

THERMANN™

INSTALLER'S MANUAL

Gas Continuous Flow Water Heaters

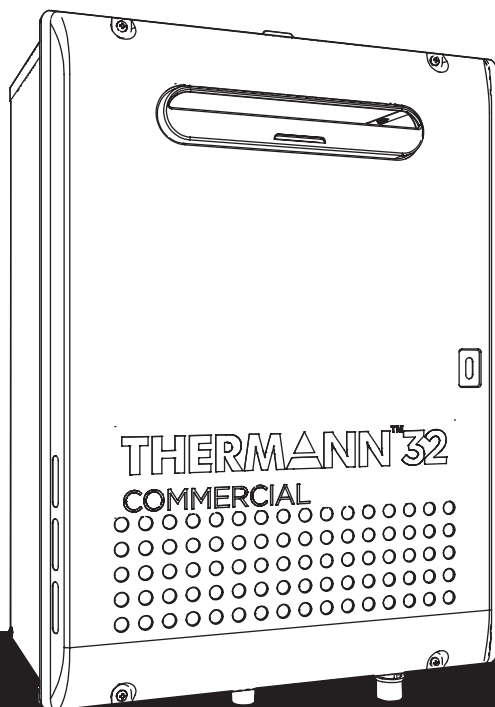
Installation Details
Warranty

Models

TH50ECR6N
TH50ECR6L
TH32ECR6N
TH32ECR6L
TH28ENR6N
TH28ENR6L



SBB813X



To be installed and serviced only by an authorised person.

This appliance is not suitable for use as a pool heater.

The "authorised installing person" is responsible for:

1. Correct commissioning of this appliance
2. Ensure unit performs to the specification stated on the data label
3. Demonstrate operation of unit to customer before leaving
4. Hand these instructions to customer

This appliance must be installed in accordance with the manufacturer's installation instructions all Local Building, Water and Gas fitting regulations (AS/NZS3500.4, AS/NZS 5601, AS/NZS3000).

This appliance delivers water in excess of 50 Degrees C. Ensure that suitable devices such as Tempering Valves are installed in lines servicing Sanitation areas per AS3500.4.

Failure to install this appliance in accordance with these installation instructions may void warranty.

In the interest of continued product improvement, Reece Manufacturing reserves the right to alter these specifications without notice.

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Installation Manual

Condensing Models

TH50ECR6N TH32ECR6N
TH50ECR6L TH32ECR6L

Non Condensing Models

TH28ENR6N
TH28ENR6L

Potential dangers from accidents during installation and use are divided into the following three categories. Closely observe these warnings, they are critical to your safety.



DANGER

DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

WARNING:



Prohibited



Earth



CAUTION

Requests to Installers

- In order to use the water heater safely, read this installation manual carefully, and follow the installation instructions.
- Failures and damage caused by erroneous work or work not as instructed in this manual are not covered by the warranty.
- Check that the installation was done properly in accordance with this Installation Manual upon completion.
- After completing installation, please either place this Installation Manual in a plastic pouch and attach it to the side of the water heater, or hand it to the customer to retain for future reference.




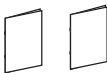


CAUTION

- The water heater must be commissioned including checking gas supply pressures at maximum demand.
- The operation of the water heater should be explained including normal operation & regular maintenance.


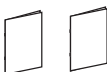
Included Accessories

The following accessories are included with the unit.
Check for any missing items before starting installation.

TH50ECR6 series



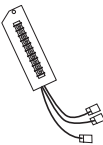

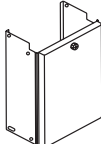
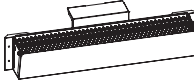
Part	Shape	Q'ty	Part	Shape	Q'ty
Anchoring Screw		7	Owner's Guide, Installation Manual (this document)		1 each
Remote Controller		1	Remote Controller Cord (3m)		1

TH32ECR6 series, TH28ENR6 series

Part	Shape	Q'ty	Part	Shape	Q'ty
Anchoring Screw		5	Owner's Guide, Installation Manual (this document)		1 each

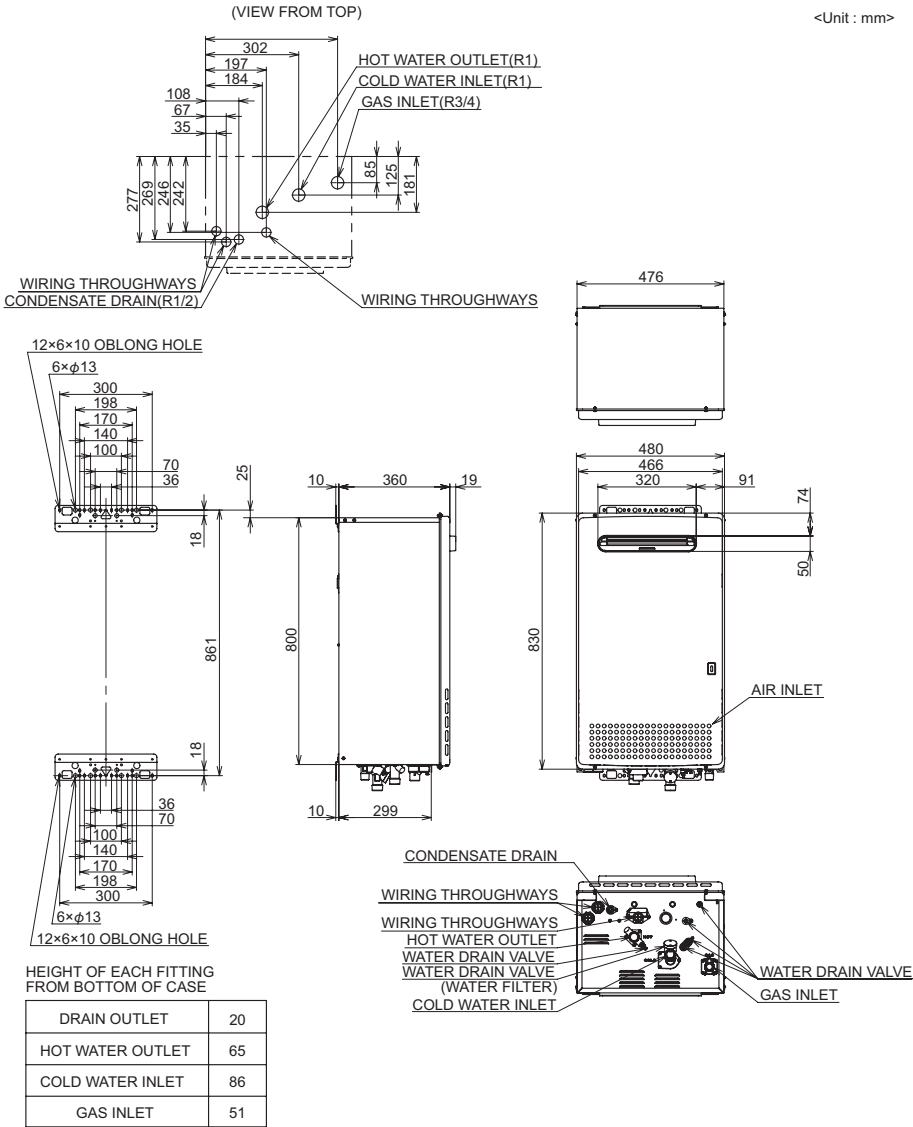
Optional Accessories

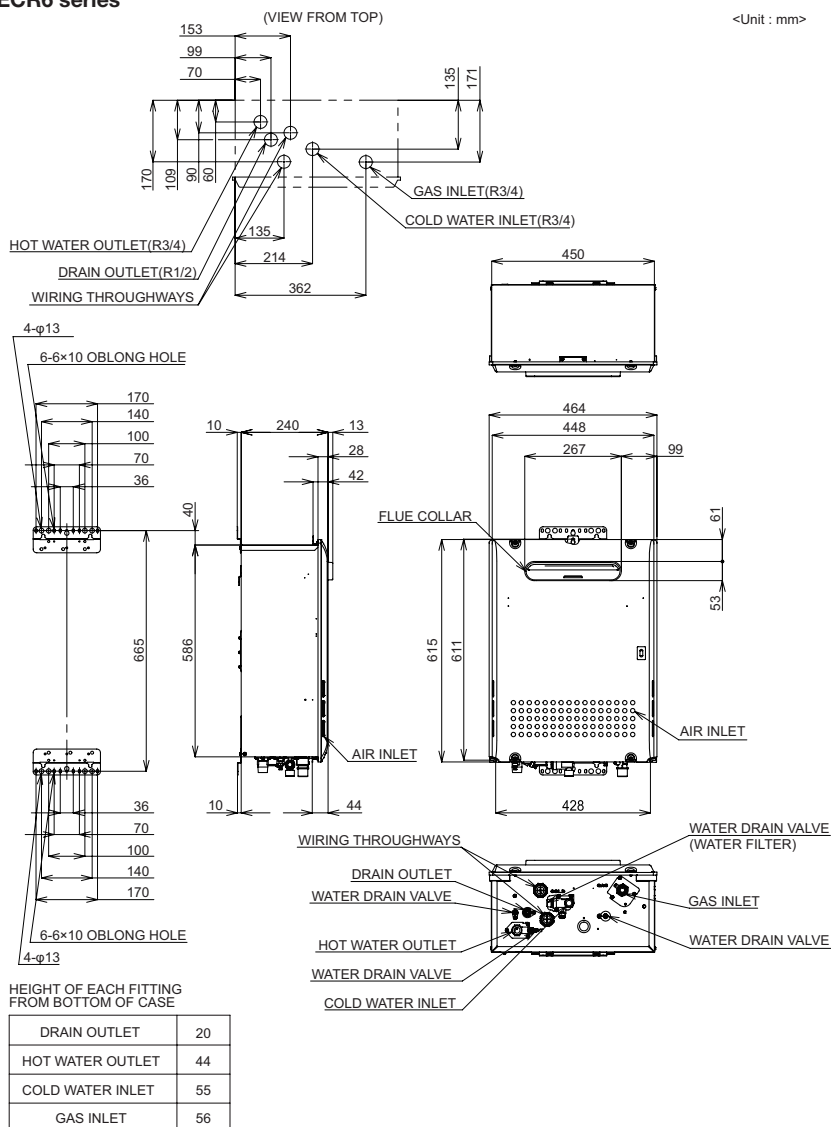
The accessories listed below are not included with the units,
but may be necessary for installation.

Part	Shape	Q'ty	Part	Shape	Q'ty
Main Controller (RC-9018C) No. CF-KRC-9018C: indoor (+15m cable) No. CF-KRC-9018C-EX: outdoor (+3m cable+box)		1	Quick Connect Cord (2m) No. CF-0706891		1
System Controller (SC-401-6M) for 1-6 units compatible with TH32ECR series and TH50ECR series No. CF-SC4016M		1	System Controller (SCU-401-12M) for 1-12 units No. CF-SCU40112M		1
Pipe cover (H50-450) No. CFH50450		1	Flue Diverter (C97) No. CFC97		1

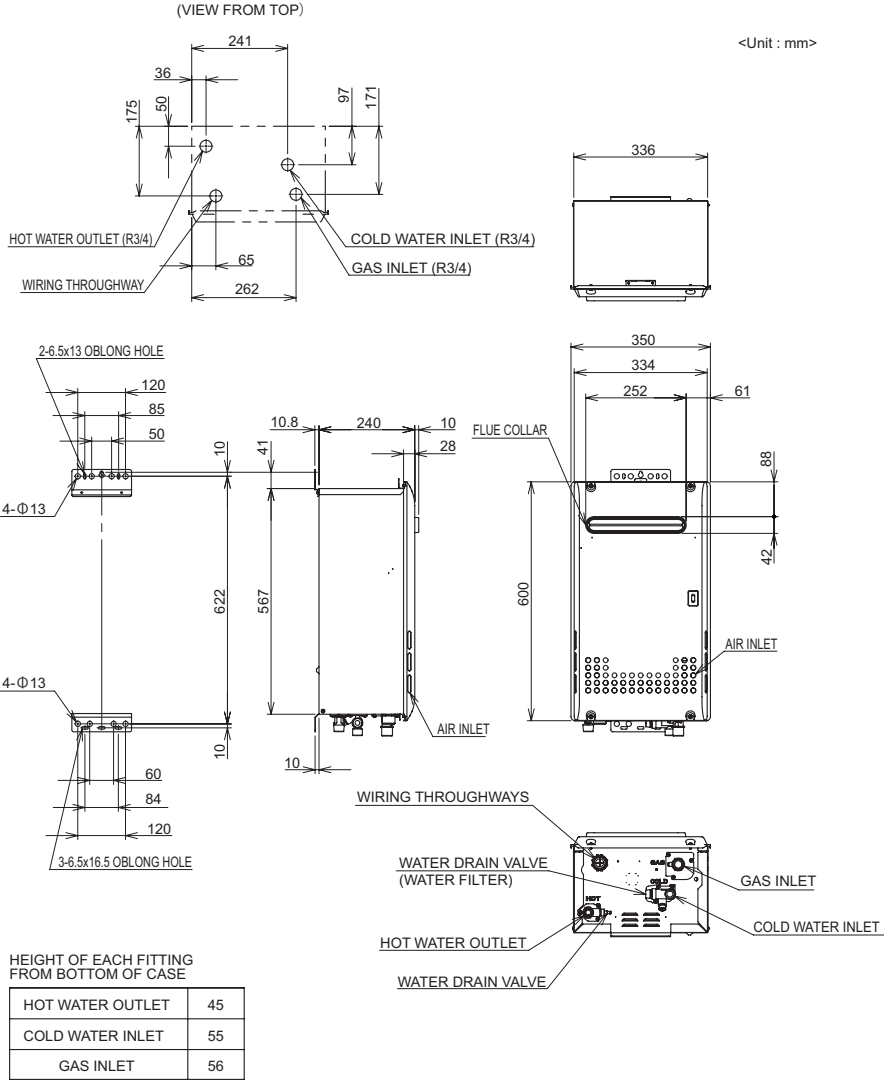
Dimensions

■ TH50ECR6 series



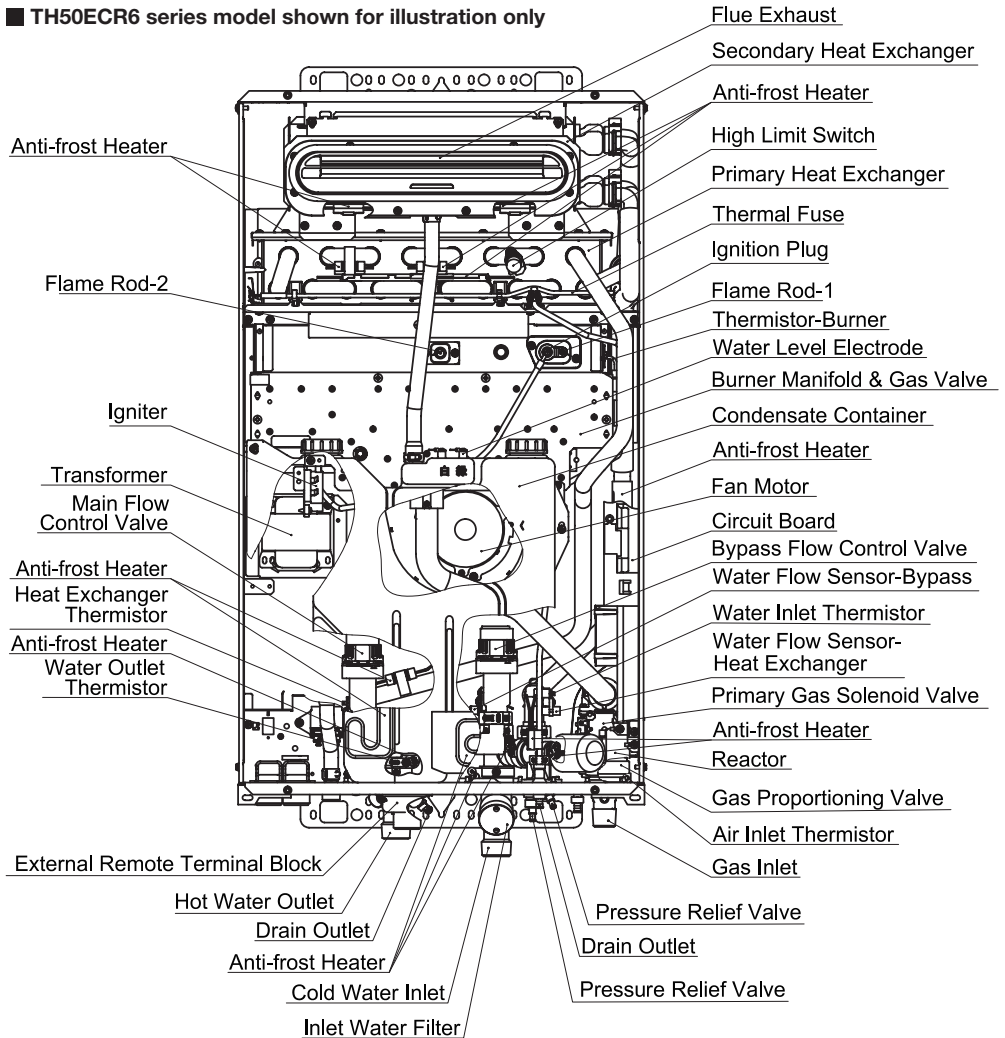
TH32ECR6 series


TH28ENR6 series



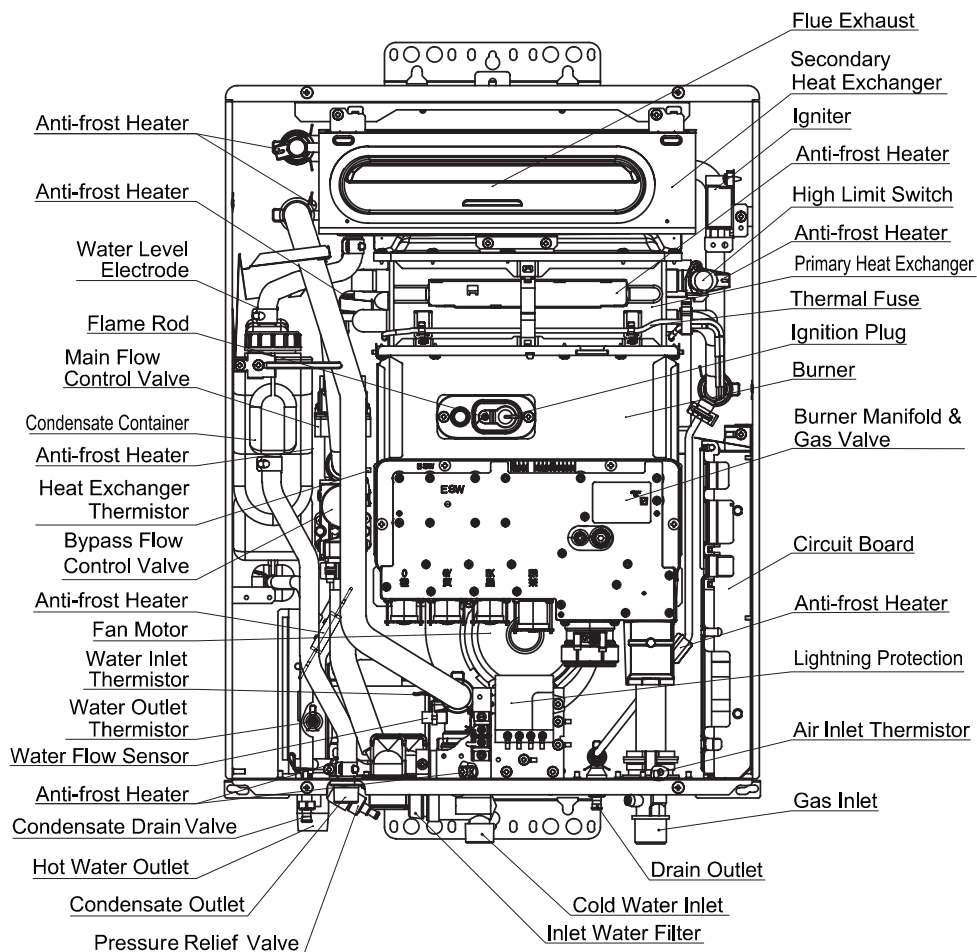
Component Details Example

■ TH50ECR6 series model shown for illustration only



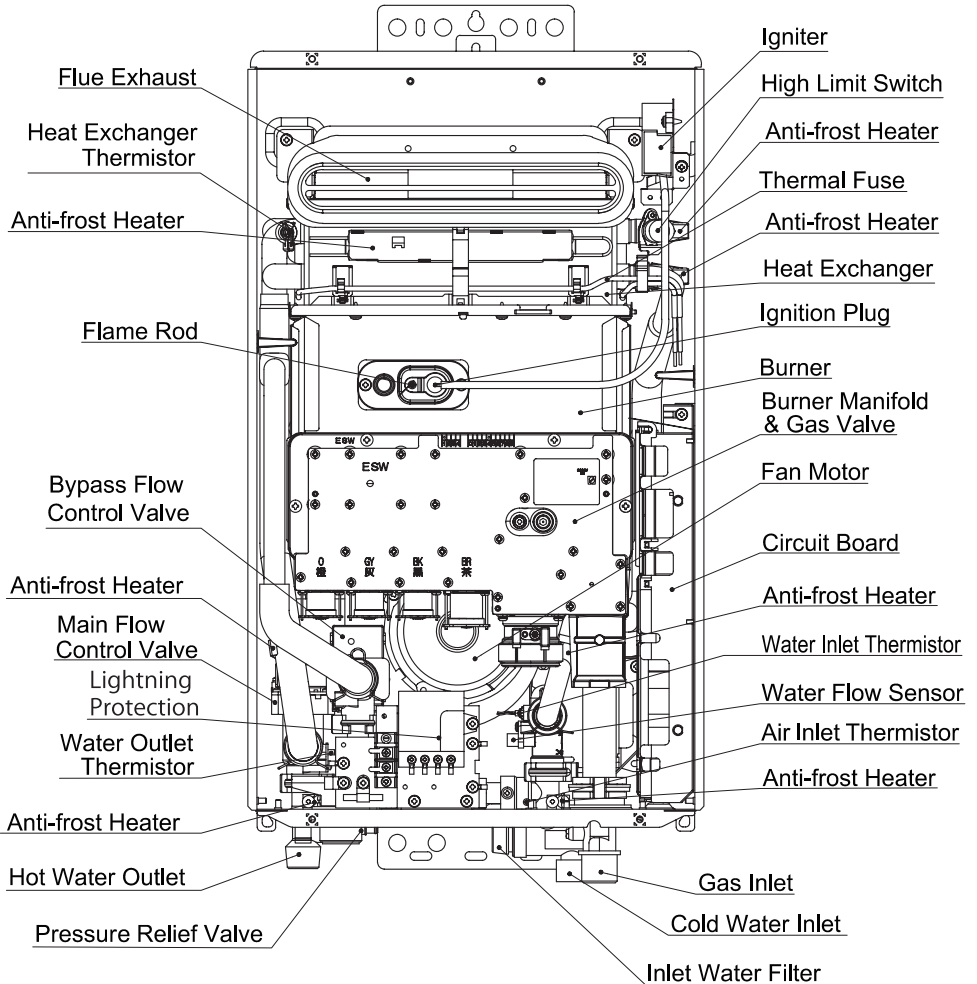
Ex. TH50ECR6

■ TH32ECR6 series model shown for illustration only



Ex. TH32ECR6

■ TH28ENR6 series model shown for illustration only



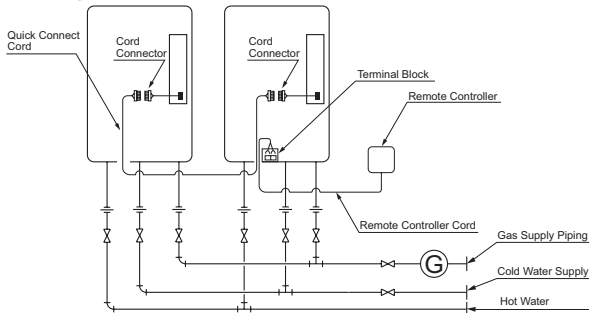
Ex. TH28ENR6

Quick Connect Multi System Installation

- The Quick Connect Multi System allows the installation of two units together utilizing only the Quick Connect Cord.

The Quick Connect Cord is 2m long. Install the units to ensure the cord will be able to reach between the units. (See Typical Plumbing diagram).
(If the distance between the two units is too great, not only will the cord not be able to reach, but the water temperature may also become unstable because of the difference in pipe length between the two units).

System Diagram

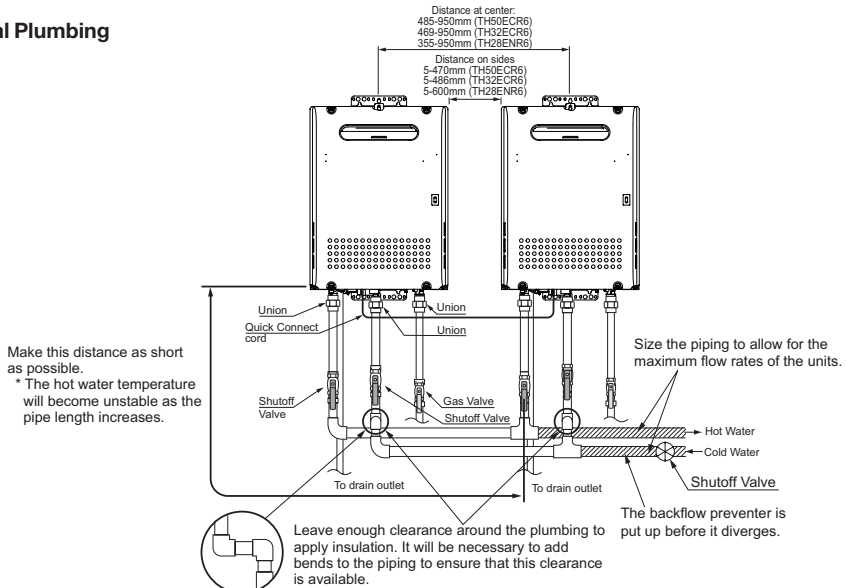


* When connecting two units, use only a single remote controller.

* The remote controller terminal location may differ depending on the unit.

Note: Connect the remote controller to only one of the units.

Typical Plumbing



- Insulate the hot water piping to prevent heat loss. Insulation and apply heating materials to the cold water supply piping to prevent heat loss and freezing of pipes when exposed to excessively cold temperatures.

Before Installation

WARNING

Check the Gas

- Check that the data label (Side of casing).
- Check that the gas supply line is sized for
TH50ECR6N, TH50ECR6L: 328 MJ/hr, 328 MJ/hr
TH32ECR6N, TH32ECR6L: 217 MJ/hr, 217 MJ/hr
TH28ENR6N, TH28ENR6L: 220 MJ/hr, 220 MJ/hr
- DO NOT OPERATE WITH ANY OTHER GAS TYPE.

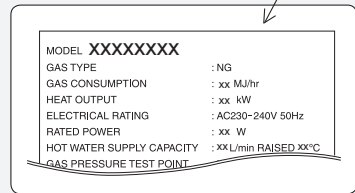
Check the Power

- The power supply required is 230 - 240VAC, at 50Hz.
Using the incorrect voltage may result in fire or electric shock.

Warning labels

- Located on the side of the casing -PLEASE READ THESE LABELS CAREFULLY!

For NG Gas



CAUTION

Do Not Use Equipment for Purposes Other Than Those Specified

- Do not use for other than increasing the temperature of the water supply, as unexpected accidents may occur as a result.

Check Water Supply Quality

- If the water supply is hard, acidic or otherwise impure, treat the water with approved methods in order to ensure full warranty coverage.
See water quality statement on page 36.

Frost Protection

- When installed, power to the unit must be kept switched on, otherwise the appliance should be drained.
This prevents water freezing, and causing damage to the water heater.

Specifications

Model Name		TH50ECR6N	TH50ECR6L
Approval certification number		SAI-400353	
Type	Installation Air Supply/Exhaust	Outdoor, Wall Mounted Power Flue	
Operating Pressure		200 -800 kPa	
Minimum Flow Rate		2.0 L/min.	
Dimensions		830mm (Height) x 480mm (Width) x 360mm (Depth)	
Weight		50 kg	
Water Holding Capacity		3.5 L	
Connection Sizes	Water Inlet	R 1 (25mm)	
	Hot Water Outlet	R 1 (25mm)	
	Gas Inlet	R3/4 (20mm)	
Power Supply	Supply	230 - 240 VAC (50Hz)	
	Consumption	NG/ULPG: 83 W/77 W Freeze Prevention 288W	
Burner Injector Size		NG/ULPG : 1.6mm / 2.6mm	NG/ULPG : 0.9mm / 1.4mm
Accessories		Remote Controller, Remote Controller Cord, Anchoring Screws	
Gas	NG	328 MJ/hr	
Consumption	ULPG	328 MJ/hr	
Maximum Hot Water	25°C Rise	50 L/min	

Model Name		TH32ECR6N	TH32ECR6L
Approval certification number		SAI-400264	
Type	Installation Air Supply/Exhaust	Outdoor, Wall Mounted Power Flue	
Operating Pressure		200 -1,000 kPa	
Minimum Flow Rate		2.5 L/min.	
Dimensions		615mm (Height) x 464mm (Width) x 240mm (Depth)	
Weight		32 kg	
Water Holding Capacity		2.0 L	
Connection Sizes	Water Inlet	R 3/4 (20mm)	
	Hot Water Outlet	R 3/4 (20mm)	
	Gas Inlet	R 3/4 (20mm)	
Power Supply	Supply	230 - 240 VAC (50Hz)	
	Consumption	NG/ULPG: 75.9 W/75.9 W Freeze Prevention 223W	
Burner Injector Size		NG/ULPG : 2.4mm / 1.7mm	
Accessories		Anchoring Screws	
Gas	NG	217 MJ/hr	
Consumption	ULPG	217 MJ/hr	
Maximum Hot Water	25°C Rise	32 L/min	

- Specifications may be changed without prior notice.
- The capacity may differ slightly, depending on the water pressure, water supply, piping conditions, and water temperature.

Model Name		TH28ENR6N	TH28ENR6L
Approval certification number		SAI-400265	
Type	Installation	Outdoor, Wall Mounted	
	Air Supply/Exhaust	Power Flue	
Operating Pressure		200 -1,000 kPa	
Minimum Flow Rate		2.5 L/min.	
Dimensions		600mm (Height) x 350mm (Width) x 240mm (Depth)	
Weight		26 kg	
Water Holding Capacity		1.0 L	
Connection Sizes	Water Inlet	R 3/4 (20mm)	
	Hot Water Outlet	R 3/4 (20mm)	
	Gas Inlet	R 3/4 (20mm)	
Power Supply	Supply	230 - 240 VAC (50Hz)	
	Consumption	NG/ULPG: 75.9 W/75.9 W Freeze Prevention 193W	
Burner Injector Size		NG/ULPG : 2.4mm / 1.5mm	
Accessories		Anchoring Screws	
Gas	NG	220 MJ/hr	
Consumption	ULPG	220 MJ/hr	
Maximum Hot Water	25°C Rise	28 L/min	

- Specifications may be changed without prior notice.
- The capacity may differ slightly, depending on the water pressure, water supply, piping conditions, and water temperature.

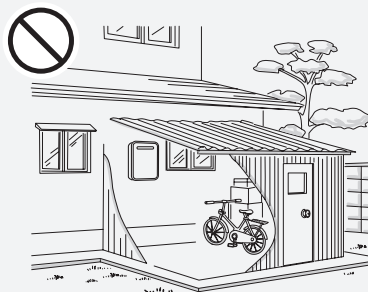
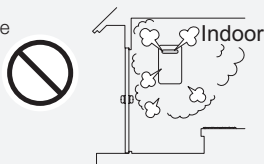
Choosing Installation Site

- * Locate the appliance in an area where water leakage from the unit or connections will not result in damage to the area adjacent to the appliance or to the lower floors of the structure. When such locations cannot be avoided, it is recommended that a suitable drain pan, adequately drained, be installed under the appliance. The pan must not restrict combustion air flow.

DANGER

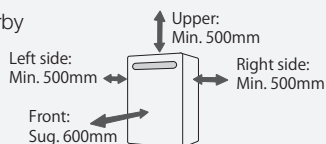
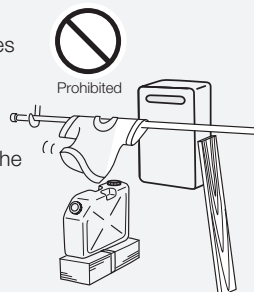
- This water heater is for outdoor installation only. Never install it indoors. Do not enclose the termination with corrugated metal or other materials.

This will cause carbon monoxide poisoning and a potential fire hazard.



WARNING

- Avoid places where fires are common, such as those where petrol, benzene and adhesives are handled, or places in which corrosive gases (ammonia, chlorine, sulfur, ethylene compounds, acids) are present. May result in fire.
- Avoid installation in places where dust or debris will accumulate. Dust may block the air-supply opening, causing the performance of the device fan to drop and incomplete combustion to occur as a result.
- Avoid installation in places where special chemical agents (e.g., hair spray or spray detergent) are used. Ignition failures and malfunction may occur as a result.
- Carbon Monoxide Poisoning Hazard. Do not install this water heater in a mobile home, recreation vehicle or on a boat.
- Leave the proper clearance between the water heater and nearby objects (trees, timber, boxes with flammable materials etc.).



⚠ CAUTION

- Install the water heater in a location where it is free from obstacles and stagnant air.
- Consult with the customer concerning the location of installation.
- Do not install the water heater near staircases or emergency exits.
- Do not install the water heater where the exhaust will blow on outer walls or material not resistant to heat. Also consider the surrounding trees and animals.

The heat and moisture from the water heater may cause discoloration of walls and resinous materials, or corrosion of aluminium materials.

- Do not locate the flue termination directed towards a window or any other structure which has glass or wired glass facing the termination.
- Install in a location where the exhaust gas flow will not be affected by fans or range hoods.
- Take care that noise and exhaust gas will not affect neighbours.
- Avoid installation where the unit will be exposed to excessive winds.
- Before installing, make sure that the flue termination will have the proper clearances according to AS/NZS5601, or your local authority.
- On combustible surfaces e.g. weatherboards etc. it is not required to install a fire proof back board.



Installation Clearances

⚠ WARNING

Before installing, check for the following:

The location of the flue terminal must comply with the clearances shown on this page. If you are unsure about clearances not indicated here, in general refer to AS/NZS5601, or your local authority. In Western Australia refer to the WA Office of Energy rules and regulations.

Flue outlet must be free from any combustible material.

The continuous flow water heaters are certified for side by side installation and hence the flue terminal clearance between the units mentioned in AS/NZS 5601.1 does not apply.

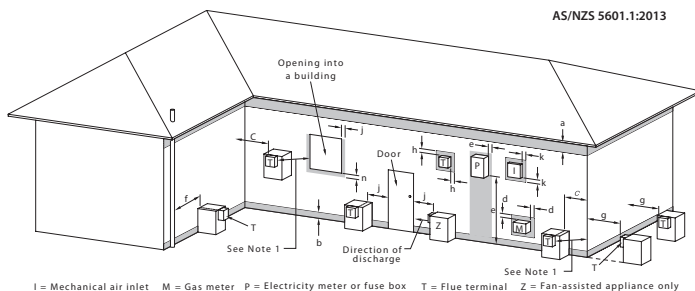
SAI Global certification allows minimum clearance of 268mm (exhaust to inlet of adjacent unit) for 28L outdoor units.

SAI Global certification allows to install with the minimum distance of 480mm (between the centerlines of the flue terminal) for 50L outdoor units.

CLEARANCES FOR FLUE TERMINAL (front of heater)

The location of the flue terminal must comply with the clearances shown on this page. If you are unsure about clearances not indicated here, in general refer to AS/NZS5601, or your local authority. In Western Australia refer to the WA Office of Energy rules and regulations.

AS/NZS 5601.1:2013



I = Mechanical air inlet M = Gas meter P = Electricity meter or fuse box T = Flue terminal Z = Fan-assisted appliance only

Shading indicates prohibited area for flue terminals

FIGURE 6.2 (in part) LOCATION OF FLUE TERMINALS OF BALANCED FLUE, ROOM-SEALED, FAN-ASSISTED OR OUTDOOR APPLIANCES

Ref.	Item	Minimum clearances mm
		Fan assisted
a	Below eaves, balconies and other projections:	
	Appliances up to 50 MJ/h input	200
	Appliances over 50 MJ/h input	300
b	From the ground, above a balcony or other surface *	300
c	From a return wall or external corner *	300
d	From a gas meter (M) (see Note 5) (see Clause 5.11.5.9 for vent terminal location of regulator) (see Table 6.7 for New Zealand requirements)	1 000
e	From an electricity meter or fuse box (P) † (see Note 5)	500
f	From a drain pipe or soil pipe	75
g	Horizontally from any building structure * or obstruction facing a terminal	500
h	From any other flue terminal, cowl, or combustion air intake *	300
j	Horizontally from an openable window, door, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:	
	Appliances up to 150 MJ/h input*	300
	Appliances over 150 MJ/h input up to 200 MJ/h input*	300
	Appliances over 200 MJ/h input up to 250 MJ/h input*	500
	Appliances over 250 MJ/h input*	1 500
	All fan-assisted flue appliances, in the direction of discharge	1 500
k	From a mechanical air inlet, including a spa blower	1 000
n	Vertically below an openable window, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:	
	Space heaters up to 50 MJ/h input	150
	Other appliances up to 50 MJ/h input	500
	Appliances over 50 MJ/h input and up to 150 MJ/h input	1 000
	Appliances over 150 MJ/h input	1 500

* Unless appliance is certified for closer installation.

† Prohibited area below electricity meter or fuse box extends to ground level.

NOTES:

- Where dimensions c, j or k cannot be achieved an equivalent horizontal distance measured diagonally from the nearest discharge point of the terminal to the opening may be deemed by the Technical Regulator to comply.
- See Clause 6.9.4 for restrictions on a flue terminal under a covered area.
- See Figure J3 for clearances required from a flue terminal to an LP Gas cylinder. A flue terminal is considered to be a source of ignition.
- For appliances not addressed above acceptance should be obtained from the Technical Regulator.
- Minimum clearances d and e also apply to any combustion air in take openings of appliances.

FIGURE 6.2 (in part) LOCATION OF FLUE TERMINALS OF BALANCED FLUE, ROOM-SEALED, FAN-ASSISTED OR OUTDOOR APPLIANCES

Installation

Securing to the wall




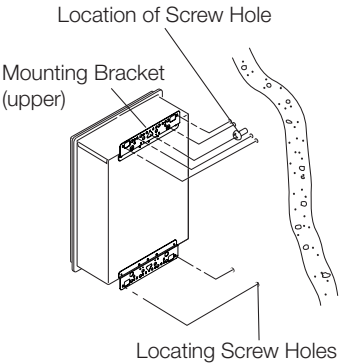
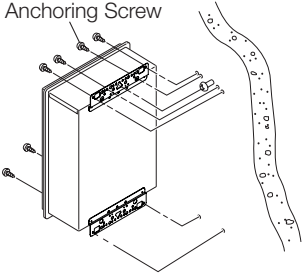
Be sure to do

- Installation must conform with all local building, water and Gas Regulations and AS/NZS5601.
- The weight of the device will be applied to the wall. If the strength of the wall is not sufficient, reinforcement must be done to prevent the transfer of vibration.
- Do not drop or apply unnecessary force to the device when installing. Internal parts may be damaged and may become highly dangerous.
- Install the unit on a vertical wall and ensure that it is level.
- Insure no additional pressure is applied to the pipework.

TH32ECR6 series, TH28ENR6 series

Item	Check	Illustration
Locating Screw Holes	<div style="border: 2px solid black; padding: 10px; margin-bottom: 10px;"> CAUTION </div> <ul style="list-style-type: none"> • When installing with bare hands, take caution to not inflict injury. • Be careful not to hit electrical wiring, gas, or water piping while drilling holes. <ol style="list-style-type: none"> 1. Drill a single screw hole, making sure to hit a stud. 2. Insert and tighten the screw and hang the unit by the upper wall mounting bracket. 3. Determine the positions for the remaining four screws (two for the top bracket and two for the bottom), and remove the unit. 	<p>Location of Screw Hole</p> <p>Mounting Bracket (upper)</p> <p>Locating Screw Holes</p>
Mounting	<ol style="list-style-type: none"> 4. Drill holes for the remaining four screws. 5. Hang the unit again by the first screw, and then insert and tighten the remaining four screws. 6. Take waterproofing measures so that water does not enter the building from screws mounting the device. 	<p>Anchoring Screw</p>
Structure	<ul style="list-style-type: none"> • Make sure the unit is installed securely so that it will not fall or move due to vibrations or earthquakes. 	

TH50ECR6 series

Item	Check	Illustration
Locating Screw Holes	<div><div></div><div>CAUTION</div></div> <ul style="list-style-type: none">• When installing with bare hands, take caution to not inflict injury.• Be careful not to hit electrical wiring, gas, or water piping while drilling holes. <ol style="list-style-type: none">1. Drill a single screw hole, making sure to hit a stud.2. Insert and tighten the screw and hang the unit by the upper wall mounting bracket.3. Determine the positions for the remaining six screws (four for the top bracket and two for the bottom), and remove the unit.	
Mounting	<ol style="list-style-type: none">4. Drill holes for the remaining six screws.5. Hang the unit again by the first screw, and then insert and tighten the remaining six screws.6. Take waterproofing measures so that water does not enter the building from screws mounting the device.	
Structure	<ul style="list-style-type: none">• Make sure the unit is installed securely so that it will not fall or move due to vibrations or earthquakes.	

Gas Piping

Follow the instructions from the gas supplier.

The appliance must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 3.5 kPa.

The appliance and its gas connections must be leak tested before placing the appliance in operation.

The inlet gas pressure must be within the range specified. This is for the purposes of input adjustment.

In order to choose the proper size for the gas line, consult local codes and / or the AS/NZS5601.

SEE DOCUMENT IN PLASTIC SLEEVE BEHIND FRONT COVER FOR PRESSURE ADJUSTMENTS

Gas Pressure

Size the gas line according to total MJ/h demand of the building and length from the meter or regulator so that the following supply pressures are available even at maximum demand refer AS/NZS5601:

Working Gas Supply Pressures

Natural Gas Supply Pressure

Min. 1.13 kPa

Max. 3.00 kPa

ULP Gas Supply Pressure

Min. 2.75 kPa

Max. 3.50 kPa

- Please ensure measurement is taken when the appliance is operating at maximum load.

Gas Meter

Select a gas meter capable of supplying the entire MJ/h demand of all gas appliances in the building.

Gas Connection

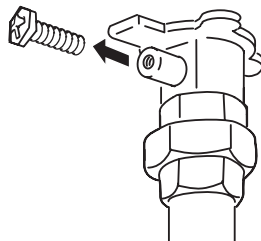
- 1) Fit a union to the water heater gas inlet for easy connection and removal. The thread diameter is 20 mm. THIS DOES NOT INDICATE THE SIZE OF THE GAS SUPPLY.
- 2) Fit an suitably approved isolating gas cock in the supply line adjacent to the water heater gas connection.
- 3) Ensure that the supply pipe and the gas pressure regulator (ULPG or Natural Gas) has sufficient flow capacity for this and other appliances connected to the fitting line.
- 4) For ULPG appliances ensure that gas cylinders are of sufficient size. The water heater alone will require 2 x 45 Kg capacity cylinders.
- 5) Before connecting the appliance to the gas service, purge any debris or air from the gas service.
- 6) Check all joints for leaks with an approved leak tester after connection.

Measuring Gas Pressure

In order to check the gas supply pressure to the unit, a tap is provided on the gas inlet. Remove the hex head philips screw from the tap, and connect a manometer using a silicon tube.

In order to check the burner gas pressure on the gas valve inside the unit. The pressure can be checked by removing the hex head philips screw and connecting a manometer with a silicon tube.

Refer to AS/NZS5601 for pipe sizing and details.



Ensure that the gas pipe size is correct. If undersized the appliance will not operate correctly

SERVICE CALLS ARE CHARGEABLE FOR UNITS WITH INCORRECT PIPE SIZES OR BLOCKED GAS OR WATER FILTERS.

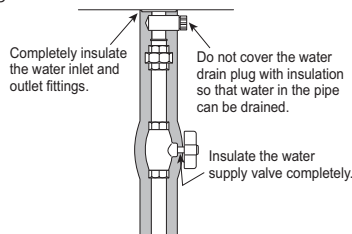
Water Piping

Installation and service must be performed by a qualified plumber. Observe all applicable codes. This appliance is suitable for potable water applications. Do not use this appliance if any part has been underwater. Immediately call a qualified service technician to inspect the appliance and replace any part of the control system and gas control which has been under water.

Piping and components connected to the water heater shall be suitable for use with potable water. Toxic chemicals, such as those used for boiler treatment, shall not be introduced into the potable water. A water heater used to supply potable water may not be connected to any heating system or components previously used with a nonpotable water heating appliance. When water is required in one part of the system at a higher temperature than in the rest of the system, means such as a mixing valve shall be installed to temper the water to reduce the scald hazard.

- Flush water through the pipe to clean out metal powder, sand and dirt before connecting it.
- Perform the following insulation measures for prevention of freezing.
 - Take appropriate heat insulation measures (e.g., wrapping with heat insulation materials, using electric heaters) according to the climate of the region to prevent the pipe from freezing.
 - Make sure that there are no water leaks from the cold and hot water supply pipes, then insulate the pipes completely.
 - Be sure to also completely insulate the water supply valve and the cold and hot water connections on the water heater (refer to the figure on the right).
 - Do not cover the water drain plug with insulation so that water in the pipe can be drained. (Refer to the figure in the right.)
- Use a union coupling for connecting the pipes to reduce the force applied to the piping.
- When feed water pressure is too high, insert a depressurizing valve, or take water hammer prevention measure.
- Avoid using joints as much as possible to keep the piping simple.
- Avoid piping in which an air lock can occur.
- Use approved piping materials.
- If installing the unit on a roof (Above lower-level hot water supply):

If the unit is installed on a roof to supply water to the levels below, make sure that the water pressure supplied to the unit does not drop below 199 kPa. It may be necessary to install a pump system to ensure that the water pressure is maintained at this level.
Check the pressure before putting the unit into operation.
Failure to supply the proper pressure to the unit may result in noisy operation, shorter lifetime of the unit, and may cause the unit to shut down frequently.



Water inlet connections

- Pipe and fittings must meet the installation requirements of AS/NZS 3500.4 and local authority regulations.
- An isolating valve must be installed on the water inlet in close proximity to the heater.
- A GATE VALVE OR BALL VALVE must be used on the cold water inlet to the water heater. THIS REQUIREMENT IS AN AUSTRALIA WIDE REQUIREMENT UNDER THE NATIONAL PLUMBING CODE. **STOP TAPS OR COMBINATION STOP TAPS AND NON-RETURN VALVES ARE NOT TO BE USED.**
- The water heater needs a minimum water supply pressure of 200kPa to operate.
- Maximum water supply pressure must not exceed 800kPa : TH50ECR6, 1,000kPa : TH32ECR6 and TH28ENR6.



Please ensure this appliance does not receive inlet water greater than 85°C when used as a Solar booster.

Hot water line

- Pipe and fittings must meet the installation requirements of AS/NZS 3500.4 .
- Hot water lines should be lagged with suitable insulating material.
- DO NOT FIT ANY VALVES OR RESTRICTORS TO THE OUTLET OF THE WATER HEATER.
- DO NOT FIT ANY OBSTRUCTION TO THE PRESSURE RELIEF LOCATED ON THE HOT WATER OUTLET CONNECTION.

After purging the air from the system using the hot water supply taps, remove the water inlet strainer located on the cold water supply inlet connection. Remove any debris from the filter and replace. When replacing the filter, do not over-tighten the "O" ring seal.



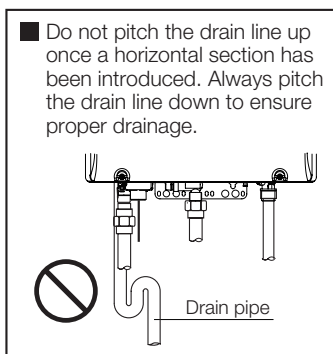
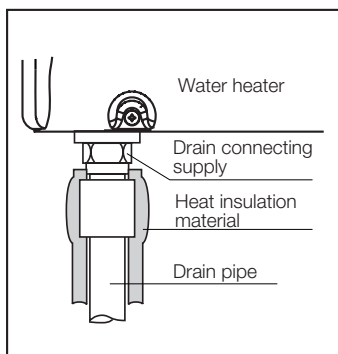
No pressure reduction is required unless the water pressure exceeds 800kPa : TH50ECR6, 1,000kPa : TH32ECR6 and TH28ENR6.

Condensate Piping (only TH50ECR6 series and TH32ECR6 series)

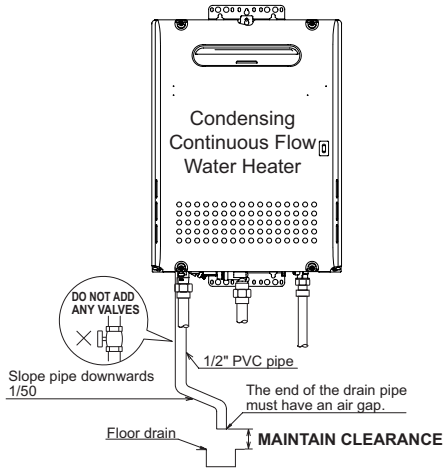
CAUTION

Due to the acidic nature of the condensate, be sure to properly drain and if necessary, treat the condensate prior to disposal. Damage caused by improperly handled condensate is not covered by the warranty.

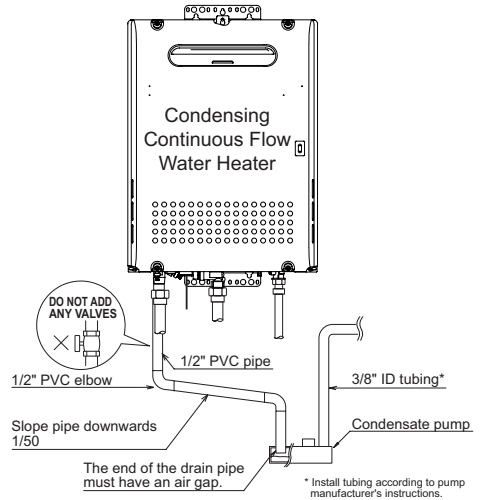
- This water heater is a high efficiency, fully condensing appliance which produces acidic condensate during operation. The water heater incorporates a collection and removal system which must be properly drained in order to ensure proper operation of this appliance as per AS3500.4.
- The pH level of the condensate is approximately 2-3. It should be drained as required by local code or when the condensate could cause damage.
- In order to drain the condensate, a 1/2" threaded fitting is provided at the base of the water heater. Do not reduce the size of this fitting or the drain piping to less than 1/2". In cold climates, do not drain the condensate to the outdoors. If the drain pipe freezes during cold weather, the pipe will not drain condensate and the unit will stop operating.
- Use plastic pipe, such as PVC, for the drain line. Do not use steel, black iron, or any other material which can corrode when placed into contact with acidic condensate.
- Keep the length of the drain pipe as short as possible. Long runs or applications where the nearest drain is above the water heater will require the use of a condensate pump. Size the pump to allow for a maximum condensate discharge of 160ml/min : TH50ECR6, 100ml/min : TH32ECR6 from the water heater.
- Horizontal runs must be sloped 1/50 downwards the drain or condensate pump. The condensate will be discharged by gravity force only. Make the drain pipe run as short as possible.
- The end of the drain pipe must not be submerged in water or blocked in any way. To ensure proper drainage, leave the end of the drain pipe open to the atmosphere. Do not have a trap. Also, make sure that there are no obstructions blocking the drain line from discharging condensate.
- Be sure to check that condensate is freely flowing from the drain piping after the system has been installed. Condensate will begin flowing out of the water heater within 15 minutes after operation has started.
- Take measures to prevent the condensate drain lines from freezing (insulation, heat tape, electric heaters, etc.).



Condensate piping to floor drain



Condensate piping with pump

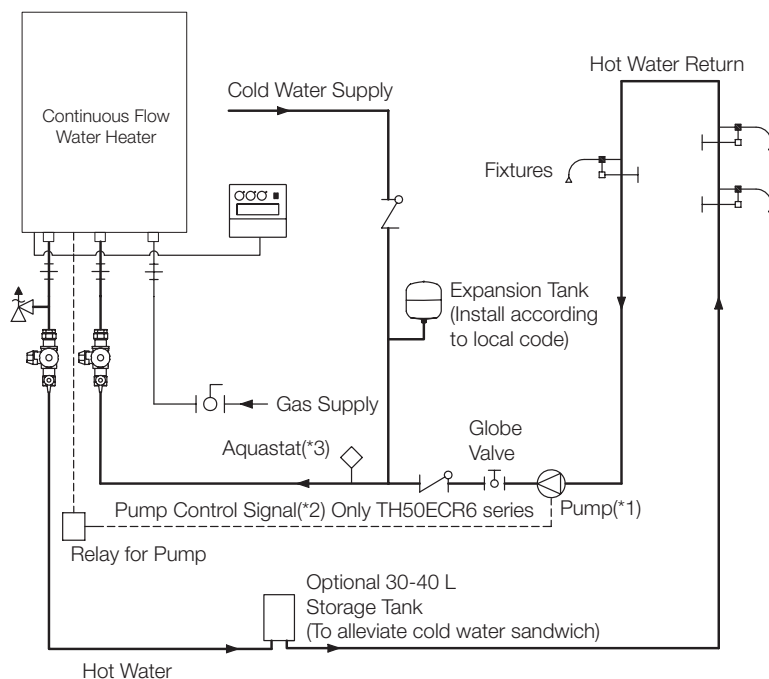


Note:

If the drain line becomes clogged or frozen, condensate will back-up into the water heater and a "29" error code will flash on the remote controller, ceasing operation. If this occurs, clear the clog or freeze so that condensate can freely flow. Be sure to slope the drain pipe, use the appropriate size pipe, allow the proper clearances, and apply freeze prevention measures (when necessary) to prevent the drain line from clogging or freezing.

Plumbing Applications

Recirculation System



Notes:

1. Size the pump to provide a maximum of 7.5 L/min. through the system at 3m of head plus piping losses. Adjust the flow using a globe valve and verify the flow rate with the maintenance monitors.
2. Pump Control Signal is the preferred method to control the recirculation pump. A relay connection must be used. Only TH50ECR6 series. If the Pump Control Signal is not used, an Aquastat may be used to control the pump.
3. Set the Aquastat to 5°C below the set output temperature. An aquastat is the minimum pump control requirement in order to maintain the full recirculation warranty.

Electrical Wiring



WARNING

Electrical Shock Hazard

Do not turn power on until controllers have been connected. Disconnect power before servicing.
Failure to do so may result in death or serious injury from electrical shock.

- The appliance is equipped with a 1.5m cable with a three pinned earthed plug to be connected to 230 - 240VAC at 50 Hz.
The power consumption may be up to TH50ECR6 series 288W, TH32ECR6 series 223W, TH28ENR6 series 193W.
Use an appropriate circuit.
- The appliance requires a 240V in Australia and 230V in New Zealand, 50Hz weatherproof plug installed in a protected position adjacent to the appliance.
- If the power cord is damaged and requires replacement, use only an original spare part available from the manufacturer.
- Do not disconnect the power supply when not in use. When the power is off, the freeze prevention in the water heater will not activate, resulting in possible freezing damage.

-
- Do not let the power cord contact the gas piping.

Tie the excess power cord outside the water heater. Putting the redundant length of cord inside the water heater may cause electrical interference and faulty operation.

Earth

- To prevent electrical shock, always plug power lead into an earthed point.



CAUTION

Electrostatic discharge can affect electronic components. Take precautions to prevent electrostatic discharges from personnel or hand tools during the water heater installation and servicing to protect product's electronic control.

Temperature Setting

To ensure compliance with Australian Standard AS/NZS3500.4, for sanitary areas, install the water heater with a tempering valve. In New Zealand, please refer to the New Zealand Building Code and all other applicable electrical, gas fitting and plumbing codes.

Temperature is controlled by the maximum temperature set in the water heater.

The temperature allowed can be changed with adjusting the DIP switches as described below.

<The changing procedure of the maximum temperature setting.>

1. Turn the water heater off by pressing the ON/OFF button on the remote controller.

With Remote controller

2.Disconnect electrical power to the water heater.

3. Remove the front cover of the water heater (4 screws).

4. Adjust the DIP switches as illustrated below.

With Remote controller

This setting is to restrict the maximum temperature using remote controller. Without any change, the maximum temperature using remote controller is 85°C.

The maximum hot water temperature can be restricted to 55°C , 60°C or 75°C by changing DIP switch.

Without Remote controller

This setting is the temperature setting when not using the remote controller. Without changing, the temperature is 60°C.

The hot water temperature can be set to 55°C , 60°C or 75°C by changing DIP switch.

With Remote controller

* Do not change any other DIP switches.

OFF

ON

* Maximum temperature.

	1	2
85 °C	OFF	OFF
55 °C	ON	OFF
75 °C	OFF	ON
85 °C	ON	ON

Without Remote controller

* Do not change any other DIP switches.

OFF

ON

* temperature.

	1	2
60 °C	OFF	OFF
55 °C	ON	OFF
75 °C	OFF	ON
85 °C	ON	ON

5. Replace the front cover of the water heater (4 screws).

6. Reconnect electrical power to the water heater.



WARNING

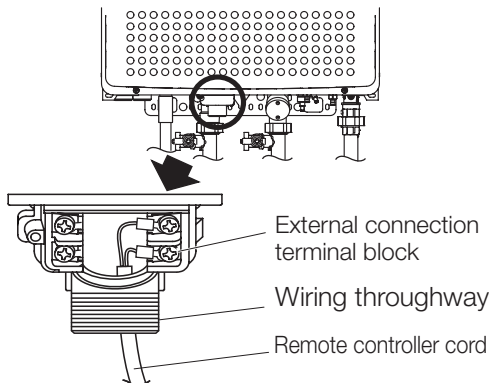
- When changing the temperature, make sure to confirm with the customer that the temperature of the hot water will be very high and that there is a risk of scalding.

Connecting Remote Controller Cord to Unit

- Tie the excess cord outside the water heater. Do not put the extra length inside the water heater.
- The remote controller cord can be extended up to 100m.
- Be sure to hand tighten when screwing to the terminal block. Power tools may cause damage to the terminal block.

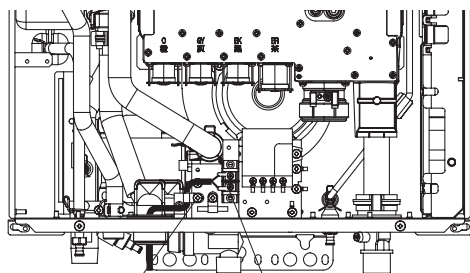
Remote controller cord (TH50ECR6 series)

- Use remote controller cord for any extensions.
 - Install according to the National Electrical Code and all applicable local codes.
1. Check to make sure that the remote controller cord has plenty of slack in order to reach the external connection terminal block.
 2. Disconnect electrical power to the water heater.
 3. Remove the single screw securing the terminal block cover and then remove the cover.
 4. Pass the remote controller cord through the wiring throughway and connect the Y terminals at the end of the remote controller cord to the terminal block.
 5. Replace the terminal block cover and install the screw previously removed in step 3.
 6. Reconnect electrical power to the water heater.

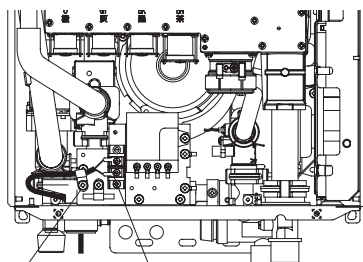


Remote controller cord (TH32ECR6 series, TH28ENR6 series)

- Use remote controller cord for any extensions.
 - Install according to the National Electrical Code and all applicable local codes.
1. Disconnect electrical power to the water heater.
 2. Leave enough slack so that the remote controller cord will not be damaged if the unit is removed from the wall.
 3. Remove the front cover of the heater (4 screws).
 4. Pass the remote controller cord through the wiring throughway and into the unit.
 5. Connect the Y terminals at the end of the remote controller cord to the terminal block.
 6. Secure the remote controller cord with a clamp.
 7. Replace the front cover.



Clamp
Remote Controller Terminal
TH32ECR6 series



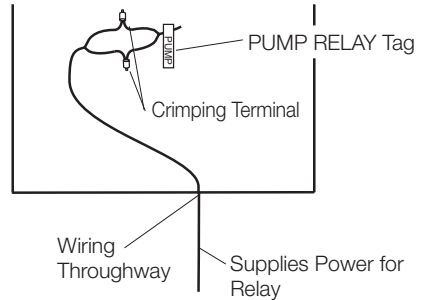
Clamp
Remote Controller Terminal
TH28ENR6 series

Pump Wiring (Only TH50ECR6 series)

* This feature is not available when using the Quick Connect Multi System feature.

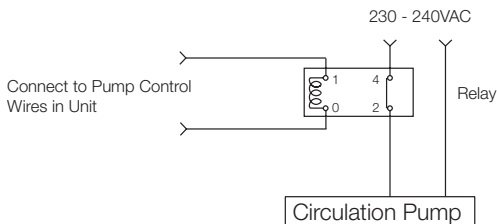
Connecting the pump control wire

1. Leave enough slack so that the pump control wires will stay connected if the unit is removed from the wall.
2. Remove the front cover of the heater (4 screws).
3. Cut off the connector at the end of the pump control wires.
4. Wire the pump control wires through the wiring throughway and connect them to the relay for the pump (Do not directly connect to the pump). The voltage from these wires as the signal to close a normally open relay through which 100VAC will be supplied directly from a wall circuit to the pump.
5. Replace the front cover.



Relay connection with pumps

1. Locate and prepare the pump control wires as described above.
2. Choose a suitable installation location for the relay where it will be protected from moisture.
3. Connect the pump control wires from the heater to the signal input on the relay.
4. Cut one of the electrical supply leads and wire it across the open terminals of the relay.
5. Secure all connections.



Connecting Quick Connect Cord

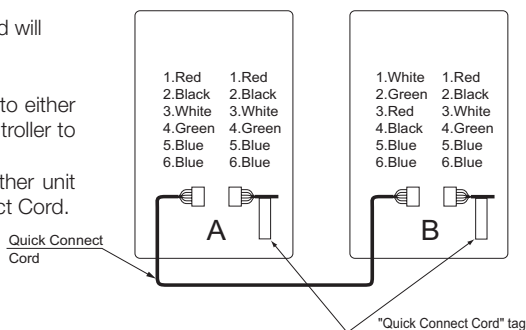
For Quick Connect Multi System Installation use part No.CF-0706891 only. (sold separately).

Caution

The wire coloring on the Quick Connect Cord will not be the same as the wire coloring of the connection plug inside the unit.

* The remote controller can be connected to either unit A or B. Do not connect a remote controller to both units.

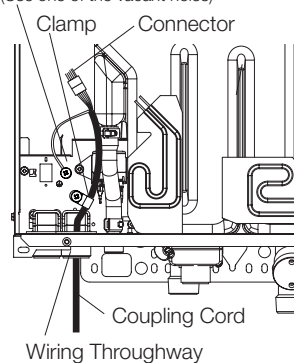
* Disconnect the remote controller from either unit A or B prior to installing the Quick Connect Cord.



Connecting the Quick Connect Cord to the two units.

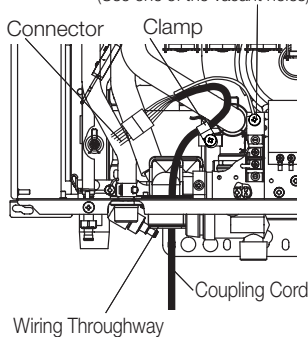
1. Turn off the power.
2. Remove the front cover of the heater (4 screws).
3. Pass the Quick Connect Cord through the wiring throughway and into the unit.
4. Plug the connector on the Quick Connect Cord to the receptacle inside the unit.
5. Attach the ground wire of the Quick Connect Cord to the terminal block fixing plate.
(If the ground wire is not attached, electrical noise may cause problems).
6. Secure the Quick Connect Cord with a clamp.
7. Replace the front cover.

Ground wire Connector
(Use one of the vacant holes)



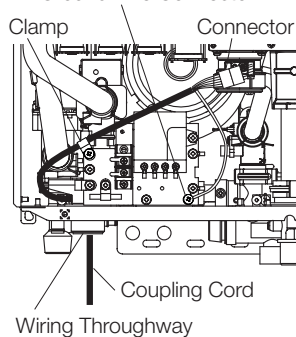
TH50ECR6 series

Ground wire Connector
(Use one of the vacant holes)



TH32ECR6 series

Ground wire Connector



TH28ENR6 series

Maintenance

Periodically check the following to ensure proper operation of the water heater.

- The flueing system must be examined periodically by a qualified service technician to check for any leaks or corrosion.
- The burner flame must be checked periodically for a proper blue color and consistency.
- If the flame does not appear normal, the burner may need to be cleaned.
- If the burner needs to be cleaned, it must be performed by a qualified service technician.
- Do not obstruct the flow of combustion and ventilation air.
- See Owner's Guide for further maintenance or consult Reece for recommended service checks.

Warning: There is a scald potential if the output temperature is set too high.

Should overheating occur, or the gas supply fail to shut off, turn off the manual gas control valve to the appliance.

Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

Periodically check and clean the filter inside the cold water inlet of the unit.

Servicing by qualified technician should be performed every two years.

Trial Operation

The installer should test operate the unit, explain to the customer how to use the unit, and give the owner this manual before leaving the installation.

- Preparation (1) Open a hot water fixture to confirm that water is available, and then close the fixture.
 - (2) Open the gas supply valve.
 - (3) Turn on the power supply. Using the remote controller, turn on the Power ON/OFF button (the Operation lamp will turn on).
 - (1) Open a hot water fixture and confirm that the Burner on lamp comes on, and that hot water is being produced. (If necessary, repeat until the air in the gas piping is bled out).
 - * White smoke may be noticed from the exhaust flue during cold weather. However, this is not a malfunction of the unit.
 - * If an "11" error code appears on the remote controller, turn the unit off and then back on again, and then open a hot water fixture again.
 - (2) Change the temperature setting on the remote controller and check that the water temperature changes.
 - If the water heater does not operate normally, refer to "Troubleshooting" in the Owner's Guide.
 - * After the trial operation, clean the filter in the cold water inlet.
- <If installed with a quick connect multi-system>
- Turn the system power ON with the remote controller.
 - Slowly open a hot water fixture and check that the units ignite sequentially. Check to see that the hot water temperature is the same as the temperature displayed on the remote controller (*1)
- * If both units do not ignite, switch which unit will ignite first by pressing the Max. or Min. Manifold Pressure Set Button on the circuit board. (*2)



- * If an 11 or F11 error code flashes on the remote controller, hit the Power Button on the remote controller off and on 2 -3 times.
- * If (*1) and (*2) cannot be done, the Quick Connect Cord may not be properly connected. Check that the cord is properly connected.



CAUTION

Handling after trial operation

- If the unit will not be used immediately, close off all gas and water shut off valves, drain all of the water out of the unit and the plumbing system to prevent the unit and system from freezing, and bleed the gas out of the gas line.
Freezing is not covered by the warranty.

**WARNING**

A fire or explosion may result if these instructions are not followed, which may cause loss of life, personal injury or property damage.

Lighting Instructions

This water heater does not have a pilot. It is equipped with an ignition device that automatically lights the burner.

Do not try to light the burner by hand.

1. Read the safety information in the installation manual or on the right side of the water heater.
2. Turn off all electrical power to the unit.
3. Do not attempt to light the burner by hand.
4. Turn the gas control manual valve (external to the unit) clockwise to the off position.
5. Wait five minutes to clear out any gas. If the smell of gas remains, stop, and follow the instructions on page 3 of Owner's Guide.
6. Turn the gas control manual valve counterclockwise to the on position.
7. Turn on electric power to the unit.
8. The unit will now operate whenever hot water is called for. If the unit will not operate, follow the shutdown instructions and call a service technician.

Shutdown Instructions

1. Stop any water demand.
2. Turn off electric power.
3. Turn the gas control manual valve clockwise to the off position.

Should overheating occur, or the gas supply fail to shut off, turn off the manual control valve to the appliance.

WATER QUALITY

All Thermann water heating appliances are constructed from high quality materials and components and all are certified for compliance with relevant parts of Australian and New Zealand gas, electrical and water standards.

Whilst Thermann water heaters are warranted against defects, the warranty is conditional upon correct installation and use, in accordance with detailed instructions provided with the heater. In the case of the water supplied to the heater, it is important that the water quality be of acceptable standard.

The water quality limits/parameters listed in water quality table are considered acceptable and generally, Australian and New Zealand suburban water supplies fall within these limits/parameters.

In areas of Australia and New Zealand where water may be supplied, either fully or partly, from bores, artesian wells or similar, one or more of the important limits may well be exceeded and the heater could, therefore, be at risk of failure.

Where uncertainty exists concerning water quality, intending appliance users should seek a water analysis from the water supplying authority and in cases where it is established that the water supply does not meet the quality requirements of the water quality table, the Thermann warranty would not apply.

WATER QUALITY TABLE

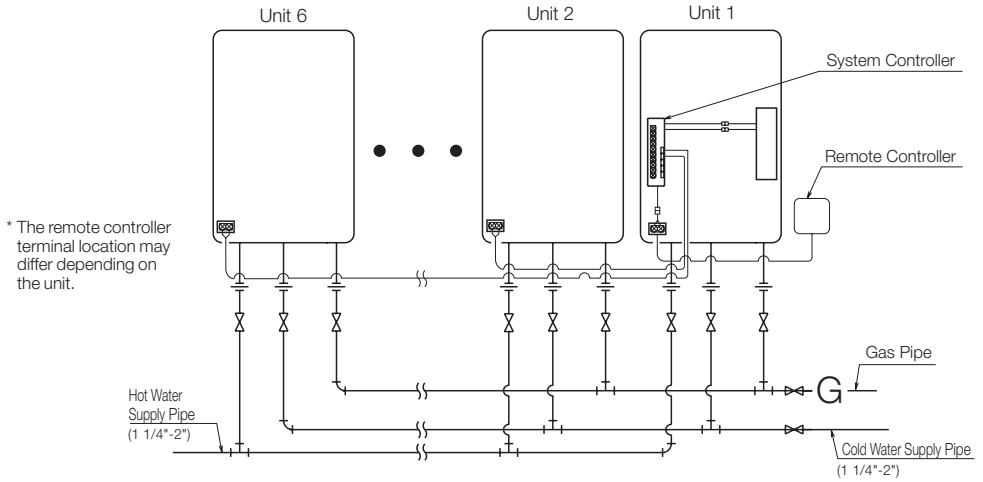
Maximum levels

pH	Saturation Index(LSI) (langelier)	Total Hardness	Chlorides	Sodium	Iron
6.5-9	+0.4 to Minus 1.0 @65C	200mg/l	250mg/l	180mg/l	1mg/l

Multi-System

Install one system controller (SC-401-6M) for every six units.
Only TH50ECR6 series and TH32ECR6 series.

A. Installation without a recirculation system (Standard System)

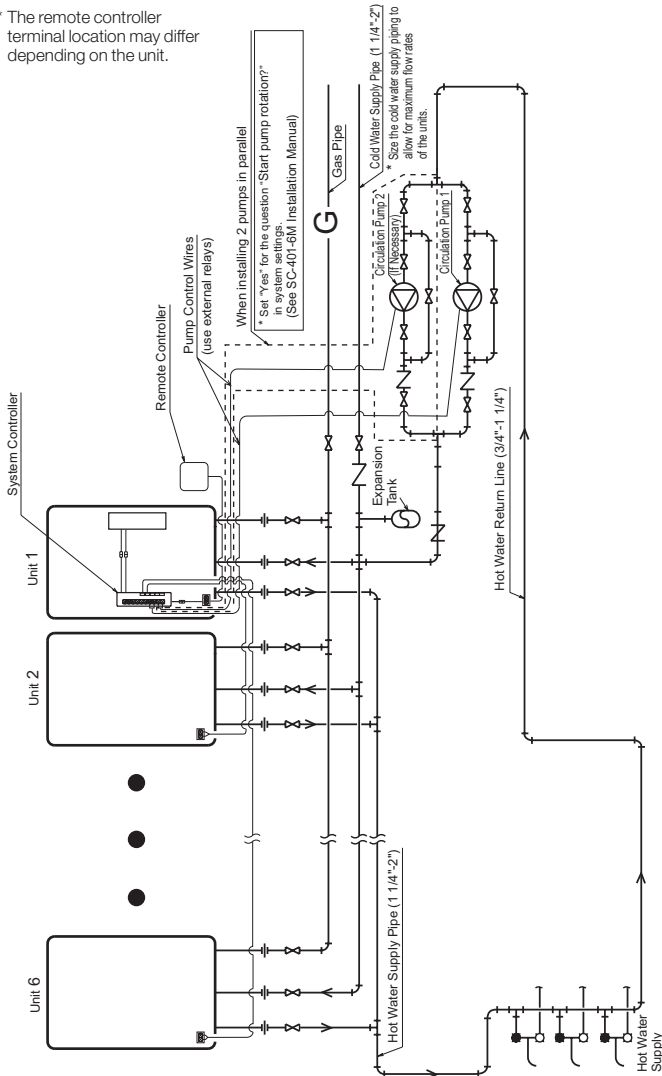


- Insulate or apply heating materials to both the cold water supply piping and the hot water supply piping to prevent freezing during cold weather and to prevent heat loss through the piping.

B-1. Example of Recirculation with a Multi-System (Recirculation system) Only TH50ECR6 series and TH32ECR6 series.

This system will make hot water more quickly available to remote fixtures.
The pump will circulate water through the loop until the entire loop is warm, and then the system controller will turn off the pump until the loop cools down.

* The remote controller terminal location may differ depending on the unit.



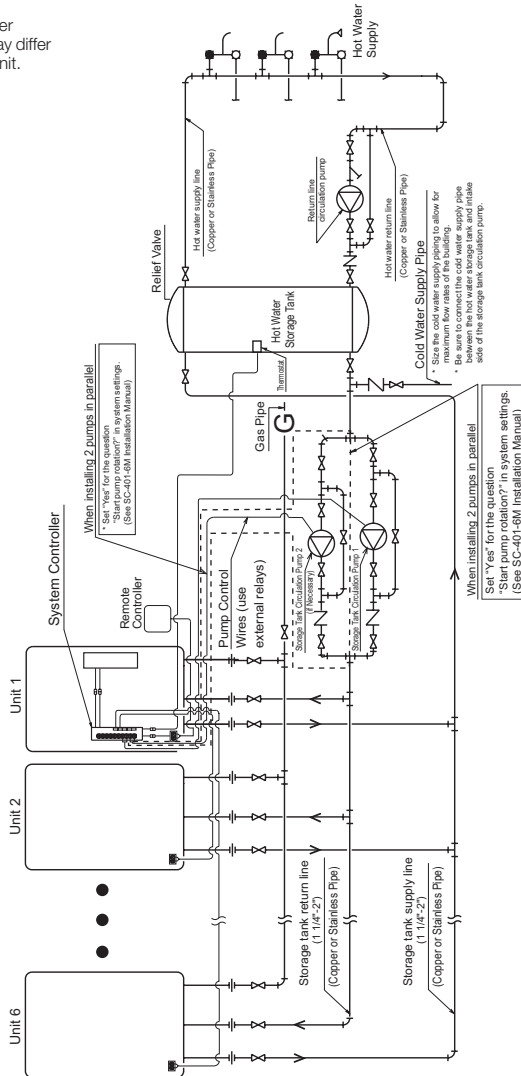
- * Size the pump to provide at least 8 L/min @ 3 m of head + piping losses through the system.
Check the maintenance monitors on the unit to make sure the pump is providing adequate flow.
- Make sure that the flow rate is not greater than 1.2 m/sec.
If the flow is too low, the recirculation loop temperature will not be warm enough, if the flow is too high, the lifetime of the unit will be reduced.
- * If there are multiple circulation loops, try to make the flow rate .3-5 L/min in each loop.
- * Use copper or stainless water piping for the entire system.

B-2. Example of Installation with a Storage Tank and Recirculation System (Tank recirculation system)
Only TH50ECR6 series and TH32ECR6 series.

The pump will push water through the Multi-System to heat up the tank.

When the temperature of the thermostat is high, the system controller will turn off the pump until the temperature cools down.

* The remote controller terminal location may differ depending on the unit.

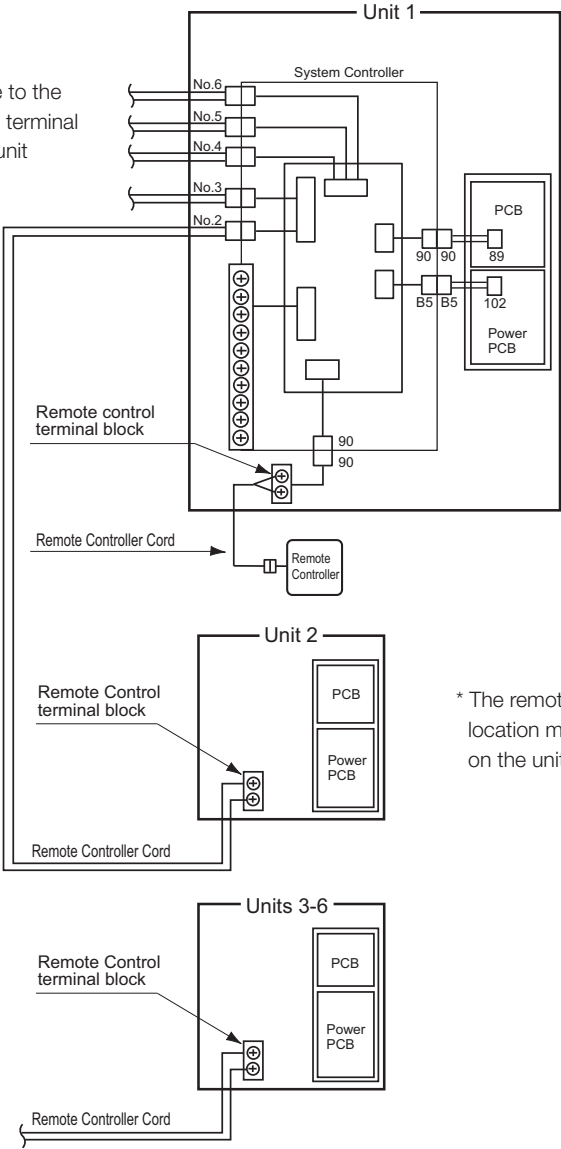


- * For the set temperature of the remote controller, use the temperature (of the thermostat) + about 5 °C.
- * To achieve the highest recovery, size the storage tank circulation pump for maximum capacity.
(TH50ECR6 : 30 L/min (each), TH32ECR6 : 18 L/min (each), TH28ENR6 : 18 L/min (each) @ 20 m of head + piping losses through the system.)

Multi-System Wiring (Use SC-401-6M)

Only TH50ECR6 series and TH32ECR6 series.

* Connect these to the remote control terminal block in each unit

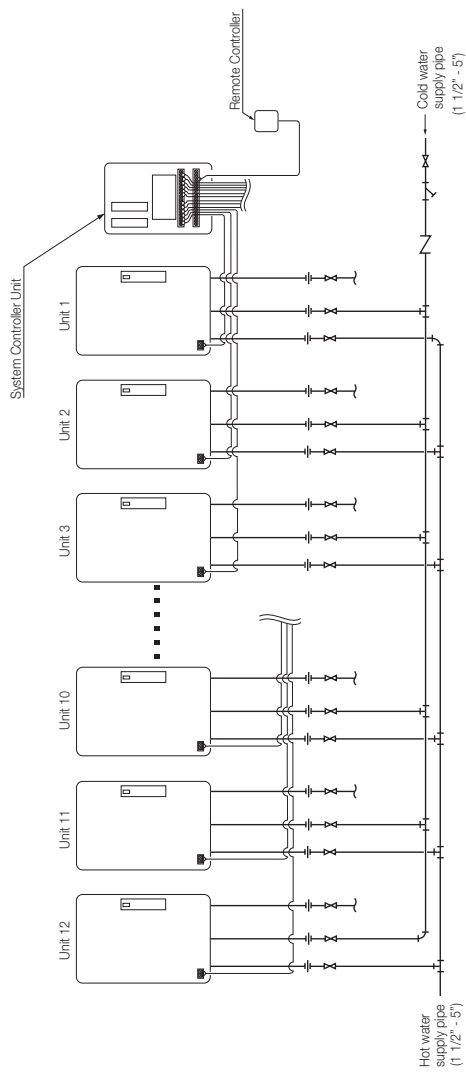


Multi-System

Install one external system controller (SCU-401-12M) for every 12 units.
For all models.

A. Installation without a recirculation system (Using external system controller) (Standard System)

* The remote controller terminal location may differ depending on the unit.

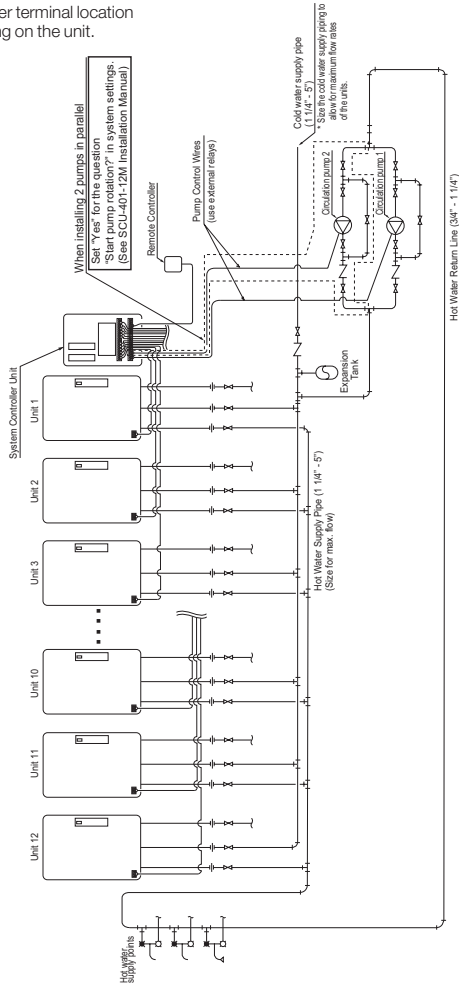


- Insulate or apply heating materials to both the cold water supply piping and the hot water supply piping to prevent freezing during cold weather and to prevent heat loss through the piping.

B-1. Example of Recirculation with a Multi-System (Using external system controller)
(Recirculation system)

This system will make hot water more quickly available to remote fixtures.
The pump will circulate water through the loop until the entire loop is warm, and then the system controller will turn off the pump until the loop cools down.

* The remote controller terminal location may differ depending on the unit.

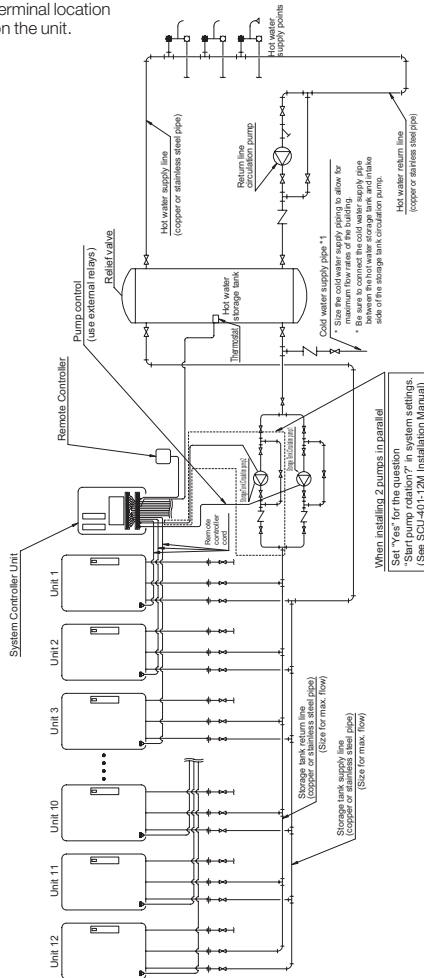


- * Size the pump to provide at least 8 L/min @ 3 m of head + piping losses through the system. Check the maintenance monitors on the unit to make sure the pump is providing adequate flow.
- Make sure that the flow rate is not greater than 1.2 m/sec.
 - * If the flow is too low, the recirculation loop temperature will not be warm enough, if the flow is too high, the lifetime of the unit will be reduced.
 - * If there are multiple circulation loops, try to make the flow rate .3-5 L/min in each loop.
 - * Use copper or stainless water piping for the entire system.

B-2. Example of Installation with a Storage Tank and Recirculation System (Using external system controller) (Tank recirculation system)

The pump will push water through the Multi-System to heat up the tank.
When the temperature of the thermostat is high, the system controller will turn off the pump until the temperature cools down.

* The remote controller terminal location may differ depending on the unit.



- * For the set temperature of the remote controller, use the temperature (of the thermostat) + about 5 °C.
- * To achieve the highest recovery, size the storage tank circulation pump for maximum capacity.
(TH50ECR6 : 30 L/min (each), TH32ECR6 : 18 L/min (each), TH28ENR6 : 18 L/min (each) @ 20 m of head + piping losses through the system.)

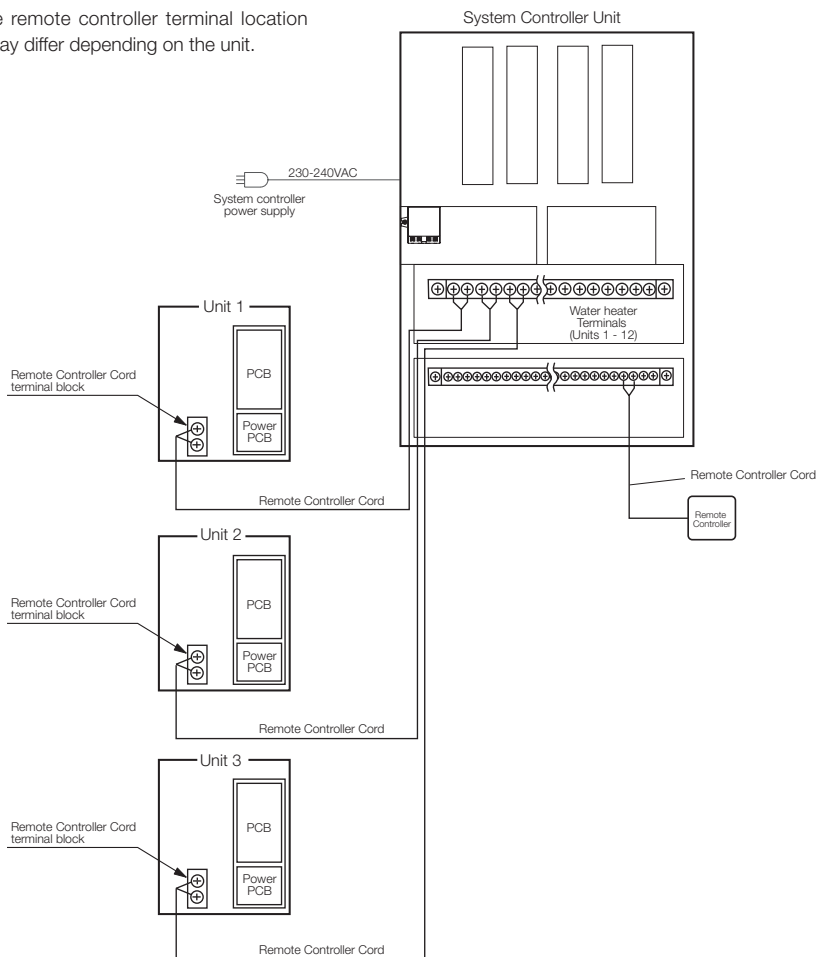
Multi-System Wiring (Use SCU-401-12M)

For all models.

CAUTION

- The below diagram shows the connection of 3 units to the system controller. When connecting 4 or more units, follow the same procedure.
- Connect the water heaters to the system controller following the detailed wiring instructions included with the system controller.
- Always connect a remote controller to the system controller. Do not connect the included remote controllers to the individual water heaters. These remote controllers will not be used.

* The remote controller terminal location may differ depending on the unit.



Remote Controller (Optional or Included)

Installation Guide

Requests to Installers

- In order to use the water heater safely, read this installation guide carefully, and follow the installation instructions.
- Failures and damage caused by erroneous work or work not as instructed in this manual are not covered by the warranty.
- Refer to the Installation Manual provided with the water heater for complete installation details.

In order to use this product safely, read this installation manual carefully and follow the installation instructions.

- Potential dangers from accidents during installation and use are described below. Closely observe these warnings, they are critical to your safety.



CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



CAUTION

- Indoor use only. The remote controller is not water resistant. Not suitable for installation in wet areas like shower recesses.
- The remote controller is not suitable for outdoor installation unless installed in an enclosed and water proof box.



CAUTION

- Do not connect power to the system unit until the remote controller installation is complete.
- Be sure to fasten the mounting screws tightly by hand so that the remote controller will be secure.
 - * Do not use electric drivers, impact drivers and so forth. Tightening with excessive force may cause the mounting bracket to be damaged and lead to failures.
- Install the remote controller on an even wall surface.
 - * Installing it on an uneven wall surface may cause the bracket to be damaged and lead to failures.
- This remote controller has a built-in speaker which can be damaged by metal shavings resulting in sound cracking.
 - Keep the remote controller in a safe location prior to mounting it on the wall to prevent metal shavings from entering the remote controller.

Note

- Cutting too large of a hole on the wall may result in failure to properly secure the remote controller.
- Never fasten or loosen unnecessary screws in order to complete the remote controller installation.
- Be sure to check the positions of wall studs or other obstructions when determining the installation location for the remote controller.
- Secure the remote controller cable with appropriate anchors, ties, etc.
- Wire the remote controller cable in an area where it will not be directly affected by heat.
- To embed the remote controller cable in concrete, brick, etc., enclose it in conduit in order to prevent the remote controller cable from becoming damaged.
- When penetrating a wall containing metal lath, prevent the lath from coming into contact with any metallic conduit used in order to prevent electrical interference.
- Wiring shall be provided so that the remote controller cable length is 100m or shorter.
- Connect the remote controller cable to the terminal block of the water heater (see Installation Manual provided with the water heater).

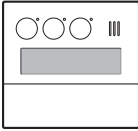
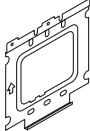




Post-installation Checks

- (1) Check if the remote controller is installed securely.
- (2) Verify remote controller operation (see OWNERS GUIDE).
 - * Press the Power On/Off button approximately 5 seconds after connecting power to the system.
 - * Check if the temperature setting on the remote controller is appropriate.

Explanation to the Customer

Explain the "Important Safety Information", "Operation Procedures" and "Follow-up Service" according to the OWNERS GUIDE supplied with the water heater.

Included Parts List (The value in () indicates the quantity.)

Remote Controller	Mounting bracket	Raised countersunk head wood screw	Wall anchor	Raised countersunk head screw	Machine screw
 (1)	 (1)	 (2)	 (2)	 (2) (For junction box installation)	 (2)

Confirmation before the setting

■ Introduction

- Make sure that the power is not turned on (the breaker is "OFF" or the power plug of equipment is disconnected).
- Check the included parts list.

■ Confirmation before the setting

- Choose a place that is easy to use in consultation with our customers (It is necessary to get the approval of the visitor).
- Do not be attached to the following place;
 1. The place where the temperature becomes higher (near a gas stove)
 2. The place where direct rays hit (near a window etc.)
 3. The place which requires steam (near a gas stove and a rice cooker etc.)
 4. The place which requires a spray (near a hot water tap etc.)
 5. The place which requires oil (near a gas stove)
 6. The place which uses chemical specialties (Benzine, Oils and fats system detergent etc.)

■ Confirmation of the remote-control cord

A remote control code has the following length ; 3m, 5m, 8m, 10m, 15m, 20m, 50m, 100m
Please use the thing of required length according to the conditions of the spot.

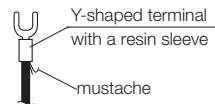
* Y-shaped terminal is not attached 50m and 100m length code.

For using 50m and 100m length code, please be sure to attach Y-shaped terminal with a resin sleeve.

Be careful for a mustache not to come out.

When a mustache comes out, please be sure to reattach Y-shaped terminal.

A mustache contacts other parts and causes failure of apparatus.



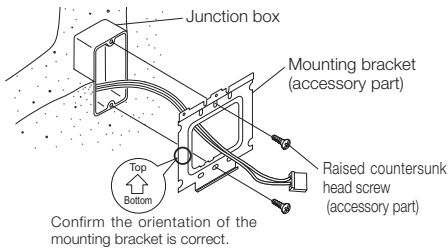
Installation

1. Attach the mounting bracket to the wall.
The parts to be used vary depending on the attachment method.

* Never use electric drivers, impact drivers and so forth.
Tightening with excessive force may result in deformation of the mounting bracket and/or failures.

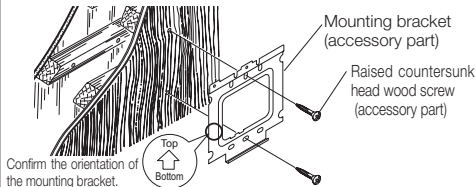
<When attaching to a junction box>

- Use the raised countersunk head screws to attach the mounting bracket to the junction box.
(In this case, the wall anchor and raised countersunk head wood screws are not used.)



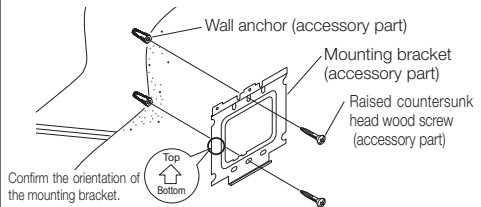
<When attaching to a wood surface>

- Use the raised countersunk head wood screws to attach the mounting bracket.
(In this case, the wall anchor and raised countersunk head screws are not used.)

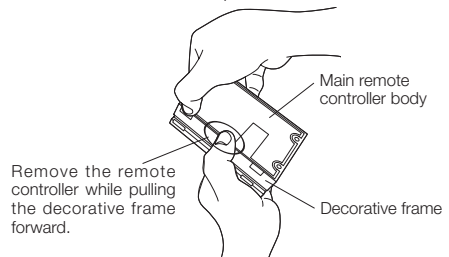



<When attaching to a concrete wall surface>

- Drill a $\varnothing 6\text{mm}$ hole, approx. 25mm - 30mm in depth, and hammer in the wall anchor.
Attach the mounting bracket using the raised countersunk head wood screws.
(In this case, raised countersunk head screws are not used.)

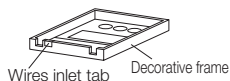
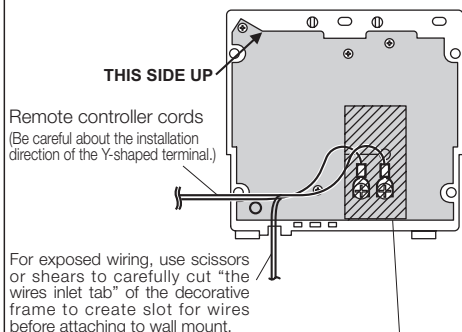



2. Remove the decorative frame from the remote controller. (The remote controller is inserted in the decorative frame.)



3. Connect a Y-shaped terminal of the remote control cord to a terminal stand of the remote control in back side.
Push down only section A () of an insulated cover (clear) to the front, and attach Y-shaped terminal from an insulated cover (clear) top side.

- * Do not remove the insulating cover (clear).
- * Be careful about the installation direction of the Y-shaped terminal.
- * Do use an electric driver, the impact screwdriver absolutely.
- * The position of a terminal stand changes with kinds of remote control.

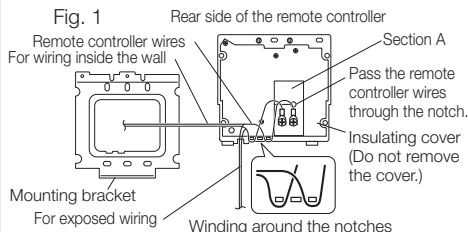


- * Check the terminal is covered with Section A () of the insulating cover (clear, see Fig. 1).

- * If the Y-shaped terminal is not covered, the exposed section may come into contact with the mounting bracket resulting in improper operation or failure.

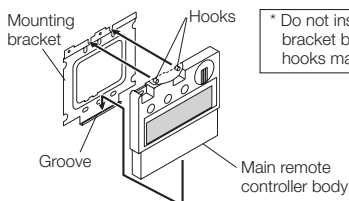
4. Secure the remote controller wires by winding them around the notches as shown in Fig. 1.

Fig. 1



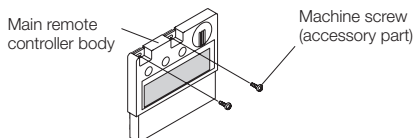
5. Attach the remote controller to the mounting bracket. Insert the bottom of the remote controller into the groove at the bottom of the bracket and push in the 2 hooks on top of the remote controller completely.

- * If it is difficult to attach, do not try to force it as it may result in broken hooks. Check for proper alignment in the groove or for loose wires obstructing the remote controller.



- * Do not install on the bracket by force, the hooks may break.

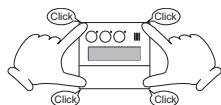
6. Secure the remote using the machine screws.



7. Attach the decorative frame which was removed in the second step.

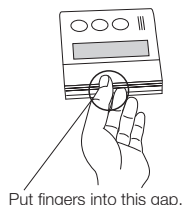
Push the 4 corners of the decorative frame until there is a click.

- * Incomplete installation may result in failures such as switch operation failure.



Note: To remove the decorative frame after installation of the remote controller and the frame, pull the entire decorative frame forward while pressing the sections indicated (where the fingers are) in the figure below.

- * If it does not come off, insert a flat head driver into the notch at the bottom of the decorative frame and slightly twist it to remove (due caution is required not to scratch the remote controller, decorative frame or the wall in doing so).



Memo

Memo

Memo

