0371(E)-BA

Original instructions

Mistrésa

Operation Manual & Cautions



CRM-S Series



CRM-V Series



CRMH-S Series



CRH Series

SDG

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.

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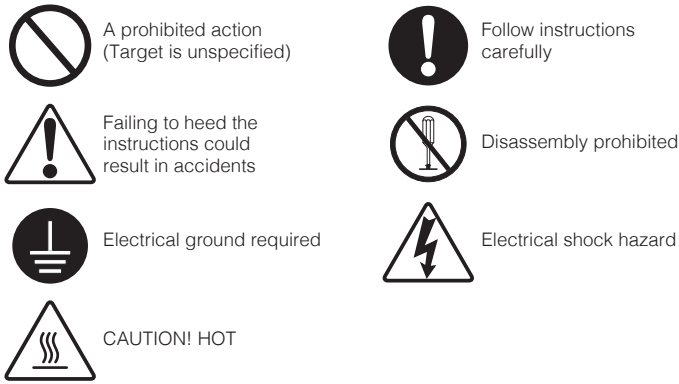
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1. Cautionary information indications used in this manual

"[⚠] 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



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. Operating the Mistresa in areas where explosive gases, etc., are present could result in an explosion in the event of an electric motor burnout. (CRH-□□E Series except.)

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 8 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 (CRH, CRMH-S Series)

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 Cautionary notes on using Mistresas of the CRM-S, CRM-V and CRMH-S series

The high efficiency motor (IE3) used with the Mistresas of the CRM-S (H02 excluded), CRM-V (H02 excluded) and CRMH-S series is designed with a lower winding resistance than the standard motor (IE1 and equivalent), in order to reduce loss. Since this design feature requires a higher starting current than the standard motor, replacing your existing motor may require that you also replace the circuit breaker, thermal relays and other parts.



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 (CRM-V series)

Do not hold the Mistresa by the terminal box when moving the unit. This may deform or damage the unit. Hold the Mistresa somewhere other than the terminal box or attach the included hanger bolts to lift and relocate the unit.



4. Items to check at product delivery

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		CRM-S Series	CRMH-S Series	CRM-V 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	—	—	—	○
Eyebolts	2 sets	—	—	○	—
Crimp terminals (1 spare)	7 sets	○	○	○	—

* Two duct companion flanges come with the product – one for installing the product and the other for connecting with the next machine. The packings (for duct companion flanges) for CRM-S, CRMH-S Series are affixed to the duct companion flanges.
Accessories may vary depending on the model.

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)

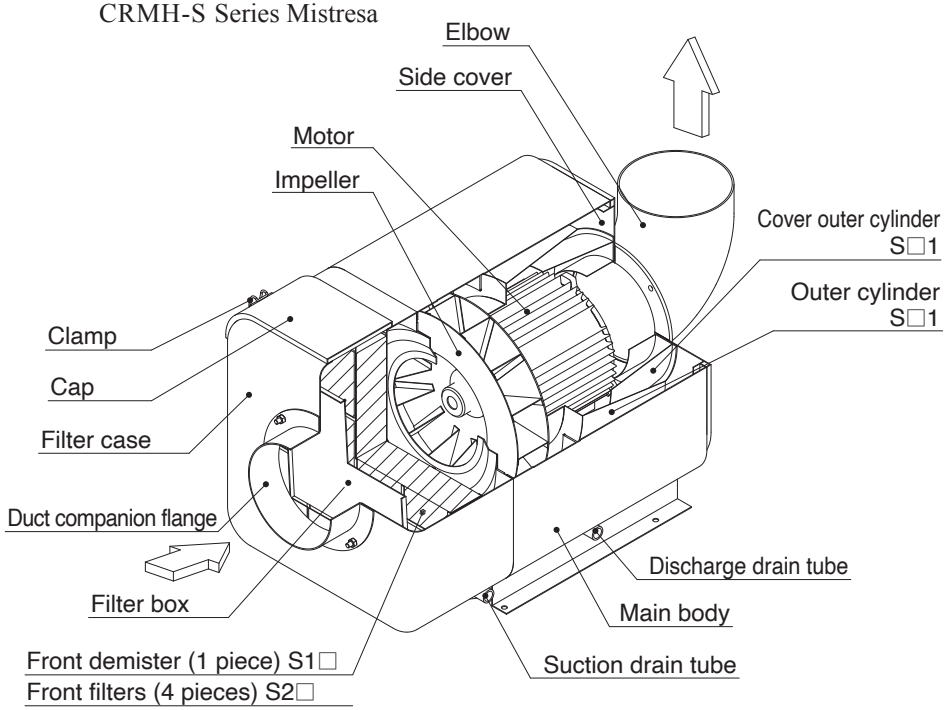
Follow the instructions below if it is necessary to stop the operation or store the Mistresa for 3 months or longer.

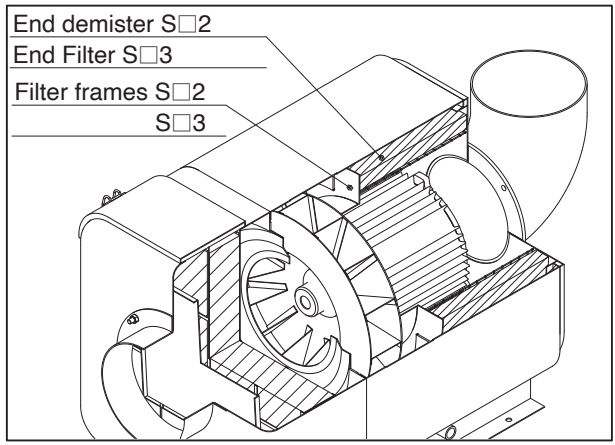
(1) Storing Mistresa in the original packaging
Store the Mistresa in a dry area indoor where the temperature does not change much.

(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.

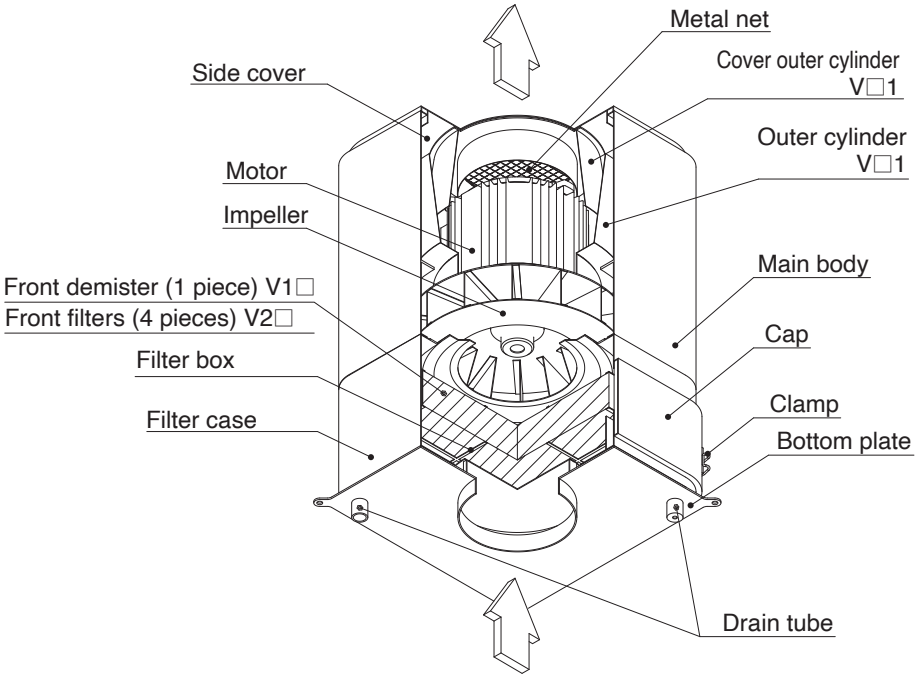
5. Internal component names and layout

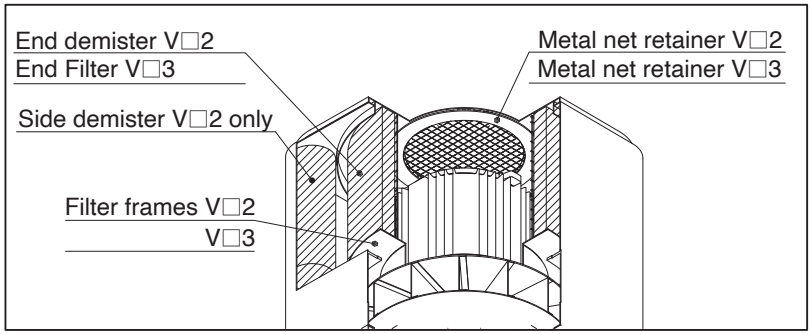
(1) Internal component names and layout for CRM-S Series and CRMH-S Series Mistresa





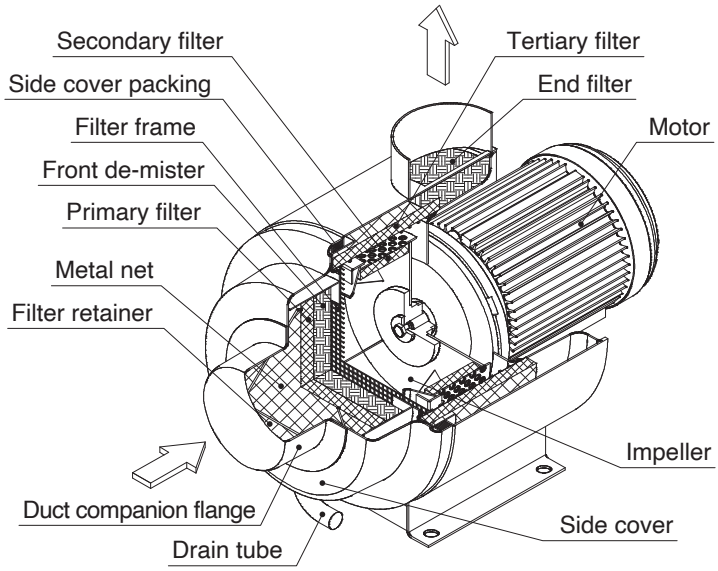
(2) Internal component names and layout for CRM-V Series Mistresa



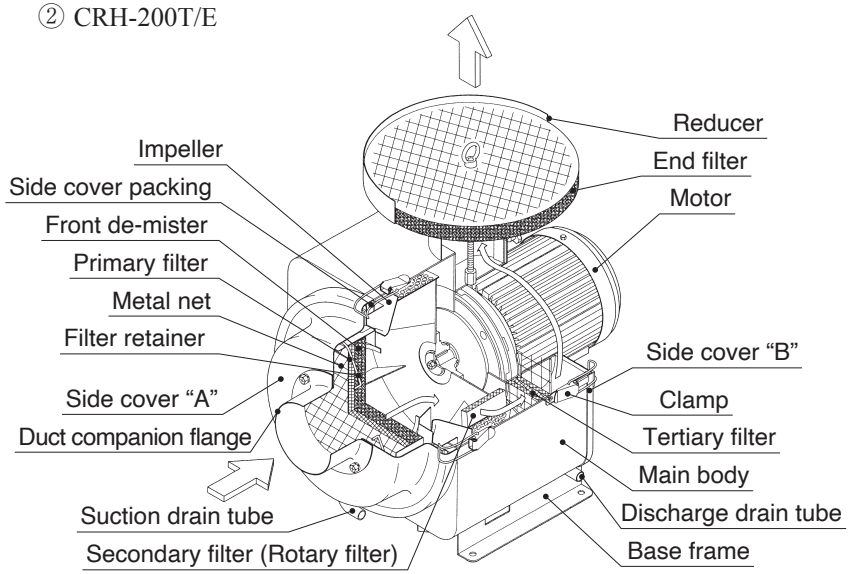


(3) Internal component names and layout for CRH Series Mistresa

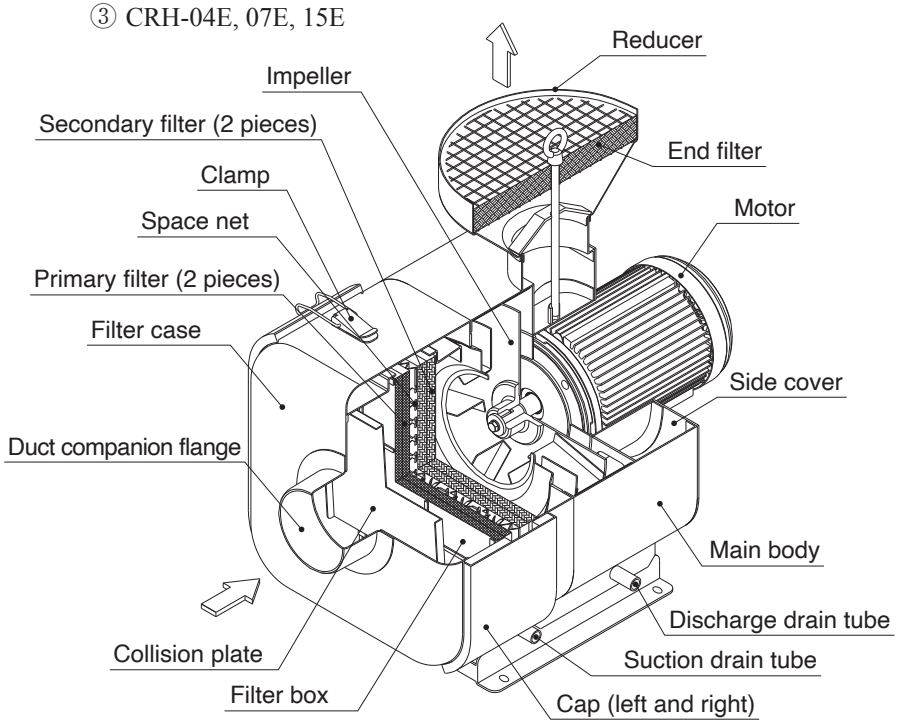
① CRH-100T/E



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-S 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-S Series CRM-V Series	CRMH-S 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 (6) in section **"Cautionary Notes on Operation"** on page 20.)

* Class 3 petroleum mist having the flash point higher than 150°C may flow into the CRM-S, CRM-V or CRMH-S 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 so that the motor would not experience an excessive temperature.
* Note that some mist substances may deteriorate the packings and filters.

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.
- Do not hold the Mistresa by the terminal box when transporting it.
- After installing the Mistresa on the machine, do not lift the Mistresa together with the machine using the eye bolts.
- When lifting a Mistresa of the CRM-S series (horizontal type), use the eye bolts located on the top of the Mistresa.
- When lifting the CRM-V series (vertical type), replace the bolts at the top of the Mistresa with the eye bolts included in the product package.
- Replace the diagonally opposite bolts on the top of the Mistresa with the eye bolts.

① CRM-S Series, CRMH-S 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).

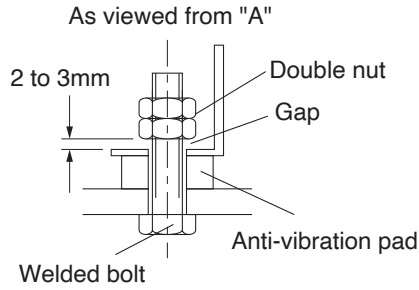


Fig.1

d The liquid seal surface should be 300mm or farther below the drain pipe in order to allow drain pipe discharge. An optional floor stand with a height of 600mm is available (see Fig.2) (For drain piping details, see page 19, 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.

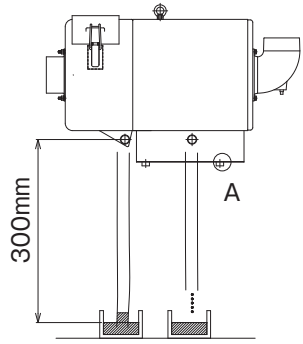


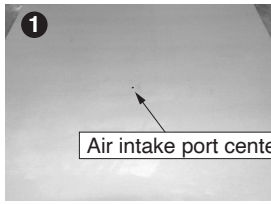
Fig.2

② CRM-V Series

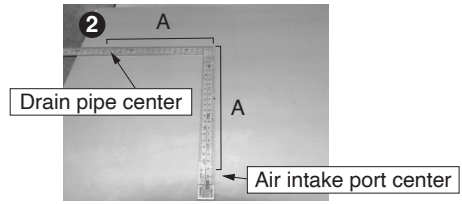
Do not hold the Mistresa by the terminal box when moving the unit. Hold the Mistresa somewhere other than the terminal box or attach the included eye bolts as shown in the photo at right* to lift and relocate the unit.

*Remove the screws that lock down the side covers.



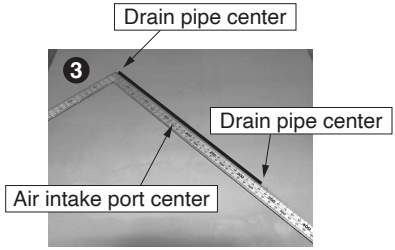


Mark the center of the air intake port on the surface where installing the Mistresa.



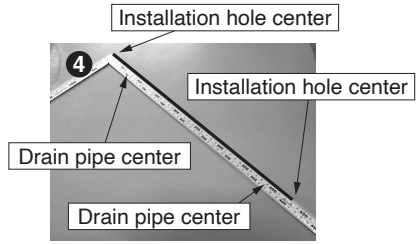
Mark the center of one of the drain pipes, at the distance from the mark made in ❶ specified in the installation dimensions on pg. 2.
Dimension A

H02, H04 : 118 mm
H07 : 138 mm
H15 : 168 mm
H22 : 187 mm



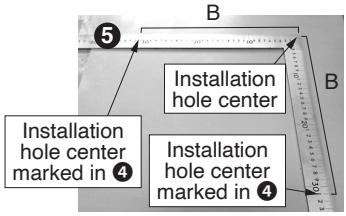
Mark the center of the other drain pipe, along the line drawn through the marks made in ❶ and ❷.
Distance from the mark drawn in ❷

H02, H04 : 335 mm
H07 : 390 mm
H15 : 475 mm
H22 : 530 mm

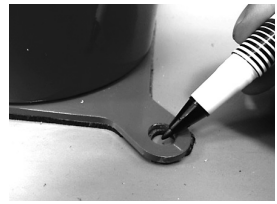


Mark the centers of the installation holes (x 2), along the line drawn through the marks made in ❷ and ❸.
Distance from the mark drawn in ❷ and ❸

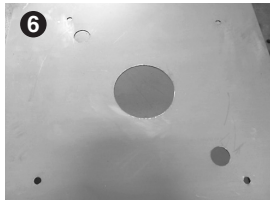
H02, H04 : 51.7 mm
H07 : 59.6 mm
H15 : 66.6 mm
H22 : 67.3 mm



Mark the centers of the remaining installation holes (x 2), at the distances from the installation holes marked in ❹ specified in the installation dimensions on pg. 2.
Dimension B
H02、H04 : 310mm
H07 : 360mm
H15 : 430mm
H22 : 470mm



The centers of the installation holes marked in ❹ and ❺ can also be marked without doing any measuring, by drilling the holes marked in ❶, ❷ and ❸, loosely anchoring the Mistresa and then tracing the holes.
However, move the Mistresa out of the way to drill the ϕ10 holes.

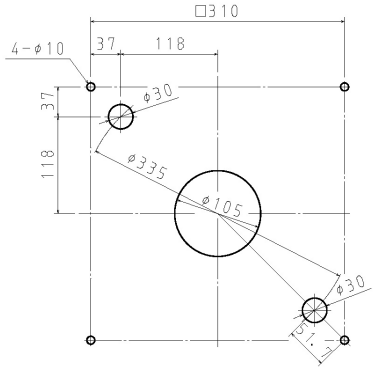


Open the holes around the marks, with a hole saw, etc.
Air intake port (Center)
H02, H04: ϕ105 mm
H07: ϕ130 mm
H15: ϕ160 mm
H22: ϕ210 mm
Drain pipes: ϕ30 mm
(Same for all models)
Installation holes: ϕ10 mm
(Same for all models)

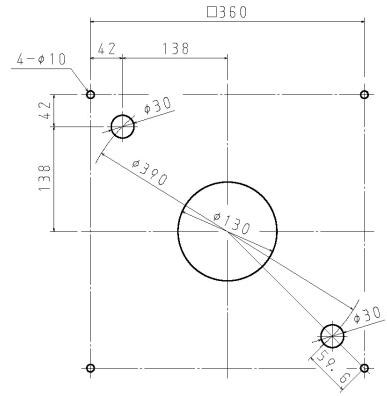


Set the Mistresa in place and lock it down with the nuts and bolts.

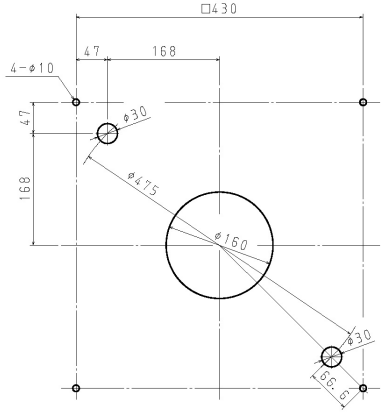
Mistresa CRM-V Installation Dimensions



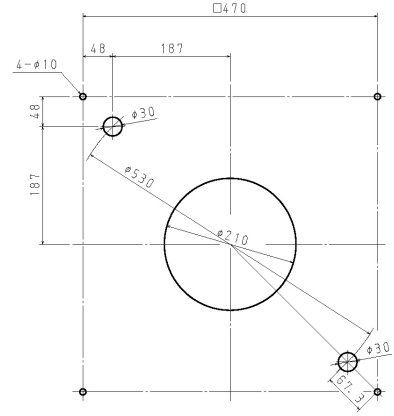
CRM-H02-V□□、CRM-H04-V□□



CRM-H07-V□□



CRM-H15-V□□



CRM-H22-V□□

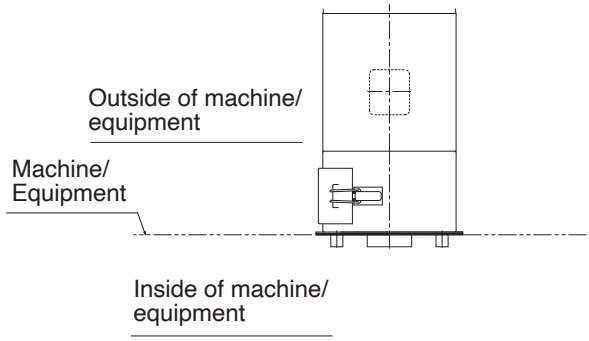
⚠ CAUTION

CAUTION

a Install the Mistresa level so that oil properly drains from the unit.

b Using bolts and nuts, connect the Mistresa to the machine/equipment. (CRM-V series Mistresas do not require a duct hose or drain tube.)

c Ensure about 500 mm of clearance on all sides of the Mistresa for checks, maintenance and parts replacement.



(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.
- Permissible voltage fluctuation range:
  Continuous…Rated voltage within ±5%
  Momentary…Rated voltage within ±10%

② Please connect the **ground wire** sure.

③ CRH Series: The impeller rotates clockwise when viewed from the motor. Make sure that impeller rotates in the correct direction before starting operation.

CRM-S Series, CRM-V Series, and CRMH-S Series
: The impeller can rotate either clockwise or counterclockwise direction.

④ The terminals A and B (with white leads) on the CRM-S, CRM-V, and CRMH-S Series are for motor burnout prevention. See (4) for their connection and use.

⑤ When using crimp terminals, either cover the crimp area with an insulation tube, or use insulated type crimp terminals.

Screw size	Tightening torque
M3.5	0.87N·m (max0.96N·m)

Minimum cross-sectional area of the external protection copper conductor

Models	Cross-sectional area of copper conductor that supplies power to the equipment	Minimum cross-sectional area of the external protection copper conductor
CRM-H02, CRH-100T/E, CRH-200T/E	AWG16 (≒1.25 mm^2)	AWG16 (≒1.25 mm^2)
CRM(H)-H04, CRH-04E	AWG16 (≒1.25 mm^2)	AWG16 (≒1.25 mm^2)
CRM(H)-H07, CRH-07E	AWG16 (≒1.25 mm^2)	AWG16 (≒1.25 mm^2)
CRM(H)-H15, CRH-15E	AWG14 (≒2.0 mm^2)	AWG14 (≒2.0 mm^2)
CRM(H)-H22	AWG14 (≒2.0 mm^2)	AWG14 (≒2.0 mm^2)

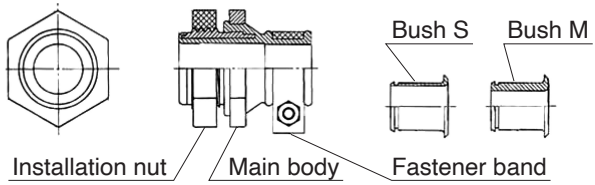
⑥ When wiring the power supply, immobilize the cable at the cable port using a cable lock or similar means, so that external force is not applied to terminals.
If a cable lock comes with a customized product, wire the power supply as follows.

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-S, CRM-V, and CRMH-S 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.

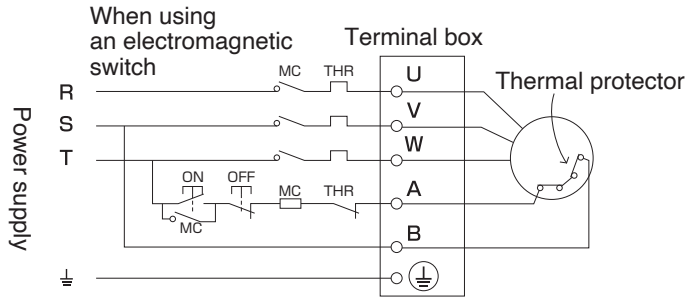
② Use the prescribed or lower contact rating (115V AC, 18A / 230V AC, 13A / 24V DC, 18A).

③ When the thermal relay is tripped, correct the cause, then press the [RESET] button.

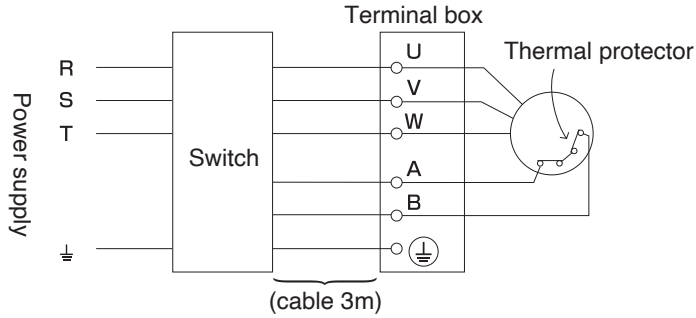
④ The thermal relay may be erroneously tripped if the Mistresa is operated in an intermittent manner. In this case, change the thermal relay.

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)



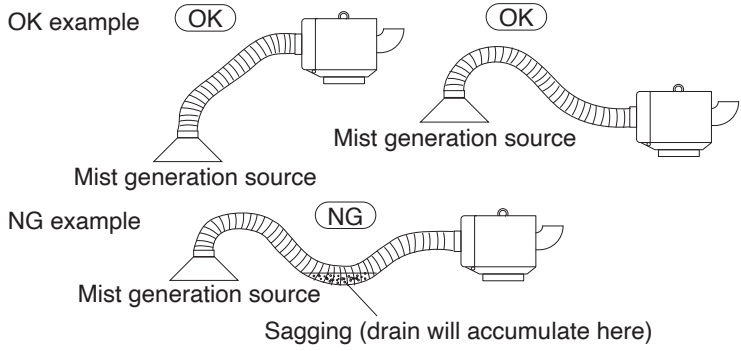
⑤ Check the rated current shown on the nameplate of the Mistresa and set the thermal current to the rated current.

10. Piping

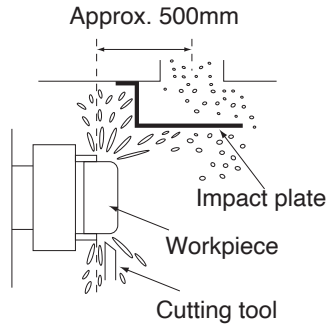
CRM-V series Mistresas do not use a duct hose or drain tube, so neither needs to be connected to the unit.
Connect the Mistresa directly to the machine/equipment.

(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 (Not reguired with the CRM-V series.)
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.

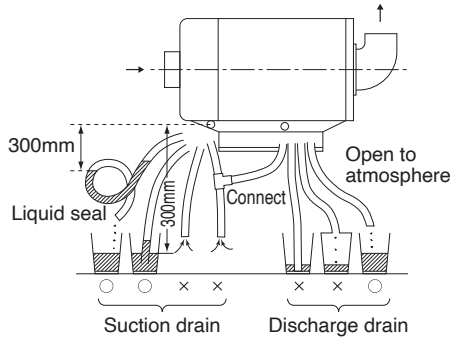


④ Positioning the intake port too close to the mist generation source could result in large amounts of mist, cutting chips, and dust to be sucked in, causing blow leakage and accelerated clogging of the filters and demister. Either provide an adequate distance (approx. 500mm) between the mist generation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



(3) Drain tube piping (Not required with the CRM-V series)

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 step filter.



② Do not connect the suction drain tube with the discharge drain tube.

③ Make sure that the discharge drain tube is **[open to atmosphere]**. Otherwise, it does not drain well, possibly causing the drain to remain inside the main body.

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) In order to prevent fires, never allow explosive gases, organic solvents, sparks, or burning cigarettes to be sucked into the suction port.

(2) 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.

(3) In environments where large amounts of **oily** mist (non-water-soluble) are being sucked in, or where the sucked in mist particulate is small, etc., either the optional **general-purpose after-filter or the high-performance after-filter** should be used to compensate for changes in the collection efficiency due to these operating conditions, and to prevent blow leakage and re-dispersion. (With CRM-S, CRM-V and CRMH series Mistresas that are not equipped with an end filter, use an optional end filter.) Additional optional parts are required to install the after-filter.

(4) The optional **high-performance after-filter** should be used when operating the Mistresa in environments with small particulate matter such as oily smoke, etc., and where the mist particulate is small and present in high concentrations. Moreover, the optional inner-filter should also be used to increase the after-filter life.

(5) For the CRM-S Series, CRM-V Series and CRMH Series Mistresa, use care so as not to let the filter (de-mister) clogged 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 (high temperature types) as they sit outside the units.

(6) Make sure that the CRH (high temperature types) 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-S, CRM-V Series, or CRMH Series as each of them employs a V ring that can operate in a dry condition.

(7) If a CRH (high temperature types) or a CRMH-S 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

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) Filter and demister inspection/replacement schedule

① CRM-S, CRM-V and CRMH-S series

Part Name	Model	Material	Quantity	Inspection/Replacement Schedule	Washable YES/NO Status
Front demister	S1□,V1□	Aluminum	1	12 to 24 months	YES
Front filter	S2□,V2□	Polyester	4	1 to 6 months	YES
End demister (Side demister)	S□2,V□2	Aluminum	1 (4)	24 to 36 months	YES
End filter	S□3,V□3	Polyester	1	6 to 12 months	NO

* Internal parts differ according to product model.
(The S□2 uses 1 end demister, while the V□2 uses 1 end demister and 4 side demisters.)

② CRH (High Temperature Types) 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.

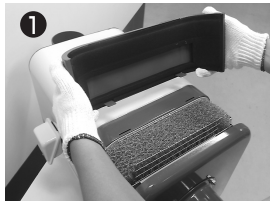
(3) FilterFilter/Demister inspection and replacement procedures

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-S, CRM-V and CRMH-S series

a. Front demister and filter inspection and replacement
(□1□→□2□ □2□→□1□)

S and V models



Release the clamps and detach the cover.

S and V models

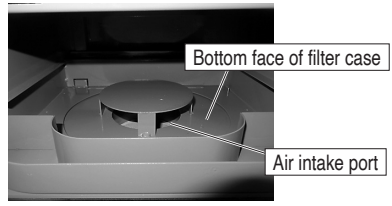


Remove the front demister (front filter).

S models



V models

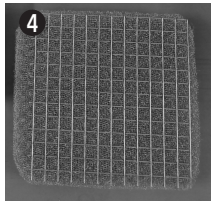


If cutting chips are sucked into the unit

S model : Detach the filter box and remove the cutting chips from inside the box.

V model : Either remove the cutting chips piled up on the bottom face of the filter case or push them to the air intake port.

Front demister **Front filter**

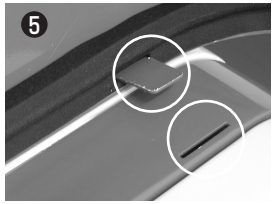




After inspecting and removing the front demister/filters

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

【NOTE S and V models】

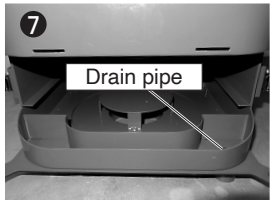


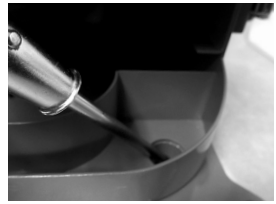
To reattach the cover, fit the cover guides in the guide holes. An improperly attached cover may cause oil to leak.



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.)

【NOTE V models】





When inspecting or replacing the demister or filters, check for cutting chips in the drain pipe. If detected, remove the chips by hand or using a rod of no more than ϕ8 mm in diameter. Clogging may prevent oil from draining properly.

b. End demister and filter inspection and replacement

(□□2→□□3　□□3→□□2)

S and V models





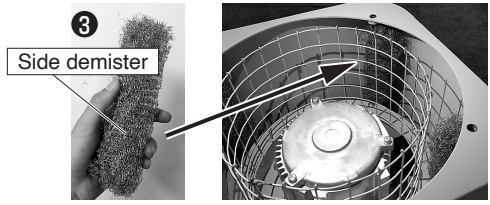
Remove the screws that lock down the side cover and detach the side cover so that the end demister (end filter) is visible.

S and V models



Pull out the end demister (end filter).

【NOTE　V model with demister】



Replacing the end demister of V model units

V model Mistresas require side demisters. To replace the end demister with an end filter, detach the side demister (see d [4] - [5]) and to replace the end filter with an end demister, install a new side demister (see c [4] - [5]).

S and V models





After inspecting and removing the end demister/filters

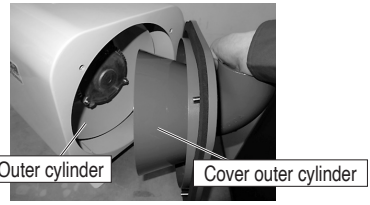
Insert the end demister (end filter) into the filter frame and reattach the side cover with the original screws. (With S model Mistresas, insert the end filter with the seam to the bottom.)

c. Replacing the tapered cylinder with the end demister/filter

(□□ 1→□□ 2　□□ 1→□□ 3)

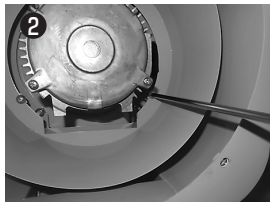
S and V models





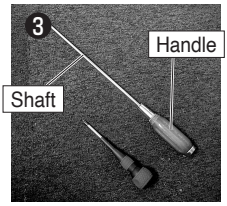
Remove the screws that lock down the side cover and detach the side cover so that the outer cylinder on the main body side and cover outer cylinder on the side cover side are visible.

S and V models



Detach the outer cylinder from the main body.
Screws H02 and H04: 3
H07, H15 and H22: 4

【NOTE S and V models】



To detach the outer cylinder and install the filter frame, use a long screwdriver (200 mm or longer shaft). Smaller screwdrivers may not reach the screws if the handle gets stuck in the opening.

V model with end demister



For V model with end demister
Tuck the side demister in the 4 corners.

S and V models



Attach the filter frame to the main body.
Screws 2

S models

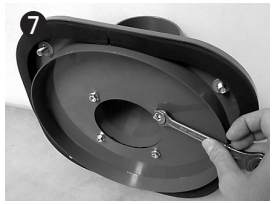


V models

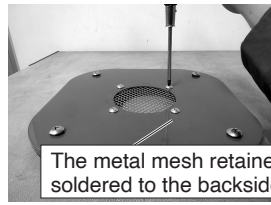


Detach the cover outer cylinder from the side cover.

S models

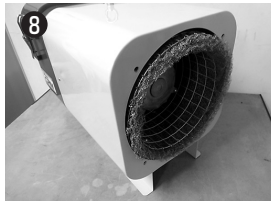


V models



S model: Lock the elbow and side cover in place with the truss screws (with sealing washer) and nuts.
V model: Fit the wire mesh between the side cover and mesh retainer, and lock in place with the truss screws (with sealing washer).

S and V models





Insert the end demister (end filter) into the filter frame and lock the side cover in place with the truss screws. (With S model Mistresas, insert the end filter with the seam to the bottom.)

d. Replacing the end demister/filter with a tapered cylinder

(□□ 2→□□ 1　□□ 3→□□ 1)

S and V models





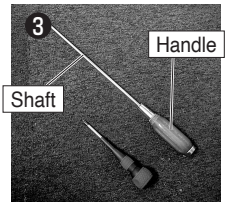
Remove the screws that lock down the side cover and detach the side cover so that the end demister (end filter) on the main body side is visible.

S and V models



Pull out the end demister (end filter).

【NOTE S and V models】



To detach the outer cylinder and install the filter frame, use a long screwdriver (200 mm or longer shaft). Smaller screwdrivers may not reach the screws if the handle gets stuck in the opening.

S and V models



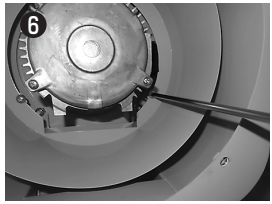
For V model with end demister
Detach the filter frame from the main body. Screws 2

V model with end demister



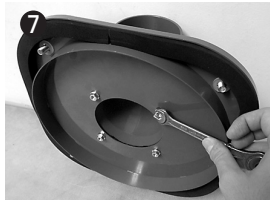
For V model with end demister
Detach the side demister in the 4 corners.

S and V models



Attach the outer cylinder to the main body.
Screws H02 and H04: 3
H07, H15 and H22: 4

S models



V models



S model: Detach the elbow and side cover.
V model: Detach the side cover and metal mesh retainer.

S models



V models



S model: Lock the elbow, side cover and cover outer cylinder in place with the truss screws (with sealing washer).
V model: Fit the wire mesh between the side cover and cover outer cylinder, and lock in place with the truss screws (with sealing washer).

S and V models



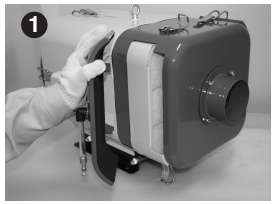
Lock the side cover in place with the truss screws.

② CRH Series

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

Primary and secondary filter replacement

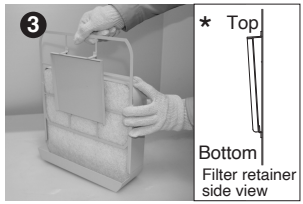
(These filters can be reused after being washed)



Unclamp the filter. Remove the cap.

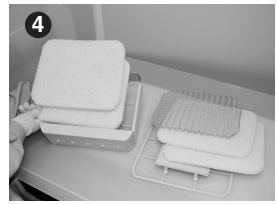


Slide the filter box to take it out.

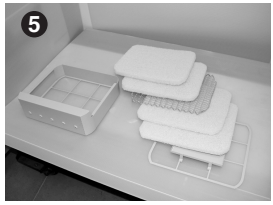


Remove the filter retainer.

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

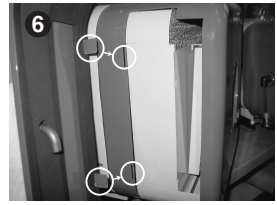


Remove the primary filter (thin one) first, then space net and finally the secondary filter (thick one).



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】



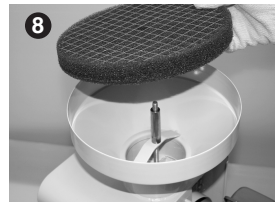
When installing the cap after replacing the filters, be sure to put the guide into the guide slot. Otherwise, improper installation of the cap could lead to oil leak.

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.

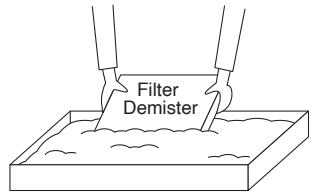
(4) Other maintenance items

Since the CRH-□□E Series Mistresa use a quasi-explosion-proof motor, contact us for maintenance other than replacing the filters. (See page 32.)

(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.

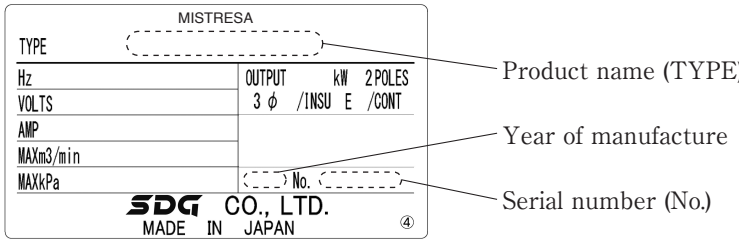
⑥ Malfunctions and damages due to mixing in of foreign materials.

⑦ Discoloration and flaws from age deterioration or from long-term use and malfunctions due to natural consumption of consumable parts.

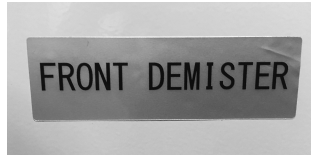
(4) Damages caused by malfunctions occurring during use of this unit shall not be indemnified.

14. Contact information

Inquiries regarding product faults and requests for repairs, etc., should be directed to the Oversea Sales Department. The contact information for this Group is given on the back cover of this manual. When contacting the Oversea Sales Department, please have the following product information in hand: The product "TYPE" (indicated on the affixed nameplate label), and the manufacture No.



*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-S Series

Type	CRM-H02-S□□	CRM-H04-S□□	CRM-H07-S□□	CRM-H15-S□□	CRM-H22-S□□
Power supply *1	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 *2 1 meter from machine dB(A)	64/67	68/72	73/78	81/83	83/86
Weight kg	26	32	42	67	77

CRM-V Series

Type	CRM-H02-V□□	CRM-H04-V□□	CRM-H07-V□□	CRM-H15-V□□	CRM-H22-V□□
Power supply *1	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 *2 1 meter from machine dB(A)	63/66	71/75	77/81	78/83	81/85
Weight kg	27	34	43	69	78

CRMH-S Series

Type	CRMH-H04-S□□	CRMH-H07-S□□	CRMH-H15-S□□	CRMH-H22-S□□
Power supply *1	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 *2 1 meter from machine dB(A)	68/72	73/78	81/83	83/86
Weight kg	32	42	67	77

CRH (High Temperature Types) Series

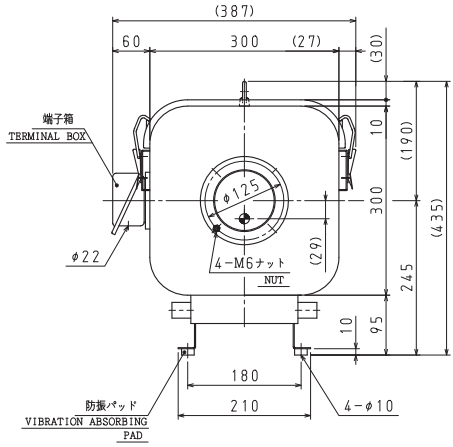
(* The CRH-100E, 200E, 04E, 07E and 15E do not comply with CE marking requirements.)

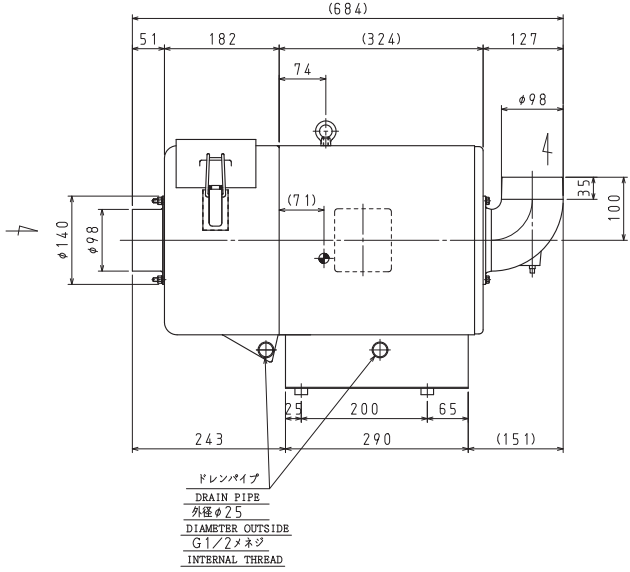
Type	CRH-100T/E CRH-100T/EA	CRH-200T/E CRH-200T/EA	CRH-04E CRH-04EA	CRH-07E CRH-07EA	CRH-15E CRH-15EA
Power supply*1	3-phase, 50Hz, 200V / 60Hz, 200V / 60Hz, 220V				
Output kW	0.2	0.2	0.4	0.75	1.5
Frequency Hz	50/60	50/60	50/60	50/60	50/60
Current A	1.2/1.1/1.0	1.2/1.1/1.0	2.0/1.8/1.7	3.3/3.1/2.8	6.2/5.8/5.4
Weight kg	13	20	26	37	57

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

*1 Refer to the delivery specifications to verify voltages other than those shown above.
*2 Operating Condition：Full
Load Measuring Method：According to clause1.7.4.2 of Machinery Directive 2006/42/EC

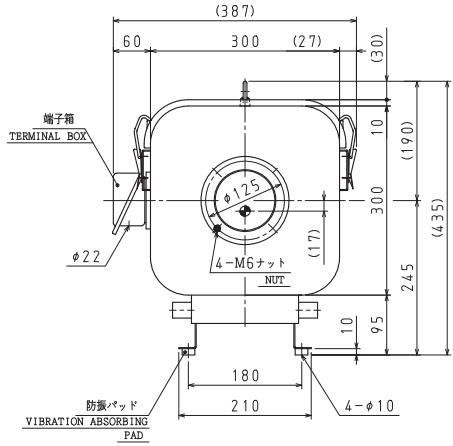
① CRM-H02-S□□

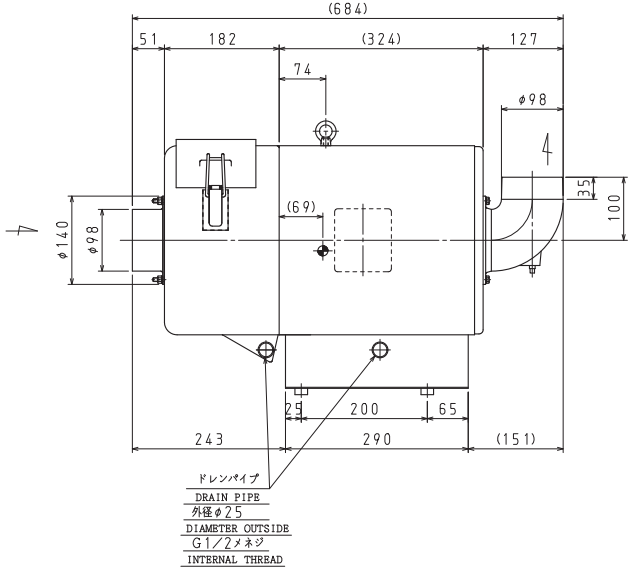




⊕：重心位置（CENTROID POSITION）

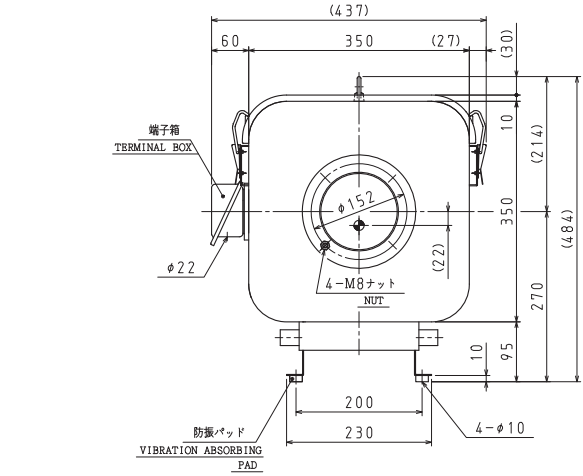
② CRM-H04-S□□、CRMH-H04-S□□

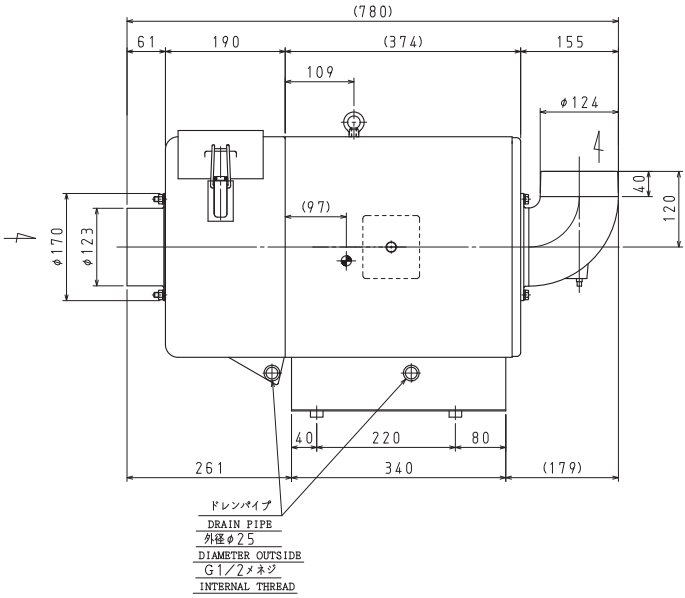




：重心位置（CENTROID POSITION）

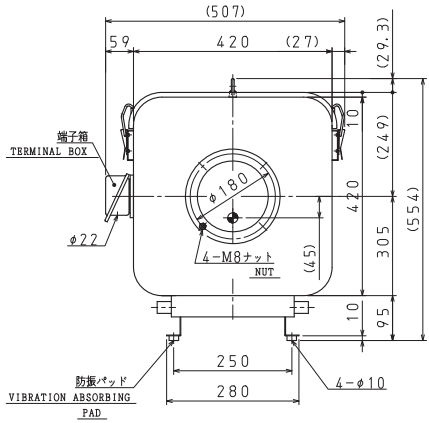
③ CRM-H07-S□□、CRMH-H07-S□□

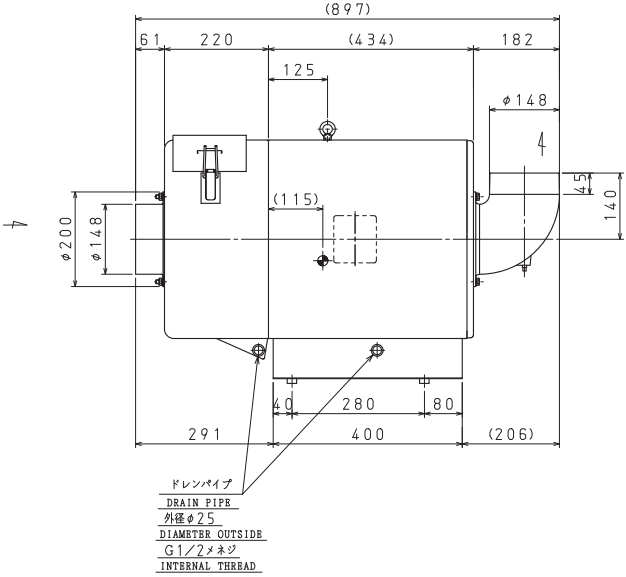




：重心位置（CENTROID POSITION）

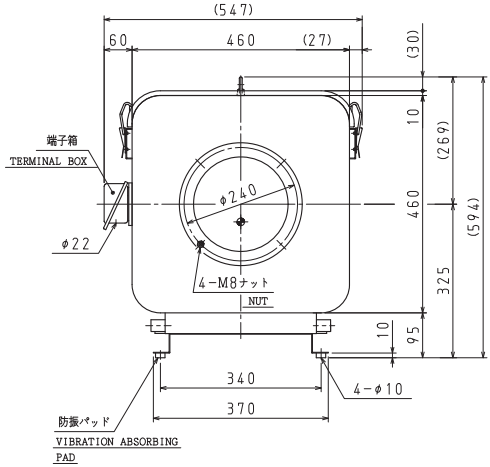
④ CRM-H15-S□□、CRMH-H15-S□□

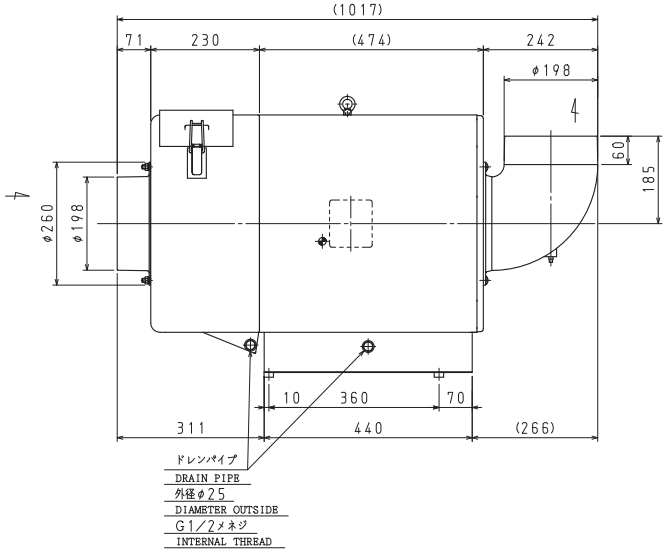




⊕：重心位置（CENTROID POSITION）

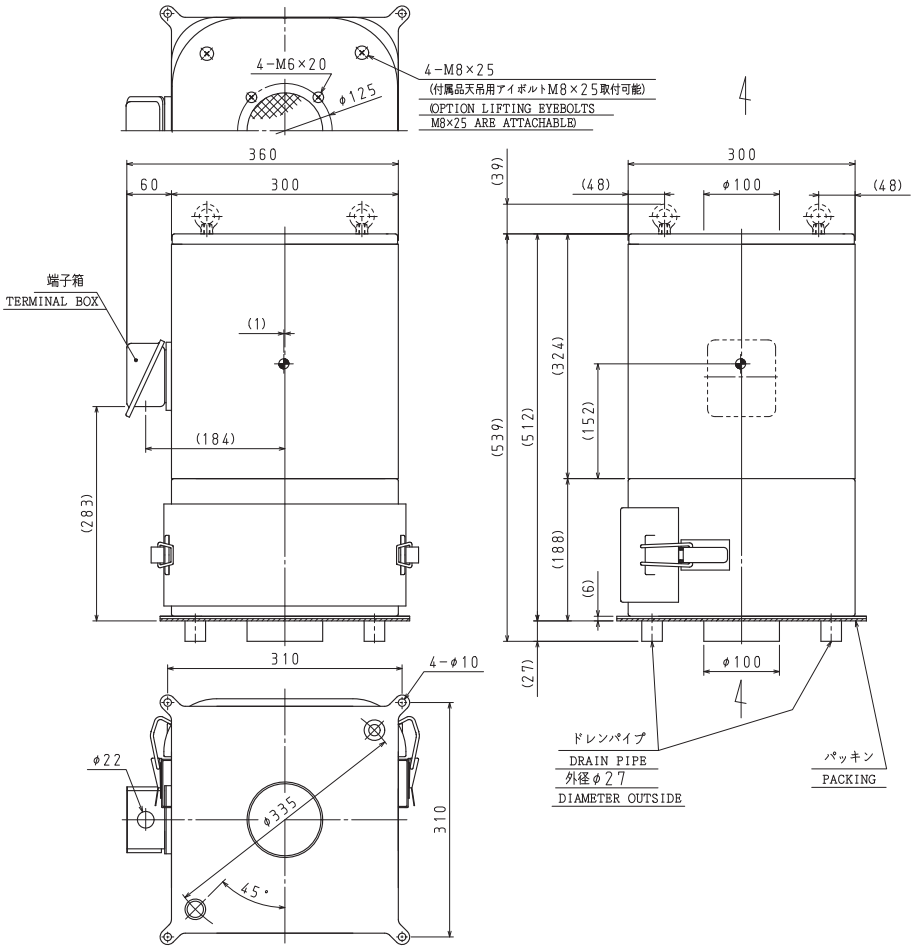
⑤ CRM-H22-S□□、CRMH-H22-S□□





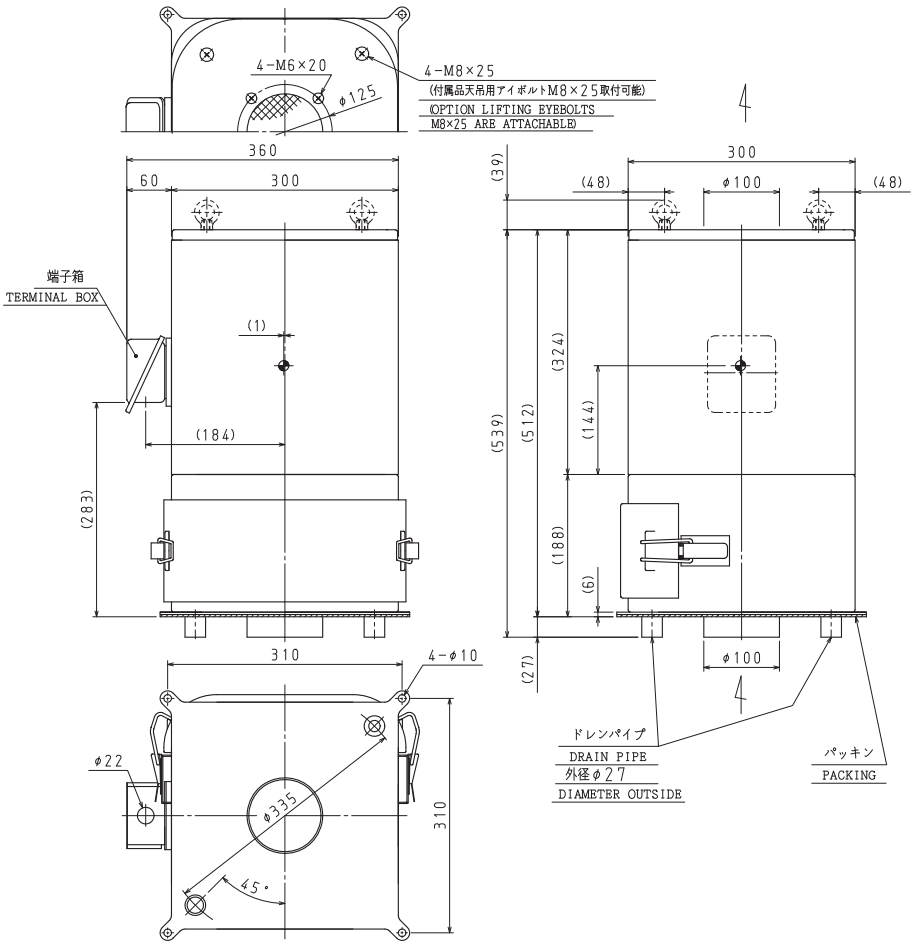
⊕：重心位置（CENTROID POSITION）

⑥ CRM-H02-V□□



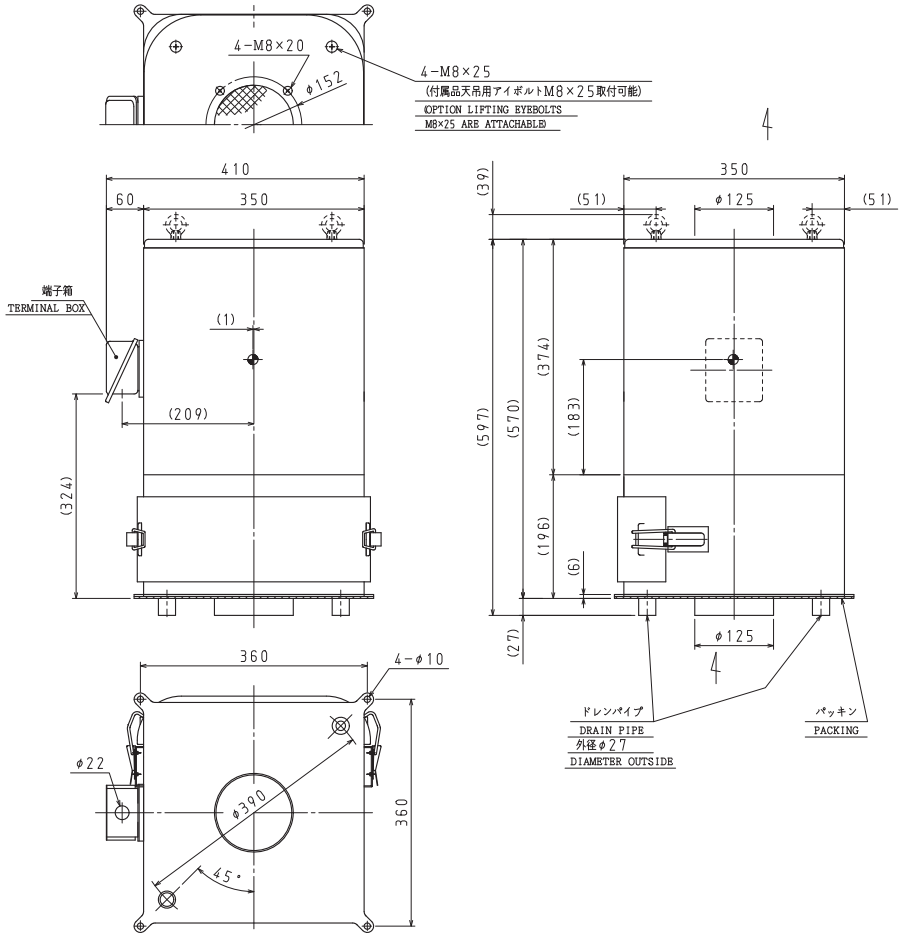
：重心位置（CENTROID POSITION）

⑦ CRM-H04-V□□



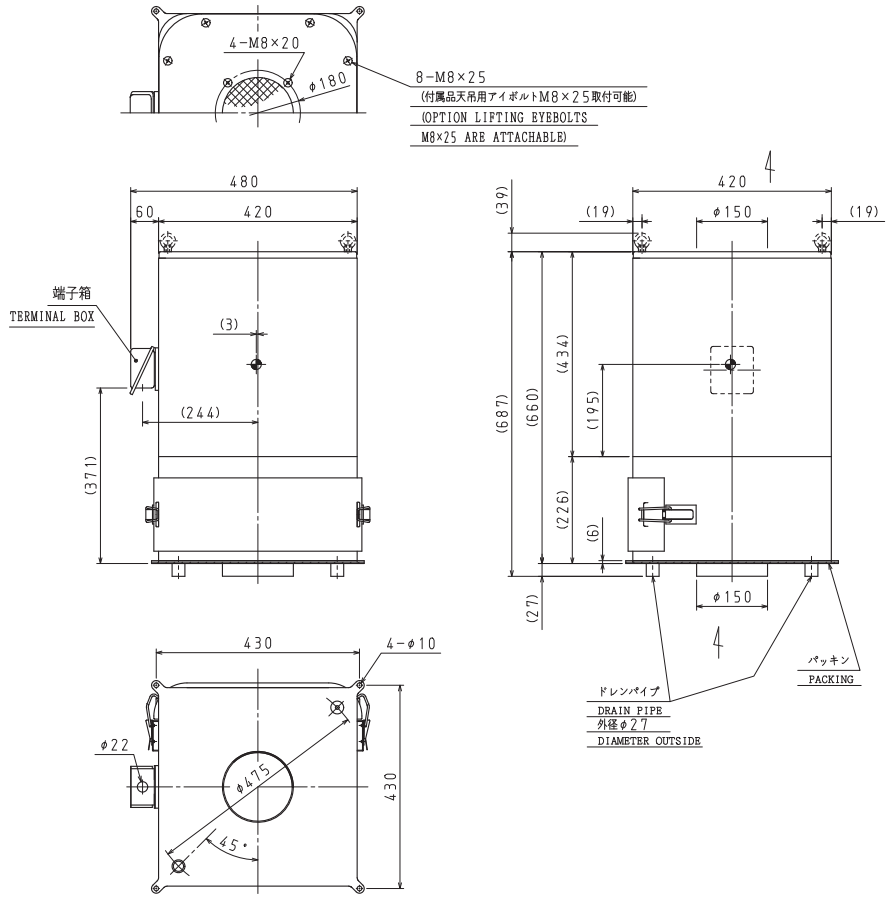
✣：重心位置（CENTROID POSITION）

⑧ CRM-H07-V□□



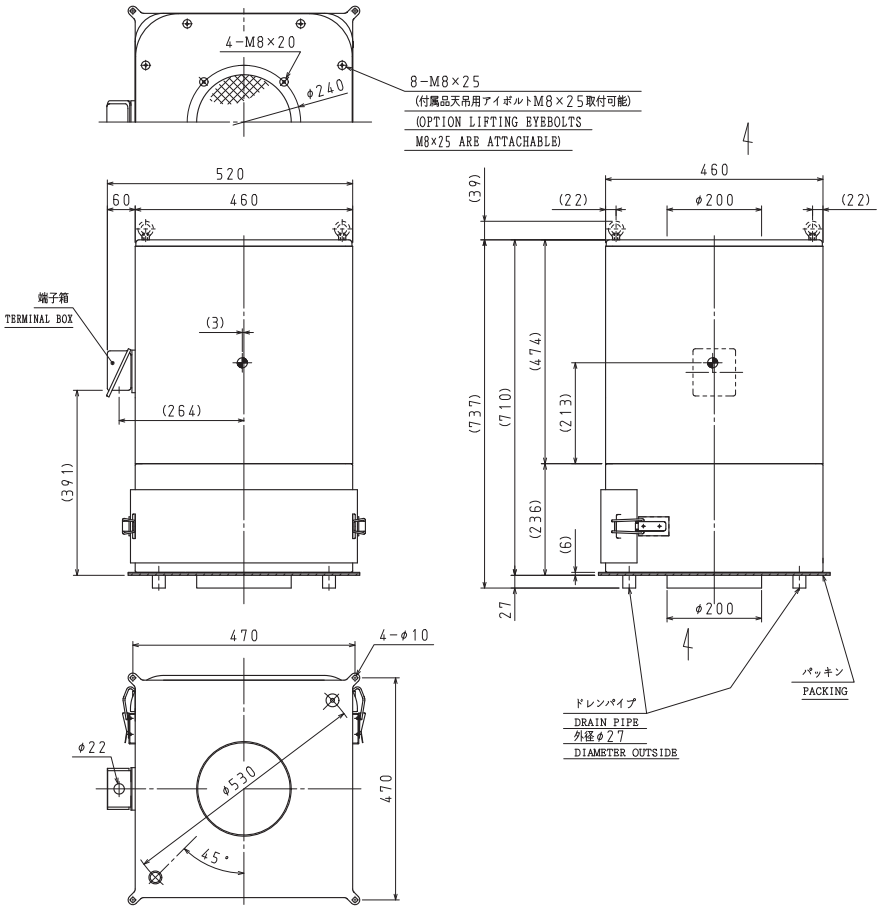
⊕：重心位置（CENTROID POSITION）

⑨ CRM-H15-V□□



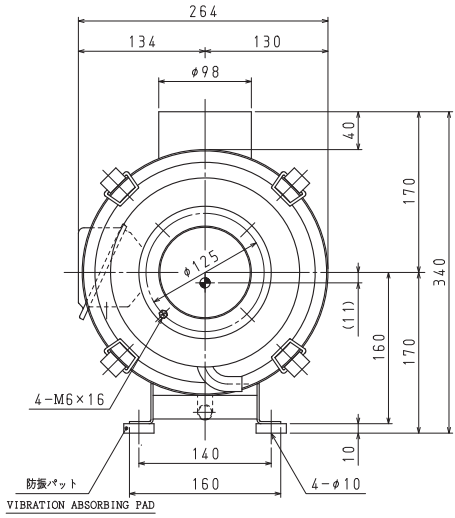
⊕：重心位置（CENTROID POSITION）

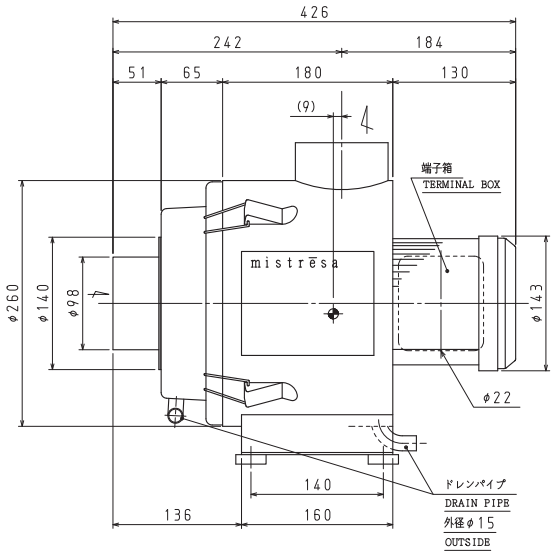
⑩ CRM-H22-V□□



：重心位置（CENTROID POSITION）

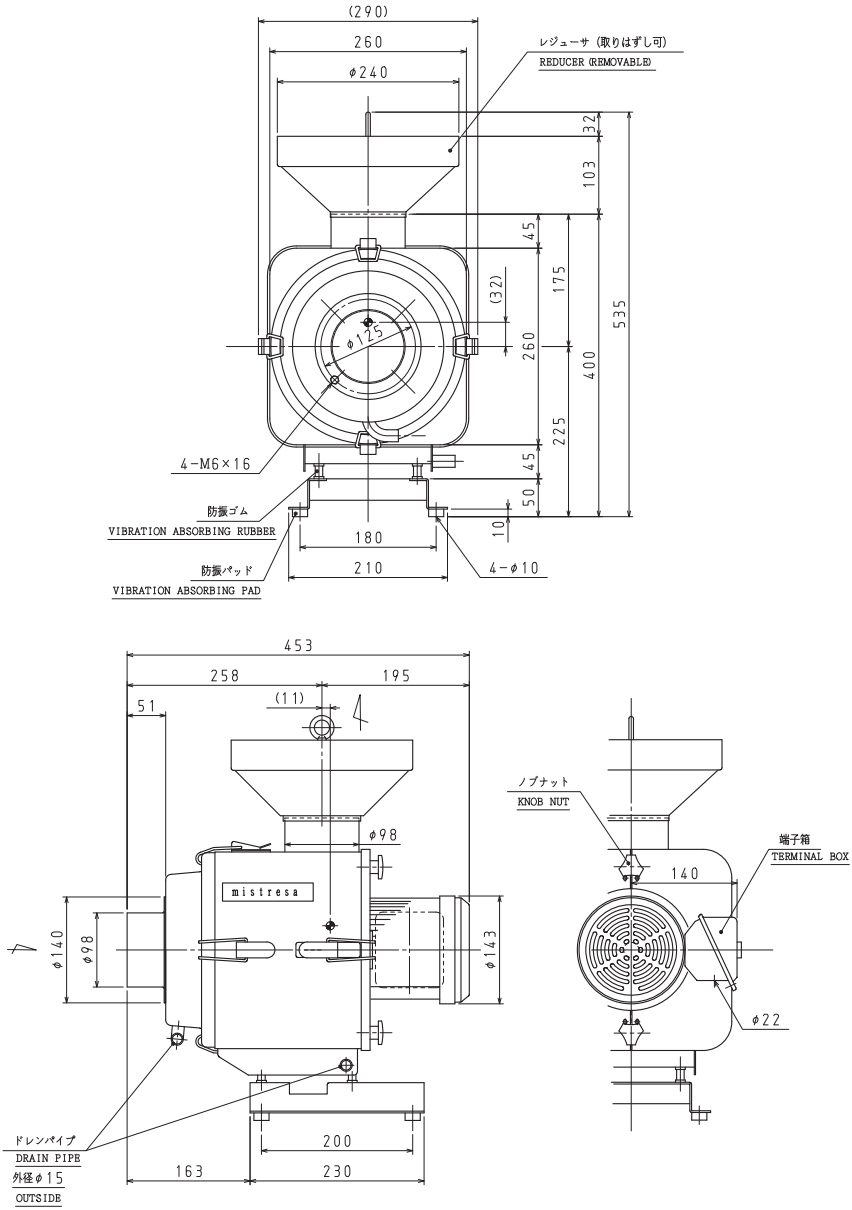
⑪ CRH-100T





：重心位置（CENTROID POSITION）

⑫ CRH-200T



：重心位置（CENTROID POSITION）

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 Machinery Regulation (EU) 2023/1230

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 (Machinery Regulation) :
EN ISO12100:2010, EN 60204-1:2018, 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