



# WHATSMINER

## Product Manual





# CATALOG

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# WHATSMINER M30S++

## Air Cooling



### Components

Power Supply, Fan, Control Board, Hash Board, Case

### Flashing Light Introduction

Blinking Green Light:  
Working normally

Green and Red Lights Alternately Flashing:  
Alarm status and need to find the response error code

### Safety Guidelines

1. Please check if there is any obvious physical failure before power on, beware of electric shock
2. The product must be kept away from water sources and must not be operated in a humid environment
3. It requires professionals to carry out daily maintenance on the product
4. It is forbidden to directly touch the product by hand when power is on
5. Please use the stable voltage
6. The size of the air outlet: 143\*218mm, refer to the relevant documents for the specific shape(website-support-download)

### Warranty Period

One year after leaving the factory

### After-sales Contact Information

1. Email: Support@microbt.com
2. Telegram Group: @WhatsMiner Community

## SPECIFICATION

Hashrate	100~112T ± 5%	Size	430mm*155mm*226mm
Power Ratio	31J/T ± 5% @25° C	Weight	11.7KG
Power On Wall	3100~3472W ± 10%	Internet Connections	Ethernet
Working Temperature	-5° C ~ 35° C	Power Cable Model	IEC C19, ≥16A
Air flow	350CFM	PSU Model	P221B/P222B AC220V ~ 240V

# WHATSMINER M30S+

## Air Cooling



### Components

Power Supply, Fan, Control Board, Hash Board, Case

### Flashing Light Introduction

Blinking Green Light:  
Working normally

Green and Red Lights Alternately Flashing:  
Alarm status and need to find the response error code

### Safety Guidelines

1. Please check if there is any obvious physical failure before power on, beware of electric shock
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6. The size of the air outlet: 143\*218mm, refer to the relevant documents for the specific shape(website-support-download)

### Warranty Period

One year after leaving the factory

### After-sales Contact Information

1. Email: Support@microbt.com
2. Telegram Group: @WhatsMiner Community

## SPECIFICATION

Hashrate	100T ± 5%	Size	430mm*155mm*226mm
Power Ratio	34J/T ± 5% @25° C	Weight	11.7KG
Power On Wall	3400W ± 10%	Internet Connections	Ethernet
Working Temperature	-5° C ~ 35° C	Power Cable Model	IEC C19, ≥16A
Air flow	350CFM	PSU Model	P221B/P222B AC220V ~ 240V

# WHATSMINER M30S

## Air Cooling



### Components

Power Supply, Fan, Control Board, Hash Board, Case

### Flashing Light Introduction

Blinking Green Light:  
Working normally

Green and Red Lights Alternately Flashing:  
Alarm status and need to find the response error code

### Safety Guidelines

1. Please check if there is any obvious physical failure before power on, beware of electric shock
2. The product must be kept away from water sources and must not be operated in a humid environment
3. It requires professionals to carry out daily maintenance on the product
4. It is forbidden to directly touch the product by hand when power is on
5. Please use the stable voltage
6. The size of the air outlet: 143\*218mm, refer to the relevant documents for the specific shape(website-support-download)

### Warranty Period

One year after leaving the factory

### After-sales Contact Information

1. Email: Support@microbt.com
2. Telegram Group: @WhatsMiner Community

## SPECIFICATION

Hashrate	88T ± 5%	Size	430mm*155mm*226mm
Power Ratio	38J/T ± 5% @25° C	Weight	11.7KG
Power On Wall	3344W ± 10%	Internet Connections	Ethernet
Working Temperature	-5° C ~ 35° C	Power Cable Model	IEC C19, ≥16A
Air flow	350CFM	PSU Model	P221B/P222B AC220V ~ 240V



# WHATSMINER M31S+

## Air Cooling



### Components

Power Supply, Fan, Control Board, Hash Board, Case

### Flashing Light Introduction

Blinking Green Light:  
Working normally

Green and Red Lights Alternately Flashing:  
Alarm status and need to find the response error code

### Safety Guidelines

1. Please check if there is any obvious physical failure before power on, beware of electric shock
2. The product must be kept away from water sources and must not be operated in a humid environment
3. It requires professionals to carry out daily maintenance on the product
4. It is forbidden to directly touch the product by hand when power is on
5. Please use the stable voltage
6. The size of the air outlet: 143\*218mm, refer to the relevant documents for the specific shape(website-support-download)

### Warranty Period

One year after leaving the factory

### After-sales Contact Information

1. Email: Support@microbt.com
2. Telegram Group: @WhatsMiner Community

## SPECIFICATION

Hashrate	80T ± 5%	Size	430mm*155mm*226mm
Power Ratio	42J/T ± 5% @25° C	Weight	11.7KG
Power On Wall	3360W ± 10%	Internet Connections	Ethernet
Working Temperature	-5° C ~ 35° C	Power Cable Model	IEC C19, ≥16A
Air flow	350CFM	PSU Model	P221B/P222B AC220V ~ 240V

# WHATSMINER M31S

## Air Cooling



### Components

Power Supply, Fan, Control Board, Hash Board, Case

### Flashing Light Introduction

Blinking Green Light:  
Working normally

Green and Red Lights Alternately Flashing:  
Alarm status and need to find the response error code

### Safety Guidelines

1. Please check if there is any obvious physical failure before power on, beware of electric shock
2. The product must be kept away from water sources and must not be operated in a humid environment
3. It requires professionals to carry out daily maintenance on the product
4. It is forbidden to directly touch the product by hand when power is on
5. Please use the stable voltage
6. The size of the air outlet: 143\*218mm, refer to the relevant documents for the specific shape(website-support-download)

### Warranty Period

One year after leaving the factory

### After-sales Contact Information

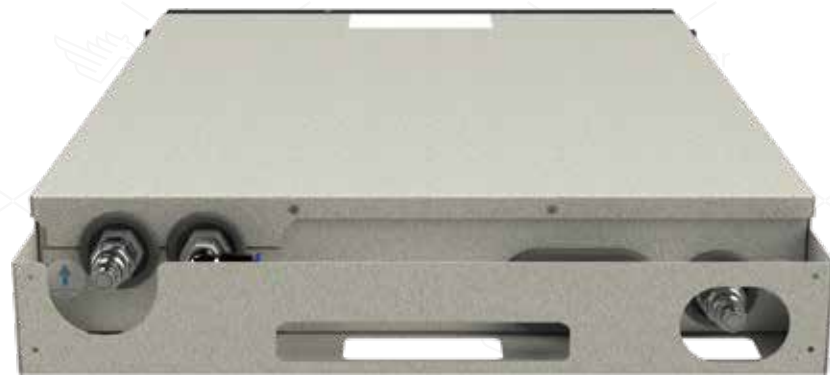
1. Email: Support@microbt.com
2. Telegram Group: @WhatsMiner Community

## SPECIFICATION

Hashrate	72T ± 5%	Size	430mm*155mm*226mm
Power Ratio	46J/T ± 5% @25° C	Weight	11.7KG
Power On Wall	3312W ± 10%	Internet Connections	Ethernet
Working Temperature	-5° C ~ 35° C	Power Cable Model	IEC C19, ≥16A
Air flow	350CFM	PSU Model	P221B/P222B AC220V ~ 240V

# WHATSMINER M33S++

## Hydro Cooling



### SPECIFICATION

Hashrate	218~240T $\pm$ 10%
Power Ratio	31J/T $\pm$ 5%
PSU	AC380~480V, 3W+ ground, input 10kw
Size	86mm*482.6mm*663mm with handle
Weight	Net weight: 27.5kg    Weight with packaging materials: 30kg
Coolant demand per machine	About 1L
Power Cable Model	Custom made , $\geq$ 16A
Internet Connections	Ethernet

### ENVIRONMENTAL PARAMETERS

- Liquid temperature
- Working temperature (inlet): 20°C~50°C@normal mode  
20°C~40°C@high performance mode;
  - Inlet temperature control accuracy  $\pm$  2°C
  - Storage and transportation temperature: -40~70°C

Note: please empty the liquid in the equipment during storage and transportation.

- Liquid flow
- Limited Data :  $\geq$ 10L/min
  - Flow control accuracy  $\pm$  10%

Remarks: 10L/min corresponds to the temperature difference between inlet and outlet water close to 10°C@normal mode, 14°C@high performance mode



Liquid pressure	<p>≤350kpa</p> <p>Remarks: when the pressure is more than 350kpa, the water-cooled plate will be deformed and cause the risk of coolant</p>
Liquid medium	<p>First-level deionized water: meet the requirements of the national standard GB/T 6682-2008 first-level deionized water</p> <p>Notice:</p> <p>1) If the water conductivity is ≥100us/cm, the medium must be replaced;</p> <p>2) The water conductivity is less than 5us/cm when the system is running for the first time.</p>
Liquid PH	Control range: 6~8
Liquid medium circulation system(Machine side)	<ul style="list-style-type: none"> <li><input type="checkbox"/> Anti-rust and anti-corrosion of pipeline;</li> <li><input type="checkbox"/> The particle diameter of the liquid medium is ≤53 microns, that is, the circulation system is equipped with a 270 mesh filter;</li> <li><input type="checkbox"/> Before connecting the cabinet to the heat dissipation system, clean and filter the system pipeline with deionized water to remove dust, welding slag and other impurities;</li> <li><input type="checkbox"/> The temperature resistance of system components is above 85°C;</li> <li><input type="checkbox"/> The circulatory system is recommended to be equipped with a UV lamp sterilization device to prevent the liquid from breeding bacteria and attenuate the heat dissipation capacity of the system;</li> <li><input type="checkbox"/> The system is equipped with a 4bar safety relief valve;</li> <li><input type="checkbox"/> The system is equipped with a constant pressure expansion tank.</li> </ul> <p>Note: when the temperature of the coolant rises after the miner is turned on the pressure will rise.</p>
Humidity	<ul style="list-style-type: none"> <li><input type="checkbox"/> Working humidity: 5%RH~85%RH (non-condensing)</li> <li><input type="checkbox"/> Storage humidity: 5%RH~95%RH (non-condensing)</li> <li><input type="checkbox"/> Long-term storage humidity: 30%RH~69%RH (no condensation)</li> </ul>

Remarks: The above liquid temperature and flow parameters are based on deionized water as the liquid medium. If the liquid medium uses antifreeze, the liquid temperature and flow parameters need to be calculated separately. Table 2 shows an example of 30% glycol antifreeze temperature and flow parameters.

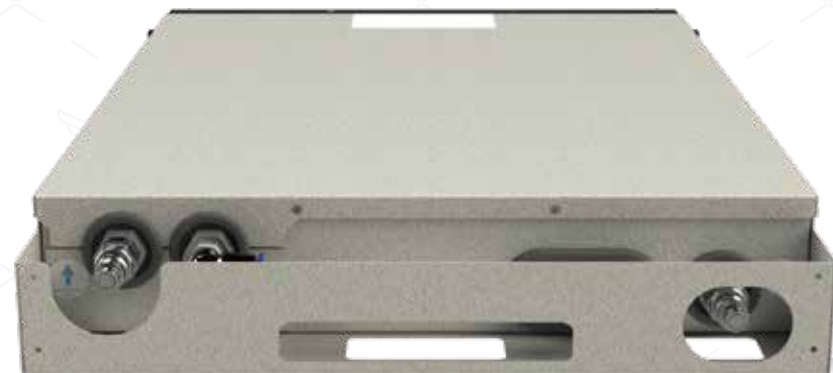
Table2 Example of temperature and flow parameters of 30% ethylene glycol antifreeze

Temperature	<ul style="list-style-type: none"> <li><input type="checkbox"/> Working temperature (inlet): 15°C~45°C@normal mode 15°C~35°C@high performance mode</li> <li><input type="checkbox"/> Inlet temperature control accuracy ± 2°C</li> <li><input type="checkbox"/> Storage and transportation temperature: -40~70°C</li> </ul> <p>Note: please empty the liquid in the equipment during storage and transportation.</p>
Flow	<ul style="list-style-type: none"> <li><input type="checkbox"/> Limited Data: ≥11L/min</li> <li><input type="checkbox"/> Flow control accuracy ± 10%</li> </ul> <p>Remarks: The temperature difference between the inlet and outlet liquids at this flow rate is close to 10°C@normal mode, 14°C@high-performance mode)</p>

Warranty Period	One year after leaving the factory
After-sales Contact Information	<p>1. Email: Support@microbt.com</p> <p>2. Telegram Group: @WhatsMiner Community</p>

# WHATSMINER M33S+

## Hydro Cooling



### SPECIFICATION

Hashrate	198~220T ± 10%
Power Ratio	34J/T ± 5%
PSU	AC380~480V, 3W+ ground, input 10kw
Size	86mm*482.6mm*663mm with handle
Weight	Net weight: 27.5kg    Weight with packaging materials: 30kg
Coolant demand per machine	About 1L
Power Cable Model	Custom made, ≥16A
Internet Connections	Ethernet

### ENVIRONMENTAL PARAMETERS

- Liquid temperature
- Working temperature (inlet): 20°C~50°C@normal mode  
20°C~40°C@high performance mode;
  - Inlet temperature control accuracy ± 2°C
  - Storage and transportation temperature: -40~70°C

Note: please empty the liquid in the equipment during storage and transportation.

- Liquid flow
- Limited Data: ≥10L/min
  - Flow control accuracy ± 10%
- Remarks: 10L/min corresponds to the temperature difference between inlet and outlet water close to 10°C@normal mode, 14°C @high performance mode

Liquid pressure	<p>≤350kpa</p> <p>Remarks: when the pressure is more than 350kpa, the water-cooled plate will be deformed and cause the risk of coolant leakage.</p>
Liquid medium	<p>First-level deionized water: meet the requirements of the national standard GB/T 6682-2008 first-level deionized water</p> <p>Notice:                      1) If the water conductivity is ≥100us/cm, the medium must be replaced;                      2) The water conductivity is less than 5us/cm when the system is running for the first time.</p>
Liquid PH	Control range: 6~8
Liquid medium circulation system(Machine side)	<ul style="list-style-type: none"> <li><input type="checkbox"/> Anti-rust and anti-corrosion of pipeline;</li> <li><input type="checkbox"/> The particle diameter of the liquid medium is ≤53 microns, that is, the circulation system is equipped with a 270 mesh filter;</li> <li><input type="checkbox"/> Before connecting the cabinet to the heat dissipation system, clean and filter the system pipeline with deionized water to remove dust, welding slag and other impurities;</li> <li><input type="checkbox"/> The temperature resistance of system components is above 85℃;</li> <li><input type="checkbox"/> The circulatory system is recommended to be equipped with a UV lamp sterilization device to prevent the liquid from breeding bacteria and attenuate the heat dissipation capacity of the system;</li> <li><input type="checkbox"/> The system is equipped with a 4bar safety relief valve;</li> <li><input type="checkbox"/> The system is equipped with a constant pressure expansion tank.</li> </ul> <p>Note: when the temperature of the coolant rises after the miner is turned on the pressure will rise.</p>
Humidity	<ul style="list-style-type: none"> <li><input type="checkbox"/> Working humidity: 5%RH~85%RH (non-condensing)</li> <li><input type="checkbox"/> Storage humidity: 5%RH~95%RH (non-condensing)</li> <li><input type="checkbox"/> Long-term storage humidity: 30%RH~69%RH (no condensation)</li> </ul>

Remarks: The above liquid temperature and flow parameters are based on deionized water as the liquid medium. If the liquid medium uses antifreeze, the liquid temperature and flow parameters need to be calculated separately. Table 2 shows an example of 30% glycol antifreeze temperature and flow parameters.

Table2 Example of temperature and flow parameters of 30% ethylene glycol antifreeze

Temperature	<ul style="list-style-type: none"> <li><input type="checkbox"/> Working temperature (inlet): 15℃~45℃@normal mode 15℃~35℃@high performance mode</li> <li><input type="checkbox"/> Inlet temperature control accuracy ± 2℃</li> <li><input type="checkbox"/> Storage and transportation temperature: -40~70℃</li> </ul> <p>Note: please empty the liquid in the equipment during storage and transportation.</p>
Flow	<ul style="list-style-type: none"> <li><input type="checkbox"/> Limited Data: ≥11L/min</li> <li><input type="checkbox"/> Flow control accuracy± 10%</li> </ul> <p>Remarks: The temperature difference between the inlet and outlet liquids at this flow rate is close to 10℃@normal mode, 14℃@high-performance mode)</p>

Warranty Period	One year after leaving the factory
After-sales Contact Information	1. Email: Support@microbt.com 2. Telegram Group: @WhatsMiner Community

# WHATSMINER M50S+

## Air Cooling



### Components

Power Supply, Fan, Control Board, Hash Board, Case

### Flashing Light Introduction

Blinking Green Light:  
Working normally

Green and Red Lights Alternately Flashing:  
Alarm status and need to find the response error code

### Safety Guidelines

Please check if there is any obvious physical failure before power on, beware of electric shock  
The product must be kept away from water sources and must not be operated in a humid environment  
It requires professionals to carry out daily maintenance on the product  
It is forbidden to directly touch the product by hand when power is on  
Please use the stable voltage  
The size of the air outlet: 143\*218mm, refer to the relevant documents for the specific shape(website-support-download)

### Warranty Period

One year after leaving the factory

### After-sales Contact Information

1. Email: Support@microbt.com
2. Telegram Group: @WhatsMiner Community

## SPECIFICATION

Hashrate	130~142T ± 5%	Size	430mm*155mm*226mm
Power Ratio	24J/T ± 5%@25° C	Weight	11.7KG
Power On Wall	3120~340W ± 10%	Internet Connections	Ethernet
Working Temperature	-5° C ~ 35° C	Power Cable Model	IEC C19, ≥16A
Air flow	350CFM	PSU Model	P221B/P222B AC220V ~ 240V



# WHATSMINER M50S

## Air Cooling



Components

Power Supply, Fan, Control Board, Hash Board, Case

Flashing Light Introduction

Blinking Green Light:  
Working normally

Green and Red Lights Alternately Flashing:  
Alarm status and need to find the response error code

Safety Guidelines

1. Please check if there is any obvious physical failure before power on, beware of electric shock
2. The product must be kept away from water sources and must not be operated in a humid environment
3. It requires professionals to carry out daily maintenance on the product
4. It is forbidden to directly touch the product by hand when power is on
5. Please use the stable voltage
6. The size of the air outlet: 143\*218mm, refer to the relevant documents for the specific shape(website-support-download)

Warranty Period

One year after leaving the factory

After-sales Contact Information

1. Email: Support@microbt.com
2. Telegram Group: @WhatsMiner Community

### SPECIFICATION

Hashrate	120~130T ± 5%	Size	430mm*155mm*226mm
Power Ratio	26J/T ± 5%@25° C	Weight	11.7KG
Power On Wall	3120~3380W ± 10%	Internet Connections	Ethernet
Working Temperature	-5° C ~ 35° C	Power Cable Model	IEC C19, ≥16A
Air flow	350CFM	PSU Model	P221B/P222B AC220V ~ 240V

# WHATSMINER M50

## Air Cooling



Components

Power Supply, Fan, Control Board, Hash Board, Case

Flashing Light Introduction

Blinking Green Light:  
Working normally

Green and Red Lights Alternately Flashing:  
Alarm status and need to find the response error code

Safety Guidelines

1. Please check if there is any obvious physical failure before power on, beware of electric shock
2. The product must be kept away from water sources and must not be operated in a humid environment
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4. It is forbidden to directly touch the product by hand when power is on
5. Please use the stable voltage
6. The size of the air outlet: 143\*218mm, refer to the relevant documents for the specific shape(website-support-download)

Warranty Period

One year after leaving the factory

After-sales Contact Information

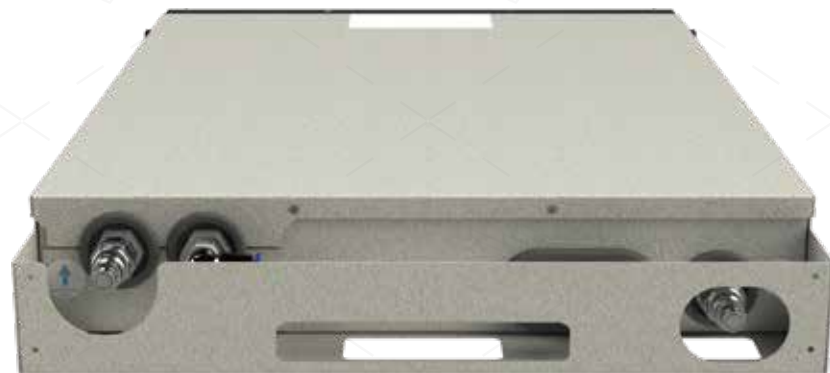
1. Email: Support@microbt.com
2. Telegram Group: @WhatsMiner Community

### SPECIFICATION

Hashrate	110~120T ± 5%	Size	430mm*155mm*226mm
Power Ratio	29J/T ± 5%@25° C	Weight	11.7KG
Power On Wall	3190~3480W ± 10%	Internet Connections	Ethernet
Working Temperature	-5° C ~ 35° C	Power Cable Model	IEC C19, ≥16A
Air flow	350CFM	PSU Model	P221B/P222B AC220V ~ 240V

# WHATSMINER M53S

## Hydro Cooling



### SPECIFICATION

Hashrate	264~288T $\pm$ 10%
Power Ratio	26J/T $\pm$ 5%
PSU	AC380~480V, 3W+ ground, input 10kw
Size	86mm*482.6mm*663mm with handle
Weight	Net weight: 27.5kg    Weight with packaging materials: 30kg
Coolant demand per machine	About 1L
Power Cable Model	Custom made, $\geq$ 16A
Internet Connections	Ethernet

### ENVIRONMENTAL PARAMETERS

Liquid temperature	<input type="checkbox"/> Working temperature (inlet): 20 $^{\circ}$ C~50 $^{\circ}$ C@normal mode 20 $^{\circ}$ C~40 $^{\circ}$ C@high performance mode; <input type="checkbox"/> Inlet temperature control accuracy $\pm$ 2 $^{\circ}$ C <input type="checkbox"/> Storage and transportation temperature: -40~70 $^{\circ}$ C  Note: please empty the liquid in the equipment during storage and transportation.
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Liquid flow	<input type="checkbox"/> Limited Data: $\geq$ 10L/min <input type="checkbox"/> Flow control accuracy $\pm$ 10%  Remarks: 10L/min corresponds to the temperature difference between inlet and outlet water close to 10 $^{\circ}$ C@normal mode, 14 $^{\circ}$ C@high performance mode
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Liquid pressure	<p>≤350kpa</p> <p>Remarks: when the pressure is more than 350kpa, the water-cooled plate will be deformed and cause the risk of coolant leakage.</p>
Liquid medium	<p>First-level deionized water: meet the requirements of the national standard GB/T 6682-2008 first-level deionized water</p> <p>Notice:                      1) If the water conductivity is ≥100us/cm, the medium must be replaced;                      2) The water conductivity is less than 5us/cm when the system is running for the first time.</p>
Liquid PH	Control range: 6~8
Liquid medium circulation system(Machine side)	<ul style="list-style-type: none"> <li><input type="checkbox"/> Anti-rust and anti-corrosion of pipeline;</li> <li><input type="checkbox"/> The particle diameter of the liquid medium is ≤53 microns, that is, the circulation system is equipped with a 270 mesh filter;</li> <li><input type="checkbox"/> Before connecting the cabinet to the heat dissipation system, clean and filter the system pipeline with deionized water to remove dust, welding slag and other impurities;</li> <li><input type="checkbox"/> The temperature resistance of system components is above 85℃;</li> <li><input type="checkbox"/> The circulatory system is recommended to be equipped with a UV lamp sterilization device to prevent the liquid from breeding bacteria and attenuate the heat dissipation capacity of the system;</li> <li><input type="checkbox"/> The system is equipped with a 4bar safety relief valve;</li> <li><input type="checkbox"/> The system is equipped with a constant pressure expansion tank.</li> </ul> <p>Note: when the temperature of the coolant rises after the miner is turned on the pressure will rise.</p>
Humidity	<ul style="list-style-type: none"> <li><input type="checkbox"/> Working humidity: 5%RH~85%RH (non-condensing)</li> <li><input type="checkbox"/> Storage humidity: 5%RH~95%RH (non-condensing)</li> <li><input type="checkbox"/> Long-term storage humidity: 30%RH~69%RH (no condensation)</li> </ul>

Remarks: The above liquid temperature and flow parameters are based on deionized water as the liquid medium. If the liquid medium uses antifreeze, the liquid temperature and flow parameters need to be calculated separately. Table 2 shows an example of 30% glycol antifreeze temperature and flow parameters.

Table2 Example of temperature and flow parameters of 30% ethylene glycol antifreeze

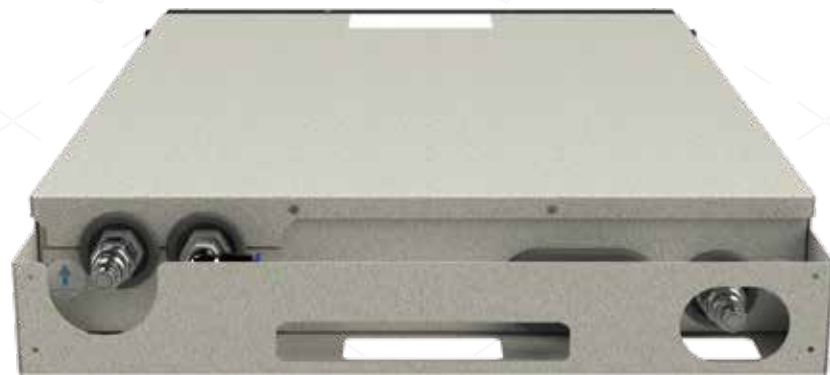
Temperature	<ul style="list-style-type: none"> <li><input type="checkbox"/> Working temperature (inlet): 15℃~45℃@normal mode 15℃~35℃@high performance mode</li> <li><input type="checkbox"/> Inlet temperature control accuracy ± 2℃</li> <li><input type="checkbox"/> Storage and transportation temperature: -40~70℃</li> </ul> <p>Note: please empty the liquid in the equipment during storage and transportation.</p>
Flow	<ul style="list-style-type: none"> <li><input type="checkbox"/> Limited Data: ≥11L/min</li> <li><input type="checkbox"/> Flow control accuracy± 10%</li> </ul> <p>Remarks: The temperature difference between the inlet and outlet liquids at this flow rate is close to 10℃@normal mode, 14℃@high-performance mode)</p>

Warranty Period	One year after leaving the factory
After-sales Contact Information	<ol style="list-style-type: none"> <li>1. Email: Support@microbt.com</li> <li>2. Telegram Group: @WhatsMiner Community</li> </ol>



# WHATSMINER M53

## Hydro Cooling



### SPECIFICATION

Hashrate	226~250T $\pm$ 10%
Power Ratio	29J/T $\pm$ 5%
PSU	AC380~480V, 3W+ ground, input 10kw
Size	86mm*482.6mm*663mm with handle
Weight	Net weight: 27.5kg    Weight with packaging materials: 30kg
Coolant demand per machine	About 1L
Power Cable Model	Custom made, $\geq$ 16A
Internet Connections	Ethernet

### ENVIRONMENTAL PARAMETERS

Liquid temperature	<input type="checkbox"/> Working temperature (inlet): 20 $^{\circ}$ C~50 $^{\circ}$ C@normal mode 20 $^{\circ}$ C~40 $^{\circ}$ C@high performance mode; <input type="checkbox"/> Inlet temperature control accuracy $\pm$ 2 $^{\circ}$ C <input type="checkbox"/> Storage and transportation temperature: -40~70 $^{\circ}$ C
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Note: please empty the liquid in the equipment during storage and transportation.

Liquid flow	<input type="checkbox"/> Limited Data: $\geq$ 10L/min <input type="checkbox"/> Flow control accuracy $\pm$ 10%
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Remarks: 10L/min corresponds to the temperature difference between inlet and outlet water close to 10  $^{\circ}$ C@normal mode, 14  $^{\circ}$ C@high performance mode

Liquid pressure	<p>≤350kpa</p> <p>Remarks: when the pressure is more than 350kpa, the water-cooled plate will be deformed and cause the risk of coolant leakage.</p>
Liquid medium	<p>First-level deionized water: meet the requirements of the national standard GB/T 6682-2008 first-level deionized water</p> <p>Notice:                      1) If the water conductivity is ≥100us/cm, the medium must be replaced;                      2) The water conductivity is less than 5us/cm when the system is running for the first time.</p>
Liquid PH	Control range: 6~8
Liquid medium circulation system(Machine side)	<ul style="list-style-type: none"> <li><input type="checkbox"/> Anti-rust and anti-corrosion of pipeline;</li> <li><input type="checkbox"/> The particle diameter of the liquid medium is ≤53 microns, that is, the circulation system is equipped with a 270 mesh filter;</li> <li><input type="checkbox"/> Before connecting the cabinet to the heat dissipation system, clean and filter the system pipeline with deionized water to remove dust, welding slag and other impurities;</li> <li><input type="checkbox"/> The temperature resistance of system components is above 85℃;</li> <li><input type="checkbox"/> The circulatory system is recommended to be equipped with a UV lamp sterilization device to prevent the liquid from breeding bacteria and attenuate the heat dissipation capacity of the system;</li> <li><input type="checkbox"/> The system is equipped with a 4bar safety relief valve;</li> <li><input type="checkbox"/> The system is equipped with a constant pressure expansion tank.</li> </ul> <p>Note: when the temperature of the coolant rises after the miner is turned on the pressure will rise.</p>
Humidity	<ul style="list-style-type: none"> <li><input type="checkbox"/> Working humidity: 5%RH~85%RH (non-condensing)</li> <li><input type="checkbox"/> Storage humidity: 5%RH~95%RH (non-condensing)</li> <li><input type="checkbox"/> Long-term storage humidity: 30%RH~69%RH (no condensation)</li> </ul>

Remarks: The above liquid temperature and flow parameters are based on deionized water as the liquid medium. If the liquid medium uses antifreeze, the liquid temperature and flow parameters need to be calculated separately. Table 2 shows an example of 30% glycol antifreeze temperature and flow parameters.

Table2 Example of temperature and flow parameters of 30% ethylene glycol antifreeze

Temperature	<ul style="list-style-type: none"> <li><input type="checkbox"/> Working temperature (inlet): 15℃~45℃@normal mode 15℃~35℃@high performance mode</li> <li><input type="checkbox"/> Inlet temperature control accuracy ± 2℃</li> <li><input type="checkbox"/> Storage and transportation temperature: -40~70℃</li> </ul> <p>Note: please empty the liquid in the equipment during storage and transportation.</p>
Flow	<ul style="list-style-type: none"> <li><input type="checkbox"/> Limited Data: ≥11L/min</li> <li><input type="checkbox"/> Flow control accuracy± 10%</li> </ul> <p>Remarks: The temperature difference between the inlet and outlet liquids at this flow rate is close to 10℃@normal mode, 14℃@high-performance mode)</p>

Warranty Period	One year after leaving the factory
After-sales Contact Information	1. Email: Support@microbt.com 2. Telegram Group: @WhatsMiner Community

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