

# Chore-Time® Fan Guide

## For Tunnel and Other Applications



Let's grow together.



### Chore-Time's Fiberglass and Galvanized Fans Provide Efficiency and Performance

*Diameters available through 54 Inches (137.2 cm)*

- Chore-Time's TURBO® Fiberglass Fans feature a sturdy, reinforced-fiberglass housing with heavy cast-aluminum blade and corrosion-resistant components.
- Chore-Time's Galvanized Fans provide a great combination of performance and value.



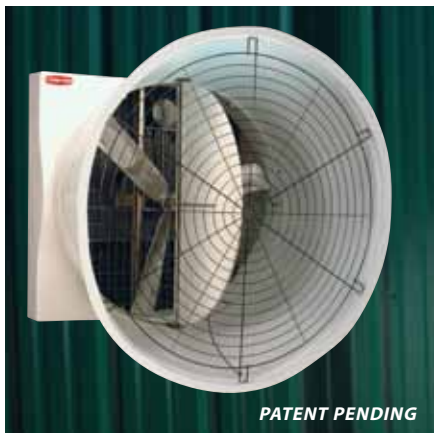


## Chore-Time Ventilation Fans

When you grow with Chore-Time, you get the ventilation products you need to keep your birds healthy and productive. Chore-Time's Fans are put through rigorous testing at our on-site wind tunnel and rated by BESS Labs for performance.

Whether you move more air with Chore-Time's HYFLO® shutter (available on fans up to 54 inches/137.2 cm) or replace minimum ventilation fans with Chore-Time's efficient variable speed fans, you can optimize your air moving efficiency with the latest innovations from Chore-Time. Choose from these top-performing models:

- TURBO® Fiberglass Tunnel Fans
- CHORE-TIME® Galvanized Tunnel Fans
- 54-Inch Outside-Mount Galvanized Tunnel Fans
- HYFLO® Shutters for Tunnel Fans
- Energy-Efficient Variable Speed Fans
- Box, Panel and Basket Fans For Supplemental Air Circulation



Add Chore-Time's HYFLO® Shutter for even greater efficiency.



Users may choose black or white for housing interior and cone. Housing exterior is white.

### TURBO® Fiberglass Tunnel Fans

Available in 52- and 48-inch Models (132.1- and 121.9-cm)

- Sturdy, corrosion-resistant fiberglass housing with heavy cast-aluminum blade, aluminum motor mounts and corrosion-resistant components.
- Motors are selected for each fan model to optimize its performance efficiency. Extensive motor testing is completed in our on-site wind tunnel under various operating conditions.
- One-piece, impact-resistant, polyethylene cone.
- Automatic belt tensioner uses arm and pulley arrangement to provide consistent belt tension.
- Heavy-duty, cast iron, air-handler type bearings are self-aligning, pre-lubricated, and include a zerk fitting, as well as being shielded from moisture and dust.
- Fans are shipped fully assembled including shutter doors. At installation, simply attach fan to house sidewall, add one-piece cone, and snap grill in place. Unit installs flush on inside of house.
- Backed by Chore-Time's generous extended warranty including limited lifetime coverage for housing and blade, three years on shutter and cone, and two years on motor and bearings. (See Chore-Time's full written warranty for complete warranty details.)



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## Chore-Time® Galvanized Tunnel Fans

Available in 54-, 52- and 48-inch Models  
(137.2-, 132.1- and 121.9-cm)

- Factory-assembled using rugged, galvanized steel panels with screw fasteners and a galvanized steel blade.
- Chore-Time specifically selects the motor for each fan model to optimize its performance efficiency. Motors are then extensively tested in our on-site wind tunnel under various operating conditions.
- Automatic belt tensioning system uses an idler arm and pulley to maintain constant optimum belt tension on the fan's easy-to-change belt.
- Heavy-duty, cast iron, air-handler type bearings are self-aligning, pre-lubricated, and include a zerk fitting, as well as being shielded from moisture and dust.



*Chore-Time's HYFLO® Shutter improves fan performance by minimizing obstructions during fan operation.*

## 54-Inch (137.2-cm) Outside-Mount Galvanized Tunnel Fans

Designed for more airflow or fewer fans with faster, more convenient installation



### Fewer Fans for New Construction

Mounts to the outside of the framed opening, using same sidewall opening as a 52-inch fan.

- Can be installed on 5-foot (1.5-m) centers.
- Tighter seal limits light and air leakage.
- Quieter operation.

### Get More Airflow and Easy Installation with Retrofit Applications

Easily replace older, inefficient 48-inch fans and get 30-35% more airflow.

- For replacement applications, mount to rough openings from most existing 48-inch through 54-inch fans.
- No need to reframe sidewalls or update wiring before installation in many cases.

*Chore-Time's 54-inch Fan can be mounted using existing 48-inch (shown in red) or 52-inch (shown in blue) framing. This eliminates the need to reframe sidewalls for retrofit applications.*





Chore-Time's high-capacity 52-inch (132.1-cm) diameter TURBO® Fan with HYFLO® Shutter delivers more air with fewer fans – 29,700 CFM at 0.05 inches of static pressure in independent wind tunnel tests.

(Patent Pending)



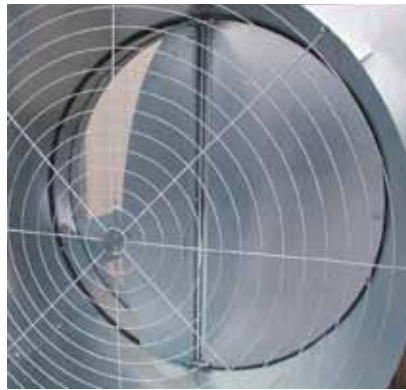
Cable attachment allows HYFLO® Doors to float left or right together for maximum efficiency.

## HYFLO® Shutters for Tunnel Fans

Available for Chore-Time's Fiberglass and Galvanized Fans

**Chore-Time's HYFLO® Shutter** improves fan performance by minimizing obstructions during fan operation.

- Delivers up to **10% more air** than traditional shutters.
- **75% less opportunity for air to leak** through compared to a traditional louver shutter.
- Does not suffer the typical 12-15% loss of efficiency and air speed typical of dirty louver-style shutters, so **air speed is maintained over time**.
- The HYFLO Shutter consists of **only two moving parts** for greater reliability and easier cleaning.



Shutter's unique springs draw the doors closed when fan is not in operation.



HYFLO® Shutter doors are pushed open as air is exhausted when fan operates.

## Variable Speed Fans Can Replace Minimum Ventilation Fans

Chore-Time's 52" Galvanized Fan with HYFLO® Shutter at 58%

Typical 36-Inch Minimum Ventilation Fan

10,400 CFM	10,000 CFM
30.1 CFM/Watt	17 CFM/Watt

Running tunnel fans at reduced capacity using Chore-Time's Variable Frequency Drive can save significant energy compared to running small fans continuously.





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## Variable Speed Fans

### CHORE-TIME® 54-, 52- and 48-Inch Fans\* with HYFLO® Shutters

\*Variable speed option available for certain galvanized and fiberglass fan models.

#### The Energy-Efficient Way to Smooth House Temperature and Airflow Changes

- Have you ever noticed excessive fan cycling?
- Have your young birds experienced chilling or increased mortality from excess airflow?
- Are you concerned about energy efficiency on your small minimum ventilation fans?

Chore-Time's variable speed fan option offers a solution to these problems and an improved environment for your birds.

#### Features and Benefits

- Improve the environment for your birds by using Chore-Time's Variable Speed Fan to smooth the house's airflow and temperature curves.
- Gain efficiency with impressive CFM/watt during ramp up and ramp down periods.
- Reduce framing costs for new construction or retrofitting by adding a Variable Speed Kit to a tunnel fan instead of installing a small fan.
- Inexpensively add variable speed capability to existing houses by converting existing tunnel fans to variable speed.

#### Get Better Temperature Control and Energy Savings with Chore-Time's Variable Speed Fans

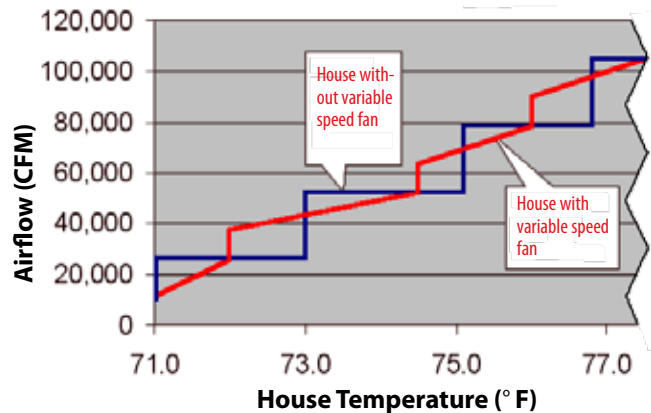
Control Setting	Fan Performance at .05" Static Pressure	
58% (35 Hz)	10,400 CFM	30.1 CFM/Watt
67% (40 Hz)	14,100 CFM	29.1 CFM/Watt
83% (50 Hz)	21,400 CFM	27.6 CFM/Watt
100% (60 Hz)	26,100 CFM	21.9 CFM/Watt

Example features Chore-Time's 52-Inch Galvanized Fan with HYFLO® Shutter, Part No. 49519-42. Contact Chore-Time for performance data for additional fan models.

Bess Labs Test No. 08283



#### Airflow CFM with & without Variable Speed Fan



Using Chore-Time's Variable Speed Fans smooths airflow and temperature efficiently and creates a better bird environment.

#### Chore-Time's Variable Speed Fans Smooth the Airflow and Temperature in the House

1. Using your CHORE-TRONICS® 2 Control and a Variable Frequency Drive, the fan equipped with variable speed capability comes on briefly at 100% to open the shutter, then drops back to the minimum speed setting.
2. The fan gradually accelerates to 100% (based on house temperature) until the first tunnel fan comes on. It then drops back to the minimum speed setting again and begins ramping up as the house temperature increases. This process can be repeated until all tunnel fans are on.
3. By increasing (and decreasing) its airflow gradually, Chore-Time's Variable Speed Fan helps smooth out both airflow and temperature during the period before and after full tunnel operation.

Chore-Tronics® 2 Control



Chore-Time® Variable Frequency Drive



# Air Circulating Fans, Louvers and Fan Accessories

## Air Circulating Basket Fan

- Mixes air for more even house temperatures.
- 1/10-horsepower direct drive motor.
- Sealed ball bearings.
- Automatic thermal overload protection.
- Polyvinyl-coated heavy-duty guard for superior corrosion resistance.
- "L"-shaped ceiling mount bracket provided with fan.



20-Inch (508-mm) Diameter Basket Fan with Ceiling Mount Bracket

### Basket Fan Specifications Chart

Part No.	Diameter	Motor	Electricity
51702	20 inches (508 mm)	1/10 HP 1725 RPM	115/230V 1 Phase

## Box and Panel Fans

**Box fans** are available in 24-, 36- and 48-inch diameters with metal framing in direct-drive. Wood framing is available for the 24- and 36-inch fans. Belt-drive is available for the 36- and 48-inch fans.

**Panel fans** are available without framing in 36- and 48-inch diameters in belt- or direct-drive.

Chore-Time's 36-inch Direct-Drive Box Fans deliver 10,980 CFM and 16.4 CFM/Watt at 0.00 static pressure.



## Cone Covers

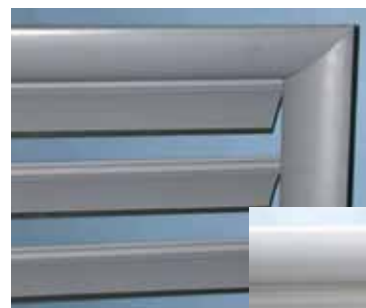


HELP SEAL OUT DRAFTS during cold weather with optional cone covers made of vinyl-coated, ultraviolet-resistant fabric. Available in 53- or 64-inch (134 or 162 cm) outside diameters.

## Louver Shutters

Chore-Time's Louver Shutters come in an aerodynamic "belled" style frame for greater efficiency as well as in a flat frame model for flush mounting. Available in white or gray.

- Louvers' flexible edge helps seal the fan's opening when fan is at rest.
- Corrosion-proof vinyl construction with a rigid vinyl frame and fiberglass rod hinges for the louvers.
- Louvers are easy to replace and have a smooth, easy-care finish for low maintenance.



Flexible louver edge helps seal the fan's opening.



Belled shutter has a curved, aerodynamic frame.



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## Fan Selection and Maintenance Recommendations

The materials from which today's poultry house equipment is made have not changed, but the poultry house environment has. Proper equipment selection and maintenance has never been more important.

**Poultry houses tend to have more moisture, ammonia and chemicals than in years past.**

- Houses are more air tight.
- Rising fuel costs lead to underventilation.
- Advanced litter treatments permit more dampness and ammonia on floors.

**Without curtains, all moisture must be removed by power ventilation.**

- Using tunnel fans to exhaust air from the brood chamber introduces hot humid air in the grow-out area.
- Increased amounts of ammonia exhausted through fans can cause extensive damage.

**During cool weather, the combination of hot humid air and cold surfaces can lead to condensation.**

- Condensation on galvanized metal can result in corrosion and serious damage.
- The problem of corrosive chemicals in the house is compounded if chemicals are allowed to come into contact with wet equipment.



## Best Practices for Bird Health and Equipment Life

### Reduce Moisture in the House

- Follow minimum ventilation standards based on birds' age.
- Maintain relative humidity in the house below 70%.

### Limit the Effects of Corrosive Elements

- Maintain fans properly.
- Remove surface dust and dirt from fans between flocks.
- When cleaning fans, don't leave standing water on metal surfaces.
- Avoid direct contact of chemicals with equipment.

### Choose Fans Wisely

- Consider whether the fan is made of heavy-duty, corrosion-resistant materials.
- Evaluate the warranty and the company behind it.
- Contrast the fan's performance and energy usage with its cost and life expectancy.

## Fan Selection Comparison

Chore-Time® Fans	52-Inch Fiberglass	52-Inch Galvanized	54-Inch Galvanized
CFM	Better	Good	Best
CFM/Watt	Better	Good	Best
Life Expectancy	Best	Good	Good
Warranty	Best	Good	Good
Price	Higher	Lowest	Lower



## Tunnel Fan Specifications (60 Hz 1 Phase)

Fans are arranged in descending order by fan capacity at 0.10 static pressure.

Chore-Time recommends considering both capacity (CFM) and performance (CFM/Watt) when selecting a fan.

Size	Mat.	Style	Shutter Drive	Type	Fan P/N	.05 Static Pressure		.10 Static Pressure		Air Flow Ratio	Bess Labs Test No.	
						CFM	CFM/Watt	CFM	CFM/Watt			
54 inch 137.2 cm	G	C	HYFLO	BD	High-Cap.	52157-21	30,800	22.0	28,900	19.4	0.80	09080
52 inch 132.1 cm	F	C	HYFLO	BD	High-Cap.	49740-21	29,700	20.5	27,700	18.3	0.79	04312
52 inch 132.1 cm	G	C	HYFLO	BD	High-Cap.	49519-21	29,100	20.0	27,300	18.0	0.78	05188
52 inch 132.1 cm	G	SW-C	Bell Louver	BD	High-Cap.	48319-215	27,800	18.7	26,300	17.1	0.80	05197
54 inch 137.2 cm	G	C	HYFLO	BD	Energy-Eff.	52157-22	27,700	25.3	25,800	22.0	0.78	09081
48 inch 121.9 cm	F	C	Bell Louver	BD	High-Cap.	47898-4825	26,400	18.0	25,000	16.3	0.83	02473
52 inch 132.1 cm	F	C	HYFLO	BD	Energy-Eff.	49740-22	27,000	23.5	24,900	20.8	0.73	04334
52 inch 132.1 cm	G	C	HYFLO	BD	Energy-Eff.	49519-22	26,400	23.6	24,500	20.8	0.76	05186
52 inch 132.1 cm	G	SW-C	Bell Louver	BD	Energy-Eff.	48319-225	24,900	21.6	23,300	19.4	0.78	05198
48 inch 121.9 cm	G	SW-C	Bell Louver	BD	High-Cap.	48318-215	24,400	20.3	22,900	18.0	0.77	04323
48 inch 121.9 cm	G	C	HYFLO	BD	High-Cap.	49515-21	24,600	20.8	22,700	18.0	0.76	04327
48 inch 121.9 cm	F	C	Bell Louver	BD	Energy-Eff.	38264-4825	23,600	21.2	22,100	19.0	0.74	04332
48 inch 121.9 cm	G	C	HYFLO	BD	Energy-Eff.	49515-22	21,100	24.4	19,600	21.3	0.77	04326
48 inch 121.9 cm	G	SWC	Bell Louver	BD	Energy-Eff.	48318-225	20,700	23.2	19,200	20.2	0.75	04321

## Other Exhaust Fan Specifications (60 Hz 1 Phase)

Fans are arranged in descending order by fan capacity at 0.10 static pressure.

Chore-Time recommends considering both capacity (CFM) and performance (CFM/Watt) when selecting a fan.

Size	Mat.	Style	Shutter Drive	Fan P/N	.05 Static Pressure		.10 Static Pressure		Air Flow Ratio	Bess Labs Test No.	
					CFM	CFM/Watt	CFM	CFM/Watt			
36 in / 91.4 cm	F	C	Flat Louver	BD	38589-3622	11,960	19.0	11,190	17.0	0.79	96199
36 in / 91.4 cm	G	SW-C	Flat Louver	BD	46130-3622	11,030	17.8	10,200	15.5	0.75	00174
36 in / 91.4 cm	F	C	Flat Louver	DD	38265-3622	10,970	18.6	10,200	16.8	0.73	96159
36 in / 91.4 cm	G	SW-C	Flat Louver	DD	44860-3622	10,210	17.9	9,460	15.9	0.75	99217
36 in / 91.4 cm	G	C	HYFLO	DD	50372-22	9,880	21.5	9,160	18.9	0.76	06241
24 in / 61.0 cm	F	C	Flat Louver	DD	40452-2422	5,990	16.2	5,550	15.0	0.73	98012

KEY: Mat.=Material; G=Galvanized; F=Fiberglass; C=Cone; SW-C=Slantwall Cone; BD=Belt-Drive; DD=Direct-Drive

A variable frequency drive option is available for the following 3-phase fan models: 52-inch fiberglass energy-efficient and high-capacity fans; 48-inch fiberglass energy-efficient fan with special motor; and 54-inch and 52-inch galvanized energy-efficient fans.



This is a sampling of the many fan sizes, models and configurations that Chore-Time offers. Additional electrical specifications also available. Contact your certified TRUE RED® distributor for details on any fans not shown here.

Find your certified TRUE RED® distributor in our on-line distributor finder.

[www.choretimepoultry.com](http://www.choretimepoultry.com)

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Feeding | Drinking | Controls | Ventilation | Heating | Nests | Feed Storage