cable system.

Refer to this formula to determine the proper size of power unit.

System load = number of 8 foot sections X 7 (lbs required to pull each section) ÷ 2 (reduced load through turnback pulley).

Example: System using (400) 8' sections.

400 X 7 ÷ 2 = 1,400 lbs (635 kg) of pull

Power Unit Capacities

Light Duty Winch	
Heavy Duty Winch	

If the load requirement is less than 500 lbs (226 kg), the Light Duty Winch is adequate. For load requirements over 500 lbs (226 kg), use the Heavy Duty Winch. NOTE: For systems with over 6 rows of inlets, multiple power units may be necessary to avoid clearance problems with overhead doors, electrical panels, etc.

Mount the power unit high enough on the end wall so that the center of the winch drum is even with the inlets. If the inlet cable system will be connected to both sides of the winch, the power unit should be mounted as close to the center of the end wall as possible. If possible, the load should be balanced on both sides of the winch.

If the Heavy Duty Winch is required, use the cable supplied with the winch to form the turnback loop, as shown in **Figure 11**. The winch drum should be out of cable when the inlets are completely open. IMPORTANT: Do not pre-wrap the cable on the drum.

Mount the end pulleys on the end wall directly in line with the inlets.

IMPORTANT:

Turn-back pulleys and row pulleys must align with each other and the front of the power unit winch drum:

In order to align the pulleys with the winch drum, it may be necessary to create a stand-off bracket for each pulley location. Chore-Time does not supply these brackets.

For applications using the Heavy Duty Winch, the stand-off bracket should be approximately 8" (20.3 cm).

For applications using the Light Duty Winch, the stand-off bracket should be approximately 7" (17.8 cm).

Misalignment will cause additional pull force, pulley failure, and system malfunction.

If (optional) hand winches are used to operate during power outage, the hand winches <u>must</u> be returned to their original position for the power unit to operate properly.

Connect cable to Inlet End Connectors, turnbuckles, and to the backside of the turnback pulley shown in Figures 11 and 12.

IMPORTANT:

USE THREE' CABLE CLAMPS ON ALL CABLE SPLICE CONNECTIONS TO INSURE THAT NO CABLE SLIPPAGE WILL OCCUR.

Tower Switch Installation

Tower Switch installation instructions are supplied with the Tower Switch.

Mount the Tower Switch so that the top of the tower is even with the inlets. The Tower Switch may be mounted in a corner of the building out of the way of bird transport buggies, feed carts, etc.



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Final Adjustment

ROW ALIGNMENT: After the inlet rows are all connected to the power unit, adjust the turnbuckle(s) so that all of the inlet rows reach the fully open position and the fully closed position at the same point. The following description defines the open and closed position of the carriage wheels on the ramps.

FULLY OPEN: Carriage wheels resting against the Ramp Support Hanger. At this point the bottom limit switch on the Tower Switch(es) should be activated.

FULLY CLOSED: The center of the carriage wheels are 1.5 inches (38 mm) from the edge of the Ramp Hanger, as shown in Figure 13. At this point the top limit switch on the Tower Limit Switch should be activated.

RAMP ADJUSTMENT: Use the winch to pull the system up until the carriage wheels are in the 'closed' position on the ramps. The ramps should be adjusted so that the seals just touch the deflector boards all along the inlet row.

Controlling the Inlets

The TURBO-HOUSE Inlets may be controlled by the Chore-Time Automatic Static Pressure Inlet Control. The pressure setting on the Inlet Control should be set to operate at 0.05" static pressure. The pressure sensor bottle(s) for the Inlet Control should be located so that the control senses the pressure drop across the inlet ONLY. The bottle(s) should be located in the bird area and the attic area (inside the building) to measure the required pressure drop.

Note: The fans will operate at a higher static pressure that the Inlet Control will read. The Inlet Control must measure the pressure differential across the inlet ONLY.

Wire the system according to the wiring diagrams in the Control instructions and the Heavy or Light Duty Winch Instructions.



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1* 2**	Curtain Inlet Assembly Inlet End Curtain Assembly (L.H.)	29280 29339-1	
3**	Curtain Cap End Assembly	29240	
4**	Inlet End Curtain Assembly (R.H.)	29339-2	
5*	1/2" PVC Curtain Weight	28672-29	
6*	Ramp Hanger	28789	
7*	Clip	28671	
8*	Side Rail Support	30122	
9*	Carriage Assembly	30125	
	Carriage	30124	
	Nylon Sheave	2452	
10**	#10-24 x 3/8 Countersunk Screw	8636-2	
11**	End Connector	28791	
12*	#10-24 Nut	27795	
13**	Single Pulley Assembly	27301	
14*	Side Rail	30123	
15	Pulley Assembly	2500	
16*	Ramp (Studs to left)	27069-1	
17	3/16" 7 x 19 Aircraft Cable	13976	
18**	Turnbuckle	27389	1
19*	Ramp (Studs to right)	27069-2	
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ORDERING INFORMATION

- 1. All parts should be ordered by PART NUM-BER and DESCRIPTION as given in the PARTS LIST.
- 2 Parts are always billed when shipped. If a returned part is defective, and within warranty period, credit will be allowed against billing.
- 3. CHECK SHIPMENT FOR DAMAGES AND SHORTAGES.
- 4. All claims for damages or shortages resulting from shipment must be filed with the carrier.

*These items may be ordered as an assembly under part no. 30152.

**These items may be ordered as an assembly under part no. 29481

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