

Installation and Operation Manual

2GMS

Guard Mount Exhaust Fans



Technical / Customer Support:

United States Tel.: 800.747.1762

Canada Tel.: 800.565.3548



fantech[®]
a systemair company

Unpacking

1. When receiving the unit, inspect carefully for any damage that may have occurred during transit.
2. Before installing, rotate the propeller to be sure there are no obstructions which would interfere with proper operation. Adjust as required.

Warnings

1. Do not depend on any switch as sole means of disconnecting power when installing or servicing the fan. If the power disconnect is out-of-sight, lock it in the open position and tag to prevent application of power. Failure to do so may result in fatal electrical shock.
2. Check the voltage on the fan faceplate to verify it corresponds to the motor name plate rating.
3. Follow all local electrical and safety codes in the United States and Canada, as well as the National Electrical Code (NEC) and the Occupational Safety and Health Act (OSHA) in the United States, and the Canadian Electric Code (CEC) in Canada.
4. **DO NOT USE** in explosive atmospheres.
5. Motor will restart without warning after protector trips.
6. Motor must be securely and adequately grounded. This can be accomplished by wiring with grounded, metal-clad raceway system, by using a separate ground wire connected to the bare metal of the motor frame, or other suitable means.
7. Always disconnect power source before working on or near a motor or its connected load. If the power disconnect point is out of sight, lock it in the open position and tag to prevent unexpected application of power.

Installation

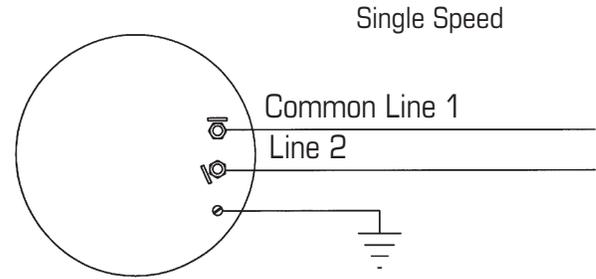
1. Mount unit to a wooden frame or plywood panel. Opening for air flow should be 1/2" to 1" larger in diameter than the propeller. Use wood screws, sheet metal screws, or bolts and nuts for mounting.
2. Install any auxiliary equipment such as shutter, louver, motor starter, etc.
3. Connect power to the unit in accordance with the local and national electrical codes.

! The fan frame and motor must be connected to a suitable electrical ground such as a grounded water pipe, properly grounded metallic raceway or ground wire system.

4. Unit is ready for operation.

! Before activating the fan, double check to ensure that there are no obstructions (framing, studs, shutters, etc.) which would interfere with fan propeller.

Wiring



8. Be careful when touching the exterior of an operating motor - it may be hot enough to be painful or cause injury. With modern motors this condition is normal if operated at rated load and voltage. Modern motors are built to operate at higher temperatures.
9. Protect the power cable from coming in contact with sharp objects.
10. Do not kink power cable and never allow the cable to come in contact with oil, grease, hot surfaces, or chemicals.
11. Make certain that the power source conforms to the requirements of your equipment.
12. To reduce the risk of fire or electric shock, do not use this fan with any solid state speed control device.
13. In USA to reduce the risk of injury to persons, OSHA complying guards are required when fan is installed within 8 feet of floor, ground, or working level.
14. In Canada to reduce the risk of injury to persons, CSA complying guards are required when fan is installed below 2.5 meters (8.2 feet) above floor or grade level.

Maintenance

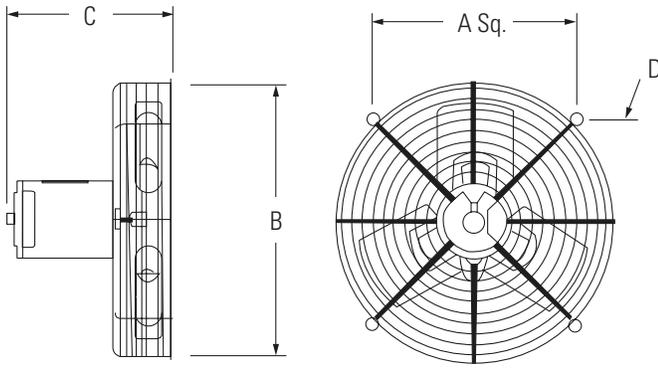
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REMEMBER: All electrical connections should be made by a qualified electrician.

Minor and Routine

1. Disconnect power source before servicing.
2. Lubricate shaded pole motors every six months using S.A.E. 20 non-detergent oil.
3. Relubricate split phase motors every 12 months using SAE 20 non-detergent oil for continuous duty or every 24 months for intermittent duty.
4. Periodically clean the propeller, guards, and motor of any excessive accumulation of dirt.

Dimensions



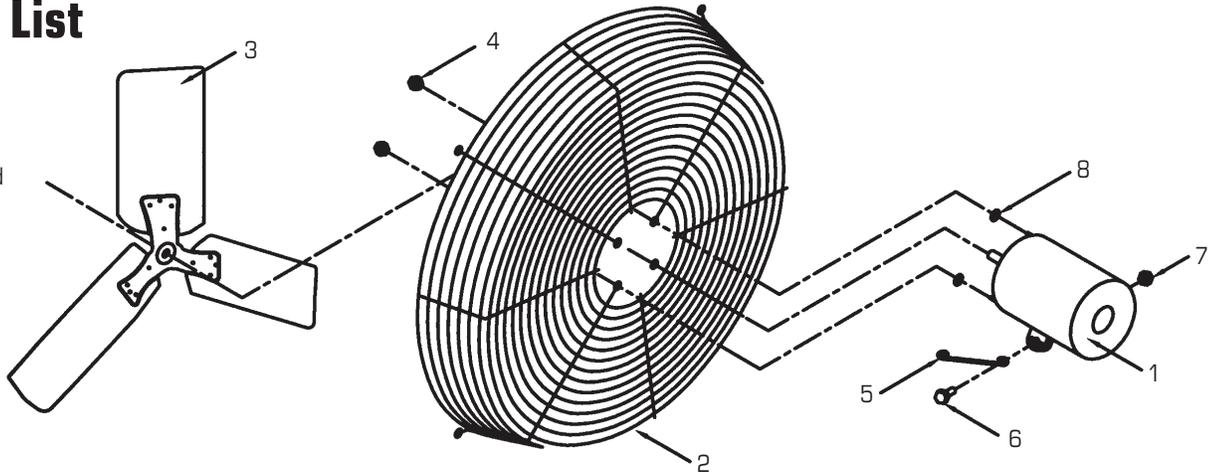
Model	Propeller Dia	A	B	C	D
2GMS 1021	10	8 ³ / ₄	11	5 ⁹ / ₁₆	1 ¹ / ₄
2GMS 1221	12	10 ³ / ₁₆	13	5 ¹⁵ / ₁₆	1 ¹ / ₄
2GMS 1661	16	12 ¹⁵ / ₁₆	17 ³ / ₈	6 ¹ / ₂	1 ¹ / ₄
2GMS 20B1	20	16 ³ / ₄	22 ¹ / ₈	11 ¹⁵ / ₁₆	5 ⁵ / ₁₆

All dimensions in inches

Repair Part List

PART REPLACEMENT

1. Do not repair damaged propeller. They should be replaced with a properly balanced replacement.
2. Remove the four screws holding the guard to the venturi panel. Remove the guard, yoke, motor, and propeller.
3. Loosen and remove bolt and nut holding wire brace to motor yoke tabs.



4. Loosen the setscrews in blade hub and remove the propeller.
5. Loosen the nuts holding motor on guard and remove.

6. Reassemble the unit in reverse order of disassembly.

Ref. #	Description	Qty
1	Motor	1
2	Guard	1
3	Propeller	1
4	#8-32 Spinlock nut*	4

Ref. #	Description	Qty
5	Yoke brace (2GMS20B1 only)	1
6	3/8-24 X 1" Screw*	1
7	3/8-24 Locknut*	1
8	#10 Flatwasher*	4

(* Standard hardware items, available locally.

Troubleshooting

Symptom	Possible Cause(s)	Corrective Action
Insufficient air flow	1. Restricted air intake	1. Provide larger opening for intake air
	2. Restricted exhaust opening	2. Remove restriction
	3. Low voltage	3. Determine cause and correct
	4. Excessive dirt on guard and propeller	4. Clean
Excessive noise while operating	1. Loose mounting screws	1. Tighten securely
	2. Loose propeller on motor shaft	2. Tighten setscrew
	3. Noisy motor bearing	3. Lubricate or replace motor
	4. Unbalanced fan blade	4. Replace

Warranty

Fantech, Inc. warrants to the original purchaser that our products will be free from defects in material and workmanship for a period of five (5) years from the date of shipment. THIS IS OUR SOLE AND EXCLUSIVE PRODUCT WARRANTY AND IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ARISING BY OPERATION OF LAW OR OTHERWISE, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHETHER OR NOT THE PURPOSE OR USE HAS BEEN DISCLOSED TO US IN SPECIFICATIONS, DRAWINGS OR OTHERWISE, AND WHETHER OR NOT OUR PRODUCTS ARE SPECIFICALLY DESIGNED AND/OR MANUFACTURED BY US FOR PURCHASER'S USE OR PURPOSE.

This warranty does not cover any losses or damages due to misuse, accident, abuse, neglect, normal wear and tear, negligence (other than ours), unauthorized alteration, use beyond rated capacity, or improper installation, maintenance or application. This warranty shall be null and void to the extent that purchaser supplied incorrect information to us about the necessary product specifications or the environment in which the products were to be used, and our selection or design of the products for the purchaser was based in part on such information.

Limitation of Warranty and Liability

THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF ANY WARRANTY HEREUNDER SHALL BE LIMITED TO REPAIR, CORRECTION OR REPLACEMENT, OR REFUND OF THE PURCHASE PRICE UNDER THE PRECEDING PARAGRAPH ENTITLED "LIMITED WARRANTY". FANTECH VENTILATION PRODUCTS SHALL NOT BE LIABLE FOR DAMAGES CAUSED BY DELAY IN PERFORMANCE AND IN NO EVENT, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION, SHALL OUR LIABILITY TO PURCHASER AND/OR ITS CUSTOMERS EXCEED THE PRICE PAID BY PURCHASER FOR THE SPECIFIC PRODUCT PROVIDED BY US THAT GAUE RISE TO THE CLAIM OR CAUSE OF

If within thirty (30) days after purchaser's discovery of any warranty defects within the warranty period, purchaser notifies us thereof in writing, we shall, at our option, repair, correct or replace F.O.B. point of manufacture, or refund the purchase price for, the products that we have found to be defective. Failure by purchaser to give such written notice within the 30-day time period shall be deemed an absolute and unconditional waiver of purchaser's claim for such defects. Products repaired or replaced shall be covered by this warranty for the remainder of the original warranty period or ninety (90) days from the date of shipment, whichever is longer.

Warranty claims should be sent to Fantech, Inc.,
Attn: Quality Department, 10048 Industrial Blvd., Lenexa, KS 66215.
Included in the claim should be Order Number, Model Numbers, Serial Numbers and a detailed description of the issues.

Purchaser assumes all other responsibility for any loss, damage or injury to persons or property arising out of the use of our products, either alone or in combination with other products or components.

ACTION. PURCHASER AGREES THAT IN NO EVENT SHALL OUR LIABILITY TO PURCHASER AND/OR ITS CUSTOMERS EXTEND TO INCLUDE INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES. The term "consequential damages" shall include, but not be limited to, loss of anticipated profits, business interruption, loss of use or revenue, cost of capital, or loss or damage to property or equipment. It is expressly understood that any technical advice furnished by us with respect to the use of our products is given without charge, and we assume no obligation or liability for the advice given, or results obtained, all such advice being given and accepted.

Warning

Fantech products are designed and manufactured to provide reliable performance, but they are not guaranteed to be 100% free from defects. Even reliable products will experience occasional failures and this possibility should be recognized by the user. If these products are

used in a life support ventilation system where failure could result in loss or injury, the user should provide adequate backup ventilation, supplementary natural ventilation, failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.

For Customer/Technical Support call (800) 747-1762

