

# Cooling Systems, Air Inlets and Winches For Poultry Applications



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## Chore-Time's Air Inlets, Cooling Systems and Winches Improve Air Flow and Temperature Management

*Dependable Hardware in a Variety of Styles*

- Innovative TURBO-COOL™ Evaporative Cooling System
- Inlets Include Tunnel Doors, Ceiling and Side-Wall Models
- Cable, Chain and Strap Winches for Ventilation Applications



Count on Chore-Time for  
experience, reliability,  
performance and confidence.

# CHORE-TIME® Tunnel Doors

## Chore-Time's Tunnel Doors Tumble Air for Better Mixing Throughout the House



Four-foot (122-cm) and five-foot (152-cm) door heights available to match typical tunnel house openings for retrofit or new construction. Door angle is adjustable for maximum efficiency in a wide range of climate conditions.

### Better In-House Air Mixing

- Cyclonic air movement generates desirable airflow at bird level throughout the house.
- No more dead zones at side- and end-walls such as are typical of curtain sidewall or double door houses.
- Insulates about eight times better than a curtain during winter (when completely closed) for reduced energy costs.
- During tunnel-assist mode, cold air is directed away from the birds until it has mixed with house air.

### Smoke Test Video Image



Air shoots upward and then swirls down and around from center of house for outstanding air mixing.

### Cost Effective and User Friendly

- Laminated, composite door panels of 1.5-inch (38-mm) thick extruded foam insulation, sandwiched between thick pebbled fiberglass-reinforced plastic.
- Structure provides greater rigidity and dent resistance.
- Wall-mounted, continuous "P"-shape seal does not affect airflow when door is open, and is more tolerant of house imperfections for a tighter seal when door is closed.
- Assembly (composite door, stainless steel hinges and nylon/galvanized hardware) is pest- and corrosion-resistant.
- Modular panel design allows maximum flexibility in door size to match house sidewall openings.
- Pre-assembled door available for steel truss buildings or knee-brace applications.

### Specifications

		CFM per Ft (m <sup>3</sup> /h per m)	Maximum Limited By
<b>4-Foot (122-cm) Door</b> <i>Rough Opening - 47 Inches (119 cm) High</i>	Door Alone	1,960 (10,925)	Door*
	With 4 Ft. (122 cm) Pad	1,400 (7,804)	Pad**
	With 5 Ft. (152 cm) Pad	1,750 (9,755)	Pad**
<b>5-Foot (152-cm) Door</b> <i>Rough Opening - 59 Inches (150 cm) High</i>	Door Alone	2,460 (13,710)	Door*
	With 5 Ft. (152 cm) Pad	1,750 (9,755)	Pad**
	With 6 Ft. (183 cm) Pad	2,100 (11,706)	Pad**

All panels are 10 feet (305 cm) in length.

\*Door calculation shown per 10 ft. (305 cm) length and flow velocity of 500 ft./min. (254 cm/sec.)

\*\*Pad calculation shown per 10 ft. (305 cm) length and flow velocity of 350 ft./min. (254 cm/sec.)

### Patented Plastic Rope Guide

- Suitable for use with tunnel door or air inlet applications.
- Brings the pivot point for the cable closer to the wall, thereby eliminating the need for pulleys or screw hooks.
- Includes tabs which hold the lag screw in place for one-handed installation.
- Ropes snap into the guide's pivot point with no threading required.







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# TURBO-COOL™ Evaporative Cooling System

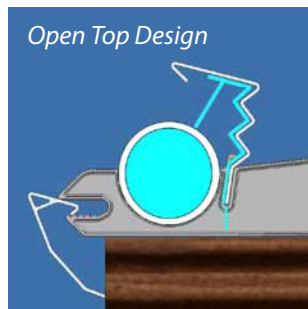
## Why Just Cool Your House When You Can "TURBO-COOL" It?

### Reinforced, Continuous, One-Piece Trough

- One-piece trough is made of heavy-duty, ultraviolet-resistant polypropylene and has no problematic joints where leaks and breaks tend to occur in others' systems.
- Fabric-reinforced trough material is proven under the harshest conditions and provides self-contained water storage.
- Unlike rigid plastic troughs, Chore-Time's seamless trough design is easy to install, saving time and expense on your new construction or retrofit project.

### Open Top Design

- Unique, large 2-inch (5-cm) pipe and 5/32-inch (4-mm) water distribution holes.
- Uniform water distribution for full length of system – up to 75 feet (22.9 m) with an end-mounted sump, or 110 feet (33.5 m) with a center-mounted tank.
- Easy access to pipe for cleaning; includes removable end plugs.
- System also includes rubber water-containment seals.



Easily see water jets and check water pressure.



One-piece trough is easy to install – no joints to glue and dry, and no holes to be cut.

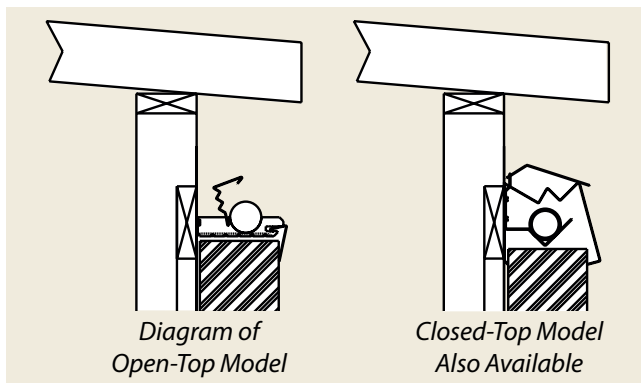
Open-top design permits easy visual inspection.

### High-Performance Pad

- Standard 45/15 fluting and 12-inch (30.5-cm) pad width.
- Pad heights: 2, 3, 4, 5 or 6 feet (0.6, 0.9, 1.2, 1.5 or 1.8 meters).
- Standard pad includes black protective coating. Protective bottom coating is optional.



Designed for easy pad removal for cleaning without hardware or tools. Full-width plastic support tray under pads improves pad support and extends pad life.



Well-designed, innovative sump tank can be mounted at either end or in middle of system and holds heavy-duty, submersible pump.

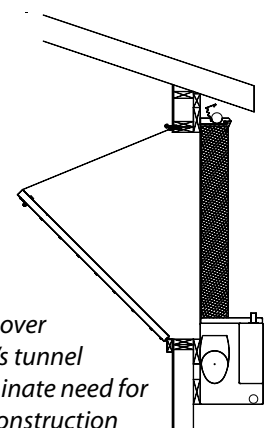
Includes reinforcing ribs, a drain plug, automatic float valve, low-water safety switch, bleed-off valve and easy-access shut off.



Use CHORE-TRONICS® 3 Controls to wet just part of the evaporative pad to reduce rapid temperature fluctuations.



RIGHT: System can be installed over Chore-Time's tunnel door to eliminate need for doghouse construction and curtain.

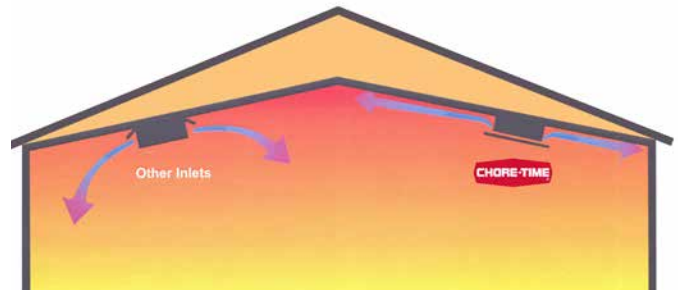


## Ceiling Inlets

### Automatic Supply of Tempered Air During Early Stages of Minimum Ventilation

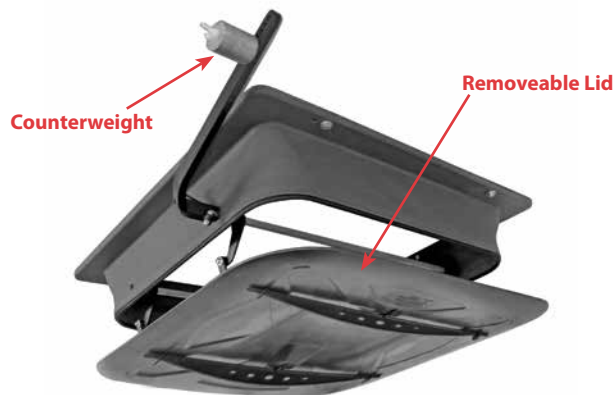
#### Advantages of Chore-Time's Attic Inlets

- In tests, the total amount of air moved through a poultry house with attic inlets averaged 10-30 percent higher per day than houses with sidewall inlets only.
- The higher ventilation rate typical in houses with Chore-Time's attic inlets leads to: lower house humidity levels, drier litter and lower ammonia concentrations.
- During the earliest stages of minimum ventilation, gravity-operated attic inlets open automatically when fans run. This dramatically reduces winch operation since sidewall inlets start operating later.
- With Chore-Time's attic inlets, growers can maintain higher ventilation rates during cold weather without sacrificing house temperature or wasting fuel. Additionally, birds are provided with a better mix of air.



*Chore-Time's Attic Inlets direct the incoming air along the ceiling of the poultry house for better mixing and to prevent downdrafts on birds.*

- Fuel savings associated with the use of attic inlets may vary from 5 to 35 percent depending on house management, house construction and climate.



#### 360° Airflow Insulated TopJet Attic Inlet

- 360-degree design delivers tempered air all around the inlet during the early stages of minimum ventilation.
- Fully insulated to minimize heat loss and sweating, especially in cold environments. Soft rubber edge gives a tight seal when unit is closed.
- Counterweighted inlet has an adjustable weight that lets user determine at what static pressure the inlet will open. Can also be locked shut without using blades.
- Operate manually or connect multiple inlets to a cable that is connected to Chore-Time's LINEAR-LIFT™ Winch and CHORE-TRONICS® 3 Control.
  - The control signals the winch when desired static pressure has been reached and the inlets open.
  - When fans shut off, the inlets immediately close and the winch pulls them tight.
- Removable bottom lid for easy cleaning and installation.



#### Gravity-Operated TopJet Attic Inlet

- Supplements house sidewall inlets to provide an automatic supply of tempered air during the early stages of minimum ventilation, without a winch.
- The inlets mix warm tempered air from the attic with house air along the ceiling – better for birds and more energy-efficient than bringing in cold, untempered air through sidewall inlets.
- Remote Closure Kit allows gravity operation in the “open” position or units may be locked in the “closed” position.
- To lock or unlock units in groups, connect multiple inlets to a cable that is connected to Chore-Time's LINEAR-LIFT™ Winch and CHORE-TRONICS® 3 Control.
- Simple assembly requires no tools; simply snap three sides together, insert bottom channel and snap fourth side in place to complete inlet. Remote closure kit requires only a drill and simple hand tools.

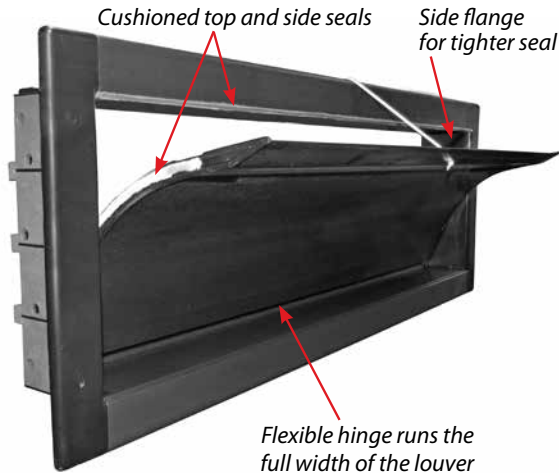


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## Air Inlets

### Durable, Reliable Control of Incoming Air

#### Corrosion-Proof Directional Air Inlets

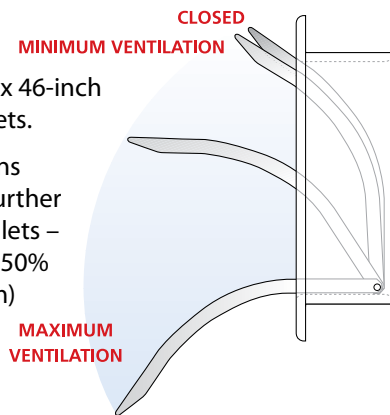


#### Directional Air Control

- Curved louver directs fresh air upward and speeds it to the center of the house – ideal for wide buildings.
- Draws building air into airstream at sides of inlet to mix it with fresh air.
- During operation, airflow is directed through the inlet's opening rather than leaking out at bottom and sides.

#### Superior Air Movement

- Delivers over 70% more air (CFM) than conventional 7 x 46-inch (17.8 x 116.8-cm) inlets.
- Curved inlet maintains greater air velocity further than conventional inlets – in fact, air velocity is 50% greater 20 feet (6.1 m) from the inlet.



#### Specifications

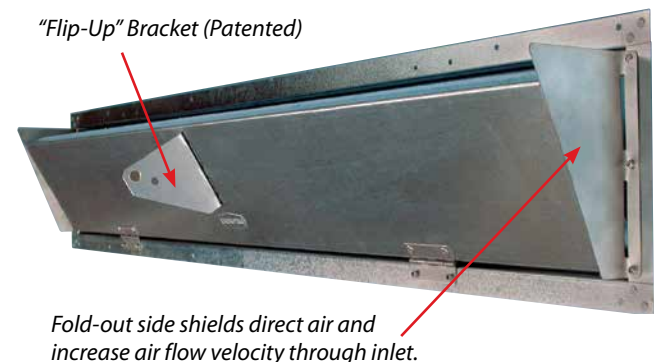
- Fits perfectly between four-by-fours, 48 inches (121.9 cm) on center.
- Rough wall opening 13.5 x 44.5 inches (34.3 x 113.0 cm).

#### Durable Galvanized Steel Inlets

- Easy-to-use, patented “flip-up” bracket folds up to accept winch cable (Chore-Time’s standard plastic cable clamp fits through grommet).
- One-inch (2.5-cm) foam insulation repels insects and minimizes condensation.
- Each inlet has two smooth-operating, corrosion-resistant stainless steel hinges.
- Rigid, durable, lock-formed frame resists warping for improved closure.
- No welds or other easy targets for rust.

#### Galvanized Steel Inlet Size Options

Size Inches (cm)	CFM at .05" (m <sup>3</sup> /h@12.45 Pa) Static Pressure	Rough Wall Opening Inches (cm)
7 x 44 (17.8 x 111.8)	1,217 (2,068)	7¼ x 44¼ (18.4 x 112.4)
7 x 46 (17.8 x 116.8)	1,275 (2,166)	7¼ x 46¼ (18.4 x 117.5)
7 x 55.5 (17.8 x 141.0)	1,547 (2,628)	7¼ x 55¾ (18.4 x 141.6)
7 x 58 (17.8 x 147.3)	1,633 (2,775)	7¼ x 58¼ (18.4 x 148.0)
12 x 44 (30.5 x 111.8)	2,324 (3,949)	12¼ x 44¼ (31.1 x 112.4)
12 x 46 (30.5 x 116.8)	2,434 (4,135)	12¼ x 46¼ (31.1 x 117.5)

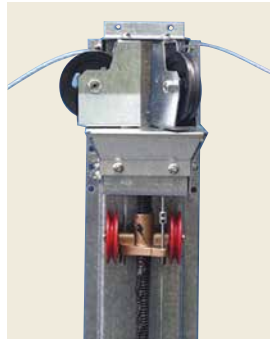


Air Flow Comparison Inches (cm)	Quantity per “Typical” Broiler House	.05" (12.45 Pa) Static Pressure	.10" (24.91 Pa) Static Pressure
Directional Air Inlet 13 x 44 (33.0 x 111.8) (P/N 53533-5)	Approx. 50	2,456 CFM (4,170 m <sup>3</sup> /h) per unit	3,361 CFM (5,710 m <sup>3</sup> /h) per unit
Galvanized Steel Inlet 7 x 44 (17.8 x 111.8) (P/N 49252)	Approx. 86	1,217 CFM (2,070 m <sup>3</sup> /h) per unit	1,625 CFM (2,760 m <sup>3</sup> /h) per unit



# CHORE-TIME® LINEAR-LIFT™ Winch

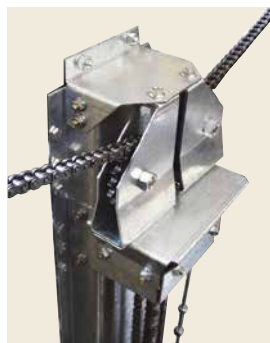
## Designed for Long Life and Ease of Use



*Cable-Pulley Model  
with Bronze Nut*



*Cable Straight-Out  
Model*



*Chain-Sprocket Model*

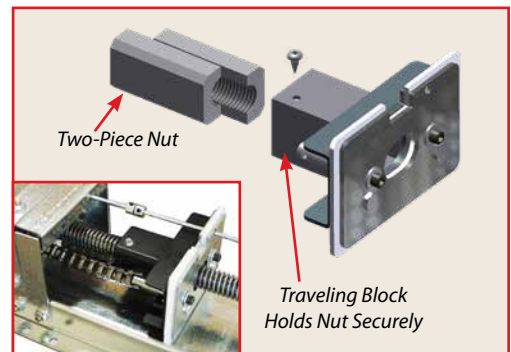


*Safety Switch  
Light indicates  
when a limit switch  
needs to be replaced.*

*Use the LINEAR-LIFT™  
Winch to open and close  
tunnel doors or curtains.*

Chore-Time's LINEAR-LIFT™ Winch provides the power to operate poultry house curtains, tunnel doors or other applications.

- Chain or cable is attached near the center of the threaded rod, reducing the torque of unbalanced loading and providing smoother, more reliable movement.
- Two-piece, plastic nut glides smoothly and is easy to replace or to retrofit. The plastic nut is held securely in a metal block for extra durability.



*Easy-to-  
Replace,  
Two-Piece  
Plastic Nut*

*Two-Piece Nut*

*Traveling Block  
Holds Nut Securely*


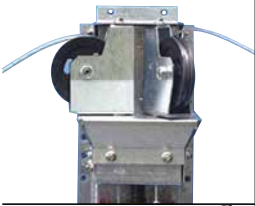


- Greasable traveling bronze nut option has a grease storage "pocket" to lubricate the rod.
- Limit switch helps to prevent over-travel and potential for structural damage.
- Safety switch light backs up the limit switch and lights up to indicate when a limit switch needs to be replaced.
- Pulleys and sprockets swivel from -5 to 90 degrees for better alignment.
- Corrosion-resistant galvanized steel housing and sealed, plastic electrical box.
- Unit has an easy-access cover and uses proven Chore-Time gearhead and reversible motor.
- A cover with a potentiometer assembly is also available.
- Winches can be wall- or ceiling-mounted.



**CHORE-TIME®  
Tunnel Door**



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LINEAR-LIFT™ 2000-Pound (900-kg) Winch Specifications						
	<b>Size</b>	26 inches (66 cm)	36 inches (91 cm)	48 inches (122 cm)	66 inches (168 cm)	76 inches (193 cm)
	<b>Travel Distance</b>	22 inches (56 cm)	32 inches (81 cm)	44 inches (112 cm)	62 inches (157 cm)	72 inches (183 cm)
	<b>Cable-Pulley Model</b>	Bronze Nut Only	Bronze Nut Only	Bronze Nut Only	Bronze Nut Only	Not Available
	<b>Chain-Sprocket Model</b>	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic Nut Only
	<b>Cable Straight-Out Model</b>	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic Nut Only

Power and Speed Options for All 2000-Pound (900-kg) Winches	
Power Options	Rate of Travel (Direct Pull 1:1 Cable Connection*)
115 V 50/60 Hz 1 Ph - 60 RPM	12 inches/min. (30 cm/min.)
230 V 50/60 Hz 1 Ph - 60 RPM	12 inches/min. (30 cm/min.)
230 V 60 Hz 1 Ph - 30 RPM	6 inches/min. (15 cm/min.)

**Alternate Pulley Combination Samples**

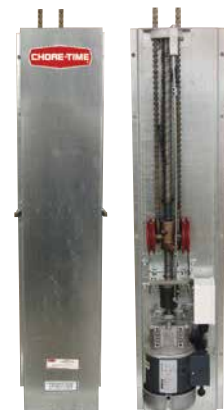
\* U.S. Measure (based on 60 RPM operation):

- 1:1 Cable Connection (shown above) =  
2,000 lbs. pull @ 12 inches/min. (22-62 inch stroke)
- 2:1 Cable Connection =  
4,000 lbs. pull @ 6 inches/min. (11-31 inch stroke)
- 1:2 Cable Connection =  
1,000 lbs. pull @ 24 inches/min. (44-124 inch stroke)

\* Metric (based on 60 RPM operation):

- 1:1 Cable Connection (shown above) =  
907.2 kg pull @ 30.5 cm/min. (56-158 cm stroke)
- 2:1 Cable Connection =  
1,814.4 kg pull @ 15.2 cm/min. (28-79 cm stroke)
- 1:2 Cable Connection =  
453.6 kg pull @ 61.0 cm/min. (112-315 cm stroke)

An 18-inch (46-cm) LINEAR-LIFT™ Winch is also available with 800 pounds (360 kg) of lift capacity at 1:1 direct pull cable connection in the straight-out cable and straight-out chain styles with bronze nut.



# CHORE-TIME® Strap Winch

## The Alternative to Cable Winches for Ventilation Applications



Chore-Time's reliable, heavy-duty strap winch operates inlets, tunnel doors and curtains smoothly and quietly.

Compact unit is easily installed on wall or ceiling.

### Product Features

- Capacity of 2,000 pounds (907 kg) with 6 feet (1.8 m) of travel.
- Speed of 12 inches (30.5 cm) per minute.
- Easily make adjustments using incorporated switches.
- Operate manually or automatically using CHORE-TRONICS® Controls.
- Includes internal limit and safety switches.
- Maintenance-free gearbox uses innovative oil-based lubrication technology.



Toggle-style switches inside unit permit the user to select local or remote operation. In local mode, the user can operate the unit manually while standing at the winch. This is particularly convenient for setting limit switches during installation and for making other adjustments.

### Winch Specifications

Load Rating	2,000 pounds (907 kg)
Lift Rate Per Minute	12 inches (30.5 cm)
Travel Distance	6 feet (1.8 meters)
Electrical Rating	1/3 HP (0.25 KW) 220 V 50/60 Hz
Weight of Unit	49 pounds (22.2 kg)



Use the CHORE-TIME® Strap Winch with CHORE-TRONICS® Controls for a complete package.



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