

Appendix-1

No of Proforma invoice: JR20140218K

ZHANGJIAGANG SEVENSTARS MACHINERY CO., LTD

PET Bottle Washing Recycling Line

(Output capacity: around 2000kg/hr)



Picture only for reference and we can adjust machine color as customer's requireme

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1. Project evaluation

1.1. Raw material & Final product:

Raw material & formulation	Post-consumer PET bottles
Final product & Output capacity	Bottle flakes around: 2000kg/h
Description of final product	<ol style="list-style-type: none"> 1. Moisture: max 1-1.5% 2. Bulk density: 0.3G/ C CM³ 3. Particle size: 10-18mm(can be designed as per special requirement) 4.PVC <300PPM (PVC has to be sort out by hand) 5.PE/PE and Paper and other impurity <total 100PPM 6.metal<50ppm 7. Ph-value : Neutral 8.colourful pet flake (has to be sort out by hand) 9.melting point : 245-250 10.IV: 0.74-0.78

1.2 Work condition

Warehouse/Workshop	<p>Dimension (M*M*M): 57(L)*15(W)*6(H); About 700 square meters with height 7 meters</p> <p>Crane: Machine positioning(provide by customer).</p>
Power supply & Installation power	<p>3-phase, 415V, 60 Hz; (can be change according customer's request)</p>
Wire/cables(provide by customer)	<p>Electric cable are not included in our scope of supply ,because th lenght of required cable depend on the buyer final floor layout , the final location of the switch board control box and so on ,After receipt of the order , we will provide a list of the required cable with suitable length according the workshop layout</p>
Water supply hose/pipe (provide by customer).	Water supply to machines and pools

1.3 Energy consumption

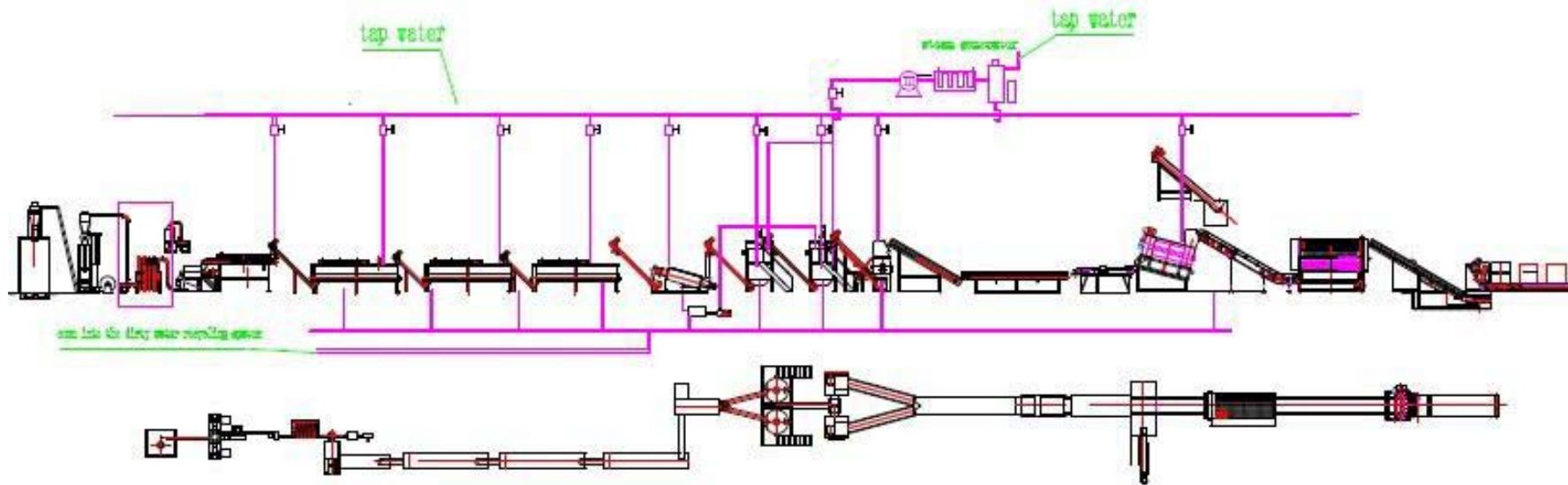
Installation power	410KW (Actual power consumption percentage: 70-80%)
Water supply	<p>Consumption: 7-8 ton/h(But it can recycled use</p> <p>Note : 1) water consumption of the line depend on the installed components ,the contamination of the input material and the installed water filter and water treatment system</p> <p>2) to reduce the water consumption ,we recommend to</p>

	<p>install a water treatment plant , by using press filter ,the load of waste water could be further minimized , the buyer should provide water tank (we recommend ground tank)with level indicator and water pumps and valves</p> <p>Note: Our label remover is wind type, it no need water, it will save lots of water for customer .</p>
Heat supply	<p>Temperature: 170℃ , Flow: 200kg/h, Pressure: 0.7Mpa</p>
Manpower	<p>8 Persons (Forklift :1 person , sorting table :4person Bale opener : 1 person Main Control box :1 person Another 1 person responsible to inspect all the parts)</p>

1.4 Main commercial terms

Project	2000kg/hr PET bottle washing line
Price for the main complete line	USD <u>168,000</u> \$, FOB Shanghai
Payment term	Paid by 100% L/C at sight
Delivery time	70 working days since the date of receiving down payment
Packing	Wood pallet covered by plastic film, 6*40HQ Containers Container
Warranty period	12 months since finished installation and start the line

1.5. Flow line picture (please match the number to the sequence number of price list)



1.6. Configuration table and unit price

No.	Machine	Qty.	Price(USD)	No.	Machine	Qty.	Price(USD)
1	Bale opener	1 set	6,500	14	Floating washer Including one water tank	1 set	9,200
2	Conveyor	1 set	2,600	15	Screw loader	1 set	3,200
3	Pre-washing tumble machine	1 set	7,000	16	Floating washer Including one water tank	1 set	9,200
4	Conveyor	1 set	2,600	17	Screw loader	1 set	3,200

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5	Label remover	1 set	8,000	18	Floating washer Including one water tank	1 set	9,200
6	Metal detector	1 set	4,000	19	Screw loader	1 set	3,200
7	Sorting table	1 set	4,000	20	Spray washer	1 set	4,500
8	Conveyor	2 sets	2,300*2 =4,600	21	Horizontal dewater machine	1 set	9,600
9	Plastic crusher	2 sets	14000*2 =28,000	22	Pipe line dryer	1 set	3,200
10	Screw loader	1 sets	3,200	23	Label remover	1 set	4,000
11	Hot washing	1set	8,100*2 =16,200	24	Silo	1 set	2,500
12	Screw loader	1set	3,200	25	Control box	1 set	9,500
13	Friction washer	1 set	6,500	26	Blade sharper	1 set	1,100
Total price: USD168,000\$; FOB Shanghai							

2. Technical specification**2.1. 1000kg PET bottle washing line**

No.	Name	Photo of machine	Technical specifications
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1	Bales breaker		<p>Model: BDX-1500 Motor power : 7.5KW+7.5KW=15KW Motor power for convey belt : 3kw Control ways for main shaft: speed control by frequency ,by ABB inverter Processed capacity: 1000—3000kg/hour Size of processing package: <1400X1600X1000mm Machine size : 5200X2000X3650mm Weight : 3000kg</p>
2	Belt conveyor		<p>Waste bottles feeding Width of belt:800mm Basic material of belt: PVC Motor power: 2.2 KW</p>

3	Pre-washing machine tumble		<p>Automatically separate out sand, rocks, metal, small garbage, and some bottle caps</p> <p>Diameter of barrel: 1500mm</p> <p>Motor power: 3Kw</p> <p>Rotary speed <=130RPM</p> <p>Weight : 1800kg</p> <p>Size of machine : 4200*1780*2900mm</p> <p>Basic material of barrel: carbon steel coated with metal Zn</p> <p>The machine inside with water spray system</p> <p>The water pressure need 3Mpa</p>
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4	Conveyor		<p>All the frame and support are made of carbon steel Waste bottles feeding Width of belt:800mm Basic material of belt: PVC Motor power: 2.2Kw</p>
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HOT

5	Label remover		<p>Function : Peel the labels on the surface of the bottle and pre-washing the bottles by normal water</p> <p>Removing labels from bottles</p> <p>Motor power: 22Kw</p> <p>Blower motor:7.5Kw</p> <p>Effective length of beater :4000mm</p> <p>the diameter of beater :620mm</p> <p>Diameter of inside mesh for label remove : 50mm</p> <p>ratio for label remove : pressing bottle : 80-90%</p> <p>non-pressing bottle: 90-95%</p> <p><u>This new design label remove can save a lot of water. It works with air.</u></p>
6	Metal detector		<p>Removing the metal from the material</p> <p>Alarming and stop the belt conveyor, the worker will pick the metal out</p> <p>Width: 1000 mm</p> <p>precision of metal detector: 1-3mm</p>

7	Manual sorting belt		<p>pick out the steel wire and film and PVC material and colorful pet bottle or other big impurity</p> <p>Waste bottles conveying and sorting</p> <p>Width of belt:1000mm</p> <p>Length of sorting table : 8000mm</p> <p>Height : 1200mm (easy to sorting)</p> <p>Basic material of belt: PVC</p> <p>Motor power: 2.2Kw</p>
8	Belt conveyor (2 sets)		<p><i>Waste bottles feeding</i></p> <p>Width of belt: 800mm</p> <p>Basic material of belt: PVC</p> <p>Motor power: 2.2Kw (Variable speed control)</p>

9 Crusher(2 sets)



Bottle crushing

Motor power: 75Kw

Capacity: 1000-1200kg/hr for each set

Actual capacity is depending on the diameter of the screen sieve

Cover opening: electric motor driver

Qty. of rotary blades: 12pcs

Qty. of stationary blades: 8pcs

Basic material of blades: SKD11 Material

Blade sharp time :each 70-90 ton PET flakes

Rotation speed of blade: 600RPM

Diameter of the screen Sieve hole :12mm,14mm,16mm,18mm (can be adjusted according to request)

Each plastic crusher with extra one set of sieve

10	Screw loader		<p><i>PET flakes conveying</i></p> <p>Diameter of screw: 420mm</p> <p>Length of loader: 4500mm</p> <p>Motor power: 3Kw</p> <p>Part contact with raw materials: stainless steel 304</p> <p>With screw convey and spray water function</p> <p>With sewage outlets at bottom of loader</p>
11	Hot washer (2 sets) <u>(paralleled)</u>		<p><i>This device is connected with steam boiler. Steam is supplied into washing tank to heat water and flakes. Hot water makes dirt, label and glue water loosen from bottles. Meanwhile you need to add caustic soda and other cleaning chemicals into tank to clean bottle flakes.</i></p> <p><i>Heating ways : steam or gas or electricity</i></p> <p><i>Motor power: 7.5kw</i></p> <p><i>Dimension of hot chamber (Dia.×Height): 1.8M×2M</i></p> <p><i>Volume of hot chamber≈4.6m3</i></p> <p><i>Water temperature: 80°C</i></p> <p><i>Part connect with raw materials: stainless steel 304</i></p> <p><i>Power for Water pump for Recycling chemical water: 1.5kw</i></p> <p><i>Including one set of water tank , collect the floating</i></p>


			<p>plastic material ,such as PE label, water after water treatment can be recycled use , the sieve made of stainless steel</p>
<p>12</p>	<p>Screw loader</p>		<p><i>PET flakes conveyed into high-speed friction washer</i></p> <p>Diameter of screw: 420mm</p> <p>Motor power: 3Kw</p> <p>Part contact with raw materials: stainless steel</p>
<p>13</p>	<p>High-speed washer friction</p>		<p><i>Get rid of glue water, dirty waste and oil</i></p> <p>Motor power: 45Kw</p> <p>Motor power of water pump:1.5kW</p> <p>Rotary speed of screw: 1440Rpm</p> <p>Part contact with raw materials: stainless steel 304</p> <p>width of machine : 1515mm</p> <p>the length of machine :3420mm</p> <p>water input pressure :1.5Kg</p> <p>water consumption : 0.5ton/hour</p>

<p>14</p>	<p>Floating washer</p>		<p>Cleaning flakes to remove chemicals and separating out rest labels and caps Motor power of screw loader: 4kw Motor power of thumbwheel: 2.2kw+1.5kw Motor power of vertical stir:0.55kw Quantity of thumbwheel:3sets On the bottom tank with double screw Steel plate thickness:4mm Tank dimension:3.9m(L)*1.2M(w)*2m(H) Part connect with raw materials: stainless steel 304</p>
<p>15</p>	<p>Screw loader</p>		<p><i>PET flakes conveyed second floating washer</i> Diameter of screw: 420mm Effective length : 4500mm Motor power:3Kw Part connect with raw materials: stainless steel304</p>

16	Floating washer		<p>Cleaning flakes to remove chemicals and separating out rest labels and caps</p> <p>Motor power of screw loader: 4kw</p> <p>Motor power of thumbwheel: 2.2kw+1.5kw</p> <p>Motor power of vertical stir:0.55kw</p> <p>Quantity of thumbwheel:3sets</p> <p>On the bottom tank with double screw</p> <p>Steel plate thickness:4mm</p> <p>Quantity of thumbwheel:3sets</p> <p>Tank dimension:3.9m(L)*1.2M(w)*2m(H)</p> <p>Part connect with raw materials: stainless steel304</p>
17	Screw loader		<p><i>PET flakes conveyed third floating washer</i></p> <p>Diameter of screw: 420mm</p> <p>Effective length : 4500mm</p> <p>Motor power: 3Kw</p> <p>Part contact with raw materials: stainless steel 304</p>

18	Floating washer		<p>Cleaning flakes to remove chemicals and separating out rest labels and caps</p> <p>Motor power of screw loader: 4kw</p> <p>Motor power of thumbwheel: 2.2kw+1.5kw</p> <p>Motor power of vertical stir:0.55kw</p> <p>Quantity of thumbwheel:3sets</p> <p>On the bottom tank with double screw</p> <p>Steel plate thickness:4mm</p> <p>Quantity of thumbwheel:3sets</p> <p>Tank dimension:3.9m(L)*1.2M(w)*2m(H)</p> <p>Part connect with raw materials: stainless steel304</p>
19	Screw loader		<p><i>PET flakes conveyed to spray washer</i></p> <p>Diameter of screw: 420mm</p> <p>Effective length : 4500mm</p> <p>Motor power: 3Kw</p> <p>Part contact with raw materials: stainless steel304</p>

20	Spray washer		<p>Flakes cleaning (final washing) Required water pressure :not less than 3kg Water consumption : 1.8ton/hour Motor power: 4Kw Diameter of screw:250mm Length of this machine :4250mm Part contact with raw materials: stainless steel304</p>
21	Horizontal machine dewater		<p><i>Dewatering</i> Motor power: 45KW Capacity : 2000kg/h Motor speed: 1440rpm The diameter of the screen hole: 2mm The thickness of screen mesh : 3mm The dewatering rate: more than 95% Continuously discharge the material from side and drainage from the bottom of this machine Material for contact with material: Stainless steel304 including one set of Auto-brushing clean system The material of Main shaft :stainless steel :diameter</p>

			<p>220*8mm(Thickness) The material of blade :stainless steel ,thickness:6mm Rotation Diameter of main shaft: 800mm</p>
<p>22</p>	<p>Pipeline dryer</p>		<p><i>Hot air drying</i> Heating power:36Kw Power of blowing motor: 7.5Kw Total length of stainless steel pipe : 15meter The diameter of stainless steel pipe : 219mm</p>

23 Label separator




Removing little amount of label and dust in PET flakes

Motor power of loading blower: 3Kw

Valve power:1.5kw

Part contact with raw materials: stainless steel

24	silo		<p>Storage silo for PET flakes</p> <p>Motor power of loading blower: 7.5Kw</p> <p>Basic material of storage silo: stainless steel</p> <p>Volume of silo : 3 cubic</p> <p>The distance between the discharge outlet to the ground : 3meter</p> <p>The distance between the opposite leg/supprt: 1.4meter</p> <p>Part contact with raw materials: stainless steel</p> <p>The discharge ways for PET flake is automatic by cylinder</p>
25	Electric cabinet		<p>Electric control system for washing line</p> <p>Touch screen & PLC control module (Mitsubishi),</p> <p>Electric control component: (Schneider), e.g.</p> <p>Circuit-breaker, AC contact, press button, pilot lamp</p> <p>This electric cabinet is used to control all machines in PET bottle washing line.</p>

26	Blade sharper		<p>This machine is easy to operation ,just fix the blade on the machine ,and start the power to sharpen tungsten blade</p> <p>max sharpen length : 700mm</p> <p>grinding wheel : 2 set</p> <p>the size of grinding wheel :</p> <p>inner diameter :125mm</p> <p>outside diameter :95mm</p> <p>thickness of grinding wheel: 12mm</p> <p>moving motor : 0.3Kw</p> <p>move speed for grinding wheel : 2.25meter/min</p> <p>grinding motor :1.1kw</p> <p>dimension of the machine : 1150*590*1320(mm)</p> <p>weight : 150kg</p>
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2.2 Spare part (free of charge)

Item	Name	Quantity	Application
Mechanical parts	Mechanical components: tighten screws, nuts, etc.	1set	Mechanical tightening
	Sealer for all kinds of connection part	1set	Anti-leakage
	Bearing	4sets	screw loader
	Sharper	4sets	For sharper use
	Blade of plastic crusher	2sets	For plastic crusher
	Screen mesh of plastic crusher	2sets	For plastic crusher
	Belt for crusher and other		Many
	Other small spare parts		Many
Electric parts	Fast acting fuse	2pcs	Electric cabinet
	Circuit breaker	2pcs	
	AC contactor	2pcs	
	Contactory relay	2pcs	
	Electric heating stick	2 pc	Heater of Pipeline dryer

Declaration:

Above technical details and photos are for reference. Horse Rider Company has the right to change one or more features without previous notice

3. After-sales service

3.1 Technical documents

All labels on machines and lay-out drawings, Electrical diagram, User Manual, will be in English. We should send all necessary files to the buyer since the third week since project execution. All documents in hard copies should be also shipped with machines together.

3.2. Arrangement for inspection, installation and testing work

- a. After all machines are delivered to customer's factory; Buyer is responsible for all preparation work, e.g. electricity supply, water supply, labors and cranes, etc.
- b. We will prepare for visa application for their engineers, who are responsible for guide of machine installation and testing at the Buyer's factory.
- c. The Buyer will buy the round-trip air ticket for Engineer if visa application is approved. The buyer is also responsible to bear expenses generated, e.g. visa formalities, meals, accommodation and allowance of USD80 per day for each engineer.
- d. Engineer will give free training lessons to labors in buyer's factory.

3.3. Quantity and quality guarantee

a. Quantity/Quality Discrepancy to destination port during transportation:

In case of quality/quantity discrepancy to destination port in transportation, customer should file claim within 30 days after the arrival of the goods at port of destination. We will be responsible for any discrepancy of the goods caused by shipping company and other transportation organization and/or post office.

b. Guarantee period and after-sales services: 15 months since date of bill of lading

During this guarantee period, we will provide spare parts without any charge in case of quality discrepancy caused by us. If the malfunctions are caused by your incorrect operations, we will provide the buyer spare parts at cost price.

c. Long-term service:

We will charge the buyer cost price of spare parts beyond one year and provide long-term technical guide.