McGill AirClean LLC

An enterprise of United McGill Corporation—
Family owned and operated since 1951

a McGill AirClean™ product

Mobile Electrostatic Precipitator

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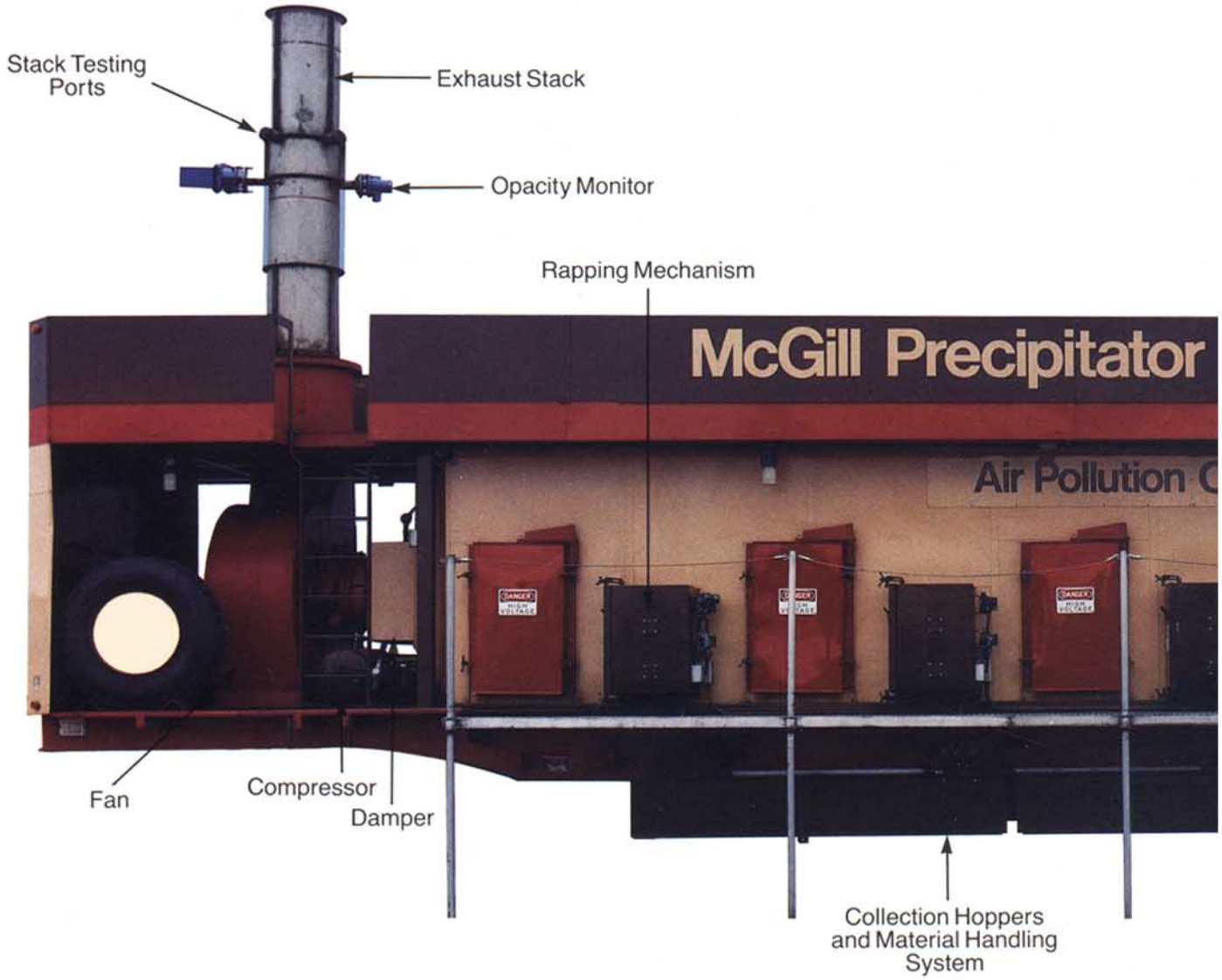
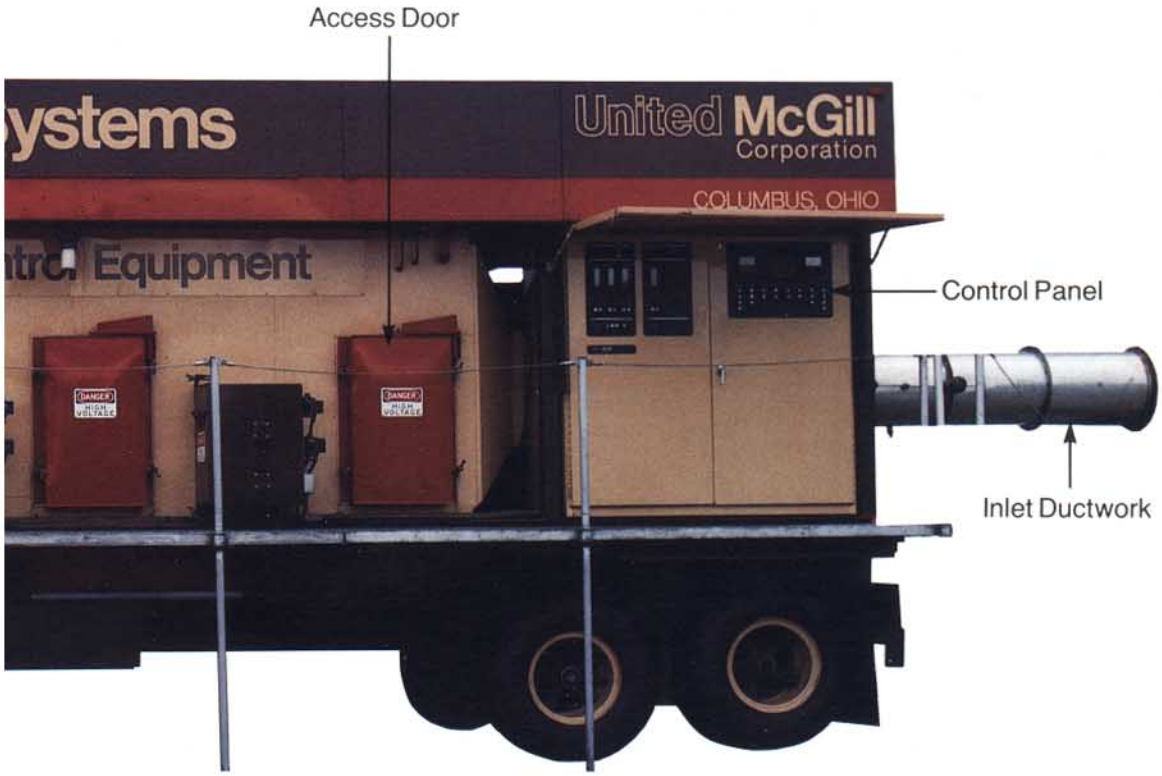
United McGill® product



Remotely controlled, the fan and damper system allows the EP to draw varying volumes of flue gas.

The outlet stack's opacity monitor (blue) indicates plume reduction; test ports for EPA Method 5 testing are above.



Microprocessor-based controls for the mobile EP are equivalent to those used on full-scale units.

The mobile EP is packed up and ready for its next job.

Mobile Testing to Determine the Collectability of Process Emissions

McGill AirClean has the unique capability of offering a truly mobile electrostatic precipitator (EP) designed to operate wet or dry. Mobile testing determines the collectibility of pollutants and provides sizing and performance information for the full-scale system. McGill AirClean's Mobile EP can also be used to evaluate existing pollution control equipment.

Conducting tests with McGill AirClean's Mobile EP for several weeks will give you confidence in our ability to solve your emission problems. We test meaningful amounts – approximately 8,000 actual cubic feet per minute (acfm). Testing can include separate chemical and resistivity analyses, as well as computer-aided statistical analysis, to predict how the full-scale precipitator will perform at conditions different from those occurring at the time of testing.

In addition, mobile testing helps us size the full-scale system to satisfy your performance requirements. We will design an efficient, economical, properly sized system that will be large enough to handle your volume flow, yet not have more capacity than you need. A properly sized system can save you a substantial amount of money in equipment, installation, and operating costs. Should your requirements ever change, McGill AirClean's modular design makes it easy to add to the system.

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Products depicted in this brochure were current at the time of publication. As a quality-conscious manufacturer, McGill AirClean is continually seeking ways to improve its products to better serve its customers. Therefore all designs, specifications, and product features are subject to change without notice.

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On-Site Testing and Performance Verification

The McGill AirClean Mobile EP is a complete system that is easy to put into operation. To do this requires only (1) a temporary duct connection from the process to the mobile precipitator, (2) 460 VAC, 175 amp electrical service, and (3) a small quantity of clean water for laboratory use or if quenching the gas stream for wet operation.

Our Mobile EP is designed to operate continuously. Each of its four EP fields can be operated independently. Each field has its own transformer/rectifier, rapping device, and dust collection hopper. A nozzle/piping arrangement is provided so the precipitator can be washed internally if the collected emissions dictate wet rather than dry cleaning.

The Mobile EP system comes complete with a fan to move flue gases through the precipitator. The control panel includes a microprocessor that monitors and controls all system functions. Testing ports are provided in the inlet and outlet ducts for measuring system efficiency.

Specifications of McGill AirClean's Dry/Wet Mobile Electrostatic Precipitator

The Mobile EP is a McGill Model 4-24 EP built to the same specifications as larger EPs.

- Approximately 24 square feet (2.2 sq m) of cross-sectional intake area
- Volume flow potential:
  7,800 acfm at 5.5 ft/sec (13,254 m^3/hr at 1.68 m/sec)
  3,500 acfm at 2.5 ft/sec (5,942 m^3/hr at 0.76 m/sec)
- Single chamber with four independent electrical fields
- Four transformer/rectifiers
- Microprocessor control of all functions including rapping and automatic voltage control
- Inlet distributor plate designed to evenly distribute the gas stream; equipped with rapping devices
- Constructed of high-strength, low-alloy steel to resist corrosion
- Variable collector and discharge plate electrode spacing
- Pneumatic discharge and collector plate rapping devices
- Fully insulated and weather protected
- Individual hoppers for each field; screw conveyors for transport of collected dust to two rotary valves
- Internal wash down system for wet operation, if required
- External pumps, meters, and microprocessor-controlled valves for wet wash down system.

Physical Characteristics

- Height: 13 feet 6 inches (4.12 m)
- Width: 8 feet 9 inches (2.67 m)
- Length: 48 feet (14.63 m)
- Total weight: approximately 70,000 lbs. (31,751 kg)
- Tandem-axle, air cushion suspension trailer
- Four-position hydraulic leveling system

Exhaust and Controls

- Fan: rated 12,000 acfm at 300˚F, 6 inches wg static (20,390 m^3/hr at 1.49 x 10^3 Pa at 149°C)
- Fan motor: 40 horsepower
- Multi-blade fan damper for automatic control of duct pressure
- Exhaust stack with test ports; inlet test ports installed in inlet ductwork
- State-of-the-art control panel with microprocessor controller programmed to monitor status of EP fields, control rapping timing, signal system alarms, provide automatic voltage control, and perform any other necessary monitoring or control functions
- Continuous recording of system parameters

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