



## *Product Specifications*

# A9000

Regenerative Air Power Sweeper



Model shown with optional equipment.



# Competitive Advantages of the Schwarze A9000

**The Schwarze model A9000 is perhaps the most capable chassis-mounted regenerative air sweeper in the world. The 9.6 cubic yard A9000 has a basic design with over 15 years of successful operation throughout the United States and around the world.**

Because the Schwarze A9000 is one of the largest, most powerful air sweepers in existence, it is an ideal choice for use in demanding road sweeping applications where offloading needs to be minimized.

The A9000's blower system generates a high velocity air column that is propelled into the top of the sweeping head through a 14-inch blast tube. The air is first pressurized in the upper chamber of the sweeping head, then expelled into the

head's lower chamber through what is called a 'blast orifice.' This is a slot in the sweeping head that forces the air against the pavement at an angle, creating a 'peeling' or 'knifing' effect.

This high volume air blast loosens the debris from the pavement surface, then transports it across the width of the sweeping head and lifts it into the containment hopper via a 14-inch suction tube. **This highly efficient system ensures that even hard-to-reach particles hidden within pavement cracks and irregularities are removed.**

This includes a significant amount of the 'PM-10 fines' known to contain a high percentage of heavy metals and other pollutants.

To assure debris transfer with minimal fugitive dust escapement, double-belted curtains on the front and rear of the sweeping head contain the circulating air flow. This prevents dirty, debris-laden air from entering into the atmosphere as fugitive dust particles.

**The Schwarze A9000 picks up more of the micron-sized contaminants that accumulate on roads and streets.** Recent studies emphasize the importance of removing these PM-10 'fines' due to the large amount of non-point source pollutants they contribute to America's stormwater runoff stream.

**Using the pickup system of the model A9000 sweeper results in a cleaner street because it's one of the most environmentally-friendly sweepers in the world. The model A9000 has a number of innovative features that combine to position the machine as the leading sweeper in its class.**

These include Schwarze Industries' industry-leading *WhisperWheel*<sup>SM</sup> fan system, which lets Schwarze air sweepers run over 70% quieter and with as much as 20% less fuel consumption.

The A9000 also includes Schwarze's revolutionary *Sweeps-in-Reverse*<sup>SM</sup> sweeping head, which allows it to operate equally well in both forward and reverse directions.

In addition to the model A9000, Schwarze Industries offers a variety of other air and mechanical broom sweepers for municipal, contracting and parking area applications. There is also a sweeper designed specifically for airport runways, and

Schwarze Industries also produces the most effective pavement cleaners in existence, the Schwarze EV-series of particulate management machines. These efficiently remove standard and small-micron pavement debris, need no water for dust suppression, and filter exhaust to 2.5 microns – 1/28 the width of a human hair.

**Schwarze Industries, Inc. is known around the world for manufacturing pavement sweepers that are efficient, dependable, and easy-to-operate, then backing them with the best customer service in the industry.**

**In the world of sweeping, when you partner with Team Schwarze you'll find the possibilities to be endless.**





### Commercial Chassis –

Schwarze A9000 sweepers are mounted on standard production, commercial chassis that meet OSHA requirements for ride and comfort, and have a proven track record in safety and reliability.

**Commercial chassis mounting allows A9000 sweepers to travel at normal highway speeds, which saves time and allows more actual sweeping per shift.**

A minimal parts supply needs to be kept in stock by owners, since parts and service are readily available at local commercial chassis distributors.

The entire unit is much easier to work on than a sweeper mounted on a ‘purpose-built’ chassis. Often, the A9000 can be mounted on a chassis that’s currently utilized in the owner’s fleet, so that operator training and other costs may be reduced.

The added familiarity and comfort of a standard production chassis also contributes to a higher level of productivity by the operator.

### Auxiliary Engine –

**The A9000’s sweeping components – hydraulic, dust control and blower systems – are powered by a 140 horsepower, turbo-charged, John Deere Powertech® auxiliary engine.**

This powerful auxiliary engine allows the A9000 to be operated at a lower rpm than most competitors. When combined with the efficiency and quiet operation of Schwarze’s exclusive, patent-pending *WhisperWheel*™ blower system, this factor reduces operating noise level and increases expected engine life.

To ensure a cleaner supply of air, the auxiliary engine has a 2-stage, dry type air filter with a centrifugal precleaner, and the air intake is positioned at the top of the sweeper.



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### Hydraulic System –

The A9000’s hydraulic system features a direct drive, gear-driven pump. This allows the A9000 to perform one-pass sweeping even under extreme conditions. And, to ensure hydraulic system protection, a preset bypass relief valve is built-in. Standard operation produces a fluid flow rate of 13 gallons per minute.

**The large 25 gallon hydraulic reservoir is coupled to a 12,500 BTU cooler, which decreases oil temperature and extends the life of the hydraulic pumps, torque motors, hoses and fluid.**



**Standard on the A9000 is a 12 volt backup hydraulic system. This has several important safety and environmental benefits.**

In areas where fugitive dust containment is a concern, the 12 volt hydraulic system may be used to lower the sweeping head prior to starting the auxiliary engine, as well as to raise the head when sweeping is finished. The 12 volt backup hydraulic system may also be used to dump the hopper.

**By utilizing these features, Schwarze A9000 operators are able to minimize the dangers caused by the output of fugitive dust and flying debris.**

In the event a primary hydraulic system failure occurs, the A9000’s 12 volt backup hydraulic system also allows the sweeping head and gutter brooms to be raised so the truck can be driven.

### Gutter Brooms –

The A9000’s vertical, steel-digger gutter brooms measure 44 inches in diameter and are driven hydraulically. Their free-floating design allows them to follow the contour of the pavement and gutter, while a spring impact protection system enables an inward swing of the broom(s) when an immovable object is encountered.

**These gutter broom features help to eliminate excessive wear, and prevent the possibility of gutter broom breakage due to striking an obstacle.**



The use of two gutter brooms extends the total sweeping width of the A9000 to 138 inches. For improved sweeping performance, simple controls in the cab provide a full range of broom adjustment. The A9000's optional, in-cab, adjustable broom tilt allows thorough sweeping of gutters located below pavement height.

**Schwarze's industry-leading Gutter Broom Extension Override (GEO<sup>SM</sup>) system enables the brooms to scrub directly in front of the sweeping head.**

This 'inboard agitation' by the steel gutter brooms removes an increased amount of compacted material from the roadway. The Schwarze GEO<sup>SM</sup> system ensures excellent transfer of debris to the suction tube even in very heavy debris conditions.



### The Schwarze-Exclusive WhisperWheel<sup>SM</sup> Fan System

Schwarze Industries' exclusive, patent-pending WhisperWheel<sup>SM</sup> design utilizes the most advanced steel blower fan system in the pavement sweeping industry.

The WhisperWheel<sup>SM</sup> system, which was introduced in 1998, enhances the A9000's already impressive pickup ability. Airflow has been increased by 7%, with 20% less energy needed to operate the fan.

Perhaps most importantly, the improvement in fan design has reduced ambient sweeper noise by over 70%. This allows the A7000 to retain its sweeping ability at lower, quieter engine speeds, while delivering significant fuel savings.

For a longer service life, the fan housing is constructed of 3/16 inch, T-42 Steel with an easily replaceable rubber lining. The A9000 is equipped with an air flow adjustment system so it can accommodate variations between light and heavy sweeping conditions.

Connecting the fan system to the sweeping head are 14 inch diameter blast and suction tubes constructed of wire-reinforced, 3/8-inch thick molded rubber. To help ensure long fan life, the blast air goes through a self-dumping dust separator prior to reentering the fan housing.

### Sweeping Head –

**The Schwarze sweeping head design is one of the keys to the A9000's superior sweeping ability.**



**A choice of two sweeping heads is offered on the A9000 model.**

Excellent sweeping performance is provided by the standard head, which features dual air chambers and an angled blast orifice. As the airstream enters the sweeping head's upper chamber it is compressed, and then forced into the lower chamber across the entire head width.

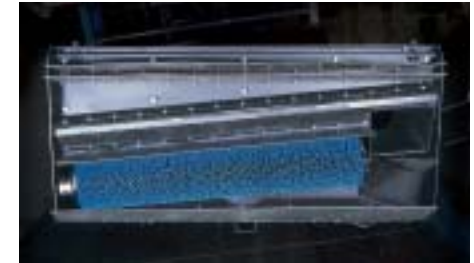
Because the blast orifice is angled, it creates an even distribution of the air blast across the head. The sweeping head's angled design also provides an increasing amount of space for the debris as it's collected into the airstream and moved toward the intake tube. **This 'across-the-head' sweeping ability contributes to the superior performance of Schwarze A-series sweepers.**

### Schwarze's Patented\* Mechani-Pneumatic Powerhood<sup>SM</sup>

For handling extremely heavy debris and specialty applications, the A9000 may be optionally outfitted with Schwarze's industry-leading Mechani-Pneumatic Powerhood<sup>SM</sup>.

This patented innovation is a broom-assist pickup head designed with a simple, common sense addition: An angled, windrowing broom is positioned ahead of the air blast to thoroughly brush the pavement surface.

This broom-forward head design is ideal for loosening debris and moving it across the head. The 66-inch long, 12-inch diameter broom transfers debris toward the 14-inch suction tube. Finer materials are left to the high pressure blast orifice.



\* Patent number 5,884,359

**The Mechani-Pneumatic<sup>SM</sup> option puts the A9000 in direct competition with mechanical broom sweepers for most sweeping applications. However, you'll find that the A9000 is more economical to operate and provides better removal of the PM-10 fines that are targeted as pollutants by the EPA and other agencies.**

Both Schwarze A9000 sweeping heads are spring-balanced and measure 90 inches in length by 36 inches wide. Each is equipped with double-wide carbide drag shoes which have a 2-year/2000 hour limited warranty.

The increased height of Schwarze sweeping heads provides significant advantages over competitive models because it allows bulky debris, such as dry leaves, to be picked up more efficiently. Both of the A9000 sweeping heads incorporate Schwarze's leading Sweeps-In-Reverse<sup>SM</sup> technology.



Being able to sweep while backing up saves time, and allows operators to maintain precise control of the sweeping operation. Reverse sweeping also provides environmental and safety benefits, since fugitive dust emissions are substantially reduced as a result of the sweeping head maintaining a secure seal when the sweeper is reversed.



### Hopper –

The A9000 hopper features a 9.6 cubic yard volumetric capacity. This large size requires less dumping, thereby maximizing sweeping time. The A9000's construction is of durable 10-gauge steel further reinforced for additional strength.

To provide fast and complete unloading, the A9000's hopper door is full height, full width, and unlatches and opens hydraulically. These features make interior hopper maintenance easier and safer for the operator. To ensure a quick, stable dumping operation, twin cylinders safely raise the hopper to a 53 degree angle. Use of 4" by 16" cylinders has reduced the standard dump cycle by 35%. The dumping operation may be controlled from either inside or outside of the cab.



Large inspection doors are located on both sides of the A9000's hopper. These doors provide an easy way to manually load debris that is too large to be picked up through the suction hose.

They also provide convenient access for hopper inspection and cleaning. An optional hopper drain hose located behind the dump door allows water to empty out, leaving more space for solid debris. As an aid to easy and thorough hopper cleanout, Schwarze's *Hopper Deluge*<sup>SM</sup> internal washdown system is also available as an option. For those who insist on maximum hopper life, Schwarze also offers



its *Four Point Protection*<sup>SM</sup> package. This consists of a stainless steel debris hopper with an extra durable interior coating. The exterior is first covered with a two-part urethane primer. Then, a two-part urethane top coat of Dupont Imron<sup>®</sup> 5000 is added.



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### Dust Suppression/Water System –

Larger debris particles are separated from the airstream by Schwarze's exclusive sawtooth dust separation screen. Its design ensures efficient air flow and reduced plugging.

The A9000's self-dumping dust separator then uses the centrifugal action of the fan to eject most smaller particles from the regenerative air flow. Finally, the finest dust is removed from the airstream by the A9000's water-based dust suppression system.

This features in-cab controls, with 11 water nozzles located as follows: 5 on the sweeping head, 2 at each gutter broom, and 2 inside the hopper. A spray bar is also available for the front bumper.



Water is stored in a 240 gallon polyethylene tank. An additional 220 gallon water tank may be added to A9000s mounted on a cabover chassis. Water pressure is supplied by an electrically-driven pump.

For operator convenience, an in-cab indicator light signals when the water supply is starting to become depleted, and an automatic shutoff eliminates the risk of damaging the pump due to running dry.

Refilling the water tank is quick and convenient using the A9000's 25 foot fill hose, with its quick-detach NST hydrant coupling. A standard washdown hose makes it possible to clean the screens, as well as the blast and suction tubes, on the jobsite.



### Control/Instrument Panel –

The Schwarze A9000's user-friendly control panel features circuit breakers, not fuses, for ease of resetting. All controls are easy to reach from both the standard and optional operating positions, feature internationally recognized symbols and are well lighted for nighttime use.



The panel has individual rocker switches for the safety lights, optional controls and each sweeper function. The panel also includes a tachometer, an hourmeter and gauges for water temperature and oil pressure.



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### Auxiliary Hand Hose –

An optional, rear-mounted auxiliary hand hose is available for the A9000. **The hand hose is ideal for catch basin cleanout, or for any other application where debris is inaccessible to the sweeping head.** The optional hand hose is eight inches in diameter, extends a full twelve-and-a-half feet and is great for a wide range of remote cleaning applications.

The power of the auxiliary hand hose – especially when outfitted with the optional hydraulic controls for the hose's support boom and four foot extension tube – makes the A9000 one of the most versatile and cost-effective pieces of cleaning equipment available.



# Schwarze A9000 Equipment

## STANDARD EQUIPMENT:

- Schwarze-Exclusive, Industry-leading *WhisperWheel*<sup>SM</sup> Fan System
- Noise Reduction Shroud
- Sweeps-In-Reverse*<sup>SM</sup> Sweeping System
- DC Auxiliary Hydraulic Pump
- Hopper-Mounted Amber Strobe Light with Limb Guard
- High Level Brake Light
- Amber Flashing Warning Lights
- Rear Flood Lights
- 3 Point Automatic Auxiliary Engine Shutdown System
- Washdown System
- Hydrant Wrench
- Fire Extinguisher
- Backup Alarm
- Resettable Circuit Breakers
- Road Flare Kit

## OPTIONAL EQUIPMENT:

- Patented\* *Mechani-Pneumatic Powerhood*<sup>SM</sup> (Broom Assist Head)
- Single or Dual Gutter Brooms
- In-Cab Tilt Control for Gutter Brooms
- Gutter Broom Extension Override*<sup>SM</sup> (*GEO*<sup>SM</sup>) System
- Twin Remote Cameras with In-Cab Video Monitor
- Dual Steering
- Sound Suppression System
- Cab-Mounted Barlight Beacon
- Safety Beacon with Limb Guard
- Spray Bar for Front Bumper, Hopper
- Hopper Deluge*<sup>SM</sup> (Hopper Washdown System)
- Extra 220 Gallon Polyethylene Water Tank (Cabover only)
- Hopper Drain System
- 8" Auxiliary Hand Hose
- 4 Point Protection*<sup>SM</sup> (Stainless Steel Hopper Package)
- Magnet Bar
- Spare Tire and Wheel
- Spare Parts Package
- Special Paint for Sweeper and Chassis
- Hydraulic or Spring System for Hand Hose
- Other Options Available



\* Patent number 5,884,359

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# Schwarze A9000 Specifications

## GENERAL SPECIFICATIONS:

|                     |            |
|---------------------|------------|
| Weight              | 19,750     |
| Wheel Base          | 141"       |
| Length              | 23' 6"     |
| Height              | 117"       |
| Width               | 96"        |
| Turning Radius      | 22' 6"     |
| Axle Capacity Front | 12,000 lb. |
| Axle Capacity Rear  | 22,000 lb. |
| GVWR                | 32,000 lb. |

## SWEEPING PATH:

|                                      |                 |
|--------------------------------------|-----------------|
| Pickup Head only                     | 90" (2,286 mm)  |
| Pickup Head and<br>One Gutter Broom  | 114" (2,896 mm) |
| Pickup Head and<br>Two Gutter Brooms | 138" (3,505 mm) |

## CHASSIS:

Mounts on various chassis to meet requirements.

## SWEEPER BODY:

|              |   |
|--------------|---|
| Construction | Welded 10-gauge steel plate with 3/16" steel hopper floor |
| Safety Prop  | Dual steel bars under body                                |

## INSTRUMENTATION:

Sweeper Engine . . . . . Tachometer, hourmeter, voltmeter, temperature gauge and oil pressure gauge

## STANDARD ENGINE:

|                   |  |
|-------------------|--|
| Model / Type      | 4045HF275/In-line 4 cylinder   |
| Aspiration        | Turbocharged diesel  |
| Manufacturer      | John Deere   |
| Displacement      | 275 cu. in. (4.5 L)  |
| Brake Horsepower  | 140 @ 2,400 rpm  |
| Torque            | 367 ft-lb @ 1,400 rpm  |
| Air Cleaner       | Sy-Klone® centrifugal precleaner; dry-type with dual safety elements and restriction indicator |
| Oil Filter        | Full-flow/Spin-on  |
| Stroke            | 5.00" (127 mm)   |
| Bore              | 4.19" (106 mm)   |
| Compression Ratio | 17.0 to 1  |
| Safety Shutdown   | Three point; automatic   |
| Throttle Control  | Electronic   |

## ELECTRICAL SYSTEM:

|                           |            |
|---------------------------|------------|
| Voltage                   | 12 Volt    |
| Sweeper Engine Alternator | 65 Amperes |

## DUST CONTROL SYSTEM:

|                     |                          |
|---------------------|--------------------------|
| Type                | High pressure/Low volume |
| Water Tank Capacity | 250 gallons              |
| Tank Construction   | Polyethylene             |
| Filter              | 200 mesh, cleanable      |
| Fill Diameter       | 2.5" (63.5 mm)           |
| Fill Hose           | 25 foot (7620 mm)        |
| Controls            | Electric; in-cab         |

## BLOWER SYSTEM:

|                  |  |
|------------------|--|
| Type             | WhisperWheel™ turbine                    |
| Diameter         | 32.75"                                   |
| Number of Blades | 10                                       |
| Speed            | 3150 rpm                                 |
| Drive            | Direct via a 5 groove, banded power belt |
| Construction     | T-42 steel                               |
| Housing Lining   | Bolt-in corded rubber                    |
| Mounting         | Modular                                  |
| Bearings         | 2 regreaseable sealed bearings           |
| Vacuum Enhancer  | For heavy/light material                 |

## PICKUP HEAD:

|                        |   |
|------------------------|---|
| Type                   | Dual chambered full-width blast orifice               |
| Operating Direction    | Forward and reverse                                   |
| Suspension             | Adjustable spring balanced                            |
| Length                 | 90" (2,286 mm)  |
| Pressure Hose Diameter | 14" (355.6 mm)  |
| Suction Hose Diameter  | 14" (355.6 mm)  |
| Hose Construction      | 3/8" (9.5 mm) wire-reinforced molded rubber           |
| Head Area              | 3,240 sq. in. (20,903 cm²)                            |
| Controls               | Hydraulic raise and lower                             |
| Skids                  | Double wide tungsten carbide                          |
| Construction           | Abrasion-resistant steel inlet and outlet transitions |

## HYDRAULIC SYSTEM:

|                         |   |
|-------------------------|---|
| Pump Capacity           | 13 gpm@1800 rpm (24.6 L/min.)   |
| Drive                   | Direct gear   |
| Maximum Pressure        | 2,500 PSI (173 bar.)  |
| Reservoir               | 25 gallons (94 liters)  |
| Filter                  | 10 micron, spin-on  |
| Protection              | Pressure relief valve   |
| Controls                | Electro-hydraulic   |
| 12 Volt Aux. Hydraulics | Gear type, driven by an electric motor. Function is to raise/lower hopper; open/close hopper door; raise brooms and pickup head |

## DEBRIS HOPPER:

|                     |                               |
|---------------------|-------------------------------|
| Volumetric Capacity | 9.6 cu. yds.                  |
| Dump Angle          | 53°                           |
| Floor Angle         | 3°                            |
| Dust Separator      | Self-cleaning centrifugal     |
| Lifting             | Twin hydraulic cylinders      |
| Dump Door           | Open/close/lock hydraulically |
| Inspection Doors    | 1 on each side of hopper      |

## SIDE BROOMS:

|                       |   |
|-----------------------|---|
| Type                  | Vertical steel digger                               |
| Location              | Right and left, forward of pickup head              |
| Diameter              | 44" (1,118 mm)                                      |
| Drive                 | Hydraulic torque motor                              |
| Suspension            | Torque-sensing spring                               |
| Wear Adjustment       | Automatic   |
| Pressure              | Manual  |
| Speed                 | Variable, non-reversing                             |
| Segments              | 5 each side, disposable, tempered steel wire filled |
| Tilt Angle Adjustment | Manual  |

## PAINT:

One coat of sealer/primer and two coats of DuPont Imron 5000® polyurethane in standard white color.

## WARRANTY:

The Schwarze A9000 sweeper is guaranteed to be free from defects due to faulty materials and/or workmanship for a period of 12 months, or 1200 hours. Liability is limited to replacement of defective parts at factory or authorized dealer. The standard warranties of chassis and sweeper engine manufacturers shall apply.

*Note: Specifications are subject to change without notice.*



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***"New Ideas From The Company  
That's Sweeping The Earth"™***

# Other Schwarze Models Available

## The Schwarze A4000 – No CDL Required



- 4.3 cubic yard hopper capacity (67" dump)
- Environmentally-friendly regenerative air
- Industry-leading *WhisperWheel*<sup>SM</sup> fan system
- *Gutter Broom Extension Override*<sup>SM</sup> (*GEO*<sup>SM</sup>)
- Schwarze *Sweeps-in-Reverse*<sup>SM</sup> system
- 130-gallon capacity dust suppression system



## The Schwarze A7000 – The Municipal Standard



- 8.4 cubic yard capacity debris hopper
- 115 hp John Deere diesel auxiliary engine
- Optional dual gutter brooms with optional tilt
- Optional *Gutter Broom Extension Override*<sup>SM</sup> (*GEO*<sup>SM</sup>)
- Environmentally-friendly regenerative air
- Schwarze *Sweeps-in-Reverse*<sup>SM</sup> capability
- Std. 240-gallon water system (opt. 220 or 350 additional)
- Cabover or conventional mounting



## The Schwarze EV-series – Top Choice for NPDES and Environmental Compliance

- Rated #1 sweeping system by many independent studies
- Pavement cleaning to 2.5 microns
- Secure containment and offload
- Ideal for toxic material cleanup
- Two models available
- Lifetime fan warranty
- Positively-pressurized cab (EV1 only)
- Patented fan, pickup and filter cleaning system
- Highly effective, 100% waterless dust suppression system



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## The Schwarze M6000 – Mechanical Broom Excellence



**M6000 Conventional**  
Single or Twin Engine



**M6000TE/CO**  
Cabover Twin Engine

- Cabover chassis: twin engine
- Conventional chassis: single or twin engine
- 5 cubic yard hopper—Proven sweeping system
- Variable-height side dump from 16" to 11'6"
- Forward-facing, digger-type curb brooms
- Squeegee-type elevator system

## The Schwarze A8000 – Variable High Dumping

- Environmentally-friendly regenerative air
- Based on the A7000's proven sweeping technology
- 115 hp John Deere diesel auxiliary engine
- 5.8 cubic yard capacity debris hopper
- Operator-controlled dumping between 36" to 116"
- Optional dual gutter brooms with optional tilt
- Schwarze-exclusive *WhisperWheel*<sup>SM</sup> fan system
- *Gutter Broom Extension Override*<sup>SM</sup> (*GEO*<sup>SM</sup>)
- Schwarze *Sweeps-in-Reverse*<sup>SM</sup> system
- Cabover or conventional mounting
- Optional 600-gallon dust suppression system
- Many innovative standard features and options



## Your Authorized Schwarze Dealer

*"New Ideas From The Company That's Sweeping The Earth"*<sup>SM</sup>