

Mistresa

Operation Manual & Cautions




CRM Series
CRMH Series



CRH Series

Thank you for purchasing the Mistresa. This manual explains the specifications for the **[Mistresa units from CRM-S Series, CRM-V Series, CRMH Series, and CRH (High Temperature Types) Series]**.


The Mistresa collects the mist generated while components are manufactured by machine tools. Please read the operating instructions and cautionary information carefully to ensure that the Mistresa is used in a **safe and efficient manner**. Special attention should be given to cautionary information **which bears the [] mark**.


Keep this manual in a secure location where it can be easily accessed.

[Contents]

1. Cautionary information indications used in this manual	1
2. Meanings of symbol marks used in this manual	1
3. Using the Mistresa in a safe manner	1
4. Items to check at product delivery/storage	3
5. Internal component names and layout	4
6. Product labels	7
7. Ambient conditions in the area of installation	7
8. Suction port cautions	8
9. Product installation	9
10. Piping	13
11. Operating cautions	15
12. Maintenance and inspections	16
13. Warranty	22
14. Contact information	23
15. About Disposal	23
16. Specifications	24

1. Cautionary information indications used in this manual

"[] **WARNING**" mark indicates cautionary information that, if not heeded, **could result in serious injury or death**, and could also pose a **fire hazard**.

A "[] **CAUTION**" mark indicates cautionary information that, if not heeded, **could result in injury and/or equipment damage**.

2. Meanings of symbol marks used in this manual



A prohibited action
(Target is unspecified)



Follow instructions
carefully



Failing to heed the
instructions could
result in accidents



Disassembly prohibited



Electrical ground required



Electrical shock hazard



CAUTION! HOT

All warnings and instructions must be strictly observed.

3. Using the Mistresa in a safe manner

This product collects oil mist generated by equipment such as machine tools to ensure and maintain a comfortable working environment. Do not use the product for any purpose other than the originally intended.



WARNING Do not install in hazardous locations

The Mistresa does not have a pressure- and explosion-proof construction. Although the CRH-□□E Series is equipped with a safety-enhanced explosion-proof motor, when installing the unit in a hazardous location where an explosive atmosphere may form, be sure to comply with all relevant legal regulations.





WARNING Fire and explosion prevention

Never allow explosive gases, organic solvents, or flames to be sucked into the suction port. (CRH-□□E series, please use in the range of 7 page described.)



WARNING Fire and electrical shock prevention

The Mistresa wiring work must be performed by a qualified electrician, and must conform to the relevant electrical engineering standards and internal wiring standards.



WARNING Maintenance and inspections prohibited during impeller rotation

Always wait at least 2 minutes after a power OFF before performing filter replacement work or inspections (to allow the impeller's inertial rotation to come to a complete stop).



CAUTION Burn

Do not touch the product main body or the inside during the operation or a short while after stopping the operation. Otherwise, "burn" may result.



CAUTION Replacing products

High-efficiency motors (IE3) have a higher starting current than standard motors (IE1 or equivalent). Because of this, it may be necessary to change breakers, thermals, or other components when replacing such products.



CAUTION For after installation transport

If you want to transport by installing the product on the device, please fix firmly with as rope hanging. It may cause malfunction or damage.



CAUTION Relocating the Mistresa

Do not hold the Mistresa by the terminal box, side cover, or elbow when moving the unit. This may deform or damage the unit. Use hanging bolts to move the unit.



4. Items to check at product delivery/storage

Although all our products are thoroughly tested and inspected prior to shipment, the customer should nonetheless check the following items when taking delivery of the Mistresa.

- Verify that the delivered product (model, etc.) is the same as that which was ordered.
- Verify that the product has not been **damaged or deformed**, etc., during shipment.
- Verify that all the product accessories are present.

Standard Accessories \ Type	Type	CRM-S Series	CRMH-S Series	CRH Series
Drain tube	2 pieces	○	○	○
Hose band (for drain tube)	2 pieces	○	○	○
Anti-vibration pads	4 pieces	○	○	○
Duct companion flange*	1 piece	○	○	○
Packing (for duct companion flange)	1 sheet	○	○	○
Crimp terminals (1 spare)	7 sets	○	○	—

* Two duct companion flanges come with the product—one for installing the product, and one for connecting to the next machine.
Some models come with the packing (for the duct companion flange) affixed to the duct companion flange.
Accessories may vary depending on the model and specification.

If necessary, store the Mistresa in ambient conditions below.

- Indoor avoiding direct sun beams
- Temperature between 0°C to 40°C
- Humidity between 10% to 90% (No condensation)

Follow the instructions below if it is necessary to stop the operation or store the Mistresa for 3 months or longer.

(1) Storing Mistresa in the original packaging

Store the Mistresa in a dry area indoor where the temperature does not change much.

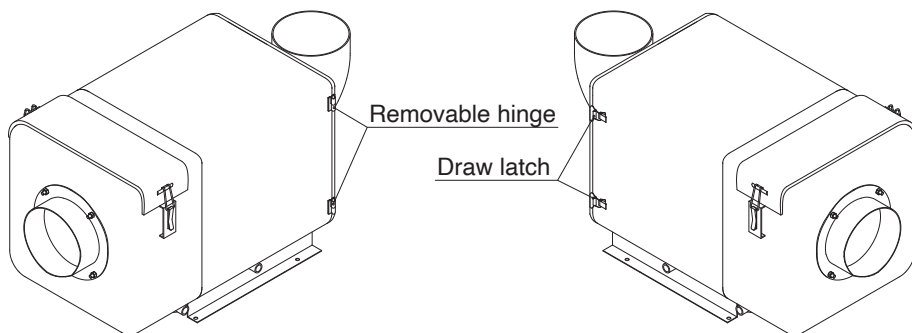
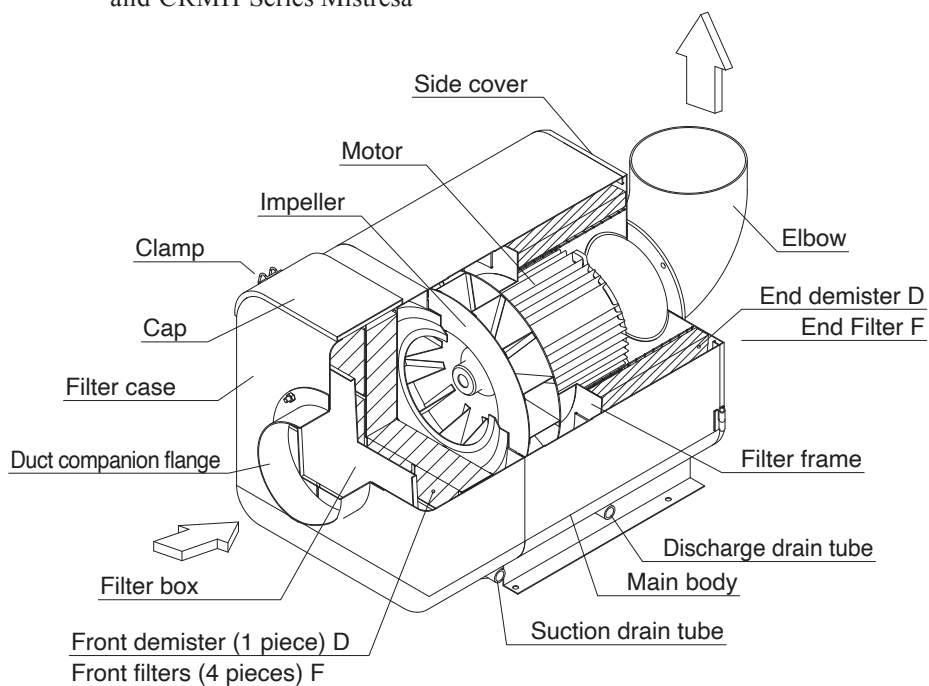
(2) Not operating the Mistresa after installation

Keep the Mistresa free from **"significant vibration"** and **"heat"** from other machines and equipment.

It is recommended that the Mistresa be covered with a plastic sheet or the like to keep it free from water, oil and dust.

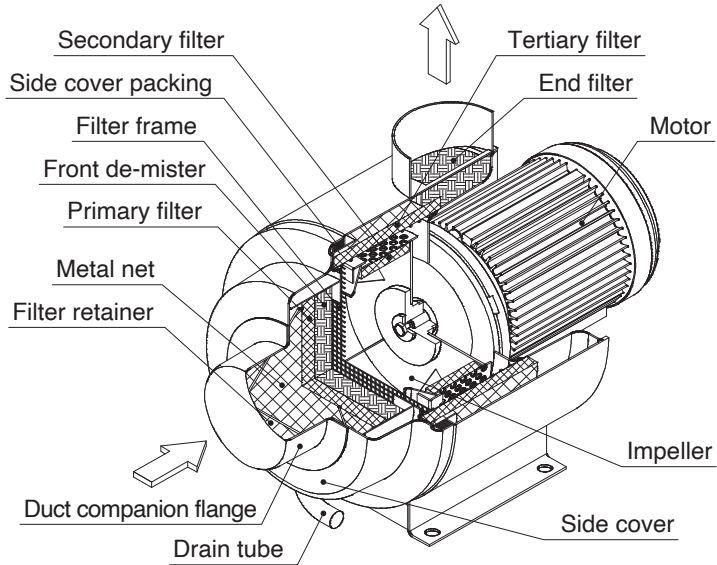
5. Internal component names and layout

(1) Internal component names and layout for CRM Series
and CRMH Series Mistresa

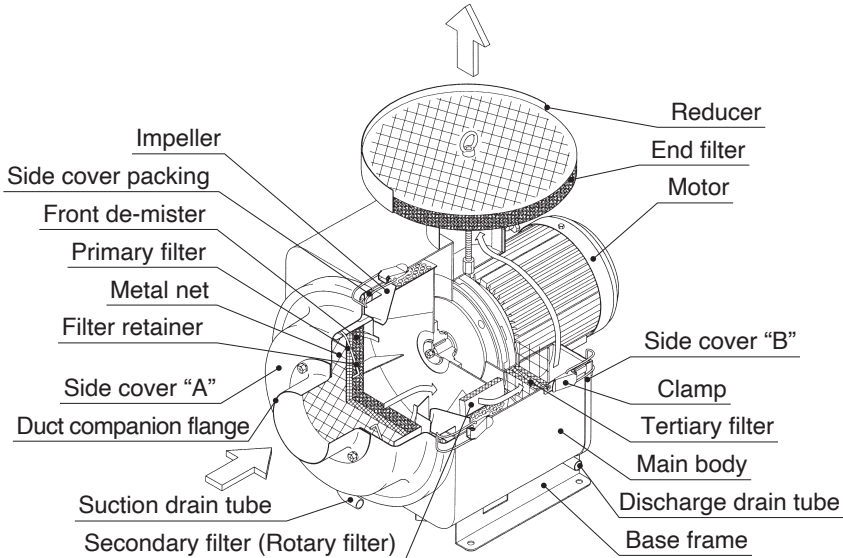


(2) Internal component names and layout for CRH Series Mistresa

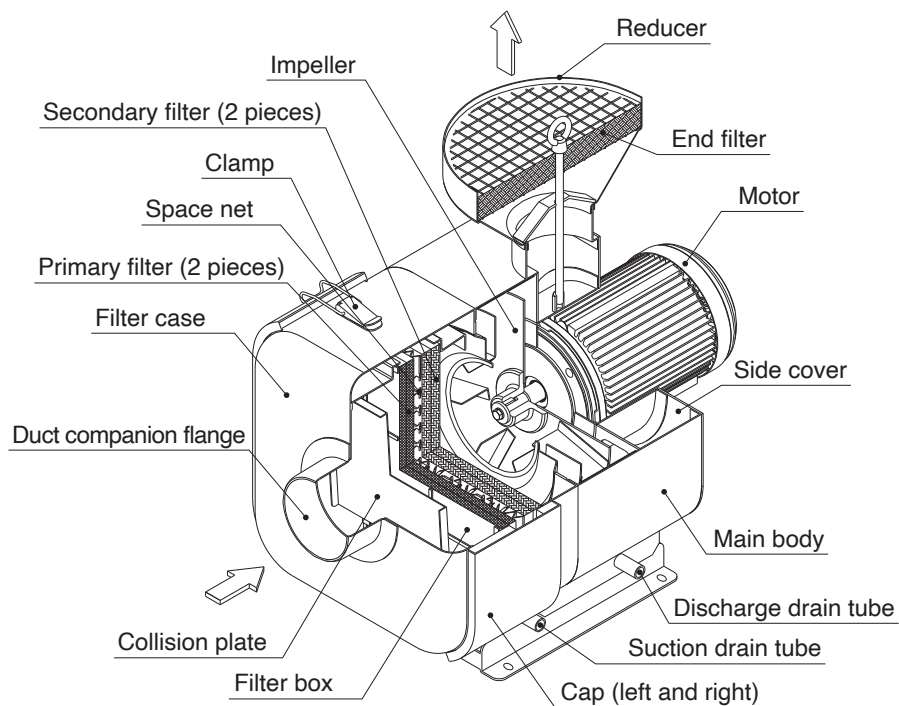
① CRH-100T/E



② CRH-200T/E



③ CRH-04E, 07E, 15E



6. Product labels

- (1) Product nameplate(motor nameplate).....At main body or base frame
The nameplate label contains the following information: product model, rated voltage, rated frequency, rated current, insulation class, max. static pressure, max. airflow rate, manufacture No., etc.

Note 1: The "ratings" are the operating limit values.

Note 2: The static pressure is the force which a gas flow applies to faces which are parallel to that flow.

- (2) Ground connection.....Inside the terminal box

The "  " mark indicates a ground connection.

Be sure that the mark-indicated part is securely grounded.

- (3) Warning label.....Filter case (CRH Series)

Warning label that prohibits removing the caps or covers while the impeller is rotating

Wait for **[at least 2 minutes]** after turning off the power supply and before opening the caps or the covers. The inertia keeps the impeller rotating even after turning off the power supply. Otherwise, a **[finger or wrist]** injury could result.

- (4) Caution label.....Side cover or top panel (CRH and CRMH Series)

Burn hazard. Do not touch the main body during operation or immediately after stopping operation. Burn could result.

7. Ambient conditions in the area of installation



CAUTION

Resulting in motor burnout and deterioration of the components.

Be sure to use within the range described following.

	CRM Series	CRMH Series CRH Series
Ambient temperature	0°C to 50°C	0°C to 40°C
Intake temperature	50°C or lower	80°C or lower
Relative humidity	10% to 90%	
Altitude	1,000 meters or lower	
Overvoltage category	III	
Material group	III	
Level of contamination	3	

- Install the Mistresa indoor.
- Make sure that the installation floor has a sufficient bearing strength commensurate with the machine weight.
- Install the Mistresa where it stays away from strong vibration or impact.
- Install the Mistresa on a level, flat surface.
- Do not install in an environment where explosive gases, etc., may be present. (Excluding CRH-□□E Series Mistresa)

8. Suction port cautions



WARNING

NEVER allow the following items to flow into the product - Explosive gases, organic solvent, sparks, burning cigarettes and so forth. Otherwise, an explosion, fire or product damage could result.

Using a CRH-□□E Series product equipped with a quasi-explosion-proof motor, however, allows Class 2 petroleum mist (such as kerosene) and Class 3 petroleum mist or higher of Class 4 hazardous substances to flow into the product. However, make absolutely sure that the mist temperature is below the flash point.

Since the CRH Series Mistresa use oil seals on the shafts, be sure to make the mist flow into the product for lubrication. (See (5) in section “**Cautionary Notes on Operation**” on page 15.)

- * Class 3 petroleum mist having the flash point higher than 150°C may flow into the CRM or CRMH Series Mistresa provided that the suction temperature of the mist is 50°C or lower (80°C or lower for the CRMH Series). Be absolutely sure to use the burnout prevention terminals A and B (white leads) in the operation circuit, and implement appropriate safety measures.
- * Depending on the type and amount of the substance being collected and the operating conditions, oil leakage, paint peeling, and early packing, caulking, or filter deterioration may occur.

9. Product installation

(1) Installation method

CAUTION

Common to all models:

- Before opening the package, make sure it is right side up.
- Check the weight of the Mistresa before lifting it and use the right sling for the rated work load.
- Confirm that the eye bolts are not loose.
- Hook the lifting hooks on the eye bolts to lift the Mistresa.
- Do not suddenly move the Mistresa up or down, or suddenly start or stop lifting in any way that shocks the Mistresa.
- After installing the Mistresa on the machine, do not lift the Mistresa together with the machine using the eye bolts.

① CRM Series, CRMH Series, CRH Series

- a Install in a horizontal (level) manner to evenly distribute the weight of the drain pipe discharge and the anti-vibration pads.
- b When installing the product on top of another machine, etc., secure it with bolts to prevent shifting due to vibration.
- c Leave a gap at the securing bolts to allow the anti- vibration pads to function properly (See Fig.1).
- d For drain piping details, see page 14, item (3) "Drain tube piping".
- e Leave a 500mm margin of space at all sides of the product to permit filter replacements, maintenance, and inspections.

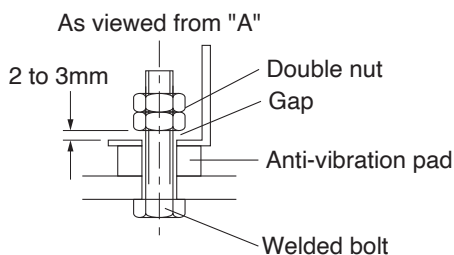


Fig.1

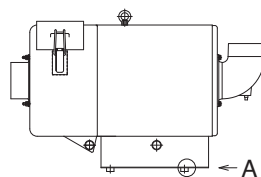


Fig.2

(2) Power supply connection

WARNING

- ① Be sure that the power supply conforms to the rated voltage and rated frequency requirements.
 - When using inverter-controlled operation, protect the motor by incorporating the motor burnout prevention terminals “A” and “B” in the inverter’s control circuit.
 - In addition, if it is inverter operation at different voltage (more than 380V), you will need a motor insulation strengthening (through special measures).
 - Permissible voltage fluctuation range:
 - Continuous...Rated voltage within $\pm 5\%$
 - Momentary...Rated voltage within $\pm 10\%$
- ② Be sure connect the **ground wire**.
- ③ Only the motors in the CRH-04E, CRH-07E, and CRH-15E rotate clockwise when viewed from the motor side. Make sure the motor rotates in the correct direction before starting operation. For other products, the motor can rotate either clockwise or counterclockwise.
- ④ The terminals A and B (with white leads) on the CRM and CRMH Series are for motor burnout prevention. See (3) for their connection and use.
- ⑤ Be sure to use cabtyre cable for the power cable. When using crimp terminals, either cover the crimp area with an insulation tube or use insulated crimp terminals.

Screw size	Tightening torque
M3.5	0.87N·m (0.96N·m)

Minimum cross-sectional area of power cable and ground wire

Models	Cross-sectional area of power cable	Minimum cross-sectional area of ground wire
CRM-H02, CRH-100T/E, CRH-200T/E	AWG16 ($\approx 1.25 \text{ mm}^2$)	AWG16 ($\approx 1.25 \text{ mm}^2$)
CRM(H)-H04, CRH-04E	AWG16 ($\approx 1.25 \text{ mm}^2$)	AWG16 ($\approx 1.25 \text{ mm}^2$)
CRM(H)-H07, CRH-07E	AWG16 ($\approx 1.25 \text{ mm}^2$)	AWG16 ($\approx 1.25 \text{ mm}^2$)
CRM(H)-H15, CRH-15E	AWG14 ($\approx 2.0 \text{ mm}^2$)	AWG14 ($\approx 2.0 \text{ mm}^2$)
CRM(H)-H22	AWG14 ($\approx 2.0 \text{ mm}^2$)	AWG14 ($\approx 2.0 \text{ mm}^2$)

- ⑥ When wiring the power supply, immobilize the cable at the cable port using a cable lock or similar means, so that external force is not applied to terminals.

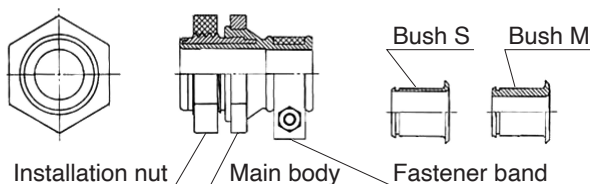
If a cable lock comes with the product, wire the power supply as follows.

Procedure:

1. Select the bush commensurate with the cord from the attached bushes.

Bush symbol	Applicable cord diameter (mm)
S	6.0 to 8.0
M	8.0 to 10.0
None	10.0 to 12.0

2. Put the cord through the cord lock.
3. Tighten the fastener band to secure the cord in place. Check that the cord is securely tightened.



(3) Using the burnout prevention terminals

The CRM and CRMH Series Mistresa have a heat-sensitive thermal protector at the motor winding. This auto reset thermal protector operates as follows. When the motor winding temperature rises excessively high, the relay contacts open. When the temperature comes back down to a certain temperature, the contacts automatically close again. Connect the thermal protector with the terminals A and B for burnout prevention.

By connecting this terminal in series with the operating circuit of the electromagnetic switch (with thermal relay), to prevent motor burnout.

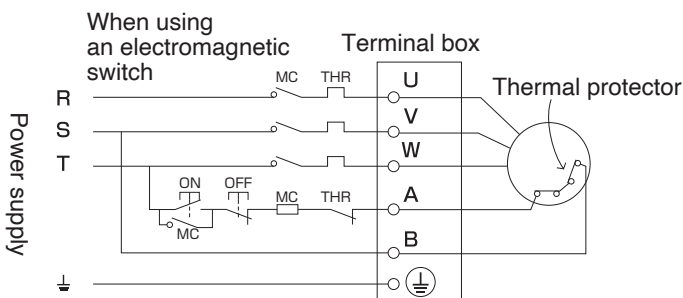
⚠ CAUTION

- ① Be sure to connect the "A" and "B" terminals to the operation circuit in order to protect the motor.
- ② Use the prescribed or lower contact rating (115V AC, 18A / 230V AC, 13A / 24V DC, 18A).
- ③ When the thermal relay is tripped, correct the cause, then press the [RESET] button.

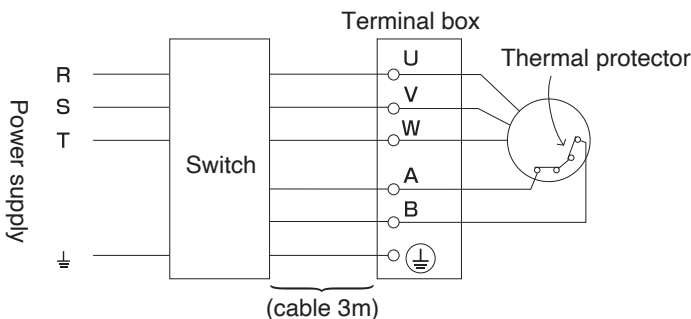
- ④ The thermal relay may be erroneously tripped if the Mistresa is operated in an intermittent manner. In this case, change the thermal relay.

a) Connection example for burnout prevention terminals "A" and "B"

Electromagnetic switch device (with thermal relay) Please prepare.



- b) Connection example when using the optional switch with built-in 3SW thermal and a 3m cable)



- ⑤ Check the rated current shown on the nameplate of the product to determine the setting current of the thermal relay, and set the rated current accordingly.

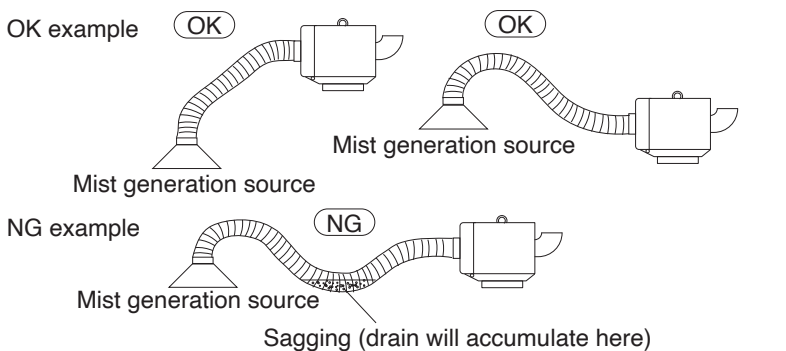
10. Piping

(1) Duct hose material

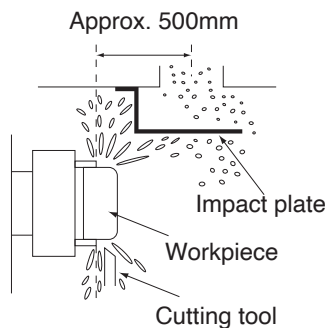
Because the life of the duct hose will vary according to the type of mist being sucked in, the use of an oil-resistant duct hose is recommended.

(2) Intake duct piping

- ① A flexible duct (optional item) should be used to facilitate easy duct maintenance and vibration resistance.
- ② The duct should be somewhat longer than strictly necessary (slight length surplus), but it must not sag when connected.
- ③ Use the duct companion flange (accessory item) to facilitate easy connection.

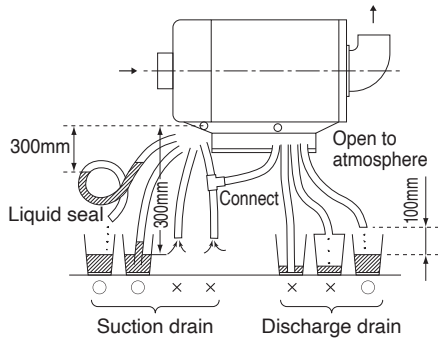


- ④ Positioning the intake port too close to the mist generation source could result in large amounts of mist, cutting chips, and dust being sucked in, causing blow leakage and accelerated clogging of the filters and demister. Either provide an adequate distance (approx. 500 mm) between the mist generation source and the intake port or install an impact plate.



(3) Drain tube piping

- ① Be sure to **[liquid seal]** the suction drain tube. Otherwise, the suction drain tube sucks air through its end, causing the drain to flow back but not drain. This in turn could lead to premature clogging of the next filter or blow leakage.



- ② Do not connect the suction drain tube with the discharge drain tube.
- ③ Make sure that the discharge drain tube is about 100 mm from the liquid surface and **[open to atmosphere]**. Also, please be careful to prevent the air and cutting fluid from splashing everywhere.
- ④ Use a plug or a similar element to close the drain tube that is not connected to the drain system.

11. Operating cautions

- (1) The optional **chip separator** should be used when operating the Mistresa in environments where large amounts of chips, dust, and high-concentration mist are present.
- (2) Blow leakage may occur if large amounts of oily mist (non-water-soluble) are being sucked in. To increase collection efficiency and reduce the risk of blow leakage, consider the following (listed in order of importance).
 - ① When using a Mistresa that is not equipped with a filter, replace the product with a filter-type Mistresa.
 - ② In addition to ① above, use the optional **general-purpose after-filter**.
 - ③ In addition to ① and ② above, use the optional **inner filter**.
- (3) When sucking in oily smoke or other mist with small particulate matter, use the optional high-performance after-filter. Moreover, the optional inner-filter should also be used to increase the after-filter life.
- (4) For the CRM Series and CRMH Series, use care so as not to let the filter (de-mister) clog to choke itself up (a state where no air flows). Otherwise, since the air flow cools the integrated air-cooled motor, choking up causes the motor not to cool down sufficiently, possibly leading to burnout. It does not apply, however, to the motors of the CRH as they sit outside the units.
- (5) Make sure that the CRH Series Mistresa draws mist. Otherwise, since the lack of mist (fluid) causes insufficient lubrication and poor cooling at the contacts between the oil seal and shaft, the resulting heat buildup leads to a shorter service life and premature leak. However, this does not apply to the CRM Series and CRMH Series as each of them employs a V-ring that can operate in a dry condition.
- (6) If a CRH or a CRMH Series has to draw in water mist that does not contain a corrosion preventive, be sure to operate it at no load for a few minutes to dry the inner structure to prevent corrosion.

12. Maintenance and inspections

(1) Periodic inspections

- ① An inspection should be performed every 3 months to check for abnormal vibration and sounds. The insulation condition should be checked once per year.
- ② For products that use rubber contact seals (such as V-rings or oil seals) in the shaft seal section, deterioration may occur due to rotational wear, and packings used in the suction and drain ports, side cover, and other areas may deteriorate over time.

Although the amount of deterioration will vary depending on the operating environment, shaft seals and packings should be replaced when replacing the bearings (about once every year).

- ③ The motor uses sealed ball bearings that do not require additional grease or lubrication.

Although the service life of grease will vary greatly depending on the operating environment, replacement once a year is a good rule of thumb.

(2) Filter and demister inspection/replacement schedule

① CRM, CRMH series

Model	Part Name	Material	Quantity	Inspection/Replacement Schedule	Washable YES/NO Status
D	Front demister	Aluminum	1	12 to 24 months	YES
	End demister	Aluminum	1	24 to 36 months	YES
F	Front filter	Polyester	4	1 to 6 months	YES
	End filter	Polyester	1	6 to 12 months	NO

② CRH Series

Part Name	Material	Quantity	Inspection/Replacement Schedule	Washable YES/NO Status
Primary filter	Polyester	*	1 to 6 months	YES
Secondary filter	Polyester	*	1 to 6 months	YES
Tertiary filter	Polyester	*	6 to 12 months	YES
End filter	Polyurethane	1	6 to 12 months	YES

* CRH-100T/E: Primary filter 1 piece, secondary filter 4 pieces, tertiary filter one piece
 CRH-200T/E: Primary filter 1 piece, secondary filter 5 pieces, tertiary filter one piece
 CRH-04E, 07E and 15E: Primary filter 2 pieces, secondary filter 2 pieces, tertiary filter none
 CRH-100T/E: The end filter is made of stainless steel.

CAUTION

To prevent injuries, always wear **rubber gloves, etc.**, when inspecting the filters and demisters.

Maintenance work should be done by a person who has read the instruction manual of the Mistresa thoroughly, is familiar with the structure of the Mistresa and has received maintenance training.

(3) Filter/Demister inspection and replacement procedures

Be sure to verify that **the power switch is OFF** before beginning the filter/demister inspection and replacement procedures. During the inspection and replacement procedures, place a placard on the power switch which says **"Maintenance In Progress. Do not turn the power switch ON"**.

① CRM, and CRMH series

a. Front filter and demister inspection and replacement

(The pictures show the front filter, but the procedure is the same for the front demister.)



Release the clamps and detach the cover.



Remove the front demister (front filter).



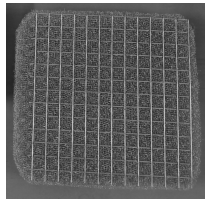
If cutting chips are sucked into the unit

Detach the filter box and remove the cutting chips from inside the box.

Front filter



Front demister

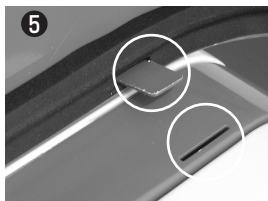


After inspecting and removing the front demister/filters

Front filters (x 4): Stack all 4 new filters neatly and install them with the short side in the vertical direction and "Mistresa Genuine Part" and the stamp facing downwind.

Front demister (x 1): Install a new demister with the short side in the vertical direction. (The demister can face either direction.)

[NOTE]



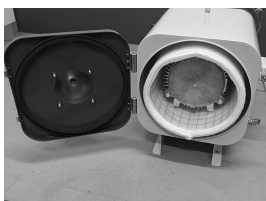
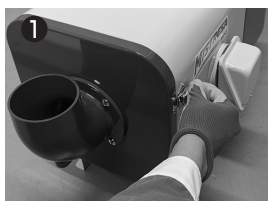
To reattach the cover, fit the cover guides in the guide holes. An improperly attached cover may cause oil to leak.



When securing the lid to the filter case, hold down the arm of the clamp to the lid with one hand as shown in the picture, then tilt the lever down to secure. (*Make sure the arm properly sits back.)

b. End filter and demister inspection and replacement

(The pictures show the end filter, but the procedure is the same for the end demister.)



Release the draw latches and open the side cover to expose the end filter (end demister).

[NOTE] When you release the pull latches, the side cover will open quickly, so please be careful.



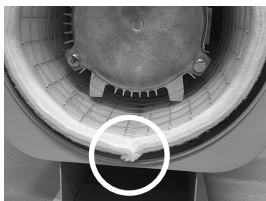
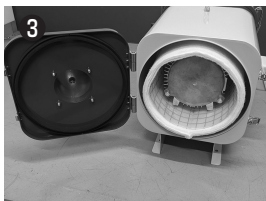
The side cover uses removable hinges to open and close.

If there is not enough space to open the side cover, open the side cover slightly and pull it upward.

[NOTE] Be careful not to get your fingers caught when installing it again.



Pull out the end filter (end demister).



After inspecting and removing the end demister/filters

Insert the end filter (end demister) into the filter frame, close the side cover, and secure the side cover with the draw latches.
(Insert the end filter with the seam facing downward.)

[NOTE]

- Insert the end filter (end demister) all the way.
- Be careful to keep the end filter (end demister) from getting caught by the side cover. Otherwise, oil leakage may occur.
- Be careful not to get your fingers caught when closing the side cover.

② CRH Series

(The CRH-100 and CRH-200T/E use a different replacement procedure. Contact us.)

Primary and secondary filter replacement

(These filters can be reused after being washed)



Unclamp the filter. Remove the cap.



Slide the filter box to take it out.

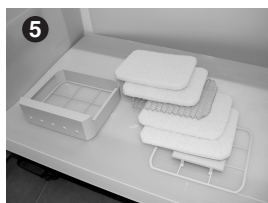


Remove the filter retainer.

*After replacing the filter and put the filter retainer back in position, be sure of the correct orientation of the filter retainer.

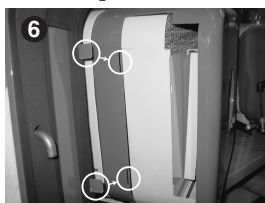


Remove the primary filter (thin one) first, then space net and finally the secondary filter (thick one).



Install the replacements in the order of the secondary filter, space net, and primary filter. For the primary filter (2 pieces) and the secondary filter (2 pieces), put each one piece of them in place at a time with the stamp "Mistresa Genuine Part" facing the downstream (downstream of air flow direction). (Do not attempt to put all of them in at one time. Otherwise, you may not be able to install them in the right position.)

[CAUTION]



When installing the cap after replacing the filters, be sure to put the guide into the guide slot. Otherwise, improper installation of the cap could lead to oil leak.

End-filter replacement

(These filters can be reused after being washed)



Remove the eye nut.



Take out the end filter and replace it.

CAUTION

Use only filters which are our genuine parts, and never operate the Mistresa with the filters removed. Doing so could cause abnormal operation and product failure.

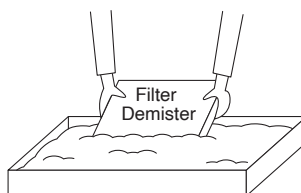
(4) Other maintenance items

Since the CRH-□□E Series Mistresa use a quasi-explosion-proof motor, contact us for maintenance other than replacing the filters. (See page 23.)

(5) Filter washing procedure

① Washing method

Filters and demisters which have a "washable" status can be cleaned by air-blowing them, or by soaking them with a neutral detergent until clean.



② Disposal method

After filter washing is completed, the waste water and filter waste material must be discarded in accordance with the local waste water and waste material disposal regulations.

13. Warranty

(1) Scope of warranty

When a malfunction occurs even if operating the unit according to the instruction manual and the cautions on the attachment labels, etc. within the warranty period, we will repair the failure for free.

However, if this unit is assembled into the customer's other equipment, expenses for removal from the equipment and attachment to the equipment, accompanying work expenses, transportation costs, and other indirect damages cost such as opportunity loss or operational loss of customers are beyond the scope of warranty.

When requesting repair, contact our nearest branches and sales offices.

(2) Warranty period

The warranty period shall be one year from delivery.

(3) Even within the scope of warranty, the following cases shall require charge for repair in principle.

- ① Malfunctions and damages due to incorrect use other than as described in the instruction manual and cautions list.
- ② Malfunctions and damages due to repair and modification (including drilling into the unit) by third parties.
- ③ Malfunctions and damages due to transportation, dropping, etc. after purchase.
- ④ Malfunctions and damages due to fires, earthquake, wind and flood damages, other disasters, abnormal voltages, use of unspecified power supply (voltage and frequency), etc.
- ⑤ Malfunctions and damages due to use of parts other than those specified by us.
- ⑥ Malfunctions and damages due to mixing in of foreign materials.
- ⑦ Discoloration and flaws from age deterioration or from long-term use and malfunctions due to natural consumption of consumable parts.

(4) Damages caused by malfunctions occurring during use of this unit shall not be indemnified.

14. Contact information

Inquiries regarding product faults and requests for repairs, etc., should be directed to the Oversea Sales Department. When contacting the Oversea Sales Department, please have the product “TYPE” (indicated on the affixed nameplate label), year of manufacture, and serial number ready.

MISTRESA			
TYPE		Product name (TYPE)	
Hz	OUTPUT	kW	2 POLES
VOLTS	3 ϕ	/INSU E	/CONT
AMP	Year of manufacture		
MAXm3/min	Serial number (No.)		
MAXkPa	No.		

SDG CO., LTD.
MADE IN JAPAN ④

*For the customer who is using the CRM-S, CRM-V or CRMH-S Series and has modified the internal parts (filter combination) after delivery, please contact us with the details of the modification based on the nameplate affixed at the time of modification. (See the nameplate below.)



* For the latest information on our sales offices, please check our website.
List of sales offices



15. About Disposal

Dispose of the Mistresa according to local laws and regulations.

16. Specifications

CRM Series

Type	CRM-H02□	CRM-H04□	CRM-H07□	CRM-H15□	CRM-H22□
Power supply	3-phase, 50Hz, 200V, 60Hz, 200V / 220V				
Output kW	0.2	0.4	0.75	1.5	2.2
Frequency Hz	50/60	50/60	50/60	50/60	50/60
Current A	1.6/1.3/1.3	2.0/2.0/2.0	3.0/3.3/3.3	6.9/7.0/7.0	10.2/10.4/10.4
Noise 1 meter from machine dB(A)	F : 57/62 D : 64/67	F : 63/67 D : 68/72	F : 69/76 D : 73/78	F : 74/77 D : 81/83	F : 76/79 D : 83/86
Weight kg	27	33	43	67	78

CRMH Series

Type	CRMH-H04□	CRMH-H07□	CRMH-H15□	CRMH-H22□
Power supply	3-phase, 50Hz, 200V, 60Hz, 200V / 220V			
Output kW	0.4	0.75	1.5	2.2
Frequency Hz	50/60	50/60	50/60	50/60
Current A	2.0/2.0/2.0	3.0/3.3/3.3	6.9/7.0/7.0	10.2/10.4/10.4
Noise 1 meter from machine dB(A)	F : 63/67 D : 68/72	F : 69/76 D : 73/78	F : 74/77 D : 81/83	F : 76/79 D : 83/86
Weight kg	33	43	67	78

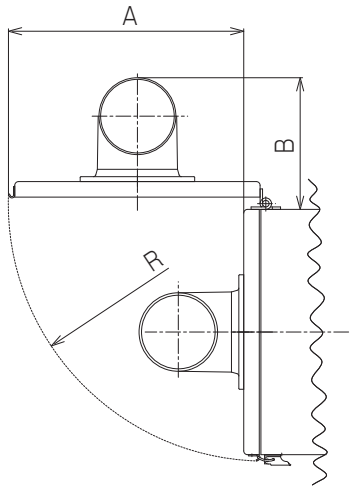
CRH Series (* The CRH-100E, 200E, 04E, 07E and 15E do not comply with CE marking requirements.)

Type	CRH-100T/E	CRH-200T/E	CRH-04E	CRH-07E	CRH-15E
Power supply	3-phase, 50Hz, 200V / 60Hz, 200V / 60Hz, 220V				
Output kW	0.2	0.2	0.4	0.75	1.5
Frequency Hz	50/60	50/60	50/60	50/60	50/60
Current A	1.2/1.1/1.0	1.2/1.1/1.0	2.0/1.8/1.7	3.3/3.1/2.8	6.2/5.8/5.4
Weight kg	13	20	26	37	57

T : The motors are not explosion-proof. E : The motors are quasi-explosion-proof.

* Refer to the delivery specifications to verify voltages other than those shown above.

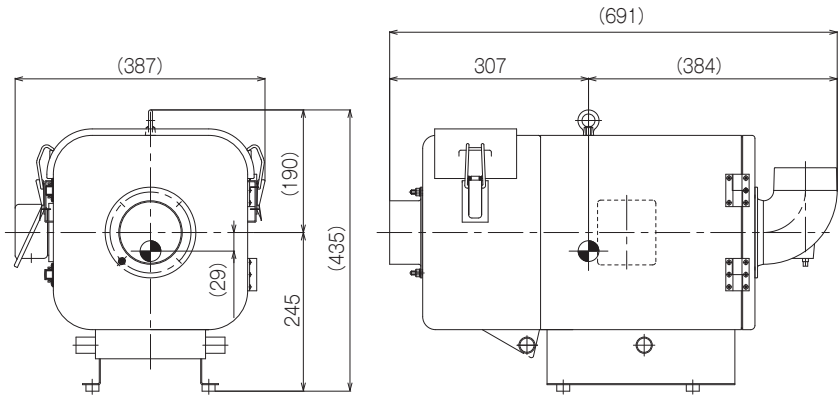
CRM Series and CRMH Series side cover opening range



Unit : mm

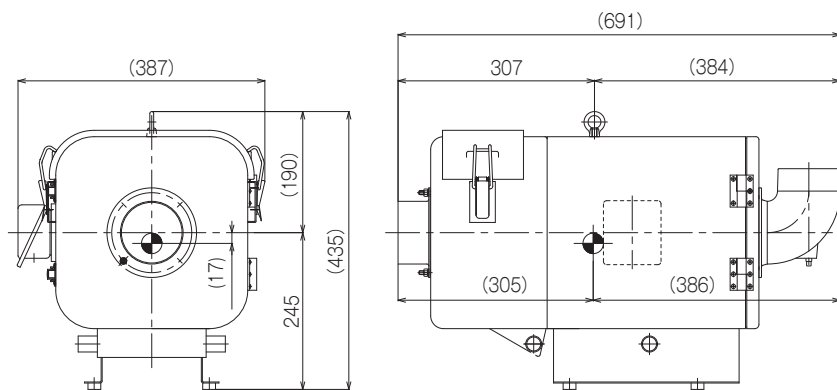
	A	B	R
CRM(H)-H02□ H04□	288	161	315
CRM(H)-H07□	338	189	365
CRM(H)-H15□	408	216	435
CRM(H)-H22□	448	276	475

① CRM-H02□

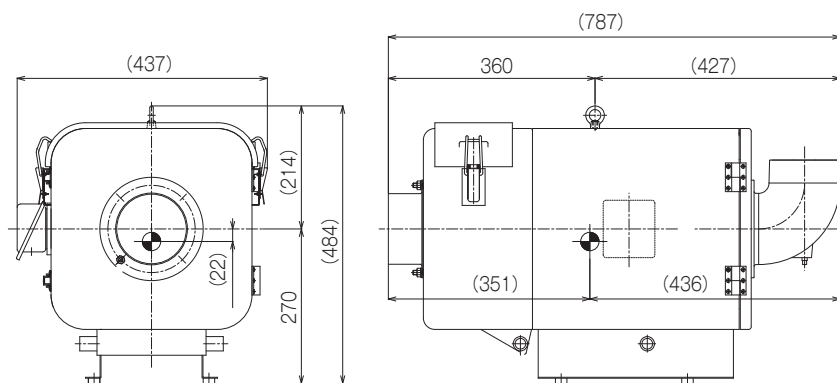


⊙ : 重心位置 (CENTROID POSITION)

② CRM-H04□, CRMH-H04□

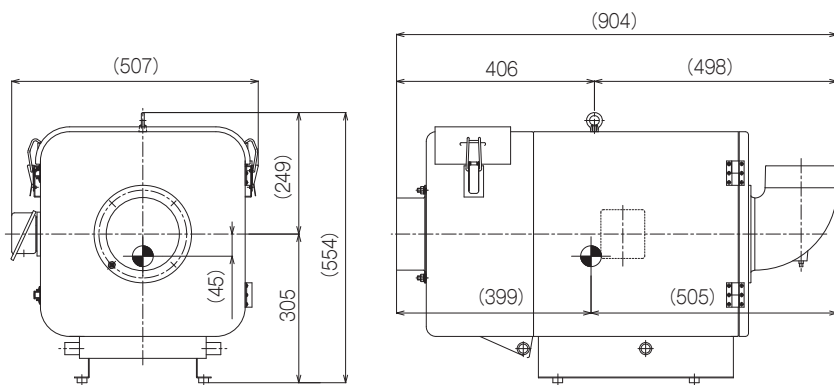


③ CRM-H07□, CRMH-H07□

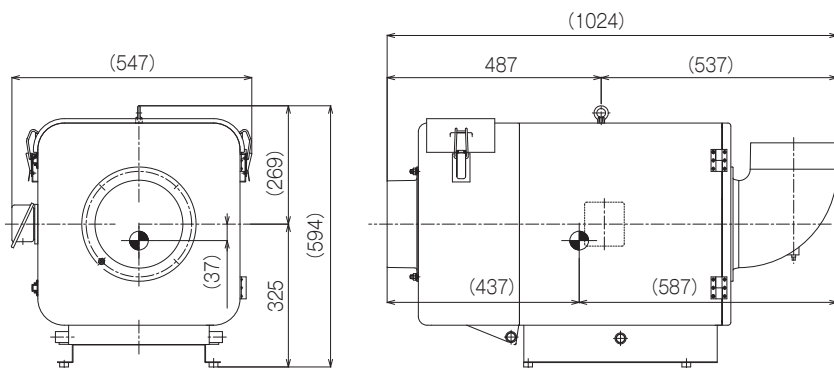


● : 重心位置 (CENTROID POSITION)

④ CRM-H15□, CRMH-H15□

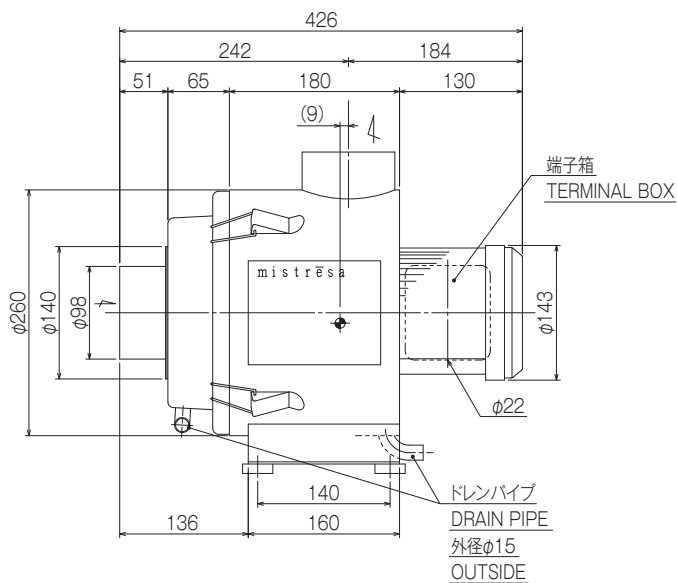
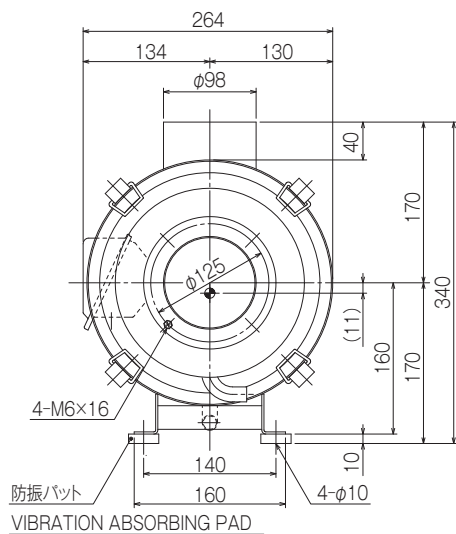


⑤ CRM-H22□, CRMH-H22□



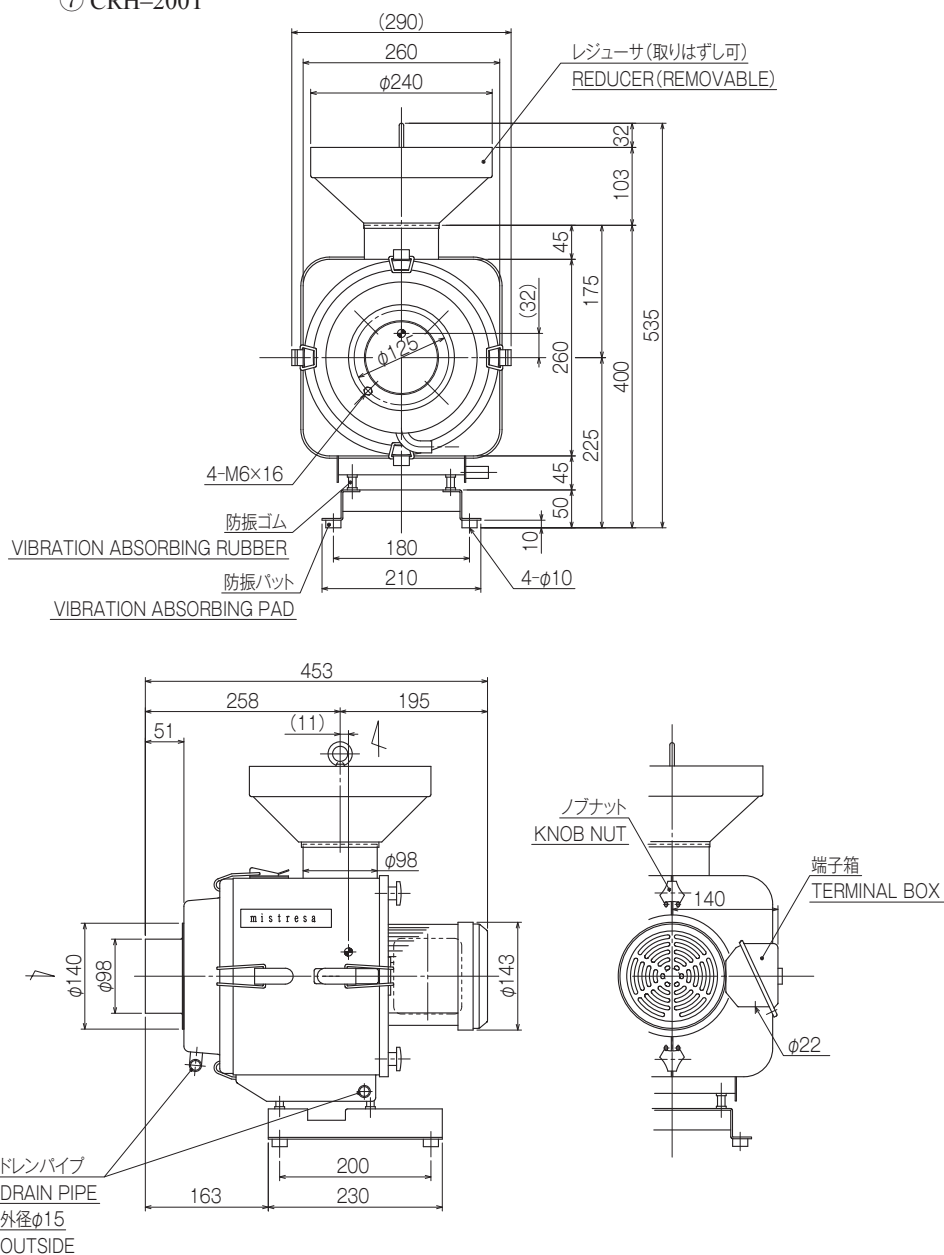
⊕ : 重心位置 (CENTROID POSITION)

⑥ CRH-100T



●：重心位置 (CENTROID POSITION)

⑦ CRH-200T



EC DECLARATION OF CONFORMITY

We hereby declare that the following our product conforms with the essential health and safety requirements of EC Directive.

Product : MISTRESA
Model : CRM / CRMH / CRH series
Manufacturer : SDG Co., Ltd.
No.1-25 Shinden Kita-machi, Daitoh-City,
574-0052 Japan
Directive : Machinery Directive 2006/42/EC

The above product has been evaluated for conformity with above directive using the following European standards. The technical construction file (TCF) for this product is retained at the above manufacturer's location.

Machinery Directive:

EN ISO12100:2010, EN 60204-1:2006+A1: 2009, others

Being the responsible person appointed and employed by the manufacturer.

*Applicable to products containing CE in model.

SDG CO., Ltd.

<https://www.sdg-eng.com>

