



Technical Data

MAS Model I500

Mine Air Systems Product Line



P&H Mine Air Systems (MAS) climate control units provide air conditioning, heating, filtration and pressurization comforts to the operator's cab. Advanced MAS climate control technology sustains ultimate operator comfort and efficiency by automatically maintaining an even floor-to-roof temperature and a regulated, filtered air flow.

The MAS I500 will control the climate conditions of operator cabs and electrical rooms on large electric mining shovels, drills and draglines – and is manufactured and distributed worldwide by P&H MinePro Services.

Through modular design, an entire MAS unit can be changed out in just 30 minutes. Individual electrical and control modules can be replaced in as little as 10 minutes with no special tools.

Performance Benefits

- Rugged design specifically engineered for surface mining application
- Silica dust and diesel emission packages (optional)
- Precise, automatic air temperature and pressurization comfort with even, floor-to-roof cab temperature
- Modular design for unmatched changeout speed and convenience
- Unique weather-sealed roofplate eliminates dust and water leaks into the cab and electrical room
- Stainless steel construction
- Designed for maintenance ease
- Designed specifically for ozone friendly R-407C refrigerant
- High efficiency air filters to suit each application
- Industrial-sized super efficient filter-pressurizer with air pre-cleaner
- Smooth and quiet scroll-technology compressor



Applications

The **MAS Model 1500** unit is a complete operating system requiring only a power supply to function. Ideal applications include shovels, drills and draglines. The unit can be deck or roof mounted.

Additional considerations:

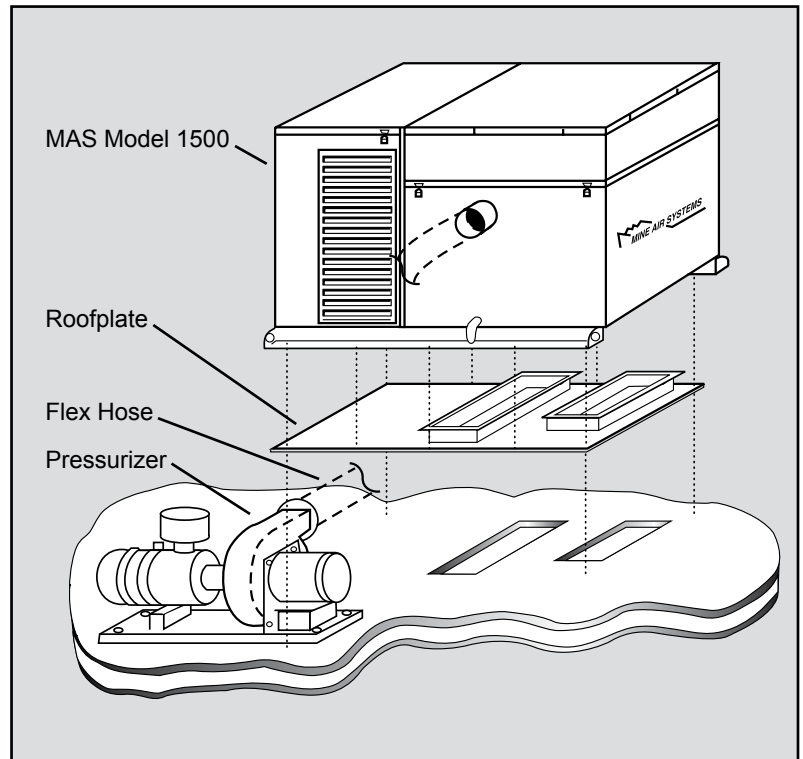
- Installation Expertise Required:
 - Electrician
 - Welder
 - Mechanic
 - Air conditioning experience
- Power requirement 30 amp: 460/3/60 AC (see specs.)

Components/Options

The following are components/options available on the MAS Model 1500 unit:

- Filter – pressurizer with air pre-cleaner
- Silencer kit for the pressurizer
- Silica dust and diesel emission packages
- Cooling only unit
- Fan speeds of 1100/500 CFM
- Mine Logic Control – digital programmable control with self diagnostic feature
- Automatic PID control of supply air temperature by MLC

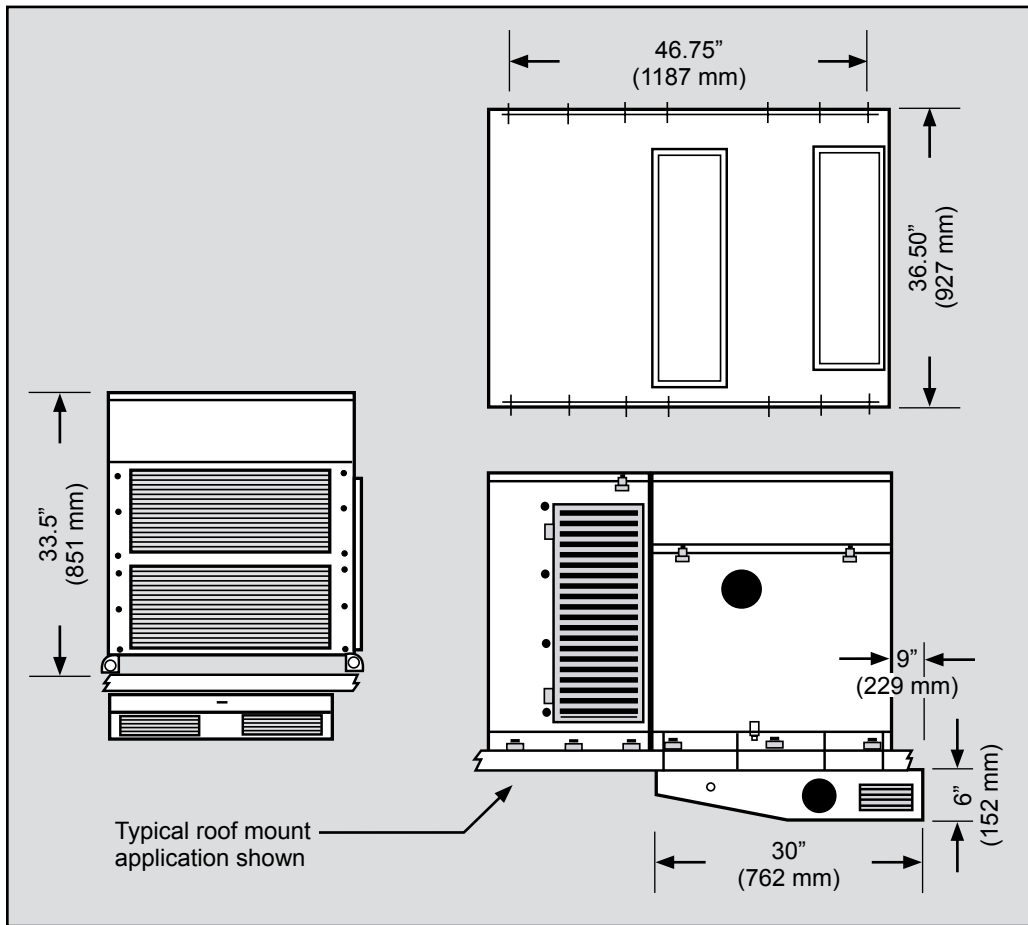
Model 1500 Installation (Roof Mount Application shown)



Technical Characteristics

Feature	Specification	Feature	Specification
Description	Roof or beside-the-cab mounted climate control system with optional remote mounted dedicated blower pressurizer.	Exchangability (Modularity)	Complete system – 30 minutes Electrical module – 20 minutes Control module – 10 minutes
Electrical	460 VAC, 3 Phase, 60 Cycle 575 VAC, 3 Phase, 60 Cycle 380 VAC, 3 Phase, 50 Cycle	Switch Gear	High quality contactors and thermal overloads all circuits. Safety contactor, fuses, auto-reset, and main reset limits-heaters. Fused disconnects main, heater, control circuits.
Recirculated Airflow	High speed - 1500 cfm Low speed - 1000 cfm Dual single inlet forward curved fan wheels.	Cooling Capacity	48,000 Btu/hr @ 75°F DB/65°F WB Return Air, 125°F Ambient @ 460 VAC
Safety Controls	Field replaceable without refrigerant loss. Digitally monitored low and high pressure, historic trends on PLC for the MLC only.	Capacity Control	Low load idle (hot gas bypass) valve. Externally equalized thermostatic expansion valve. Microprocessor temperature control of compressor motor for the MLC only.
Compressor	Compliant scroll, hermetically sealed.	Compressor Oil	Polyolester
Refrigerant	R-407C	Heating Capacity	18.0kW at 460 VAC Fully proportional control from 0 to 100% of capacity (stageless).
Pressurization	170 cfm @ 60 Cycle with clean filter, 20% reduction at change interval. Self-cleaning pre-cleaner. Maintainable second stage filter cup. Donaldson radial seal disposable filter element (no fasteners). Cast aluminum, high speed impeller, operating range 7" w.c.	Control	Standard Electric Controller (SEC) Analog. Mine Logic Controller (MLC) Digital (optional). Selector switch for COOL/HEAT. Independent Pressurizer Switch. PID control of cab supply air temperature SCR fired controller for heater elements. Cooling mode switch. Thermostatic Control of cooling functions.
Filters	Disposable 65% efficient in-cab filter in standard plenum configurations. Custom filter plenums from 65% to Hepa (99% @ .1 micron) to suit individual requirements.	Construction	Cases 16 gauge 316 stainless steel, polished finish. Coils copper tube/copper fin-8 fins/in. Trapezoidal weight bearing structural members with internal sub-frame construction, 1/8", 3/16", 1/4" variable.
Physical Size	46.75" long, 36.50" wide, 33.5" high (1187 mm x 927 mm x 851 mm)	Weight	765 lbs (347 kg)

Model I 500 Dimensions



www.phmining.com/en/PHMining/Mining-Equipment/Mine-Air-Systems.htm

P&H

About P&H Mining Equipment Inc.

P&H Mining Equipment is a global leader in the manufacture and service of pace-setting large excavating and drilling equipment used to mine copper, coal, iron ore, silver, gold, diamonds, oilsands, phosphate, molybdenum, potash and other minerals and bedded materials. Ninety percent of the world's surface mines utilize P&H equipment.

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