# **Cooling Systems, Air Inlets and Winches** For Poultry Applications



Let's grow together.™





## 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<sup>™</sup> Evaporative Cooling System
- Inlets Include Tunnel Doors, Ceiling and Side-Wall Models
- Cable, Chain and Strap Winches for Ventilation Applications

## **CHORE-TIME®** Tunnel Doors

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



Up to five-foot (152.4-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.

Pre-assembled door available for steel truss buildings or knee-brace applications.

## **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.

#### **Innovative Design**

- 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 corrosionresistant.
- Modular panel design allows maximum flexibility in door size to match house sidewall openings.

Specification	15	CFM per Ft (m <sup>3</sup> /h per m)	Maximum Limited By
4-Foot	Door Alone	1,960 (10,925)	Door
(122-cm) Door Rough Opening	With 5 Ft. (152 cm) Pad	1,875 (10,450)	Pad*
– 47 Inches (119 cm) High	With 6 Ft. (183 cm) Pad	1,960 (10,925)	Door
5-Foot	Door Alone	2,460 (13,710)	Door
(152-cm) Door Rough Opening	With 5 Ft. (152 cm) Pad	1,875 (10,450)	Pad*
– 59 Inches (150 cm) High	With 6 Ft. (183 cm) Pad	2,250 (12,540)	Pad*

\*CFM per foot for a 5-Ft. Pad Alone Is 1,875; for a 6-Ft Pad alone is 2,250. (M<sup>3</sup>/hour per meter for a 152-cm pad alone is 10,450; for a 183-cm pad alone is 12,540.)

#### **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.

## **TURBO-COOL<sup>™</sup> Evaporative Cooling System**

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

## Reinforced, Continuous, One-Piece Trough

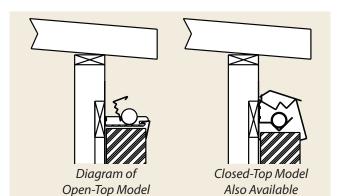
- One-piece trough is made of heavy-duty, ultravioletresistant polypropylene and has no problematic joints where leaks and breaks tend to occur in others' systems.
- Fabric-reinforced trough material is proven under the harshest conditions and provides self-contained water storage.
- Unlike rigid plastic 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.
- Open Top Design

Easily see water jets and check water pressure.

- Easy access to pipe for cleaning; includes removable end plugs.
- System also includes rubber water-containment seals.



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

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





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.

*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.

Let's grow together.™

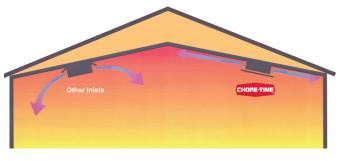
CHORE-TIME

# **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.



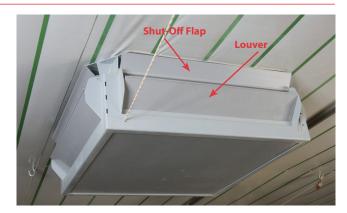
Chore-Time's Attic Inlets direct the incoming air along the ceiling of the poultry house for better mixing and to prevent downdrafts on birds.

• 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<sup>™</sup> Winch and CHORE-TRONICS<sup>®</sup> 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.



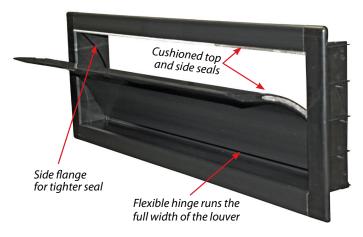
## **Gravity-Operated TopJet Attic Inlet**

- 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<sup>™</sup> Winch and CHORE-TRONICS<sup>®</sup> 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.

## **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.

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#### **Superior Air Movement**

- Delivers over 70% MINIMUM VENTILATION more air (CFM) than conventional 7 x 44-inch (17.8 x 111.8-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. MAXIMUM VENTILATION

## **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).



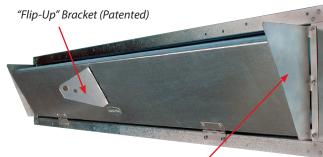
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#### **Durable Galvanized Steel Inlets**

- 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, corrosionresistant 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)



Fold-out side shields direct air and increase air flow velocity through inlet.

Air Flow Comparison	Quantity per "Typical"	.05" (12.45 Pa)	.10" (24.91 Pa)
Inches (cm)	Broiler House	Static Pressure	Static Pressure
Directional Air Inlet 13 x 44 (33.0 x 111.8)	Approx. 50	2,116 CFM	2,825 CFM
(P/N 53533-5)		(3,600 m <sup>3</sup> /h) per unit	(4,800 m <sup>3</sup> /h) per unit
Galvanized Steel Inlet 7 x 44 (17.8 x 111.8)	Approx. 86	1,217 CFM	1,625 CFM
(P/N 49252)		(2,070 m <sup>3</sup> /h) per unit	(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

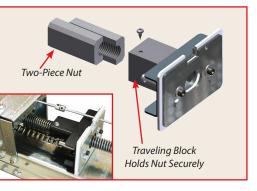


Chain-Sprocket Model

Chore-Time's LINEAR-LIFT<sup>™</sup> 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 load-ing 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



- 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.

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

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



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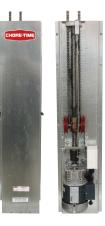
	LINEAR	-LIFT™ 2000	-Pound (900	-kg) Winch S	Specificatior	15
	Size	26 inches (66 cm)	36 inches (91 cm)	48 inches (122 cm)	66 inches (168 cm)	76 inches (193 cm)
- In	Travel Distance	22 inches (56 cm)	32 inches (81 cm)	44 inches (112 cm)	62 inches (157 cm)	72 inches (183 cm)
	Cable-Pulley Model	Bronze Nut Only	Bronze Nut Only	Bronze Nut Only	Bronze Nut Only	Not Available
	Chain-Sprocket Model	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic Nut Only
	Cable Straight-Out Model	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic or Bronze Nut	Plastic Nut Only
Po	ower and Speed O	ptions for A	ll 2000-Pour		Vinches	
Power 0	Options		(Direct Pu	Rate of Travel II 1:1 Cable Cou	nnection*)	
115 V 50/60 Hz	: 1 Ph - 60 RPM		12 incl	hes/min. (30 cm	n/min.)	
230 V 50/60 Hz	1 Ph - 60 RPM		12 incl	hes/min. (30 cm	n/min.)	
230 V 60 Hz 1	Ph - 30 RPM		6 inch	ies/min. (15 cm	/min.)	

#### Alternate Pulley Combination Samples

<sup>•</sup> U.S. Measure (base	d on 60 RPM	operation)	:
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- 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 straightout 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<sup>®</sup> Controls.
- Includes internal limit and safety switches.
- Maintenance-free gearbox uses innovative oil-based lubrication technology.

## **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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Complete Production Equipment for Broilers, Breeders, Turkeys and Eggs



user to select local or remote operation. In local

Toggle-style switches inside unit permit the 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.

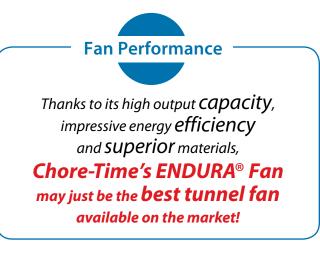


# **Environmental Control** Our Experience. Your Success.



# **Chore-Time® Fans**

# ENDURA® High-Performance, Corrosion-Resistant 57-Inch (145-cm) Fans



## Fan and Shutter Performance

- The ENDURA® Fan's high airflow and efficiency move a lot of air while saving energy.
- Chore-Time's HYFLO® Shutters do not suffer the typical 12-15% loss of efficiency and air speed typical of dirty louver-style shutters, so air speed is maintained to the end of the flock, when you need it most.
- HYFLO® Shutters improve fan performance by minimizing obstructions during fan operation. They deliver up to 10% more air than traditional shutters with 75% less opportunity for air to leak through.





Chore-Time's 57-inch (145-cm) ENDURA® Fan with HYFLO® Shutter features an industry-leading combination of outstanding performance and strategic material selection.

## **Exceptional Materials**

- Durable composite shroud and HYFLO® Shutter Doors contain fiberglass made of long fibers for greater strength.
- Extensive durability testing under both extreme high and extreme low temperatures.

## Adaptability

- Can be installed 60 inches (152.4 cm) on center over 56.5-inch (143.5-cm) framed openings.
- For retrofit, will fit over openings for many 48- through 54-inch (121.9- through 137.2-cm) fans.
- Black HDPE (high-density polyethylene) cone aids in light control.
- Capable of variable speed operation with the use of a variable frequency drive.

## Durability

- Automatic belt tensioner uses an idler arm and pulley to provide constant belt tension.
- Rugged air-handler bearings are shielded from dust and moisture, self-aligning, prelubricated and include a zerk fitting.
- Aerodynamic three-wing, heavy-duty fan blade.

# **57-Inch ENDURA® Fan Specifications**



# Composite Shroud and HYFLO® Shutter Doors with High-Density Polyethylene (HDPE) Cone

#### Our Experience. Your Success.

57-Inch (14 ENDURA®	•		c Pressure 2 <i>Pa)</i>		c Pressure 5 Pa)		c Pressure 7 Pa)	Air Flow	Electricity	Bess Labs
Туре	Fan P/N	CFM (Pa)	CFM/Watt (M <sup>3</sup> /Hr/W)	CFM (Pa)	CFM/Watt (M <sup>3</sup> /Hr/W)	CFM (Pa)	CFM/Watt (M <sup>3</sup> /Hr/W)	Ratio	Volts/Hz/Ph*	Test No.
High-Capacity	53464-41	31,900 ( <i>54,300</i> )	23.6 <i>(40.2)</i>	30,000 (51,100)	20.9 (35.6)	27,800 (47,200)	18.1 <i>(30.8)</i>	0.79	230/60/3	12616
Energy-Efficient	53464-42	28,700 (48,700)	26.5 (45.1)	26,900 (45,600)	23.3 <i>(39.6)</i>	24,800 ( <i>42,200</i> )	20.4 <i>(34.6)</i>	0.78	230/60/3	12619
High-Capacity	53464-51	31,400 (53,300)	23.4 <i>(39.7)</i>	29,500 ( <i>50,100</i> )	20.8 <i>(35.3)</i>	27,200 (46,200)	18.1 <i>(30.8)</i>	0.78	230/50/3	12617
Energy-Efficient	53464-52	28,500 (48,500)	26.1 (44.3)	26,500 (45,100)	22.9 (38.9)	24,500 (41,600)	20.1 (34.1)	0.77	230/50/3	12618

\*Three-phase fans can be operated using 230/400-volt 50-Hz or 230/460-volt 60 Hz output.

# 54-Inch Chore-Time® Galvanized Steel Fan Specifications

54-Inch (13 Metal Fa		.05 Static Pressure (12 Pa)			.10 Static Pressure (25 Pa)		tic Pressure (37 Pa) Air		Electricity	Bess
Туре	Fan P/N	-	CFM/Watt (M <sup>3</sup> /Hr/W)	_	CFM/Watt (M <sup>3</sup> /Hr/W)		CFM/Watt (M <sup>3</sup> /Hr/W)	Ratio	Volts/Hz/Ph*	Labs Test No.
Energy-Efficient	52157-52	27,100 (46,000)	25.7 (43.7)	25,200 (42,800)	22.2 ( <i>37.7</i> )	23,200 (39,400)	19.5 <i>(33.1)</i>	.77	230/50/3	09085
Energy-Efficient	52157-42	27,500 (46,700)	25.6 <i>(43.5)</i>	25,500 (43,300)	22.1 <i>(37.6)</i>	23,600 (40,100)	19.4 <i>(33.0)</i>	.78	230/60/3	09082

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\*Three-phase fans can be operated using 230/400-volt 50-Hz or 230/460-volt 60 Hz output.

## 54- and 57-Inch Fan Comparison

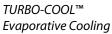
CHORE-TIME® Fans	54-Inch Galvanized	57-Inch Composite
CFM	Good	Best
CFM/Watt	Good	Best
Life Expectancy	Good	Best
Light Control	Good	Best

54-Inch Galvanized Fans with High Efficiency HYFLO® Shutters

# **Cooling, Inlets and Winches** TURBO-COOL<sup>TM</sup> Evaporative Cooling System



- Large 5-cm (2-inch) pipe and 4-mm (5/32-inch) water distribution holes.
- Uniform water distribution from one end up to 22.8 meters (75 feet), or 33.5 meters (110 feet) with a center-mounted sump.
- See water jets and check water pressure easily.
- Easy access to pipe and removable end plugs for cleaning.
- Includes rubber water-containment seals at system ends.





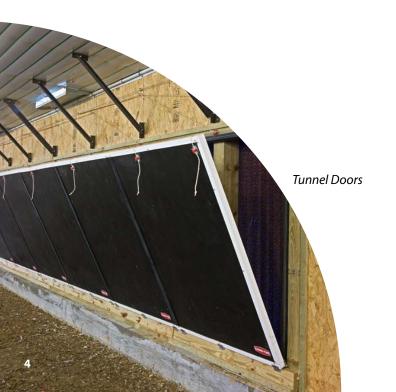
*Well-Designed, Innovative Sump Tank* 



Open Top Design (Closed Top Model Also Available)

## **Tunnel Doors**

- Sturdy, laminated, composite door panel of 38-mm (1.5-inch) thick extruded foam insulation, sandwiched between thick, textured, fiberglass-reinforced plastic.
- Cyclonic air movement generates desirable airflow at bird level throughout the house, eliminating dead zones at side- and end-walls.
- During tunnel-assist mode, cold air is directed away from the birds until it has mixed with house air.
- Reduces energy costs by insulating about eight times better than a curtain during cold weather (when completely closed).
- Available in 1.2- and 1.5-meter (4- and 5-foot) heights to match typical tunnel house openings.
- Choose continuous-run doors or pre-assembled individual door panels. The modular panel design gives great flexibility in matching door size to house side-wall openings.
- Door assemblies are pest- and corrosion-resistant.



## Image from Video Footage of Smoke Test



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

# **Inlets and Winches**

- Chore-Time offers attic inlets (see next page) as well as both straight and curved side-wall inlets.
- LINEAR-LIFT<sup>™</sup> Winches can be used to operate tunnel doors and inlets.
- Winches are available in three styles: chain-sprocket, cable-pulley and cable straight-out.



LINEAR-LIFT<sup>™</sup> Chain-Sprocket (left) and Cable Straight-Out Models

# **Curved 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.

## **Superior Air Movement**

- Delivers over 70% more air (CFM) than conventional 178 x 1168 mm (7 x 46 inch) inlets.
- Curved inlet maintains greater air velocity further than conventional inlets – in fact, air velocity is 50% greater 6.1 m (20 feet) from the inlet.
- Reduces the number of inlets needed by almost half.



LINEAR-LIFT™ Winch Cable-Pulley Model



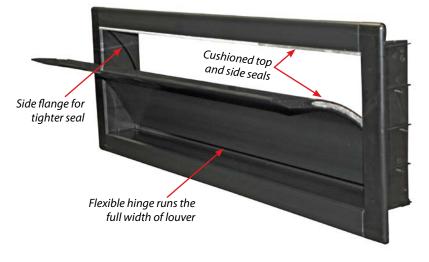
## Our Experience. Your Success.



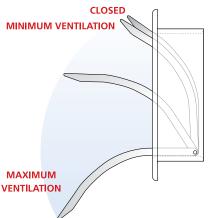
galvanized steel inlets use side shields to direct air.

A 46-cm (18-inch) LINEAR-LIFT™ Winch is also available in the straight-out cable and straight-out chain styles.





Directional Air Inlet Performance	.05 Static Pressure	.10 Static Pressure
Part Number	CFM/Unit	CFM/Unit



# **Chore-Time's Attic Inlet**

## **Features**

- Chore-Time's attic inlets supplement house sidewall inlets to provide an automatic supply of tempered air during the early stages of minimum ventilation.
- Fuel savings associated with the use of attic inlets may vary from 5 to 35 percent depending on house management, house construction and climate.
- Simple assembly requires no tools. Remote closure kit requires only a drill and simple hand tools.
- Unique packaging also serves as the attic sleeve during installation.

## 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 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 the fans run. Winches are not needed until later when side-wall inlets begin operating.

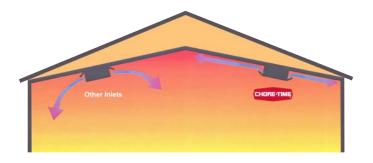


## Closure Kit (See at right)

Counterweight rods pull louvers closed when fans are not operating. Shut-off flaps work with louvers to direct air along the ceiling. Flaps can also be folded down for a permanent shut-off.



Our Experience. Your Success.



Unlike traditional ceiling inlets which force cold air directly toward the floor, Chore-Time's gravity-operated attic 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** Chore-Time's Popular Attic Inlets feature an optional remote locking device.

#### **Open (Unlocked) Position**



#### **Closed (Locked) Position**





Top view of inlet from the attic in closed/locked position.

# **Heaters**

## **Chore-Time QUADRATHERM® Heaters**

Chore-Time's QUADRATHERM® Heater uses fuel efficiently and delivers a robust 80,000 BTUs of heat in a broad, house-shaped heat pattern.



The special shape of the QUADRATHERM® Heater reflects heat in a wide pattern 9.1-12.2 meters by 12.2-18.3 meters (30-40 feet by 40-60 feet).

## QuadRadiant<sup>®</sup> Heater Spacing\* For Houses 12.2-15.2 m (40-50 feet) Wide

House Length 122 m (400 Feet)	Brood End	Non-Brood End
Distance from End Wall/Curtain	4.6 m (15 ft)	12.1 m (40 ft)
Distance between Heaters	10.4 m (34 ft)	18.3 m (60 ft)
House Length 152.4 m (500 Feet)	Brood End	Non-Brood End
Distance from End Wall/Curtain	4.6 m (15 ft)	10.7 m (35 ft)
Distance between Heaters	11.3 m (37 ft)	18.3 m (60 ft)

\*Stir fans, inlets and tunnel doors should not blow directly on the heaters. Position units so there is no direct air movement on them during operation.



CHORE-TIME Ultra-Ray® Infrared Brooder Heats an average of 74.3 to 92.9 square meters per brooder.

## QUADRATHERM® Infrared LP Heater with Pilot Ignition – Select Specifications

Heating Area per Unit	111.5-223.0 m <sup>2</sup>	1,200-2,400 feet <sup>2</sup>
Maximum Output Capacity per Hour	20,160 Kcal	80,000 BTU
Maximum LP Gas Pressure Requirements (Measured at Inlet)	27.5 Mbar	11 inches WC
Maximum Gas Consumption per Hour	3.29 l/h	0.87 gph



Low-Pressure, Snap Action Model requires no electricity. Unit is shown with the sensor arm lowered into the operating position. Sensor arm can be raised for winching.

# CHORE-TIME Ultra-Ray<sup>®</sup> Infrared Brooder

- Variable Heat is most intense directly under brooder with concentric rings of diminishing heat so birds can choose where they are most comfortable.
- Reliable Backed by 80 years of experience in heater innovation and design.
- Comfort Provides a broad comfort zone with a high volume of heat to the floor and a wide pattern of heat distribution.
- Volume of Heat Design of emitter and canopy work together to distribute heat to a larger area.
- Fuel Efficiency Infrared transmission of heat efficiently warms floors and birds without the need to "superheat" the air. This uses less fuel.

## DURA-THERM™ Space Heater

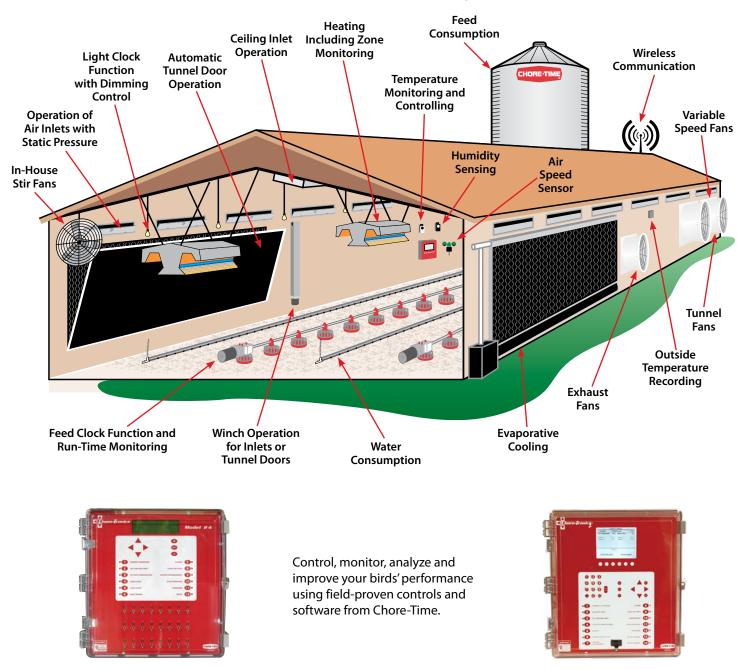
Heats an average of 232.3 to 408.8 square meters (2,500 to 4,400 square feet) per heater. Optional outside mount kit available.



Space Heater Specifications	DURA-THERM™ 250
Heating area per unit	255.5-408.8 square meters (2750-4400 square feet)
Capacity (Maximum Per Hour) with Direct Spark or Hot Surface Ignition	63,000 Kcal (250,000 BTU) LP or Nat. Gas

The policy of Chore-Time is one of continuous product improvement. We reserve the right to alter specifications without prior notice. Heating products should be installed only in accordance with local laws, codes and regulations. These products are not for residential use. Gas pipe layout assistance available to customers through authorized distributors. All models meet stringent standards for low carbon monoxide.

# **CHORE-TIME® Controls & Software** A whole-house solution for poultry house control!



CHORE-TRONICS<sup>®</sup> Model 24 Control

CHORE-TRONICS® 2 Control

## Chore-Time's Ventilation Package is Made to Work. Built to Last.®



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#### www.choretime.com

Complete Production Equipment for Broilers, Breeders, Turkeys and Eggs