

QINGDAO HVON
BOAT CO. LTD



CATALOG

MAIN PRODUCTS

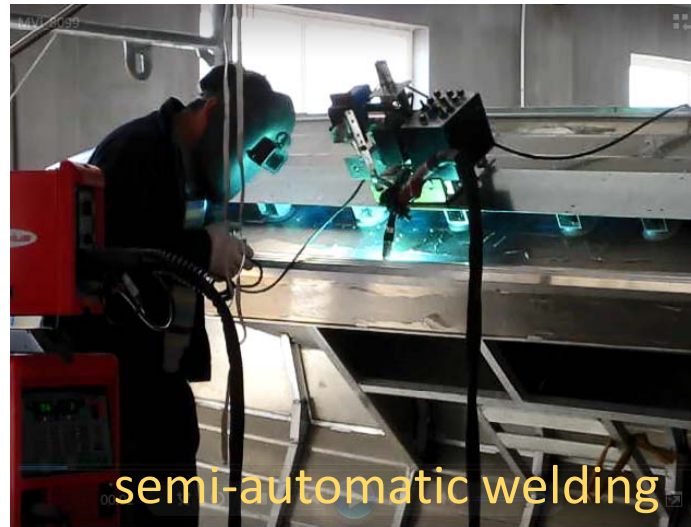
- 1 Aluminum Alloy Fishing Boat
- 2 Unmanned Vessel
- 3 Rescue and Entertainment Equipment
- 4 PV Mounting Kits

Brief Introduction

Since the establishment of Qingdao Hvon, it is not only dwelling on our domestic markets, but also energetically exploiting international markets. After ten years of continuous research and development and innovation, the company have produced a number of products with independent intellectual property rights, such as aluminum alloy fishing boats, unmanned vessel, water rescue and entertainment equipment, aluminum alloy pv bracket, FRP yacht, etc. for customers both at home and abroad. At present, Hvon have many customers in Qingdao, Shanghai, Dalian, Ningbo, Australia, Malaysia, Italy, Korea and India.



Fronius



semi-automatic welding





Part 1

Aluminum Alloy Fishing Boat

PART 1 — Aluminum Alloy Fishing Boat

SEAYA series aluminum alloy fishing boats are designed for fishing enthusiasts, a fashionable leisure product made of all aluminum alloy. They are suitable for waters up to 10 kilometers offshore and below 1 meter high waves, covered area of sea surrounded by islands and islands in good condition, as well as areas such as inland rivers, lakes and wide river courses. They are especially suitable for families or friends to go out to the water to relax and fish together, so that everyone can enjoy the fresh air and the beauty of outdoor nature while enjoying the fun of water driving.

SEAYA series aluminum alloy fishing boats are made of marine aluminum plates with classification society certificates. The plate model is 5083H116, which has many advantages such as light weight, strong strength and corrosion resistance.



SEAYA

Aluminium Alloy Fishing Boat

www.qdhvon.com

Main Parameter:

480T Trimaran

Length	4.8m
Width	2.32m
Depth	1.2m
Draft	0.4m
The weight of the empty boat	500kg (exc. OBE) / 600kg (inc. OBE 60hp)
Loadable weight	500kg
Maximum crew capacity	5人
Tank capacity	70L
Recommended outboard engine power	60~80hp





SEAYA

Aluminium Alloy Fishing Boat

www.qdhvon.com

Main Parameter:

480D

Length	4.8m
Width	2.1m
Depth	1.2m
Draft	0.4m
The weight of the empty boat	500kg (exc. OBE) / 600kg (inc. OBE 60hp)
Loadable weight	500kg
Maximum crew capacity	5人
Tank capacity	70L
Recommended outboard engine power	60~80hp





SEAYA

Aluminium Alloy Fishing Boat

www.qdhvon.com

Main Parameter:

480A

Length	4.8m
Width	2.1m
Depth	1.2m
Draft	0.4m
The weight of the empty boat	500kg (exc. OBE) / 600kg (inc. OBE 60hp)
Loadable weight	500kg
Maximum crew capacity	5人
Tank capacity	70L
Recommended outboard engine power	60~80hp





SEAYA

Aluminium Alloy Fishing Boat

www.qdhvon.com

Main Parameter:

580A

Length	5.8m
Width	2.3m
Depth	1.4m
Draft	0.45m
The weight of the empty boat	800kg (exc. OBE) / 1000kg (inc. OBE)
Loadable weight	90hp
Maximum crew capacity	1000kg
Tank capacity	8人
Recommended outboard engine power	150L
	90~120hp





SEAYA

Aluminium Alloy Fishing Boat

www.qdhvon.com



Main Parameter:

Length	5.8m
Width	2.3m
Depth	1.4m
Draft	0.5m
The weight of the empty boat	1100kg(exc.OBE)/1300kg(inc.OBE 90hp)
Loadable weight	800kg
Maximum crew capacity	8人
Tank capacity	150L
Recommended outboard engine power	90~120hp



580D





SEAYA

Aluminium Alloy Fishing Boat

www.qdhvon.com

Main Parameter:

620D

Length 6.2m

Width 2.3m

Depth 1.4m

Draft 0.5m

The weight of the empty boat

1100kg(exc.OBE)/1300kg(inc.OBE 90hp)

Loadable weight 1000kg

Maximum crew capacity 8人

Tank capacity 150L

Recommended outboard engine power 90~150hp



Personalized Customization

SEAYA series aluminum alloy fishing boats are hand-made products with complete configuration, reasonable layout and comfortable ride, therefore, they can create your own unique style according to your needs.





Part 2

Unmanned Vessel

Automatic Flow Measurement USV HV120

Overview

It is designed and developed for the water conservancy and environmental protection departments to measure the river flow rate and the demand for Intelligent telemetry working boats. The boat adopts GPS satellite positioning navigation and integrates advanced robot control technology and automatic navigation technology. It is equipped with a doppler profiler ADCP, which allows the crew to control the ship remotely to measure water flow and flow.



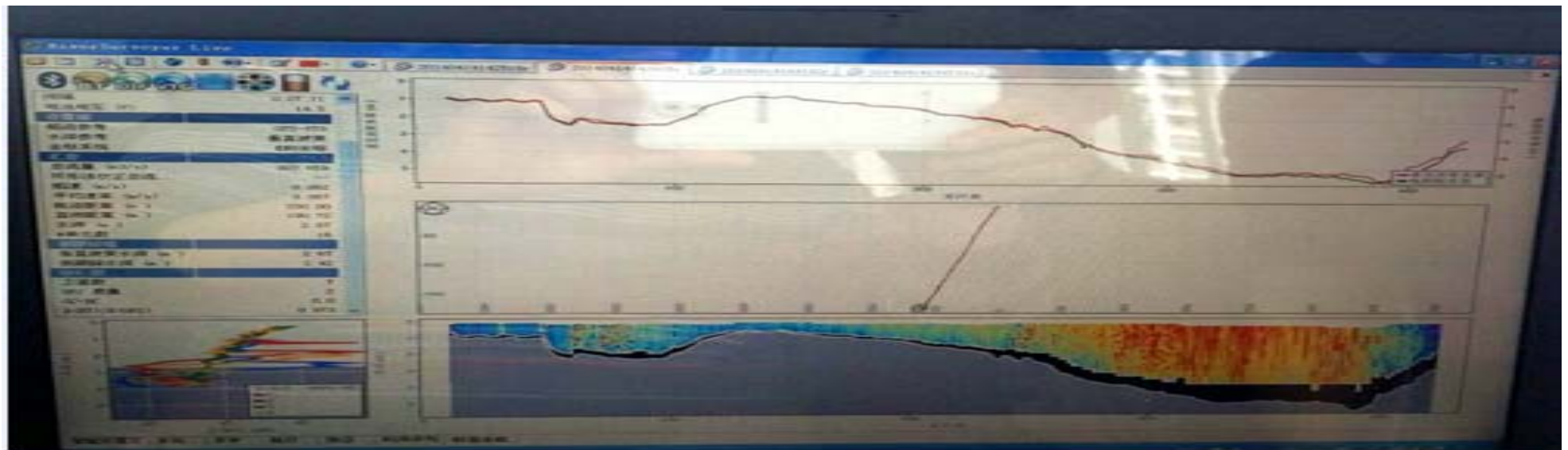
Application field

- The flow velocity measurement
- The flow measurement

• Automatic Flow Measurement USV HV120

Adapted range

- Operating radius 2km;
- Maximum endurance 3h;
- Suitable for rivers, reservoirs, lakes and wharves;
- The data is accurate and reliable, so as to get rid of the dependence of measurement on Bridges and ropes;



• Automatic Flow Measurement USV HV120

Rapid response

- Coordinates of **measurement points** are displayed on satellite maps;
 - Take **two minutes** to formulate the measurement route and plan;
 - The measurement route and scheme can be changed **at any time**
 - Compatible with most ADCP;
 - It is only **1.26m** long and the total weight is no more than **25kg**.
- The operation can be completed by **two people**.



• Automatic Flow Measurement USV HV120



■ Basic parameters

<p>Basic parameters</p>	<p>Hull size (length * width * height) 1260×678×370mm Hull weight 9kg Hull materials Aluminum alloy</p>	
<p>Navigation parameter</p>	<p>Power 48V electric water jet propulsion Cruising ability 2-3h Maximum speed 6m/s Maximum operating radius 2km Navigation mode remote control</p>	
<p>Load parameters</p>	<p>Load capacity 15kg ADCP diameter 50-200mm</p>	
<p>Communication distance</p>	<p>Communication methods Real-time rf point-to-point Communication distance 2km</p>	
<p>Intelligent remote control</p>	<p>Communication mode Real-time rf point-to-point Standby time 10hour Waterproof level IP66 Remote control distance 2km</p>	
<p>Function</p>	<p>Other functions anti-sinking design Safety protection function automatic return after signal interruption</p>	
<p>Configuration list</p>	<p>Intelligent remote control 1 set ADCP doppler profiler 1 set External GPS antenna and receiver 1 set</p>	

Triple-hulled unmanned surveying and mapping USV HV300

■ Overview

The automatic surveying and mapping unmanned ship can carry equipment such as single wave speed, multiple wave speed, ADCP, 3D laser scanning and imaging system. It can carry out automatic and accurate water depth measurement, topography and geomorphology mapping, hydrology mapping and other tasks without manual driving, which greatly liberates manpower and makes hydrological surveying and mapping more efficient and standard



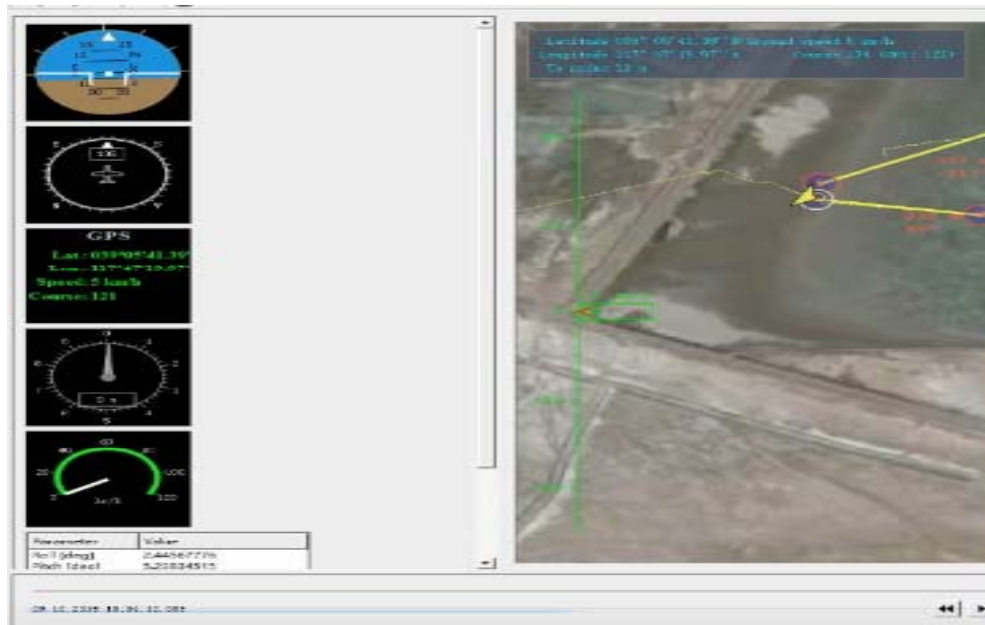
Application field

- Water depth measurement
- Topographic survey
- Hydrological surveying and mapping
- Flow velocity measurement

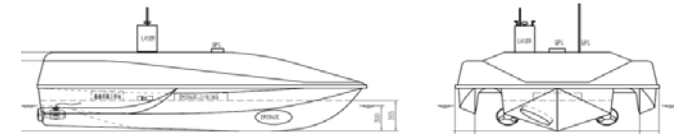
Triple-hulled unmanned surveying and mapping USV HV300

System composition and characteristics

- Three body structure, **sailing smoothly**
- 48V twin – water jet with a speed of more than 6kn can operate continuously for 4 hours
- **Two modes of operation:** near - range wireless remote control and far - range autonomous navigation
- Data transmission over long distances
- With landing platform of aircraft, it can **meet the landing requirements of rotors**
- **The loading weight is up to 150kg**, which meets the installation requirements of various mission loads



• **Triple-hulled unmanned surveying and mapping USV HV300**



<p>Basic parameters</p>	<p>Hull size (length * width * height) 3000×1860×920mm Inert weight : 140kg Hull materials : FRP Color : Ivory white or custom-made</p>
<p>Navigation parameter</p>	<p>Power : 48V electric water jet propulsion Cruising ability : 4h Navigation mode remote control/autonomous navigation Maximun speed : 6kn</p>
<p>Adapted sea condition</p>	<p>Working conditions: level 2</p>
<p>Communication distance</p>	<p>Communication mode: real-time rf point-to-point Data10km : point to point microwave transmission</p>
<p>Base station</p>	<p>Communication mode: real-time rf point-to-point Waterproofing grade: IP66 Remote control distance: 1.5km Standby time: 10h</p>
<p>Base station remote control platform The defense control platform</p>	<p>Communication mode: real-time rf point-to-point waterproofing grade: IP66 Remote control distance: 10km Standby time: 10h</p>
<p>Mode of operation</p>	<p>Manual remote control or autonomous navigation</p>
<p>Configuration list</p>	<p>Multiwave speed depth finder 1set Single wave speed depth finder 1set 3d laser scanning system 1set Base station 1set Base station remote control platform 1set</p>



Dual-hull unmanned surveillance USV HV270

■ Overview

HV270 can be widely used in water law enforcement, water quality monitoring, Marine surveying and mapping and hydrological research. It can be used in coastal, harbor basin, inland river and other non-open water areas. It can also be carried by car or ship.



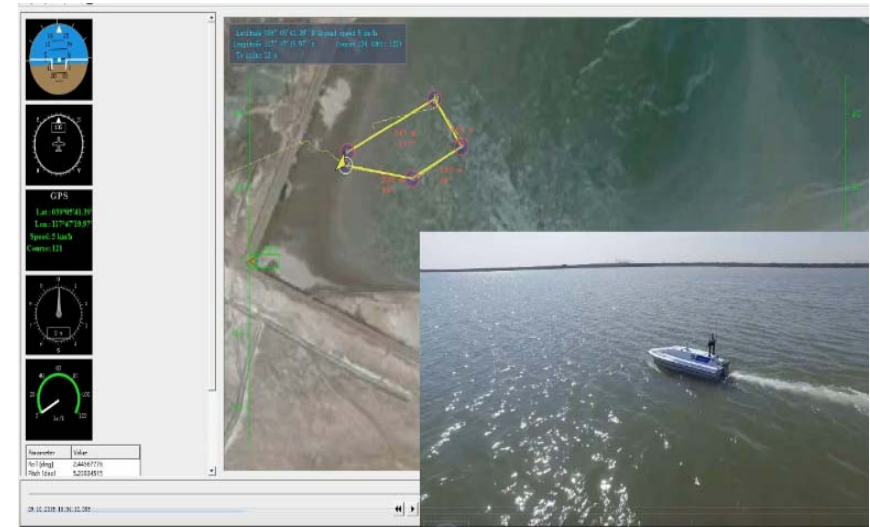
Application field

- Law enforcement
- Underwater measurement
- Maritime search and rescue

System composition and characteristics

- Dual-hull structure, sailing smoothly
- Two modes of operation: near - range wireless remote control and far - range autonomous navigation
- Video/data transmission over long distance
- The loading weight is up to 150kg, which meets the installation requirements of various mission loads

Dual-hull unmanned surveillance USV HV270






surveillance USV HV270
Catamaran



Control system
Remote control and
autonomous navigation



Mission load
a variety of sensors

Basic parameters	Hull size (length * width * height) 2800×1200×700mm Full weight : 100kg Hull material : FRP																
Navigation parameter	Power : 48V water jet propulsion Cruising ability : 5h Maximum speed : 6kn																
Adapted sea condition	Working conditions: level 2																
Communication distance	Video/data > 50km 4G transmission Video 8km/ data 10km point to point microwave transmission																
Base station	Communication mode: real-time rf point-to-point waterproofing grade: IP66 Remote control distance: 1.5km Standby time: 10h																
Base station remote control platform The defense control platform	Communication mode: real-time rf point-to-point waterproofing grade: IP66 Remote control distance: 10km Standby time: 10h																
Mode of operation	Manual remote control or autonomous navigation																
Configuration list	<table border="0"> <tr><td>Surveillance camera</td><td>1 set</td></tr> <tr><td>Microwave communication equipment</td><td>1 set</td></tr> <tr><td>Alarm lights and loudspeaker equipment</td><td>1 set</td></tr> <tr><td>base station</td><td>1 set</td></tr> <tr><td>Base station remote control platform</td><td>1 set</td></tr> <tr><td>Single wave speed depth finder</td><td>1 set</td></tr> <tr><td>Multi-parameter water quality meter</td><td>1 set</td></tr> </table>		Surveillance camera	1 set	Microwave communication equipment	1 set	Alarm lights and loudspeaker equipment	1 set	base station	1 set	Base station remote control platform	1 set	Single wave speed depth finder	1 set	Multi-parameter water quality meter	1 set	
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base station	1 set																
Base station remote control platform	1 set																
Single wave speed depth finder	1 set																
Multi-parameter water quality meter	1 set																

• **Dual-hull unmanned surveillance USV HV270**

Dual-hull water sampling USV HV130

■ Overview

The ship adopts GPS satellite positioning navigation, and integrates advanced robot control technology, automatic navigation technology and 4G network real-time communication technology. It can be used for emergency sampling and water quality monitoring, real-time water quality inspection and quick tracking of pollution sources in water pollution accidents.

It can meet the automatic sampling of water quality within a radius of 5km through wireless microwave point-to-point frequency radiation.



It has self-righting function!

Application field

- Water quality sampling
- Water quality detection
- Wireless communicating
- sounding

Adapted range

Operating radius :0~5km;

Maximum endurance: 5h;

Suitable for large reservoirs, lakes and wharves;

Large capacity multi-point automatic sampling (10 sample bottles, 10 L).

Dual-hull water sampling USV HV130



Dual-hull water sampling USV HV130

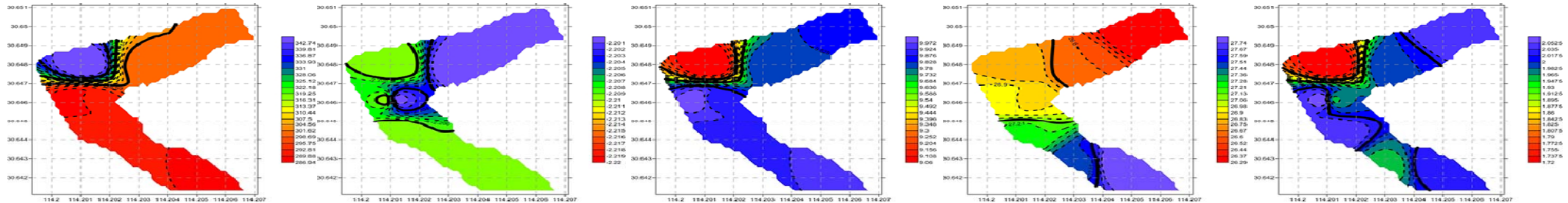


The unmanned ship works automatically according to the set route, monitoring point and sampling point. Ground control base stations use professional software to record and store the specific coordinates and data of monitoring in real time, draw monitoring and sampling reports, and automatically generate water quality parameter distribution maps.

Reports of monitoring data

监测点	时间	纬度	经度	水温	pH	溶解氧浓度	水浊度	电导率
0	2015-5-11 12:01:06	30.65246217(31°39'8.86")	114.27247800(114°16'20.92")	23.003604888916	7.34997081756592	0.699906408786774	-2.20315217971802	1168.90246582031
0	2015-5-11 12:05:22	30.65404383(31°39'14.56")	114.27032367(114°16'13.17")	23.2659568786621	8.51828479766846	2.83517169952393	-2.16488885879517	418.078796386719
0	2015-5-11 12:07:09	30.65334467(31°39'12.04")	114.26975617(114°16'11.12")	23.3545913696289	8.59804439544678	3.01374912261963	-2.16553163528442	397.963500976563
0	2015-5-11 12:09:14	30.65220967(31°39'7.95")	114.26930817(114°16'9.51")	23.5213413238525	8.71912097930908	3.02327346801758	-2.16510391235352	393.279388427734
0	2015-5-11 12:11:09	30.65113517(31°39'4.09")	114.26929200(114°16'9.45")	23.6468029022217	8.74647808074951	3.03875088691711	-2.17026114463806	392.653259277344
0	2015-5-11 12:13:51	30.65149433(31°39'5.38")	114.27044217(114°16'13.59")	23.3316326141357	8.7448148727417	3.14948344230652	-2.16687345504761	393.320739746094
0	2015-5-11 12:15:21	30.65213933(31°39'7.70")	114.27051367(114°16'13.85")	23.4388580322266	8.68057155609131	3.03702521324158	-2.16634225845337	393.018005371094
0	2015-5-11 12:17:18	30.65218700(31°39'7.87")	114.27174083(114°16'18.27")	23.6509437561035	8.73873424530029	3.05776286125183	-2.16652774810791	392.666839599609

Distribution of water quality parameters



Rapid response to pollution emergencies

- Accurate detection of fixed points on the satellite map
- Develop sampling route and scheme within 2 minutes;
- Sampling route and scheme can be changed at any time;
- Get first-hand data and water samples from the pollution exclusion zone;
- Remote real-time video monitoring and warning;
- It is only 1.3m long and the total weight is no more than 50kg for two people



Dual-hull water sampling USV HV130



The screenshot displays the GCS for Panda2 software interface. The main window shows a satellite map with a flight path marked by red lines and waypoints (WP-1 to WP-5). The interface includes a control panel on the left with buttons for '遥控' (Remote Control), '航线飞行' (Route Flight), '定向飞行' (Directional Flight), '返航' (Return Home), '悬停' (Hover), '自动起飞' (Auto Takeoff), and '自动降落' (Auto Landing). A central status bar shows coordinates (2467.2761m, 00:00:00, 00M-00D-00Y) and altitude (8108.2576237 m). The bottom panel displays various sensor data including speed, altitude, temperature, and battery status.

航点规划	全部清除	结束规划
经纬度	39.172009	增加
经纬度	117.913407	编辑
高度	200	删除
01,39.200213,117.917022,200		
02,39.185510,117.923327,200		
03,39.177465,117.894799,200		
04,39.191983,117.886823,200		
05,39.198178,117.908786,200		

• **Dual-hull water sampling USV HV130**

<p>Basic parameters</p>	<p>Hull size (length * width * height) 1300×810×640mm Hull weight : 40kg Load capacity : 20kg Hull materials : FRP</p>	
<p>Navigation parameter</p>	<p>Power : 48V Electric water jet propulsion Cruising ability : 5h Maximun speed : 3m/s</p>	
<p>Sampling parameters</p>	<p>Mode : Fixed time/place remote sampling Capacity : 10L (1000ml×10) Depth : 0.18 m</p>	
<p>Communication distance</p>	<p>Mode : 4Gnet-work/GPRS Video/data 4G transmission : > 50km</p>	
<p>Hand-held remote control</p>	<p>Communication mode: real-time rf point-to-point waterproofing grade: IP66 Standby time: 10hour Remote control distance: 1km</p>	
<p>Base station remote control platform The defense control platform</p>	<p>Communication mode: real-time rf point-to-point waterproofing grade: IP66 Standby time: 10hour Remote control distance: 1k</p>	
<p>Configuration list</p>	<p>Surveillance camera and hard disk video recorder 1set Intelligent sampling equipment 1set Alarm lights and loudspeaker equipment 1set base station 1set Base station remote control platform 1set</p>	

Other New developing Unmanned Vessels



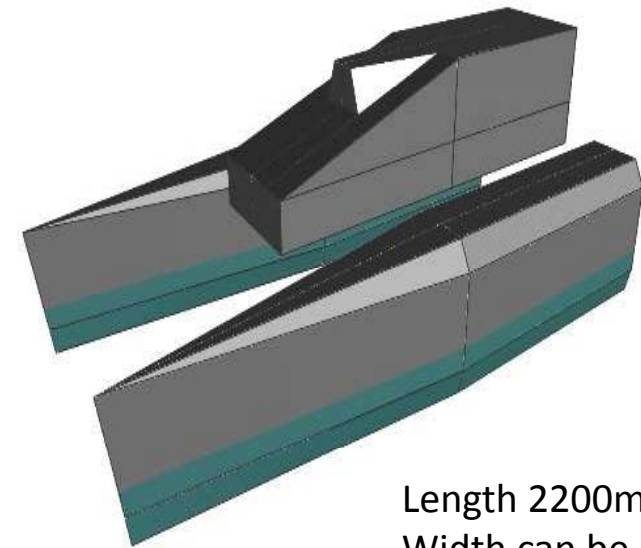
USV
M230

Dia. 332 x2300mm
Aluminum alloy



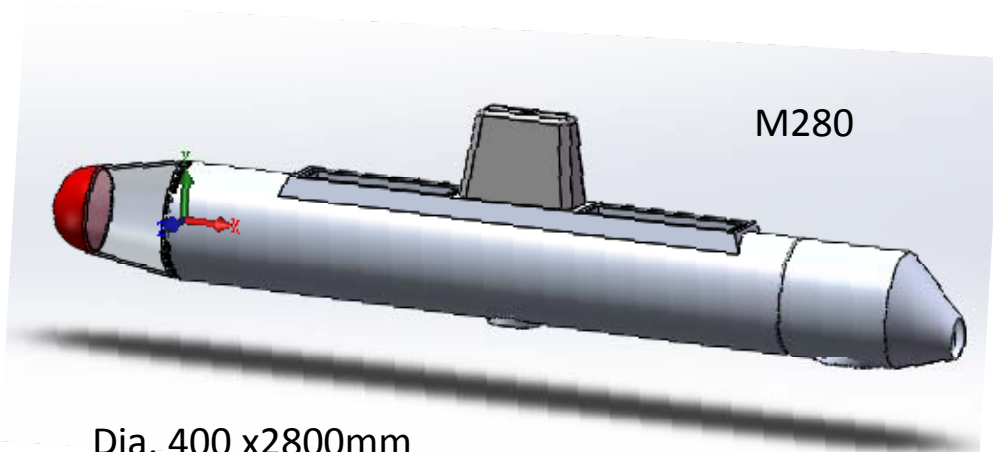
Catamaran HV220
Aluminum alloy

Detachable



Water Jet
Propulsion

Length 2200mm
Width can be adjustable



M280

Dia. 400 x2800mm
Aluminum alloy

□ Fixed water quality monitoring floating

Fixed intelligent on-line monitoring floating make full use of the advantages of current rapid monitoring technology. It uses different combination of water quality monitoring probes to carry out long time series and high frequency monitoring of key monitoring sections/points

It can observe the changes of water quality in real time and provide basic data for algal bloom early warning and smelly river management in water environment





Part 3

Rescue and entertainment equipment

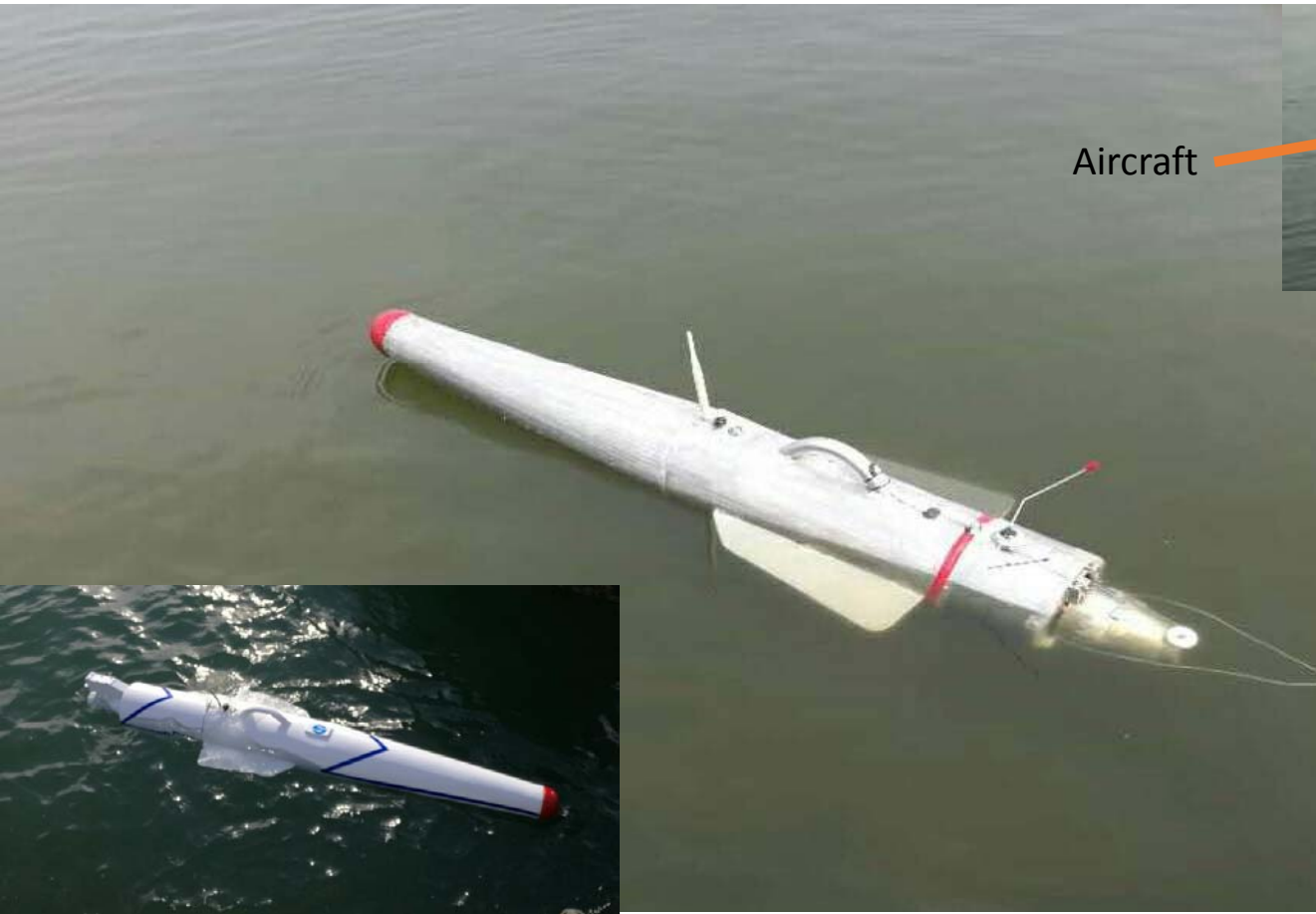
RESCUES

PEOPLE IN DANGER

CNN, July 12, 2017 : last Saturday, nine tourists, including two children and an elderly woman, were stranded by a torrent of water on the beach in Panama City, Florida. Strangers on the shore took action immediately after seeing them. They spontaneously formed a chain of 80 people and eventually came close to and successfully rescued the trapped people.

This rescue is dangerous, praiseworthy but not desirable!
It would be easy and safe to use our remote-controlled electric water-jet lifesaver
In the premise of ensuring the safety of the rescue workers themselves, the people in danger should be quickly rescued

PART 3
Rescue and entertainment equipment



Aircraft

Traction rope

Floating pad

Length: 1.5 m
 weight: 15 kg
 Water jet model : HJ94
 Motor model : PDS-600

No-load speed more than 4m/s
 (lifeguard's swimming speed is 0.6m/s)
 The towing weight is 200kg
 Remote control distance: 1000m

Remotely operated electric water jet propulsion lifesaving device

Rescue plan:

1. Send the heavy buoyancy pad to the drowning person quickly
2. Rescue workers quickly reached the drowning man on a cushion

It can be thrown into the water, and the drowning can be quickly rescued from a distance

Operation: remote control

Can be used in severe sea condition

PART 3
 Rescue and entertainment equipment

Remotely Operated Electric Water Jet Propulsion Lifesaving USV C130

PART 3
Rescue and entertainment
equipment



Length x Width x Height = 1.3 x 0.5 x 0.35m

Weight 20kg

Material of hull: Carbon Fiber

Water Jet Propulsion

Maximum Speed: 10kn



The condition of a self-righting system in which the airbag is not opened



Automatic inflatable self - righting system

When the ship is knocked over by the wind and waves, it is very dangerous for people to fall into the water if they cannot turn over in the shortest time. However, it is impossible for manpower to turn the boat over.

If installed, the airbag will automatically pop up and inflate when the ship is flipped over. The whole process is safe and requires no human operation. It has a high lightness, quick reaction and quick start, and can inflate the airbag in the shortest time.

According to the size of the ship, we will help you choose suitable air bags

PART 3
Rescue and entertainment
equipment

Capsized



Automatic inflatable self-righting system start working immediately



PART 3
Rescue and entertainment equipment

Recover upward again



Lift up boat at the aft



Rescuing

PART 3
Rescue and entertainment
equipment

RESCUE FRAME



Easy for taking an unconscious person out off water.

RIB A & B

RIB 270~300



RIB 250~270



RIB 220



RIB 330~360



RIB 470~520



RIB 420



RIB 680~720

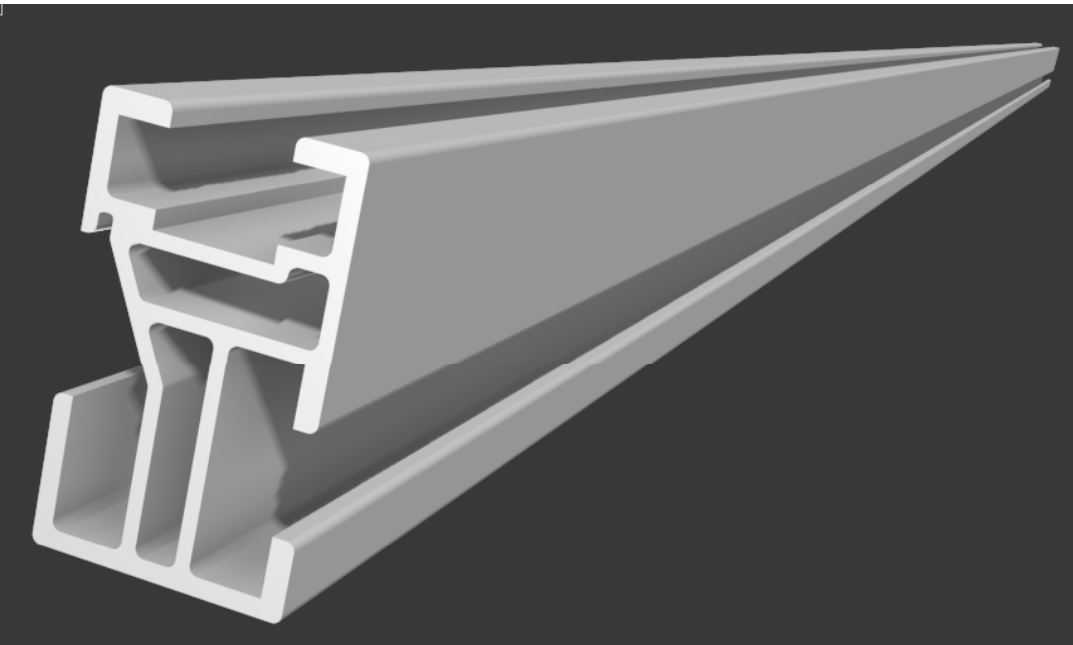


PART 3
Rescue and entertainment
equipment

Part 4

PV Mounting Kits





Rail AE021

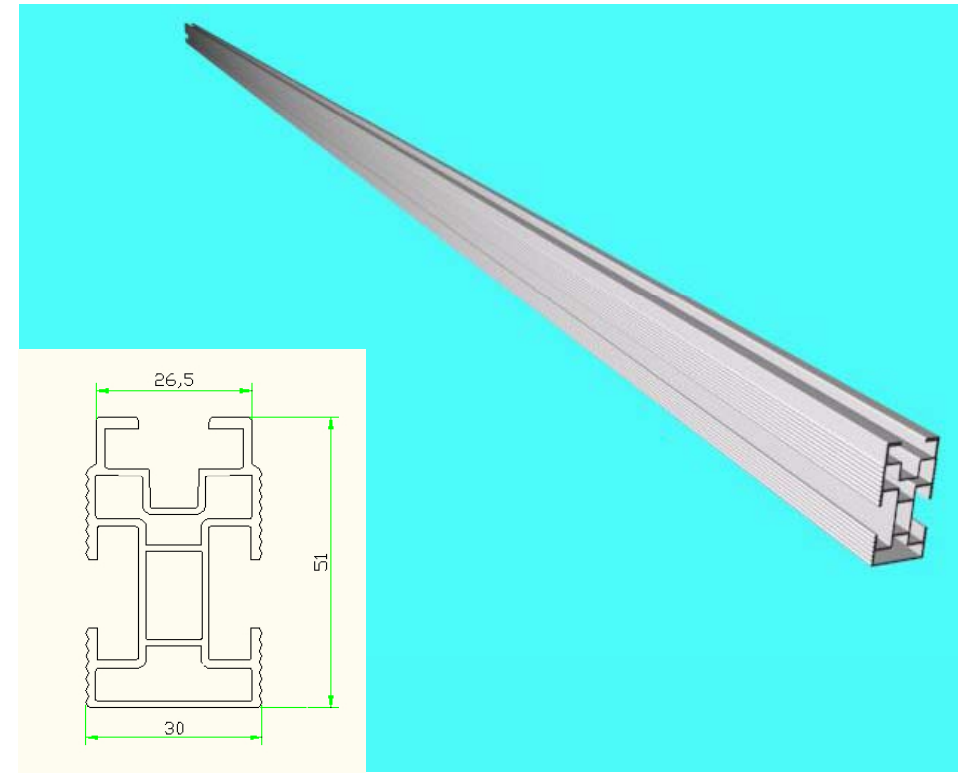
For supporting PV panels

Material: 6063T5

Surface Treatment: Anodizing

Length: 1000~6500mm

Weight: 1kg/m



Rail HV008

For supporting PV panels

Material: 6063T5

Surface Treatment: Anodizing

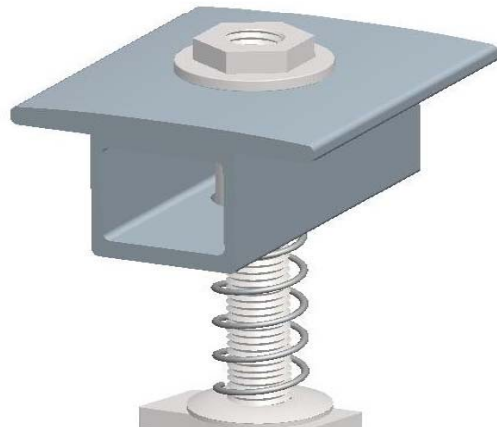
Length: 1000~6500mm

Weight: 1.05kg/m

PART 4

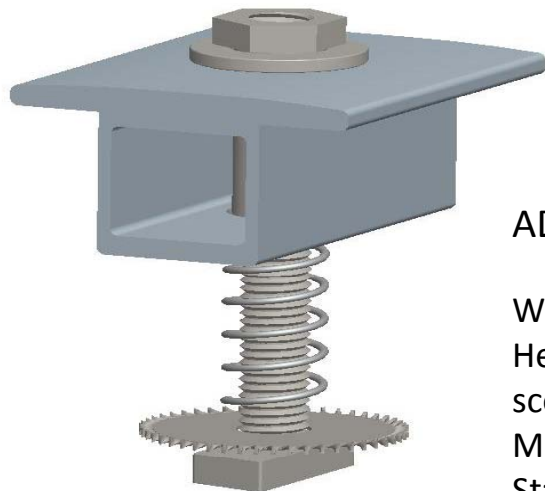
PV Mounting Kits

Mid Clamp Assembly For fixing PV panels on the rails



AD001

Without earth washer
Height can be adjusted in the
scope of 35~50mm
Material : Aluminum alloy +
Stainless steel 304



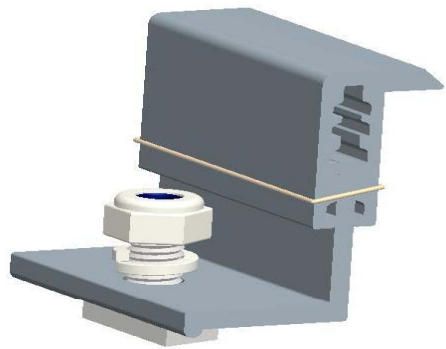
AD002

With earth washer
Height can be adjusted in the
scope of 35~50mm
Material : Aluminum alloy +
Stainless steel 304



EC001

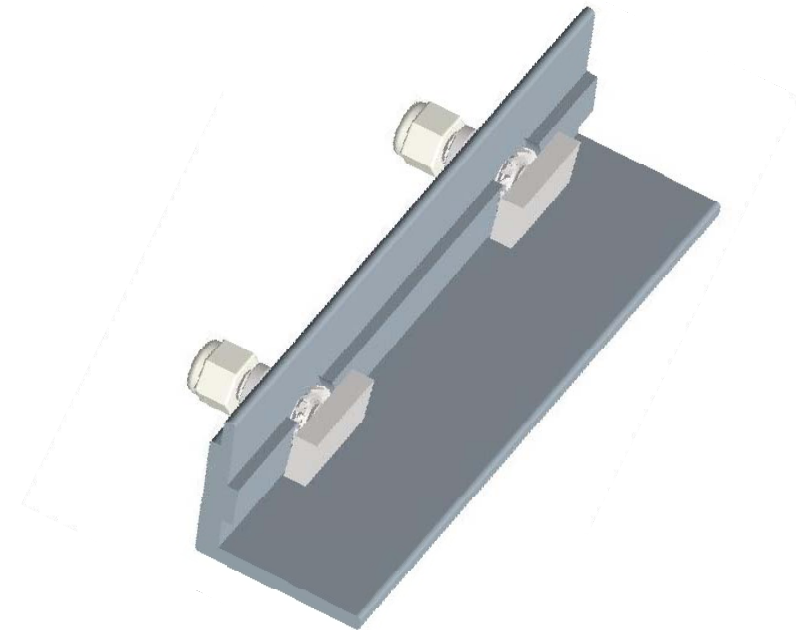
Without earth washer
Height can be adjusted by choosing
bolts with different length.
Material : Aluminum alloy + Stainless
steel 304



AD004
End Clamp
For fixing the end of PV panel on to the rails
Height can be adjusted in the scope of 35~50mm
Material : Aluminum Alloy + Stainless steel 304

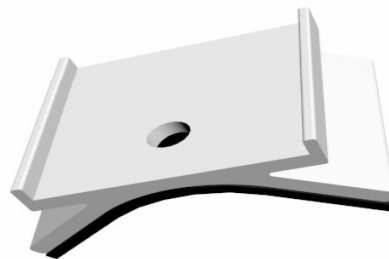


MS008
For earth
connecting to
the rail

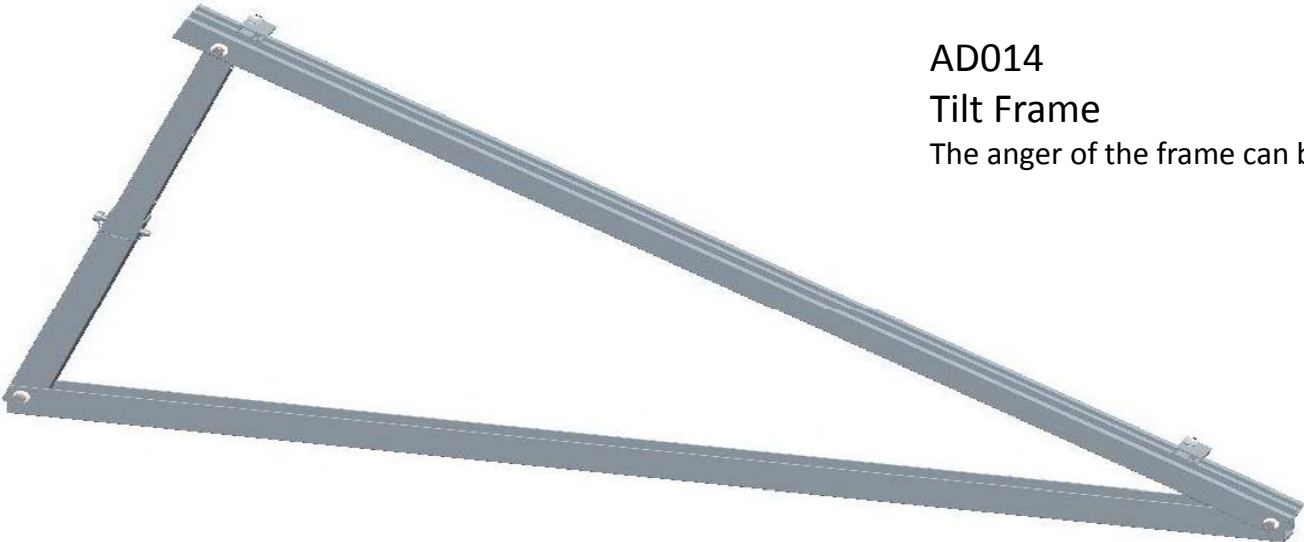


AD012
Rail joiner
For joining two rails

AD003
Corr base



MC045
Base for mounting bracket on
the color steel tile

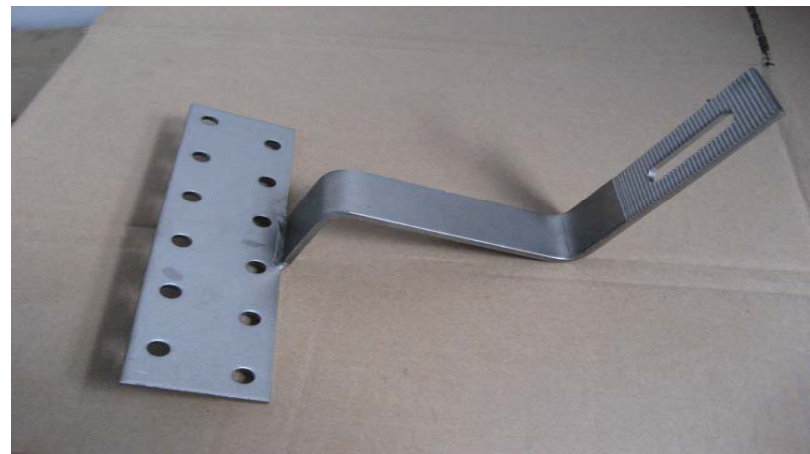


AD014
Tilt Frame
The angle of the frame can be adjusted between 15~30degree

AD005
Tile mount



C011
Tile mount



PART 4
PV Mounting Kits



MS006
Earth plate



S021
Switch box
Rail-proof



SC001
Roof screw



MS007
Earth washer
Outdia 30, inner dia 8
Thickness 1.5mm



S016
Cable shield



S017
Cover
for
cable
hole

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QQ: 981038065

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