



## Quotation

Date: 21<sup>st</sup> November 2022

PROJECT TITLE:  
"GLUE KITCHEN MACHINE"

Buyer: KAVEH CELLULOSE ZARRIN  
Manufacturer: DONGGUAN TAIQUAN MECHANICAL EQUIPMENT TECHNOLOGY CO.,LTD.

Item	Descriptions	Quantity	Unit Price (EUR)
1	Intelligent Fully Automatic Glue Kitchen Machine Model: TQ-3.0T	1 Set	157,200
2	Freight	1 Set	7,800
Total CFR amount:			165,000

### Product features:

- One-step viscosity control error is less than 1S
- Zero error control for adding materials
- A wide range of dynamic viscosity measurement 6.5S~99.0S
- The data feedback of the detected dynamic viscosity is reflected once within 15 seconds
- Temperature curve compensation control function

### Business Terms:

- Delivery date: 60 working days after the signing of the contract & receipt of the deposit (Ship From Factory) .
- Payments: 30% by T/T as down payment, 70% by T/T before shipment
- Validity of Offer: 60 days from above date





**Technical terms:**

**Each Unit Configuration**

Equipment list	Specification	Function description
<b>1. Glue Production Master Machine Unit:</b>		
Starch storage and delivering FSS-6000L	<ul style="list-style-type: none"> <li>◇ SUS304 Stainless steel tank 6 m<sup>3</sup>.</li> <li>◇ 3-inch ARO diaphragm pump + stainless steel spiral feeding</li> </ul>	Patent design, the starch is dispersed thoroughly
Main machine mixing system TBQ-3400L	3,400L-SUS304 stainless steel main tank	<ul style="list-style-type: none"> <li>◇ US Transcell weighing system</li> <li>◇ Italy Phase 24KW servo motor +30KW Siemens driver</li> <li>◇ 2-inch ARO diaphragm pump + mixing spindle</li> </ul>
Framework platform	Integrated SUS 304 stainless steel framework and l stairs and platforms of structured design	Strong and durable, safe and reliable,
Pneumatic operation system	SUS304 stainless steel control cabinet + Solenoid valve/ Taiwan + unique design	TAIQUAN unique gas path distribution system
Additives adding system	<ul style="list-style-type: none"> <li>◇ SUS304 stainless steel tank + SUS304 stainless steel screw feeding + vibrator</li> <li>◇ Taiwan CHENG PANG gear motor + the US Transcell sensor</li> </ul>	With the weighing system, it optimizes the ratio of materials, strong and durable with precise feeding; precise (100KG ± 0.1%)
Water and steam adding system	SUS304 Stainless steel pneumatic valve and piping	
Auto Liquid Caustic Soda adding system	SUS304 Stainless steel tank + US Transcell sensor + independent pump delivery	<ul style="list-style-type: none"> <li>◇ 1<sup>st</sup> Liquid Caustic Soda Adding Unit</li> <li>◇ Nonmetallic diaphragm pump (1"O) for liquid caustic soda</li> <li>◇ Flow meter used to control &amp; record weight of the 1<sup>st</sup> caustic soda</li> <li>◇ 2<sup>nd</sup> Liquid Caustic Soda Adding Unit</li> <li>◇ The 2<sup>nd</sup> liquid caustic soda input quantity is controlled and automatically adjusted by PLC program to adapt varied quality of ingredients such as wash water pH condition and starch condition, for glue viscosity controlling.</li> </ul>



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TQ-S gelatinization viscosity detection & control system (VDC)	SUS 304 Stainless steel detection tank + viscosity sensor + viscosity controller	The viscosity reaction process is detected, and the viscosity error of the glue is less than 1 second. Modular design, solid and durable, safe and reliable. Automatic cleaning & Calibration of the VDC system is performed for every batch.
No formulation glue making system	Glue volume setting + viscosity setting + gelatinization temperature setting + powder water ratio setting	The unique system control concept enables effective real-time control of formula adjustment, glue data, and easy operation, which guarantees all aspects of cardboard bonding.
Intelligent control system	Siemens S7-1200 PLC + MCGS 15-inch touch screen + Schneider electronics + INO power unit + water isolation treatment methods	Stable and reliable, fast operation, strong anti-interference, European design concept

### 2. Glue storage Unit:

Glue storage system	<ul style="list-style-type: none"> <li>◇ Two sets of SUS304 stainless steel- 4,500L tanks + mixing</li> <li>◇ The motor of agitator 40KW</li> </ul>	Storage for glue of SF formula and DF formula
Automatic supply system	Two Sets of 2" ARO diaphragm pumps	Low air consumption, less failure, low air condition requirement; a small amount of multi delivery, automatic glue supply, stable viscosity.

### 3. Glue recycle Unit:

Glue Recycling tank	One of SUS304 stainless steel tanks, thickness: 3.0mm	<ul style="list-style-type: none"> <li>◇ Waste glue can be recycled for re-use purpose.</li> <li>◇ Glue saving and no drain out of glue.</li> <li>◇ PH value is automatically adjusted</li> <li>◇ Waste glue consistency is automatically detected by sensor</li> <li>◇ Under the system adjusts PH value, the glue viscosity and gelatinization temperature of each tank are completely stable.</li> </ul>
water pump-ARO	One 2" ARO diaphragm pumps	
<ul style="list-style-type: none"> <li>◇ 1set of stirring system</li> <li>◇ 1set of 2" Control valve + Environmental protection system control</li> </ul>		

### 4. Standby ARO diaphragm pump (for glue delivering from Main mixing tank to Storage tank)



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ARO diaphragm pump	1 set of 2" ARO diaphragm pump	Standby (Extra)
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<b>5. Online glue storage tank:</b>		
Online Glue Storage Tank	3 Sets of SS304-800L storage tanks & Agitators	SF: 2 sets of glue tanks DF: 1 set of glue tank
Glue supply system	<ul style="list-style-type: none"> <li>◇ Taiquan intelligent glue supply &amp; recycling system</li> <li>◇ 6 sets of 1.5" ARO diaphragm pump</li> </ul>	There are 2 sets of diaphragm pumps for each online storage tank

### Main Material List of Each Unit

Machine units	Name of Parts	Specification	Units	Qty.	Bland & Origin	
Electric System	1	Touch Screen	15inch	unit	1	MCGS
	2	Servo driver	30KW	set	1	Siemens
	3	Switches	Moulded case	set	1	Schneider
	4	Contactors		set	1	Schneider
	5	Thermal relay		set	1	Schneider
	6	Temperature sensor		set	1	CHINA
	7	Master controller	S7-1200	set	1	Siemens
	8	Expansion Module		set	1	Siemens
	9	Buttons		set	1	Schneider
	10	relay		set	1	Schneider
	11	Solenoid valve		set	1	AIRTEC
	12	Buttons with light	LED disply	set	1	Schneider
	13	Power Supply	10A/24VDC	unit	1	Schneider
Main Tank Mixing System	1	Mani Tank	SUS304 -3500L	set	1	TAIQUAN
	2	Square tube of main frame	100*100*4 SUS304	set	1	CHINA
	3	Worktop and stair board	SUS304 2.5mm	set	1	TAIQUAN
	4	Weighing Module		unit	3	US TRANSCCELL
	5	Weighing display instrument		set	1	US TRANSCCELL
	6	Main motor	24KW	unit	1	ITALY PHASE
	7	Stainless steel dispersion disk	Patented design	set	1	TAIQUAN



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	8	Main axis		set	1	TAIQUAN
	9	Steam valve and piping	SUS304	set	1	CHINA
	10	Water feeding system	SUS304	set	1	CHINA
	11	Cleaning valve	SUS304	set	1	CHINA
	12	Glue delivery diaphragm pump	2inches	unit	2	ARO
Starch Delivering System	1	Starch storage tank	6M <sup>3</sup>	set	1	TAIQUAN
	2	feeding mechanism	SUS304	unit	1	TAIQUAN
	3	powder feeder	SUS304	set	1	TAIQUAN
	4	Vibrator	250W	set	1	CHINA
	5	Feeding and conveying system	3inches pump	set	1	ARO
Liquid caustic system	1	Pneumatic control valve	1inch	set	1	OEM
	2	Chemical alkali storage tank (including mixing blade)	SUS304	set	1	TAIQUAN
	3	Tank mixing motor	Reducer	unit	1	TAIWAN
	4	Liquid alkali weighing device		sets	3	US TRANSCCELL
	5	Weighing display instrument		set	1	US TRANSCCELL
	6	Delivery diaphragm pump	1/2 inches	unit	1	ARO UK
	7	Alkali inlet control valve	pneumatic valve	unit	1	OEM
Borax / auxiliary material delivery system	1	Borax storage tank	SUS304	set	1	TAIQUAN
	2	Powder adhesive storage tank	SUS304	set	1	TAIQUAN
	3	Stable agent storage tank (powder shape additive)	SUS304	set	1	TAIQUAN
	4	Borax and adhesive transportation	Screw feed	sets	3	TAIQUAN
	5	Borax, adhesive conveying motor	Gear motor	units	3	TAIWAN
	6	Borax, adhesive inlet control	Cylinder	units	3	TAIWAN
	7	Weighing of additives	Weighing apparatus	sets	3	US TRANSCCELL
	8	Weighing display instrument		set	1	US TRANSCCELL



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Temperature control system	9	Vibrator		set	1	CHINA
	1	Heating mechanism		set	1	TAIQUAN
	2	Temperature sensor		set	1	CHINA
	3	Pneumatic control valve		set	1	OEM
Others	1	Signal connection	8×0.75mmShielded sheath cable	set	1	CHINA
	2	Weighing signal cable	0.75mmShielded sheath cable	set	1	CHINA
	3	All reduction motors of the system		set	1	TAIWAN
	4	All solenoid valves of the system		set	1	AIRTAC
	5	Piping of glue making machine	SUS304	set	1	CHINA

### ARO Diaphragm Pump List

Item	Descriptions	Model	Size	Units	Qty.
1	Main Tank Mixing System	666272-EEB-C	2 inch	Set	1
2	Main Tank Mixing System- Standby	666272-EEB-C	2 inch	Set	1
3	Liquid Caustic Soda	66605J-EEB	1/2 inch	Set	1
4	Starch Delivering System	PP30A-BAP-AAA	3 inch	Set	1
5	Glue storage tank	666272-EEB-C	2 inch	Set	2
6	Recycling tank	666272-EEB-C	2 inch	Set	1
7	On-line storage tank	666172-3EB-C	1.5 inch	Set	6



## **Machine brief Description**

- 1) The system uses free maintenance design, make long time running stably.
- 2) With one step and two-step-method glue-making mode. It has liquid chemical additives addition system.
- 3) Design Ability: Single time glue-making is about 2000kg, each glue-making period is about 40 minutes (glue-making period is including feeding water first to evacuating glue of making, watching to make glue, and so on, and make sure the water pipe is big enough and water pressure is strong)
- 4) The system can choose auto-glue making, manual glue making and auto glue feeding. No need labor to stand and check in glue house if preparing glue in one time, it can continuously make glue.
- 5) Special less quantities, more production auto feeding system. Keep glue quality stable. Rise quality of paperboard. Reduce or avoid degumming, bubbles, bending. Increasing running speed. Good design for high-speed corrugation line.
- 6) Use special diaphragm pump & air transport system. Starch feeding is fast and dispersing completely.
- 7) Main tank uses national patent design. High efficiency glue making. Quality of glue is homogeneous and smooth.
- 8) Except powder, water, alkali liquor, borax and steam auto put-in device, the system have liquid chemical additives auto feeding device, including 0.5 inch diaphragm pump and stainless transit tank, use borax weighing system to calculating. It is useful for demands of high-speed corrugation line and special paperboard production.
- 9) Special high-speed gas channel design. Make system run stably under different conditions.
- 10) The pipe system design is very easy for any saving or making glue tank of recycle glue function towards glue house.
- 11)** Automatic material reporting system: Reporting material volume used per month, and collecting loss data to reduce cost.

## **Installation Preparation Work**

- 1) 60kw three phase (five wires including earthling) standard power supply, individually (from main power panel) output to glue-making machine's connector which is reserved.



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- 2) Supply 300l/min water system (or 2500L water storage tank and 2 inch pipe pressure pump) ,the water temperature cannot be over 25°C, connect 2 inch galvanized pipe to each connector of main machine. Make 8-11kg saturated steam pipe Dn25 to connector that reserved of main machine. Remember to install steam trap valve before connect to machine.
- 3) Supply 4—8kg/cm<sup>2</sup> pressure's dehydration compressed air, 0.3-0.5 m<sup>3</sup> air storage tank. Connect 1 inch galvanized pipe to main machine's connector that reserved.
- 4) Use Dn50 galvanized pipe as glue pipe. All the pipes and valves that from machine to saving glue tank, glue tank to all machines are supplied by buyers.
- 5) The distance between glue conveying pipe and steam pipe should be equal or more than 300mm.
- 6) Arc welding machine, oxygen, acetylene, stairs, puller machine(power-operated),lifting tools, pliers common tools, two mechanical engineers, one electrician, one welding engineer.
- 7) Waterway size of pollution discharge: 200 width 150 depth (mm)
- 8) Glue making materials:starch (corn or cassava),borax (content is 99%), caustic soda flakes (content is 99%) or liquid soda, water, steam.
- 9) The foundation drawing of main machine and design requirements are supplied by seller. The buyer is responsible for construction and charges.
- 10) All preparation work should be done before seller's engineer arrives for on-site installation.

### **After Sales Service**

- 1) The warranty period of mechanical, electrical and pneumatic equipment is 12 months. During the warranty period, if human or force majeure causes the damage, the cost of damaged parts shall be charged.
- 2) Provide technical training related to glue making process or develop core formula according to customer requirements.
- 3) Provide customers with active and regular technical guidance on glue making process.
- 4) The service fee agreed by both parties shall be charged outside the warranty period, and no service fee shall be charged for active service.
- 5) Assist the enterprise to improve the level of operation technology and provide quality analysis and solutions for paperboard products.

--The End--