

POWERMATIC PM1900 Dust Collector

The POWERMATIC PM1900 is designed with the power to work with planers, wide belt sanders and most woodworking machines. Its powerful dust-evacuating suction, effective filtering, multiple connection and large collection capacity make the POWERMATIC PM1900 a capable central dust collection system for the whole shop. Plus, it packs those capabilities into a durable, space-saving package that accommodates virtually any shop size and needs.

The POWERMATIC PM1900 is shipped as a bare machine without filter elements or catch bags allowing the buyer to “design” the system they want. The fabric filter and catch bag sets as well as the pleated canister filters with five plastic catch bags are sold as individual kits. This allows the purchaser to save money by getting the POWERMATIC PM1900 with the filter style wanted without paying for and then discarding an unused “standard” filter and bag sets.



The POWERMATIC DC1900 is essentially the same machine but can be equipped with the fabric style bags (left) or the canister kit. (right) The difference in height between the bag and canister setups can be important in some shop environments with low ceilings or other height restrictions.

Filtering Efficiency

The bag filter elements are 20” in diameter and 48” in length. Upright hooks are included to support the bags when the POWERMATIC PM1900 is not running. Spring steel band clamps secure the filter bags to the twin collector housings. The fabric collector bags use spring retaining rings sewn into their upper edges that fit into a groove in the collector housings making installation and removal tool free. Many manufacturers use an outside band for securing collection bags that can be very difficult to work with, especially when done alone.

The bag type elements filters out 96% of 30 micron particles.

The canister filters are 20” in diameter and 29” long. The canisters mount directly to the collector housings and seal with factory installed foam gaskets within the canister flanges. Four finger-operated knobs lock each canister to the collector housings. Despite the canisters compact overall size, its pleated filter element has six times the filtering surface area of the fabric bag type.



A pair of "hands" (left) within the canister flex the pleated element to knock off excess buildup. The hands are operated by the external handle (right), which is generally turned through one revolution per month in most home woodshop circumstances.

The canisters filter 86% of 1 micron particles and 98% of 2 micron particles. To maintain that efficiency, a top-mounted handle operates a pair of "hands" within the canister. When turned the hands wipe across the interior filter pleats, flexing them to knock off excessive dust buildup but leaving the beneficial layer. Turning the top-mounted handle one full revolution per month (per canister) under normal conditions is all that is required. The oval POWERMATIC sticker on the canister exteriors can be easily peeled off the canisters wire mesh if one wants to remove any possible impact on performance though none has been recorded.

The difference in height between the fabric and canister filter elements can be an issue in shop spaces with low ceilings or overhead clearances. The POWERMATIC PM1900 has an overall height of just under 6 feet with the canisters installed compared to 92 1/2" when equipped with the fabric filter bags and their hangars.

Collector (catch) bag capacity for both the fabric and plastic bags is 10 cubic feet.

Power and Control

The POWERMATIC PM1900 is available in two configurations. First is with a 3HP, 1Ph 220V (only) TEFC (totally enclosed fan cooled) motor. We also offer a version with a 3HP motor running on 3Ph, 230/460V power, wired for 230V from the factory. POWERMATIC motors are rated using a continuous duty cycle rather than the "peak" or "max developed" claims so common in the industry. Very often new POWERMATIC users are pleasantly surprised by the amount of power our motors actually deliver when compared to other motors with similar power ratings in their shop.



The 3 HP motor (1Ph version only) features a magnetic start switch that protects the motor itself, and you from unexpected power variations or outages.

The motor is secured to a common mount with the blower section, directly on the base platform. This creates a very low center of gravity that makes moving the POWERMATIC PM1900 safe and easy.

Because woodworkers sometimes locate their dust collector in an out of the way portion of the shop or connected to a permanently installed hard tubing system, we added a full-function, infrared remote control (1Ph version only) that emits its invisible light-based signal in a 120-degree cone. That means the pocket-sized remote unit will turn the POWERMATIC PM1900 on and off from virtually anywhere (line of sight) in most shops, saving untold numbers of steps and

time. Eliminating those trips back and forth between a machine and dust collector can increase safety in the shop as well.



The infrared remote (1Ph version only) can save untold steps back and forth to the DC1900. It also has a timer function that allows programming in up to 99 minutes of run time before the DC1900 shuts off automatically.

Our remote control also has a timer function that allows programming in a specific amount of run time between 1 and 99 minutes. When activated, the timer function allows the POWERMATIC PM1900 to run a specific amount of time before it shuts off automatically.

The POWERMATIC PM1900 comes with a magnetic starter (1Ph version only) that protects the motor from excessive current variations. It also prevents the POWERMATIC PM1900 from restarting unexpectedly should the power go out, and then come back on. When the power is restored, the

On button (on the machine or the remote) must be pushed to restart the machine.

Fan System

We designed a super efficient air system for the POWERMATIC PM1900, based on a specially designed 14"-diameter impeller and housing. The heavy-duty impeller has been optimized to both move large amounts of air and to maintain that volume consistently in a wide range of usage situations.

The fan section develops 1,891 CFM (cubic feet per minute) of airflow at 8" of water. Velocity, also at 8" of water is 5,393.7 FPM (feet per minute). Static pressure is 12.15 inches of water.

To make the POWERMATIC PM1900 compatible with the widest range of machines, it comes with a single 8"-diameter inlet port fitted with a triple 4"-port adapter. Two of the 4" ports come with tethered, friction fit covers that seal them when not in use.



The impeller is specifically designed for maximum efficiency and consistency in the DC1900.



The smooth surfaces and curves of the sheet metal chute (left) enhance airflow and efficiency. This triple 4"-outlet adapter (right) slips onto an 8"-diameter port to provide the most versatility in your shop.



The inlet ports are mounted directly to the blower housing, putting them low on the POWERMATIC PM1900 and on an even plane with the dust outlets on many machines. This alignment keeps more of the hose flat on the floor for safety and eliminates much of the lifting loss higher inlet ports experience to enhance performance.

To further enhance overall airflow we replaced the common flex hose connection between the fan and collector

housings with a curved, smooth-walled sheet metal chute. The ends of the chute have flange-type connections with gaskets that help prevent even small leaks. This chute has a larger inside area than a hose initially, and then tapers down slightly as it splits and then runs to the collector housings. The smooth, flowing shape of the chutes interior surfaces move air efficiently and contribute to the overall performance of the POWERMATIC PM1900.

The strength and rigid mounting of the sheet metal duct adds a considerable amount of stability to the POWERMATIC PM1900 making it possible to eliminate two of the three legs normally needed to support each collector housing. Eliminating two legs at each collector housing creates substantially more unobstructed space that makes changing the collection bags much easier.

The collector housings are specially designed to create a cyclonic effect that helps separate particles from the air to enhance filtering and venting. The swirl of air also helps distribute the dust evenly in the catch bag.

Mobility

The POWERMATIC PM1900 is built on a heavy-duty base that features full-swivel, smooth-rolling casters at each corner. This base, along with the low center of gravity makes moving the POWERMATIC PM1900 around the shop effortless and safe. We also added a pair of handles to each collector housing that make moving the POWERMATIC PM1900 easier.



Full swivel casters at each corner of the solid metal base make moving the DC1900 around the shop safe and easy.

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