SANTINT 三华

M3 Manual Dispenser
User's Manual

Please read this manual carefully before operation

Printed in the People's Republic of China.

Disclaimer

QAC®

Quality Assurance Centre of China Association for Quality

CERTIFICATE OF QUALITY MANAGEMENT SYSTEM

Certificate No. **00607Q10059R1M**

This is to certify that the Quality Management System of

Zhengzhou Sanhua Technology & Industry Co., Ltd.

Address: Xushui Industrial & Trading Park, Zhongyuan West Road, Zhengzhou City, Henan Province, People's Republic of China

Post Code: 450042

is in conformity with

GB/T 19001-2000 idt ISO 9001:2000

This certificate is valid to the following scope:

Design, Manufacture and Services to its Series Products-Paint Mixing and Dispensing Machines Such as Paint Mixing Machine and Mixing Lids for Car refinishes, Dispenser, Shaker and Mixer for Decorative Paint (Exclusion Item 7.5.2)

Term of validity of this certificate from: 11th.Jan.2007 to 10th.Jan.2010

Quality Assurance Centre of China Association for Quality (QAC)

Representative:

Huang Jinfu
General Manager
Issue Date: 11th.Jan.2007

CNAB

Registration No. CNAB006-Q

IAF

Content

1. Preface

Thanks for purchasing the Santint Manual Dispenser!

This user's manual provides general information on installation, usage and maintenance of our manual dispenser. Any improper use will shorten its longevity. Read this manual completely and carefully before installation, use and maintenance of the machine. The manual should be kept in a convenient place for future reference.

For any questions, please do not hesitate to contact our service team.

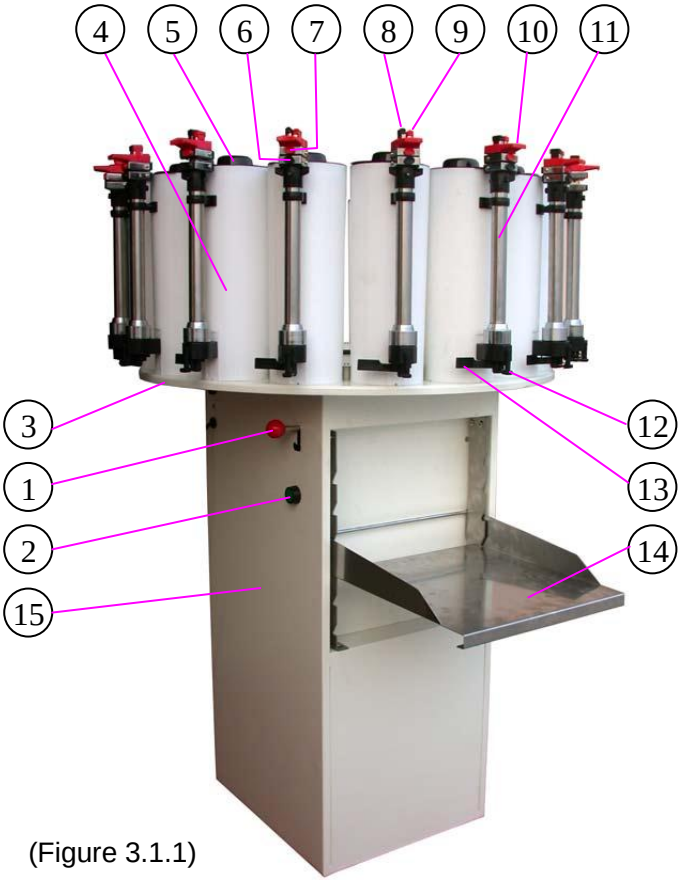
2. General Safety Instructions

1. The ambient temperature shall not be below 5℃.
2. Take notice:
   - Check the wooden case for missing parts.
   - The machine must be placed in a well-ventilated place. Otherwise an aerator must be provided.
   - The applicable power cord: refer to the nameplate in the rear. Make sure the power cord is well grounded to ensure safety.
   - Do not lengthen the power cord as to avoid malfunction or injury.
   - Before servicing and repairing, remove power cord from wall socket.
   - If the dispenser is not used for a long time, unplug from wall socket.
   - Do not operate in a flammable and explosive environment.

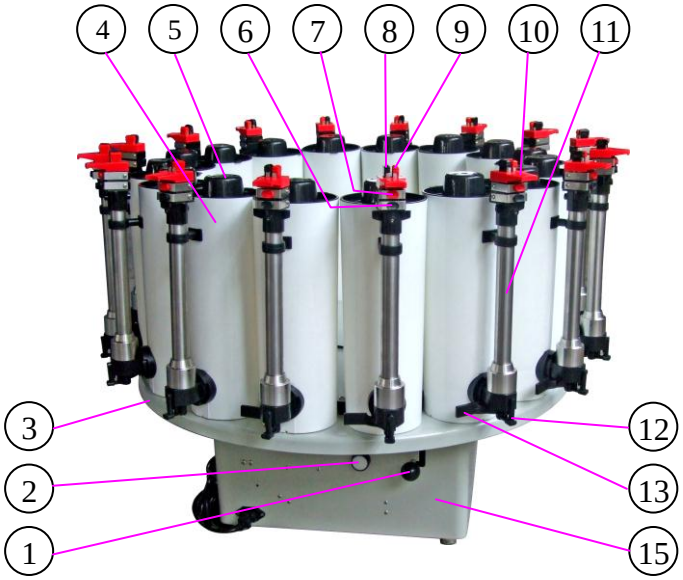
3. Configuration

As Figure 3.1.1, Figure 3.1.2 shows:

①. ----Brake handle
②. ----Button
③. ----urntable
④. ----Canister
⑤. ----Canister Lid
⑥. ----Rough Rease Button
⑦. ----Fine Rease Button
⑧. ----Rough Gauge
⑨. ----Fine Gauge
⑩. ----Plunger Handle
⑪. ----Pump
⑫. ----Nozzle
⑬. ----Valve Handle
⑭. ----Shelf
⑮. ----Stand



(Figure 3.1.1)



(Figure 3.1.1)

4. Major Specifications

Model	M310	M312	M314	M316	M320	M324
No. of Canisters	10	12	14	16	20	24
Power Supply	See Nameplate					
Rated Power	80W					
Dispensing Speed	20rpm					
Canister's Volume	2.3L					
Min Dispensing Quantity	US Fluid Ounce 0.077ml(1/384) US Metric Fluid Ounce 0.081ml(1/384) Metric 0.1ml					USOZ US METRIC OZ
Dimensions（Floorstand）(mm)	745X745X1300	745X745X1300	860X860X1300	860X860X1300	1016X1016X1300	1150X1150X1310
Dimensions（Countertop）(mm)	745X745X630	745X745X630	860X860X630	860X860X630	1016X1016X630	1150X1150X630
Net Mass（Floorstand）	51KG	53KG	63KG	65KG	72KG	85KG
Net Mass（Countertop）	42KG	44KG	54KG	56KG		

5. Installation and Preparations before Operation

5.1 Installation

Please refer to < Installation Guide>

5.2 Preparation before operation

Attention: Please stick the specified label on each canister to show different colorants!

- The colorant in each canister must be fully mixed (It is not recommended to be mixed by shaker as too many bubbles may appear that would cause the chromatic aberration).
- Remove each canister lid and pour the colorant into the corresponding canister.
- Before operation, remove the air out of each pump. Follow the procedures:

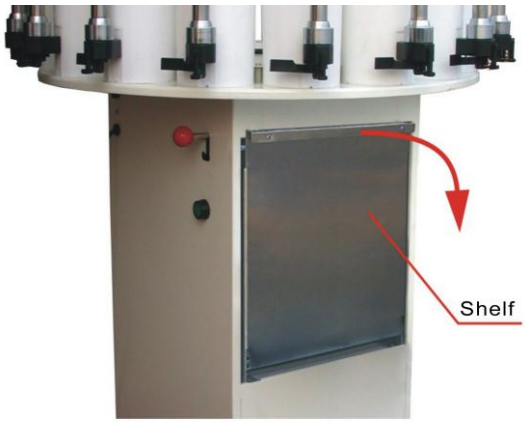
5.2.1 step A: Operation of the gauges:

- Press and hold the Rough release button and pull the Rough gauge upwards to a certain

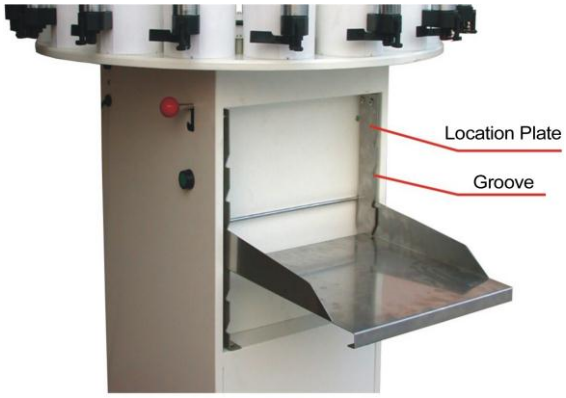
height, ie. 1Y.

- Release the Rough release button back to its original position
- Lift up the plunger handle slowly to its full extent and then press it down gently. Do not move the valve handle during this process.
- Repeat the same procedures 5-6 times;
- Follow the same procedures for the Fine gauge.

5.2.2 Step B: For the floor-stand dispenser, Operation of the shelf



(Figure 5.2.2.1)

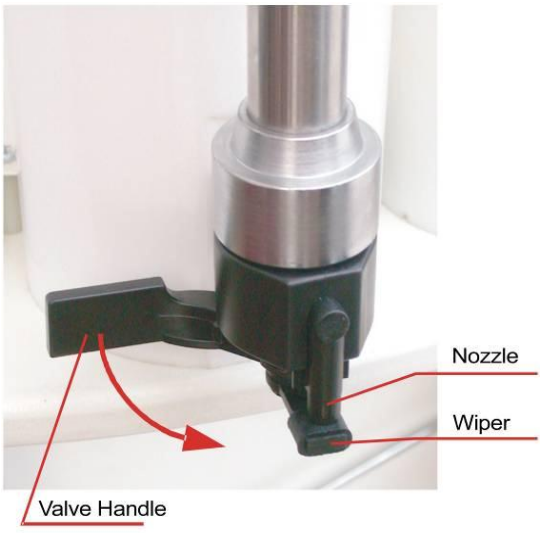


(Figure 5.2.2.2)

- Open the shelf by pulling it down. See figure 5.2.2.1.
- Move the shelf up and down to an appropriate height. Press it gently so that it can be locked into the grooves of the location plate. See Figure 5.2.2.2 (Return the shelf back to its original position when it is not in use)

5.2.3 Step C: Check air inside canisters

- On the shelf, place a clean container just below the nozzle.
- Lift up the plunger handle slowly to its highest position, rotate the valve handle with your left hand to an angle of 90º as shown in Figure 5.2.3, and then push down on the plunger handle slowly. Meanwhile, observe if the colorant flows continuously. If the colorant flow is discontinuous, or if the colorant leaks from nozzle while valve handle is being



(Figure 5.2.3)

rotated, that is an indication that air remains in the pump. In this case, return the valve handle to its original position and repeat step A until the colorant flows out at an even stream. This indicated that all air is pressed out. Finally, pour the colorant in the container back into the corresponding canister. Follow the same operation for other pumps.

- The dispenser is ready for use.

6. Operation

6.1 Colorant Mixing

Connect power cord to a wall socket and press the button to initiate mixing. To stop mixing, repress the button. Stir 3 times every day, at 10 minutes time intervals (If client has special requirements, the daily stir frequency and time can be altered accordingly).

6.2 Rotating and Locking of Turntable

Countertop Dispenser and Floor-stand Dispenser share the same method of turning and locking turntable. Please see Floor-stand type as an example (As Figure 6.2.1 shows.):

- Press the brake handle down to the horizontal slot.
- To lock the turntable:

01. Rotate the turntable to the desired position.

02. Release the turntable brake handle back up to the vertical slot.

03. Move the turntable to the left and right slightly to let the brake handle return to its original position.

04. The turntable is now locked.

(Figure 6.2.1)

6.3 Dispensing

The minimum shot of the dispenser is one division on the Fine gauge's dispensing unit is marked at the bottom. For example, 2957/384 means the unit is 1/384 US Fl. Oz. Numbers on the **Rough** gauge and the **Fine** gauge have same unit marked at the bottom of the **Rough** gauge. For example, if the **Rough** gauge is marked 2957/48, the number "30" on the **Rough** gauge represents the dispensing value of "30x29.57/48ml.", and number "2" on the Fine gauge

represents the dispensing value of “2x29.57/48ml.”.

Dispensing Procedures:

01 Determine the dispensing quantity of different colorant as per the formula.

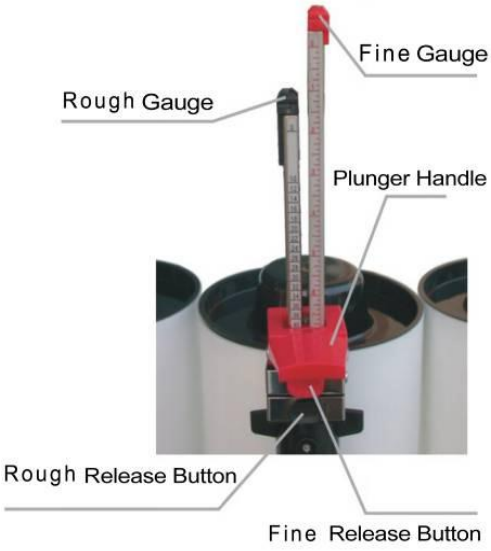
02 Put an open base paint can on the shelf, pull the turntable brake handle down into the horizontal slot, and rotate the turntable until the nozzle is right above the base paint can. Push the turntable brake handle up to the vertical slot and move the turntable left and right slightly to lock the turntable (See Figure 6.2.1).

Attention! Please put the base paint can as close as possible to the spout.

03 Press and hold the Rough (or Fine) button as required, lift up the Rough (or Fine) gauge to required number, and then release the button to lock the gauge (See Figure 6.3.1).

04 Lift up the plunger handle up to the maximum travel and hold for several seconds to ensure the pump is filled with colorant.

Attention! Do not open or operate the valve handle when lifting up plunger handle, otherwise air will enter into the pump and cause inaccurate dispensing.



(Figure 6.3.1)

05 Turn the valve handle to an angle of 90º, pull the plunger handle down to its full travel, then release the valve handle slowly back to its original position. Repeat the above procedures for more shots of the same colorant (See Figure 6.3.2).

06 Press down Rough release button, push the Rough gauge back to zero-scale and then release the Rough release button.

07 Press down Fine release button, push the Fine gauge back to zero-scale and then release the Fine release button.

(Figure 6.3.2)

Attention!

- **As a precise device, either Rough or Fine gauge is vulnerable to damage**

when falling freely to the zero-scale.

- **Set the Rough or Fine gauge to zero-scale when it is not in use.**
- **The aggregation of the shots by Rough and Fine gauges should be equal to the dispensing quantity specified in the formula.**

08 Use the same method to dispense all the other required colorant into the base paint can.

7. Maintenance

7.1 Daily Maintenance

01 Move each plunger handle up and down three times every day to ensure smooth flow of the colorant and to avoid blockages in pumps and canisters.

02 Clean the nozzle with soft cloth or cotton moistened with water or thinner to keep it unobstructed.

03 Move the valve handle 5 times every day. This can keep the valve in optimum working condition and prevent the colorant from drying in the valve.

04 Check the colorant level in canisters and refill if necessary. If the colorant is lower than the feeding level, air will enter the pump when lifting up the plunger handle. This will cause inaccuracy in dispensing.

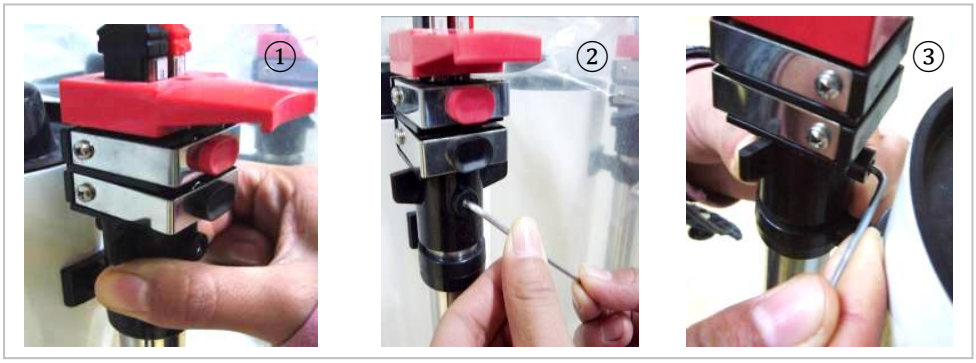
7.2 Weekly Maintenance

01 Check if the canister is loose. If so, tighten the tapping screws under the turntable (see 7.5-Replacement of Canister)

02 Check if the gauge's scales are damaged or covered with colorant. Clean or replace the gauges if necessary.

03 Set the black gauge at its full scale; lift up the plunger handle to check if the shaft is stuck by colorant. If yes, the big piston must be replaced because it has been worn out and/or broken.

7.3 Periodical Maintenance



(Figure 7.3)

The dispenser must be maintained every 3-6 months:

01 Check to see if the fixed base is loose or not (Figure 7.3 ①). If loose, push the base to the bottom most position, fasten two screws of the base Symmetrically with inner hexagon Spanner. (Figure 7.3 ②,③)

Note: don't screw too hard.

02 Open canister lid during the process of mixing to observe if the agitator works normally. For any abnormity, stop mixing and repair the canister.

03 Cleaning the nozzle: Rotate the valve handle and pull out the nozzle. Clean the nozzle with cotton moistened with water or thinner. Then rotate the valve handle once again to reinstall the nozzle.

Attention!

- **After reinstallation of nozzle, dispense out certain amount of colorant to fill the nozzle. The reinstallation must be carried out carefully.**
- **The M3 by default is installed with a large-size nozzle. The end user can choose to install a different size nozzle according to the colorant's viscosity.**

7.4 Yearly Maintenance

After a long period of use, colorant may be stuck to the inner wall of the pump and canister. This will make the piston difficult to move and cause measurement errors. If this is the case, cleaning must be done to canisters and pumps.

01. Remove the canister assembly from the turntable.

02. Pour any remaining colorant from the canister into a clean container.

03. Clean the canister with warm water to get rid of most of the adhesive colorant.

04. Properly dispose the mix of cleaner and colorant according to local environmental regulations.

05. Reinstall the canister on the turntable.

06. Add some cleaner into the canister.

07. Set the Rough gauge to its maximum scale.

08. Put a container right below the nozzle and then operate as dispensing procedures (6.3).

09. Set the Fine gauge to its maximum scale.

10. Place a container right below the nozzle and then operate as dispensing procedures (6.3).

11. Repeat steps 7-9 until the canister is clean (the cleaner can be used for 1-3 times. Yet fresh cleaner is required for the final cleaning).

12. Leave the canister to dry before re-filling with fresh colorant.

7.5 Replacement

Replace Sniff-Back Piston

01. Rotate the valve handle and pull out the nozzle.

02. Rotate the valve handle to its maximum travel and hold.

03. Pull out the sniff-back piston.

04. Install a new sniff-back piston with small O-ring.

05. Reinstall the nozzle.

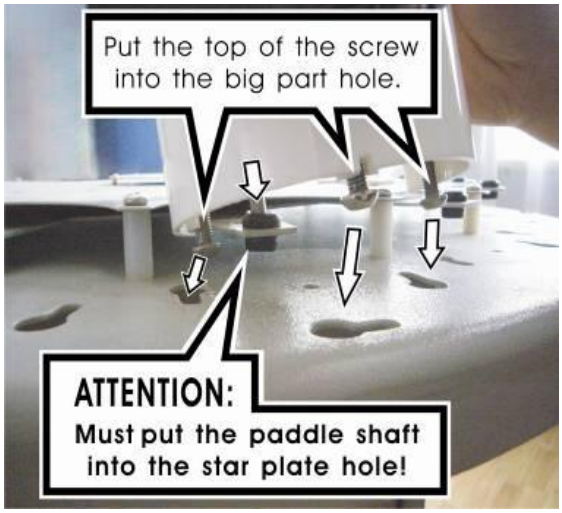
06. Release the valve handle.

Replace Canister

01. Loosen but do not remove the three screws that fix the canister under the turntable using the inner hexagon wrench. Rotate the canister clockwise to remove from the turntable.

02. While installing the new canister, place the three M6 screws at the bottom of the canister into the larger ends of the three cone-shaped holes in the turntable.

Caution: Must insert the canister crank into the plastic sleeve in the turntable (see Figure 7.5.1).



(Figure 7.5.1)

03. Rotate the canister anti-clockwise, shift the canister's three screws to the smaller ends of the cone-shaped holes, and then fix the screws with inner hexagon wrench from the bottom of the turntable.

7.6 Calibration

Normally the machine has been precisely calibrated and ready for use before leaving the factory. Yet in the following cases, new calibration is necessary:

- When replacing either the Rough or Fine gauge or the location pin of the said gauge.
- The dispensing result is not accurate.

Calibration procedures as follow:

01. Check the condition of the Rough or Fine gauge or their location pin. Replace them if necessary.
02. Press and hold the Rough button until the black gauge reaches zero-scale. Release the Rough button back to the original position. Use an inner hexagon spanner to adjust the

screws on the active base until its top surface touches the bottom surface of the gauge knob.

03. Press and hold the Fine button until the red gauge reaches zero-scale. Release the Fine button back to the original position. Use an inner hexagon spanner to adjust the screw on the plunger handle until its top surface touches the bottom surface of the Fine gauge knob.
04. Measurement: Measure the minimum dispensing quantity of the Rough gauge and Fine gauge respectively according to Dispensing Procedures (5.3 step 2 through 5).
05. Compare the measured value with the standard one to find their difference. For any difference exceeding the permitted range, you'll have to adjust the screw(s) on the active base or the plunger handle.
06. Repeat the step 4 and 5 until you get the required minimum dispensing quantity.

7.7 Extended periods on non-use

For extended periods of non-use with colorant still in the canisters, the M3 must be kept powered on. Dispense some colorant (approx. 1ml) periodically (every 5 days) to avoid the nozzle from becoming dry and the colorant hardening. Otherwise, disconnect from power， pour the colorant into clean (or corresponding) canister, and clean the canister to avoid the colorant from drying.

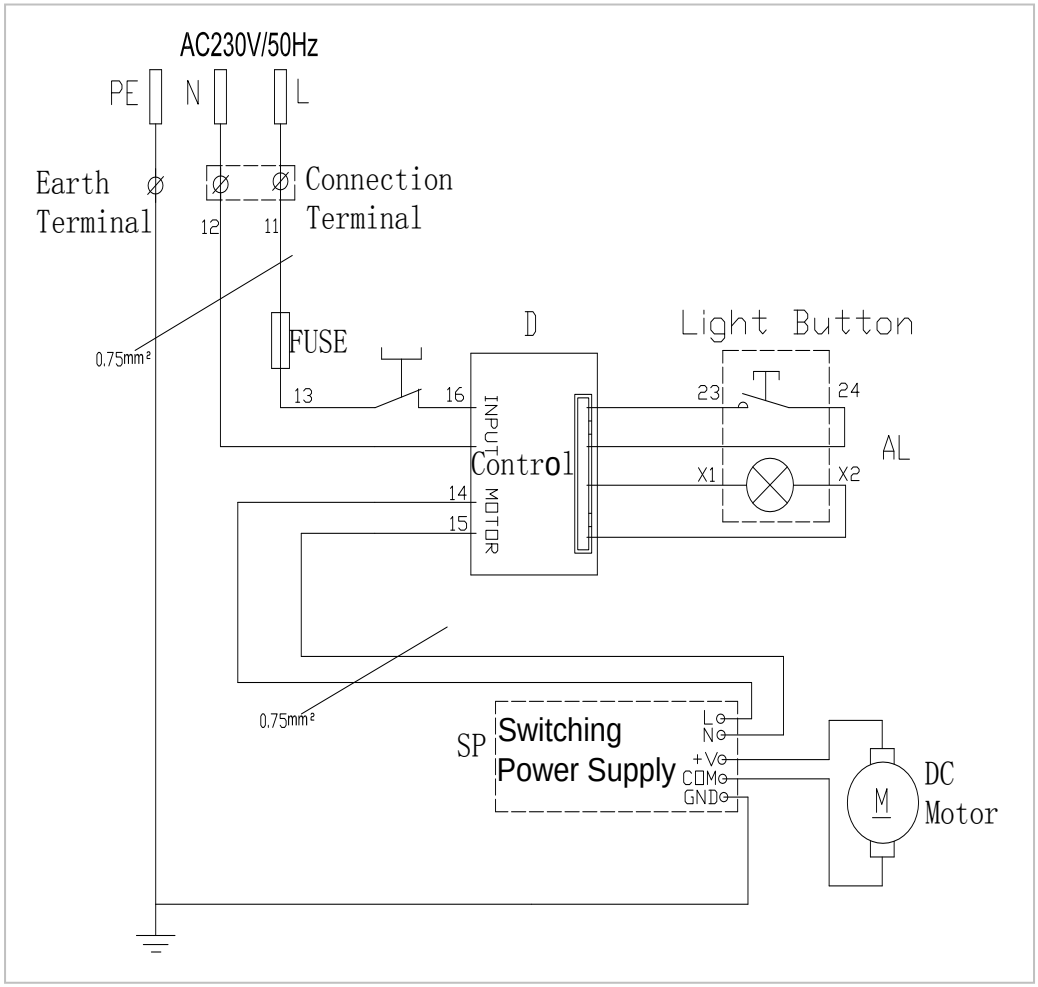
8. Troubleshooting

Symptom	Cause	Action
The motor does not work.	No power	Check if plug and wire are fine; Check if socket has power.
	The fuse is broken.	Replace fuse.
	The motor is disconnected.	Open motor case and reconnect the motor correctly.
	The motor is broken.	Replace it.
Uneven flow of colorant from the nozzle during dispensing.	Air bubbles in the cylinder	See "Preparation Before Operation ". Allow the bubbles to escape
	Colorant in canister is low.	Top off colorant.
	Dried deposits of colorant causing blocks.	Clean canister assembly and relevant parts.

Canister is loose on turntable.	Loose fastening screws.	Tighten fastening screws.
Colorant doesn't dispense easily.	Nozzle blocked.	Clean nozzle.
Piston doesn't move easily.	Colorant has dried and hardened in the canister.	Canister and pump should be removed, emptied and cleaned thoroughly. Replenish with new colorant.
Agitator doesn't move during mixing.	The crank shaft under the canister is not attached to the plastic sleeve of the rotating panel.	Reinstall the canister.
Colorant leakage at the nozzle.	Worn out O-ring.	Replace O-ring.

9. Circuit Diagram

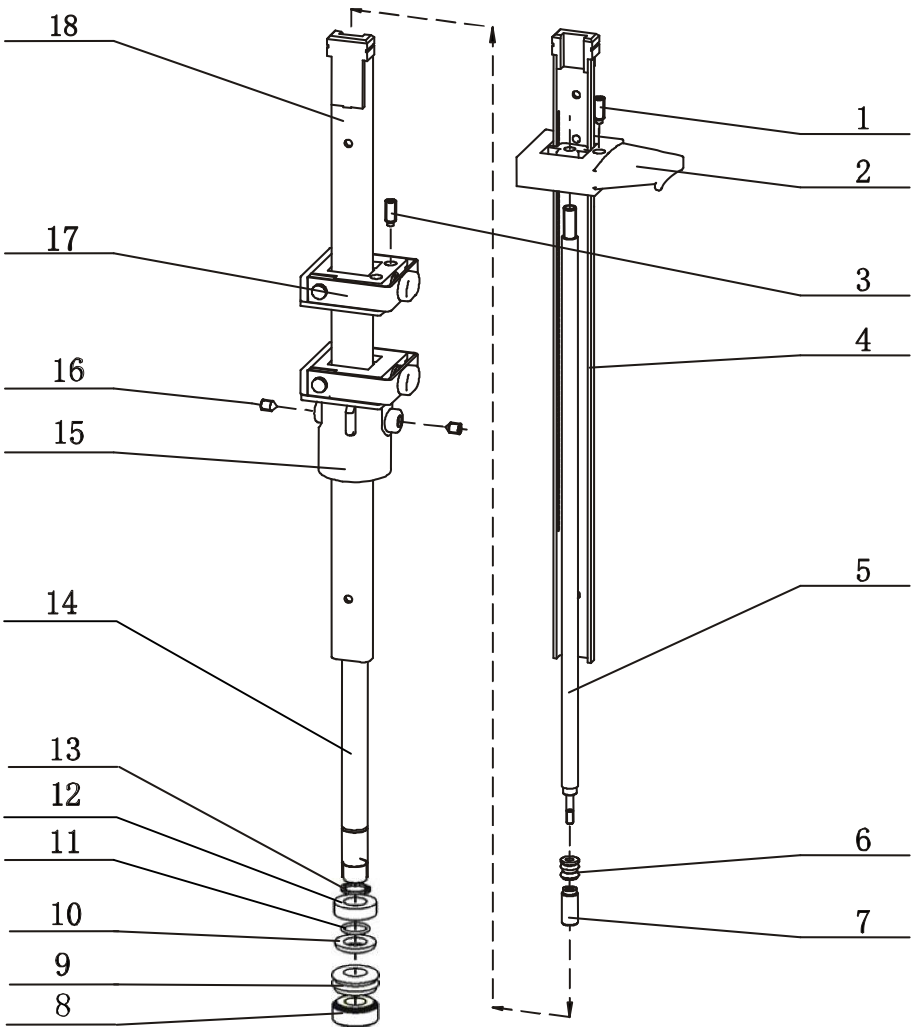
See Figure 9.1:



(Figure 9.1)

10. Assembly Drawings

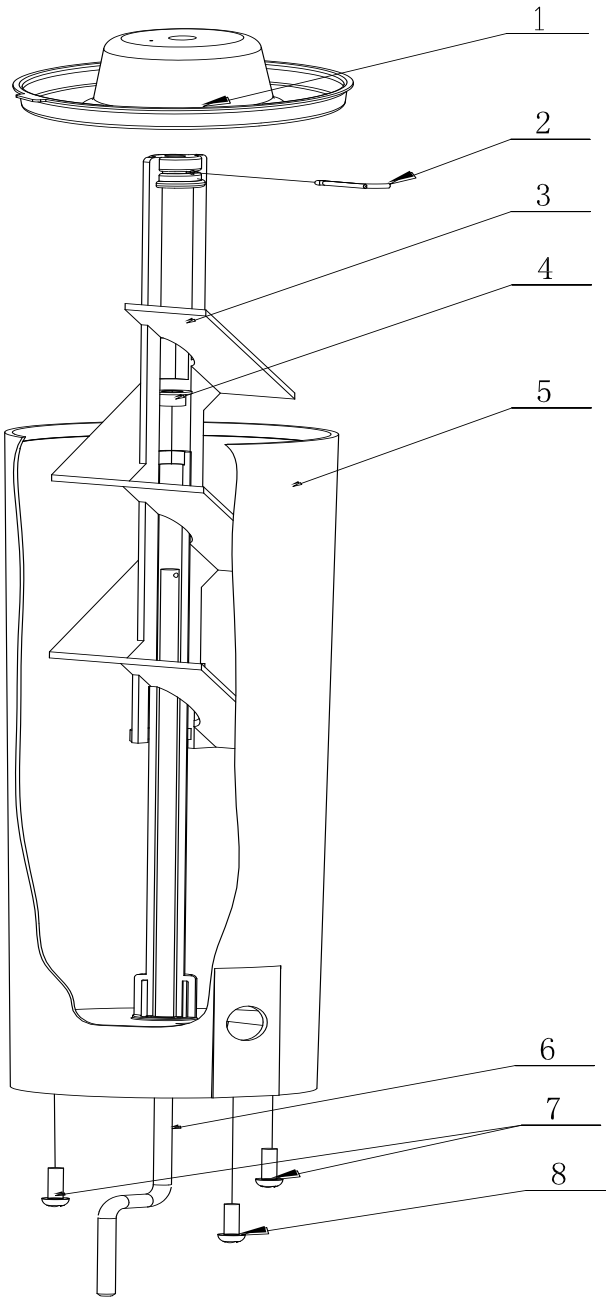
10.1 Assembly of Piston Kit



(Figure 10.1)

1----Screw (M4x10)
2----Plunger Handle
3----Screw (M4x10)
4----Red Gauge (Fine Gauge)
5----Small Piston Shaft
6----Small Piston
7----Small Piston Head
8----Large Piston Head
9----Large Piston
10---- Large Piston Wiper
11----"O" Ring (9x1.9)
12---- plug stopper
13---- Circlip for Shaft
14---- Large Piston Shaft
15---- Fixed Base
16---- Set Screw (M4x6)
17---- Active Base
18---- Black Gauge(Coarse Gauge)

10.2 Assembly of Canister



(Figure 10.2)

1 ----Canister Lid

2 ----Collar Pin

3 ----Agitator

4 ----Shaft Bushing, Agitator

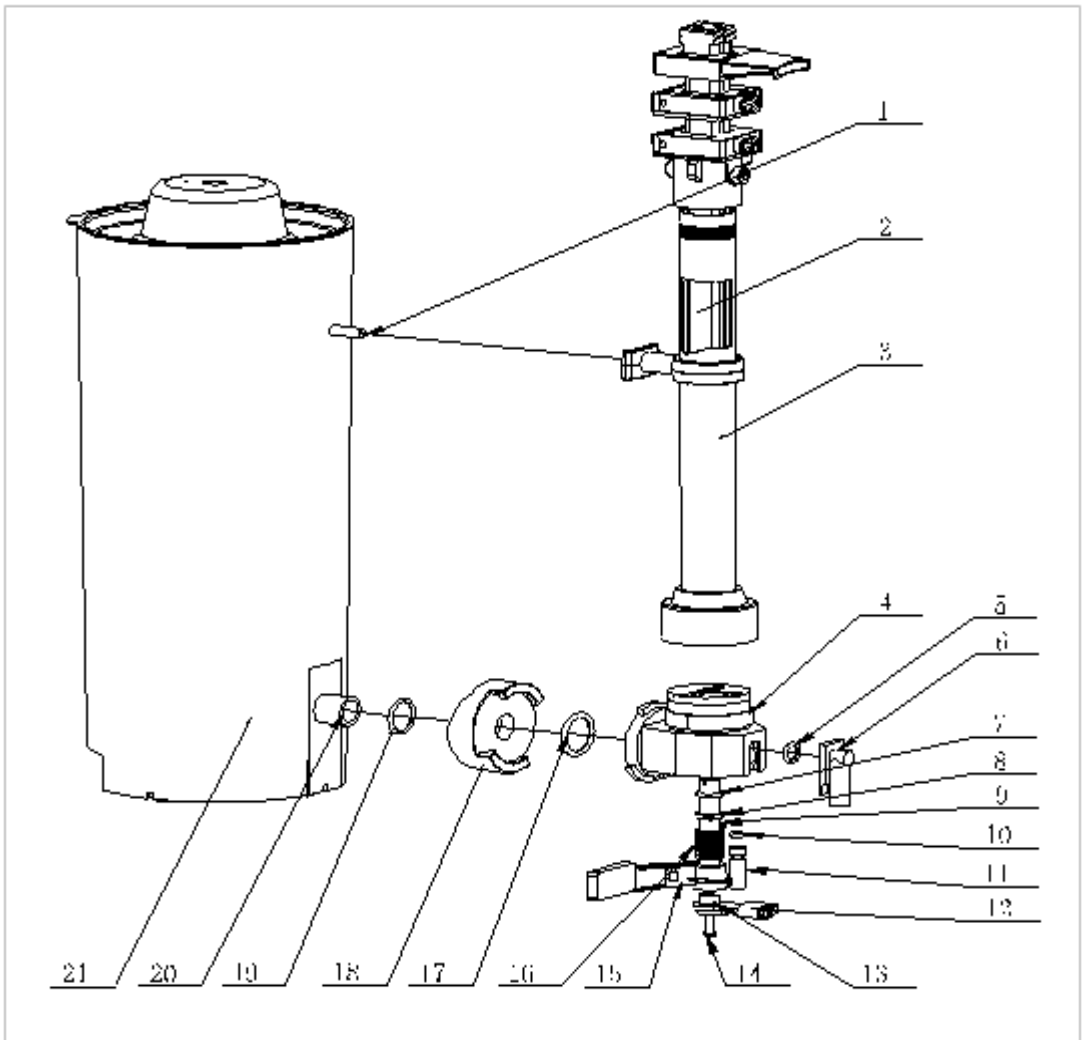
5 ----Canister

6 ----Crank shaft

7 ----Screw（M6X35）

8---- Screw (M6X30)

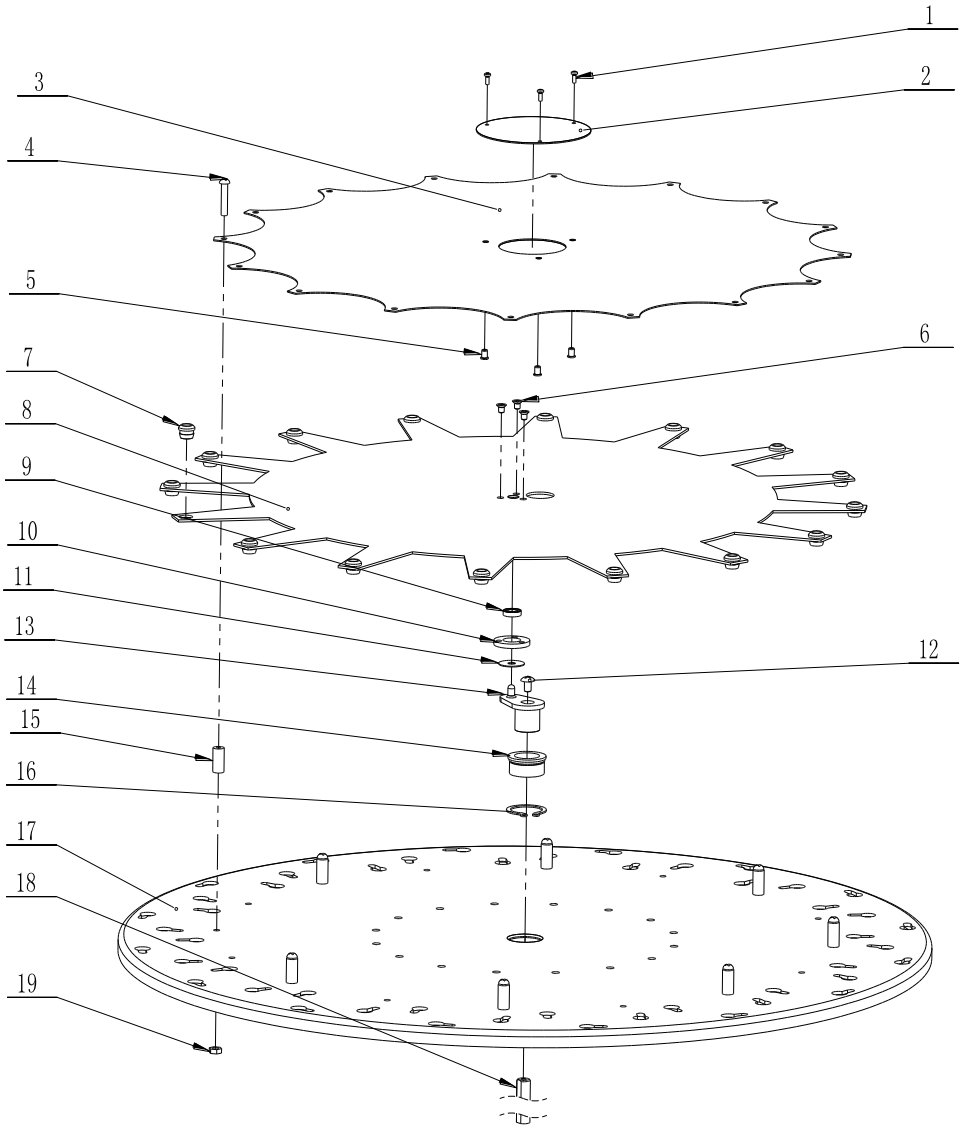
10.3 Assembly of Canister/Pump



(Figure 10.3)

1---- Bolt (M5X10)
2---- Piston Kit, Gauge
3---- Pump Housing
4---- Valve Kit
5---- "O" Ring (8X1.8)
6---- Nozzle
7---- "O" Ring (7.2X1.8)
8---- Washer
9---- Valve Pole
10---- "O" Ring (3.15X1.8)
11----Inhalant Piston
12----Rubber Cover, Wiper
13---- Wiper
14---- Pan-head Screw (M3X12)
15---- Valve Handle
16---- Torsion Spring
17---- "O" Ring (19X2.65)
18---- Linking Block
19---- "O" Ring (19X2.1)
20----Fixing Bolt, Linking Block
21----Canister Kit

10.4 Assembly of Turntable



(Figure 10.4)

1---- Bolt
2---- Protection Cap
3---- Upper Turntable
4---- Bolt
5---- Riveting Nut
6---- Bolt
7---- Plastic Sleeve
8---- Stelliform Plate
9---- Bearing
10---- Rotary Plate
11----Plastic Washer
12---- Bolt
13---- Eccentric Shaft
14---- Center Location Tube
15---- Support
16---- Lock Spring
17---- Lower Turntable
18---- Motor Shaft
19---- Nut

11. Nameplate

The power parameter could be found on the name plate

12. Regulatory Information

Declaration of Conformity
Application of Council Directive(s)
89/336/EEC; EMC Directive

Confirm of Conformity
Application of Council Directive(s)
98/37/EC; Machinery Directive
73/23EEC (Low Voltage Directive)

Standards to Which Conformity is Declared
Machinery Directive Annex 1; EN60204-1:1997; EN292-1,-2; EN1050

Manufacturer Name:
ZHENGZHOU SANHUA TECHNOLOGY & INDUSTRY CO., LTD.

Manufacturer Address:
Xushui Industrial & Trading Park, Zhongyuan West Road, Zhengzhou, Henan 450042, P. R. China
Tel: +86-371-67857198, 67857178
Fax: +86-371-67857221, 67857166
Email: info@santint.com

APPENDIX

APPENDIX 1

EC Declaration of Conformity

According to the Low Voltage Directive 73/23/EEC 93/68EEC

For the following equipment:

Product:	**Manual Dispenser**
Type designation/trademark:	**M3**
Manufacturer's Name:	**Zhengzhou Sanhua Technology & Industry CO., Ltd.**
Manufacturer's Address:	**Xushui Industrial & Trading Park, Zhongyuan West Road, Zhengzhou City, Henan Province, P. R. China**

Referred to in this declaration conforms with the following standards or directive(s) as far as applicable: EN60204-1:1997

.....

.....

.....

Responsible for marking this declaration is the:

Manufacturer ☑ Authorized representative established within the EU ☐

Authorized representative established within the EU (if applicable):

Company Name: N.A

Company Address: N.A

Person responsible for making this declaration

Full Name: Shen Ruhua

Position/Title: General Manager

Zhengzhou 1 Aug 2006

APPENDIX 2

EC Declaration of Conformity

According to the Machinery Directive 98/37/EC

For the following equipment:

Product: **Manual Dispenser**

Type designation/trademark: **M3**

Manufacturer's Name: **Zhengzhou Sanhua Technology & Industry CO., Ltd.**

Manufacturer's Address: **Xushui Industrial & Trading Park, Zhongyuan West Road, Zhengzhou City, Henan Province, P. R. China**

Refer to in this declaration conforms with the following directive(s):

AnnexI of the Machinery Directive 98/37/EC:

.....

.....

The company named above will keep on file for reviewing the following technical documentation:

♦ Operating and maintenance instructions

♦ Technical drawings

♦ Risk assessment

♦ Description of measures designed to ensure conformity

♦ Other technical documentation, e.g. quality assurance measures for design and Production.

Responsible for marking this declaration is the:

Manufacturer ☑ Authorized representative established within the EU ☐

Authorized representative established within the EU (if applicable):

Company Name: N.A

Company Address: N.A

Person responsible for making this declaration

Full Name: Shen Ruhua

Position/Title: General Manager

Zhengzhou 1 Aug 2006 _____

APPENDIX 3

Declaration of Conformity

According to 2002/95/EC

For the following equipment:

Product: **Manual Dispenser**

Type designation/trademark: **M3**

Manufacturer's Name: **Zhengzhou Sanhua Technology & Industry CO., Ltd.**

Manufacturer's Address: **Xushui Industrial & Trading Park, Zhongyuan West Road, Zhengzhou City, Henan Province, P. R. China**

Referred to in this declaration conforms with the following Standards or directive(s) as far as applicable:

2002/95/EC ROHS Directive

Responsible for marking this declaration is the:

Manufacturer ☑ Authorized representative established within the EU ☐

Authorized representative established within the EU (if applicable):

Company Name: N.A

Company Address: N.A

Person responsible for making this declaration

Full Name: Shen Ruhua

Position/Title: General Manager

Zhengzhou 1 Aug 2006

ZHENGZHOU SANHUA TECHNOLOGY & INDUSTRY CO., LTD.

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