



— BROCK SOLID<sup>®</sup> —

# AERATION SYSTEMS



Safeguarding Your Grain<sup>®</sup> Since 1957

# Brock GUARDIAN® Series Fans



## Axial Fans

The BROCK® Aeration System product line offers:

- Economical GUARDIAN® Series Vane Axial Aeration Fans with high airflows at low static pressures.
- Factory-balanced fans tested for vibration and energy usage to provide reliably smooth operation.
- Recommended and optional BROCK® Axial Wrap-Around and Bolted Fan Transitions to optimize airflow into the grain.

The GUARDIAN® Series Vane Axial Fan's **venturi opening** uses innovative curvature design for efficient air performance. A 10-mil PVC coating on **screen guard** provides superior corrosion resistance and attractive appearance.



Dynamically balanced cast aluminum **blade** has advanced air foil design for efficient air handling.



**Totally-enclosed, air over (TEAO) motors** are standard for all GUARDIAN® Series Axial Fans. Two-piece bolt-together **motor mount/fan support** provides a solid connection for mounting the fan and aids fan stability during operation.

**Air vanes** are a standard feature on all 18-inch (457-mm) diameter and larger fans. The vanes aid efficient airflow at higher static pressures by reducing air turbulence.



## Ask About Brock's Axial Heaters

Brock's GUARDIAN® Series Axial Heaters are available in 24-, 26-, and 28-inch (610-, 660-, and 711-mm) diameters to match your grain drying and conditioning needs. Low temperature heaters are also available.

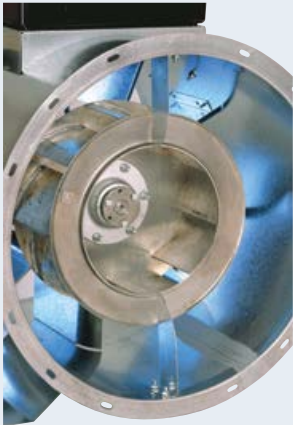


# For Your Grain Drying And Conditioning Needs

## Centrifugal In-Line Fans

The BROCK® Aeration System product line offers:

- GUARDIAN® Series Centrifugal In-Line Aeration Fans with low airflows at high static pressures — excellent for use with smaller grain bins holding small grains (wheat, rapeseed, barley, etc.)
- Factory-balanced fans tested for vibration and energy usage to provide reliably smooth operation.
- Recommended BROCK® Axial Wrap-Around Fan Transitions to optimize airflow into the grain.



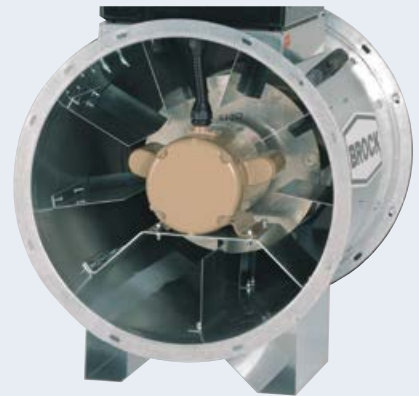
Dynamically balanced aluminum **centrifugal wheel** features advanced air foil blade design to efficiently handle low airflows at medium to high static pressures.



Fan's **air inlet orifice** uses an innovative design to promote better airflow into the centrifugal wheel to enhance fan performance. The unique **baffle** design helps to direct air into the centrifugal wheel to encourage smooth, efficient fan operation. A 10-mil PVC coating on **screen guard** provides an attractive appearance and superior corrosion resistance.



All Brock GUARDIAN® Series Centrifugal In-Line Fans feature a reinforced, 12-gauge, galvanized **steel housing** for durability and long fan life.



**Totally-enclosed, air over (TEAO) motors** are standard for all Brock GUARDIAN® Series Centrifugal In-Line Fans. Two-piece bolt-together **motor mount/fan support** provides a solid connection for mounting the fan and aids fan stability during operation. **Air straightening vanes** aid efficient air flow by reducing air turbulence.

## Fan Selection Made Easy

A key component of the BROCK® Aeration System is the AIRSOLVER® Fan Selection Software. Your Brock dealer simply enters your storage system's aeration requirements and the software helps choose the aeration fan type and size appropriate for meeting your aeration needs.



# GUARDIAN® Series Fans

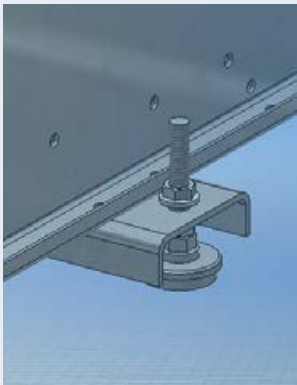


## Low-Speed Centrifugal Fans

The BROCK® Aeration System product line offers:

- GUARDIAN® Series Low-Speed Centrifugal Aeration Fans with high airflows at medium static pressures for larger storage bins.
- Factory-balanced fans tested for vibration and energy usage to provide reliably smooth operation.
- Recommended and optional BROCK® Centrifugal Wrap-Around and 44- and 67-inch (1118- and 1702-mm) Wide Bolted Fan Transitions to optimize airflow into the grain.

All Brock GUARDIAN® Series Centrifugal Fans have a reinforced, 12-gauge, galvanized **steel housing** for durability and long fan life. Totally-enclosed, fan-cooled (TEFC) **motors** are standard.



When GUARDIAN® Series Centrifugal Fans require a foot-mount, Brock's high-strength, adjustable foot structure with dampening pad assists with leveling the unit and provides the fan support needed for smooth operation.

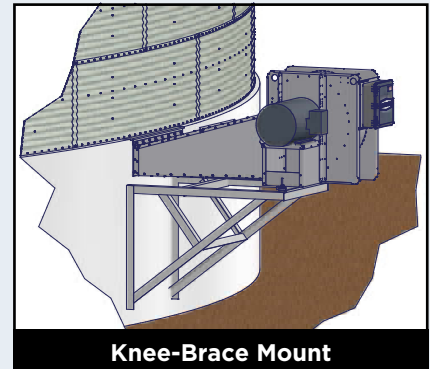
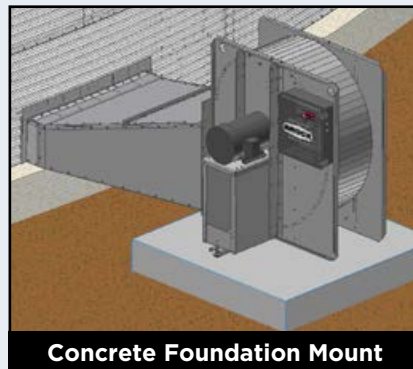
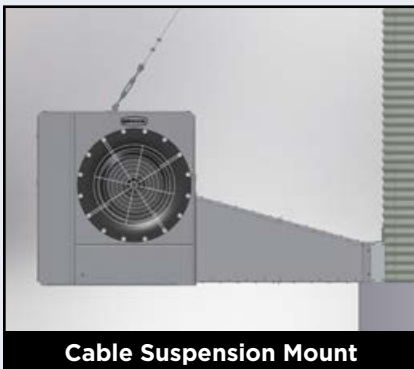


As a part of Brock's high standard of quality and reliability, all GUARDIAN® Series Centrifugal Fans are factory-tested for fan balance to minimize performance-robbing vibration.

## A Variety Of Ways To Support GUARDIAN® Series Centrifugal Fans

The BROCK® Aeration System offers a variety of approved mounting options for installing GUARDIAN® Series Centrifugal Fans and transitions to BROCK®

Grain Storage Bins. Each has been designed and tested to ensure proper fit and smooth performance. See your authorized Brock dealer for the details.



# For Your Grain Drying And Conditioning Needs

## High-Speed Centrifugal Fans

The BROCK® Aeration System product line offers:

- GUARDIAN® Series High-Speed Centrifugal Aeration Fans with low airflows at high static pressures.
- Factory-balanced fans tested for vibration and energy usage to provide reliably smooth operation.
- Recommended BROCK® 44-inch (1118-mm) Wide Bolted Fan Transitions to optimize airflow into the grain.



The GUARDIAN® Series High-Speed Centrifugal Fan's **air inlet orifice** uses an innovative design to promote better airflow into the centrifugal wheel to enhance fan performance. A 10-mil PVC coating on the **screen guard** provides superior corrosion resistance and attractive appearance.



**Diverter** and **baffle** help to redirect air spilling from the centrifugal wheel to encourage smooth, efficient fan operation.



Dynamically balanced, seam-welded steel **centrifugal wheel** features advanced air foil blade design to help maximize air performance.

## Low-Speed Centrifugal PTO Fans

The Brock GUARDIAN® Series Low-Speed Centrifugal PTO Fan is designed for direct engine-drive use at 1750 RPM. Use a flexible coupling to link this fan to the power take-off of irrigation or other utility engines. Fan features:

- Models from 10- to 50-horsepower.
- Heavy-duty two-inch (51-mm) diameter high-tensile steel drive shaft.
- Industrial grade double pillow-block bearings.



## Ask About Brock's Centrifugal Heaters

Brock's GUARDIAN® Series Centrifugal Downstream Heaters are available to match centrifugal fan models and offer capacities of up to 5,000,000 BTUs.

This gives you the flexibility required to meet your grain drying and conditioning needs for in-bin drying.



# Specific Controls, Standard Box



A standardized control box is used with all Brock GUARDIAN® Series Fans. Brock's controls are specifically matched to each fan unit and have adjustable overload protection.



Made of durable polycarbonate with a hinged translucent cover, the **control housing** is designed to be weather-, dust-, and rodent-proof.



**Standard components** are used for safe and reliable motor control.

## Airflow Ratings

**Axial Fans (3450 RPM)** Airflow Ratings (Cubic Feet Per Minute - CFM)



Model	HP	INCHES OF STATIC PRESSURE														
		0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0
AX12-075	.75	2,320	2,010	1,480	980	630	430									
AX12-1	1	2,320	2,010	1,480	980	630	430									
AX14-1	1.5	3,350	3,050	2,530	1,950	1,410	1,000	740								
AX16-1	1.5	3,650	3,310	2,840	2,320	1,810	1,340	930	580							
AX18-2	2	4,750	4,390	3,920	3,350	2,700	2,040	1,430	990							
AX18-3	3	5,990	5,720	5,430	5,030	4,500	3,840	3,100	2,360	1,730	1,370					
AX22-4	4.5	9,160	8,670	8,250	7,790	7,220	6,510	5,650	4,710	3,770	2,970	2,480				
AX24-5	5	12,300	11,770	11,130	10,380	9,510	8,540	7,490	6,390	5,290	4,250	3,320	2,580	2,130		
AX24-7	7.5	13,500	13,140	12,630	11,960	11,170	10,270	9,290	8,250	7,190	6,140	5,130	4,210	3,440		
AX24-10	10	15,490	15,160	14,580	13,790	12,840	11,750	10,570	9,320	8,060	6,810	5,610	4,490	3,500		
AX26-12	12	14,690	14,090	13,570	13,070	12,550	11,990	11,350	10,620	9,780	8,820	7,740	6,540	5,240		
AX28-15	15	16,330	15,880	15,460	15,020	14,570	14,090	13,560	12,980	12,340	11,640	10,880	10,060	9,190	8,260	7,300



# Airflow Ratings



## Low-Speed Centrifugal Fans (1750 RPM) Airflow Ratings (Cubic Feet Per Minute - CFM)

Model	HP	INCHES OF STATIC PRESSURE											
		0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	
LC22-3	3	5,564	5,203	4,742	4,183	3,526	2,769						
LC22-5	5	9,095	8,504	7,752	6,838	5,763	4,526						
LC24-7	7.5	11,745	11,112	10,377	9,542	8,606	7,569	6,431					
LC24-10	10	14,445	13,666	12,763	11,736	10,584	9,309	7,909					
LC27-10	10	13,475	12,803	12,047	11,207	10,283	9,275	8,183	7,007				
LC27-15	15	19,250	18,290	17,210	16,010	14,690	13,250	11,690	10,010				
LC27-20	20	20,792	19,989	19,094	18,105	17,019	15,834	14,549	13,161				
LC30-25	25	24,857	24,171	23,352	22,400	21,314	20,095	18,743	17,257	15,638	13,886		
LC30-30	30	26,100	25,380	24,520	23,520	22,380	21,100	19,680	18,120	16,420	14,580		
LC33-40	40	34,080	32,801	31,508	30,198	28,872	27,528	26,165	24,781	23,376	21,948	20,496	
LC33-50	50	37,000	35,887	34,746	33,572	32,361	31,108	29,808	28,458	27,053	25,589	24,060	

## High-Speed Centrifugal Fans (3450 RPM) Airflow Ratings (Cubic Feet Per Minute - CFM)

Model	HP	INCHES OF STATIC PRESSURE											
		0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0	
HC15-3	3	2,657	2,492	2,294	2,052	1,755	1,392						
HC15-5	5	4,505	4,225	3,890	3,480	2,976	2,360						
HC18-7	7.5	5,250	4,957	4,652	4,321	3,952	3,535	3,056	2,505				
HC18-10	10	6,920	6,535	6,132	5,695	5,210	4,660	4,029	3,302				
HC18-15	15	10,500	9,915	9,303	8,641	7,905	7,070	6,113	5,009				
HC22-20	20	9,460	9,088	8,699	8,294	7,871	7,427	6,962	6,474	5,962	5,423	4,858	
HC22-25	25	11,610	11,153	10,677	10,179	9,660	9,115	8,544	7,946	7,317	6,656	5,962	
HC22-30	30	13,975	13,425	12,851	12,253	11,627	10,972	10,285	9,564	8,807	8,012	7,176	
HC22-40	40	18,490	17,762	17,004	16,212	15,384	14,517	13,608	12,654	11,652	10,600	9,494	
HC22-50	50	21,500	20,653	19,772	18,851	17,888	16,880	15,823	14,714	13,549	12,326	11,040	

## Centrifugal In-Line Fans (3450 RPM) Airflow Ratings (Cubic Feet Per Minute - CFM)

Model	HP	INCHES OF STATIC PRESSURE												
		0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0
IC18-2	2	2,400	2,270	2,080	1,900	1,710	1,360							
IC18-3	3	3,740	3,530	3,240	2,970	2,660	2,120							
IC24-3	3	4,020	3,900	3,710	3,530	3,340	3,140	2,850	2,370					
IC24-5	5	6,130	5,940	5,660	5,370	5,100	4,790	4,350	3,610					
IC24-7	7.5	6,960	6,600	6,260	5,950	5,640	5,320	4,970	4,570	4,070				
IC28-10	10	6,040	5,870	5,670	5,460	5,250	5,040	4,820	4,600	4,360	4,110	3,820	3,490	3,080
IC28-15	15	9,110	8,850	8,550	8,240	7,920	7,600	7,270	6,930	6,580	6,200	5,770	5,260	4,650

Airflow ratings have been determined by an independent fan testing facility in accordance with AMCA Standard 210.

# Aeration Fan Transitions

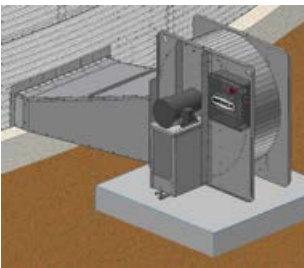
## BROCK® Fan Transitions Help Optimize Grain Airflows



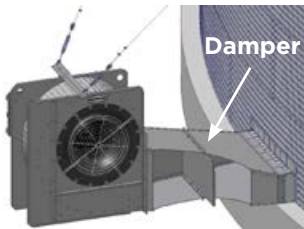
Wrap-around transitions for axial, low-speed centrifugal and in-line centrifugal fans

The BROCK® Aeration System's selection of components includes BROCK® Fan Transitions and related options for excellent aeration performance with reliably smooth operation. Brock's family of fan transitions offers:

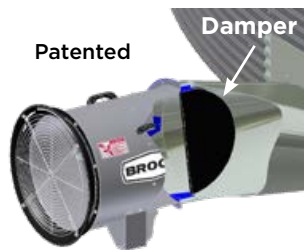
- A selection of durable, galvanized steel wrap-around and bolted transitions designed to optimize airflow into the grain while minimizing pressure losses.
- Exclusive patented back-draft damper options that automatically prevent under-floor pressure from flowing air back through a fan that is not running. Dampers are recommended for multiple fan installations.
- Extensions for supporting bin floors in full-floor bins are standard and help to minimize airflow obstructions into the aeration plenum.



Bolted transitions for low- and high-speed centrifugal fans



Centrifugal fan back-draft damper cutaway view with damper closed



Patented Axial fan butterfly back-draft damper cutaway view with damper open



Sidewall/Floor Support helps minimize airflow obstructions

BROCK® Transitions for GUARDIAN® Series Fans		Axial Wrap-Around	Axial Bolted
Fan Model	Fan Horsepower	Transition Type	
<b>Vane Axial Fans</b>			
AX12-075	.75	O	X
AX12-1	1.0	O	X
AX14-1	1.5	O	X
AX16-1	1.5	X	O
AX18-2	2.0	X	O
AX18-3	3.0	X	O
AX22-4	4.5	X	
AX24-5	5.0	X	
AX24-7	7.5	X	
AX24-10	10.0	X	
AX26-12	12.0	X	
AX28-15	15.0	X	
<b>In-Line Centrifugal Fans</b>			
IC18-2	2.0	X	
IC18-3	3.0	X	
IC24-3	3.0	X	
IC24-5	5.0	X	
IC24-7	7.5	X	
IC28-10	10.0	X	
IC28-15	15.0	X	

X - Recommended Fan Transition;  
O - Optional Fan Transition

Fan Model	Fan Horsepower	Centrifugal Wrap-Around	Centrifugal 44-Inch (1118-mm) Wide Bolted	Centrifugal 67-Inch (1702-mm) Wide Bolted
		Transition Type		
<b>Low-Speed Centrifugal Fans</b>				
LC22-3	3.0	X		
LC22-5	5.0	X		
LC24-7	7.5	X		
LC24-10	10.0	X	O	
LC27-10	10.0	X	O	
LC27-15	15.0		X	
LC27-20	20.0		X	
LC30-25	25.0		X	O
LC30-30	30.0		X	O
LC33-40	40.0			X
LC33-50	50.0			X
<b>High-Speed Centrifugal Fans</b>				
HC15-3	3.0		X	
HC15-5	5.0		X	
HC18-7	7.5		X	
HC18-10	10.0		X	
HC18-15	15.0		X	
HC22-20	20.0		X	
HC22-25	25.0		X	
HC22-30	30.0		X	
HC22-40	40.0		X	
HC22-50	50.0		X	



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Safeguarding Your Grain® Since 1957

### BROCK GRAIN SYSTEMS

A Division of CTB, Inc.  
A Berkshire Hathaway Company  
Phone: +1 866.658.4191  
www.brockgrain.com  
Email: sales@brockgrain.com