

# LIEBHERR

## **Design Guide Undercounter**

Release 03 2021



## **Liebherr's engineering excellence in Germany provides the largest selection of freezers, refrigerators and wine refrigerators worldwide.**

Liebherr is one of the World's leading Manufacturers of Premium Refrigeration. For more than 60 years, Liebherr has specialized in developing and manufacturing first class refrigerators and freezers as well as wine cabinets. We focus on performance and efficiency as well as keeping food fresher longer. Produced in Austria and Germany, Liebherr has a full line of premium models tailored specifically for the North American marketplace to fit any design vision you have for your kitchen.

Our freestanding stainless models are sleek centerpieces that make a definite statement. Our built-in models are perfect for designs that call for units that slide into cabinet surrounds. And our fully-integrated models become one with your kitchen design, hidden seamlessly behind your custom cabinetry.

High quality materials, perfectly detailed finishes, precise electronic control systems, elite cooling components, variable speed compressors and the latest production processes ensure energy efficiency and performance for years to come. Our superior products offer premium quality, cutting edge design and innovative features that fit with your busy lifestyle.

## **Liebherr's Commitment to the Environment**

The components of Liebherr products can be recycled when the necessary resources are available. A concern for the environment and a desire to protect resources has led to increased levels of recycling year after year. When Liebherr manufactures products, it is essential that the recyclable recovery rate of the materials we use constantly increases.

Recycling is a common goal among all manufacturers, municipalities and recycling companies to protect our environment. Protecting the environment and producing products which have a low impact on the environment, is one of Liebherr's core values. When the time comes, please attempt to dispose of your old appliances in an environmentally safe and friendly manner.

### **LIEBHERR WARRANTY PLAN**

#### **FULL TWO YEAR WARRANTY**

For two years from the date of original purchase, your Liebherr warranty covers all parts and labor to repair or replace any part of the product which proves to be defective in materials or workmanship.

#### **FULL FIVE YEAR WARRANTY**

For five years from the date of original purchase, your Liebherr warranty covers all parts and labor to repair or replace any components that prove to be defective in materials or workmanship in the sealed system. The “Sealed System” means only the compressor, condenser, evaporator, drier and all connecting tubing.

#### **LIMITED 6TH THROUGH 12TH YEAR WARRANTY**

From the 6th through 12th year from the date of original purchase, your Liebherr warranty covers all parts that prove to be defective in materials or workmanship in the Sealed System (parts only).

### **For Service in the U.S.**

#### **Liebherr Service Center**

Toll Free: **1-866-LIEBHER**  
**1-866-543-2437**

Email: [Service-appliances.us@liebherr.com](mailto:Service-appliances.us@liebherr.com)

#### **PlusOne Solutions, Inc.**

3501 Quadrangle Blvd, Suite 120  
Orlando, FL 32817

### **For Service in Canada**

#### **Liebherr Service Center**

Toll Free: **1-888-LIEBHER**  
**1-888-543-2437**

[www.euro-parts.ca](http://www.euro-parts.ca)

#### **EURO-PARTS CANADA**

39822 Belgrave Road  
Belgrave, Ontario, N0G 1E0  
Phone: (519) 357-3320  
Fax: (519) 357-1326

### **For Installation Questions**

[Install.Americas@liebherr.com](mailto:Install.Americas@liebherr.com)

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## General Remarks

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### Safety Warnings

#### PLEASE READ AND FOLLOW THESE INSTRUCTIONS

This design guide contains Warning and Important statements. This information is important for planning a safe and efficient installation. Please refer to the Installation Manual specific to your model for complete installation instructions.

This design guide is intended for planning purposes and is not a replacement for your appliance's Use and Care Manual which contains important information on how to use Liebherr appliances.

Always read and follow all Warning and Important statements!

 **WARNING!**

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

#### **IMPORTANT**

*This highlights information that is especially relevant to a problem-free installation and operation.*

Make sure incoming voltage is the same as the unit rating.

To reduce the risk of fire, electric shock, or personal injury, the installation work and electrical wiring must be done by a qualified electrician in accordance with all applicable codes and standards, including fire rated construction.

#### **To the Installer**

It is very important that the guidelines and instructions are followed in this design guide to ensure proper installation and operation of the unit. The Installation Guidelines section contains important information for making sure the installation is correct. Read and understand all the information and installation guidelines in this manual before the unit is installed.

It is also very important to **know** the Safety Information.

# General Remarks

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## Electrical Requirements & Safety

A 15 amp or 20 amp, 110-120 VAC, circuit which is grounded and protected by a circuit breaker or fuse is required.

We recommend using a dedicated circuit for each appliance to prevent circuit overload and the chance of interruption to the appliance.

The appliances are equipped with a three-prong (grounding) polarized plug for protection against possible shock hazards.

Comply with the National Electrical Code as well as local codes and ordinances when installing the receptacle.



**WARNING!**

**Electrocution hazard.**

**Electrical grounding required.**

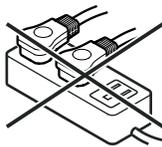
- Do not remove the round grounding prong from the plug. →



- Do not use extension cords or ungrounded (two-prong) adapters.

- Do not use a power cord that is frayed or damaged.

- Do not use a power strip. →



**Failure to follow these instructions may result in fire, electrical shock or death.**

## Additional Electrical Requirements for Outdoor Refrigerator RO 510

### When using the RO 510 Appliance Indoors

Connect the appliance to a 15 amp or 20 amp, 110-120 VAC, circuit which is grounded and protected by a circuit breaker or fuse.

### When using the RO 510 Appliance Outdoors

The appliance must be connected to a GFCI (Ground Fault Circuit Interrupter) receptacle.



**WARNING!**

**Electrocution hazard.**

**For outdoor use, connect this appliance to a GFCI receptacle only.**

**Failure to follow these instructions may result in fire, electrical shock or death.**

### **IMPORTANT**

*Do not place the appliance where it may be in standing water or where the power cord may be immersed.*

# General Remarks

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## Area Requirements

Verify the following:

- Finished kitchen floor height is level. The appliance must be shimmed to the floor level, or levelled, to make sure air vents are not obstructed.
- Remove anything attached to the rear or side walls that can obstruct the refrigerator opening.
- Cutout dimensions are accurate.
- Electrical outlet is in correct location.

Do not install this appliance next to any other refrigerator or freezer except another Liebherr model.

Liebherr models are designed to allow side by side installation. They are equipped with a heating system to eliminate condensation when units are installed side by side.

Installing this appliance next to any other refrigerator or freezer can cause condensation or cause damage to the appliance.

### **IMPORTANT**

*To protect the refrigerator from possible damage, allow the appliance to stand 1 hour in place before turning the electricity on. This allows the refrigerant and system lubrication to reach equilibrium.*

## Safety Regulations

The appliances are designed to cool and store beverages.

The appliances are manufactured to operate within specific ambient temperature limits according to its climate rating.

The climate rating indicates the ambient temperature at which the appliance may be operated in order to deliver optimal refrigeration performance.

The climate rating for each model is visible in chapter "Specifications".

<b>Climate Rating</b>	<b>Ambient Temperature</b>
SN	50°F to 90°F (10°C to 32°C)
N	61°F to 90°F (16°C to 32°C)
ST	61°F to 100°F (16°C to 38°C)
T	61°F to 109°F (16°C to 43°C)
SN-ST	50°F to 100°F (10°C to 38°C)
SN-T	50°F to 109°F (10°C to 43°C)

### **IMPORTANT**

*Do not operate the appliance outside the specified ambient temperature range.*

- Refrigerant circuits are tested for leaks.
- The appliances

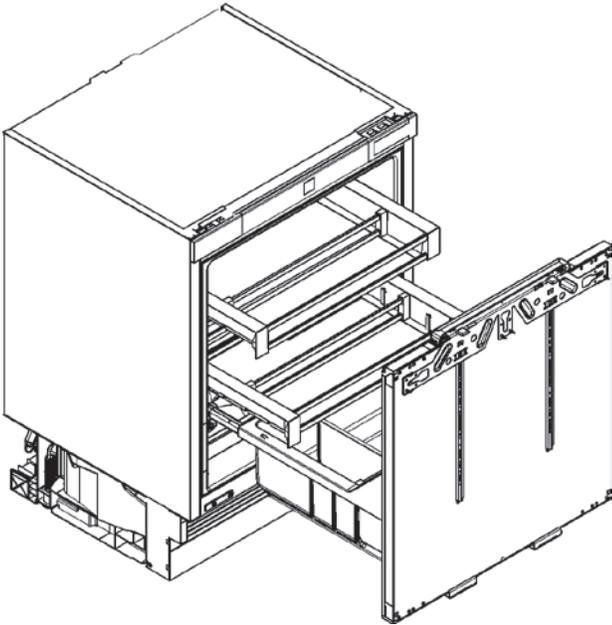
UPR 513  
UB 501  
UF 501  
UR 500  
RU 510  
RO 510

complies with current safety regulations

CAN/CSA C22.2 No.60335-1-11  
UL 60335-1 Fifth Edition  
CAN/CSA C22.2 No. 60335-2-24-06  
UL 60335-2-24 First Edition

# Undercounter

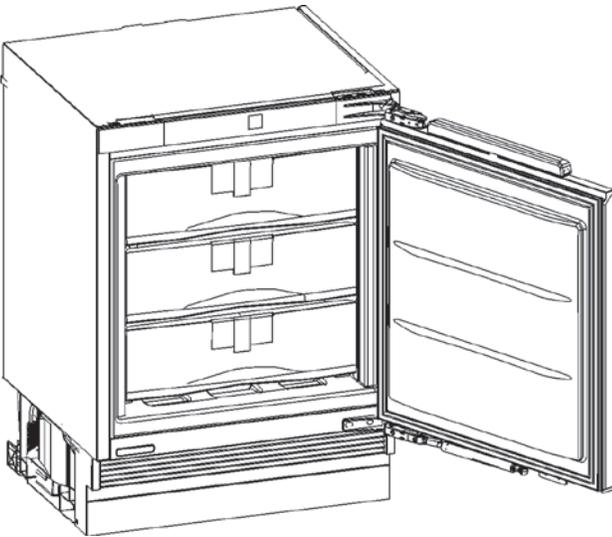
## Specifications



### UPR 513

Energy Supply: 115V / 60Hz / 2.3A  
Climate Rating: SN-T  
Total capacity: 4.37 cu ft (124l)

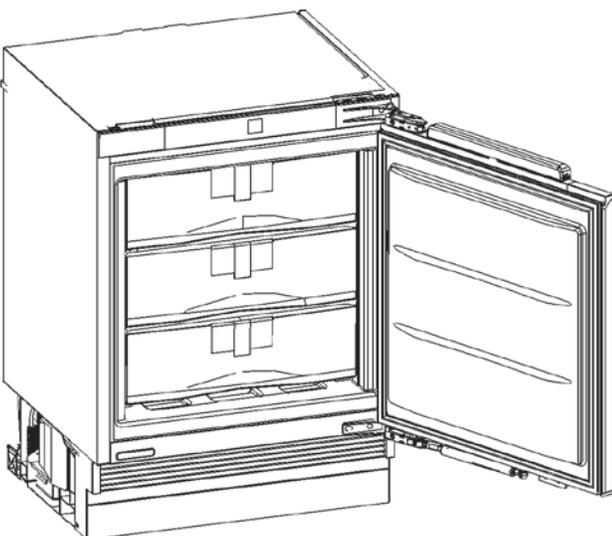
- Pull-out compartment
- Pull-out glass shelf board
- LED-light
- Height-adjustable feet
- Storage space under bottom drawer
- Touch electronic control system
- Sabbath Mode function
- Fully concealed behind a cabinet door



### UB 501

Energy Supply: 115V / 60Hz / 2.3A  
Climate Rating: SN-T  
Total capacity: 3.35 cu ft (95l)

- Safety glass storage shelves
- BioFresh refrigerator drawers
- Soft stop mechanisms
- LED-light
- Height-adjustable feet
- Touch electronic control system
- Sabbath Mode function
- Fully concealed behind a cabinet door

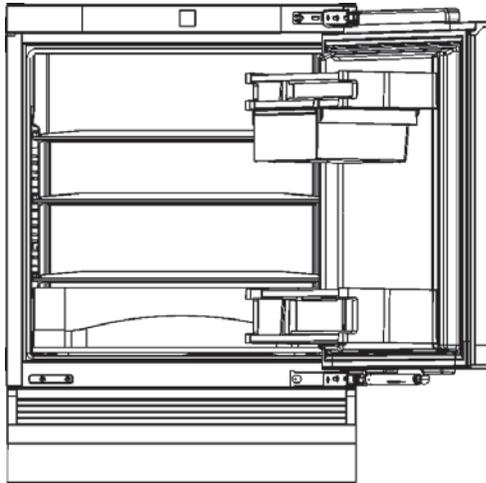


### UF 501

Energy Supply: 115V / 60Hz / 2.3A  
Climate Rating: SN-T  
Total capacity: 3.35 cu ft (95l)

- Large freezing capacity
- Safety glass storage shelves
- Soft stop mechanisms
- LED-light
- Height-adjustable feet
- Touch electronic control system
- Sabbath Mode function
- Fully concealed behind a cabinet door

# Undercounter



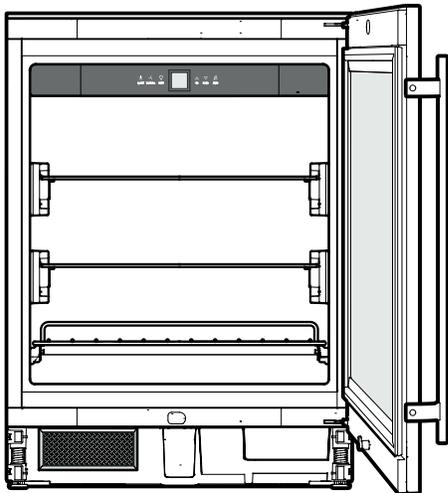
## UR 500

Energy Supply: 115V / 60Hz / 2.3A  
Climate Rating: SN-T  
Total capacity: 4.80 cu ft (136l)

- Adjustable door shelves for tall bottles
- Safety glass storage shelves
- Soft stop mechanisms
- LED-light
- Height-adjustable feet
- Touch electronic control system
- Sabbath Mode function
- Fully concealed behind a cabinet door

## Undercounter Beverage Center RU 510

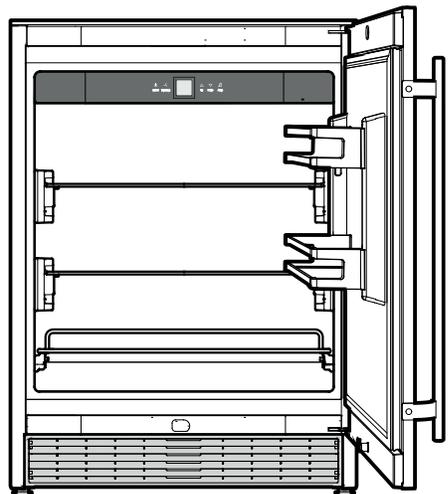
## Outdoor Refrigerator RO 510



## RU 510

Energy Supply: 115V / 60Hz / 1.5A  
Climate Rating: SN-ST  
Door hinges: right/reversible  
Door: glass door with stainless steel frame

- Touch electronic control system
- Telescopic bottom shelf
- Activated charcoal filter
- LED-light
- Glass shelves with stainless steel trim



## RO 510

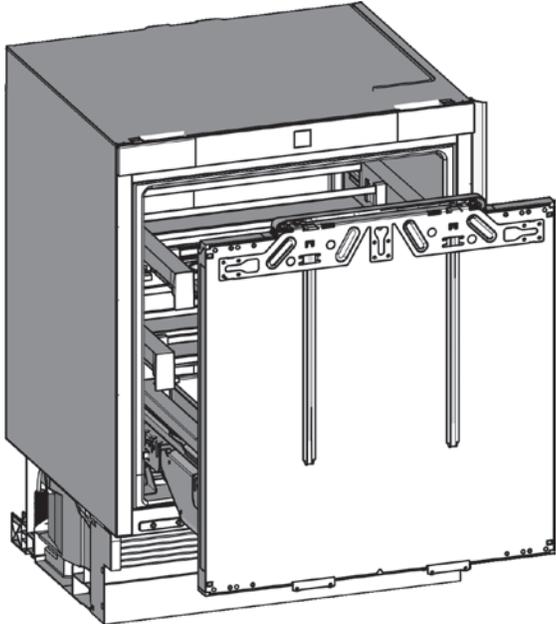
Energy Supply: 115V / 60Hz / 1.5A  
Climate Rating: SN-T  
Door hinges: right/reversible  
Door: stainless steel

- Touch electronic control system
- Telescopic bottom shelf
- Top door rack adjustable
- LED-light
- Glass shelves with stainless steel trim

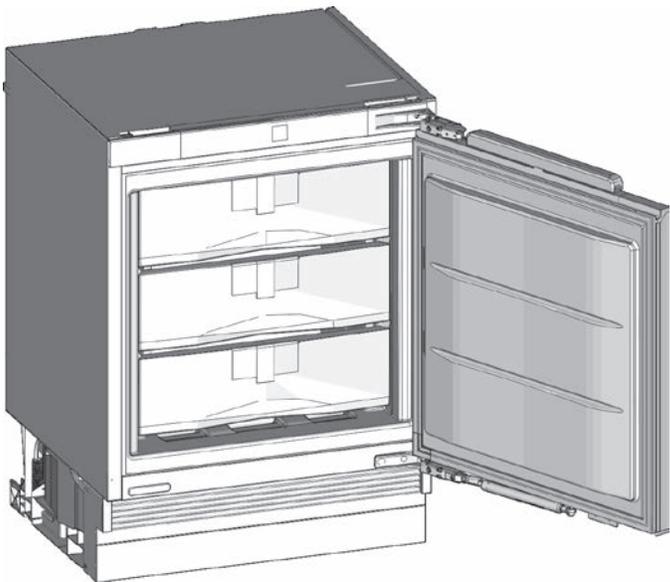
# Undercounter

## Fully integrated Undercounter

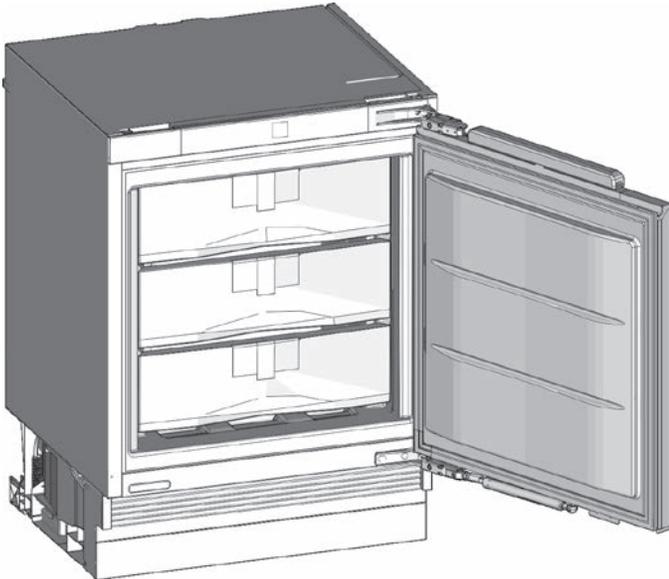
**UPR 513**



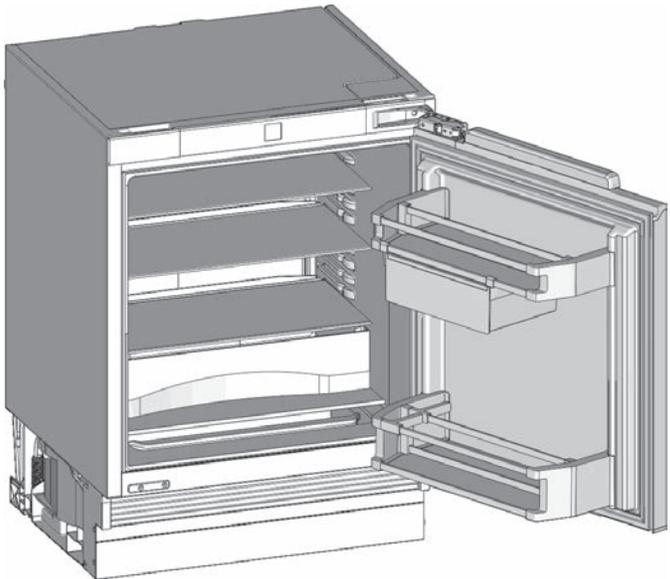
**UF 501**



**UB 501**



**UR 500**



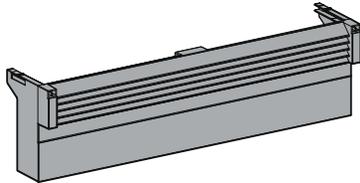
## Ventilation Requirements

This is a fully integrated undercounter model which means that it is fully enclosed by a kitchen cabinet. This type of cabinet must be carefully constructed using the correct dimensions and it must provide suitable ventilation to ensure proper appliance operation.

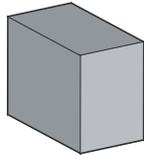
### IMPORTANT

*To ensure proper refrigeration performance of the appliance, designed ventilation is required.*

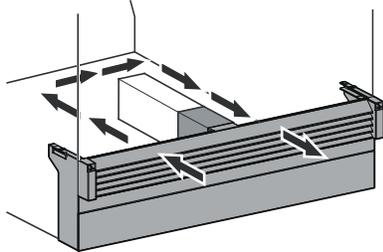
*The ventilation grille must be installed onto the appliance.*



*The foam block supplied must be installed in order to ensure the required air flow through the appliance base.*



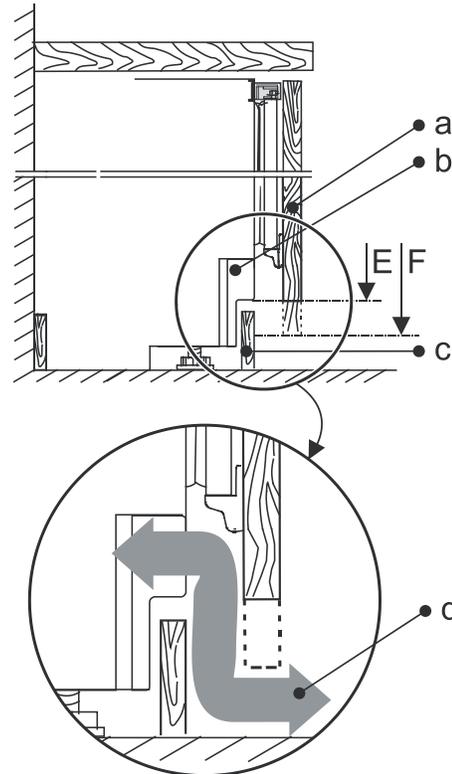
*Failure to follow this instruction may result in poor refrigeration performance.*



After installing the kitchen cabinet door, there must be a ventilation gap between the appliance ventilation grille and the kitchen cabinet door. The ventilation grille is movable to guarantee sufficient ventilation.

### Important

*A minimum opening of 1-3/8" (35 mm) must be maintained to allow proper air flow for ventilation.*



- a:** kitchen cabinet door
- b:** appliance ventilation grille
- c:** toe kick panel

### **d:** Air flow

The kitchen cabinet door, the appliance ventilation grille and the toe kick panel must maintain a minimum opening of 1-3/8 " (35 mm) to allow proper air flow for ventilation.

### **Case E:**

The ventilation openings in the ventilation grille are freely visible or are scarcely covered by the unit door.

- Ventilation is sufficient
- The ventilation grille can be pulled forward as far as possible so that the front edge of the ventilation grille and the toe kick panel lie flush.

### **Case F:**

The kitchen cabinet door covers the ventilation openings of the appliance ventilation grille b and part of the toe kick panel.

- To guarantee sufficient ventilation, there must be a ventilation gap of 1-3/8 " (35 mm) behind the unit door.
- Push the ventilation grille fully back.

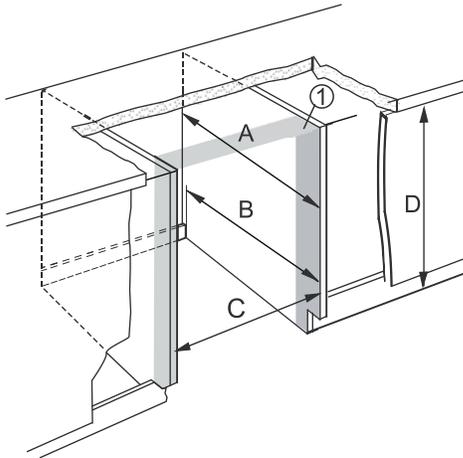
# Undercounter

## Appliance and Cabinet Dimensions

### IMPORTANT

The floor on which the appliance stands must be horizontal and level. The kitchen units must be aligned horizontally and vertically.

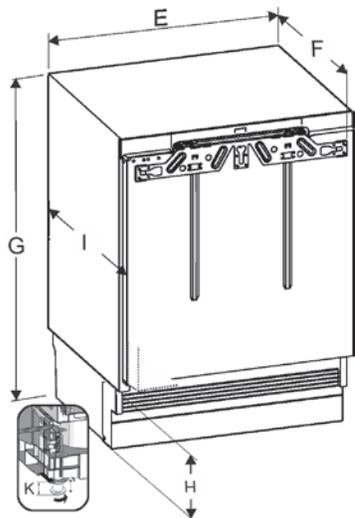
### Cabinet Dimensions



- A min. 21-5/8 " (min. 550 mm)
- B 21-1/4 " (540 mm)
- C 23-5/8 " - 24 " (600 mm - 610 mm)
- D 32-1/4 " - 34-5/8 " (820 mm - 880 mm)

① 3" (approx. 76 mm) of the cabinet needs to be finished as it can be seen when the door is open.

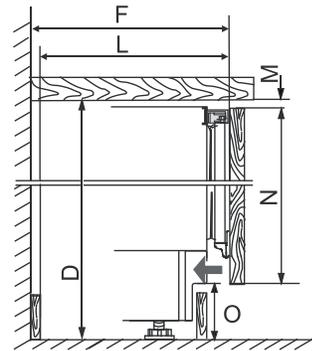
### Appliance Dimensions



- E 23-1/2 " (597 mm)
- F closed: 21-5/8 " (550 mm)  
max. opened: 39-3/4 " (1010 mm)
- G adjustable feet screwed in: 32-1/4 " (819,5 mm)  
adjustable feet screwed out max: 34-1/4 " (869,5 mm)
- H 6-5/8 " - 8-9/16 " (163 mm - 223 mm)
- I 21-1/4 " (540 mm)
- K max. height adjustment: 2 " ( max. 50 mm)

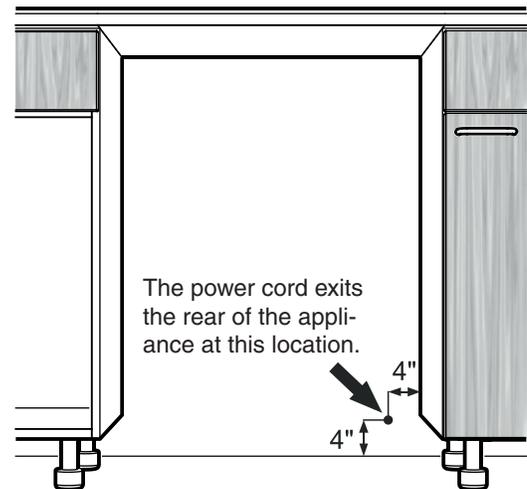
## Cabinet Dimensions with integrated Appliance

- Sideview -



- D 32-1/4 " - 34-5/8 " (820 mm - 880 mm)
- F closed: 21-5/8 " (550 mm)  
max. opened: 39-3/4 " (1010 mm)
- L 21-1/4 " (540 mm)
- M 1/8 " (4 mm)
- N 25-7/16 " - 30-5/16 " (646 mm - 770 mm)
- O max. 4 " - 6 " ( max. 102 mm - 152 mm)

## Location Of The Electrical Outlet



Free length of the power cord = 71" (~1800 mm)

### IMPORTANT

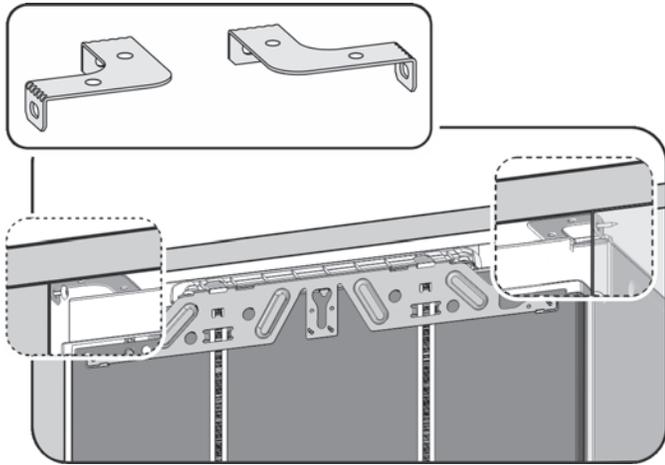
The electrical outlet must not be situated behind the appliance and must be easily accessible.

# Undercounter

## Fastening Method Appliance - Cabinet

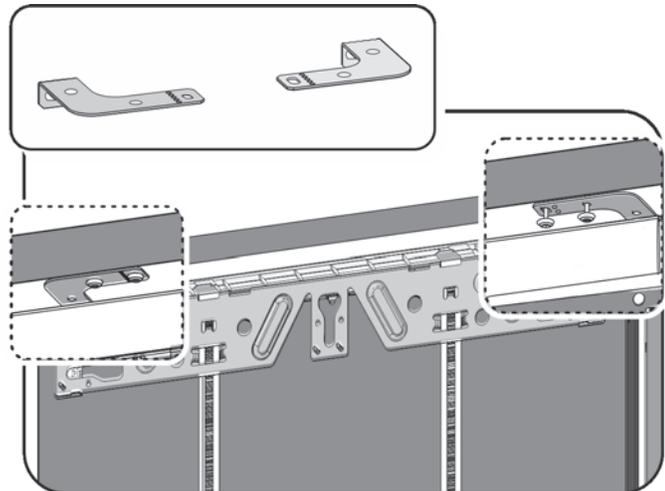
### Side fastening:

- Installation below hard worktops such as granite.
- With the adjusting feet completely screwed out, the appliance is lower than the counter top.



### Top fastening:

- When the adjusting feet are screwed out completely, the appliance sits slightly tensioned below the worktop.
- No granite top.

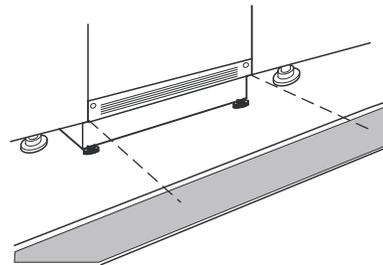


## Toe Kick Panel

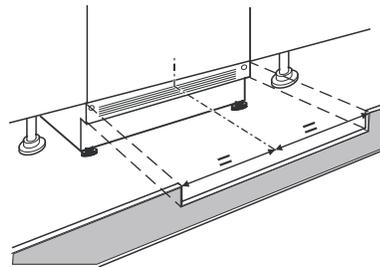
The toe kick installation will be different depending on the cabinets where the appliance is installed. A toe kick panel will be required to cover the gap between the ventilation grill and the floor.

A stainless steel adjustable toe kick is provided with the unit. A custom panel toe kick can also be used.

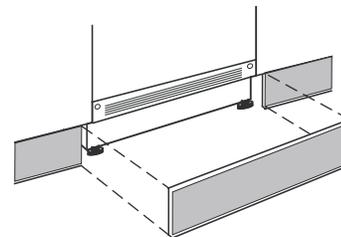
Toe kick can be placed along the front of a row of cabinets including the appliance if the toe kick does not cover the ventilation openings and maintains the 1-3/8" air flow gap shown on the previous page.



A cut-out in the toe kick panel is necessary when the toe kick covers the ventilation openings of the ventilation grille.



If the cabinets do not have a toe kick, a toe kick can be prepared and fitted just in front of the appliance.



# Undercounter

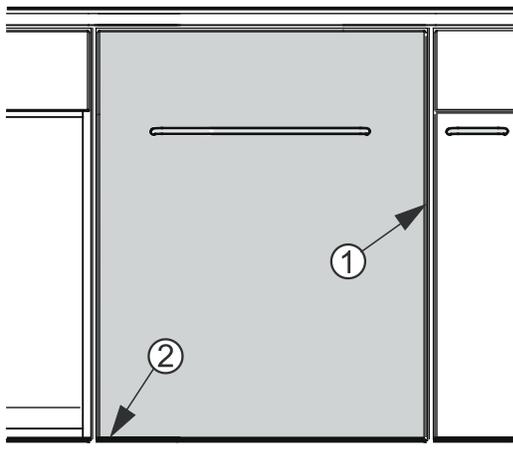
## Kitchen Cabinet Doors

### Designing the Kitchen Cabinet Door

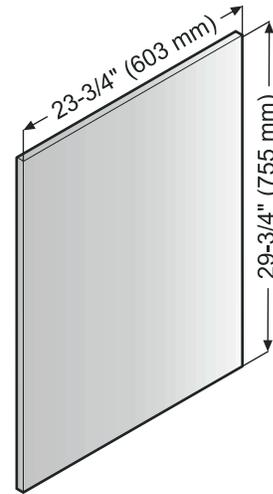
You will need one door for the kitchen cabinet. In general, the door has these characteristics:

- The width of the cabinet door depends on the kitchen style and the size of the gaps between the door panels of the cabinetry. Generally, a 1/8 in. (3 mm) vertical and horizontal gap between the door panels is recommended (1).
- The door should be at least 5/8 in. (16 mm) thick to allow the connecting rails to be fastened to it. The maximum thickness of the door panel can be 3/4 in. (19mm).
- The top edge of the door, if any, and the bottom edge of the door should be even with the doors of adjoining cabinet(s) (2).
- Adjust the door alignment before installing the appliance. It is impossible to adjust the cabinet door with the appliance installed.
- Check the installation dimensions according to Section "Unit Dimensions".
- Do not load the door of the refrigerator with more than 44,09 lbs (20 kg) of food.
- Before assembling the unit door, make sure that the permitted weight for the unit door is not exceeded. If permitted weight is exceeded damage to hinges may occur.

Maximum weight of unit door 22 lbs (10 kg)



## Kitchen Cabinet Door Panel for standard Toe Kick



### Note

*These panel dimensions are for inset flush installation in a standard cabinet opening of 24" (610 mm) wide with a cabinet that is 30" (762 mm) tall plus a 4" (102 mm) or 4 1/2" (115 mm) toe kick.*

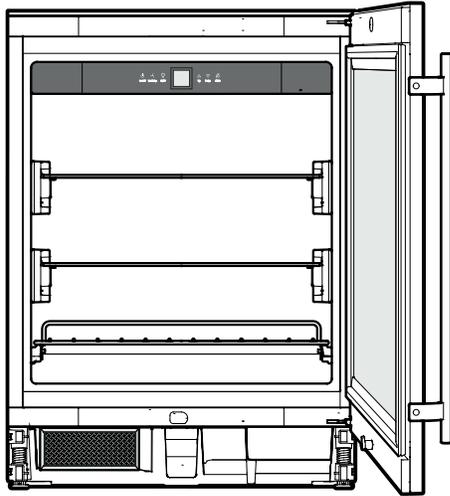
*If the cabinet opening is different you will need to modify the door panel accordingly.*

### Note

*A stainless steel door panel and handle are available as accessories, please see accessories section for kits number.*

# Undercounter

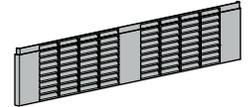
## Undercounter Beverage Center RU 510



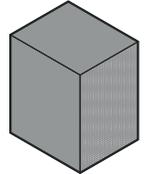
### IMPORTANT

To ensure proper refrigeration performance of the appliance, the adjustable toe kick supplied must be installed.

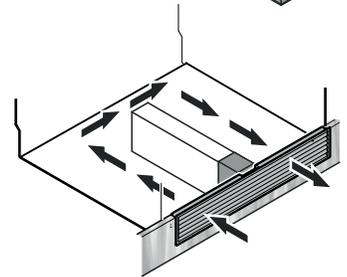
The ventilation grille must be installed into the toe kick panel.



The foam block supplied must be installed in order to ensure the required air flow through the appliance base.



Failure to follow this instruction may result in poor refrigeration performance.



### IMPORTANT

The cut-out section in the toe kick panel must be centered in relation to the appliance and in the uppermost part of the toe kick.

## R600a Refrigerant



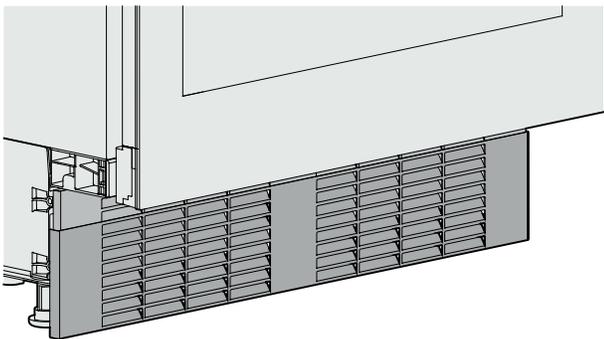
**WARNING!**

The refrigerant R600a contained within the appliances is environmentally friendly, but flammable. Leaking refrigerant can ignite.

To prevent possible ignition, designed ventilation is required.

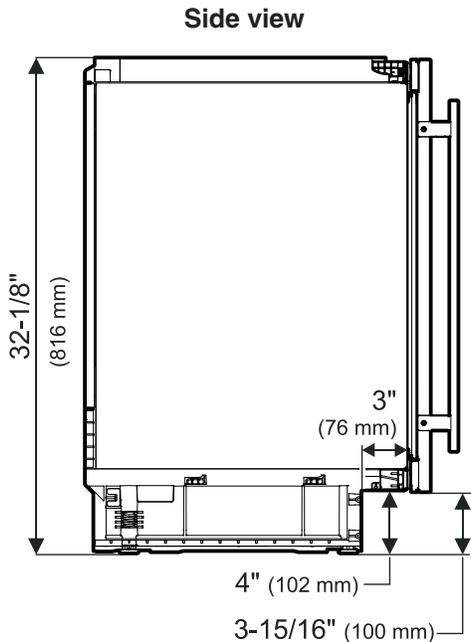
### Note

The adjustment of your beverage center unit to the counter, can be achieved with the adjustable toe kick, (height adjustable from 4 to 6 1/2 inches). Also can be achieved by using a trim kit to adjust above the beverage center units.



# Undercounter

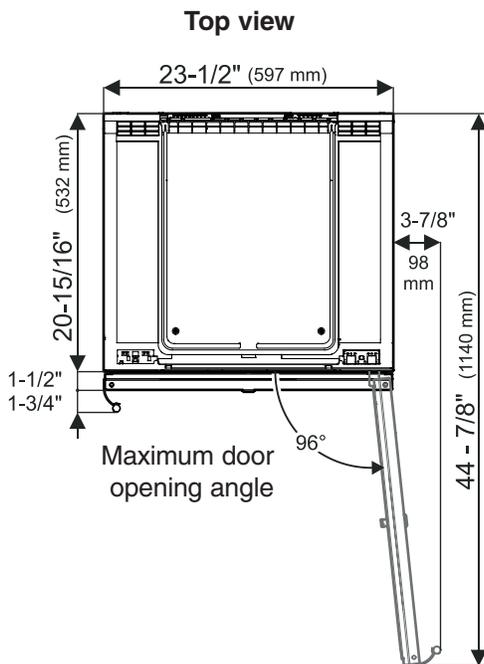
## Appliance and Cabinet Dimensions



Height when adjustable feet have been screwed in as far as they will go.

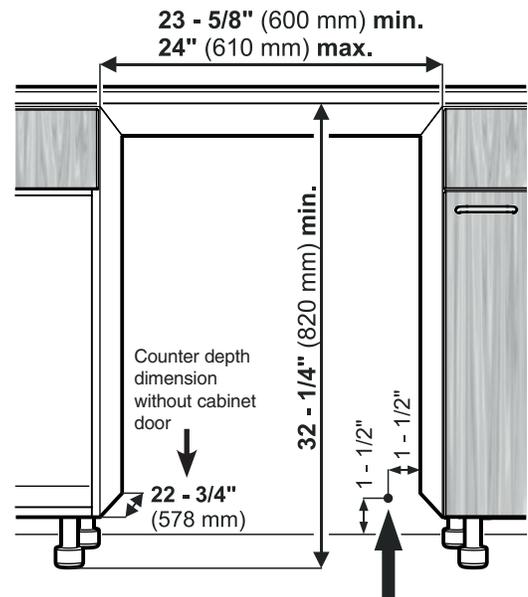
Delivery status = feet unscrewed approx. 1/8" .

Maximum height adjustment = 2" (51 mm) to allow for a 6" (153 mm) toe kick.



### IMPORTANT

The floor on which the appliance stands must be horizontal and level. The kitchen units must be aligned horizontally and vertically.

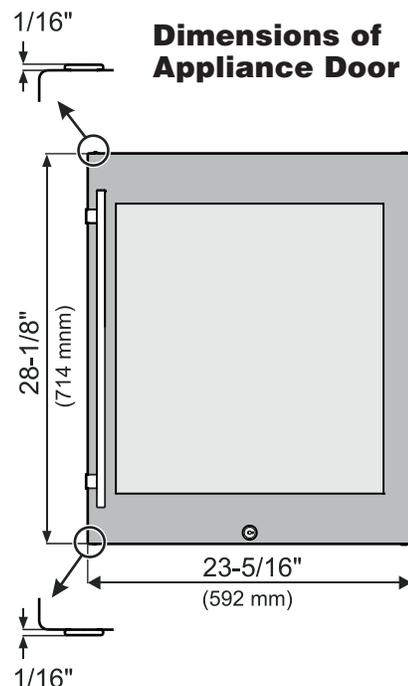


The power cord exits the rear of the appliance at this location.

Free length of the power cord = 78 - 3/4 inch (2000 mm)

### IMPORTANT

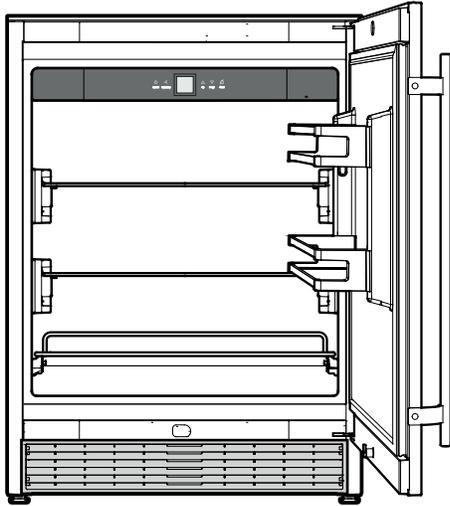
The electrical outlet must not be situated behind the appliance and must be easily accessible.



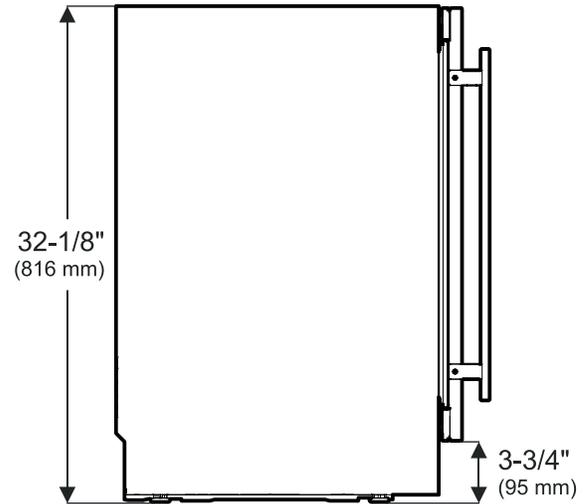
# Undercounter

## Outdoor Refrigerator RO 510

## Appliance Dimensions



Side view



## R600a Refrigerant



**WARNING!**

The refrigerant R600a contained within the appliances is environmentally friendly, but flammable. Leaking refrigerant can ignite.

To prevent possible ignition, designed ventilation is required.

It is recommended to install the appliance in a sheltered area, avoiding direct contact with extreme weather.

Avoid placing the appliance in direct sunlight or near the stove, range top, radiators and similar heat sources.

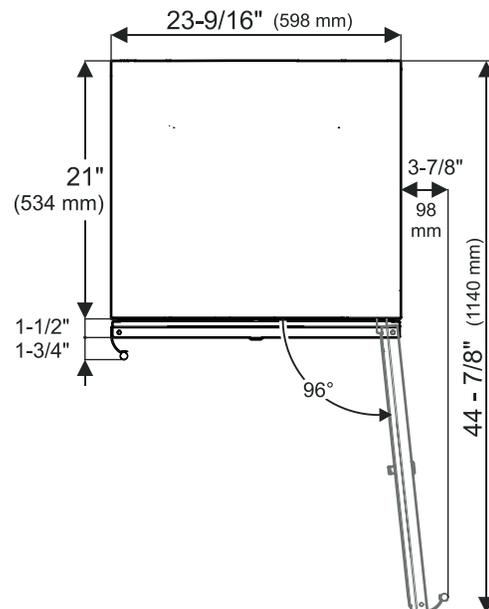
The appliance is designed for a freestanding setting up.

Height when adjustable feet have been screwed in as far as they will go.

Delivery status = feet approx. 1/8" unscrewed.

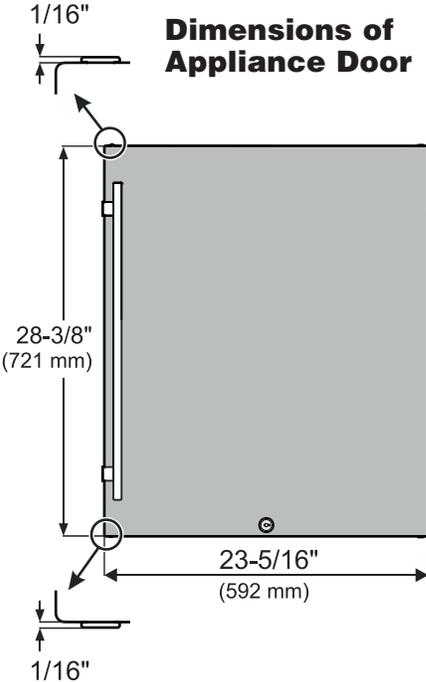
Maximum height adjustment = 2" (51 mm)

Top view



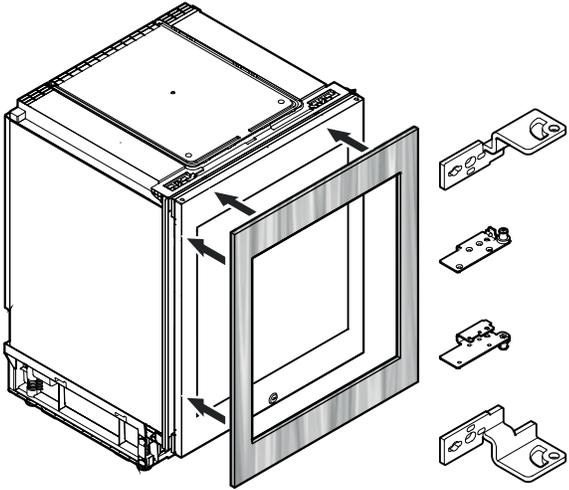
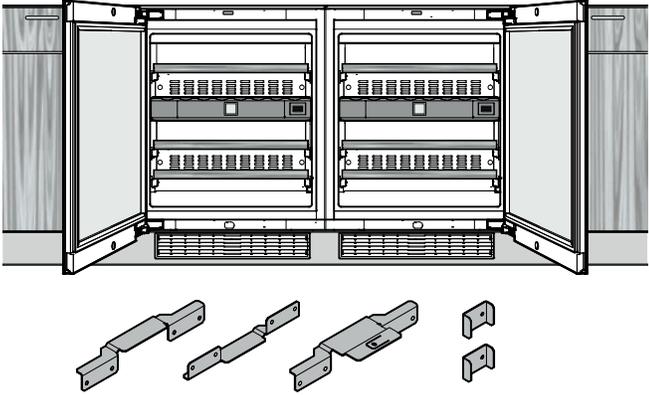
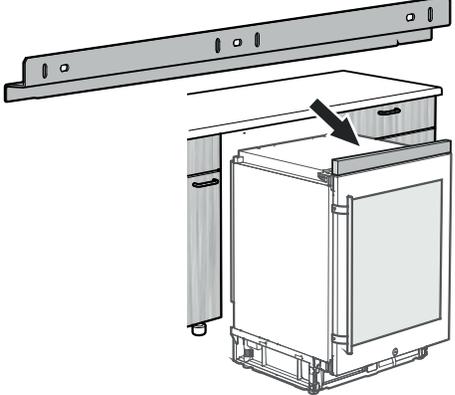
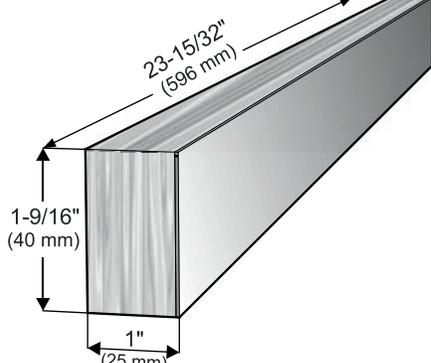
# Undercounter

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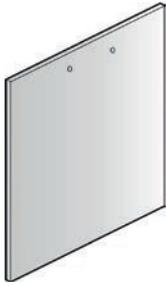
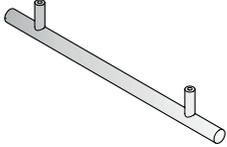
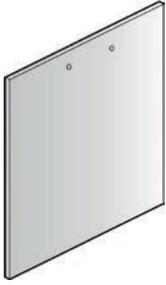
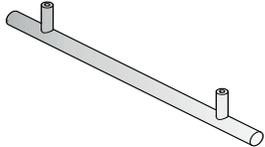
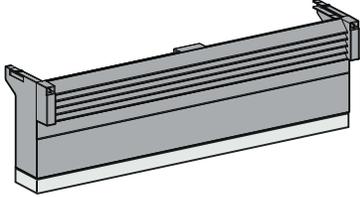
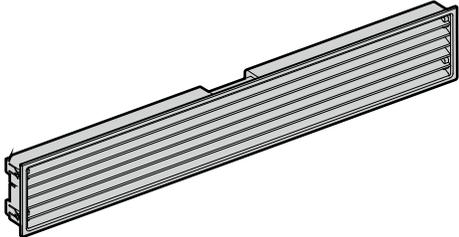


# Undercounter

## Accessories

Image	Article number	Name of the item	For use with model
	9590 131-00	<p>Overlay Kit</p> <p>Includes hinges, brackets, screws and manual.</p> <p>Panel is not included.</p>	<p>WU 3400 WU 4500 RU 510</p>
	9902 272-00	<p>Side by Side Kit</p> <p>Includes angle brackets, screws and installation manual.</p>	<p>WU 3400 WUgb 3400 WU 4500 RU 510</p>
	9902 240-00	<p>Angle bracket for cover panel</p> <p>One is included with the appliance.</p> <p>The bracket can be mounted at top or bottom of the appliance.</p>	<p>WU 3400 WUgb 3400 WU 4500 RU 510</p>
	9901 601-00	<p>Trim Kit</p> <p>Cover panel with stainless steel front</p> <p>(for use with angle bracket 9901 651-00)</p>	<p>WU 3400 WU 4500 RU 510</p>

# Undercounter

Image	Article number	Name of the item	For use with model
	9902 830-00	Stainless steel panel with pre-drilled holes	UR 500, UB 501, UF 501
	9901 561-00	14" round handle stainless steel	
	9902 833-00	Stainless steel panel with pre-drilled holes	UPR 513
	9901 561-00	23" round handle stainless steel	
	9900 436-00	adjustable toe kick, one provided with the unit	UPR 513, UR 500, UB 501, UF 501
	7436 521-00	Toe kick vent	RU 510

