



TCSM

CHEN SHIN (TCSM) MC. CO., LTD

CE series ELECTROSTATIC OIL MIST COLLECTOR (Original Instructions)

Operation and Maintenance Manual

Product type:

Serial

Number:

Manufacture

Date:

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Hemei Township, Changhua County 508007 , Taiwan · R.O.C.

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1. General instructions

This manual gives user important safety instructions for machine and user. Please follow manual instructions to prevent machine damage or operator harming.

1.1 Electrostatic oil mist collector operation theory and method

TCSM electrostatic oil mist collector is applied for lathe and milling machine filtration and reuse of coolant. This model uses several parts. (As shown in Figure 1)

1. The dispersion zone:

The conflict plate forces the oil drop disperse into smaller oil mist.

2. The blocking zone:

Block large oil mist by front filter to improve the efficiency of the electric field filter.

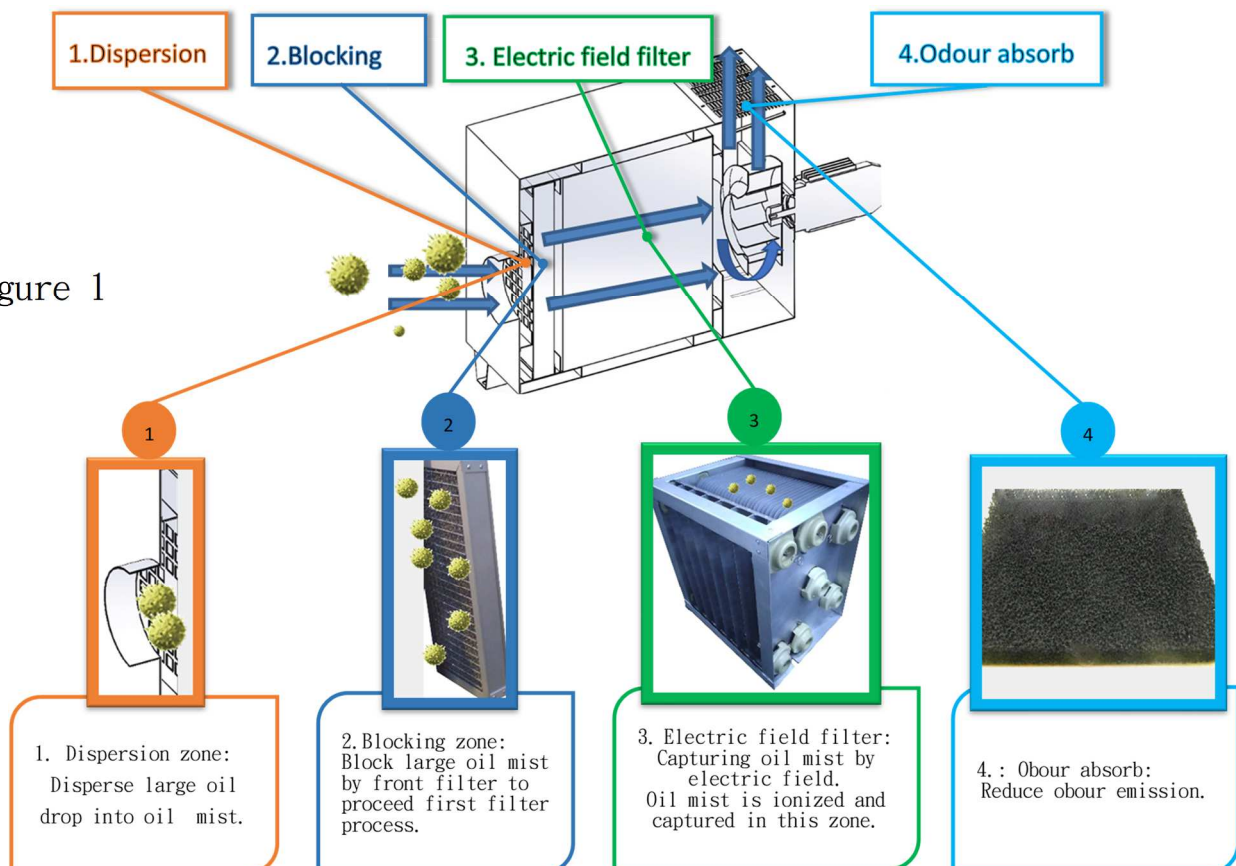
3. Electric field filter:

Electrode plate got positive plate and negative plate.

After oil mist through positive plate, oil mist is captured with negative plate.

4. Odour absorption:

To reduce odour emission, TCSM could supply different optional spare parts depending on each field application to improve filter efficiency.



1.2 Transportation instructions

1.2.1 Packing: CE series are packed with Wooden Box

1.2.2 Transportation: Depending on <Table 1> Collector weight, use appropriate vehicle to move Collector (like Stacker), Person who using the vehicle must have relevant knowledge and qualification to carry it



1.3 Disposal instructions

When the various parts of the equipment cannot be used, please scrap them in accordance with the local environmental regulations.

2. CE series technical data



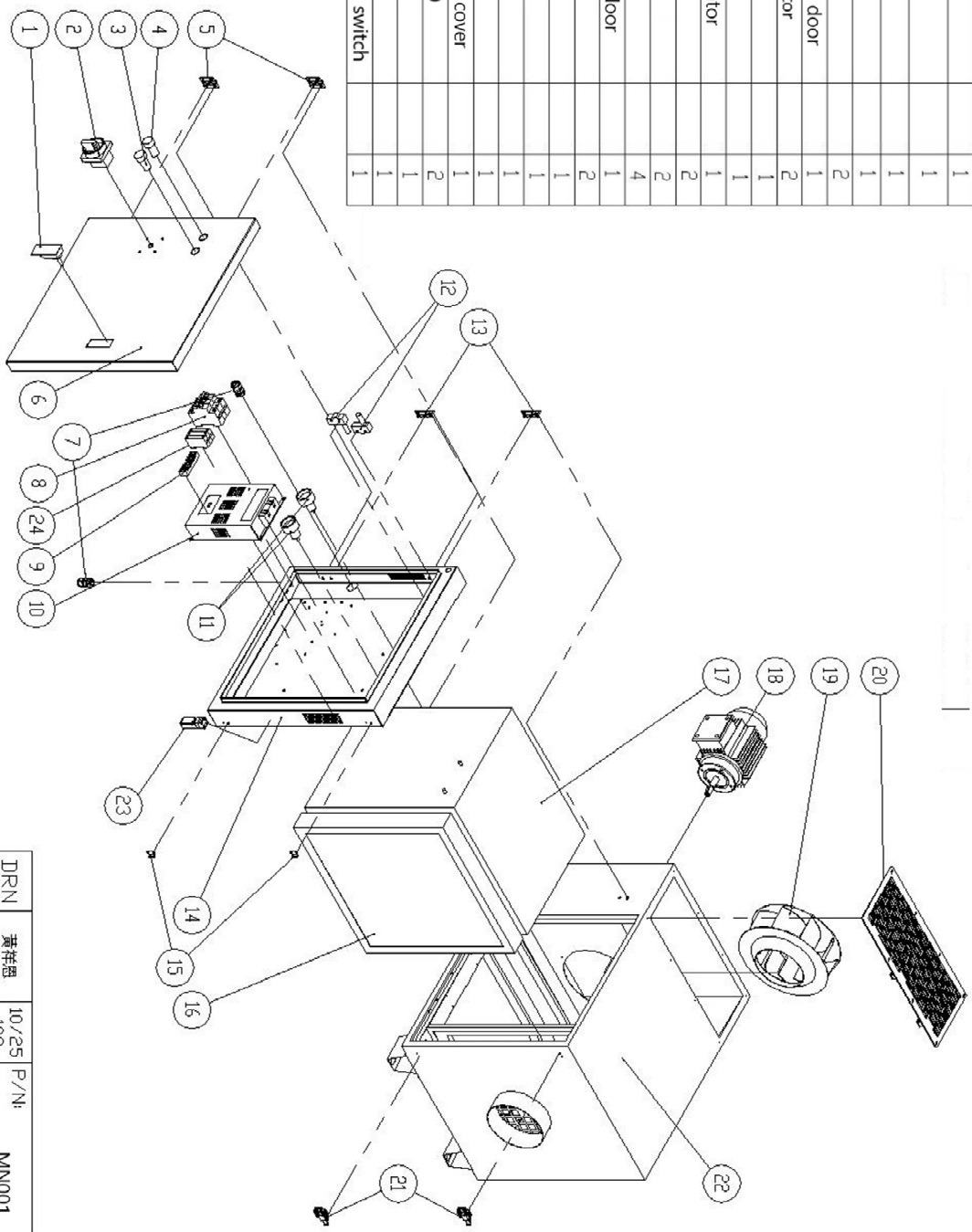
| Type | Unit | CE-900 | CE-1000 | CE-1800 | CE-2200 |
|----------------------|-------------------|---|----------------|--|-----------------|
| Air flow volume | m ³ /h | 900 | 1000 | 1800 | 2200 |
| Power | kW | 0.45 | 0.45 | 0.875 | 1.275 |
| Noise | dB(A) | 70 | 75 | 79 | 79 |
| Motor frequency | Hz | 50 | | 50 | |
| Motor rotating speed | r/min | 2500 | 2860 | 1430 | 2860 |
| Net weight | kg | 75 | | 115 | |
| Physical dimension | mm | 720L*630W*590H | 930L*630W*590H | 1525L*620W*615H | 1525L*620W*615H |
| Dimension | |  | |  | |

Table 1 CE series technical data

3. CE series spare parts

3.1 CE-900

| Item | Parts | Description | Qty. |
|------|------------------------|-------------|------|
| 1 | Handle | | 1 |
| 2 | Main switch | | 1 |
| 3 | LED green light | | 1 |
| 4 | LED red light | | 1 |
| 5 | Door hinge | | 2 |
| 6 | CE-900N-1 Front door | | 1 |
| 7 | M16 Cable Connector | | 2 |
| 8 | Circuit breaker | | 1 |
| 9 | Terminal block | | 1 |
| 10 | Electrode generator | | 1 |
| 11 | Ceramics | | 2 |
| 12 | Micro Switch | | 2 |
| 13 | Door hinge | | 4 |
| 14 | CE-900 Second door | | 1 |
| 15 | Spring buckle(F) | | 2 |
| 16 | Stainless filter | | 1 |
| 17 | Electrode plate | | 1 |
| 18 | 0.5HP Motor | | 1 |
| 19 | Aluminum fan | | 1 |
| 20 | CE-900 Emission cover | | 1 |
| 21 | Spring buckle(M) | | 2 |
| 22 | CE-900 Body | | 1 |
| 23 | Micro Switch | | 1 |
| 24 | Electromagnetic switch | | 1 |



note:

1. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24.

| TOLERANCE TABLE | |
|--------------------------------|--------|
| DIMENSIONS OTHERWISE SPECIFIED | |
| RANGE | TOL. ± |
| UNDER 6 | 0.18 |
| 6~10 | 0.22 |
| 10~18 | 0.27 |
| 18~30 | 0.33 |
| 30~50 | 0.39 |
| 50~80 | 0.46 |
| 80~120 | 0.54 |
| 120~250 | 0.63 |
| 250 OVER | 0.8 |
| ANG TOL. ± | 1° |

| REV. | DESCRIPTION | DATE |
|------|-------------|------|
| | | |

| REVISION HISTORY | DATE | MATERIAL: | FINISH: | REV: | CHK | APP | DRN | SCALE: |
|------------------|------|-----------|---------|------|-----|-----|-----|--------|
| | | | | | | | | |

| | | | |
|---------------|---------------------|---------------------|--------------------------------------|
| TCSM 泰科斯密有限公司 | TEL: +886 4 7331657 | FAX: +886 4 7330116 | TCSM CHEMISHIM (TCSM) INC. CO., LTD. |
|---------------|---------------------|---------------------|--------------------------------------|

| | | |
|-------------------|------------|------------|
| TITLE: CE-900 BOM | P/N: MN001 | SCALE: 1:1 |
|-------------------|------------|------------|

3.2 CE-1000

| Item | Parts | Description | Qty. |
|------|------------------------|-------------|------|
| 1 | Handle | | 1 |
| 2 | Main switch | | 1 |
| 3 | LED green light | | 1 |
| 4 | LED red light | | 1 |
| 5 | Door hinge | | 2 |
| 6 | CE-900N-1 Front door | | 1 |
| 7 | M16 Cable Connector | | 2 |
| 8 | Circuit breaker | | 1 |
| 9 | Terminal block | | 1 |
| 10 | Electrode generator | | 1 |
| 11 | Ceramics | | 2 |
| 12 | Micro Switch | | 2 |
| 13 | Door hinge | | 4 |
| 14 | CE-900 Second door | | 1 |
| 15 | Spring buckle(F) | | 2 |
| 16 | Stainless filter | | 1 |
| 17 | Electrode plate | | 1 |
| 18 | 0.5HP Motor | | 1 |
| 19 | TAB240 FAN | | 1 |
| 20 | CE-900 Emission cover | | 1 |
| 21 | Spring buckle(M) | | 2 |
| 22 | CE-900 Body | | 1 |
| 23 | Micro Switch | | 1 |
| 24 | Electromagnetic switch | | 1 |

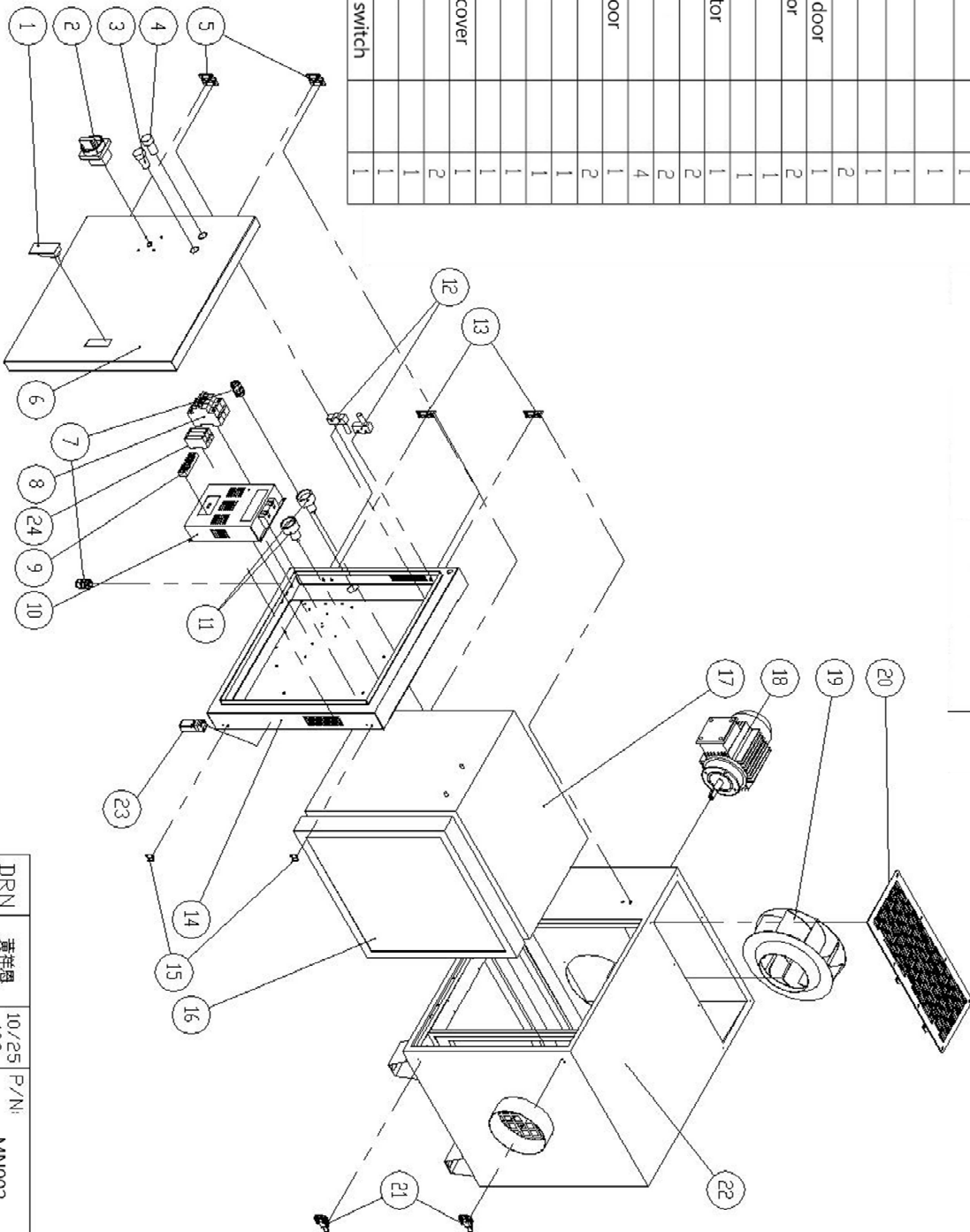


TABLE REFERENCE TABLE
 DIMENSIONAL TOLERANCE SPECIFICATION

| RANGE | TOL. ± |
|-------------|--------|
| UNDER 6 | 0.18 |
| 6~10 | 0.22 |
| 10~18 | 0.27 |
| 18~30 | 0.33 |
| 30~50 | 0.39 |
| 50~80 | 0.46 |
| 80~120 | 0.54 |
| 120~250 | 0.63 |
| 250 OVER | 0.8 |
| ANG. TOL. ± | 1° |

note:

1. All dimensions are in millimeters unless otherwise specified.

2. All parts are to be assembled in accordance with the assembly manual.

3. All parts are to be inspected and approved before assembly.

4. All parts are to be stored in a dry, clean environment.

5. All parts are to be handled with care to avoid damage.

6. All parts are to be assembled in the order specified in the assembly manual.

7. All parts are to be assembled in the order specified in the assembly manual.

8. All parts are to be assembled in the order specified in the assembly manual.

9. All parts are to be assembled in the order specified in the assembly manual.

10. All parts are to be assembled in the order specified in the assembly manual.

11. All parts are to be assembled in the order specified in the assembly manual.

12. All parts are to be assembled in the order specified in the assembly manual.

13. All parts are to be assembled in the order specified in the assembly manual.

14. All parts are to be assembled in the order specified in the assembly manual.

15. All parts are to be assembled in the order specified in the assembly manual.

16. All parts are to be assembled in the order specified in the assembly manual.

17. All parts are to be assembled in the order specified in the assembly manual.

18. All parts are to be assembled in the order specified in the assembly manual.

19. All parts are to be assembled in the order specified in the assembly manual.

20. All parts are to be assembled in the order specified in the assembly manual.

21. All parts are to be assembled in the order specified in the assembly manual.

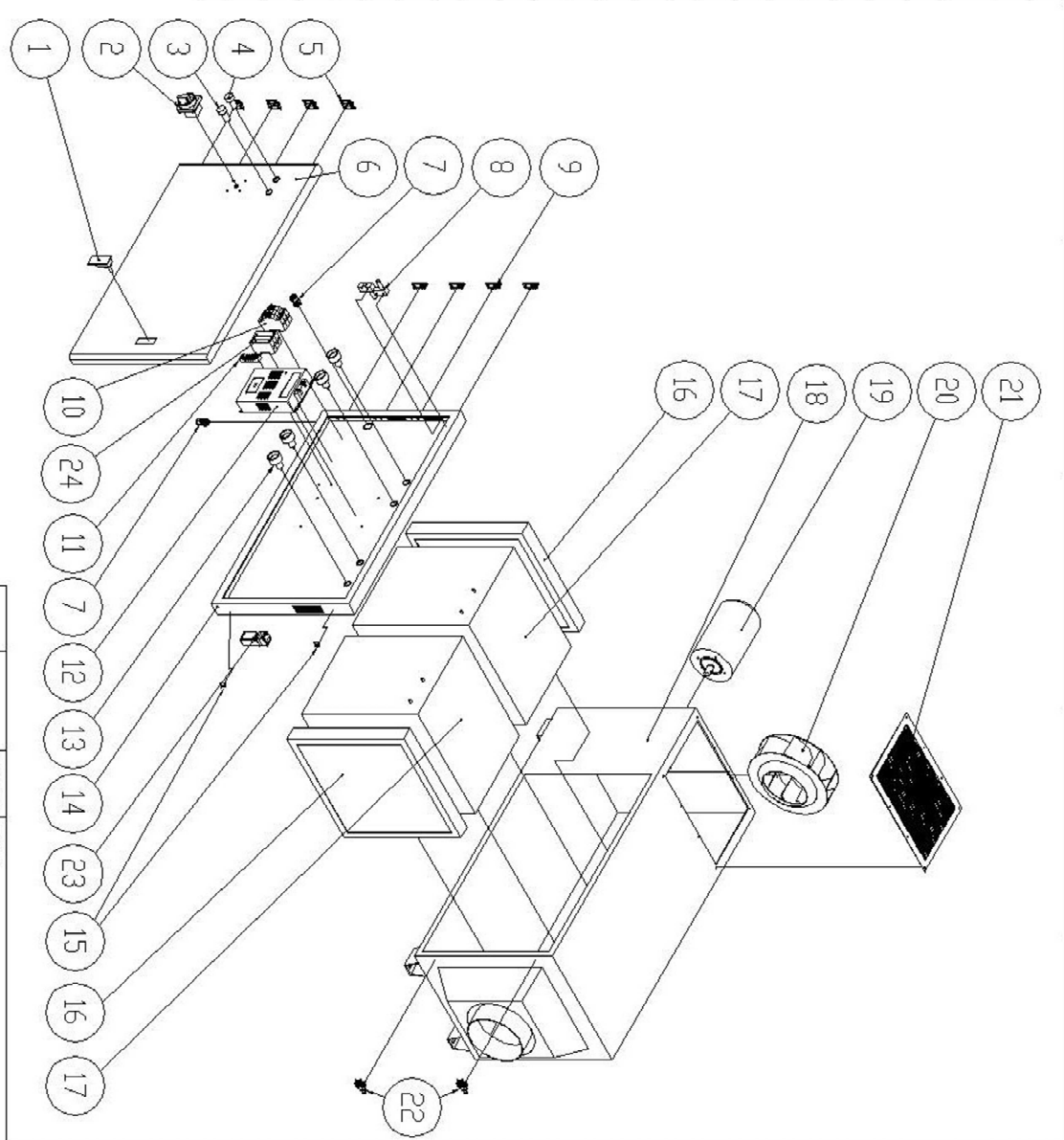
22. All parts are to be assembled in the order specified in the assembly manual.

23. All parts are to be assembled in the order specified in the assembly manual.

24. All parts are to be assembled in the order specified in the assembly manual.

3.3 CE-1800

| Item | Parts | Description | Qty. |
|------|------------------------|-------------|------|
| 1 | Handle | | 1 |
| 2 | Main switch | | 1 |
| 3 | LED green light | | 1 |
| 4 | LED red light | | 1 |
| 5 | Door hinge | | 4 |
| 6 | CE-1800N-1 Front door | | 1 |
| 7 | M16 Cable Connector | | 2 |
| 8 | Micro Switch | | 2 |
| 9 | Door hinge | | 4 |
| 10 | Circuit breaker | | 1 |
| 11 | Terminal block | | 1 |
| 12 | Electrode generator | | 1 |
| 13 | Ceramics | | 4 |
| 14 | CE-1800 Second door | | 1 |
| 15 | Spring buckle(F) | | 2 |
| 16 | Stainless filter | | 2 |
| 17 | Electrode plate | | 2 |
| 18 | CE-1800 Body | | 1 |
| 19 | 1HP Motor | | 1 |
| 20 | Aluminum fan | | 1 |
| 21 | CE-1800 Emission cover | | 1 |
| 22 | Spring buckle(M) | | 2 |
| 23 | Micro Switch | | 1 |
| 24 | Electromagnetic switch | | 1 |




| TOLERANCE TABLE | |
|----------------------------|-------|
| UNLESS OTHERWISE SPECIFIED | |
| RANGE | TOL.# |
| UNDER 6 | 0.18 |
| 6~10 | 0.22 |
| 10~18 | 0.27 |
| 18~30 | 0.33 |
| 30~50 | 0.39 |
| 50~80 | 0.46 |
| 80~120 | 0.54 |
| 120~250 | 0.63 |
| 250 OVER | 0.8 |
| ANG. TOL.# | 1° |

note:

| REV. | DESCRIPTION | DATE |
|------|-------------|------|
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| MATERIAL: | FINISH: | REV: | CHK: | APP: | DRAWN: | DATE: | P/N: | TITLE: | SCALE: | UNIT: |
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| REVISION HISTORY | DATE |
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|---|---|
|  禾泰科技股份有限公司 TCSM CHEN SHIN (TCSM) INC., LTD. | TEL: +886 4 73031657 FAX: +886 4 7303116 |
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| | | | | |
|-----|-----|-------|--------|-------------|
| DRN | 黃梓恩 | 10/24 | P/N: | MN003 |
| CHK | | 109 | TITLE: | CE-1800 BOM |
| APP | | | SCALE: | 1 : 1 |
| | | | UNIT: | M/M |

3.4 CE-2200

| Item | Parts | Description | Qty. |
|------|------------------------|-------------|------|
| 1 | Handle | | 1 |
| 2 | Main switch | | 1 |
| 3 | LED green light | | 1 |
| 4 | LED red light | | 1 |
| 5 | Door hinge | | 4 |
| 6 | CE-1800N-1 Front door | | 1 |
| 7 | M16 Cable Connector | | 2 |
| 8 | Micro Switch | | 2 |
| 9 | Door hinge | | 4 |
| 10 | Circuit breaker | | 1 |
| 11 | Terminal block | | 1 |
| 12 | Electrode generator | | 1 |
| 13 | Ceramics | | 4 |
| 14 | CE-1800 Second door | | 1 |
| 15 | Spring buckle(F) | | 2 |
| 16 | Stainless filter | | 2 |
| 17 | Electrode plate | | 2 |
| 18 | CE-1800 Body | | 1 |
| 19 | 1.5 Motor | | 1 |
| 20 | TBA285 FAN | | 1 |
| 21 | CE-1800 Emission cover | | 1 |
| 22 | Spring buckle(M) | | 2 |
| 23 | Micro Switch | | 1 |
| 24 | Electromagnetic switch | | 1 |

| TOLERANCE TABLE | TOL.± |
|----------------------------|-------|
| UNLESS OTHERWISE SPECIFIED | |
| RANGE | TOL.± |
| 6~10 | 0.18 |
| 10~18 | 0.22 |
| 18~30 | 0.33 |
| 30~50 | 0.39 |
| 50~80 | 0.46 |
| 80~120 | 0.54 |
| 120~250 | 0.63 |
| 250 OVER | 0.8 |
| ANG. TOL.± | 1° |

Note:

REVISION HISTORY

DESCRIPTION

DATE

MATERIAL:

FINISH:

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CHK

APP

DRN

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10/24

109

P/N:

MN004

TITLE:

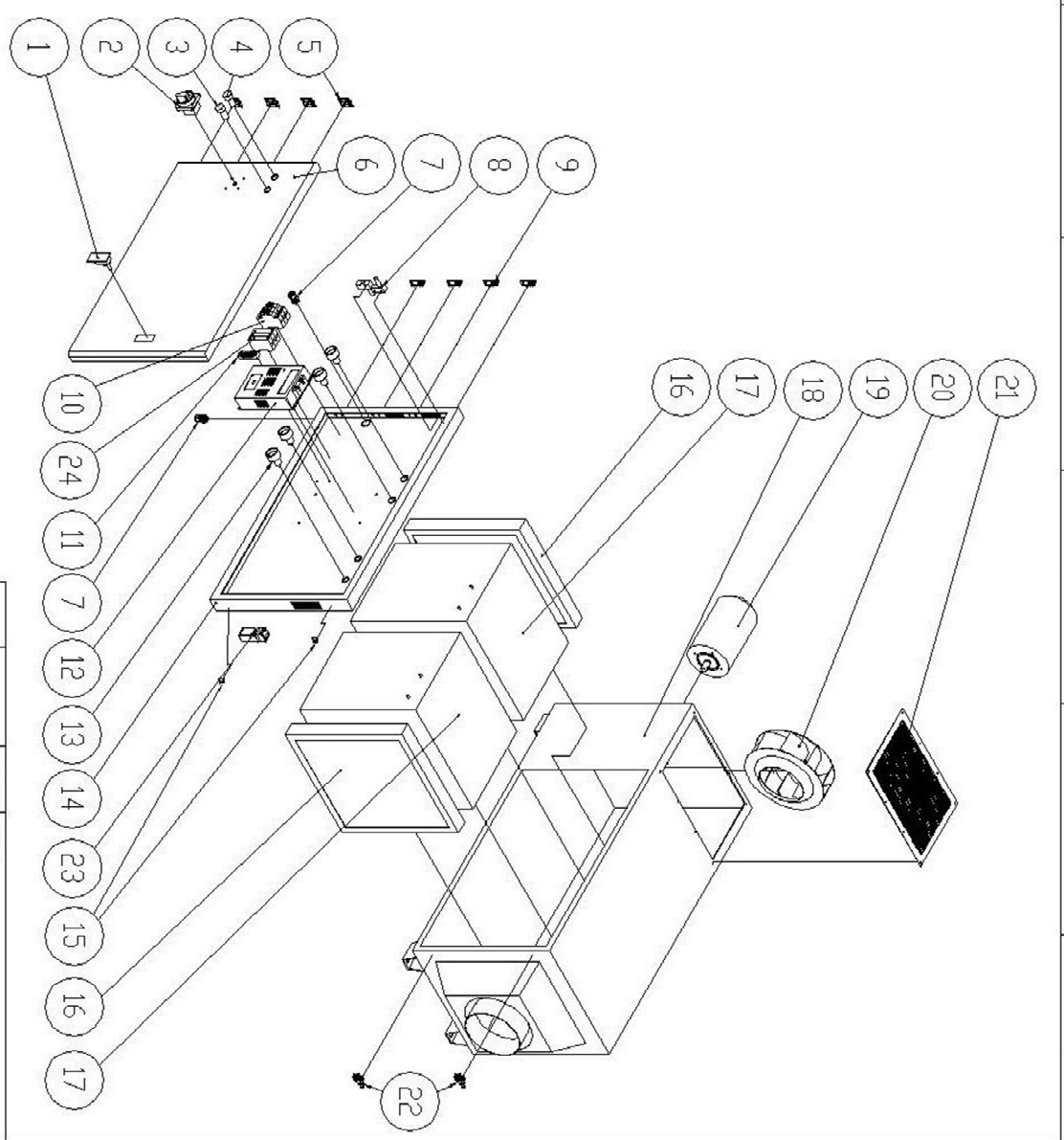
CE-2200 BOM

SCALE:

1 : 1

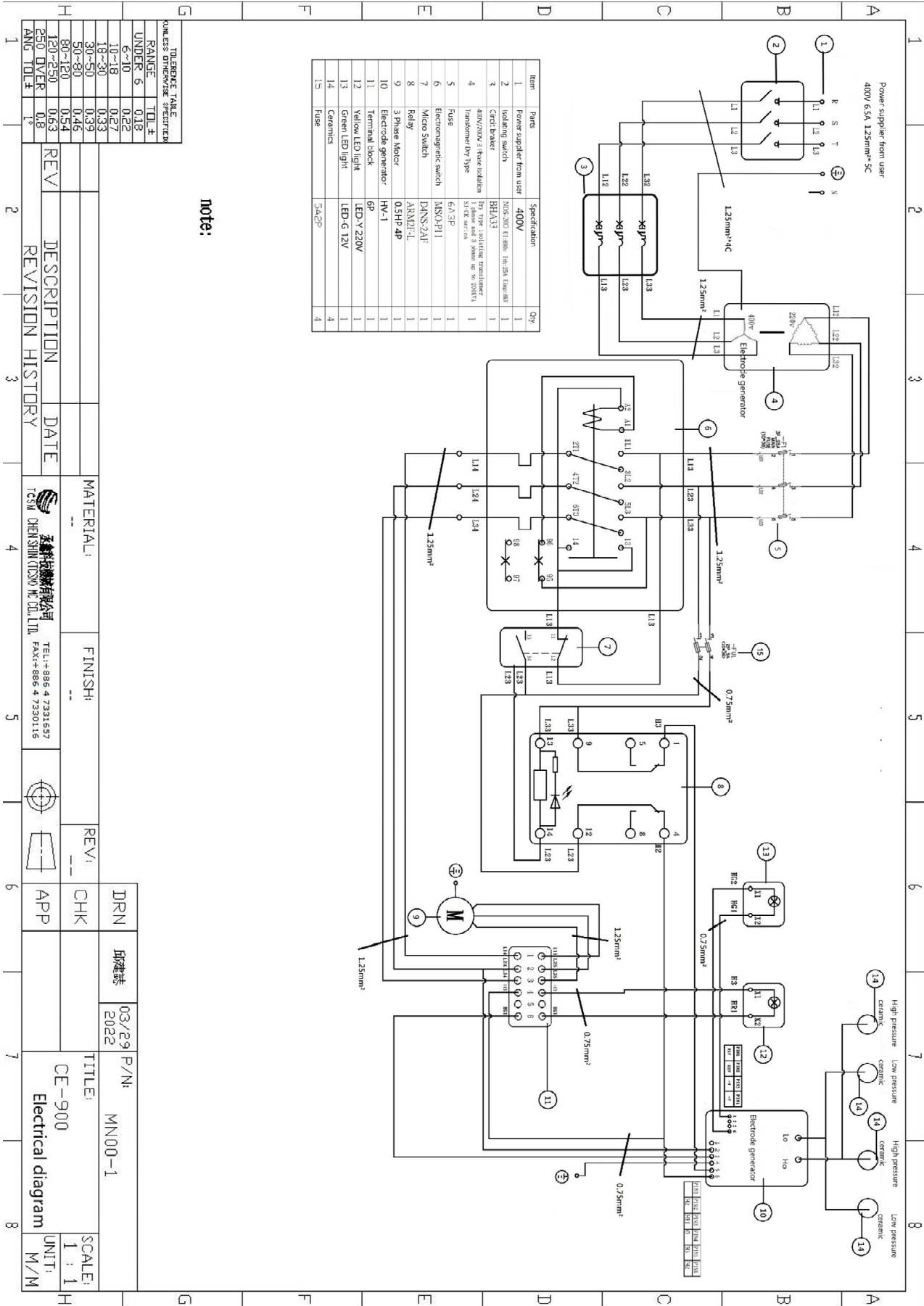
UNIT:

M/M



4. Circuit Diagram

4.1 CE-900



TOLERANCE TABLE

| RANGE | TOL ± |
|----------|-------|
| UNDER 6 | 0.16 |
| 6~10 | 0.25 |
| 10~18 | 0.27 |
| 18~30 | 0.33 |
| 30~50 | 0.39 |
| 50~80 | 0.46 |
| 80~120 | 0.54 |
| 120~250 | 0.63 |
| 250 OVER | 0.8 |

REVISION HISTORY

| REV | DESCRIPTION | DATE |
|-----|------------------|------|
| 1 | REVISION HISTORY | |

MATERIAL:

FINISH:

REVI:

DRN 邱建榮 03/29 2022 P/N: MN00-1

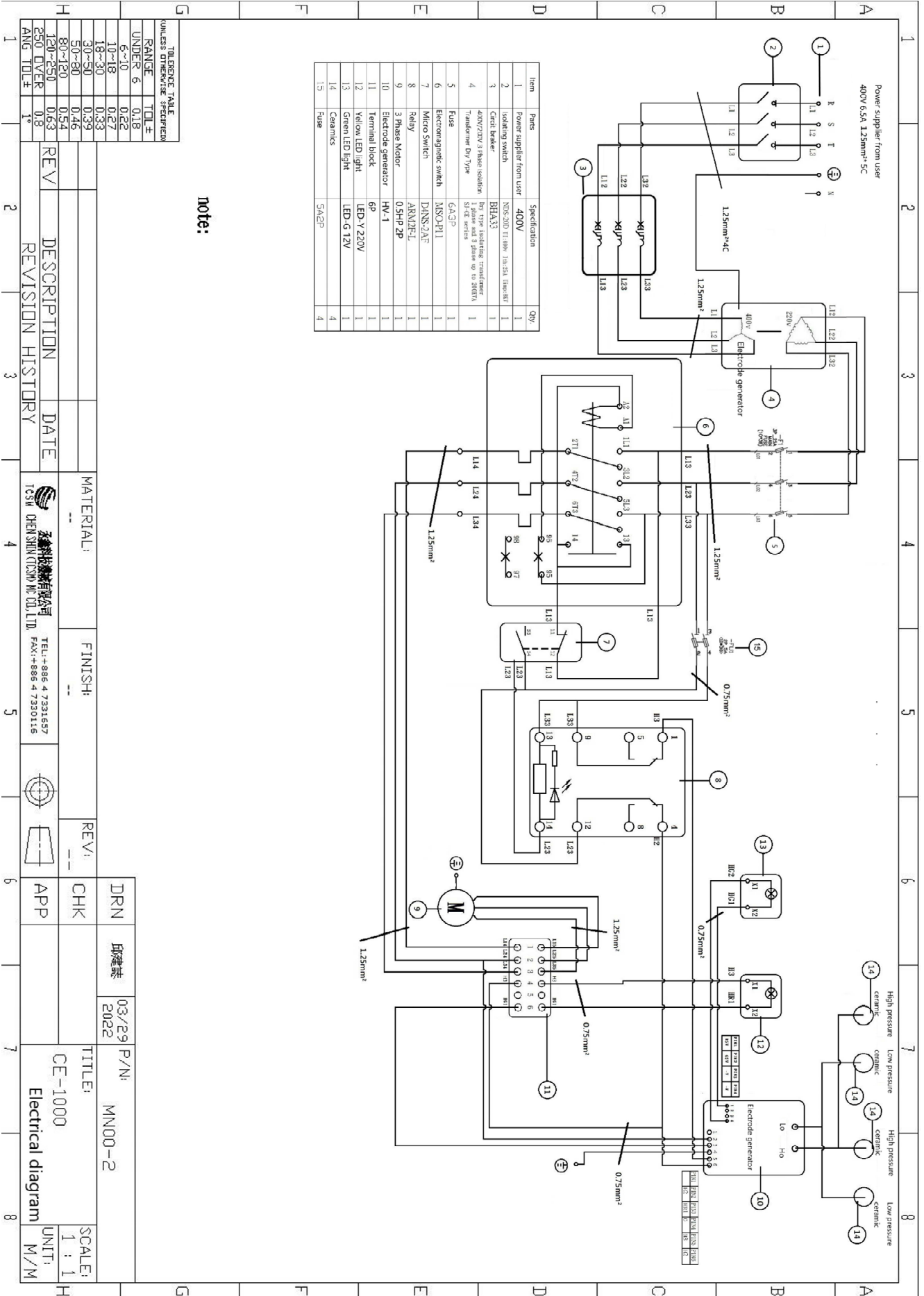
CHK APP

TITLE: CE-900 Electrical diagram

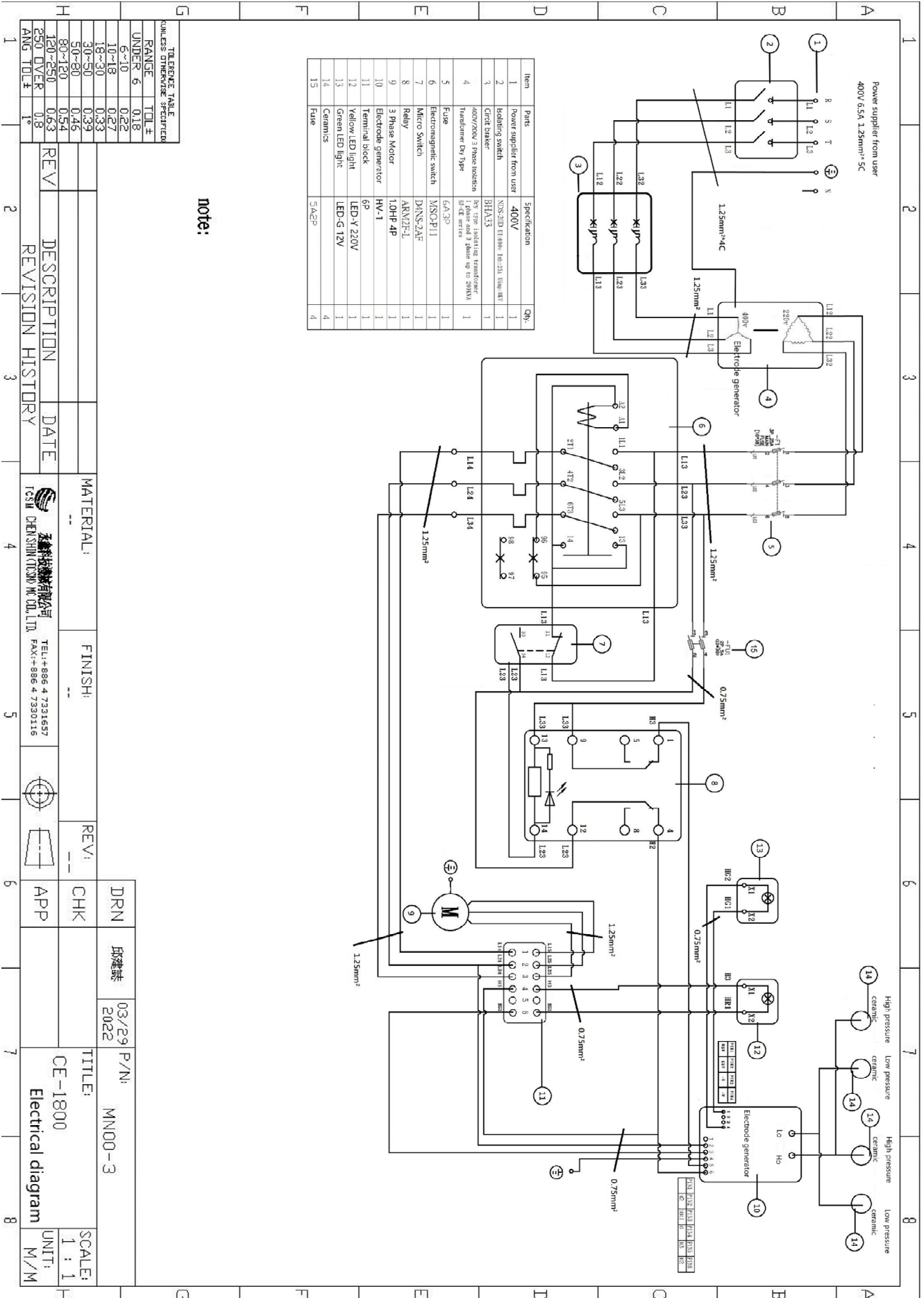
SCALE: 1:1

UNIT: M/M

4.2 CE-1000



4.3 CE-1800



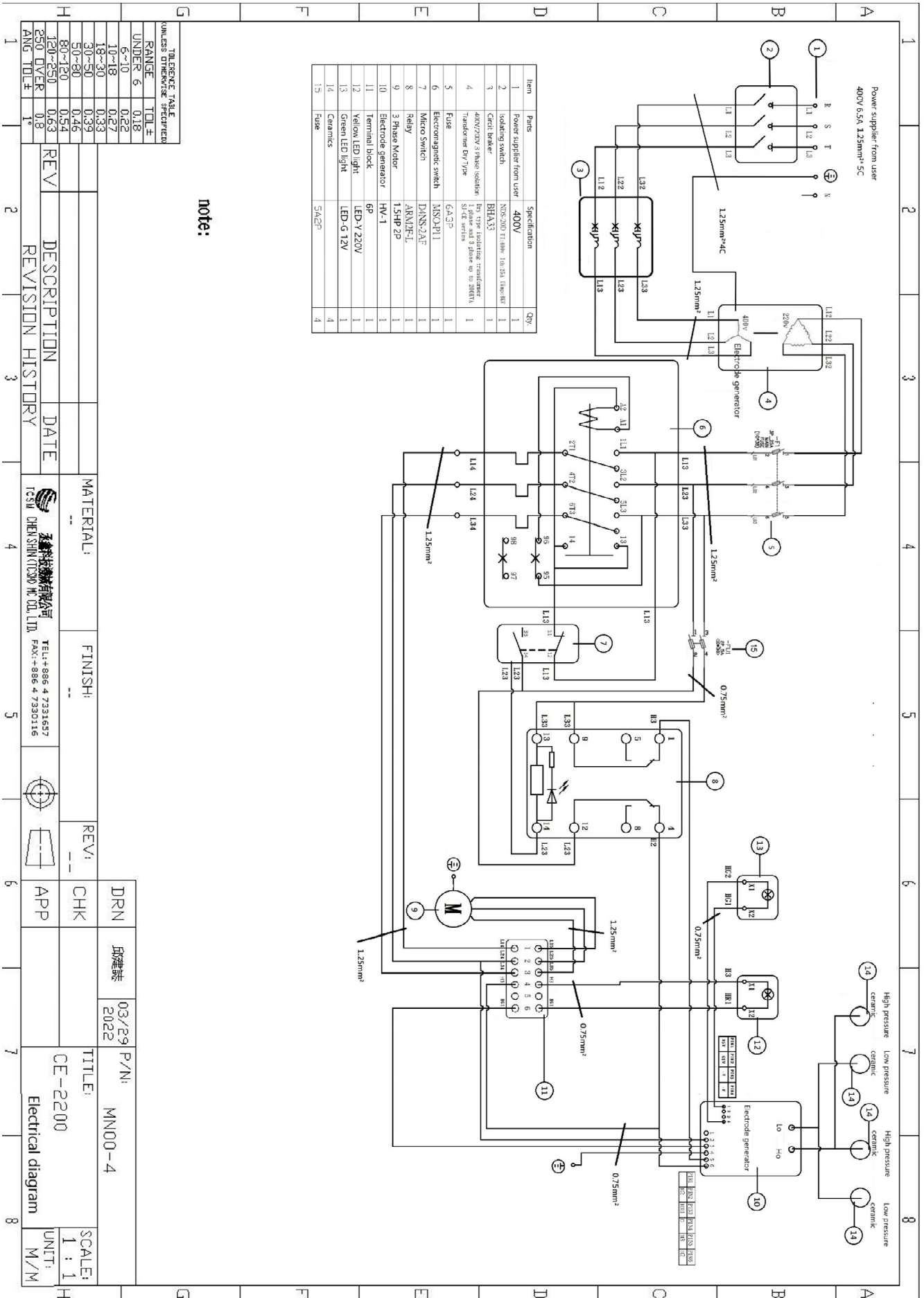
TOLERANCE TABLE
 Unless otherwise specified

| RANGE | TOL.# |
|----------|-------|
| UNDER 6 | 0.18 |
| 6~10 | 0.22 |
| 10~18 | 0.27 |
| 18~30 | 0.33 |
| 30~50 | 0.39 |
| 50~80 | 0.45 |
| 80~120 | 0.54 |
| 120~250 | 0.63 |
| 250 OVER | 0.8 |

| REV | DESCRIPTION | DATE | REVISION HISTORY |
|-----|-------------|------|------------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |

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|--------------------|-------------------|
| MATERIAL: | FINISH: |
| DRN 邱建誌 | 03/29 P/N: MN00-3 |
| 2022 | |
| TITLE: CE-1800 | SCALE: 1 : 1 |
| Electrical diagram | UNIT: M/M |

4.4 CE-2200



TOLERANCE TABLE
UNLESS OTHERWISE SPECIFIED

| RANGE | TOL± |
|----------|------|
| UNDER 6 | 0.18 |
| 6~10 | 0.22 |
| 10~18 | 0.27 |
| 18~30 | 0.33 |
| 30~50 | 0.39 |
| 50~80 | 0.46 |
| 80~120 | 0.54 |
| 120~250 | 0.63 |
| 250 OVER | 0.8 |
| ANG TOL± | 1° |

| REV | DESCRIPTION | DATE | MATERIAL | FINISH | REV | DRN | 核准時間 | P/N | TITLE | SCALE |
|-----|------------------|------|----------|--------|-----|-----|------------|--------|--------------------|-------|
| 1 | REVISION HISTORY | | | | | DRN | 2022/03/29 | MN00-4 | CE-2200 | 1:1 |
| 2 | | | | | | CHK | | | Electrical diagram | 1:1 |
| 3 | | | | | | APP | | | | M/M |

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5. Installation and operation instructions

5.1 Installation instructions

5.1.1.

Check the main voltage and frequency by comparing the specification on the utility meter with the specification on the machine rating plate. The power supply needs to be grounded. Be sure to turn off the primary power side before installing the machine. Primary side 3 phase circuit breaker rated current should be 15A large than the collector rated current.

The voltage fluctuations must be in the range of -5 % to 10 %. In case of major fluctuations, faults and premature wear can be expected. In this case, the warranty will no longer be valid.

5.1.2. Depending on customer field application, CE series of collectors have three installation ways:

- (1) Install on the machine directly.
- (2) Install on support column (Support column height customizable).
- (3) Whole factory machine tools oil mist solution. Solution is proceeded with CE series collectors and air duct.

5.1.3. Oil mist intake place suggestions:

5.1.3.1 Usually set oil mist intake place on machine tool top cover or side cover.

5.1.3.2 Oil mist intake place should prevent nearby or opposite machine tool coolant nozzle. If this situation could not be prevented, user should install oil mist intake cover (plastic/steel) to reduce oil drop intake volume.

5.1.4. Connection between air duct and CE series collectors should not leak, and air duct layout should prevent oil accumulation inside air duct. Also, could install "Front oil blocker" or PVC pipe to prevent above problem.

5.1.5. After the power distribution is completed, it is necessary to confirm that all power terminal contacts in the machine are tightened well and confirm that the rotation of the wind wheel and motor are correct according to the sticker deration. The operating lights are all working properly.

5.1.6. Oil recycle tube cannot layout horizontal more than 30cm. Oil recycle tube should be arranged vertical to oilpail, this oil recycle tube must turn a circle and fill oil in this circle.

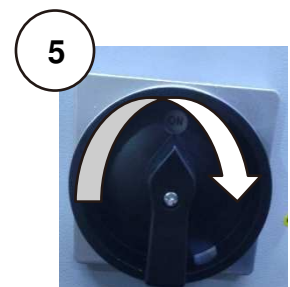
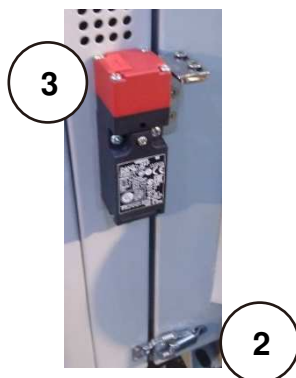
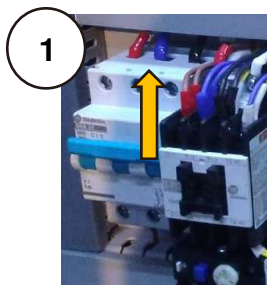
The end of oil recycle tube need higher than oil level in pail. The purpose of this arrangement is to prevent CE series collectors have air flow leaking and recycle oil back to CE series collectors.



5.2 Operation instructions

5.2.1 Interface

Turn on the braker (1) inside the control box. Please close the door. Hook the door buckle (2) to ensure the safety switch (3) is attached properly. After the outer door is closed, use a #4 Allen wrench to lock door buckle .And turn on the main power switch (5) to start the machine. °



5.2.2 Before starting up

5.2.2.1 Please double check the power distributions are tightened well.

5.2.2.2 Motor rotation direction:

The direction of rotation of the motor must be checked as follows: - Use the hand switch to turn on the machine. - The motor must rotate clockwise. - If the direction of rotation is incorrect, the poles of the mains cable reversed by an electrician. - Furthermore, the safety checks that are specified for each workday must be executed.



5.2.2.3 Operating/Error light:



After confirming the rotation of the motor, turn on the main power switch. At this time, the operating/error light may flash. Please confirm whether it is still flashing after 5 minutes. If still flashing, turn off main power switch and take out the Electrode Plate. Clean Electrode Plate by pressurized air. According to the pressurized air use rules in the cleaning chapter 6.3.1, clean up the large pieces of residual material. After clean up, put it back in the machine, and turn it on again. If there is no flashing, the machine is work properly. If light still flashing, please repeat the cleaning process once again.

5.2.3 Starting up

After testing start up, machine is ready to run.

If there is any situation that cannot be solved, please contact supplier for more assistance.

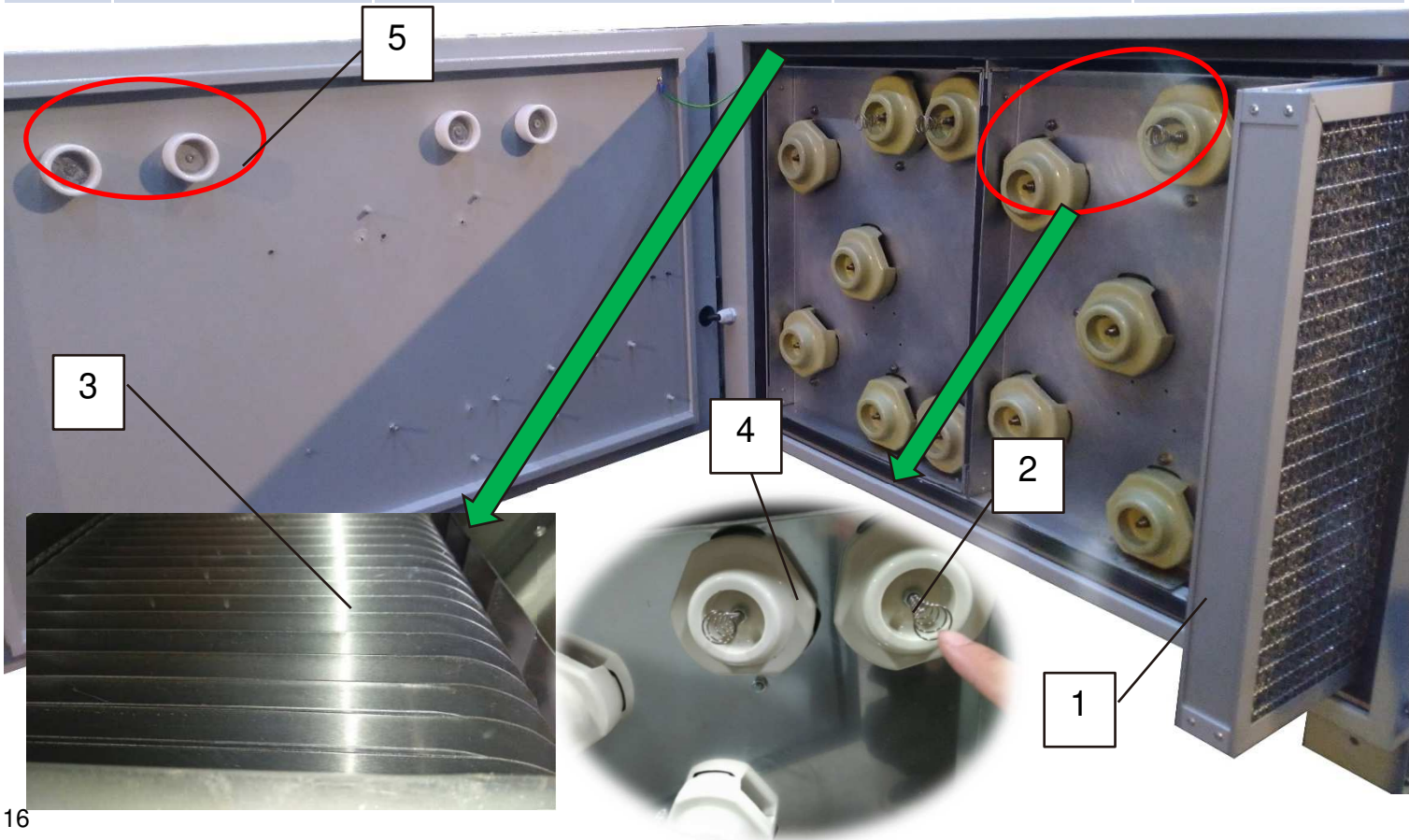
6. Maintenance and inspection

6.1 Inspection and maintenance plan:(Please inspect each month)In order to ensure the user safety and machine efficiency, the periodic maintenance must be followed. The following table shows the monthly maintenance schedule.

(Before maintenance, the main power supply should be powered off and a padlock should be added. After power off, please wait 10 minutes before performing maintenance.)

For cleaning method, please refer to 6.3.1 Manual cleaning

| CE series Oil Mist Collector- monthly maintenance schedule | | | | M | Y |
|--|-------------------------------|---|------------------------------|---------|---|
| Item | Check Parts | Situation | Maintenance | Checked | |
| 1 | Front filter | If filter can't clean up by pressurized air | Wash filter with detergent | | |
| 2 | Electrode Spring | Broke or dirty | Cleaning or exchange new one | | |
| 3 | Electrode Plate | Dirty which cannot clean up easily | Wash plate with detergent | | |
| 4 | Ceramic block | Dirty which cannot clean up easily by mopping | Wash plate with detergent | | |
| 5 | Ceramic block on second cover | Dirty which cannot clean up easily by mopping | Wash plate with detergent | | |



6.2 Troubleshooting

Before maintenance, the main power supply should be powered off and a padlock should be added. After power off, please wait 10 minutes before performing maintenance.

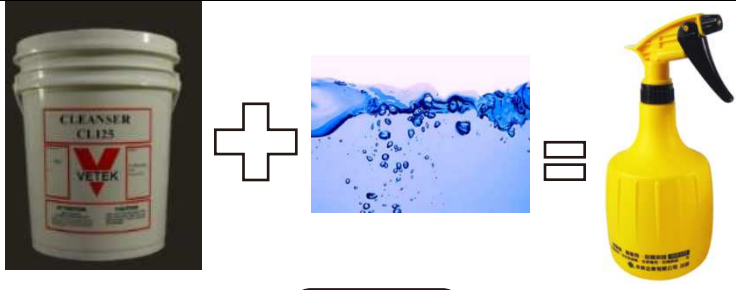
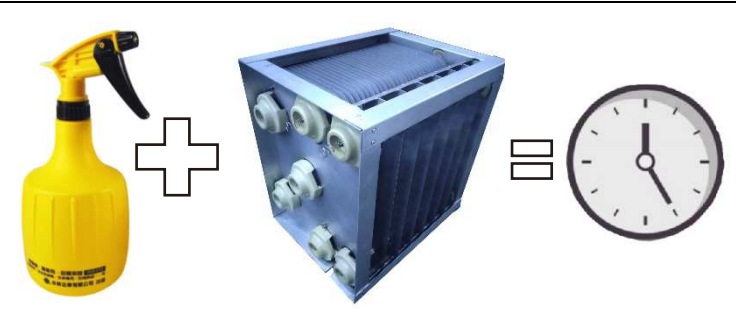
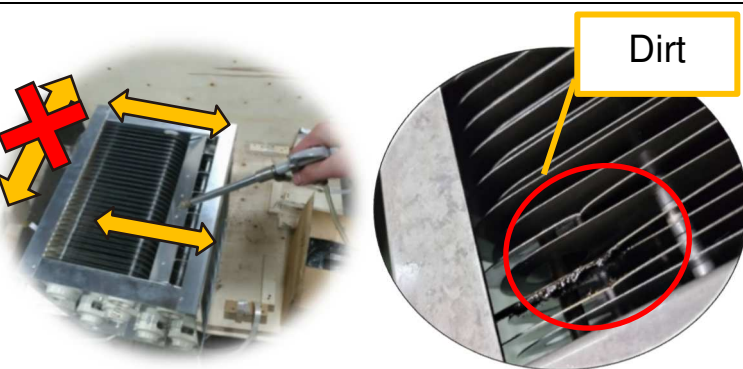
| Disturbance Indicator | Possible causes | Way to resolve the problem |
|---|---|--|
| 6.2.1 Motor and Electric field filter are not activated after turning on main switch. | <ol style="list-style-type: none"> 1. Power not connected or phase loss 2. Circuit breaker is triggered | <ol style="list-style-type: none"> 1. Please double check all switches are opened. 2. Check breaker. If breaker still trigger after reset (Figure 2), please contact supplier. |
| 6.2.2 Motor does not work. (Collector which use inverter) | <ol style="list-style-type: none"> 1. Inverter alarm 2. Inverter broke | <ol style="list-style-type: none"> 1. Please check inverter panel. If no error code display, check power supply situation. If panel display error code, please turn off Collector and turn on again 2. If error code can not solve, please check Shihlin SE3/SC3 inverter user manual, follow inverter manual instruction or contact supplier. |
| 6.2.3 Operating/Error light flashing | <ol style="list-style-type: none"> 1. Electrode Plate dirty. 2. Electrode Plate broke | <ol style="list-style-type: none"> 1. Please confirm whether it is still flashing after turn on main switch again. If still flashing, turn off main power switch and take out the Electrode Plate. If electrode plate is dirty or short with metal filings. Clean Electrode Plate by pressurized air. According to the pressurized air use rules in the cleaning chapter 6.3.1, clean up the large pieces of residual material. 2. Please check electrode plate, if electrode plate broke or short, please contact supplier. |
| 6.2.4 CE series oil mist collector is inefficient. | <ol style="list-style-type: none"> 1. Electrode occasional error. 2. Related electronic parts failure | <ol style="list-style-type: none"> 1. Follow troubleshooting 6.2.3 instruction to solve electrode error. 2. Please check operating light. If it isn't work, please check fuse and change open one. In case Collector is still inefficient, please contact to supplier. |

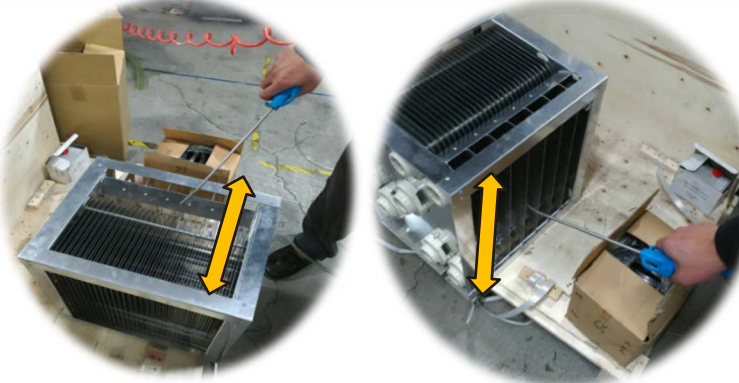

Figure 2



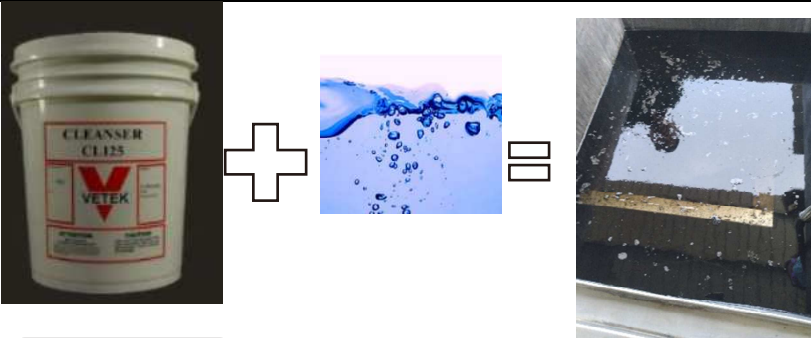
6.3 Electrode plate cleaning

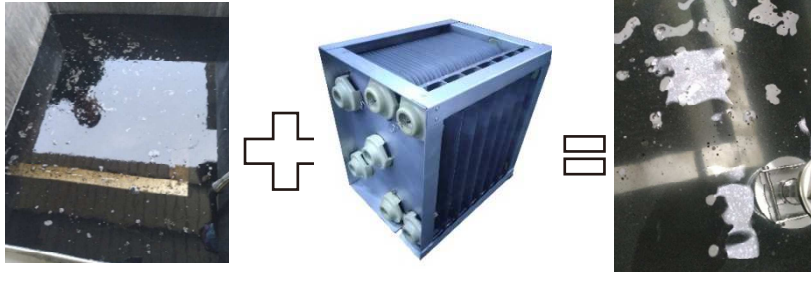
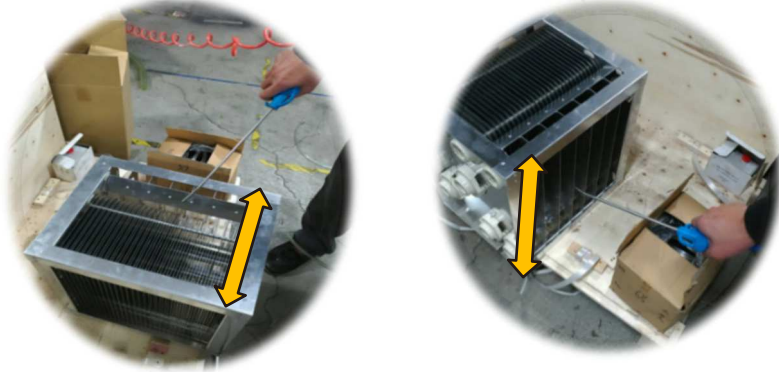
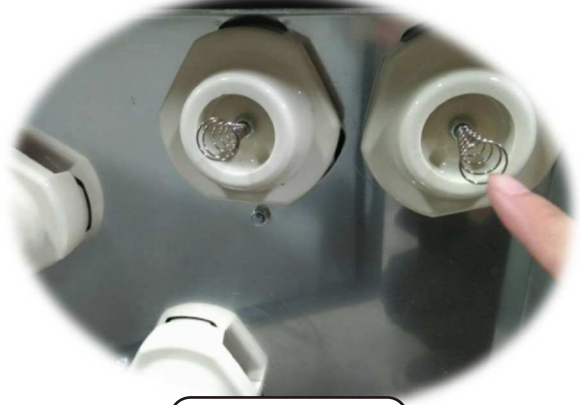
6.3.1 Manual cleaning

| Item | Icon | Instruction |
|------|--|---|
| 1 |  <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div data-bbox="213 672 448 795" style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">Neutral Detergen</div> <div data-bbox="501 672 678 795" style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">Water</div> <div data-bbox="719 672 952 795" style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">Detergent</div> </div> | <p>Please choose a neutral detergent with good degreasing performance and follow the formula of the lotion. If you use (strongly acidic) aluminum lotion, please pay attention to the use of aluminum lotion, and you need to wear protective equipment before cleaning)</p> |
| 2 |  <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div data-bbox="213 1209 448 1355" style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">Detergent</div> <div data-bbox="456 1209 695 1355" style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">Electrode plate</div> <div data-bbox="719 1209 959 1355" style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center;">Stand still</div> </div> | <p>Spray the entire electrostatic plate, including each plate, with the detergent. And use a brush to remove stains, then rinse repeatedly with detergent. After cleaning, spray the detergent full and let it stand for 10 minutes until the detergent dissolves and softens the dirt.</p> |
| 3 |  <div data-bbox="213 1892 959 1991" style="border: 1px solid black; border-radius: 10px; padding: 5px; text-align: center; margin-top: 10px;">High pressure water cleaning</div> | <p>Use 4-5bar high-pressure water to clean up plate in parallel way. Avoid hurting the plates and wash it until the oil stains are cleaned. If there is no high-pressure water, please use a brush in the previous step to remove the oil stains on the plate</p> |

| | | |
|----------|---|---|
| <p>4</p> |  <p>Blow water away by pressurized air</p> | <p>Use the pressurized air to remove the water in parallel direction. If user cannot confirm whether water has been totally removed, please let Electrode plate sit for a period of time to remove remaining water.</p> |
| <p>5</p> |  <p>Check</p> | <p>After cleaning, check the condition of each part according to the monthly maintenance plan. If there is no problem, check plan out, and put the plate back into Collector.</p> |

6.3.2 Ultrasonic cleaning

| Item | Icon | Instruction |
|----------|---|--|
| <p>1</p> |  <p>Neutral Detergen</p> <p>Water</p> | <p>Please choose a neutral detergent with good degreasing performance and follow the formula of the lotion. If you use (strongly acidic) aluminum lotion, please pay attention to the use of aluminum lotion, and you need to wear protective equipment before cleaning)</p> |

| | | |
|----------|---|---|
| <p>2</p> |  <div data-bbox="327 526 989 649" style="border: 1px solid black; border-radius: 15px; padding: 5px; text-align: center;"> <p>Ultrasonic cleaning</p> </div> | <p>Fully immerse the electrode plate in the prepared cleaning tank (hot water 50~60 °C, the best value can be adjusted and tested by user). Turn on the ultrasonic device and adjust the cleaning time according to the actual situation.</p> |
| <p>3</p> |  <div data-bbox="247 1131 1029 1232" style="border: 1px solid black; border-radius: 15px; padding: 5px; text-align: center;"> <p>Blow water away by pressurized air</p> </div> | <p>Use the pressurized air to remove the water in parallel direction. If user cannot confirm whether water has been totally removed, please let Electrode plate sit for a period of time to remove remaining water.</p> |
| <p>4</p> |  <div data-bbox="518 1668 758 1780" style="border: 1px solid black; border-radius: 15px; padding: 5px; text-align: center;"> <p>Check</p> </div> | <p>After cleaning, check the condition of each part according to the monthly maintenance plan. If there is no problem, check plan out, and put the plate back into Collector.</p> |

6.3.3 Disposal instructions

Please dispose of the potion, residue and grease in the cleaning process in accordance with the local waste disposal law.

7. Warranty

Product type:

Serial Number:

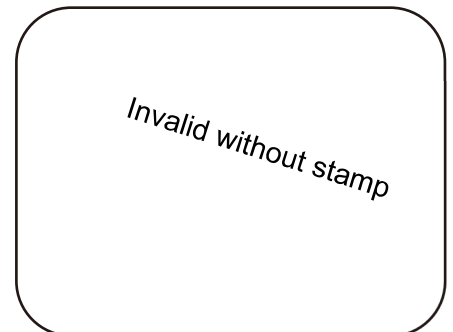
Manufacture Date:

Warranty Period : One Year

Warranty content:

1. Maintenance of the whole machine without consumables.
2. Damage due to improper operation during the warranty period is not covered by the warranty. Damage caused by natural disasters, force majeure or improper human operation is not covered by the warranty °
3. If there are maintenance requirements outside the warranty period, material fees and service fees will be charged °

CHEN SHIN (TCSM) MC CO., LTD



If you have any questions, please contact us with the information below.

CHEN SHIN (TCSM) MC CO., LTD

[TEL:+886-4-7331657](tel:+886-4-7331657)

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EMAIL: assa.tcsm@gmail.com ; chenshin.h@gmail.com

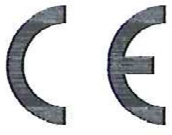
Office Add.: No. 66, Aly. 208, Bianxing Ln., Xuetian Rd.,

Wuri Dist., Taichung City 414011 , Taiwan , R.O.C.

Factory Add.: No. 30, Aly. 63, Ln. 446, Sec. 2, Zhangmei Rd.,

Hemei Township, Changhua County 508007 , Taiwan , R.O.C.

8. EC declaration of conformity



EC DECLARATION OF CONFORMITY

We: **CHEN SHIN (TCSM) MC CO., LTD.**

No. 66, Aly. 208, Bianxing Ln., Xuetian Rd., Wuri Dist.,
Taichung City 414011, Taiwan (R.O.C.)

declare in sole responsibility that the equipment

Equipment : Electrostatic Oil Mist Collector

Model/ Serial No. : CE-900, CE-1000, CE-1800, CE-2200

to which this declaration applies, complies with these normative documents:

- Machinery Directive: 2006/42/EC

and conforms to the following EN standard,

- Low Voltage Directive: 2014/35/EU
- EN ISO 12100:2010
- EN 60204-1:2018

Importer or authorized representative established within the EU:

Company Name :

Company :

Address

Person responsible for compiling the technical file established within the EU

Name, Surname :

Address :

Signature

Name, Surname: :

Position/ Title: :

Date :

Chang. Naiuen