

MMBOX168

Instruction Manual





Technical Parameters of Mine Box

Box weight: approximately 2.0 tons

Color: white

External Dimensions: 5700*2200*2200mm (L*W*H)

Internal Dimensions: 5500*2000*2000mm (L*W*H)

Rated power consumption: 3250W (-5%--+5%) X168 units

Miner capacity: 168 units for S19 series miners, compatible with Avalon A841, 1246, 15, 11, 9 series miners (factory default is optimized for S19 series miners)

Certification: The MMBOX168 is **CSA FCL certified** as a whole unit, and major components such as power distribution cabinets, PDUs, cables, and wires are UL certified.

Assembly height: Recommended not to exceed 2 layers

Assembly length: No specific requirements, determined based on the specific site.

Layout: Inlet relative to the air inlet. Recommended spacing: 9 meters, with the transformer located on the side of the air inlet. Outlet relative to the air inlet. Recommended spacing: 6 meters, with the transformer located on the side of the air inlet. The spacing between each row of containers and each group: 2.5 meters (these dimensions are recommended).

Product Internal Layout Display



Shelf Display



Based on the external dimensions of the mining machine, the number of rack levels and their width can be customized:

1. The model S19 mining machine is placed inside the box, and the rack consists of 6 levels. Each level can accommodate 28 mining machines. In total, 168 mining machines are accommodated within the entire box.
2. The rack has a length of 5500mm and a width of 400mm, with a spacing of 300mm between each level.
3. The mainframe of the rack is constructed by welding 30*30mm galvanized square pipes, and the central grid is formed by welding 4.5mm diameter round steel. Each level of the rack can support a weight of approximately 500kg.

Note: The bottom-level rack is a movable rack for easy floor installation.



Network Cable Display

- 1. Network Cable Material:** Brand new PVC CAT5 oxygen-free copper.
Model: Outer diameter 0.55mm, inner diameter 870.12mm.
2. Each mine box is equipped with network cables distributed in equal numbers based on the quantity of mining machines placed inside. Each network cable is labeled with matching numbers at both ends. One end connects to the switch, while the other end connects to the miner.
3. According to the number of mining machines placed in each mining box, the same number of network cables are distributed, with the same number at both ends of each network cable. One end is connected to the switch, and the other end is connected to the miner.
4. Network cables are securely fastened to the shelves using cable ties, facilitating future replacements if needed.
5. Inside the mine box, there are 168 reserved network cables, with 28 cables on each floor.



Distribution Cabinet

Mobile Mining Box Electricity Demand

Main switch capacity of power distribution cabinet: 1200A

Rated current: 1000A

Input voltage: 380V~415V AC 50/60HZ

Operating power: 505KW~649KW

2500KVA transformer: It can support 4 MMBOX168 work (take running 168 S19 miners as an example)



Fan Installation Guide

The technical parameters are as follows:

Model Specification	WindLeaf Diameter (mm)	WindLeaf Rotating Speed (r/min)	Motor Rotating Speed (r/min)	Air Volume (m ³ /h)	Full Pressure (Pa)	Noise (DB)	Enter Power (W)	Rated Voltage (V)	high (mm)	width (mm)	thick (mm)
FBD-900	750	616	1400	22200	65	≤70	550	380	900	900	400



Fan installation method:

1. Preparation of Installation Site:

Before installing the fan, prepare a properly sized installation hole in the designated location and ensure that the base is level.

2. Placing the Fan:

Position the fan in the prepared installation hole, ensuring it is level and vertically aligned. Securely fasten the fan on all four sides.

3. Prevent Deformation: During installation, take care not to exert pressure that may deform the four frames.

4. Electrical Connection: Connect the three-phase four-wire power supply to the fan. Ensure that the cable is of adequate thickness and make secure connections to prevent phase loss.

5. Power Testing: Energize the fan to test if it rotates in the correct direction and operates smoothly and normally.

6. Safety Precaution: Do not reach inside or insert any objects while the fan is in operation.

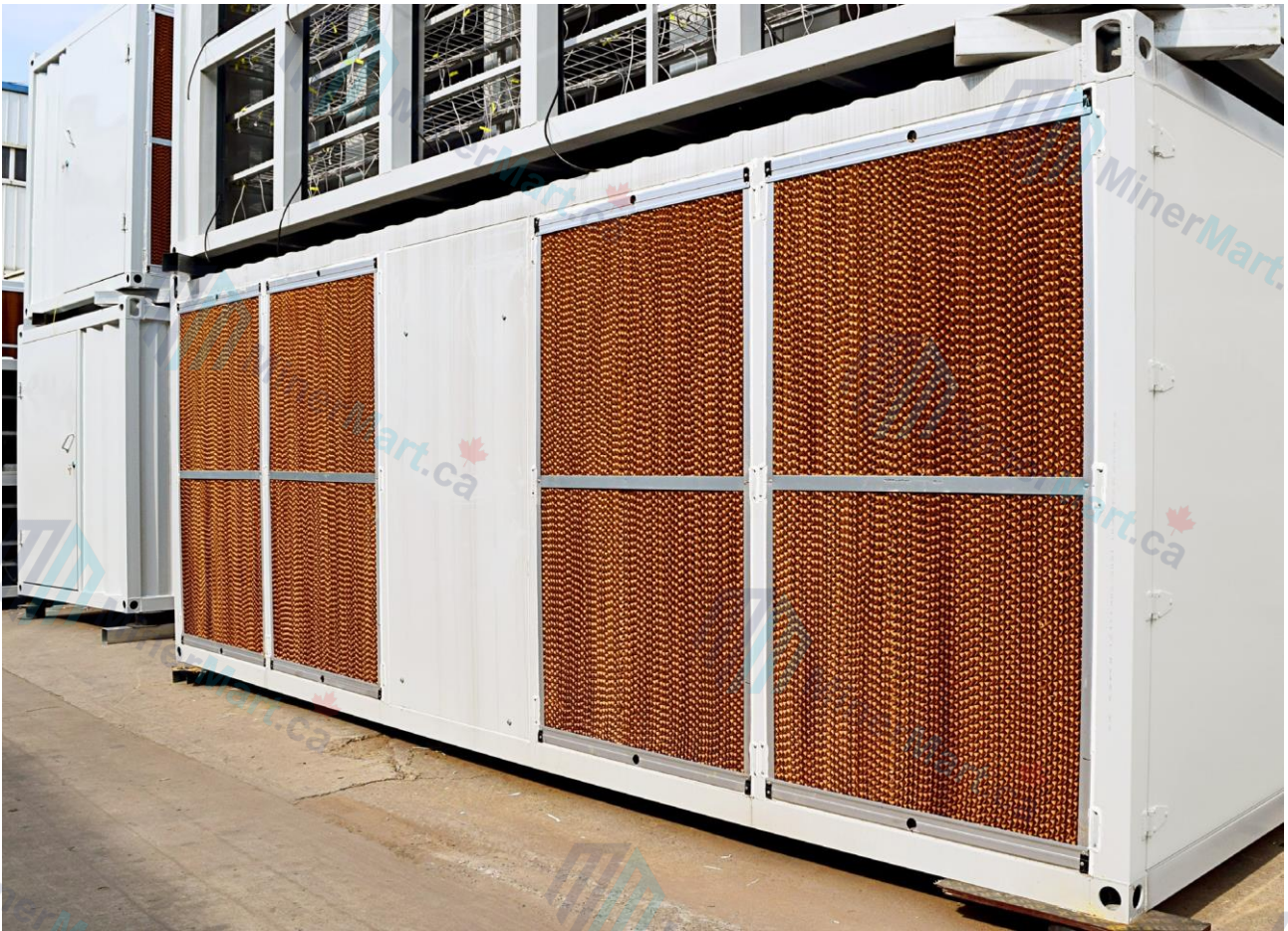
7. Regular Cleaning: Periodically remove debris from the fan during use to prevent corrosive materials from coming into contact with the fan.

8. Handling Malfunctions: In case of a malfunction, do not attempt repairs with the power on. Please have qualified personnel disassemble, inspect, and carry out repairs, or consult the manufacturer for guidance.



Precautions:

- 1 **Reliable Grounding for Enclosure and Motor:** Ensure the enclosure or motor housing is grounded securely. Zero connection cannot substitute for proper grounding.
- 2 **Prohibition of Reverse Operation, Overrated Current, and Phase Loss:** Operating in reverse, exceeding rated current, or running with phase loss is strictly prohibited.
- 3 **Fan Bearing Lubrication Frequency:** Lubricate the fan bearings at intervals of no less than 1000 hours per application.
- 4 **Prohibition of Fan Maintenance During Operation:** Maintenance of the fan while it is in operation is strictly prohibited.



Water Curtain Display

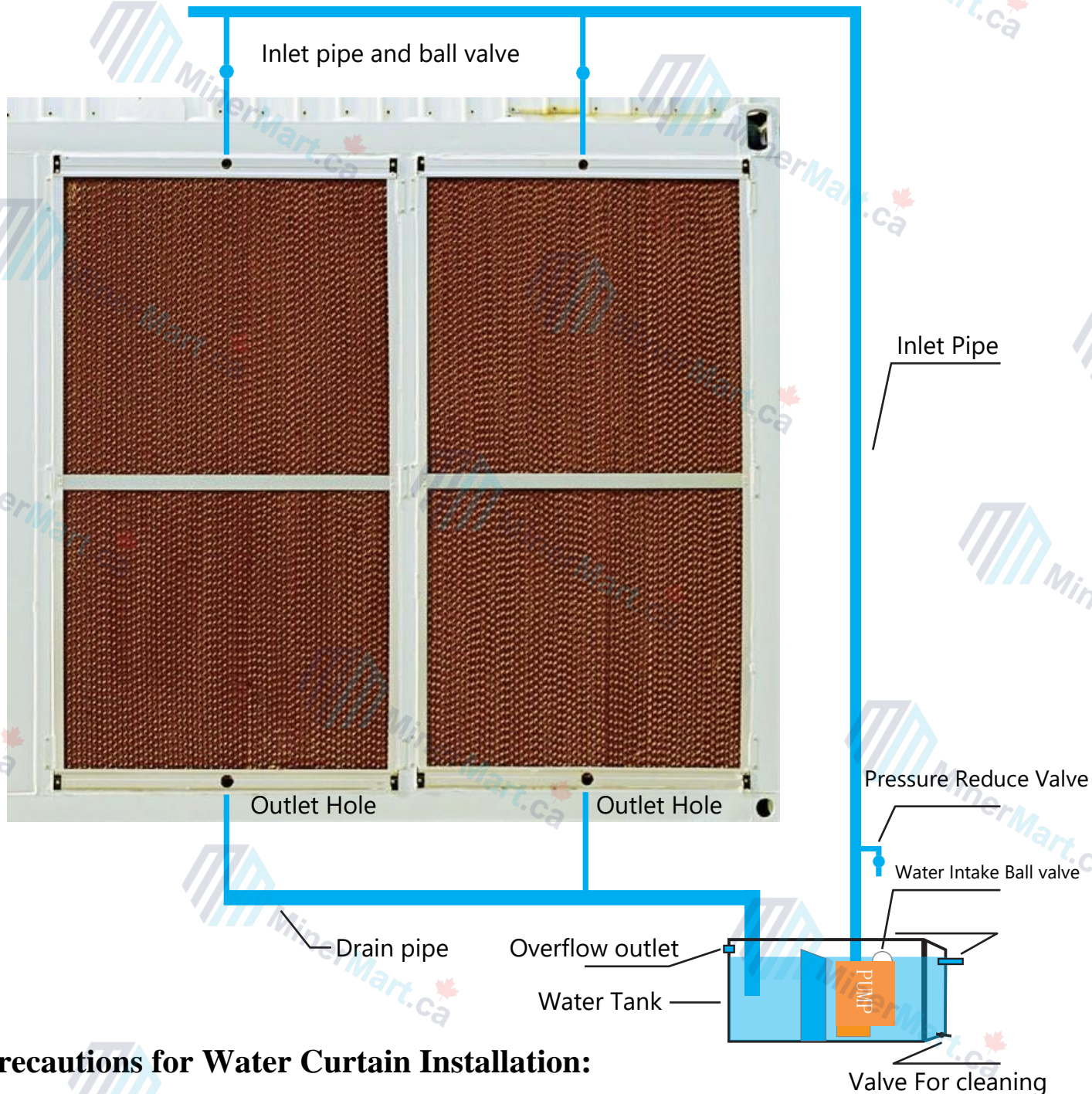
Main performance characteristics:

1. The water curtain is manufactured using new materials and spatial cross-linking technology, resulting in high absorption capacity, excellent water resistance, resistance to mold and corrosion, and an extended service life.
2. The material surface is treated with an active agent, enabling rapid and long-lasting natural absorption. A single drop of water can fully diffuse in just 4-5 seconds, achieving a natural absorption height of 60-70mm in 5 minutes and 200mm in 1.5 hours, meeting national industry standards.

3. The product is manufactured in accordance with industry standards, and a typical 600mm width water curtain contains approximately 85 sheets of paper.
4. Premium imported kraft paper is used as the raw material, with a basis weight of 100g/m², tensile strength of 70N, thickness ranging from 0.18mm to 0.20mm, water absorption height of 45mm/10min, moisture content between 5-8%, and a wet strength of 18N.
5. The product is free from skin-sensitive chemicals like phenol. It poses no harm to human health during installation and use, making it safe, energy-efficient, environmentally friendly, and cost-effective.



Installation diagram of water curtain circulating water pipe



Precautions for Water Curtain Installation:

Level Adjustment and High-Quality Water Pipes: Ensure precise leveling during installation and use high-quality water pipes.

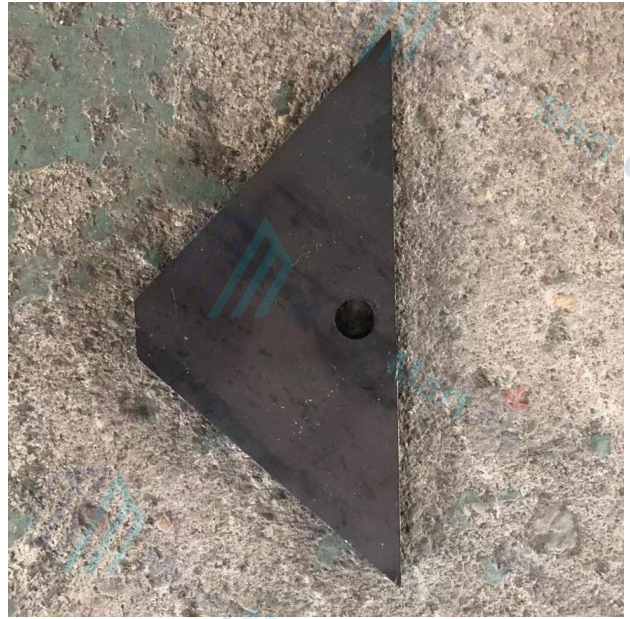
Inclined Return Pipe and Overflow for Water Tank: Slightly tilt the return pipe towards the direction of the pool. Install an overflow outlet for the water tank. Equip the water pump with a pressure reducing valve.



Installation Instructions for 304 Stainless Steel 8-Mesh Dust-Proof Net

- 1. UV Resistance (Anti-Aging):** The product surface is treated with spray coating, capable of absorbing ultraviolet rays from sunlight, reducing the material's inherent oxidation rate. This enhances the product's anti-aging performance, ultimately extending its service life. Furthermore, the low UV transmittance prevents damage from sunlight exposure.
- 2. Flame Retardancy:** Due to its metal composition, the product exhibits excellent flame-retardant properties, meeting the requirements of fire safety and industrial standards.
- 3. Impact Resistance:** The product boasts high strength, capable of withstanding impacts such as hail and strong winds. In impact strength tests, a 1kg steel ball is dropped freely from a height of 1.5 meters above the peak of the sample, resulting in no fractures or penetrating holes.
- 4. Anti-Static:** The product's surface undergoes electrostatic spray treatment, allowing it to oxidize and decompose organic pollutants adhering to the surface upon exposure to sunlight. Additionally, its super-hydrophilic nature facilitates easy cleaning by rainwater, ensuring a self-cleaning effect without maintenance costs.

Four Corners of the Dust Screen Fixed Accessories Display





Canopy Display

- 1 . One canopy, multiple functions. With its innovative design, it provides rain protection, sun shading, wind blocking, and sand shielding. It reduces the impact of external environmental factors on the mining box, extending its operational lifespan
- 2 . Technological Innovation: Utilizing galvanized sheet metal fabrication, it offers lightweight, high strength, corrosion resistance, and superior durability, surpassing the properties of ordinary plastic sheet materials by several times.
- 3 Human-centric design and easy installation.



Points for Attention When Moving the MMBOX

1. The MMBOX must be placed on a level surface. It is recommended to elevate the ground by 100-200mm with a tolerance of ± 1 degree.
2. If stacking two layers is required, the ground should be reinforced to withstand a load of 12 tons.
3. Customers should prepare a 5-10-ton crane for loading and unloading MMBOX.
4. External facilities such as stairs, walkway boards, transformers, cables, bridges, cable junction boxes, switches, and mining machines are not included in the mobile mining box products.
5. Environmental requirements: Temperature: -25°C to 45°C ; humidity 10%RH to 90%RH; in high-humidity areas, the environmental temperature should not exceed 40°C . When the temperature is below 0°C , the air inlet and outlet must be closed. The miner can only be started after internal heating raises the temperature above 0°C .

Precautions for the Use of Mobile Integrated Distribution Boxes

Before using this product, please carefully read the following precautions to prevent product damage and personal or property safety risks due to improper use.

1. Visual Inspection:

Upon arrival at the site, perform a comprehensive inspection of the product packaging and the exterior of the cabinet to ensure packaging integrity and that the cabinet is free from severe deformation or damage. If there are issues such as desoldering, delamination, breakage, or significant deformation, repair is required before use.

2. Power Supply System Inspection:

Prior to powering up the product, inspect all power system circuits and components for signs of damage, breakage, corrosion, overheating, or any anomalies. Verify the tightness of wiring screws. This distribution box model uses a 380V power source, so correct connection and installation are essential. Additionally, three fire protection measures and one neutral line are set up. Customers must not modify the power supply system in any way and are strictly prohibited from starting the mining machine when the main power is on to avoid unnecessary electric shocks.

3. Installation Precautions:

Ensure that the cabinet remains vertical throughout the installation process to prevent tilting. The product should be placed on a level surface with an inclination not exceeding 2 degrees. After installation, before starting the mining machine, ensure that lightning protection equipment is in place. Powering the equipment requires current-limiting overcurrent protective devices.

4. Safety Operation:

Prior to connecting the mining machine, cut off the circuit and maintain it in the off state throughout the process. Adhere to five safety guidelines: safe isolation, prevention of reclosure, ensuring circuit disconnection, grounding and disconnecting, and covering or isolating adjacent live parts. When restarting the power, the miner's power must be turned off before starting the machine. Follow the sequence for powering up: first, activate the main switch, and then sequentially supply power to each group. Aim for balanced electrical usage across the four PUFs within the mine box. While the mine box is operational, regularly check the performance of each group of mining machines. Adjust the internal temperature based on the size of the air outlet, reducing the operation of several fans when the temperature drops. Inspect the exhaust system and water supply system, and check the fan's direction during power installation. Regarding the water supply system, when the outdoor air temperature exceeds 35°C, the water curtain must be activated. Use regular industrial water, with a small stream of water for dripping. If the water curtain becomes heavily damp (50%-80% coverage), reduce water flow. Water supply above 1.5 atmospheric pressure is strictly prohibited. In case of heavy rain, enlarge the leak holes to prevent water from entering the cabinet and damaging the machinery.

5. Maintenance:

Regular maintenance of the equipment is necessary to ensure proper and safe operation. Trained personnel should carry out maintenance tasks such as fuse replacement in compliance with safety guidelines. In case of emergencies, use the emergency stop button, which de-energizes the entire mining box. Use dedicated plug accessories for the miner's cable plug.

6. Remarks:

This MMBOX undergoes powered testing before leaving the factory and is a qualified product. However, due to long-distance transportation and sea shipping, electrical components and accessories may become loose. It is recommended to have a professional electrical engineer conduct inspections before use.