

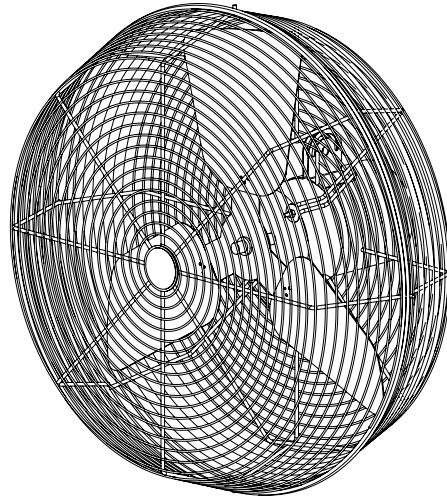


# 20", 24" & 36" Circulation Fan Assembly

HF20N01, HF24N01

924430/-KD, 936420/-KD, 936430/-KD

## Installation Quick Sheet



### Introduction



Please carefully read the information provided. Retain instructions for future reference.

**NOTE:** If installing a pre-assembled fan, skip ahead to the *Circulating Fan Various Mounting Instructions* on page 3.

### Assembly of 20", 24" & 36" Circulation Fans

1. Install the basket fan guard (924018) into the oversized opening in the back grill if the fan has a 3PH motor. (*The oversized opening in the back grill is designed to allow room for the large capacitor in 1PH motors. The guard is to be used only with 3PH motors.*) The guard ships flat from the factory - the installer must bend the tabs around the vertical grill wires to install securely, as shown in Figure 2.

**NOTE:** The guard is easier to install before attaching the front grill but can be done afterwards, by using a screwdriver or equivalent tool to bend the tabs.

Figure 1

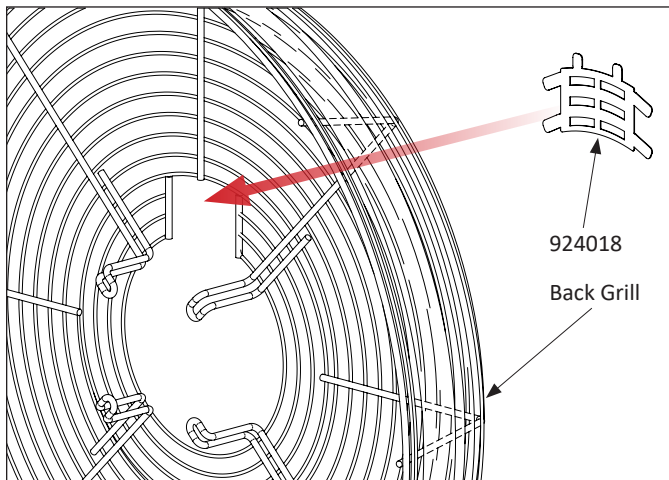
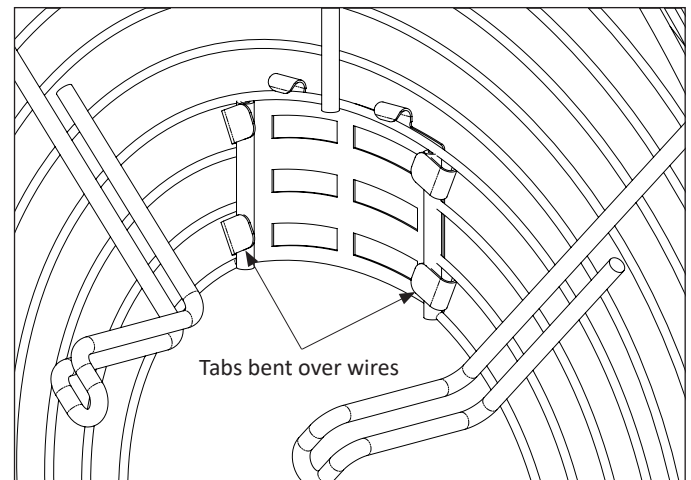


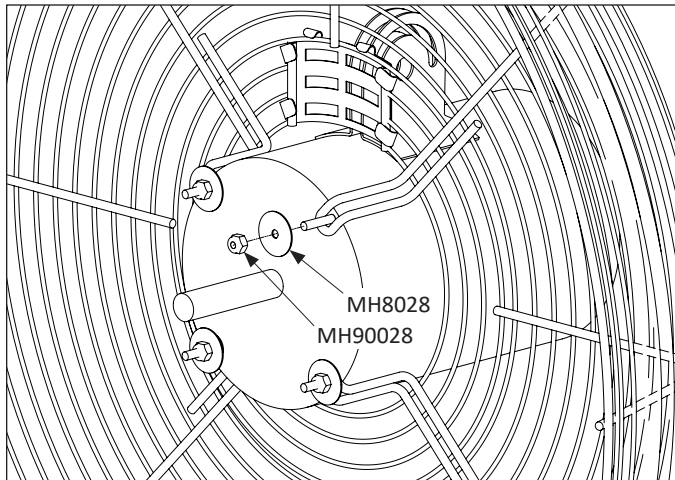
Figure 2



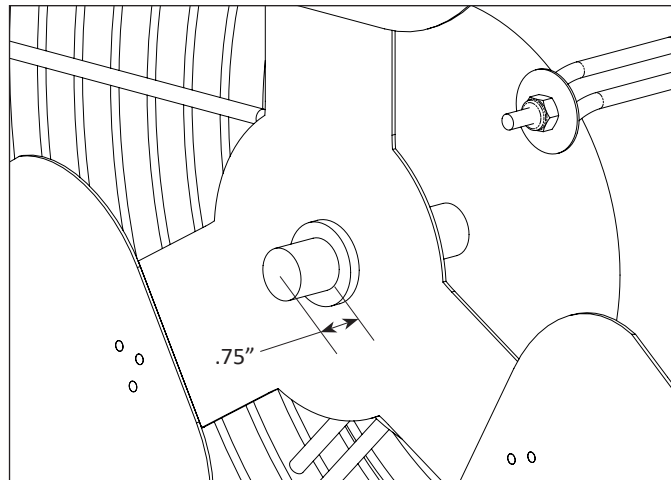
## Assembly of 20", 24" & 36" Circulation Fans - continued

2. Assemble the motor to the back grill using (4) 3/16" flat washers (MH8028) and (4) #10-32 nylock nuts (MH90028), as shown in Figure 3.
3. Install the fan blade onto the motor shaft according to the model size shown in the chart below Figure 4.

**Figure 3**



**Figure 4**

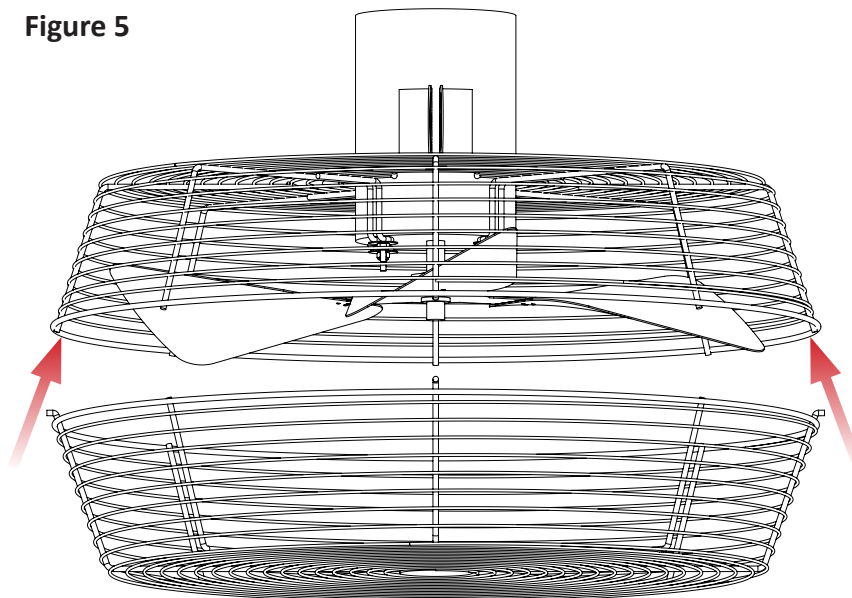


Blade	Motor	Blade Position
24"	1PH	Blade is flush with end of motor shaft
24"	3PH	0.75" (19mm) back from end of motor shaft
36"	All Sizes	Blade is flush with end of motor shaft

**NOTE:** Figure 4 shows the 0.75" offset distance in a 24" 3PH model.

4. Once the fan blade is secured to the motor shaft, attach the front grill to the back grill by inserting the hooks at the edge of the grill into the exterior wires by flexing the grill to fit inside, as shown in Figure 5.

**Figure 5**



5. Complete fan assembly by adhering the Val-Co logo label to the center of the front grill.

## Circulating Fan Various Mounting Instructions

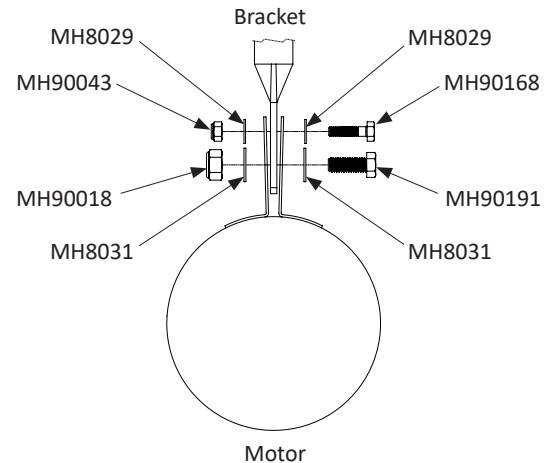
### Overview

These instructions will cover all of the various mounting hardware and methods used to install these variations. It is the responsibility of the installer to select suitable fasteners and washers to attach the mounting brackets to the framing members of the building.

The motor attaches to each of the different styles of mounting brackets in the same way, no matter what model is being assembled:

1. The 3/8-16 x 1" hex bolt (MH90191) with a 3/8" flat washer (MH8031) goes through the lower hole on the motor yoke and mounting bracket and is assembled to a 3/8-16 nylock nut (MH90018) and 3/8" flat washer (MH8031). This hardware is left loose until final assembly.
2. The 1/4-20 x 1" hex bolt (MH90168) with a 1/4" flat washer (MH8029) goes through the adjustment slot and mounting bracket and is assembled to a 1/4-20 nylock nut (MH90043) and 1/4" flat washer (MH8029).
3. Once the hardware is installed, the fan can be adjusted to the desired tilt, and the 1/4-20 hardware can be tightened. Afterwards, tighten the 3/8-16 hardware to secure the fan.

Figure 6



## NOTICE

**SERVICE AND TECHNICAL ASSISTANCE:** Your dealer or the Valco Service Department will be happy to answer all technical questions which will improve your use of the circulation fans. Be prepared with the model number and necessary information before you place a call to your dealer or Valco. If your fan requires service when the warranty period has expired, please contact your dealer for assistance.

## ! WARNING

If these ventilation products are used to support life in agricultural structures where failure of the system could result in loss or injury, the user must provide an adequate backup and alarm system. The user must accept all risks of such loss or injury due to the possible failure of the ventilation system.

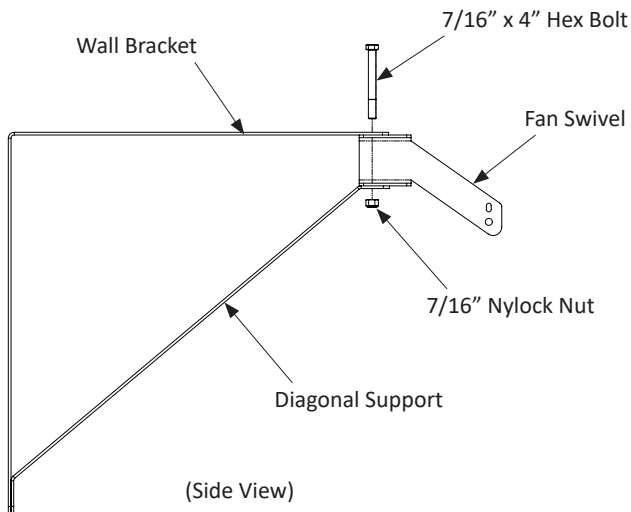
## ! WARNING

Do not install fan with moving parts within seven feet of floor or grade level without a guard that complies with OSHA Regulations. Do not use unless electrical wiring complies with all applicable codes. Do not wire without providing a power source disconnect at the fan itself. Do not service except by a qualified maintenance technician and only after disconnecting the power source. Do not install in room where flammable material is stored or flammable vapors might build up. Failure to observe all of these precautions can result in serious injury or death.

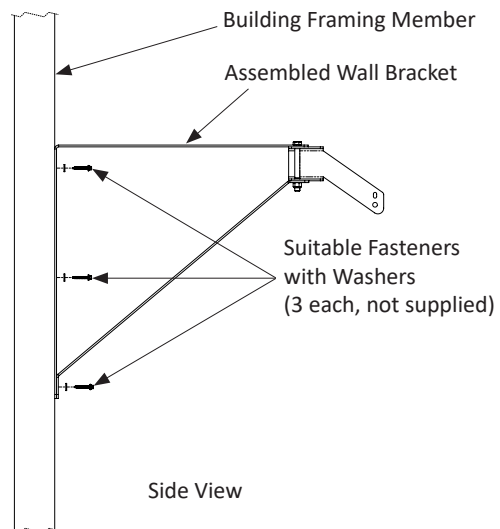
## Wall Bracket Installation

1. Identify and preassemble the wall bracket, diagonal support, and fan swivel with the supplied 7/16" x 4" hex bolt and nylock nut (provided with the bracket), as shown in Figure 7.
2. Attach the preassembled wall bracket to the wall in the desired position using suitable fasteners (not supplied), as shown in Figure 8. The bottom fasteners must be insert through both the wall bracket and the diagonal support. Make certain that these fasteners are installed centered into 2 X framing members.

**Figure 7**

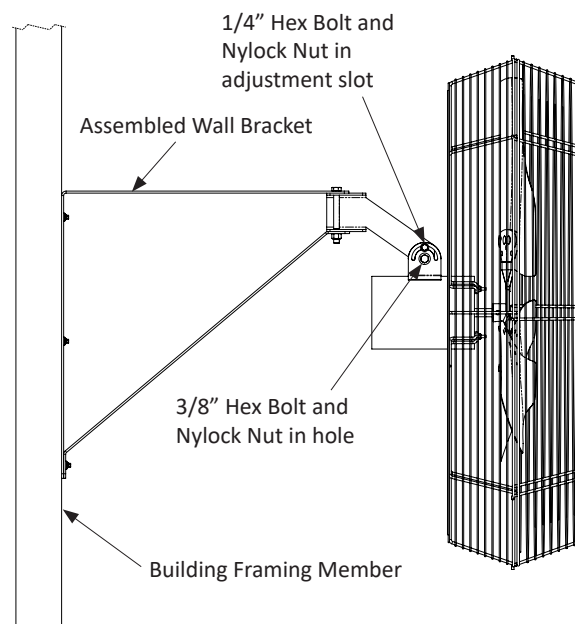


**Figure 8**



3. Attach the fan to the wall bracket by threading a 3/8-16 x 1" hex bolt (MH90191) with a 3/8" flat washer (MH8031) through the lower hole on the motor yoke and wall bracket, assembling that hardware to a 3/8-16 nylock nut (MH90018) and 3/8" flat washer (MH8031). Do not tighten 3/8-16 hardware at this time.
4. Insert a 1/4-20 x 1" hex bolt (MH90168) with a 1/4" flat washer (MH8029) through the adjustment slot and wall bracket, assembling that hardware to a 1/4-20 nylock nut (MH90043) and 1/4" flat washer (MH8029). Adjust the fan to the desired tilt and tighten the 1/4-20 bolt and nut securely. Now tighten the previously installed 3/8-16 bolt and nut to secure the fan.

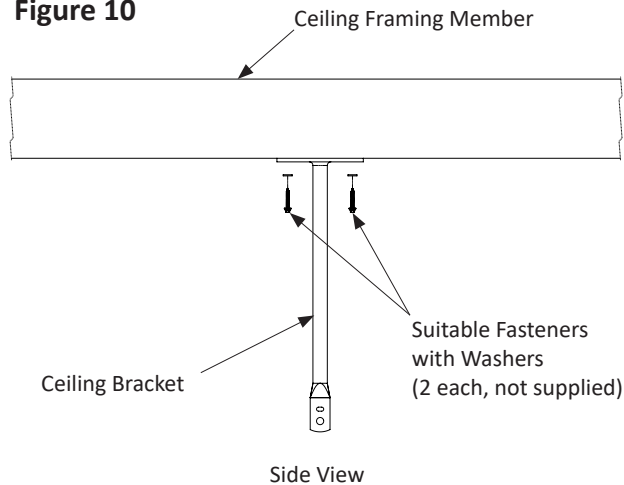
**Figure 9**



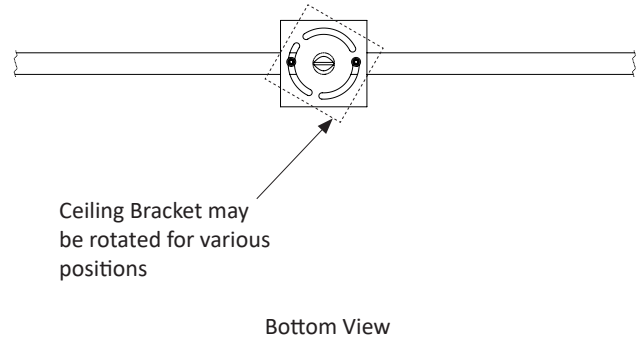
## Ceiling Bracket Installation

1. Locate and identify the ceiling bracket and hardware needed. You will need to provide the suitable fastener hardware needed to mount the ceiling bracket to the ceiling.
2. Mount the ceiling bracket to the ceiling using two suitable fasteners with washers, as shown in Figures 10 & 11. Make certain the fasteners are screwed into the center of the 2X framing members. Rotate the ceiling bracket to the desired direction and tighten the fasteners securely.

**Figure 10**

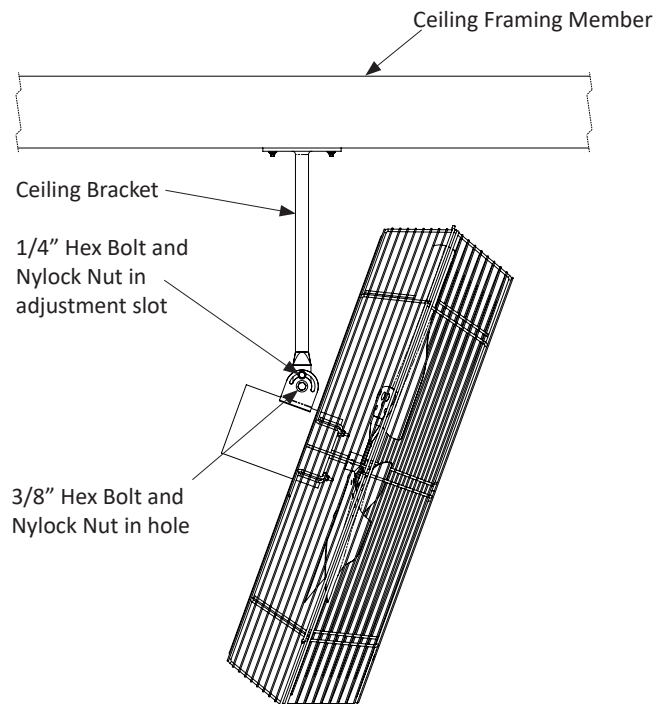


**Figure 11**



3. Attach the fan to the ceiling bracket by threading a 3/8-16 x 1" hex bolt (MH90191) with a 3/8" flat washer (MH8031) through the lower hole on the motor yoke and ceiling bracket, assembling that hardware to a 3/8-16 nylock nut (MH90018) and 3/8" flat washer (MH8031). Do not tighten 3/8-16 hardware at this time.
4. Insert a 1/4-20 x 1" hex bolt (MH90168) with a 1/4" flat washer (MH8029) through the adjustment slot and ceiling bracket, assembling that hardware to a 1/4-20 nylock nut (MH90043) and 1/4" flat washer (MH8029). Adjust the fan to the desired tilt and tighten the 1/4-20 bolt and nut securely. Now tighten the previously installed 3/8-16 bolt and nut to secure the fan.

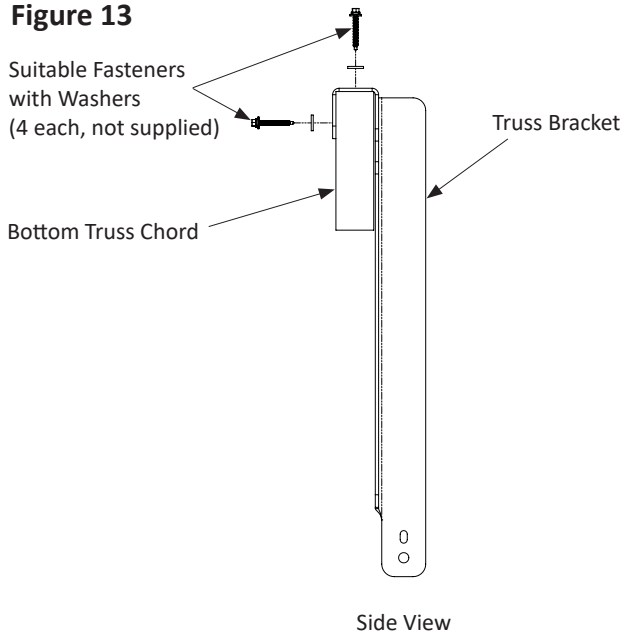
**Figure 12**



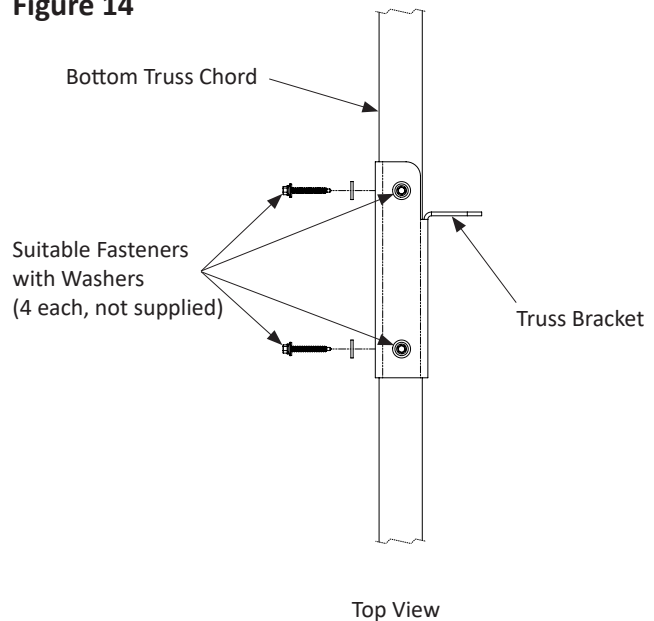
## Truss Bracket Installation

1. Locate and identify the truss bracket and hardware needed. You will need to provide suitable fastener hardware needed to mount the truss bracket to the bottom truss chord of the building.
2. Mount the truss bracket to the bottom truss chord using two suitable fasteners with washers, as shown in Figures 13 & 14. Make certain the fasteners are screwed into the center of the bottom truss chord at the desired position. Securely tighten the fasteners.

**Figure 13**

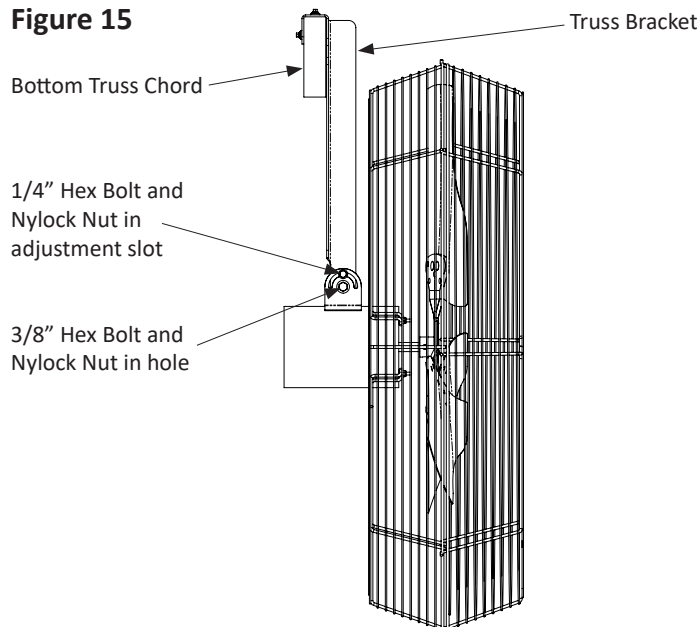


**Figure 14**



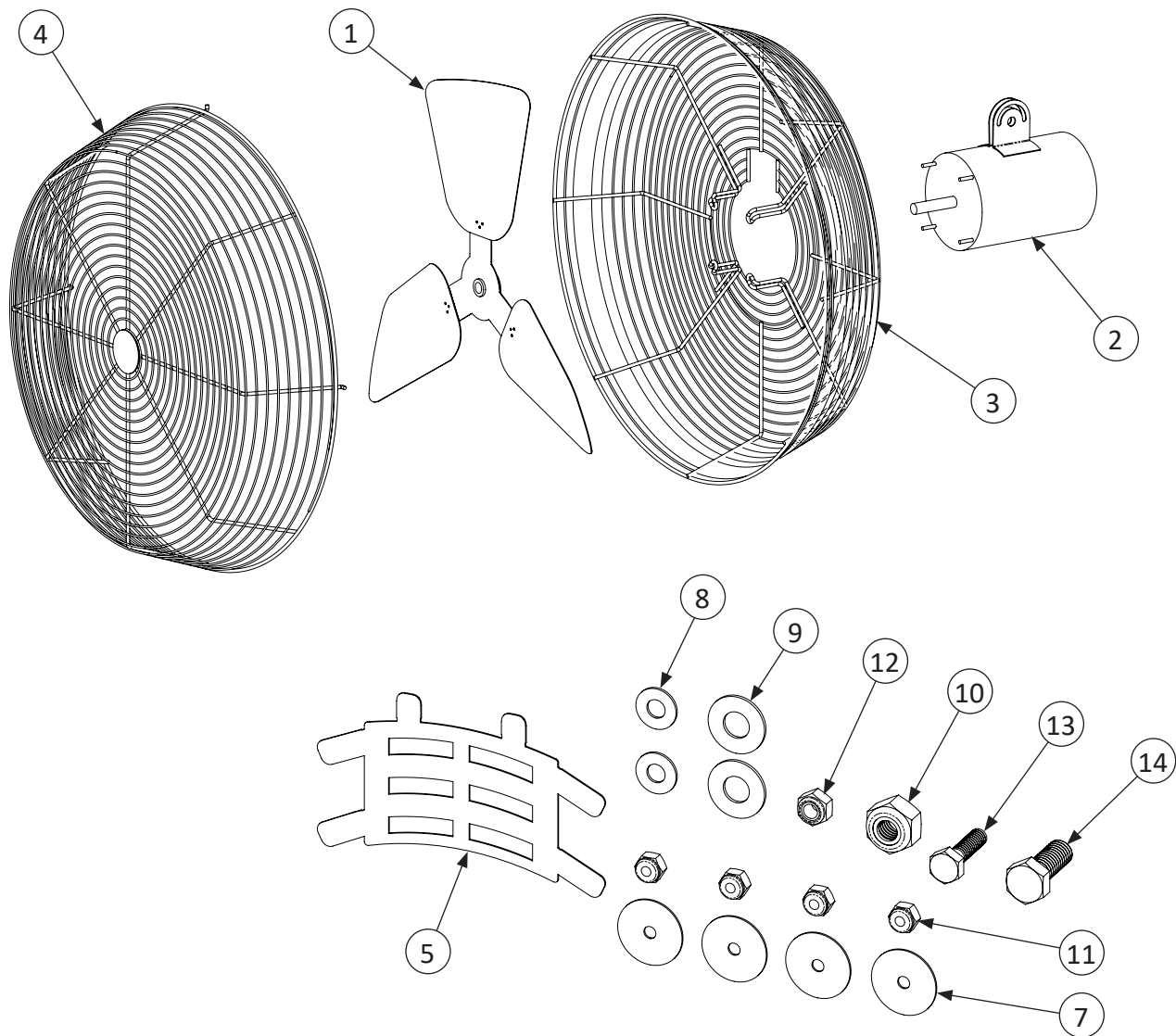
3. Attach the fan to the truss bracket by threading a 3/8-16 x 1" hex bolt (MH90191) with a 3/8" flat washer (MH8031) through the lower hole on the motor yoke and truss bracket, assembling that hardware to a 3/8-16 nylock nut (MH90018) and 3/8" flat washer (MH8031). Do not tighten 3/8-16 hardware at this time.
4. Insert a 1/4-20 x 1" hex bolt (MH90168) with a 1/4" flat washer (MH8029) through the adjustment slot and truss bracket, assembling that hardware to a 1/4-20 nylock nut (MH90043) and 1/4" flat washer (MH8029). Adjust the fan to the desired tilt and tighten the 1/4-20 bolt and nut securely. Now tighten the previously installed 3/8-16 bolt and nut to secure the fan.

**Figure 15**





20", 24" & 36" Circulation Fans: Exploded View and Repair Parts List



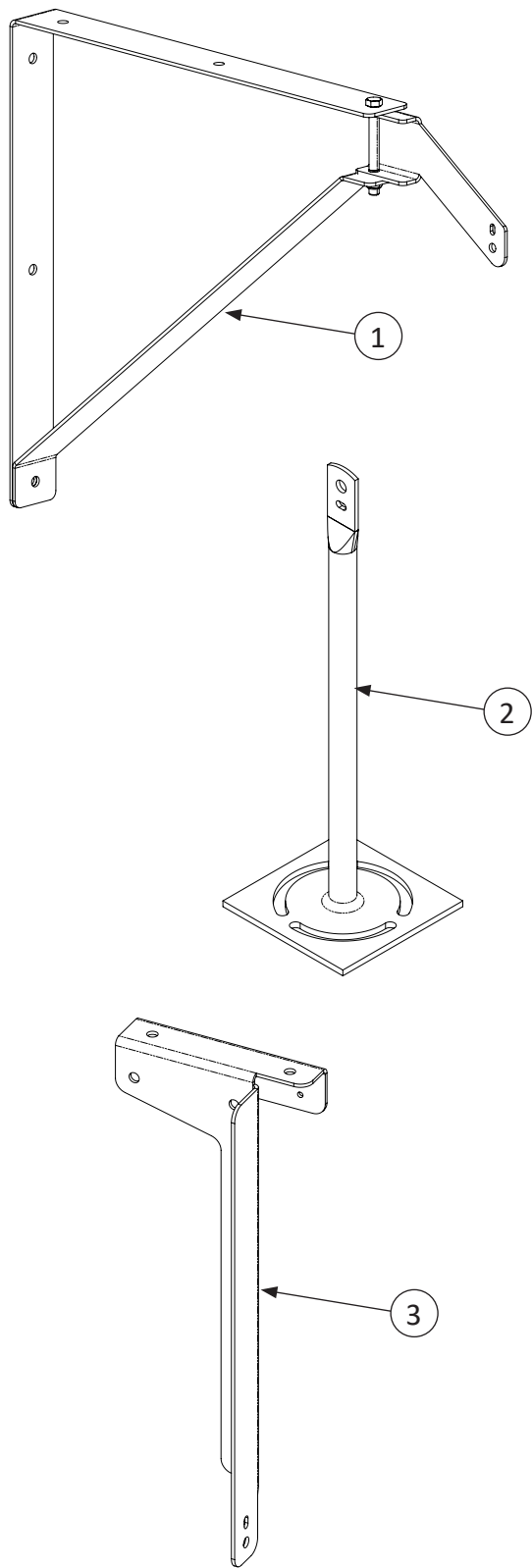
FAN SIZE	KEY	1	2	3	4
	DESCRIPTION	FAN BLADE	MOTOR	BACK GUARD	FRONT GUARD
	FAN PART #	PART #			
20"	HF20N01	B305	M767	HM94241	HM94242
24"	HF24N01	B306	M768	HM94238	HM94239
24"	924430-KD	924024	980104	HM94238	HM94239
36"	936420-KD	936148	980118	HM94243	HM94244
36"	936430-KD	936148	980104	HM94243	HM94244

Motor	Description
M767	1/3HP, 115/230V, 60HZ, 1P, 1625RPM, N48Y, SF1.0, IN.B
M768	1/2HP, 115/230V, 60HZ, 1P, 1725RPM, N48Y, SF1.0, IN.B
980104	1/2HP, 190/380 & 230/460V, 50/60HZ, 3P, 700/825RPM, 48YZ
980118	1/2HP, 115/208-230 & 110/220V, 60 & 50HZ, 1P, 825&700RPM, 48YZ

KEY	PART #	QTY	DESCRIPTION
COMMON HARDWARE			
5	924018	1	BASKET FAN GUARD (3PH only)
6	LBL1012	1	VAL-CO LABEL (not shown)
7	MH8028	4	3/16" ID X 1"OD FLAT WASHER
8	MH8029	2	1/4" FLAT WASHER
9	MH8031	2	3/8" FLAT WASHER
10	MH90018	1	3/8-16 NYLOCK NUT
11	MH90028	4	#10-32 NYLOCK NUT
12	MH90043	1	1/4-20 NYLOCK NUT
13	MH90168	1	1/4-20 X 1" HEX BOLT
14	MH90191	1	3/8-16 X 1" HEX BOLT

**NOTE:**  
Hardware can be found in Parts Bags 924035 & MH94222

Mounting Options for Circulating Fans: Repair Parts List



KEY	PART #	DESCRIPTION
WALL BRACKETS		
1	HFWB1224	WALL BRACKET, 12"-24" HAF FAN
	972430	WALL MOUNT KIT, 36" BASKET FAN

KEY	PART #	DESCRIPTION
CEILING BRACKETS		
2	980175	CEILING BRACKET, 12"-24" HAF FAN
	HFCB36	CEILING BRACKET, 36" HAF FAN

KEY	PART #	DESCRIPTION
TRUSS BRACKETS		
3	980174	TRUSS BRACKET, 12"-24" HAF FAN
	980172	TRUSS BRACKET, 24"-36" HAF FAN

North America:  
Phone: 800.99VALCO; 800.998.2526  
Fax: 419.678.2200  
Email: [sales@val-co.com](mailto:sales@val-co.com)

International:  
Phone: (+1) 419.678.8731  
Fax: (+1) 419.678.2200  
Email: [intl.sales@val-co.com](mailto:intl.sales@val-co.com)