



KB653 HIGH PERFORMANCE FAN



DESCRIPTION

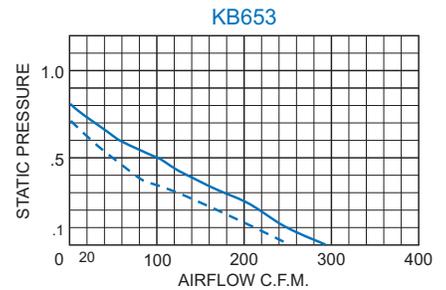
High Performance Fans are ideal for applications which present the challenges of severe space limitations and/or higher static pressures that prevent the use of conventional fans. Typical uses include computer tape drive servo motors, densely packed printed circuit board arrays and duplicating equipment.

KB653: Within its recommended operating range (150-385 CFM), the KB653 fan provides more air than other fans of comparable size. It is also quieter, less costly and overcomes higher static pressures. It can be mounted to pressurize or exhaust the enclosure. (Pressurizing, with use of a filter, is preferred).

STANDARD FEATURES

- Small size for restricted spaces
- Quiet operation
- High static pressure performance
- Capacity: 385 CFM
- Fans can pressurize or exhaust
- Rugged construction with baked powder finish
- UL/CSA ball bearing motors
- 12-inch [300mm] (minimum) power and ground leads
- Complete line of accessories

PERFORMANCE GRAPH



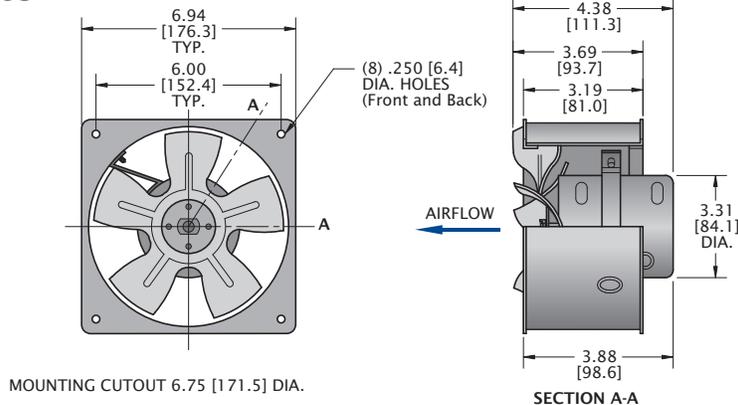
Airflow vs. static pressure curves are shown for 60 Hz (solid line) inputs and 50 Hz (broken line) inputs. Static pressure is in inches of water.

TECHNICAL DATA

Model	Volts/Hz	CFM@ 0" S.P.	RPM Nominal	Amps		Watts	Weight	
				Run.	L.R.		Lbs.	Kg.
KB653	115/60	385	3200	1.7	2.4	132	5	2.3
KB653	115/50	330	2900	1.7	2.4	132	5	2.3
K2B653	230/60	385	3200	1.7	2.4	132	5	2.3
K2B653	230/50	330	2900	1.7	2.4	132	5	2.3

DIMENSIONS inches [metric]

KB653



HOW TO ORDER

FANS: Specify model number. For 230 VAC operation, add a 2 after the K. Example: K2B653.

ACCESSORIES: Specify model number.

Dimensions, inches [mm], are for reference only and subject to change.

kb653.qxd (3/22) (CDR: 20393)



KB653 HIGH PERFORMANCE FAN

STANDARD FEATURES

RUGGED CONSTRUCTION: Precision-engineered heavy gauge steel construction of all cabinets and blowers insures fans stand up under tough applications.

BAKED POWDER FINISH: Durable, baked-on gray powder finish is standard. Other finishes are available.

BALL-BEARING MOTORS: All motors, whether permanent split capacitor or shaded pole, are UL/CSA Recognized and include automatic-reset thermal over-load protection. Designed for low temperature rise, KOOLTRONIC motors are also cooled by fans' intake air, for maximum motor life. All motors meet Federal Specification CC-M-1807A, and include double-sealed or double-shielded precision ball bearings which meet Federal specification FF-B-171A. Special permanent lubricants perform over a broad temperature range: -20°F [-28.9°C] to 250°F [121.1°C].

POWER: 115 VAC or 230 VAC, 50/60 Hz is standard. For multiphase power, other voltages and frequencies or brushless DC applications, consult KOOLTRONIC.

LEADS: 12" [304.8mm] (minimum) power and ground leads.

ACCESSORIES AND OPTIONS*

AUTOMATIC SPEED CONTROL: The Kooltronic Fan and Blower Automatic Speed Control (Part Number KSC100) is a solid state "smart" controller packaged in a NEMA 1 type enclosure for remote mounting. The allowable input power supply range is 95 to 250 Volts, 47 to 63 Hz. It is furnished standard with an IEC 320 connector, a power supply fuse and a temperature sensor. Additional temperature sensors are optional.

The controller will operate single or multiple fans or blowers of compatible voltage and frequency up to a combined load of 6 Amps. The controller may be operated by either a control voltage signal of 0 to 10 VDC, a control current signal of 0 to 20 mA or one to three temperature sensors. With multiple temperature sensors the controller will respond to the highest sensed temperature.

The control circuit board is furnished with a terminal strip for field connecting the sensor and fan wires. A pressure type strain relief connector is furnished in the enclosure. If required by installation or by code, this connector can be replaced with a 1/2-inch [12.7mm] trade size conduit connector.

A wide variety of control logic options can be field programmed into the controller by means of a board mounted DIP switch. These include fan idle or starting speed at 30%, 40%, 50% or 60% of supply voltage, fan on or off below the idle setting, control temperature setting at 86°F (30°C), 95°F (35°C), 104°F (40°C), 113°F (45°C), and temperature differential settings of 7°F (4°C) and 18°F (10°C). The selectable fan on/off feature is operative when the temperature(s) drop below the control temperature setting.

Consult factory for use with compatible Kooltronic fans or blowers.

FILTER RECOATING ADHESIVE: This compound is a superior product for recoating filters after washing. The adhesives penetrate dirt layers to keep the filter surface tacky for longer effective performance between washings. Part No. A-16 - 10 ounce container.

SPECIAL EXTERNAL PAINT FINISHES

SPECIAL LINE CORD OR CONNECTORS

VARIABLE SPEED CONTROL: This solid state device operates to maintain the preset temperature range within an electronics enclosure at minimum power consumption and audible noise levels. As the control senses temperature changes outside of the optimum range, it responds by automatically adjusting the motor speed of the blower or fan supplying the cooling air.

In many cases, the selection of cooling equipment for sensitive electronics is based on worst-case conditions. In normal operations, these rarely occur, so that considerably less cooling air is often sufficient.

Under such conditions, the use of a variable speed control reduces power consumption, lowers audible noise levels, prolongs motor life, and reduces filter maintenance, when operating at temperatures below the full-speed level.

The control is preset for full-speed operation at 90F, at 1/3 lower speed at 80F, and modulates the motor speed proportionally at the interim temperatures.

The Variable Speed Control is suitable for use with virtually all KOOLTRONIC blowers and fans, as well as air-to-air heat exchangers.

*Contact KOOLTRONIC for information.

ACCESSORIES FOR HIGH PERFORMANCE FANS

The following accessories, available at moderate cost, add versatility to the application of these High Performance Fans.

KB653 FANS

FILTER: Model 654F: 8.25" [209.6mm] square x 0.50" [12.7mm] deep. All KOOLTRONIC filters consist of a multi-layer grid of sturdy corrugated aluminum, securely held in a one-piece aluminum frame. Filters are required wherever air is drawn into an electronics enclosure or related cooling equipment to keep internal parts as clean as possible.

A non-drying adhesive coating traps a high percentage of particulate matter. These filters are reusable, they may be washed and recoated with the appropriate filter recoating adhesive. Replacements are available for those which become damaged or otherwise non-serviceable.

FILTER HOLDER: Model 654HF: 9.25" [235.00mm] square x less than 1.50" [38.1mm] deep (see below). Precision-made heavy-gauge steel construction. Can be mounted either internally or externally on enclosure, using (4) .187" [4.75mm] diameter holes on an 8.75" [222.3mm] square. Suggested use is on the intake (motor) side of the fan, to which the filter holder attaches using (4) .250" [6.35mm] diameter holes on a 6.00" [152.4mm] square. (See KB653 and KB654 diagram.) Adds less than 0.75" [19.1mm] to depth of fan. Filter inserts easily.

GUARD: Model 654G: Made of painted steel, these guards comply with OSHA and UL safety standards. Suggested use is on blade side of fans and on motor side if being used without a filter. Adds less than 1.0" [25.4mm] to the depth of the fan.

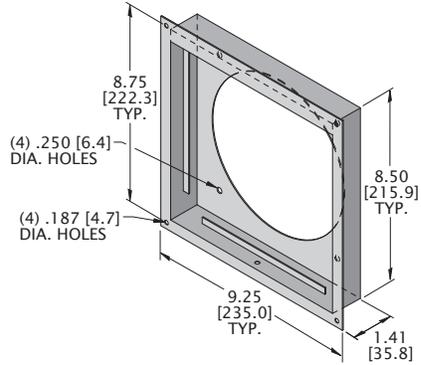
KOOLTRONIC also designs and manufactures a variety of Fans to meet *unique* specifications. We invite your inquiries about our modification and custom-design capabilities.



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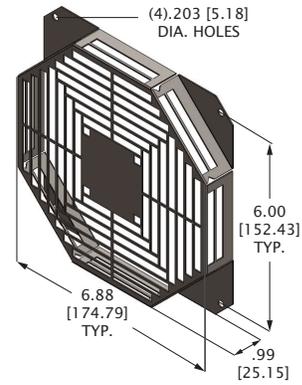
ACCESSORIES FOR HIGH PERFORMANCE FANS

MODEL 654HF FILTER HOLDER



Dimensions, inches [mm], are for reference only and subject to change.

MODEL 654G FAN GUARD



CAUTION: We strongly recommend proper guarding of fans to prevent serious injury.

