

400

400 SERIES

INSTALLATION GUIDE



SUB-ZERO 400 SERIES WINE STORAGE EQUIPMENT

Sub-Zero 400 Series Wine Storage Equipment

The information in this Installation Guide demonstrates how the Sub-Zero 400 Series wine storage equipment should be installed to function safely and efficiently. However, we realize the actual installation of the product will vary depending upon your specific conditions. This guide cannot cover all circumstances, but it does offer all the necessary information presented in the order of work recommended for the best results. The following two points will be helpful for a successful installation;

First, as you follow these installation instructions, take particular note of the **CAUTION!** and **WARNING!** symbols when they appear. This information is important for the safe and efficient installation of the Sub-Zero wine storage unit.

⚠ CAUTION

signals a hazard where minor injury or product damage may occur if you do not follow instructions.

⚠ WARNING

states a hazard may cause serious injury or death if precautions are not followed.

In addition, the printed instructions may signal an **IMPORTANT NOTE**, which highlights information that is especially important for a problem-free installation.

Second, make sure that the actual equipment, panels and hardware that were shipped to you match the design you are expecting to install. See "Door Panel Information" in the applicable models' section for more details.

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IMPORTANT NOTE: The information in this Installation Guide is divided into three basic sections which give specific instructions for each of the 400 Series models. Please note that the information on page 27 is common to all 400 Series models.

4 0 0 S E R I E S



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MODEL 424 INSTALLATION INSTRUCTIONS

SUB-ZERO MODEL 424

Preparing the Space

First, make sure that the opening where the Sub-Zero wine storage unit is to be installed is properly prepared. Refer to illustration 1 to be sure the space dimensions and electrical service are correct for the Model 424.

IMPORTANT NOTE: To operate properly, the door must open a minimum of 90°. Use a minimum 2-inch filler in corner installations to assure a 90° door opening. Allow enough clearance in front of the unit for full door swing.

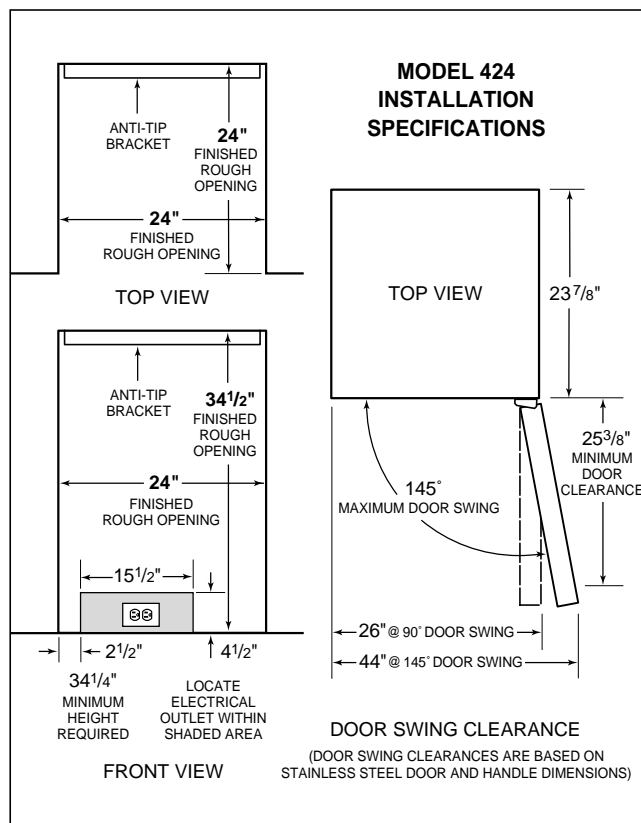
IMPORTANT NOTE: Make sure the floor under the unit is level with the surrounding finished floor. Protect a finished floor with plywood, cardboard or some other suitable material before moving the wine storage unit across it.

Preparing Electrical Connections

A 115 volt, 60Hz, 15 amp circuit breaker and electrical supply are required. A separate circuit is required for each Sub-Zero unit installed. Follow the National Electrical Code and local codes and ordinances when installing the receptacle.

IMPORTANT NOTE: For Model 424 the electrical outlet must be placed so the grounding prong is to the right of the thinner blades. The outlet must be flush with the back wall. Refer to illustration 1 for exact placement.

In addition to operating power, the installer may also be required to supply a home automation system lead to the unit. This is for a low voltage, low current signal similar to door and window sensor signals. Common, normally open and normally closed contact configurations are provided. Three 1/4" female spade connectors are located in the compressor compartment and are accessible behind the toe plate on Model 424. A minimum of 36" of lead wire should be provided for each contact to be used, exiting the back wall near the power outlet. Refer to the section "Home Alarm Connections" on page 5.



Illus. 1

Unpacking and Moving

Uncrate the unit outside. Remove the wood shipping base held on by four bolts and discard. Remove all packing materials and tape. Do not discard the anti-tip kit and hardware; this may be used later.

All sliding wine racks should be removed to reduce weight and prevent unexpected rack movement. To remove, pull the rack out to the stop point. Lift the front of the rack and pull again. As you remove the racks, be aware that some racks may be shorter than others to clear the fan system in the appliance cabinet.

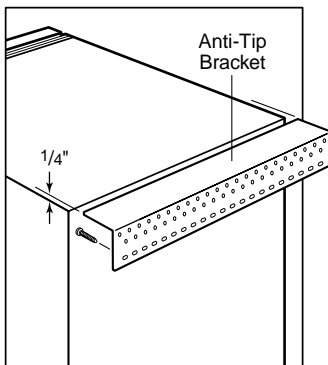
When you move the unit into the house using a hand truck or dolly, position the dolly on the side of the unit and secure the door so that it will not open while transporting the unit.

Blocking for Safety

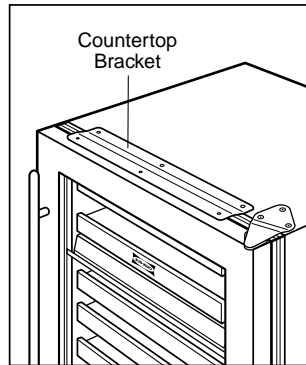
⚠ WARNING

To prevent the unit from tipping forward if multiple loaded bottle racks are pulled out at one time, and to provide a stable installation, the unit must be secured in place with an anti-tip device.

A metal anti-tip bracket and installation screws and washers are supplied with the unit. This device should be attached to the wall behind the appliance with the bracket flange located immediately above the top of the appliance, as shown in illustration 2. Some installation sites might need to be modified to provide a secure surface for attaching the bracket. A smaller metal 'countertop' bracket is provided to attach the front of the appliance to the underside of the countertop above the appliance. Refer to illustration 3.



Illus. 2



Illus. 3

Installing

⚠ CAUTION

Any finished flooring should be protected with appropriate material to avoid damage from moving the unit. If for any reason the unit has been laid on its back or side, you must allow the unit to stand upright for a minimum of 24 hours before connecting power.

Before moving the unit, make sure the door is secured with tape.

If a lock is to be used, it will need to be added before the unit is installed. Refer to the section "Lock Installation" on page 8.

Plug the unit into a 15 amp grounded outlet. With power applied to the appliance, check for lighting and cooling before going any further. Once you are satisfied the unit is operating properly, turn off the power to the wall outlet at the circuit breaker and proceed.

⚠ WARNING

Shut off the power to the wall outlet.

If a home alarm system will be used with the wine storage unit, the lead wires should be threaded into the compressor compartment at this time. See the section "Home Alarm Connections" on page 5, for the location of these lead wires. After the appliance is in place, the alarm wiring can be completed from the front.

Slide the appliance into position, making sure the anti-tip device is installed properly. The Model 424 provides best access to its contents if the front surface of the door panel extends out from the surrounding cabinets approximately 1/4".

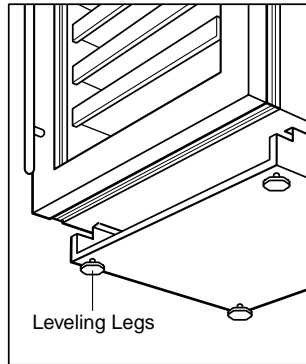
IMPORTANT NOTE: The floor under the wine storage unit must be at the same level as the surrounding finished floor.

Leveling

Turn each of the four legs clockwise to raise the unit and counterclockwise to lower the unit, using an adjustable wrench or pliers. For location of leveling legs see illustration 4. The countertop bracket should be used to make a solid installation, refer to illustration 3 on page 4. If this is not possible, wedge shims along the sides and top.

⚠ WARNING

To prevent tipover of the appliance, install the anti-tip device and extend the front levelers to the floor.



Illus. 4

Home Alarm Connections

Before the toe plate is installed, all necessary wiring connections in the compressor compartment should be completed.

If a home alarm system is to be installed on the Model 424, the connections should be made using the logic supplied with the alarm specifications. See illustration 5 for the appliance lead locations. Refer to the chart for color codes.

Switch Contacts	Appliance Wire Colors
Common	white with red stripe
Normally Closed	white with blue stripe
Normally Open	gray with white stripe

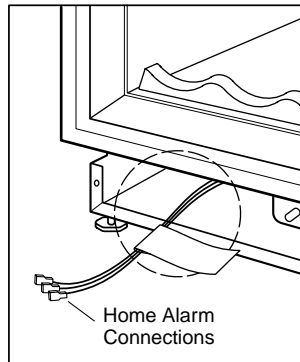
Use the 1/4" spade terminals or wire nuts provided to make the proper wiring connections.

IMPORTANT NOTE: If you are not responsible for alarm system connection, this information should be supplied to the person who is responsible.

⚠ CAUTION

The alarm circuit in the appliance is intended as a low voltage, low current device only. It should not be used to switch line power.

Any unused terminals should be completely insulated and all wires should be secured away from conductive or moving components.



Illus. 5

MODEL 424 INSTALLATION INSTRUCTIONS

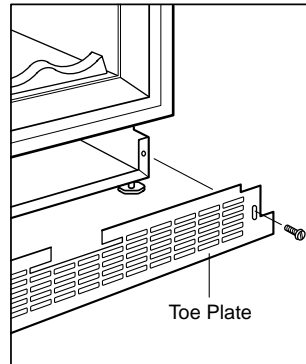
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Toe Plate Installation

Once the unit is secured, you can install the toe plate. Refer to illustration 6 for Model 424 toe plate installation.

⚠ CAUTION

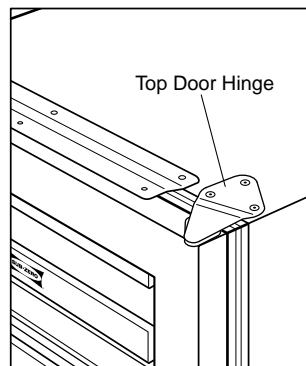
The toe plate must be removable for servicing. The floor cannot interfere with removal. The louvered section of the toe plate must not be covered so as to prevent air circulation.



Illus. 6

Hinge Adjustment

Top and bottom hinges can be adjusted by loosening three screws on the door hinge. See illustration 7.



Illus. 7

Door Panel Information

The Model 424 offers two door panel design alternatives; stainless steel (S) or overlay (O). Each of these designs is available in glass (G) or solid (S) doors. This, together with door swing choices, result in eight individual unit possibilities.

Model 424/S (stainless steel) is shipped from the factory with decorative stainless steel panels and handles in place on the appliance, ready for use.

The Model 424/O (overlay) door is designed to accept a decorative front panel to match surrounding cabinetry. This panel and the door handle will be provided by the customer.

The solid door (no glass window) configuration requires a different appliance than the glass door design.

Before beginning installation, check for the correct components for the fit and finish desired. All overlay doors require a trim panel at least 5/8" thick.

If you have questions, contact the selling Sub-Zero dealer or cabinet supplier. Instructions regarding sizing of the panels are provided in the "Sub-Zero Design Guide".

MODEL 424 PANEL INSTALLATION

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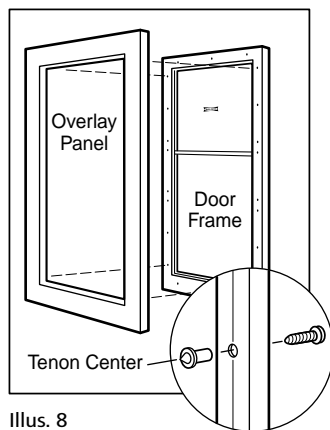
Door Panel and Handle Installation – Overlay Glass Doors

Inspect the door panel for the minimum 5/8" thickness, the finished inside edge and the 10 pound weight limit. See the 400 Series section of the "Sub-Zero Design Guide" for details.

Decide if the handle will be attached through the glass door frame or just through the trim panel. If it is just through the trim panel, the handle must be attached to that first.

Decorative panels are attached to the Model 424 door using #8 x 5/8" square drive screws passing through the door frame from the rear, into the trim panel. The door panel is marked for screw locations by the use of 'tenon centers', which are temporarily inserted into the 1/4" diameter holes in the front of the glass door frame. Refer to illustration 8.

With the wine storage unit secured in position and the appliance door closed, the trim panel is held in the desired position on the door and rapped by hand from the front, putting center marks on the rear surface of the trim panel. If the trim panel is made of such a material that pre-drilling is needed, all of the mounting holes should be marked. If not, only enough holes to hold the trim panel in place temporarily are necessary. The trim panel is then lowered from the door frame, tenon centers removed, the door opened and the screws driven into the trim panel through the door frame, using the center marks to locate the screws.



Illus. 8

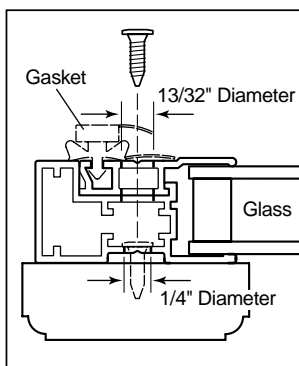
The screw holes inside the door, are hidden under a cover flap on the door gasket. It is necessary to lift the flap to insert the screws.

IMPORTANT NOTE: After the first three or four mounting screws are in place, but not completely tightened, close the door and check your trim panel fit. This is the time to make small adjustments. Once you are satisfied with the appearance, open the door and apply the remainder of the screws. Check all screws for tightness.

The metal frame on the glass door has a pair of mounting holes on each side of the door, spaced at 10-3/4" and located mid-height on the door. This is to accommodate the Sub-Zero accessory handles and provide for easy attachment of the handle through the door frame.

If you choose not to use the pre-drilled handle mounting holes, it will be necessary to fasten the handle from the rear of the trim panel only, or drill one or more additional holes through the metal frame of the glass door.

Illustration 9 shows how this hole passes through the door frame. The hole center is on the small locator groove in the front of the frame. A 1/4" diameter hole is made in the front wall of the extrusion and a 13/32" diameter hole through the rest of the frame.



Illus. 9

MODEL 424 PANEL INSTALLATION

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⚠ CAUTION

The wine storage unit door is made with a sealed double wall tempered glass core. The drill must not contact this core when you are drilling. Be sure the hole is centered on the small groove in the front of the door frame and the drill passes squarely through the frame. If you are inexperienced with drilling, fasten the handle from the rear of the trim panel only.

IMPORTANT NOTE: Install screws in all the mounting holes in the door frame. The nature of the trim panel with a narrow outer rim and no connecting center member requires the support provided by the glass door.

After trim panel installation is complete, apply the cover patches or plugs provided, over the holes on the inside surface of the door.

⚠ CAUTION

The cover plugs or patches are a part of the insulation system on the wine storage unit door. Be sure to cover all the holes in the door.

Solid Door Panel Installation

NOTE: The Model 424 solid door panel has a minimum thickness of 5/8" and a 20 pound weight limit.

Install the solid door panel the same as a trim panel on a glass door.

⚠ CAUTION

Solid panels **must not** be installed on glass doors.

Lock Installation

The lock is attached to the bottom of the metal door frame. The trim panel is not involved in the installation or operation of the lock. On the Model 424, the catch portion of the lock device is attached to the bottom of the appliance cabinet in pre-punched holes. It may be helpful to tip the unit on its back to install the lock assembly. Keep the time the unit is tipped to a minimum.

When Installation is Complete...

IMPORTANT NOTE: When you have completed the installation of the Model 424 wine storage unit please refer to page 27 of this Installation Guide for an installation check list and important service information.

SUB-ZERO MODELS 427 AND 427R

Preparing the Space

First, make sure that the opening where the Sub-Zero wine storage unit is to be installed is properly prepared. Refer to illustration 1 to be sure the space dimensions and electrical service are correct for the Model 427 or 427R.

IMPORTANT NOTE: To operate properly, the door must open a minimum of 90°. Use a minimum 2-inch filler in corner installations to assure a 90° door opening. Allow enough clearance in front of the unit for full door swing.

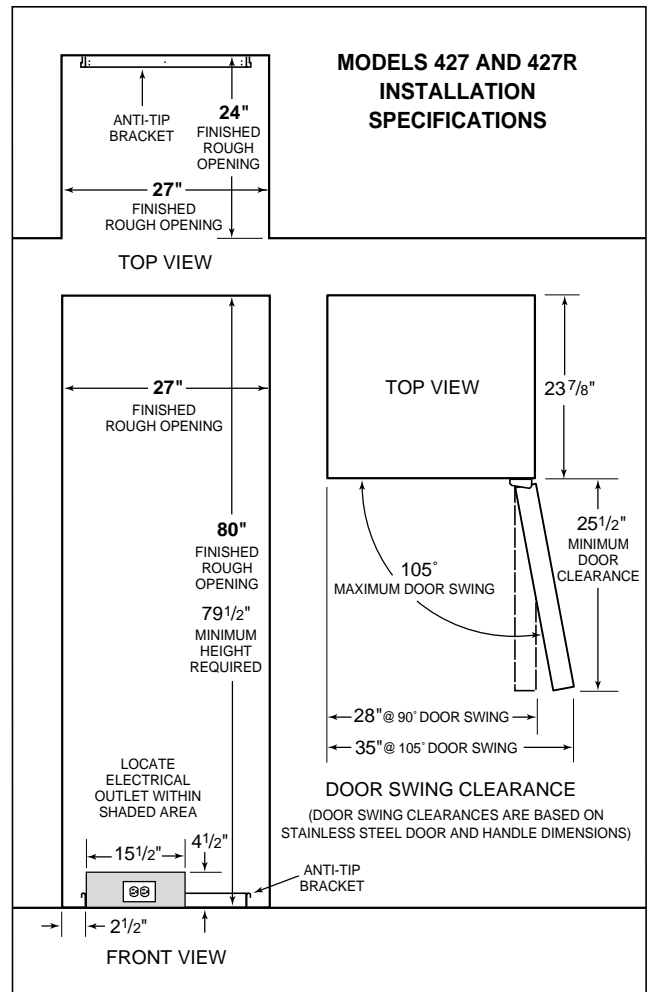
IMPORTANT NOTE: Make sure the floor under the unit is level with the surrounding finished floor. Protect a finished floor with plywood, cardboard or some other suitable material before moving the wine storage unit across it.

Preparing Electrical Connections

A 115 volt, 60Hz, 15 amp circuit breaker and electrical supply are required. A separate circuit is required for each Sub-Zero unit installed. Follow the National Electrical Code and local codes and ordinances when installing the receptacle.

IMPORTANT NOTE: For Models 427 and 427R the electrical outlet must be placed so the grounding prong is to the right of the thinner blades. The outlet must be flush with the back wall. Refer to illustration 1 for exact placement.

In addition to operating power, the installer may also be required to supply a home automation system lead to the unit. This is for a low voltage, low current signal similar to door and window sensor signals. Common, normally open and normally closed contact configurations are provided. Three 1/4" female spade connectors are located in the compressor compartment and are accessible behind the toe plate on Models 427 and 427R. A minimum of 36" of lead wire should be provided for each contact to be used, exiting the back wall near the power outlet. Refer to the section "Other Wiring Connections" on page 13.



Illus. 1

Unpacking and Moving

Uncrate the unit outside. Remove the wood shipping base held on by four bolts and discard. Remove all packing materials and tape. Do not discard the anti-tip kit and hardware; this may be used later.

All sliding wine racks should be removed to reduce weight and prevent unexpected rack movement. To remove, pull the rack out to the stop point. Lift the front of the rack and pull again. As you remove the racks, be aware that some racks may be shorter than others to clear the fan system in the appliance cabinet.

MODELS 427 AND 427R INSTALLATION INSTRUCTIONS



Retract the front leveler legs to let you move the unit easily during installation. To prevent the appliance from tipping forward, position the front levelers flat on the floor, if the unit is left unattended. Extend these legs when the unit is finally positioned.

When you move the unit into the house using a hand truck or dolly, position the dolly on the side of the unit and secure the door and drawers so they do not open while transporting the unit.

Blocking For Safety

For shipping, the anti-tip blocking bracket is fastened to the crate base at the back of the unit. Where you are installing the unit in the space deeper than 24", you must install the anti-tip blocking bracket no more than 24" deep so it engages the unit properly. It is important that this measurement be made from the front of the unit without panels, to the back of the anti-tip blocking bracket. In all instances, the Sub-Zero unit should be installed on a solid base.

⚠ WARNING

To prevent tipover of the appliance, install the anti-tip device and extend the front levelers to the floor.

Wood Floor Applications

Use the six #12 x 2-1/2" wood screws and the six 1/4" flat washers provided. Following illustration 2, drill pilot holes 3/16" diameter maximum, being certain the screws penetrate through the flooring material and into the wall plate a minimum of 3/4". Be sure screws hold tight.

⚠ WARNING

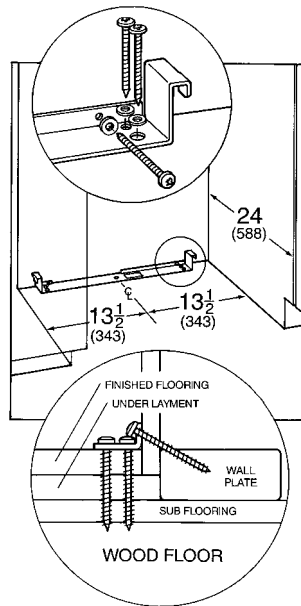
Assure that there are no electrical wires in the area which the screws could penetrate.

Concrete Floor Applications

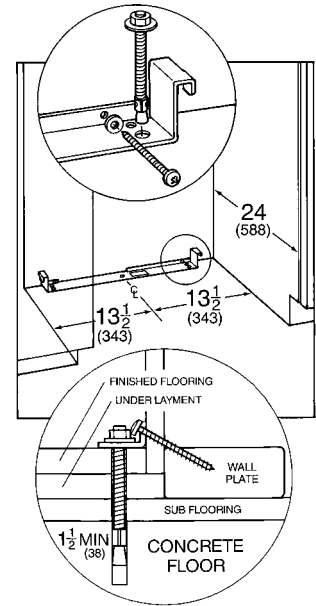
Use two 3/8" x 3-3/4" concrete wedge anchors, two #12 x 2-1/2" wood screws, and two 1/4 flat washers provided. See illustration 3.

Installation Instructions For Concrete Wedge Anchors

1. Drill a 3/8" diameter hole any depth exceeding the minimum embedment. Clean hole or continue drilling additional depth to accommodate drill fines. **NOTE:** Use a carbide drill bit manufactured within ANSI B94.12-77.
2. Assemble washer and nut flush with end of anchor to protect threads. Drive anchor through material to be fastened until washer is flush to surface material.
3. Expand anchor by tightening nut 3-5 turns past hand tight position or to 25 foot-pounds of torque.



Illus. 2



Illus. 3

IMPORTANT NOTE: In some installations the sub-flooring or finished floor may necessitate angling the wood screws used to fasten the anti-tip blocking bracket to the back wall. Refer to illustrations 2 and 3 for examples.

⚠ CAUTION

Always wear safety glasses and other necessary protective devices or apparel when installing or working with anchors.

Not recommended for use in light-weight masonry material such as block or brick. Use of core drills not recommended to drill holes for this anchor. Not recommended for use in new concrete which has not had sufficient time to cure.

Installing

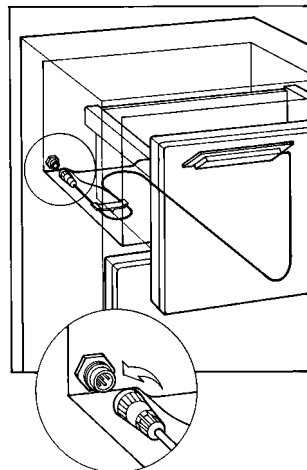
⚠ CAUTION

Any finished flooring should be protected with appropriate material to avoid damage from moving the unit. Models 427 and 427R are equipped with rollers to make installation easier. If for any reason the unit has been laid on its back or side, you must allow the unit to stand upright for a minimum of 24 hours before connecting power.

Before moving the unit, make sure the door is secured with tape and the drawers of Model 427R have been removed.

IMPORTANT NOTE: For Model 427R, the top drawer has a control cable that needs to be disconnected before removing this drawer. Refer to illustration 4 for placement and how to disconnect this fitting.

The drawers should be placed aside until you are ready for installation of the door and drawer panels. Remove the decorative top and side molding pieces and the toe plate.



Illus. 4

IMPORTANT NOTE: Where two 427, 427R or 700 Series units are placed closer than two inches to one another, it is necessary to use the dual installation components supplied by Sub-Zero. Contact your Sub-Zero distributor for the proper components and instructions. The heater plate from the dual unit kit must be attached to the exterior of the right hand unit **before** the unit is slid into position.

If a lock is to be used, the catch should be installed on the appliance cabinet before the unit is installed. Refer to the section "Lock Installation" on page 17.

Plug the unit into a 15 amp grounded outlet. For Models 427 and 427R, it is not necessary to remove the plastic straps holding extra electrical cord. With power applied to the appliance, check for lighting and cooling before going any further. Once you are satisfied the unit is operating properly, turn off the power to the wall outlet at the circuit breaker and proceed.

⚠ WARNING

Shut off the power to the wall outlet.

If a home alarm system will be used with the wine storage unit, the lead wires should be threaded into the compressor compartment at this time. See the section "Other Wiring Connections" on page 13, for the location of these lead wires. After the appliance is in place, the alarm wiring can be completed from the front.

Roll the appliance into position, making sure the anti-tip device is installed properly.

IMPORTANT NOTE: The floor under the wine storage unit must be at the same level as the surrounding finished floor. Screw the **front** leveling legs out approximately 3/16" to make any future adjustments easier.

MODELS 427 AND 427R INSTALLATION INSTRUCTIONS



Leveling

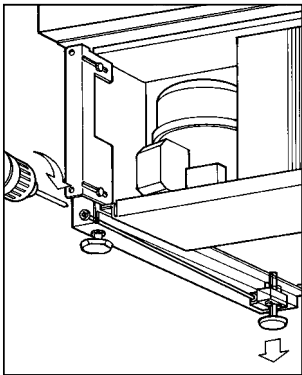
Level the unit by turning the front leveling legs counter-clockwise to raise or clockwise to lower. The rear levelers are adjusted from the front of the base by turning the phillips head screw.

IMPORTANT NOTE: The rear leveling legs will only move 1/16" for every 18 revolutions on the phillips head screw. **Do not** over torque. Use the lowest torque setting on any power screwdriver. **Do not** turn rear legs by hand. Damage will occur if you turn these legs. Refer to illustration 5.

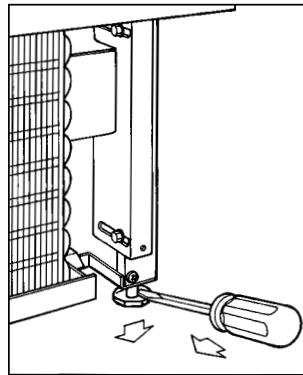
HINT: To assist you in adjusting the front leveling legs up or down, use a standard screwdriver blade and place it in the front leg as shown in illustration 6.

⚠ WARNING

To prevent tipover of the appliance, install the anti-tip device and extend the front levelers to the floor.



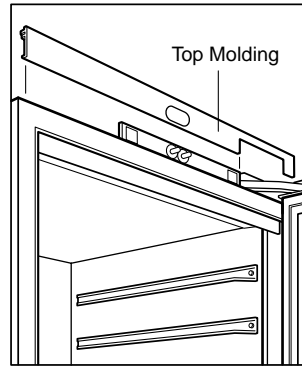
Illus. 5



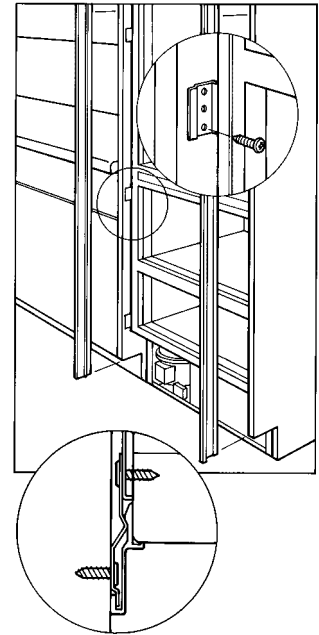
Illus. 6

Molding Installation

The decorative white molding strips for the side and top of Models 427 and 427R can be snapped into place. The top molding piece must be installed before the side molding can be attached. Refer to illustrations 7 and 8. For installations where units are side by side, refer to the section "Side Panel Installation" on page 17.



Illus. 7



Illus. 8

Other Wiring Connections

Before the toe plate is installed, all necessary wiring connections in the compressor compartment should be completed.

If the dual installation heater is used on Models 427, 427R or 700 Series units, the power supply leads should be connected according to the heater instructions.

If a home alarm system is to be installed on these models, the connections should be made using the logic supplied with the alarm specifications. See illustration 9 for the appliance lead locations of Models 427 and 427R. Refer to the chart for color codes.

Switch Contacts	Appliance Wire Colors
Common	white with red stripe
Normally Closed	white with blue stripe
Normally Open	gray with white stripe

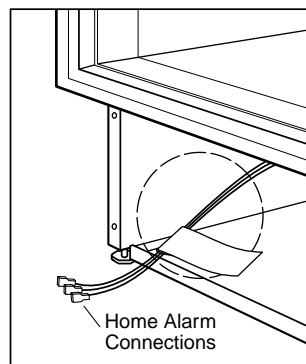
Use the 1/4" spade terminals or wire nuts provided to make the proper wiring connections.

IMPORTANT NOTE: If you are not responsible for alarm system connection, this information should be supplied to the person who is responsible.

CAUTION

The alarm circuit in the appliance is intended as a low voltage, low current device only. It should not be used to switch line power.

Any unused terminals should be completely insulated and all wires should be secured away from conductive or moving components.



Illus. 9

Toe Plate Installation

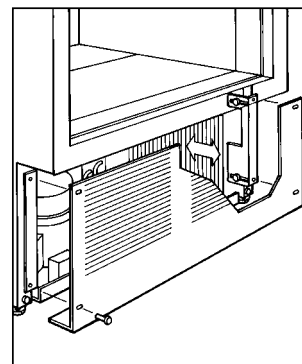
Once the Model 427 or 427R is secured, you can install the toe plate.

CAUTION

The toe plate must be removable for servicing. The floor cannot interfere with removal. The louvered section of the toe plate must not be covered so as to prevent air circulation.

Models 427/S and 427R/S are supplied with a stainless steel strip and mounting device to be added to the toe plate. As shown in illustration 10, there is some adjustment to the mounting assembly so this decorative piece can fit flush with the surrounding area.

The unit must be allowed to have ventilation through these fins. You may cover the solid area, but do not block the fins. The lower drawer panel of Model 427R may hang in front of the fins, but your baseboard molding must not cover them.



Illus. 10

MODELS 427 AND 427R PANEL INSTALLATION



Door Panel Information

Models 427 and 427R are each available in glass (G) or solid (S) doors. This, together with door swing choices, result in four individual unit possibilities for Model 427 and four for Model 427R.

Each of these appliances are set up at the job site as either stainless steel or integrated. The Sub-Zero stainless steel decorative panels may be configured several ways and are shipped in separated package(s). The integrated look is accomplished by mounting wood or composition panels provided by the customer.

Model 427R always receives solid panels on the drawers. These may match the finish on the doors, or be complementary. The Model 427R stainless steel drawer panel set and stainless steel door panel are ordered and shipped as two items.

The solid door (no glass window) configuration requires a different appliance than the glass door design.

Before beginning installation, check for the correct components for the fit and finish desired. All doors require a trim panel at least 5/8" thick. This 5/8" minimum also applies to the Model 427R drawer panels.

If you have questions, contact the selling Sub-Zero dealer or cabinet supplier. Instructions regarding sizing of the panels are provided in the "Sub-Zero Design Guide".

Panel Installation – Stainless Steel Finish

Models 427 and 427R have the stainless steel panels packaged separately from the appliance. The Model 427R door panel is packaged separate from the drawer panels because they can be ordered separately. Before beginning installation, check the panels carefully; options are available for toekick height, overall height, door swing and door lock. Panels are shipped with handles in place.

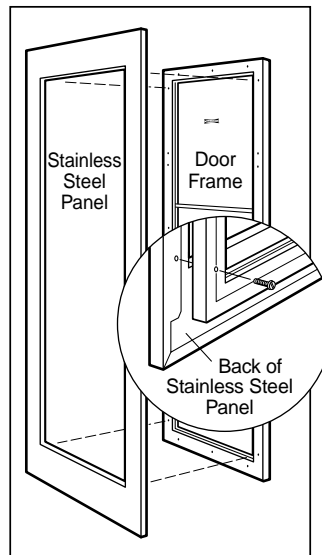
Panels are mounted to the **doors** by passing the #8-32 x 5/8" screws provided, through the holes in the door frame from the rear and into the threaded holes in the trim panel. See illustration 11. The screw holes inside the door are hidden under a cover flap on the door gasket. It is necessary to lift the flap to insert the screws.

After trim panel installation is complete, apply the cover patches or plugs provided, over the holes on the inside surface of the door.

CAUTION

The cover plugs or patches are a part of the insulation system on the wine storage unit door. Be sure to cover all the holes in the door.

Stainless steel panels are mounted to the Model 427R **drawers** by attaching metal brackets provided, to the back of the panels, then attaching this assembly to the drawer. See "Drawer Panel Installation—Model 427R" on page 16.



Door Panel and Handle Installation – Overlay Glass Doors

Inspect the door panel for the minimum 5/8" thickness, the greater width requirements for the stiles to cover the door hinges, and the finished inside edge. See the 400 Series section of the "Sub-Zero Design Guide" for details. The weight of the panel must not exceed 20 pounds.

Decide if the handle will be attached through the glass door frame or just through the trim panel. If it is just through the trim panel, the handle must be attached to that first.

If a lock is to be used, the lock body should be installed on the door panel after the panel is installed.

Decorative panels are attached to the Model 427 and 427R doors using #8 x 5/8" square drive screws passing through the door frame from the rear, into the trim panel. The door panel is marked for screw locations by the use of 'tenon centers', which are temporarily inserted into the 1/4" diameter holes in the front of the glass door frame. Refer to illustration 12.

With the wine storage unit secured in position and the appliance door closed, the trim panel is held in the desired position on the door and rapped by hand from the front, putting center marks on the rear surface of the trim panel. If the trim panel is made of such a material that pre-drilling is needed, all of the mounting holes should be marked. If not, only enough holes to hold the trim panel in place temporarily are necessary. The trim panel is then lowered from the door frame, tenon centers removed, the door opened and the screws driven into the trim panel through the door frame, using the center marks to locate the screws.

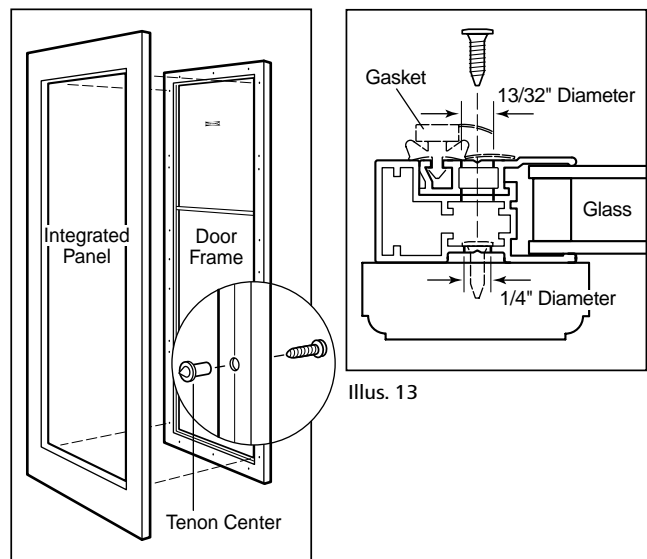
The screw holes inside the door, are hidden under a cover flap on the door gasket. It is necessary to lift the flap to insert the screws.

IMPORTANT NOTE: After the first three or four mounting screws are in place, but not completely tightened, close the door and check your trim panel fit. This is the time to make small adjustments. Once you are satisfied with the appearance, open the door and apply the remainder of the screws. Check all screws for tightness.

The metal frames on the glass doors have a pair of mounting holes on each side of the door, spaced at 10-3/4" and located mid-height on the door. This is to accommodate the Sub-Zero accessory handles and provide for easy attachment of the handles through the door frame.

If you choose not to use the pre-drilled handle mounting holes, it will be necessary to fasten the handle from the rear of the trim panel only, or drill one or more additional holes through the metal frame of the glass door.

Illustration 13 shows how this hole passes through the door frame. The hole center is on the small locator groove in the front of the frame. A 1/4" diameter hole is made in the front wall of the extrusion and a 13/32" diameter hole through the rest of the frame.



Illus. 12

Illus. 13

CAUTION

The wine storage unit door is made with a sealed double wall tempered glass core. The drill must not contact this core when you are drilling. Be sure the hole is centered on the small groove in the front of the door frame and the drill passes squarely through the frame. If you are inexperienced with drilling, fasten the handle from the rear of the trim panel only.

MODELS 427 AND 427R PANEL INSTALLATION



IMPORTANT NOTE: Install screws in all the mounting holes in the door frame. The nature of the trim panel with a narrow outer rim and no connecting center member requires the support provided by the glass door.

After trim panel installation is complete, apply the cover patches or plugs provided, over the holes on the inside surface of the door.

CAUTION

The cover plugs or patches are a part of the insulation system on the wine storage unit door. Be sure to cover all the holes in the door.

Drawer Panel Installation – Model 427R

NOTE: There is a minimum thickness of 5/8" and 12 pound weight limit for each drawer panel.

Remove the mounting hardware provided and set aside. You should work on the back side of each drawer panel and you should protect the fronts of these panels.

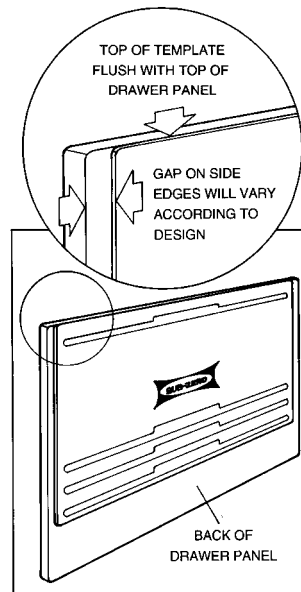
Position the top edge of the **drawer** template flush with the top edge of each drawer. For the top drawer, there is only one place for the lower mounting bracket to be placed. However, depending on the depth of the lower drawer panel, you have two options for placement of the bracket. Refer to illustration 14.

Secure the template in place with tape or small clamps and mark positions for your pilot holes. Remove template. Drill pilot holes and place the hardware in the proper place (dog-ear bracket on top) and fasten securely with #8 x 1/2" screws provided. See illustration 15.

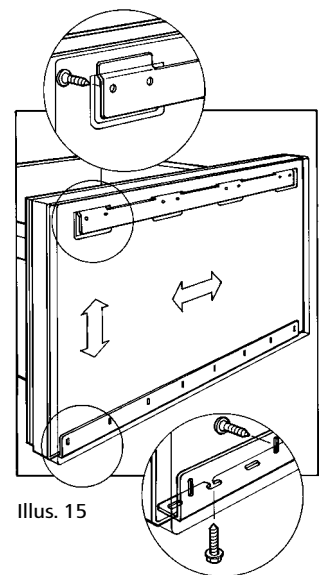
To help with the placement of the drawer panels, examine the lower bracket and determine the slotted holes on the bracket and position screws into the lower portion of the drawer that correspond with these slots. Leave these screws out a small distance so they can help when you mount the drawer panels to the drawer.

With the two brackets in place on the drawer panel, engage the top dog-ear bracket first and engage the lower bracket onto the protruding screws. You have a 1/4" inch adjustment up and down and from side to side in each drawer panel. Fasten all screws to lower bracket to secure the drawer panel. Refer to illustration 15.

IMPORTANT NOTE: Once drawer panels have been adjusted for proper spacing, be sure to reconnect the electrical wire on the upper drawer **only** after you have installed the drawer. See illustration 4 on page 11.



Illus. 14



Illus. 15

Solid Door Panel Installation

NOTE: The Models 427 and 427R solid door panel has a minimum thickness of 5/8" and a 40 pound weight limit. Install the solid door panel the same as a trim panel on a glass door.

⚠ CAUTION

Solid panels **must not** be installed on glass doors.

Side Panel Installation

Models 427 and 427R side panels are not attached to the units; you must securely fasten the panels to adjacent cabinets and floor.

Panels should be fastened to the floor and walls using 'L' brackets (hardware not provided). To help you move the appliance into place, route out an area in the floor so the 'L' bracket will sit flush with the floor level. Brackets and screws are provided for mounting the unit to adjoining cabinets and side panels. Each unit has four side mounting clips on each side.

IMPORTANT NOTE: For installations where you are not attaching to a side wall, or you are installing two Model 427, 427R or 700 Series units together, you must remove the clips before moving the unit into place. After removing the clips, replace the screws in the holes and discard the clips.

Optional components are necessary for anchoring two Model 427, 427R or 700 Series units together. Contact your product distributor or call (800) 222-7820 for details.

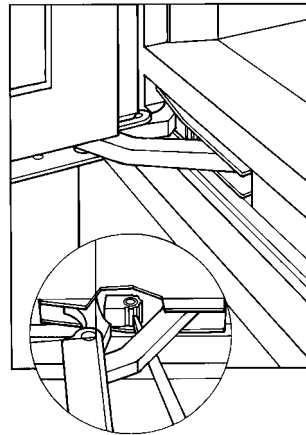
Lock Installation

The lock is attached to the trim panel through a field-drilled hole in the panel. The catch is attached to the top of the appliance cabinet.

Refer to the instructions provided with the lock package for further details.

90 Degree Door Stop

Models 427 and 427R have a 90 degree door stop built into the hinge system. Use the blade edge of a standard screwdriver and rotate the brass cam in the center portion of the hinge until you reach the stop. You must make this adjustment to both bottom and top hinge. Refer to illustration 16.



Illus. 16

When Installation is Complete...

IMPORTANT NOTE: When you have completed the installation of the Model 427 or Model 427R wine storage unit please refer to page 27 of this Installation Guide for an installation check list and important service information.

SUB-ZERO MODEL 430

Preparing the Space

First, make sure that the opening where the Sub-Zero wine storage unit is to be installed is properly prepared. Refer to illustration 1 to be sure the space dimensions and electrical service are correct for the Model 430.

If you are installing two Model 430's or a Model 430 and a 600 Series unit together, we recommend adding a separating filler strip to the finished rough opening dimensions.

IMPORTANT NOTE: To operate properly, the door must open a minimum of 90°. Use a minimum 2-inch filler in corner installations to assure a 90° door opening. Allow enough clearance in front of the unit for full door swing.

IMPORTANT NOTE: Make sure the floor under the unit is level with the surrounding finished floor. Protect a finished floor with plywood, cardboard or some other suitable material before moving the wine storage unit across it.

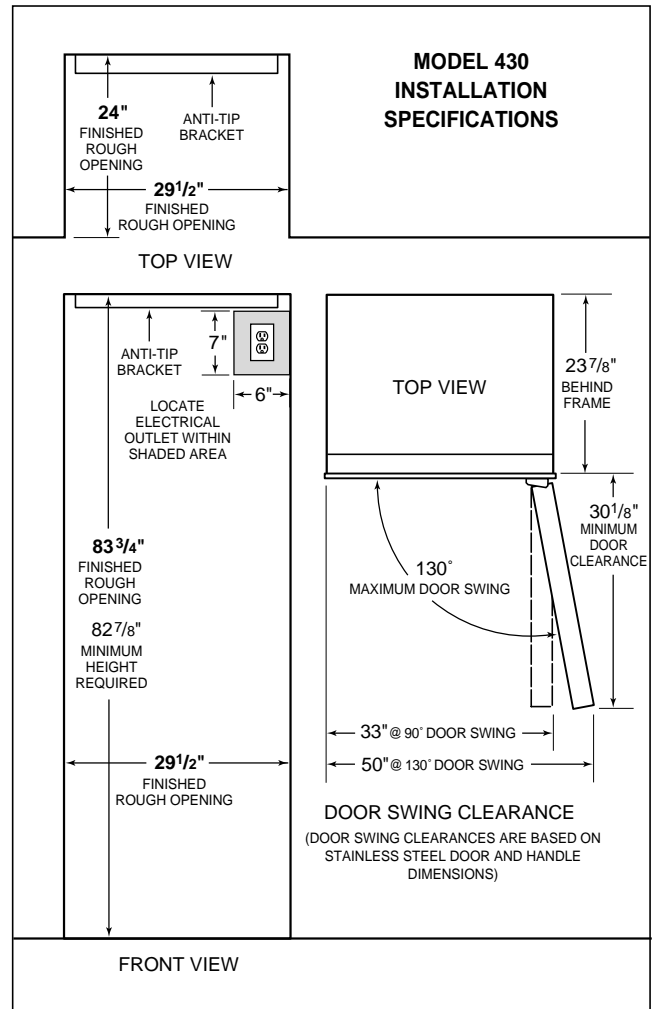
Preparing Electrical Connections

A 115 volt, 60Hz, 15 amp circuit breaker and electrical supply are required. A separate circuit is required for each Sub-Zero unit installed. Follow the National Electrical Code and local codes and ordinances when installing the receptacle.

In addition to operating power, the installer may also be required to supply a home automation system lead to the unit. This is for a low voltage, low current signal similar to door and window sensor signals. Common, normally open and normally closed contact configurations are provided. Three 1/4" female spade connectors are located in the compressor compartment and are accessible behind the grille on Model 430. A minimum of 36" of lead wire should be provided for each contact to be used, exiting the back wall near the power outlet. Refer to the section "Home Alarm Connections" on page 20.

Unpacking and Moving

Uncrate the unit outside. Remove the wood shipping base held on by four bolts and discard. Remove all packing materials and tape. Do not discard the anti-tip kit and hardware; this may be used later.



Illus. 1

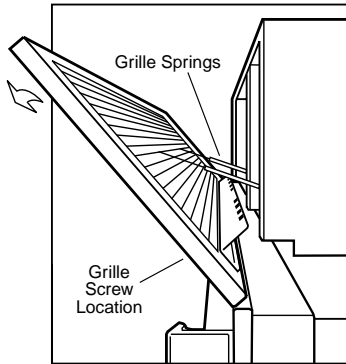
All sliding wine racks should be removed to reduce weight and prevent unexpected rack movement. To remove, pull the rack out to the stop point. Lift the front of the rack and pull again. As you remove the racks, be aware that some racks may be shorter than others to clear the fan system in the appliance cabinet.

Retract the front leveler legs to let you move the unit easily during installation. To prevent the appliance from tipping forward, position the front levelers flat on the floor, if the unit is left unattended. Extend these legs when the unit is finally positioned

When you move the unit into the house using a hand truck or dolly, position the dolly on the side of the unit and secure the door so that it will not open while transporting the unit.

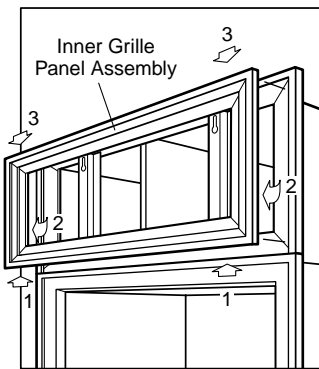
Grille Removal

Remove the grille in order to get to the power cord and move the unit through doorways. For a framed Model 430, remove three counter-sunk grille screws and cut the red nylon shipping strap. Then tilt the grille forward and release the springs from behind the grille. Refer to illustration 2.

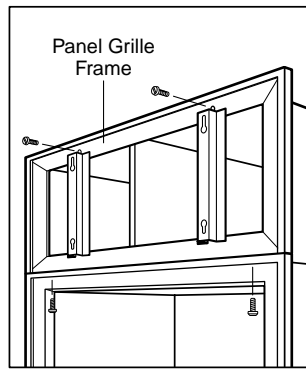


Illus. 2

If you're installing an overlay grille panel, first remove the inner grille panel assembly, as shown in illustration 3. Lift up, then pull out at the bottom, pull the top section down and out of the top key slot. Next, remove the four mounting screws that hold the outer grille panel assembly to the top compartment. See illustration 4.



Illus. 3



Illus. 4

Blocking For Safety

▲ WARNING

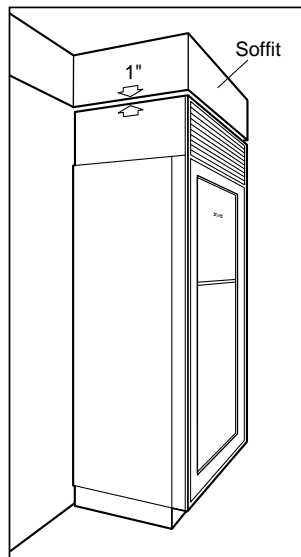
To prevent the unit from tipping forward if multiple loaded bottle racks are pulled out at one time, and to provide a stable installation, the unit must be secured in place with an anti-tip device.

If there is a solid soffit above the unit with clearance between the unit and the soffit of one inch or less, you won't need to block the unit. See illustration 5. But for installations with clearances of more than one inch, you must block the unit.

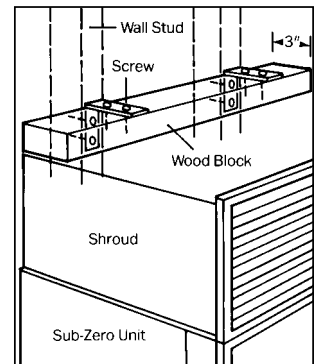
Use the anti-tip kit (wood block and hardware) provided with the shipping crate. Locate and mark two wall studs against the wall where the refrigerator will be located. Next, locate the proper height to clear the unit. The space between the unit top and the bottom of the wood block must not be more than 1/4".

Position the wood block over the unit and use the screws and 'L' brackets to lock it in place. Make sure the screws extend a minimum of 7/8" into each of the two wall studs. Make sure the wood block extends at least three inches over the unit and is securely in place. See illustration 6.

Using the front and rear levelers, raise the unit until it makes contact with the wood block. Make sure that the front levelers are firmly on the floor, to prevent the appliance from tipping forward.



Illus. 5



Illus. 6

Installing

⚠ CAUTION

Any finished flooring should be protected with appropriate material to avoid damage from moving the unit. Model 430 is equipped with rollers to make installation easier. If for any reason the unit has been laid on its back or side, you must allow the unit to stand upright for a minimum of 24 hours before connecting power.

Before moving the unit, make sure the door is secured with tape.

If a lock is to be used, it will need to be added before the unit is installed. Refer to the section "Lock Installation" on page 26.

Plug the unit into a 15 amp grounded outlet. With power applied to the appliance, check for lighting and cooling before going any further. Once you are satisfied the unit is operating properly, turn off the power to the wall outlet at the circuit breaker and proceed.

⚠ WARNING

Shut off the power to the wall outlet.

If a home alarm system will be used with the wine storage unit, the lead wires should be threaded into the compressor compartment at this time. See the section "Home Alarm Connections" for the location of these lead wires. After the appliance is in place, the alarm wiring can be completed from the front.

Roll the appliance into position, making sure the anti-tip device is installed properly.

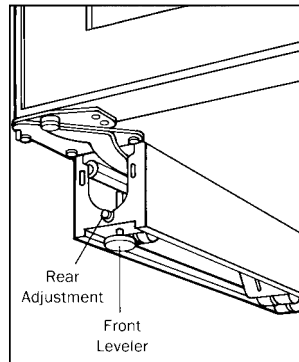
IMPORTANT NOTE: The floor under the wine storage unit must be at the same level as the surrounding finished floor.

Leveling

To adjust the height, turn the front leveling legs clockwise to raise the unit and counterclockwise to lower it. Adjust the rear levelers from the front of the base. Turn the 5/16" hex bolt clockwise to raise the unit, counterclockwise to lower the unit. Refer to illustration 7.

⚠ WARNING

To prevent tipover of the appliance, install the anti-tip device and extend the front levelers to the floor.

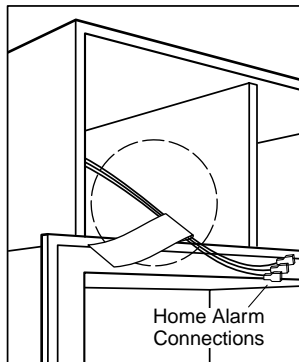


Illus. 7

Home Alarm Connections

Before the toe plate and grille are installed, all necessary wiring connections in the compressor compartment should be completed.

If a home alarm system is to be installed on the Model 430, the connections should be made using the logic supplied with the alarm specifications. See illustration 8 for the appliance lead locations. Refer to the chart for color codes.



Illus. 8

Switch Contacts	Appliance Wire Colors
Common	white with red stripe
Normally Closed	white with blue stripe
Normally Open	gray with white stripe

Use the 1/4" spade terminals or wire nuts provided to make the proper wiring connections.

IMPORTANT NOTE: If you are not responsible for alarm system connection, this information should be supplied to the person who is responsible.

CAUTION

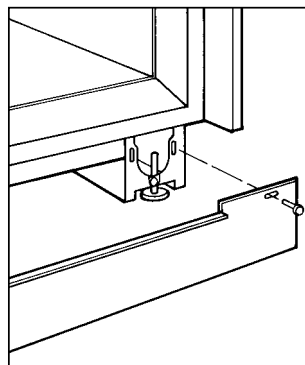
The alarm circuit in the appliance is intended as a low voltage, low current device only. It should not be used to switch line power.

Any unused terminals should be completely insulated and all wires should be secured away from conductive or moving components.

Toe Plate and Grille Installation

Once the Model 430 unit is secured, you can install the toe plate, as shown in illustration 9. Be sure the drain pan is installed properly.

The Model 430 grille may now be replaced by reversing the procedure in the section "Grille Removal" on page 19. If the installation involves a panel grille, also refer to the section "Overlay Grille Panel Installation" on page 24.



Illus. 9

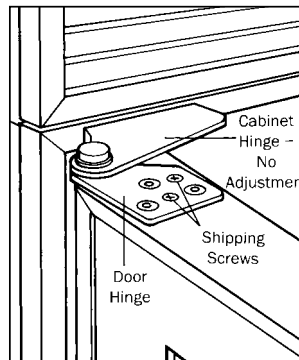
CAUTION

The toe plate must be removable for servicing. The floor cannot interfere with removal. Model 430 has a label mounted on the toe plate support for height clearance information.

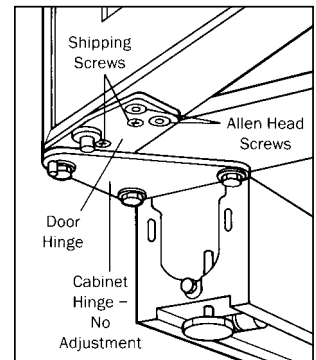
Hinge Adjustment

Check to make sure doors are properly adjusted. If not, adjust the top or bottom door hinge by first removing and discarding the two small shipping screws. See illustration 10. Adjust the top hinge left to right and in or out by loosening the three allen head screws. Adjust the bottom hinge with a 1/8" allen wrench. Refer to illustration 11. The door will now be able to move left to right or in and out.

IMPORTANT NOTE: The unit must be installed and leveled before adjusting the door hinges.



Illus. 10



Illus. 11

MODEL 430 PANEL INSTALLATION

400
SERIES

Door Panel Information

The Model 430 offers three door panel design alternatives; stainless steel (S), framed (F) or overlay (O). Each of these designs is available in glass (G) or solid (S) doors. This, together with door swing choices, result in twelve individual unit possibilities.

Model 430/S (stainless steel) is shipped from the factory with decorative stainless steel panels and handles in place on the appliance, ready for use.

Model 430/F (framed) accepts a decorative front panel which is inserted into the door frame channel. This panel will be provided by the customer. The handle is included as part of the door frame system.

Model 430/O (overlay) door is designed to accept a decorative front panel to match the surrounding cabinetry. This panel and the door handle will be provided by the customer.

The solid door (no glass window) configuration requires a different appliance than the glass door design.

Before beginning installation, check for the correct components for the fit and finish desired. All glass doors require a trim panel at least 5/8" thick, except for the Model 430/F solid door, which may be 1/4" minimum.

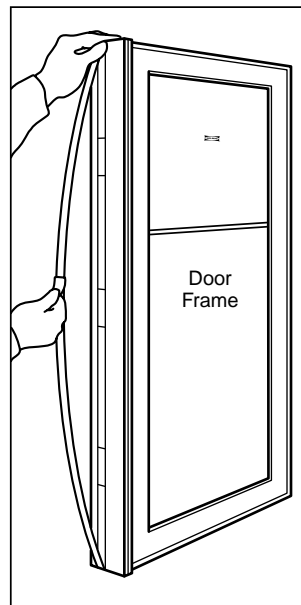
If you have questions, contact the selling Sub-Zero dealer or cabinet supplier. Instructions regarding sizing of the panels are provided in the "Sub-Zero Design Guide".

Door Panel and Handle Installation - Framed

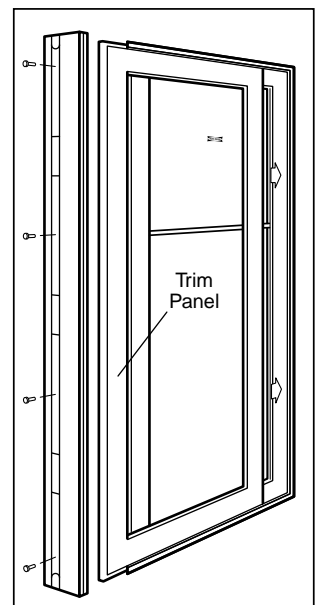
Inspect the door panel for the minimum 5/8" thickness, the required 1/4" routing around the perimeter, as shown in illustration 14 on page 23, and the finished inside edge. See the 400 Series section of the "Sub-Zero Design Guide" for details. The weight of the trim panel must not exceed 25 pounds.

Remove the door handle to install the trim panel. The handle screws are hidden by a magnet-backed trim molding. Remove the molding using a piece of tape to pull it away from the handle and expose the handle screws. The molding will bend at the center so you can remove it. See illustration 12.

With a phillips screwdriver, remove the handle from the door. Slide the panel into the channels provided by the trim extrusions on the door. With the trim panel in position, replace the handle. This is an extended version of the standard Sub-Zero handle, so no routing of the trim panel should be required for proper finger clearance. Be sure the panel is inserted completely into the channels for proper fit and alignment. See illustration 13. Next, replace the trim moldings by inserting the top, then the bottom into the handle channel. Release the middle and set the magnets.



Illus. 12



Illus. 13

MODEL 430 PANEL INSTALLATION

400
SERIES

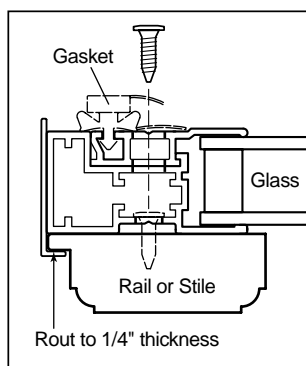
Install the #8 x 5/8" screws through the back of the glass door frame into the trim panel. Refer to illustration 14.

IMPORTANT NOTE: The trim panel should not be relied on to remain straight and flat by itself. Secure it to the wine storage unit door with the screws provided.

After trim panel installation is complete, apply the cover patches or plugs provided, over the holes on the inside surface of the door.

CAUTION

The cover plugs or patches are a part of the insulation system on the wine storage unit door. Be sure to cover all the holes in the door.



Illus. 14

Door Panel Installation – Model 430/O Overlay

If your customer has chosen overlay decorative door panels and grille panel, the unit will be shipped without a door handle and hardware. The cabinet manufacturer or designer will provide handle hardware at the job site to match the overall decorating scheme. We recommend larger D-style pulls. The use of small, one-piece knobs is not recommended.

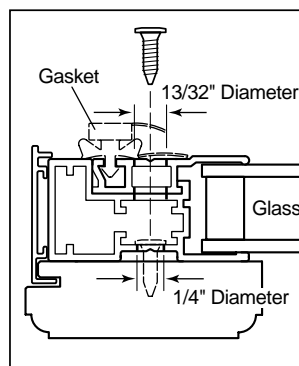
The metal frame on the glass door has a pair of panel mounting holes on each side of the door, spaced at 10-3/4" and located mid-height on the door. This is to accommodate the Sub-Zero accessory handles and provide for easy attachment of the handle through the door frame.

If you choose not to use these pre-drilled mounting holes, you must either drill additional holes through the metal frame of the door, or attach the handle through the trim panel only.

If you attach through the trim panel only the handle must be attached before the trim panel is installed and the handle screws will need to be set into the rear surface of the trim panel.

If you choose to drill through the metal door frame, this must be done before the handle holes are located and drilled in the panel.

Illustration 15 shows how this hole passes through the door frame. The hole center is on the small locator groove in the front of the frame. A 1/4" diameter hole is made in the front wall of the extrusion and a 13/32" diameter hole through the rest of the frame.



Illus. 15

MODEL 430 PANEL INSTALLATION

400

SERIES

⚠ CAUTION

The wine storage unit door is made with a sealed double wall tempered glass core. The drill must not contact this core when you are drilling. Be sure the hole is centered on the small groove in the front of the door frame and the drill passes squarely through the frame. If you are inexperienced with drilling, fasten the handle from the rear of the trim panel only.

Sub-Zero allows a quarter-inch space to slide the backing material into place on the door frame. Requirements for proper fit and appearance are; 5/8" minimum overall thickness, .10-inch wide groove between backer portion and overlay portion of panel, finished inside edge and 25 pounds maximum weight. See the 400 Series section of the "Sub-Zero Design Guide" for details.

IMPORTANT NOTE: The size of the overlay panel is critical. It must fit over the door frame.

To install overlay panels, first remove the magnet backed trim molding using a piece of tape to pull it away from the frame and expose the frame screws. The molding will bend at the center so that you can remove it.

Remove the frame by removing the five screws holding it in place. The door channel is now ready to accept the overlay panel. Slide the panel into the frame on the door. With the panel in position, replace the frame end. Be sure the panel is inserted completely into the channel for proper fit and alignment. Next, replace the trim molding by inserting the top, then the bottom into the frame channel. Release the middle and set the magnets.

Install the #8 x 5/8" screws through the back of the glass door frame into the trim panel.

IMPORTANT NOTE: Install screws in all the mounting holes in the door frame. The nature of the trim panel with a narrow outer rim and no connecting center member requires the support provided by the glass door.

After trim panel installation is complete, apply the cover patches or plugs provided, over the holes on the inside surface of the door.

⚠ CAUTION

The cover plugs or patches are a part of the insulation system on the wine storage unit door. Be sure to cover all the holes in the door.

Overlay Grille Panel Installation

If you have not already removed the inner and outer grille frame for moving the appliance, remove the inner grille panel assembly, see illustration 3 in the section "Grille Removal" on page 19. Remove the top two corner screws and pull away the top frame. Slide the panel into position in the grille frame. If you are using a grille panel 1/4" or thinner, you will need to install a filler.

Reattach the top frame by reinstalling the two top corner screws. Install the inner grille panel assembly onto the unit.

Solid Door Panel Installation

NOTE: The Model 430 solid door panel has a minimum thickness of 5/8", except for the Model 430/F, which may be 1/4" minimum. All panels have a 50 pound weight limit

Solid door panels on the Model 430 do not need mounting screws fastened into the panel.

⚠ CAUTION

Solid panels **must not** be installed on glass doors.

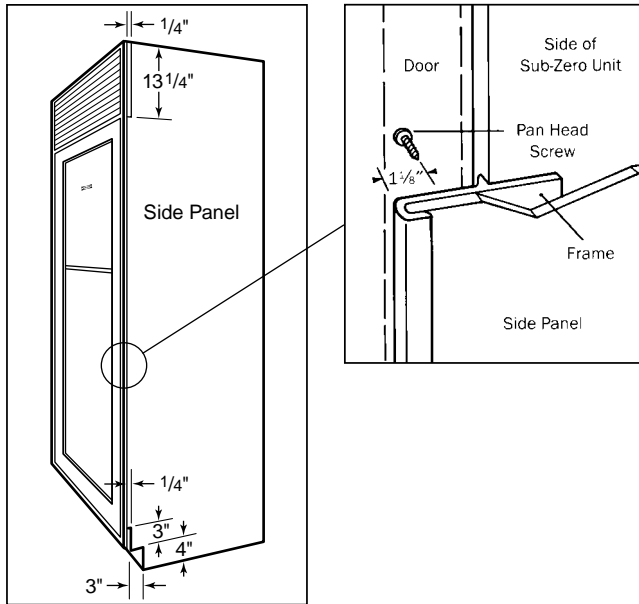
Side Panel Installation

If you're installing a unit with side panels, check with your installer or use one of the side panel installation options shown in illustration 17.

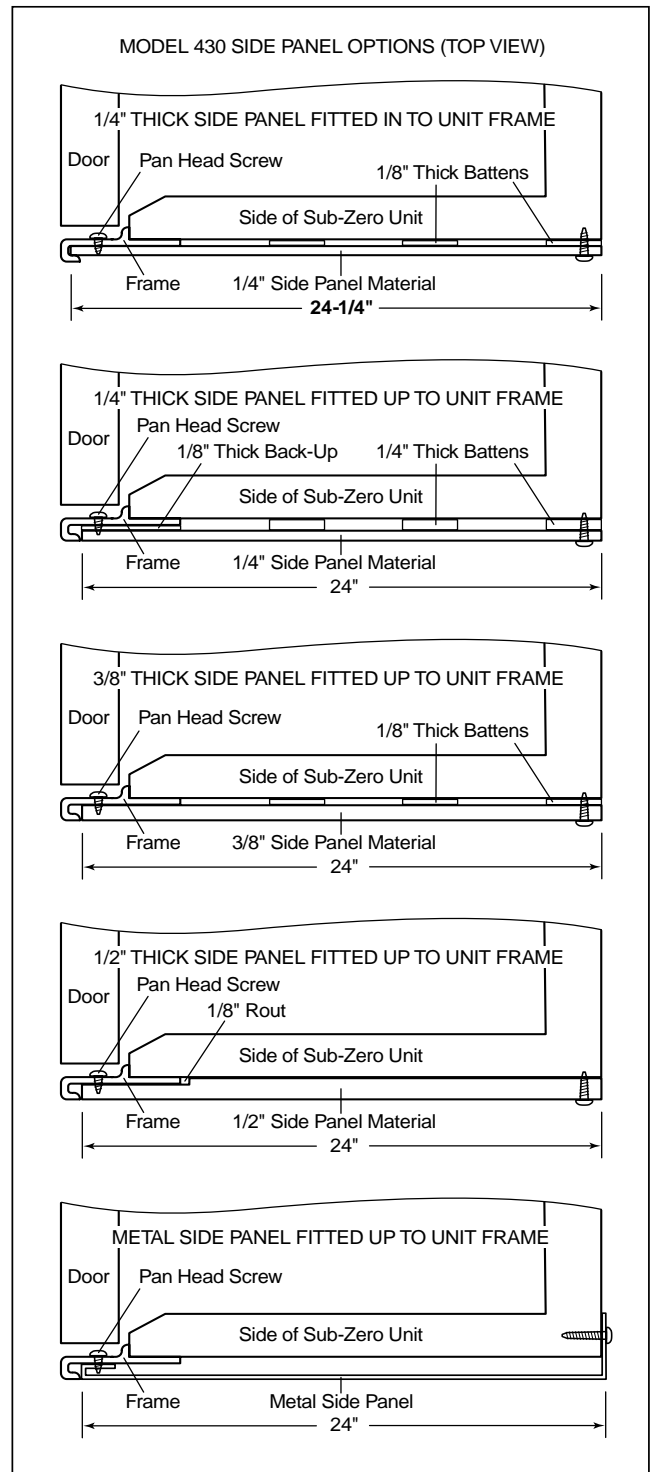
Drill three holes equidistant in a vertical section of the aluminum frame, and install pan head screws. Anchor the side panel with decorative screws or finishing nails from a local hardware store. Do not use adhesives. See illustration 16.

The dimensions given in illustration 17 are for typical wood side panels. If a 1/4" or less panel is used and inserted into the return channel extrusion, then a 24-1/4" size is necessary for width. The panel must also be notched for grille and other brackets or screws that are in the return channel. This is only necessary on this application.

The overall height on the side panel will vary with the height of the grille being used. Make sure you know your finished height before cutting any panels.



Illus. 16



Illus. 17

Anchoring the Unit

After installing door and side panels, leveling, alignment and door adjustment, anchor the unit to the opening to assure a proper fit. A Sub-Zero Anchoring Kit #4-20-090-0 is available from your distributor. Be sure to level and square the unit before anchoring it.

If two units are being tied together:

- Drill three 13/64" holes through the middle trim of both units.
- Using the loctite on the screws, install the three Chicago screw posts.
- Inspect the units for level.
- Drill three 3/16" holes through both outer trims. See illustration 18.
- Using a 1/8" drill bit, drill into the cabinetry for a pilot hole.
- Install all six sems to the cabinetry.

If you are fastening units to cabinetry:

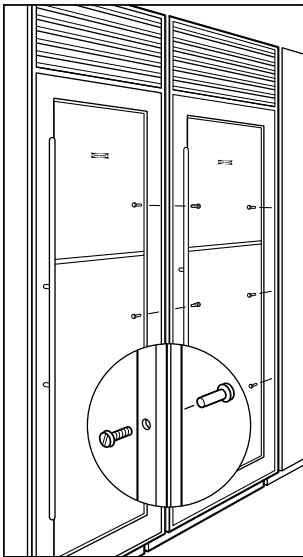
- Drill three 3/16" holes through both outer trims as shown in illustration 19.
- Drill a 1/8" pilot hole into the cabinetry.
- Install all six sems.

Lock Installation

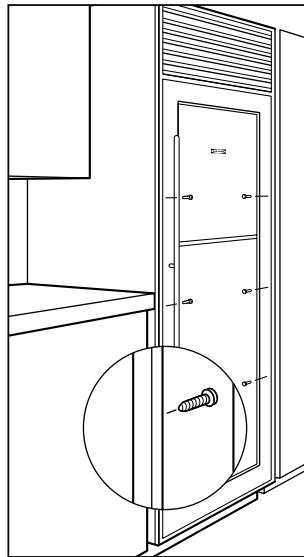
The lock is attached to the bottom of the metal door frame. The trim panel is not included in the installation or operation of the lock. On the Model 430, the catch portion of the lock device is attached to the bottom of the appliance cabinet in pre-punched holes.

90 Degree Door Stop

An optional 90° door stop kit is available through your Sub-Zero dealer or distributor.



Illus. 18



Illus. 19

SUB-ZERO 400 SERIES INFORMATION

Installation Checklist

That's it. You've completed the installation of a Sub-Zero 400 Series wine storage unit. But you're not finished yet. Go over our checklist of installation steps.

- Has the unit been secured in place with an anti-tip kit or by a secure overhead cabinet or structure?
- Are front levelers extended and making contact with the floor? Is the unit level?
- Is power cord connected directly to a properly grounded 3-prong outlet?
- Has the drain pan been installed properly, (Model 430)?
- Is the toe plate screwed in place?
- Are the grille screws back in position, (Model 430)?
- Are door panels attached securely and properly aligned?
- Are doors aligned for proper appearance and operation?
- Have installation problems been noted on warranty registration / quality control card?
- Does the 90° door stop need to be applied?

Service For Sub-Zero Wine Storage Equipment

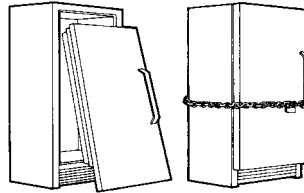
If you need service, check the model and serial number on the plate attached to the underside of the control panel/divider wall of the appliance (underside of the top wall for Model 424).

Contact a Sub-Zero Factory Authorized Service Center, a dealer, or Sub-Zero Freezer Co., Service Department, P. O. Box 44130, Madison, WI 53744-4130, call (800) 222-7820, or e-mail us at customerservice@subzero.com.

Think Safety!

If you are storing or disposing of your old refrigerator, please do it safely.

Child entrapment accidents can be tragic.



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SUB-ZERO FREEZER COMPANY, INC.

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3-75-635-4 400IG 6/99

