

OPERATION MANUAL

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1. GENERAL DESCRIPTION

Vacuum Tumblers offer a wide-range application such as massaging, marinating, and mixing for almost all kinds of meat. Appropriate vacuum and rolling speed ensure the optimum meat structure, color retention and protein extraction. This creates an excellent appearance and aroma for your products.

The frequency conversion technique offers our machine a smooth operation and energy saving. The energy consumption can be saved 30% than the traditional tumblers.



- Eight rolling speed from 4rpm to 11rpm.
- Preset total tumbling time, positive and reverse rotation tumbling time, interval time and tumbling mode, etc.
- High performance vacuum pump guarantees quick evacuation in a very short time.
- Vacuum loading, reverse rotation unloading without meat remain.

2. TECHNICAL PARAMETERS

	TT-S401B
Capacity (kg/a time)	300
Volume (L)	800
Power (kW)	3.75
Drum Speed (rpm)	4-11
Vacuum (kPa)	-80
External Dimension (mm)	1620×1060×1670
Installation Dimension (mm)	2800×1500×2000
Weight (kg)	approx. 600

3. INSTALLATION AND CONNECTION

1. The equipment should be installed in a room under a temperature range of 0~5°C.
2. Please refer to the installation dimensions prior to installation.
3. The ground floor for installation should be smooth and the carriage be leveled.
4. When the drum is being lifted, the cable should be fastened to the spindle and both sides of the drum. When the entire drum is being lifted, the cable should be fastened to the joint area between the upper beam and forward and rear beams.
5. This machine is equipped with a three-phase and four-wire power supply. Electric cables should be copper wire BV-2.5mm².
6. The equipment should be connected with grounding.

4. FUNCTION OVERVIEW

1. The total time of tumbling can be controlled.
2. Tumbling can be performed either intermittently or be continuously in obverse or reverse rotation direction.
3. There are seven tumbling speed from 4rpm to 10rpm.
4. Continuous vacuum or Breathing vacuum can be selected as needed.
5. It is provided with functions of unloading by reversed rotation and vacuum release.
6. The vacuum is controlled through an electronic vacuum gauge.
7. Tumbling is performed alternatively in obverse and reverse rotation, which can improve quality of processing.

5. OPERATION

1. Control Board

[Total Time] : Total tumbling time. When it gets to total time the tumbling is over.


[Vacuum] : Vacuum Indicator.

[Interval Time] : The interval time of Intermittent tumbling and Breath vacuum.


It is controlled by a time relay. The upper value is [Working time] and the lower one is [Interval time] of intermittent tumbling.

Continuous Vacuum : The tumbling is running in continuous vacuum state (The vacuum pump stops automatically at the maximum setting pressure is reached and the pump starts to work automatically again at minimum setting pressure, so that the vacuum degree of the tumbler is kept within the setting range.).


Breath Vacuum : The tumbling is running in vacuum state. → When it gets to [Working time] → Vacuum released to normal pressure → When it gets to [Interval time] → Vacuum pump starts to work again. →..... When it gets to [Total-Time], the tumbling is over.



: Continuous tumbling in obverse rotation direction.

: Unloading (Continuous tumbling in reverse rotation direction).

: Tumbling in obverse rotation direction. →When it gets to [Working time] →Tumbling stopped→When it gets to [Interval Time] → Tumbling in reverse rotation direction. →Cycled → When it gets to [Total-Time], the tumbling is over.

Vacuum Release : Vacuum released to normal pressure.

 : Tumbling in obverse rotation direction. →When it gets to [Working time] →Tumbling stopped→When it gets to [Interval Time] → Tumbling in obverse rotation direction again. →Cycled → When it gets to [Total-Time], the tumbling is over.



 : the  will prohibited when the switch is selected in this position.

Power ON/OFF : Power on or Power off.

SPEED : Seven tumbling speed for your option.

“1”=3rpm; “2”=4rpm; “3”=5rpm; “4”=6rpm; “5”=7rpm; “6”=8rpm; “7”=9rpm.

2. Operation Details

1. Start: close all the power elements in the control cabinet, manually turn the knob, and turn on the power switch, when the display will show the total time of tumbling and power-on of the vacuum indicator.
2. Turn the manual tumbling speed knob to select the speed.
3. Turn the manual knob to select tumbling mode.
4. Vacuum will not start until the starch is added in and the tumbling has been run for a period of time.
5. The total tumbling time and interval time can be set up in accordance with different processes.
6. Inching obverse tumbling can be achieved by turning the switch  quickly. Inching reverse tumbling can be achieved by turning the switch  quickly.
7. When the unloading is finished, the drum should be cleaned for any materials to get prepared for next tumbling.

6. MAINTENANCE

1. In order to meet the hygiene requirements, please clean the entire machine thoroughly periodically.
2. Please oil the oil cup of the chain daily, and check the oil groove biweekly and refill the oil as necessary. Check the chain and chain gear for lubrication periodically.
3. Replace the machine oil (#40 machine oil) after the speed reducer has been used for one month, and once every six months afterwards.
4. The electric equipment shall be examined and maintained every six months.
5. The lubricant for the main shaft and the riding wheel bearing shall be replaced every six months.
6. When the replacement of riding wheel bearing becomes necessary, use a backing board to lift the drum slightly along the crossbeam at the forward end of the carriage (no greater than 10mm), and replace after the supporting ring of the drum leaves the riding wheel

bearing.

7. Any aged sealing washer should be replaced.

8. The filter of vacuum connector shall be cleaned after every working shift. The air filter in the vacuum pipes should be cleaned once every week. The residual water inside the filter should be removed promptly.

9. The electric equipment in the control cabinet shall be checked for any frost every month, and blew dry and cleaned with blow drier. The cover shall be put in place after the cabinet is dried. Attention should be paid to sealing.

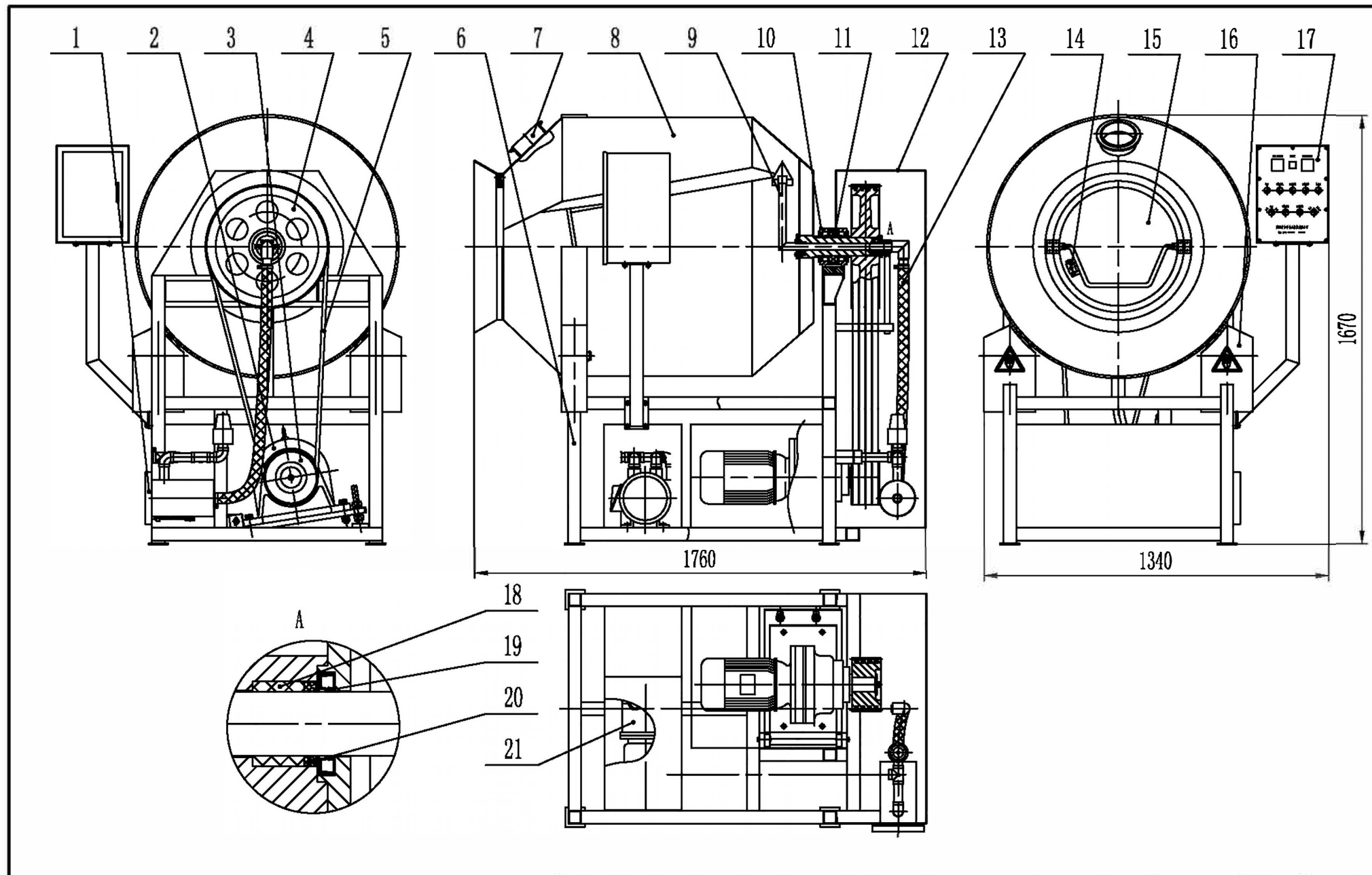
10. Perform prompt repair in case of any failure. Please contact with After-Sale Service Department of Jixiang for any failure that you can not handle.

7. ATTACHED DRAWINGS AND DIAGRAMS

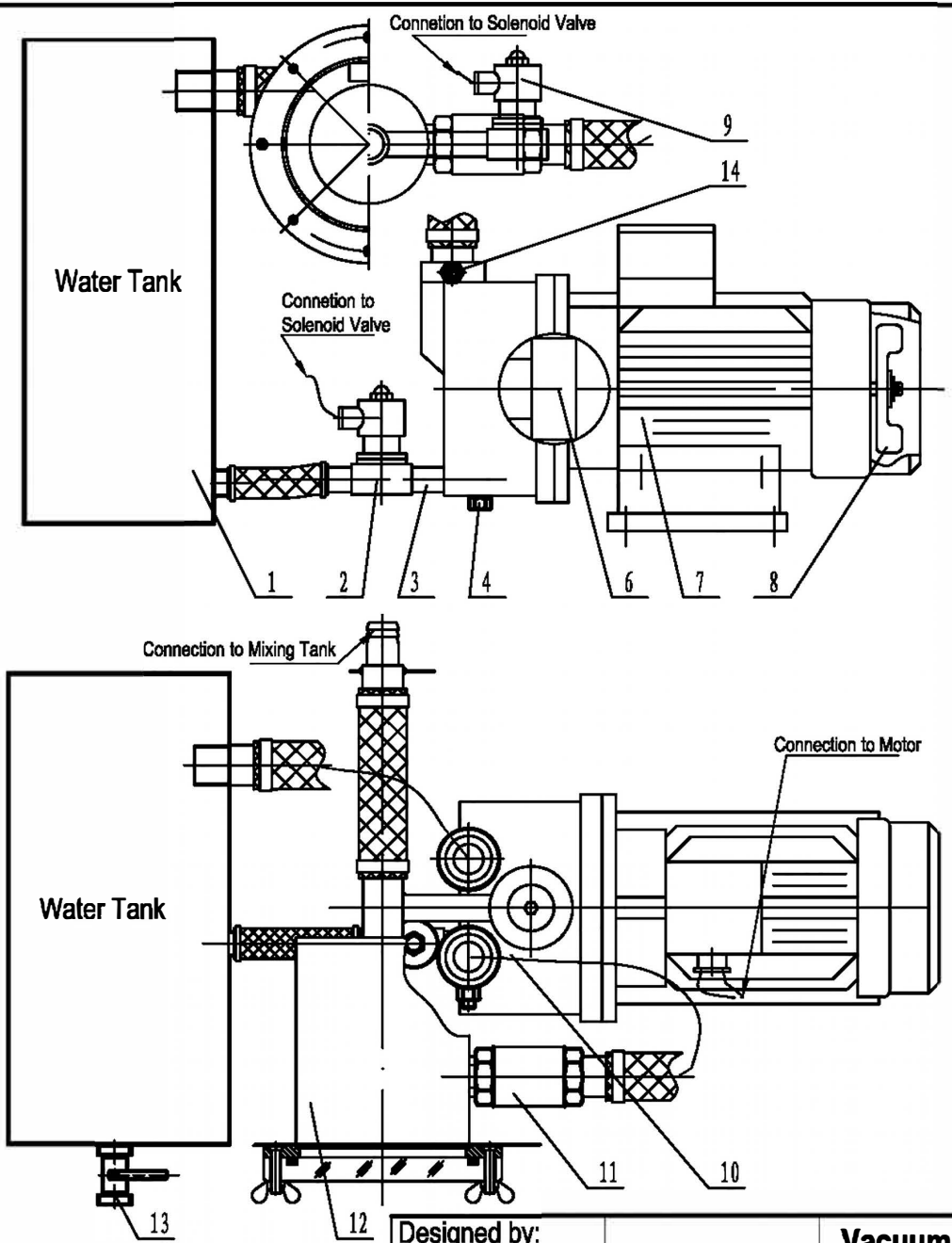
Fig.-1 General structure.

Fig.-2 Vacuum pump line & Water recycle

Fig.-3 Circuit diagram



Designed by:		General Structure	Drawing No.:	Scale:
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Water Inlet Pipeline:

1. Water tank → 2. 1/2" Valve (Water supply) → 3. Water inlet

Exhaust Pipeline:

5. Outlet (Air exhaust) → 1. Water tank

Air Suction Pipeline:

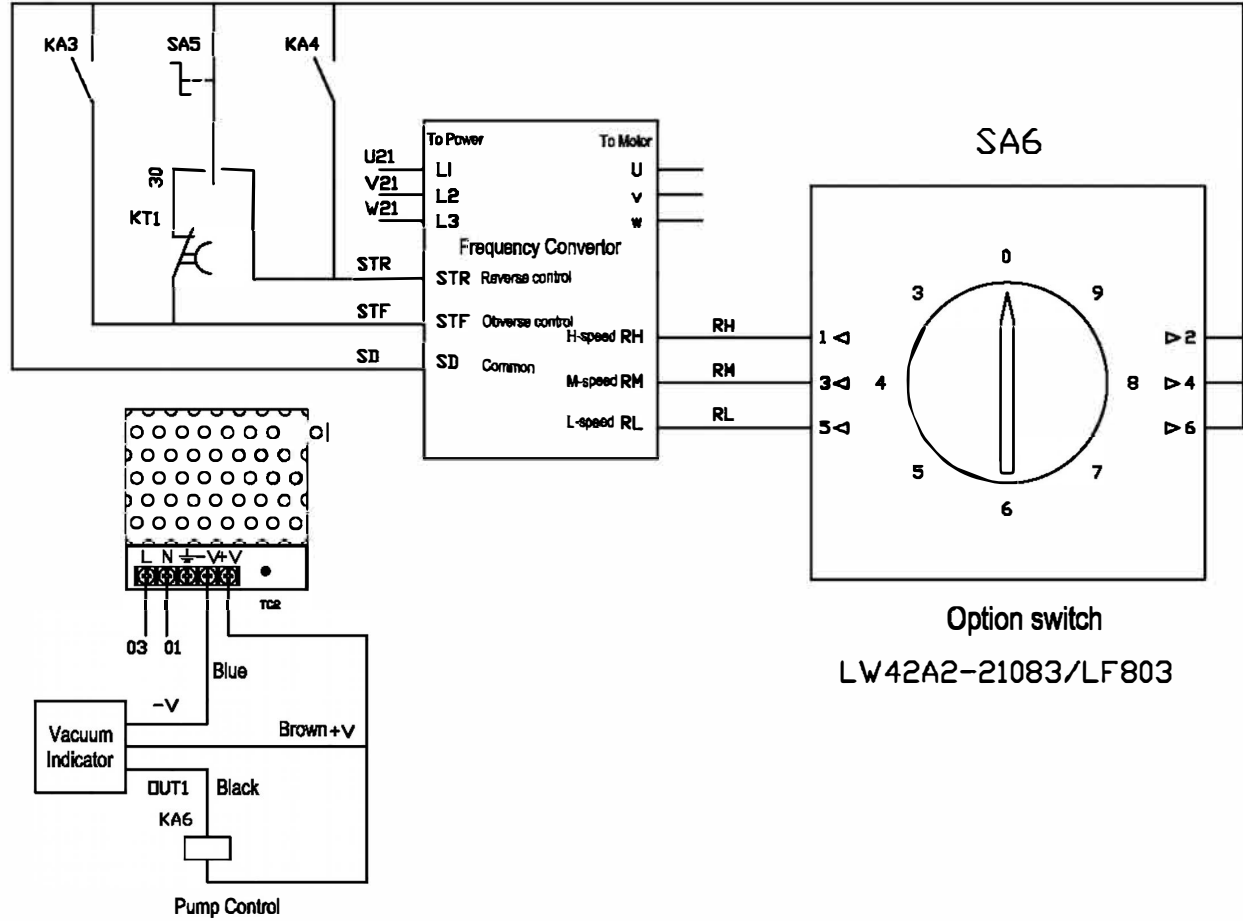
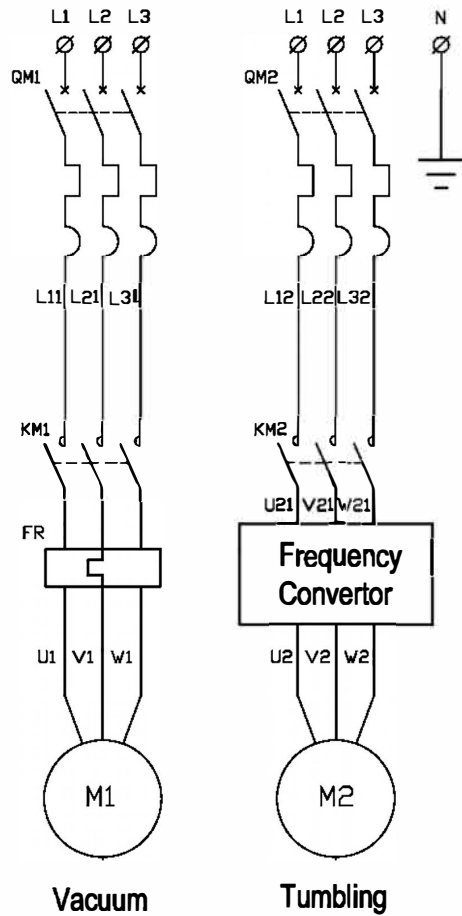
Mixing tank → 12. Filter → 11. Check valve → 10. Valve (Air exhaust)

Exhaust of tank:

Mixing tank → 9. 1/2" Valve (Air exhaust)

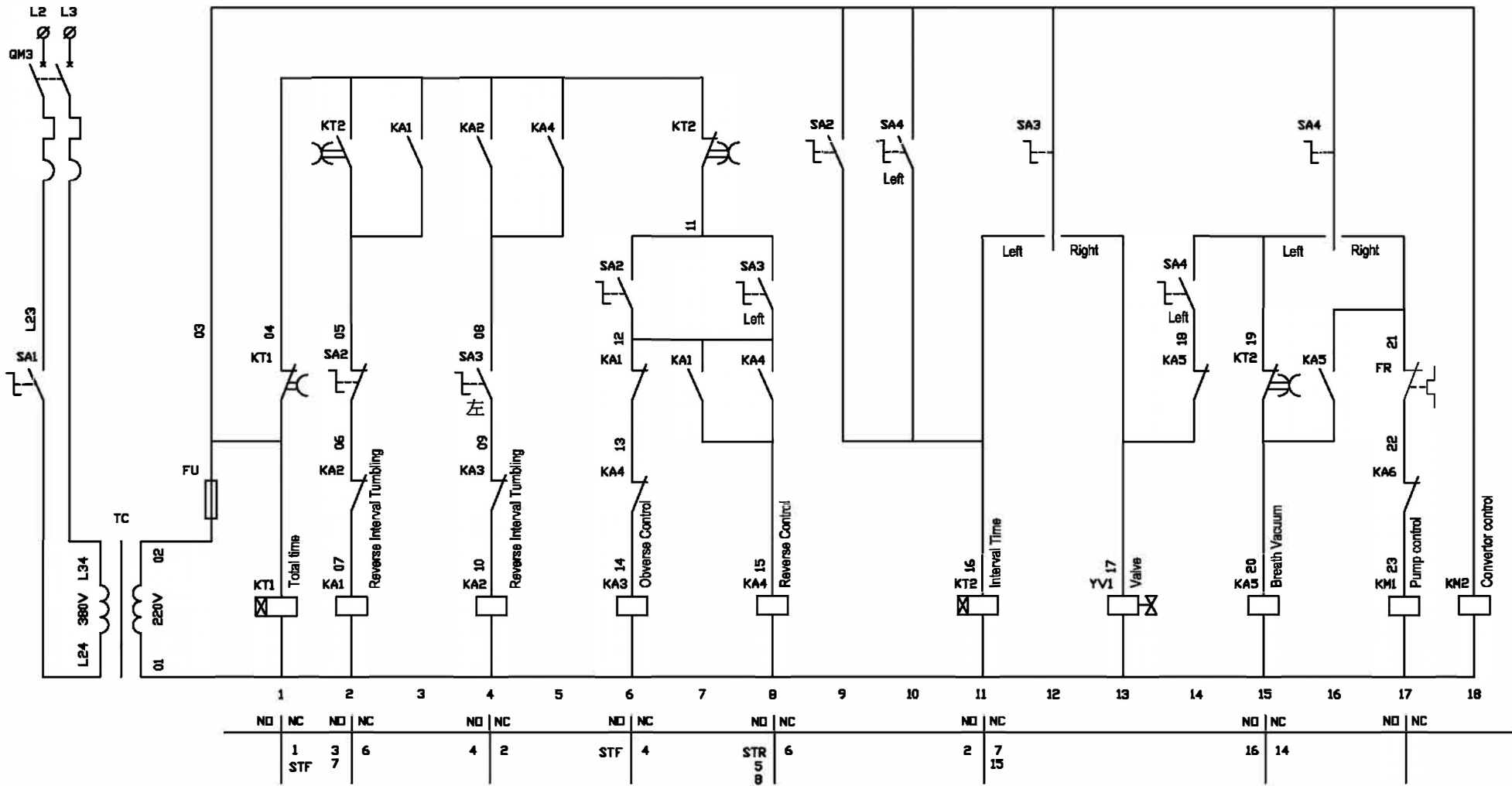
Designed by:		Vacuum pump pipeline & Water recycle	Drawing No.:	Scale:
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Main Circuit	Obverse control	Obverse rotation	Reverse rotation (Unloading)	Reverse control	Frequency Conversion	Tumbling speed conversion



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Power supply	Total time	Obverse & Reverse Conversion	Obverse control	Interval control	Reverse control	Obverse & Interval Tumbling	Breath vacuum	Obverse & Reverse Interval Tumbling	Vacuum Release	Breath Vacuum	Vacuum Control	Converter Control
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