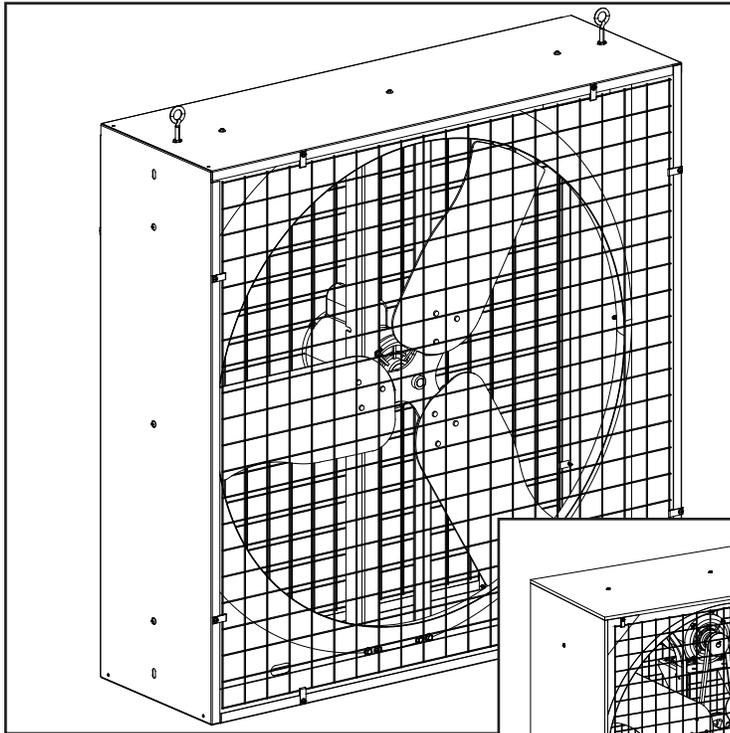


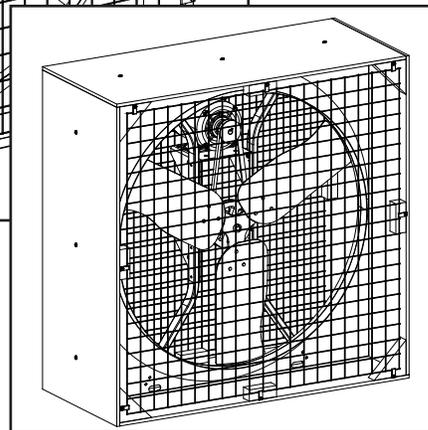
GB Series

'M' and 'H' Fans
18" - 48"

Instruction Manual



'M' Fan



'H' Fan

GB Series 'M' and 'H' Fan

18" - 48"

Models: GB18M • GB18H • GB24M • GB24H •
GB36Mx • GB36Hx • GB365Mx • GB365Hx •
GB48xMx • GB48xHx

GB Series 'M' and 'H' Fan 18" - 48"

Instructions for Use and Maintenance

Thank You:

Thank you for purchasing a GB Series 'M' or 'H' Fan. Munters equipment is designed to be the highest performing, highest quality equipment you can buy. With the proper installation and maintenance it will provide many years of service.

Please Note:

To achieve maximum performance and insure long life from your Munters product it is essential that it be installed and maintained properly. Please read all instructions carefully before beginning installation.

Warranty:

For Warranty claims information see the "Warranty Claims and Return Policy" form QM1021 available from the [Munters Corporation office at 1-800-227-2376 or by e-mail at aghort.info@munters.com](mailto:aghort.info@munters.com).

Conditions and Limitations:

- Products and Systems involved in a warranty claim under the "Warranty Claims and Return Policy" shall have been properly installed, maintained and operated under competent supervision, according to the instructions provided by Munters Corporation.
- Malfunction or failure resulting from misuse, abuse, negligence, alteration, accident or lack of proper installation or maintenance shall not be considered a defect under the Warranty.

Index

Chapters	Page
1. Unpacking the Equipment	4
1.1 Parts List	4
1.2 Dimensions	4
2. Installation Instructions	5
3. Electrical Wiring	6
4. Operation	7
5. Maintenance	8
6. Winterizing	10
7. Troubleshooting	11
8. Exploded View and Parts List	12-14

Unpacking the Equipment

1.

Before beginning installation, check the overall condition of the equipment. Remove packing Materials and examine all components for signs of shipping damage. Any shipping damage is the customers responsibility and should be reported immediately to your freight carrier.

1.1 Parts List

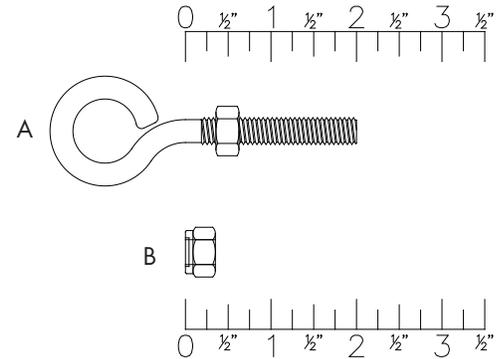
Each Crate Includes:

1 - 18", 24", 36" or 48" Belt Drive or Direct Drive fan

1 - Hardware Package (HP1044) for 'M' fan only

HP1044 - Hardware Package for 'M' Fan

ID	Qty.	Cat. No.	Description
[A]	2	KS2752	5/16"-18 x 2" Closed Eyebolt with Nut, ZP
[B]	2	KN1706	5/16"-18 x Nylock Nut, ZP

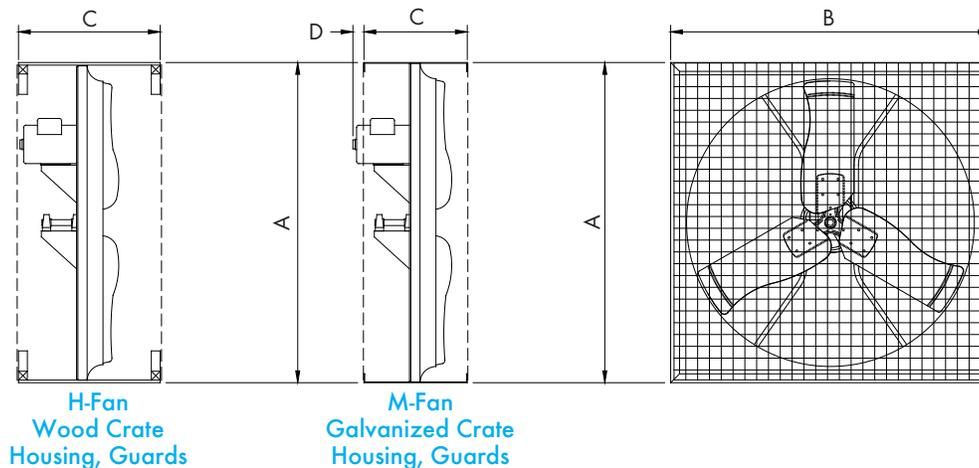


1.2 Fan Dimensions

Fan Specifications: 60Hz shown (50Hz available)

Power: 120/240 VAC or 208-240/480 VAC

Phase: 1 or 3



Dimensions:

Cat. No.	Fan Dia.	Drive Type	Prop. Type	A	B	C	D	Wall Openings (I.D., Framed)
GB18M	18"	Direct	Galvanized Steel	22 1/4"	22 1/4"	13 5/8"	---	22 1/2" sq.
GB18H	18"	Direct	Galvanized Steel	23"	23"	15 1/2"	---	23 1/2" sq.
GB24M	24"	Direct	Galvanized Steel	28 1/4"	28 1/4"	13 5/8"	---	28 1/2" sq.
GB24H	24"	Direct	Galvanized Steel	29"	29"	15 1/2"	---	29 1/2" sq.
GB36M	36"	Direct	Galvanized Steel	42 1/4"	42 1/4"	13 5/8"	---	43" sq.
GB36H	36"	Direct	Galvanized Steel	43"	43"	15 1/2"	---	43 1/2" sq.
GB365M	36"	Belt	Galvanized Steel	42 1/4"	42 1/4"	13 5/8"	3"	43" sq.
GB365H	36"	Belt	Galvanized Steel	43"	43"	15 1/2"	2 7/8"	43 1/2" sq.
GB48xM	48"	Belt	Galvanized Steel	54 1/4"	54 1/4"	17 1/2"	1 5/8"	55" sq.
GB48xH	48"	Belt	Galvanized Steel	55"	55"	24"	---	55 1/2" sq.

Installation Instructions

2.

2.1 Installation

Step 1

Remove rear guard and install (2) Eyebolts [A] and Nuts [B] (provided for 'M' fan). See Figure 1.

Step 2

Proceed to Electrical Wiring Section before replacing guard.

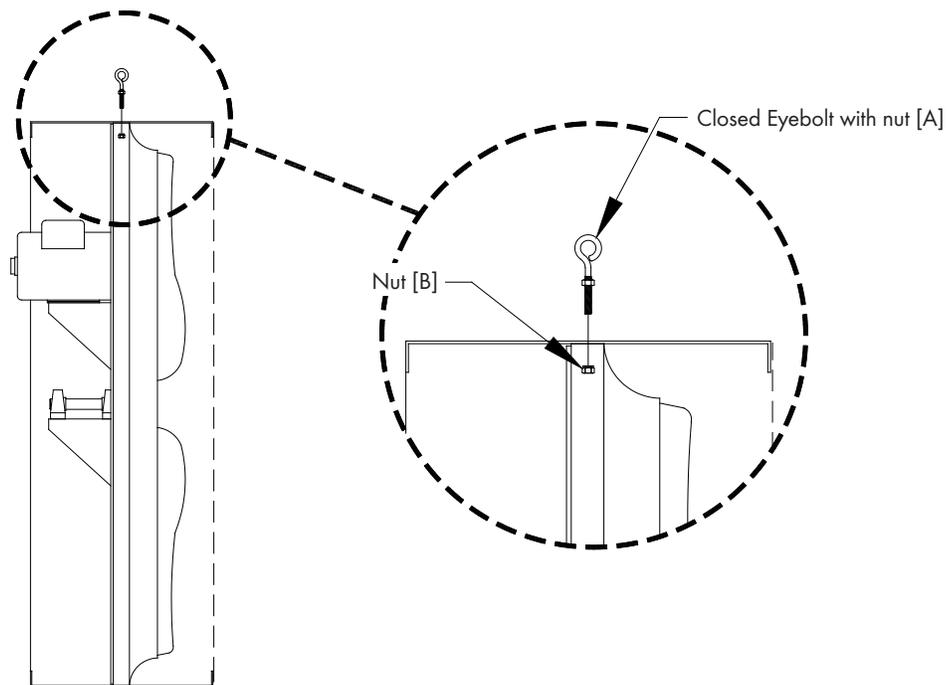


Figure 1

All wiring should be installed in accordance with National, State, and Local electrical codes. Fans used to ventilate livestock buildings or other rooms where continuous air movement is essential should be connected to individual electrical circuits, with a minimum of two circuits per room. For electrical connection requirements, refer to diagram on motor nameplate and to information enclosed with the environmental control to be used.

Single Phase Fans: motor overload protection should be provided for each fan. A Circuit Breaker Switch or slow blow motor type fuses must be used [See Figure 8A](#). See QM1400 for proper size.

Three Phase Fans: motor overload protection should be provided for each fan. A three pole motor starter or slow blow motor fuses must be used. [See Figure 8B](#).

If a frequency drive (inverter) is used, confirm that motors are rated for inverter duty at the voltage used. The installation of line reactors is recommended to reduce voltage spikes and harmonic distortion. Supplemental motor overload protection is also recommended.

NOTE: A safety cut-off switch should be located adjacent to each fan.

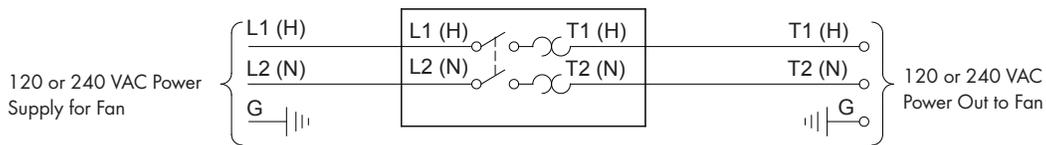


Figure 8A

Single Phase - Motor Overload Protection with Disconnect
(SY2000 or Equivalent)

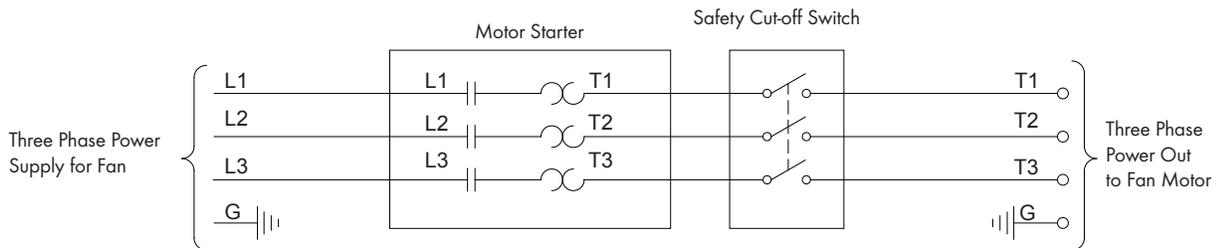


Figure 8B

Three Phase - Motor Overload Protection with Disconnect

KEY:

- L1 = Line 1
- L2 = Line 2
- L3 = Line 3
- H = Hot
- N = Neutral
- G = Ground

Note:

Information in parenthesis refers to 120 VAC control.

Operation

4.

4.1 Operation

INITIAL START-UP: With electrical power off, verify that the fan propeller turns freely and that all fasteners are secure. Turn on electrical power and confirm that the fan operates smoothly.

ADJUSTMENTS: Set the fan control to the temperature shown on your ventilations system drawing, or to a value which will provide the desired environmental conditions.



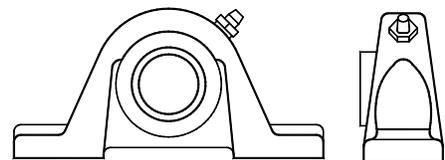
5.1 Maintenance

The following inspection and cleaning procedures should be performed monthly:

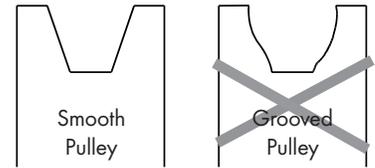
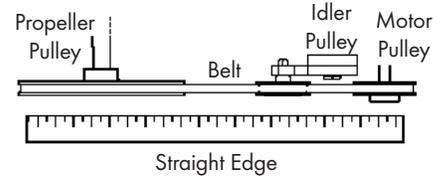
Tools Needed for Maintenance:

wrenches: 17mm, 27mm, 5/32" Allen

- 1) **INSPECT PROPELLER:** Check that propeller is secure on prop shaft or motor shaft and that there are no signs of damage. The blades are of a self-cleaning design and should not require maintenance.
- 2) **CLEAN** regularly for best results:
 - **FAN MOTOR:** Remove any dust accumulation from motor using a brush or cloth. (DO NOT use a pressure washer). A clean motor will run cooler and last longer. At the same time, verify that the motor is secure in its mount.
 - **SHUTTER:** Carefully clean dust from damper doors and frame so that doors open and close freely. A brush or cloth should be used.
 - **GUARD:** Clean any dust or feathers from fan guards using a brush. Dirty guards can reduce airflow.
- 3) **CHECK FASTENERS:** For safety, all fasteners should be inspected 1 month after initial operation and yearly thereafter. Tighten any loose connections.
- 4) **INSPECT FAN CONTROL:** With power disconnected, inspect all electrical connections. Wiring should be secure and in good condition. Remove any dust build-up from control case and sensor using a soft brush or cloth. **NEVER CLEAN ELECTRICAL EQUIPMENT WITH A PRESSURE WASHER!**
- 5) **GREASE BEARINGS:** Grease bearings every 4-6 months. Use no more than 2 shots when greasing fan.
 - A premium non-water based grease is recommended:
 - Shell Alvania #2
 - Mobil Mobilux #2
 - Exxon Unirex N2
 - Texaco Premium RB
 - Mobil 532
 - Texaco Multifak #2

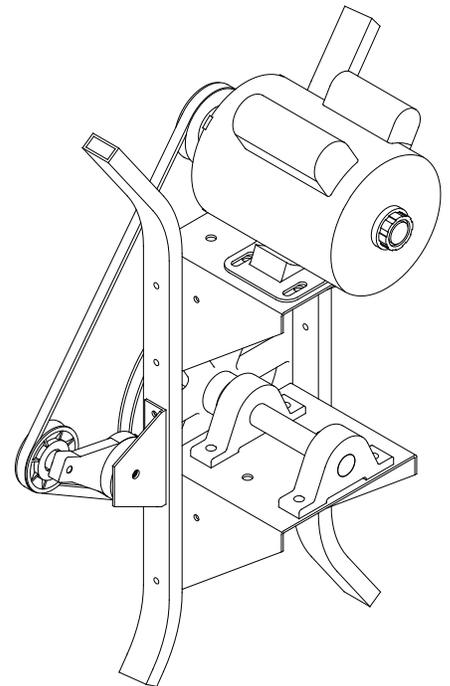


- 6) **CHECK DRIVE ALIGNMENT:** Check to make sure the belt is centered on the idler pulley, then use a straight edge to check the alignment of the drive pulleys. If an adjustment is needed, remove the belt, then loosen the set screw in one pulley and move it. Remember to tighten the set screw after making an adjustment. Drive alignment is very important for long belt life and proper operation.
- 7) **CHECKING PULLEYS:** Roll the belt off and look at both pulleys. If the pulley has grooves in it or is no longer smooth, it needs replacement. A loose or slipping belt will reduce fan performance up to 60% and cause premature belt failure.
- 8) **BELT TENSIONING:**
All belts must be checked for proper tension after the first 3 days of fan operation and every 4-6 months thereafter.



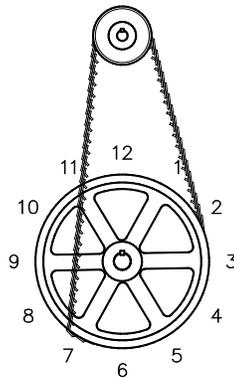
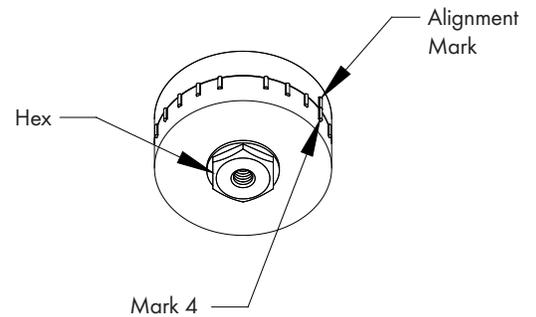
Solid Belt

To adjust the belt tensioner to the proper setting, loosen 10 mm bolt fastening tensioner to bracket (using 17mm end wrench) to allow tensioner arm to rotate. Working from inlet/motor side of fan, place a 27 mm (1 1/8") wrench onto the hex on the tensioner. Turn wrench counterclockwise until the single mark on base of the belt tensioner is aligned with mark 4 on the tensioner arm. Hold tensioner at this setting and tighten the 10mm bolt to 40 ft. lbs. [54 N-m] torque.



AeroLink Belt

- Roll the belt off the pulleys by forcing it sideways off the larger pulley as you turn the drive by hand.
- Reinstall the belt by wrapping it around the smaller pulley and then starting it over the larger pulley.
- As you continue rolling it onto the larger pulley, the belt should become taut in the position shown below.
- If the belt becomes taut before reaching the position shown, add one link and try again.
- If the belt is loose when in the position shown, remove one link and try again.



6.1 Winterizing

In most climates, it is probable that the ventilation system will never need to operate at a total capacity during the colder winter months. Consequently, it is advisable to “winterize” those fans which will not be used in cold weather to avoid unnecessary heat loss and condensation.

To winterize, turn fan control “off”. Install the insulated closure panel over the fan intake. If you don’t have an insulated closure panel, a piece of rigid insulation material can be used. Remember the insulation panel must be removed before warmer weather returns.

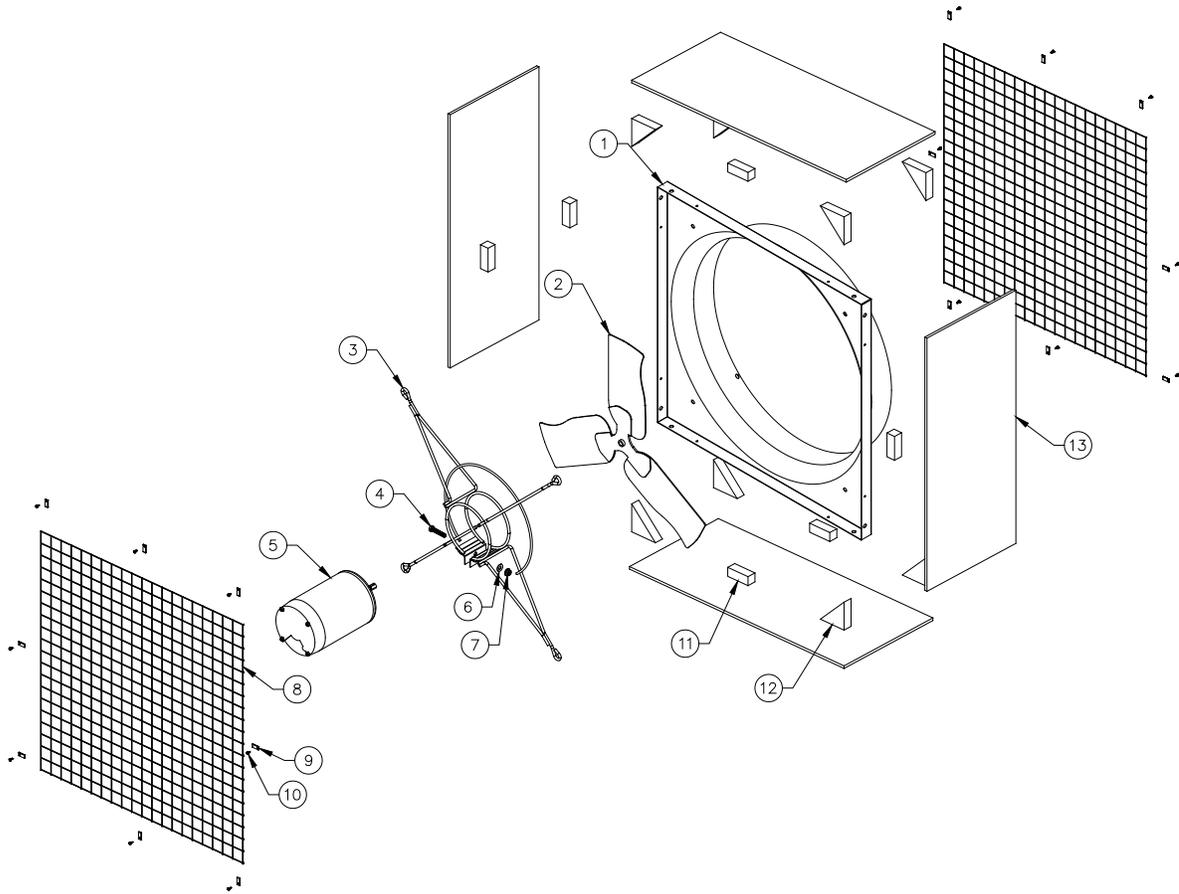
NOTE: At least one single speed fan should be left uncovered and with power available to provide air movement in the event of variable speed control difficulties.



SYMPTOM	POSSIBLE CAUSES	CORRECTIVE ACTION
Fan Not Operating	<ol style="list-style-type: none"> 1. Fan control set above room temperature 2. Blown fuse or open circuit breaker 3. Propeller blade contacting fan housing 4. Fan control defective 5. Motor defective 	<ol style="list-style-type: none"> 1. Set to a lower temperature 2. Replace fuse or reset breaker 3. Realign motor in fan housing 4. Repair or replace control 5. Repair or replace motor
Fan Operating- Insufficient Airflow	<ol style="list-style-type: none"> 1. Shutter jammed 2. Guard dirty 3. Frequency drive improperly adjusted 4. Incorrect Belt Tension/worn belt 	<ol style="list-style-type: none"> 1. See operation, Step 2 for adjustments guidelines 2. Clean guard 3. See operation, Step 2 for adjustments guidelines 4. See Maintenance Section, Belt Tensioning
Excessive Noise	<ol style="list-style-type: none"> 1. Propeller blade contacting fan housing 2. Motor bearing or shaft bearing defective 3. Frequency drive improperly adjusted 4. Variable speed control defective 	<ol style="list-style-type: none"> 1. Adjust bearing position to realign propeller 2. Repair or replace motor or shaft bearings 3. See operation, Step 2 for adjustments guidelines 4. Repair or replace control
Excessive Vibration	<ol style="list-style-type: none"> 1. Motor loose on mount 2. Propeller damaged 3. Motor Shaft Bent 	<ol style="list-style-type: none"> 1. Tighten fasteners 2. Replace propeller 3. Repair or replace motor or propeller shaft
Fan never turns off	<ol style="list-style-type: none"> 1. Override thermostat set incorrectly 2. Control set for continuous operation 	<ol style="list-style-type: none"> 1. Set to the correct temperature 2. Set speed control correctly

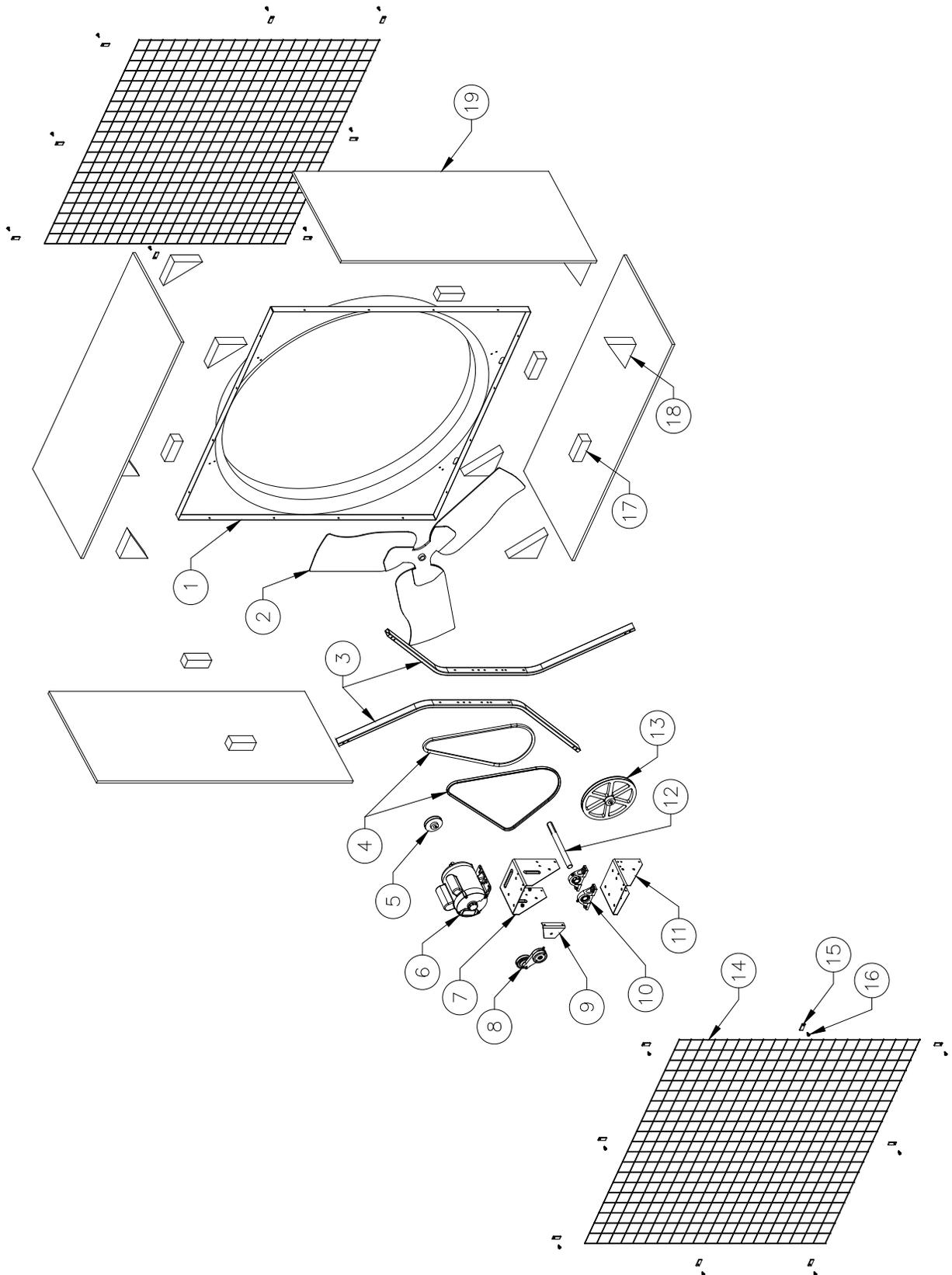
Exploded View

8.



Item	Catalog No.				Part Name/Description	QTY
	GB18M	GB18H	GB24M	GB24H		
1	FH3118	FH3118	FH3124	FH3124	Orifice Panel, GZ	1
2	FP1048	FP1048	FP1049	FP1049	Propeller, GZ	1
3	FH1009	FH1009	FH1010	FH1010	Motor Mount, PVC CTD	1
4	KS1029	KS1029	KS1029	KS1029	5/16"-18 x 1.75" Hex Head Bolt, SS	1
5	FM1009	FM1009	FM1008*	FM1008*	Motor, DD, 48 Fr.	1
6	KW3004	KW3004	KW3004	KW3004	5/16" Narrow Type-A Flat Washer, SS	2
7	KN0704	KN0704	KN0704	KN0704	5/16"-18 Hex, Serrated Flange Nut, SS	1
8	FH1288	FH1288	FH1289	FH1289	Guard, 2x2 Mesh, 14 GA, GBW	2
9	FH1274	FH1274	FH1274	FH1274	Guard Mounting Clip, ZP	16
10	KS2301	KS2301	KS2301	KS2301	#10 x 1/2" PHL-PN TEK Screw, ZP	16
11	—	—	FH3122	FH3122	Block, 2x2x4"L., Wood	8
12	—	—	FH3123	FH3123	Corner Block, 2x4, Wood	8
13	FH2318	—	FH2324	—	Housing Panel, GZ	4
	—	FH3141	—	FH3143	Housing Panel, Wood	4

* Contact office for replacement part numbers for your fan configuration.



Item	Catalog No.						Part Name/Description	QTY
	GB36M	GB36H	GB36xM	GB36xH	GB48xM	GB48xH		
1	FH3136	FH3136	FH1248	FH1248	FH1252	FH1252	Orifice Panel, GZ	1
2	FP1041	FP1041	FP1041	FP1041	FP1042	FP1042	Propeller, GZ	1
3	FH2094	FH2094	—	—	—	—	Angle Style Strut, 36"GB, GZ	2
	—	—	FH2436	FH2436	FH2448	FH2448	Tube Strut, GZ	2
4	—	—	FH2083*	FH2083*	FH2083*	FH2083*	Link Belt	1
	—	—	FH1470*	FH1470*	FH1527*	FH1527*	V-Belt	1
5	—	—	FH2091*	FH2091*	FH2034*	FH2034*	Motor Sheave, CI	1
6	FM1048*	FM1048*	FM1022*	FM1022*	FM1024*	FM1024*	Motor	1
7	—	—	FH2815	FH2815	FH2818	FH2818	Bracket, Motor Support	1
8	—	—	FH2402K	FH2402K	FH2402K	FH2402K	Belt Tensioner Assembly with 3" idler pulley	1
	—	—	FH2406	FH2406	FH2406	FH2406	3" idler pulley only, with bolt	1
	—	—	FH2439	FH2439	FH2439	FH2439	Tensioner Arm only, AL	1
9	—	—	FH2505	FH2505	FH2505	FH2505	Mounting Bracket for Belt Tensioner, CTD-GZ	1
10	—	—	FH2057	FH2057	FH2057	FH2057	Bearing, 1" bore x 1.44"CL, CI Holder	2
11	—	—	FH2815	FH2815	FH2815	FH2815	Bracket, Bearing Mount, GZ	1
12	—	—	FH2086	FH2086	FH2101	FH2101	Shaft, STEEL	1
13	—	—	FH2003*	FH2003*	FH2029*	FH2029*	Propeller Sheave, CI	1
14	FH1260	FH1260	FH1260	FH1260	FH1261	FH1261	Guard, 2x2 Mesh, 14 GA, GBW	2
15	FH1274	FH1274	FH1274	FH1274	FH1274	FH1274	Guard Mounting Clip, ZP	16
16	KS2301	KS2301	KS2301	KS2301	KS2301	KS2301	#10 x 1/2" PHL-PN TEK Screw, ZP	16
17	—	FH3122	—	FH3122	—	FH3122	Block, 2x2x4"L, Wood	8
18	—	FH3123	—	FH3123	—	FH3123	Corner Block, 2x4, Wood	8
19	FH2936	—	FH2936	—	FH2248	—	Housing Panel, GZ	4
	—	FH3139	—	FH3139	—	FH3150	Housing Panel, Wood	4

* Contact office for replacement part numbers for your fan configuration.

GB Series 'M' and 'H' Fans are developed and produced by Munters Corporation, Lansing, Michigan U.S.A. 1-800-227-2376



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