



Beijing Multifit Electrical Technology Co.,Ltd

Solar Panel Cleaning Brush

(Semi-Automatic)

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Scrape Brush



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MULR-A Scrape Brush

Product Characteristics:

- The integrated design of scraping and brushing, one brush for dual use, convenient to carry, easy to clean, and durable.
- Y-shaped universal joint, easy to adjust angle, perfectly fits the surface of the object during cleaning.
- Avoid scratches caused by cleaning solar panels with hard objects. The rubber scraper design doesn't damage the solar module and is used to scrape snow and water.
- The brush disc adopts an integrated molding bristle planting process, which is not easy to fall off and has a wide cleaning range;
- High quality aluminum alloy telescopic rod, good texture and strong toughness, not easy to deform or bend. Customized adjustable telescopic rod with multi-sections according to the length range you need to clean

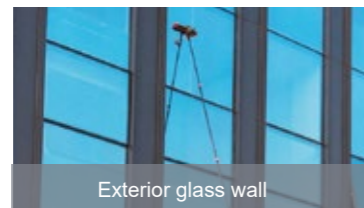


Water Spray Pump:
60W water pump (optional) is equipped.
Pumping height (lift) can be more than 50m.

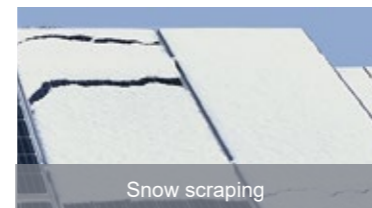
Use Scenarios



Solar panel system



Exterior glass wall



Snow scraping



01



MULR-A Scrape Brush

Brush Head		Bristles	
Size	350mm	Size	2.8 inch Width 70mm
			3.9 inch Length 100mm
Material	Engineering Plastics	Material	Made of PP
Telescopic rod (Aluminum alloy)			
Size	3.6M(12ft)	Weight	3.35kg
	5.4M(18ft)		3.95kg
	6M(20ft)		4.3kg
	7.2M(24ft)		4.65kg
	9M(30ft)		5.4kg
	10.8M(36ft)		5.7kg
REMARKS: The telescopic rod is selected according to the product distance you need to clean, and customized according to the data sheet			

02

Solar Panel Cleaning Brush

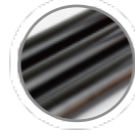
High Quality Telescopic Pole:



Aluminum alloy pole
Sections 4 - 9
Customization



Aluminum pole tube
thickness:
0.8 & 1mm



Aluminum pole size:
12FT 18FT 20FT 24FT
30FT 36FT



Carbon fiber pole sections:
Sections 4 to 9
Customization



Carbon fiber pole tube
thickness:
0.8 & 1mm



Carbon fiber pole size:
12FT 18FT 20FT 24FT
30FT 36FT



The tube is durable and comfortable with a smooth wall, which has a good texture and sponge handle.

03

Solar Panel Cleaning Brush

Technical Data:



Scraper

Material: Rubber blade

Size: 350mm



Brush

Material: Made of PP

Size: 2.8 / 3.9 inch

The telescopic rod is a thickened all-black aluminum alloy telescopic rod. The length is: 3.6m (12FT), 5.4m (18FT), 6m (20FT), 7.2m (24FT), 9m (30FT) and 10.8m (36FT), which can support custom length;



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MULR-B Single Head Brush

Product Characteristics:

- You can carry lithium battery in a backpack , easy to carry.
- The length of the water supply pipe can be customized, please call for consultation.
- The angle of the brush head fits the solar panel, which can be adjusted with the angle of the solar panel.
- Battery life: can be used continuously for 6-7 hours.
- The length of the telescopic pole is adjustable. The shorter the pole, the lighter it is.
- The bristles are moderately soft and hard ,do not harm the photovoltaic panel.

Use Scenarios



Solar Panel



High-Exterior Walls



Billboard / Doorhead

BRUSH



Technical Data:

MODEL	Power Supply	Accessory	Water Supply
MULR-B01	Be connected to 110-240V power source	Water pipe and accessories*1 Cable extension line*1(8m) Telescopic rod*1 (3.5/5.5/7.5m Optional) Adapter*1 Brush head assembly * 1 set (including 1 pcs brush discs)	Standard water pressure 0.3-0.4mpa Water pipe contains water control valve, can be connected to user's water source
MULR-B02	Be connected to lithium battery (battery can be put in backpack and carried by operator)	Lithium Battery *1 Water pipe and accessories*1 Backpack*1 Battery cable with button*1 Telescopic rod*1 (3.5/5.5/7.5m Optional) Battery charger*1 Brush head assembly * 1 set (including 1 pcs brush discs)	
MULR-B03	Be connected to 110-240V power source, or to lithium battery (user can choose suitable type for different cleaning environment)	Lithium Battery *1 Backpack*1 Battery cable with button*1 Battery charger*1 Adapter*1 Cable extension line*1(8m) Water pipe and accessories*1 Telescopic rod*1 (3.5/5.5/7.5m Optional) Brush head assembly * 1 set (including 1 pcs brush discs)	

Product Details :



Brush Head with Motor:

24V DC high-power drive motor, rated power 80W*2, rated voltage 24V, speed 200rpm

Weight: brush head assembly with brush disc (2.41kg)

Diameter of the Brush Disc: 280mm

Material: PP

Number of bristle circles: 8

Telescopic Rod:

Telescopic material:

Glass Fiber/Carbon Fiber/Aluminum Alloy

Wall thickness: 1-1.2mm

Diameter: φ39, φ43, φ47 (Optional)

Length: 1.5-3.5m / 1.7-5.5m / 1.9-7.5m (Optional)



Accessories:

1/2 inch PVC water pipe (15 Meters Length)

1/2 Inch Brass Valve , 1/2 Inch Internal Thread Connector, 1/2 Inch PCF Quick Connector (φ10) , 1/2 PVC Water Pipe Plastic Joint, Spanner

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Power Supply :

MULR-B01

Mains Supply Accessories:



AC Supply (100V-240V)

1. Adapter
2. Power cable(8M)

MULR-B02

Battery Supply Accessories



Lithium Battery DC Supply

1. Lithium battery (Working hours: 6-7h)
2. Spring wire with switch button
3. Lithium battery charger (24V)

MULR-B03

Dual DC and AC Supply



1. Adapter
2. Power cable(8M)
3. Lithium battery
4. Lithium battery charger (24V)
5. Spring wire with switch button

Large-capacity and portable backpack Battery Supply Accessories

08

MULR-C Double head brush

Product Introduction

One of the most popular solar panel cleaning products.
 Double headed cleaning brush for more efficient and convenient cleaning
 The brush head has a water outlet, and when the brush head is turned on, the water will flow out.

Product Characteristics:



Large-capacity
and portable backpack



AC Supply

Lithium Battery
DC Supply

PVC water pipe (15M)



- Dual DC and AC Supply accessories are carried in a backpack, easy to carry.
- The length of the water supply pipe can be customized, please call for consultation.

- The angle of the brush head fits the solar panel, which can be adjusted with the angle of the solar panel.
- The shorter the pole, the lighter it is, the telescopic pole can be adjusted in length.



- The bristles are moderately soft and hard, and do not harm the photovoltaic panel.

- Battery life:
Can be used continuously for 4-5 hours.



MULR-C Double Head Brush



Brush Head with Motor:

24V DC high-power drive motor, rated power 80W*2, rated voltage 24V, speed 200rpm

Weight: brush head assembly with brush discs (4kg)

Diameter of the Brush Disc: (280mm*2)

Material: PP

Number of bristle circles: 8

Telescopic Rod:

Telescopic material:

Glass Fiber/Carbon Fiber/Aluminum Alloy

Wall thickness: 1-1.2mm

Diameter: $\phi 39$, $\phi 43$, $\phi 47$ (Optional)

Length: 1.5-3.5m / 1.7-5.5m / 1.9-7.5m (Optional)



Accessories:

1/2 Inch Brass Valve , 1/2 Inch Internal Thread Connector, 1/2 Inch PCF

Quick Connector ($\phi 10$) , 1/2 PVC Water Pipe Plastic Joint, Spanner



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Power Supply:

MULR-C01

Mains Supply Accessories:



AC Supply (100V-240V)

1. Adapter
2. Power cable(8M)

MULR-C02

Battery Supply Accessories



Lithium Battery DC Supply

1. Lithium battery (Working hours: 4-5h)
2. Spring wire with switch button
3. lithium battery charger (24V)

MULR-C03

Dual DC and AC Supply



1. Adapter
2. Power cable(8M)
3. Lithium battery
4. lithium battery charger (24V)
5. Spring wire with switch button

Large-capacity and portable backpack
Battery Supply Accessories

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Technical Data :

MODEL	Power Supply	Accessory	Water Supply
MULR-C01	Be connected to 110-240V power source	Water pipe and accessories*1 Cable extension line*1(8m) Adapter*1 Brush head assembly * 1 set (including 1 pair of brush discs) Telescopic rod*1 (3.5/5.5/7.5m Optional)	
MULR-C02	Be connected to lithium battery (battery can be put in backpack and carried by operator)	Lithium Battery *1 Backpack*1 Water pipe and accessories*1 Battery cable with button*1 Battery charger*1 Brush head assembly * 1 set (including 1 pair of brush discs) Telescopic rod*1 (3.5/5.5/7.5m Optional)	Standard water pressure 0.3-0.4mpa Water pipe contains water control valve, can be connected to user's water source
MULR-C03	Connect to 110-240V power source, or to lithium battery (user can choose suitable type for different cleaning environment)	Lithium Battery *1 Backpack*1 Battery cable with button*1 Battery charger*1 Adapter*1 Cable extension line*1(8m) Water pipes and accessories*1 Brush head assembly * 1 set (including 1 pair of brush discs) Telescopic rod*1 (3.5/5.5/7.5m Optional)	



MULR-D Rolling Brush

Product Characteristics:

- The Spinning Velocity of our Roller Brush is 400rpm. It has two cleaning models and even the dry cleaning model without the water has the prominent efficiency. It can effectively clean every corner of solar panels and it can be widely adapted to clean all sizes and models of solar panels.
- The angle of the brush head can be adjusted and perfectly attached on the surface of the solar panel.
- The material of Telescope Rod can be chosen according to the Customers choose.
- The Maximum length of Telescope Rod is 7.5 Meters and the Telescope Rod can be extended or shrink. The clap can be easily locked to prevent the length of Telescope Rod to be shrinked. The length of Telescope Rod can be easily adjusted.
- The lithium battery pack can last about 5-6 hours, and you won't be tired. it is more convenient to clean.
- The weight of the machine is reduced by 35%, and the lightest is only 5.7KG. The cleaning is easier, the labor intensity is reduced, and the day is not tired.



MULR-D Rolling Brush



Brush Head with Motor:

24V DC high-power drive motor
speed 400rpm

Telescopic Rod:

Telescopic material:

Glass Fiber/Carbon Fiber/Aluminum Alloy

Wall thickness: 1-1.2mm

Diameter: φ39, φ43, φ47 (Optional)

Length: 1.5-3.5m / 1.7-5.5m / 1.9-7.5m (Optional)



Water Pump (Option): Site bucket water collection

Solar array length less than 300M	Power supply 220VAC	12VDC, Suction lift 1.5m lift 50m, flow 5L/min Adapter (220VAC-12VDC)
Solar array length less than 300M	Without power supply	12VDC, suction lift 2m, lift 55m, Flow 8L/min, power display, Lithium battery (12V10AH)
Solar array length less than 800M	Power supply 220VAC	220V5.5kW, Suction lift 8m, Lift 100m, Flow 10m³/h

Power Supply:

MULR-D01

Mains Supply Accessories:



AC Supply (100V-240V)

1. Adapter
2. Power cable(8M)

MULR-D02

Battery Supply Accessories



Lithium Battery DC Supply

1. Lithium battery
2. Spring wire with switch button
3. lithium battery charger (24V)

MULR-D03

Dual DC and AC Supply



1. Adapter
2. Power cable(8M)
3. Lithium battery
4. Lithium battery charger (24V)
5. Spring wire with switch button



Large-capacity and portable backpack
Battery Supply Accessories





Technical Data


Name	Solar panel cleaning rolling brush	Model	MULR-D
Application	Apply to small rooftop PV arrays and irregular PV arrays		
Technical Specification	Rated Voltage	24V	
	Size	Φ130mm*650mm	
	Rotating Speed	400rpm	
	Function	Washing/dry cleaning	
	Telescopic Rod	Glass fiber,option length 3.5m,5.5m,7.5m	
	Accessory	1/2 inch PVC water pipe (15 Meters Length) 1/2 Inch Brass Valve ,1/2 Inch Internal Thread Connector,1/2 Inch PCF Quick Connector (φ10) ,1/2 PVC Water Pipe Plastic Joint , Spanner	
		Single head open stamping wrench (16mm、24mm)	
	AC (MULR-D01)	Cable extension line(8m), adapter(110-120VAC/220-240VAC optional)	
	DC (MULR-D02)	Spring wire, lithium battery(24V10AH) with charger,backpack, adapter	
	Dual (MULR-D03)	Cable extension line(8m), adapter(110-120VAC/220-240VAC option),Spring wire, lithium battery(24V10AH) with charger,backpack	





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