



Quotation of Solar Panel Recycling line

To:
Email :

From: Allison Xue
Date: 2025.02.05

Customer's Requirement:

Raw material: Solar Modules with single layer glass (not bi-facial solar panels)

Volume to be shredded (throughput): 60panels per hour (1-1.5 t/h).

Max panel size range to be processed: width of panel: 800-1300mm, length of panel: 1000-2400mm

Brief Quotation

Item	Name	Capacity	FOB PRICE(USD)	Note
1	Camara Digital Capturing device	50-60 pcs per hour	29700	<ol style="list-style-type: none"> Capturing the data of panel size, J-box remover's location by the 3D scanner, and sending the data to the following machines, so that machine will be adjusted automatically to fit with different size of panels. With the 3D scanning equipment, black borders and black color backplates can also be identified, making the entire line more intelligent and eliminating the need for manual size measurement. Optional, can be removed if manually measure the size and position of the J-box
2	J-box remover with protection cover	50-60 pcs per hour	38800	<ol style="list-style-type: none"> with safeguard device servo motors and PLC control
3	Aluminum Frame Remover With protection cover	50-60 pcs per hour	91000	<ol style="list-style-type: none"> Aluminum deframer applicable to 800-2400mm size of panel
4	Glass remover with protection cover with pulse dust collector	50-60 pcs per hour	127000	<ol style="list-style-type: none"> Glass remover applicable to solar panel in width of 1250mm (maximum 1300mm wide) .



5	Crushing and separation plant	300-400kg/h	139000	Size applicable to 1.2m width panel, connected with the first three machines automatically.
6	Siemens Beide Motor (China) & Siemens Components		35700	1) All 3 phases motors, adopt Siemens Beide brand. 2) All low-voltage electrical components adopts Schneider brand 3) servo motor, PLC touch screen adopts Siemens brand
	IN TOTAL (FOB QINGDAO, CHINA)	USD 461,200 FOB QINGDAO, CHINA		
	Optional			
7	Wearing Parts (INCLUDED in total price)		33600	Optional, included in total price
8	CE Standard control cabinet (Optional , NOT included in total price)		33900	Designed and wired in CE standard, for the second part of the line only. First part of the line has cabinet integrated into the machine.
9	Robot Arm Auto & Lifting Platform (Optional, NOT INCLUDED in total price)	1	89000	Robotic automatic loading device, dual-station loading mechanism, 6-8 suction cup clamps, can replenish materials without stopping, regional protective net protection, door opening and shutdown and other functions to save labor costs.
10	Installation fee (Salary only, not include the round trip ticket fee+visa fee+ hotel and meals)	1	10500	1. Salary is USD 150 per person per day, totally 2 persons, totally 35 days at your site(including the weekends and the days on the way), 2. round trip ticket fee+visa fee+ hotel and meals) need to be arranged by customer extrally, not included in this fee.
	SUB-TOTAL	44,100 USD		
	TOTAL FOB PRICE	505,300 USD FOB QINGDAO		
	Shipping cost	8 Sets of 40ft HQ (To be checked again before shipping. Or client side arrange shipping)		
	Delivery	8 sets of 40ft High CONTAINER		
	Area Taken	44000*7000*5200mm		
	Total Power	247KW		



TRADE TERMS:

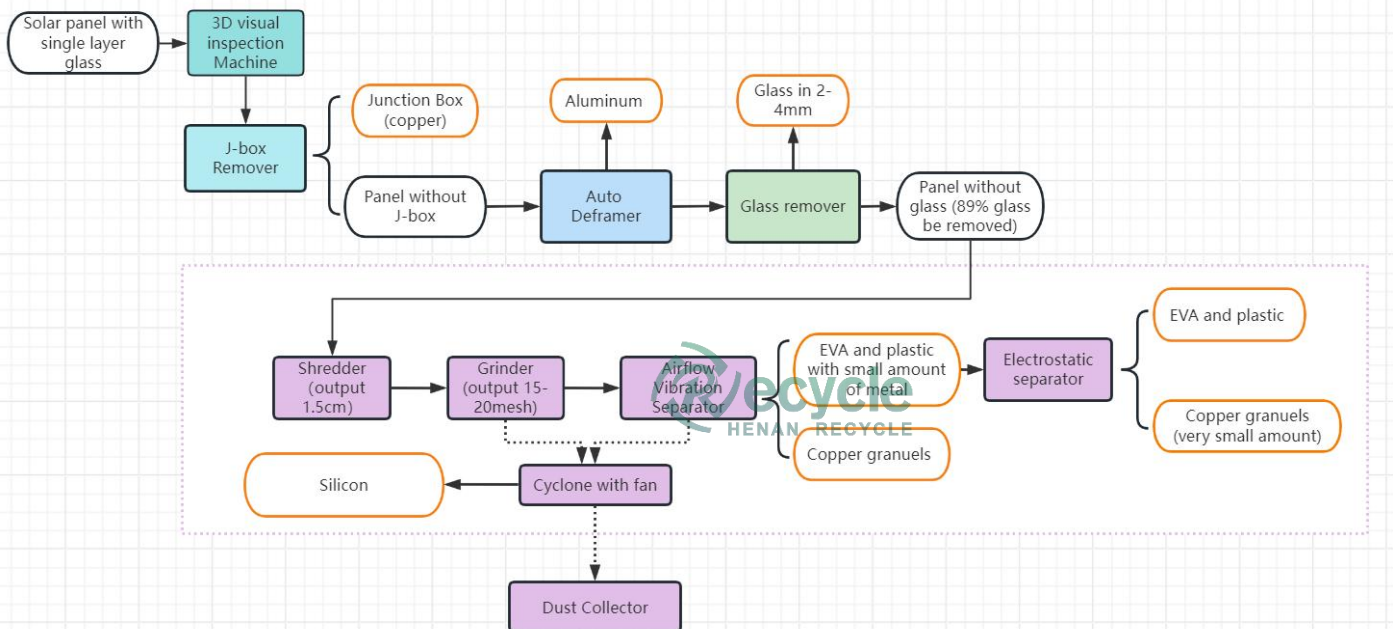
1. Payment Terms: 30% in advance as deposit by T/T, 20% be paid by T/T against the technical documents (machine layout, manual etc) after one month manufacturing; the balance be made before shipment by T/T after machine be well checked against the machine test running videos.
2. Delivery Time: **8 months** after the down payment be received
3. Mode of Transportation: By shipping
- 4.Packing: Export packing, container needs: 8 *40HQ
5. Warranty Period: 12 months.
6. Price validity: **Before Mar. 25th. 2024**

Please note: 1. machine list and price can be changed according to raw material type and customer final request on output and processing capacity.
 2. Voltage can be customized.

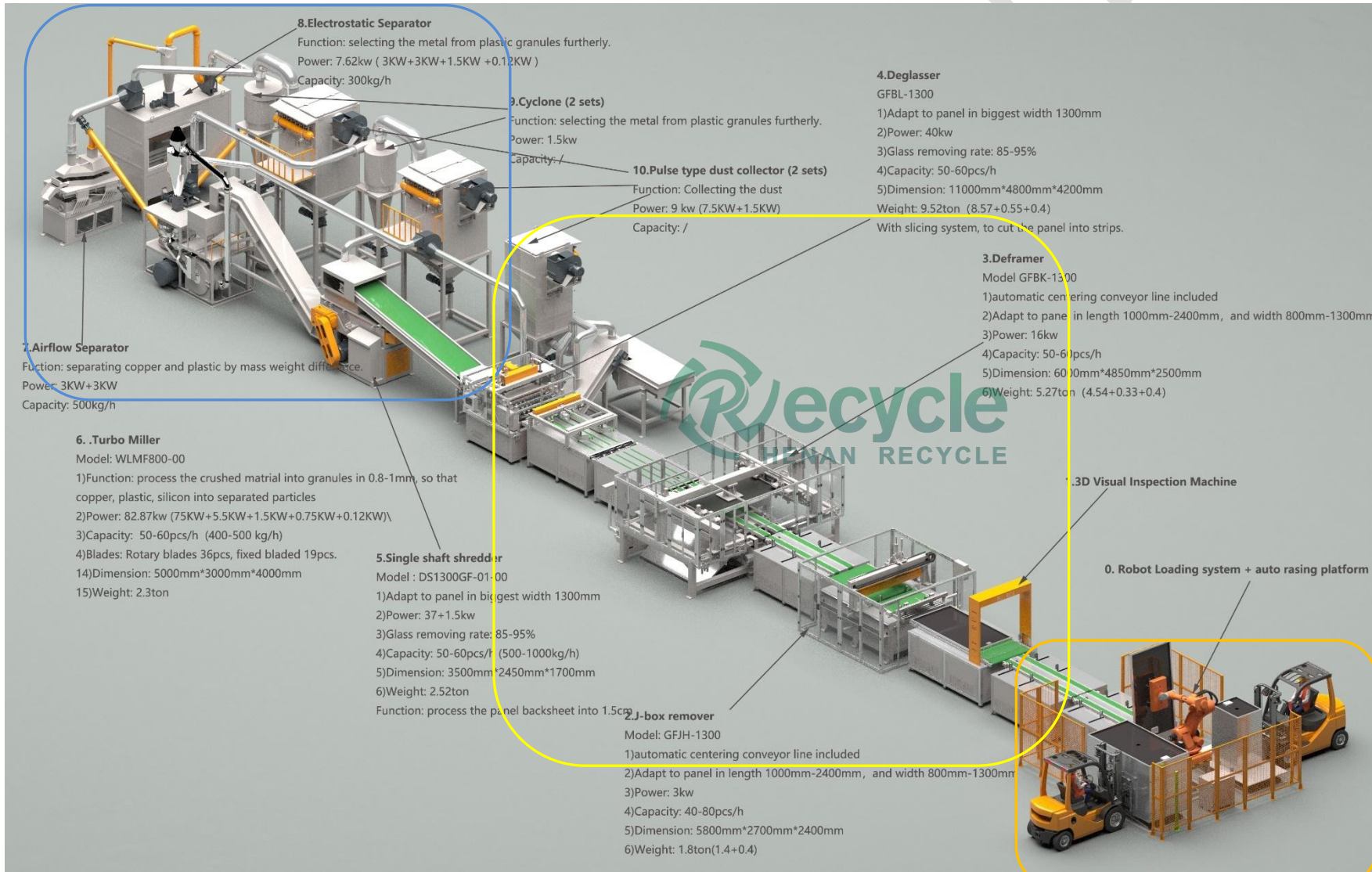
Manufacturing and shipping, installation schedule:

1. Production will be arranged after the down payment be received.
2. **Manufacturing** : 120 working days after the down payment .
Installation and test running before shipping: 30-90 working days
Shipping On Sea: About 30 days
Customs clearance & Inland delivery: 10 days
Client site Installation and Commissioning: 20 days

Flowchart

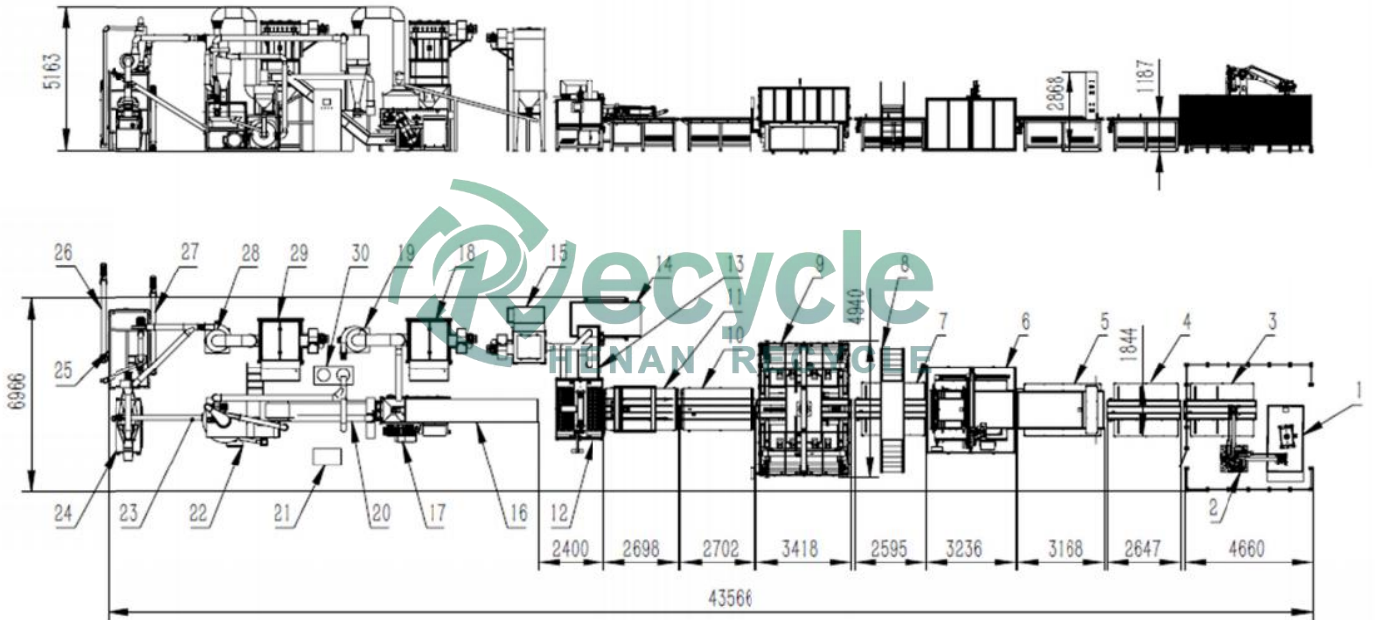


Plant Layout (Pls note, the electrostatic separator will not be included in the new design)








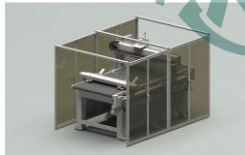
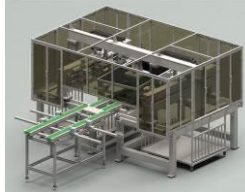


Area Taken: (with Robot Arm; 44000 * 7000 * 5200mm)










Detailed machine list

No.	Machine name	Model	Power (kw)	Capacity	Pictures Reference	Qty	Function
Auto Loading System (Optional)							
1	Robot Arm (Optional, NOT INCLUDED in total price)		10	/		1	Automatic Loading the solar panel from the lifting platform to the loading belt
2	Auto Lifting Platform (Optional, NOT INCLUDED in total price)		0.5	/		2	Automatic lifting the panel to certain height, matched with Robot arm.






First Part (J-box removing, aluminum frame removing, deglassing)							
3	Camara Digital Capturing device		1.5	50-60pcs per hour		1	3D camara, capturing length and width of panel, position of Junction box, realizing automatically adjusting in following machines
4	Junction Box remover		6	50-60pcs per hour		1	Removing the copper wire junction box
5	Aluminum Frame Removing Machine	R-B-120	16.75	50-60pcs per hour		1	Removing the aluminum frames
6	Glass removing machine	R-1200	24.8	50-60pcs per hour		1	Removing most of the glass from the surface
7	Dust collector	MC-36	7	/		1	Collecting the dust from the glass removing machine
8	Auto Transferring Line					1	
Second Part (Crushing and Separation Line)							
9	Belt Conveyor with dust collection cover at top and bottom	PDS-100 0-8	0.75 KW	/		1	feeding



10	Shredder	GFDS-1200	47.2 kw			1	Processing it into pieces in 2-3cm
11	Belt Conveyor with dust collection cover at top and bottom	PDS-1000-8	3 KW	/		1	feeding
12	Grinding machine	MF-800	84.37	500kg/h		1	Grinding material into 15-20 meshes (into even size)
13	Air Conditioner for water cooling		9			1	For cooling down the cooling water, cooling down the grinder
14	Screw conveyor	LS-165-3.5	2.2	/		1	Feeding
15	Airflow vibration separator (optional)	QLS-800	9	400-500		1	Separating copper from the rest material
16	Round vibration sieve		0.3			1	



17	Cyclone	SKL-800	1.5			2	Collecting and settle down the big particles from the dust
18	Dust collector	MC-64	9	/		2	Collecting the dust
19	Electric Cabinet - With the aviation connector			/		1	

Machine detailed information:

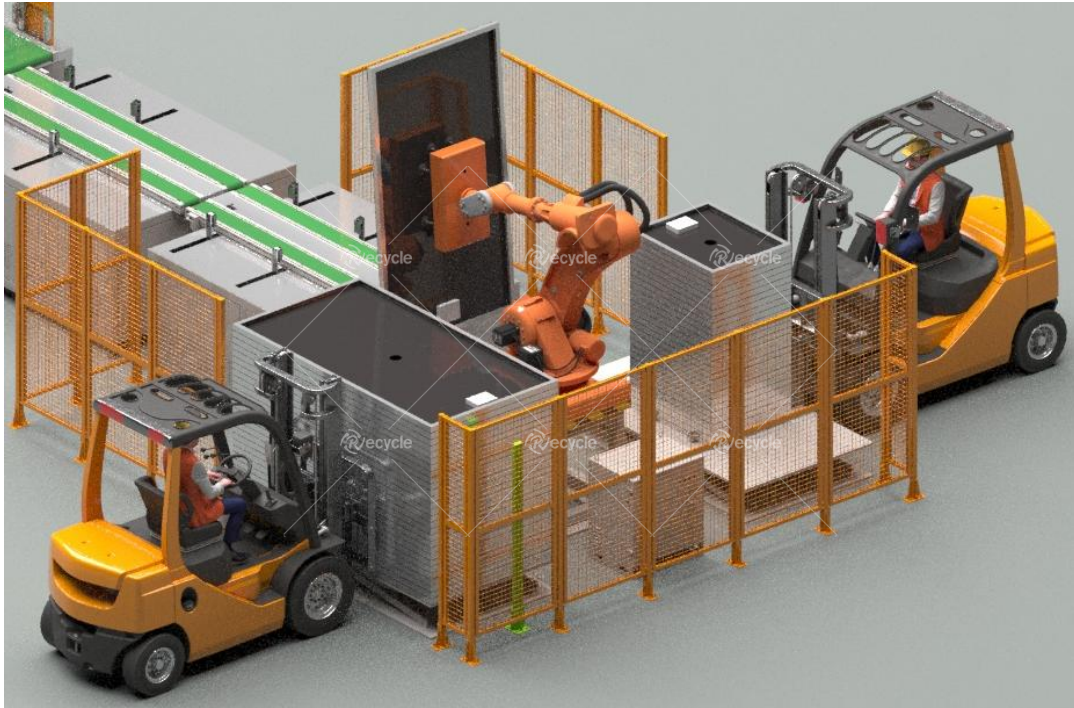


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(Optional, **not included in total price**) Robot Arm & Auto Lifting Platform



Add a robot automatic loading device, a dual-station loading mechanism, a 6-8 suction cup clamp, which can replenish materials without stopping the machine, regional protective net protection, door opening and shutdown, and other functions to save labor costs.



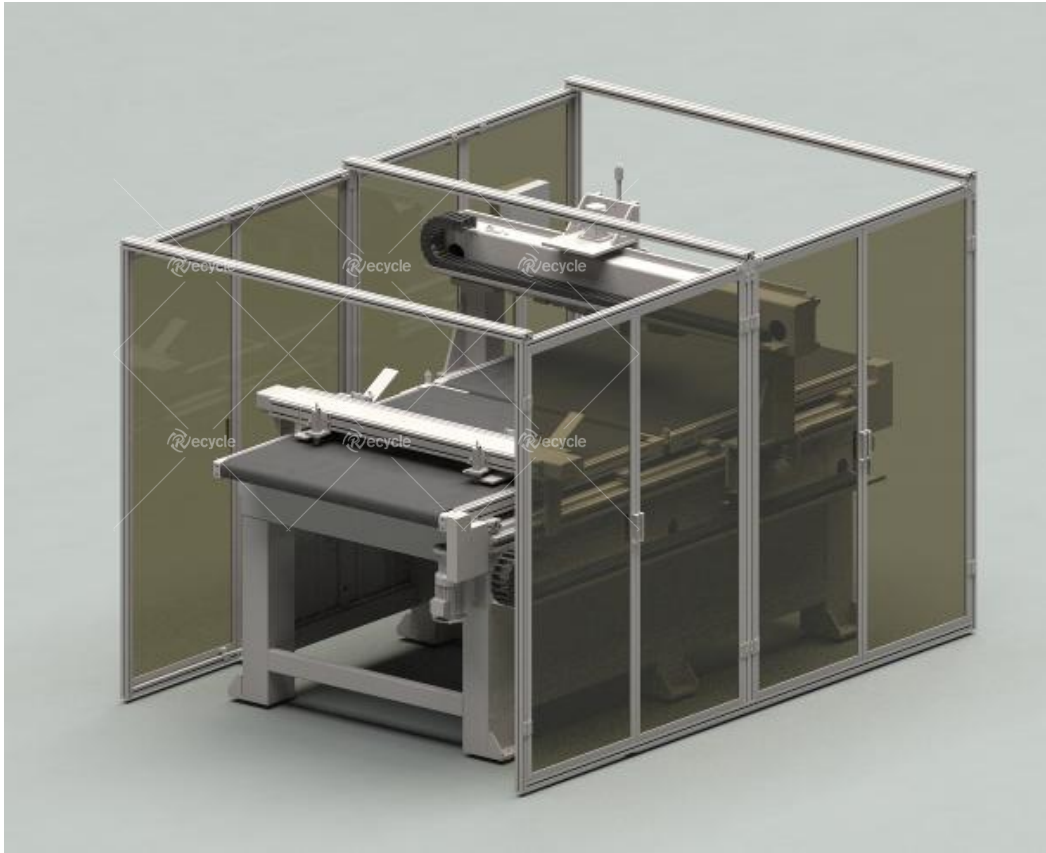
1. 3D Visual Inspection Machine

- 1) updated from the 2D vision to 3D vision, which can more accurately capture the length and width of the photovoltaic panel, the position and shape characteristics of the plastic box, and is not affected by the color of the panel and is not interfered by external light. It can automatically filter sand, soil, Dirt, burn marks and other non-plastic box characteristics.
- 2) Capture and transfer the data to the following equipment including J-box remover, Deframer, deglasser; link related actions to realize automatic adaptation to boards of different specifications.
- 3) With the 3D scanning equipment, black borders and black color backplates can also be identified, making the entire line more intelligent and eliminating the need for manual size measurement.





2. Junction Box Remover

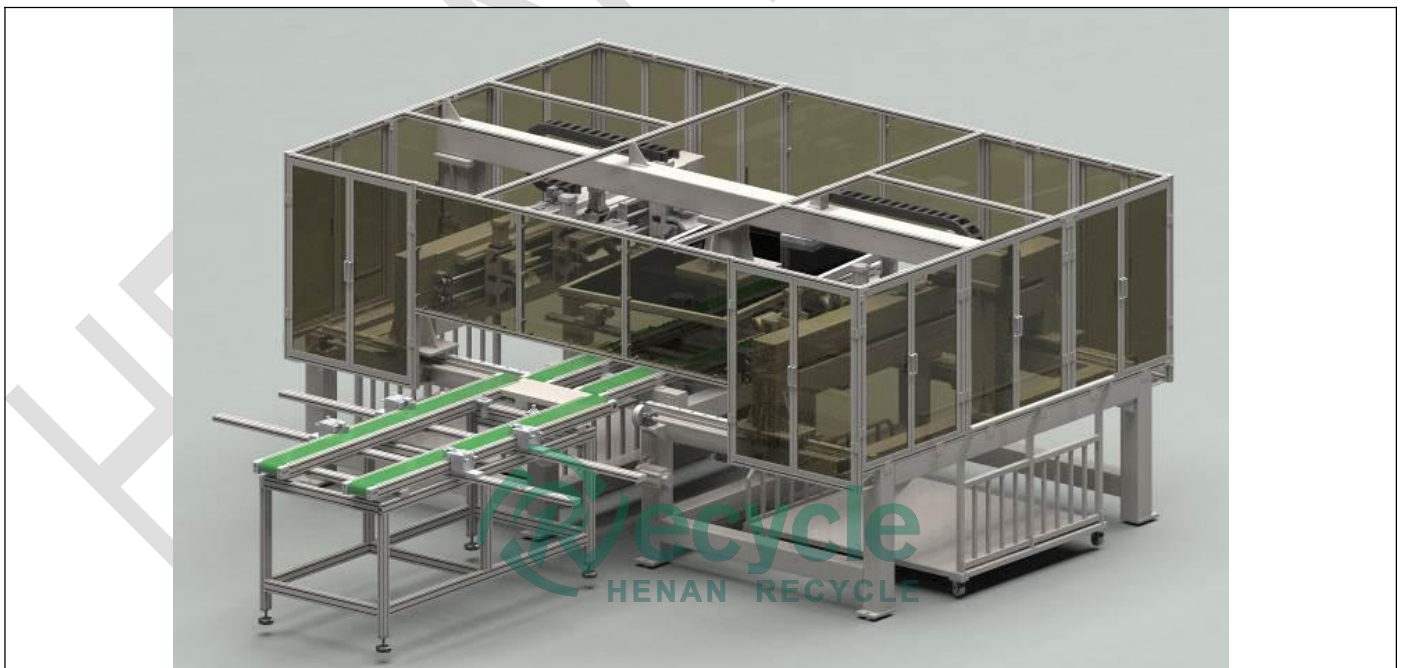


Item No.	Item Name	Specifications
1	Machine name	Junction box remover
2	Model	GFJH-1300
3	Power	5.25 kw
4	Panel size to be	Adapt to panel in length 1000mm-2400mm , and width



	processed	800mm-1300mm
5	Speed	40-80pcs/h
6	Dimension	5800mm*2700mm*2400mm
7	Weight	1.8ton(1.4+0.4)
8	Compressed air	0.6-0.8Mpa, Gas pipe diameter 12mm.
9	Cutter quantity	2 pcs
10	Size of J-box applicable	Length≤150mm, width≤130mm; Qty, 1 & 3 pcs.
11	Note:	<p>光伏板平面变形量不超过 30mm 的光伏板，输入边框尺寸和胶盒位置即可自动去除目标位置胶盒（配合 3D 扫描时无需输入），可去除纵向、横向、单胶盒、三胶盒（其他数量胶盒可提前告知），可配合整线实现自动运行。</p> <p>Photovoltaic panels with a plane deformation of no more than 30mm can automatically remove the target position glue box by inputting the frame size and glue box position (no need to input manually when cooperating with 3D scanning), and it can remove vertical, horizontal, single glue box, and three glue boxes (other quantities of glue boxes can be notified in advance). It can be combined with the entire line to achieve automatic operation.</p>

3. Deframer





Item No.	Item Name	Specifications
1	Machine name	Deframer
2	Model	GFBK-1300
3	Power	16 kw
4	Panel size to be processed	Adapt to panel in length 1000mm-2400mm , and width 800mm-1300mm
5	Speed	50-60pcs/h
6	Dimension	6000mm*4850mm*2500mm
7	Weight	5.27ton (4.54+0.33+0.4)
8	NOTE	If with 3D camera capturing system, it'll get data from the 3D camera capturing system, and it'll adjust automatically adapting to size of the panel



4. Glass Remover



Item No.	Item Name	Specifications
1	Machine name	Glass Remover
2	Model	GFBL-1300



3	Power	30.5 kw
4	Panel size to be processed	Adapt to panel in biggest width 1300mm
5	Speed	50-60pcs/h
6	Dimension	9200mm*5200mm*4200mm
7	Weight	7.02 ton (6.07+0.55+0.4)
	Glass removing rate	85-95%
8	Note:	<ol style="list-style-type: none">1. With Glue remover2. With protection cover3. With feed-in pressing system4. With output dragging system5. Upgraded program, finding the zero point automatically6. Anti-dust bearing6. If with 3D camera capturing system, it'll get data from the 3D camera capturing system, and it'll adjust automatically adapting to size of the panel

After the Glass be removed by the glass removing machine, the rest material go to our physical crushing and separation line.





Copper



Plastic



Silicon Powder



Glass

Output Glass in Two size



Glass output below 2mm



Glass in 3-5mm



Panels weight and thickness difference before and after deglasser.



After glass removing 5.35 kgs (glass removal ratio: above 88%)



Before glass removing 19.8 kgs



Thickness 6.11mm before processing



Thickness 1.98mm after processing

Some of our customer site:



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Solar Panel Recycling Line Customer site in the USA



Solar Panel Recycling Line Customer site in the Thailand



Solar Panel Recycling Line Customer site in the USA



Solar Panel Recycling Line Customer site in the USA



Solar Panel Recycling Line in Poland



Solar Panel Recycling Line in Australia

Our factory--- Professional solid waste metal recycling machine manufacturer and designer



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Henan Recycle Environmental Protection Equipment Co., Ltd.



Main Office building

FIVE SETS OF 3500sq meters manufacturing workshop



5*3500sq meters manufacturing workshop

FIVE SETS OF 3500sq meters manufacturing workshop



Technical Team in our factory



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Staffs in our factory

Machine Inspection Before delivery—install the plant and test running with raw materials, take detailed videos for customer, or online video checking the machine





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Delivery -- Machine well packed, neatly loaded & fixed in the container. Securing no clicking during the transportation





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Henan Recycle Environmental Protection Equipment Co., Ltd.



After-sale service --- 24hrs online support; detailed manuals & operation guidance video

Thanks for checking! Sincerely hope to cooperate with you soon.

Client cases

