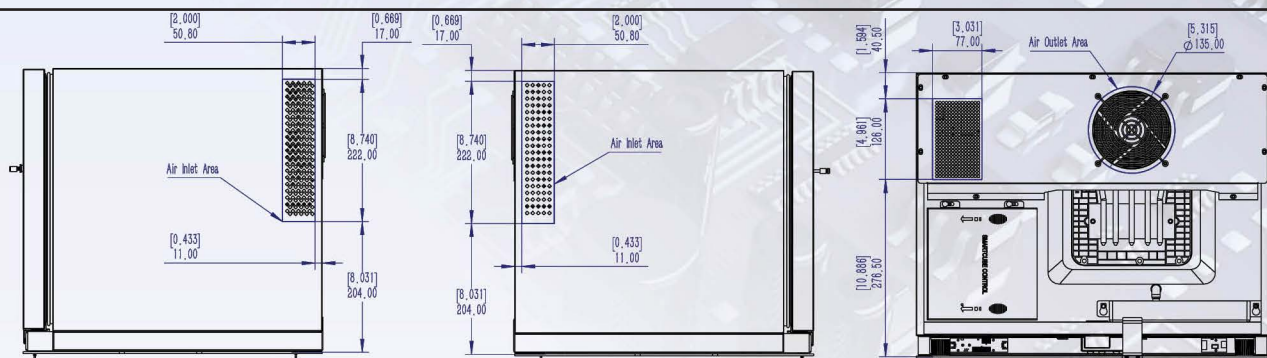


SMARTCUBE DRAWER THERMOELECTRIC SDC40T MODEL SPECIFICATIONS

(Automated)





1. Standard Features

- Environmentally sustainable energy efficient thermoelectric cooling system
- Console Box (control module) can be serviced easily and located remotely
- Shelves use infrared sensors (no moving or mechanical parts)
- Plug-and-play cold cube sensors and drawer racks (no cables)
- NEW robust electronic lock with mechanical override feature
- Self-diagnostic reporting software
- Easily removable product dividers and drawer racks for easy cleaning
- Cyclopentane thermal foaming insulation (reduces ozone depletion)
- ADA-compliant, can open with one hand
- Extremely quiet virtually silent operation
- Solid metal drawer, not plastic
- Lower drawer is self closing
- All-round magnetic seals to keep the door closed
- Internal automatic LED lighting
- Fully automatic defrost
- Strong metal drawer slides
- Customized front panel to integrate with design†
- Low energy consumption

2. Technical Specifications

SmartCube Drawer Thermoelectric	
Part Number	SDC40T
Cooling Type	Peltier Thermoelectric Superconductor 5 Heat Pipe
Capacity (liters / cubic feet)	40 / 1.41
Dimensions HxWxD (inches) * HxWxD (mm) *	17.52 x 21.65 x 19.56 (without handle) * 445 x 550 x 497 (without handle) *
Drawer Option	Drawer
Watts (W)	42-52W
Voltage (V)	110V / 60Hz or 220V / 50Hz
Amps	0.35-0.75
Energy Consumption (kWh/24h) **	0.32 kWh/24h **
Net Weight (lbs / kgs)	52.91lbs / 24kgs
Noise Level (dB)	40 dB
Certification	CSA/CE/FCC/ETL/WEEE/RoHS ISO 9001 and ISO 14001 certified

*Depth with handle is 20.47 inches (520 mm). Handle adds 0.9 inches (23mm) to depth

**Average energy consumption per 24 hours, at 25°C (77°F) ambient temperature and 4°C (39.2°F) cooling temperature, in compliance with EN ISO 7371

† Recommended weight of drawer panel is no more than 9 lbs. (4.08Kg). Recommended thickness, ¾ inches (18-20mm)

Specifications may change without notice due to continuous product development.

Door Options



Top Drawer



Self Closing Drawer Sliders



Upper & Lower Drawer Layout



3. SmartCube Sensor Shelf Configuration

SmartCube has interior sensor shelves for both the cold cube and the door. There are three possible shelf configurations for both the cold cube and the door. Please note that a sensor shelf is required in the top locations of the door and cold cube.

3.1 Door and Cold Cube Sensor Shelves

Conformal coated and sealed to keep out moisture

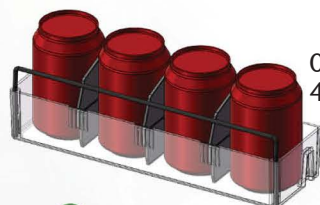


door rack shelf

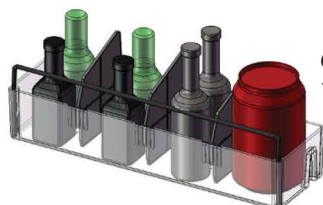


cold cube shelf

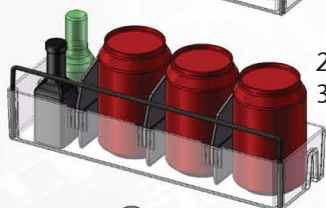
3.2 Customizable Drawer Top Racking Configurations



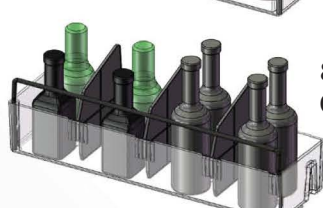
0 miniatures
4 cans



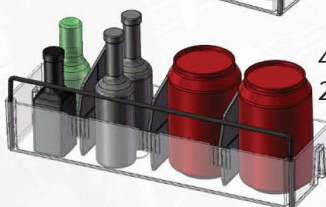
6 miniatures
1 can



2 miniatures
3 cans



8 miniatures
0 cans



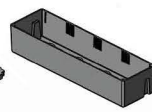
4 miniatures
2 cans



divider



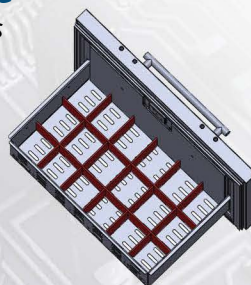
spacer



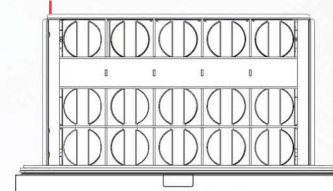
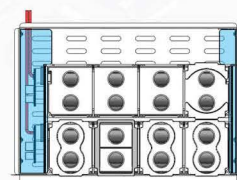
door tray

3.3 Shelf Dividers Prevent Guest Personal Use

- Designed to prevent storage of guests personal items
- Improved product placement and display



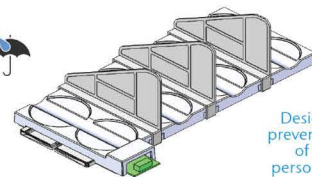
Plug-and-Play



adjustable cold cube
drawer sensors



top drawer sensor shelves

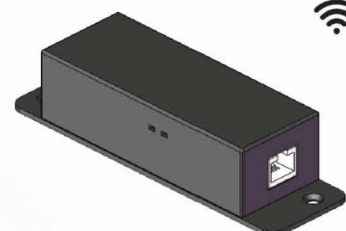


Designed to
prevent storage
of guest
personal items

cold cube sensor shelf dividers



console box (control module)



ethernet or wi-fi

4. Plug-and-Play - No cable connection



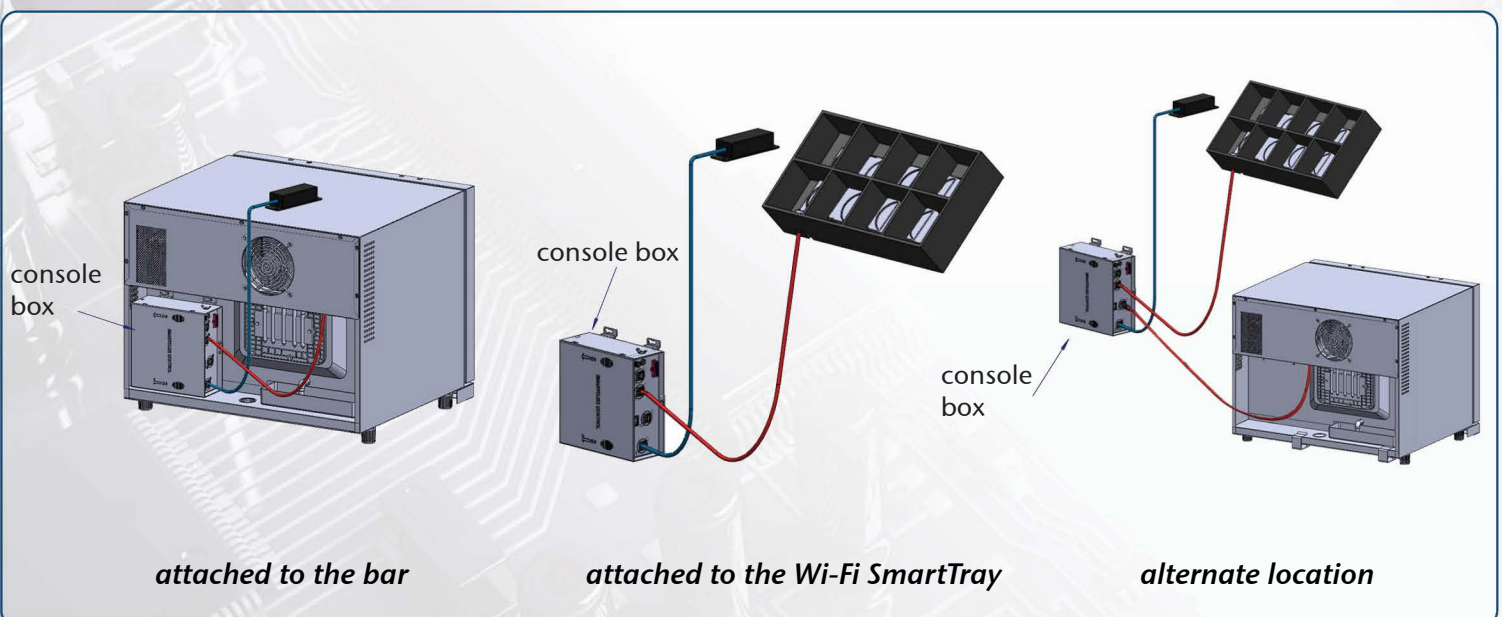
5. Console Box (Control Module)

- Console Box contains all Printed Circuit Board Assemblies (PCBA's): mainboard, lock, bluetooth, & communication
- Flexible mounting options for ease of maintenance
- Wi-Fi module has an extension cable to achieve maximum signal connectivity
- Console Box easily replaced without troubleshooting individual PCBA's



5.1 Console Box Mounting Locations

Console Box can be mounted on the SmartCube, on the SmartTray or alternate location



6. Ventilation – Basic Principles

Ventilation occurs by convection, which is the tendency of hot air to rise and colder air to sink. See recommendations in 6.1 through 6.4 on how to achieve proper ventilation.

Note: Proper ventilation and installation are required in order to not void SmartCube warranty.

6.1 Front Air Intake Ventilation (Toe Kick)

The inlet vent(s) must have a minimum open area of 43.9in² (28.31m²) to comply with specifications. This is based on a typical guest room environment of 77° F (25° C) with a relative humidity of no more than 65%. The inlet vent can be provided in any of the following configurations:

- A cut-out in the toe kick
- A series of slots in the toe kick
- A grill in the toe kick
- An arched opening in the toe kick

Note: For optimal ventilation a door should not be installed in front of SmartCube.

6.2 Case Good Base Ventilation (Bottom Cut-Out)

The cabinet bottom is to be cut away directly behind and below the cooling unit. The shelf cut-out must have a minimum open area of 73.81in² (47.62m²). The easiest way to accomplish the required ventilation is to cut away across the complete width and extend the cut out back to the rear of the case good.

6.3 Case Good Side Ventilation (Side Vent)

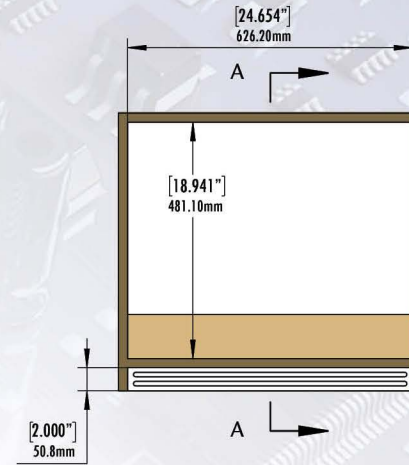
Side inlets should be cut to a minimum open area of 54.25in² (35m²). It is recommended to have two side inlets but at a minimum of one inlet would be acceptable alternative.

6.4 Exhaust Ventilation (Grill or Back Vent)

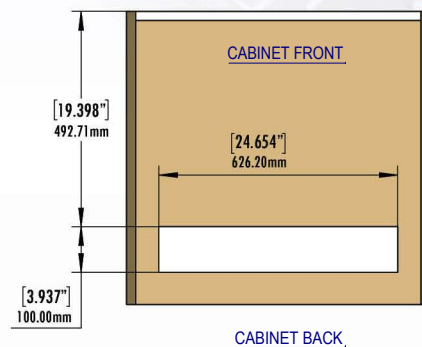
- Back Exhaust ventilation (see Fig 6.1) – Cut out in the back allowing trapped heat to escape.
- Top Exhaust Ventilation (see Fig 6.4) – Grill/Vent cut out on top for trapped heat to escape

Note: Ventilation from back requires a minimum 1.5in (38mm) air gap behind the case good for exhaust flow.

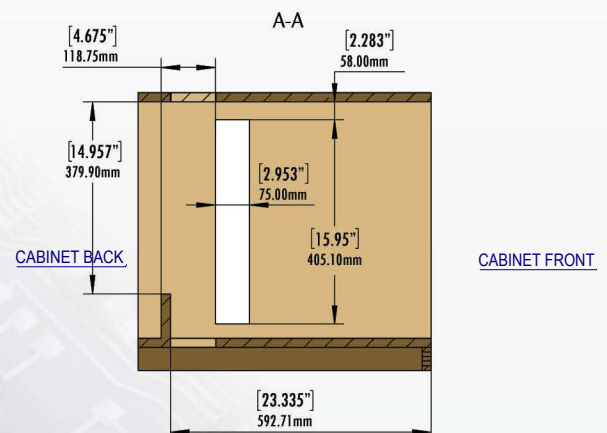
Front View Fig 6.1 & Back Ventilation Fig 6.4



Bottom View Fig 6.2



Side Section View Fig 6.3

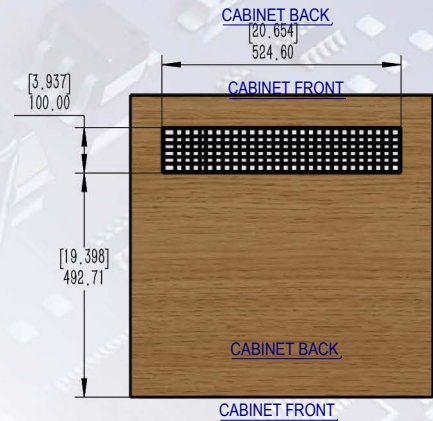


6.4 Exhaust Ventilation Continued

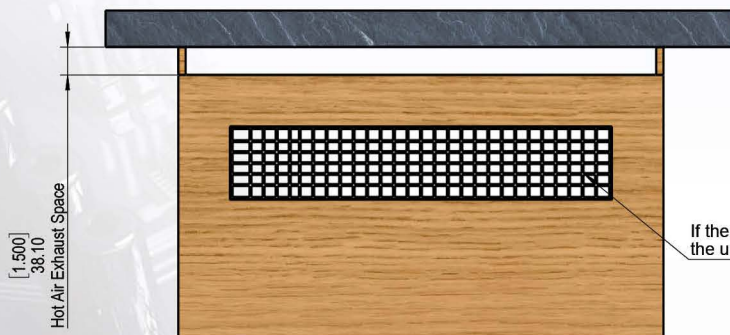
Exhaust ventilation is required in the case good to prevent warm air from being trapped in the top section causing the SmartCube to overheat. The exhaust vent(s) must have a minimum open area of 269in² (173.57m²) to comply with specifications (see Fig. 6.1). The exhaust vent(s) can be provided in any of the following configurations:

- A series of slots or a grill in the top
- A series of slots or a grill in the back at the top
- If the design will not permit the use of slots or a grill, the unit should be spaced 1.5" (38.1mm) from the wall to allow proper exhaust. Use spacers or stoppers to prevent the case good from being pushed up against the wall. In this configuration, the back of the case good must be cut away see Fig 6.1. The underside of the shelf above the SmartCube must be flat so that there are no obstruction to the airflow.

Top View Fig 6.4
(Optional Ventilation)

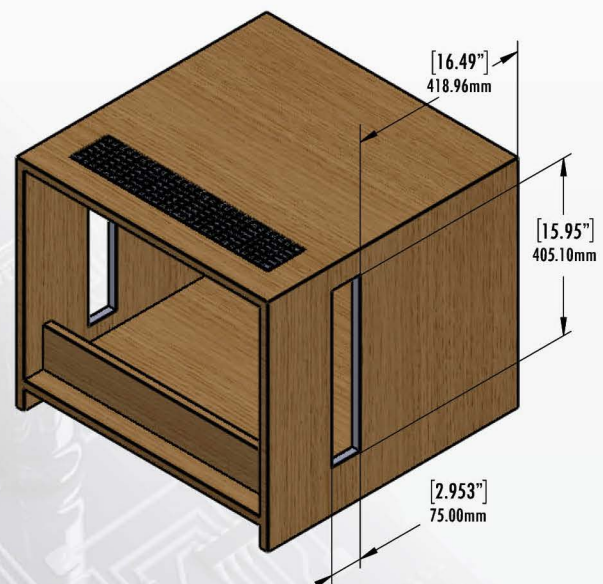
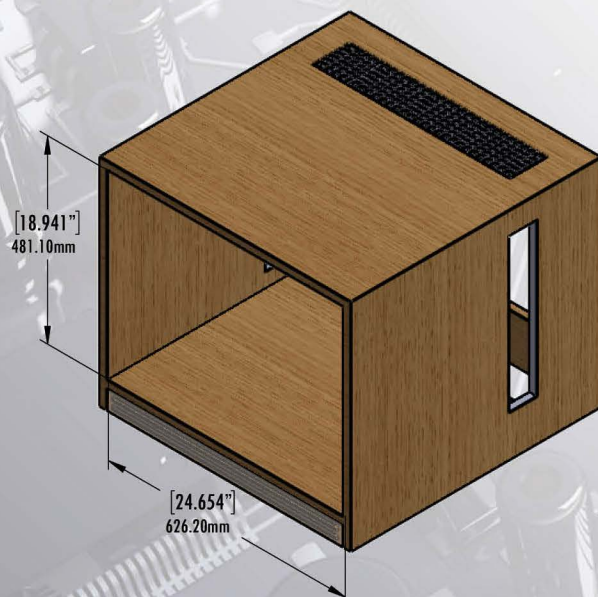


The exhaust vent must exit into free space in the guest room. It must not vent into an enclosed space such as a closet, case good or ceiling void, as the heat will be trapped. The SmartCube Classic must not be placed up against a heating radiator, window curtains or in direct sunlight. Ventilation grills or slots must not be covered.



If the design will not permit the use of slots or a grill, the unit should be spaced from the wall to allow proper exhaust.

Please contact your Minibar Systems representative for review and certification of your case good design and drawings to ensure your design meets the SmartCube and SmartCube Case Good Specifications. If these ventilation requirements are not met, the warranty is void. The case good documents can be found on the SmartCube.MinibarSystems.com website or from your Minibar Systems representative.

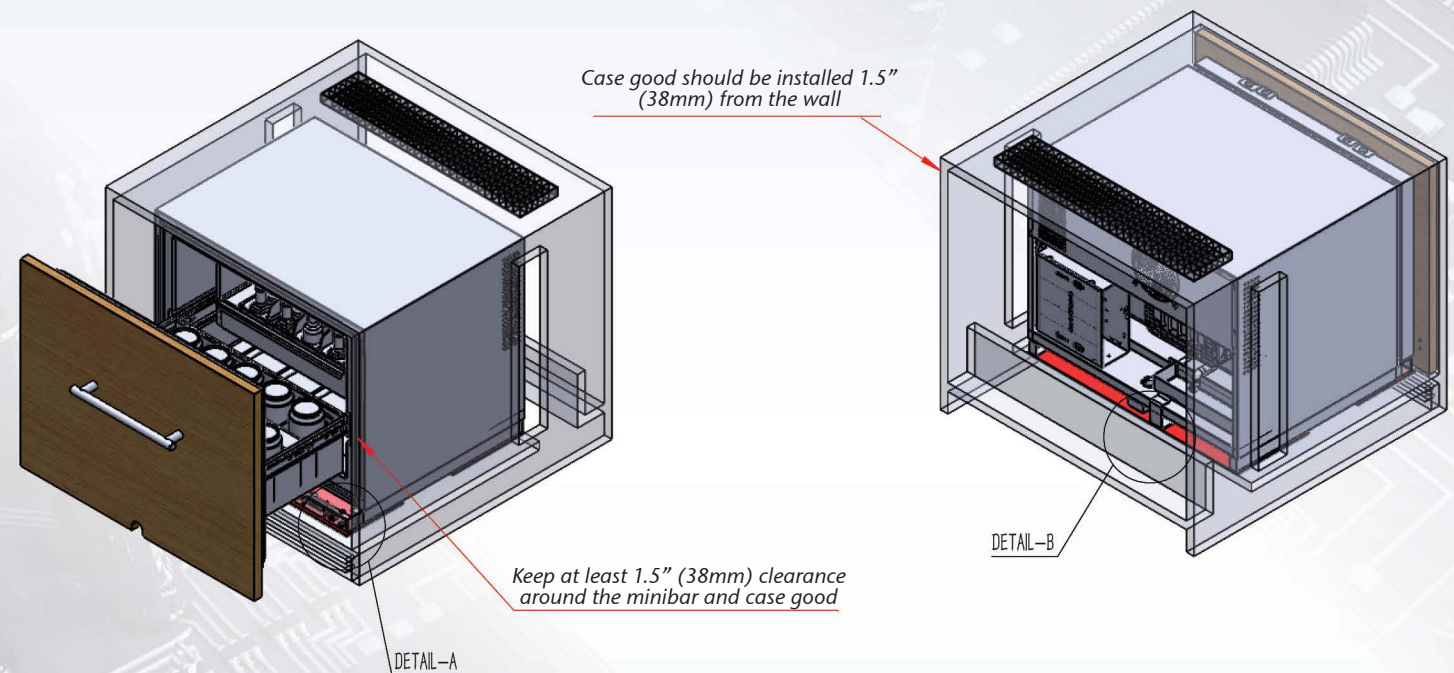


7. Ventilation and Cavity Requirements

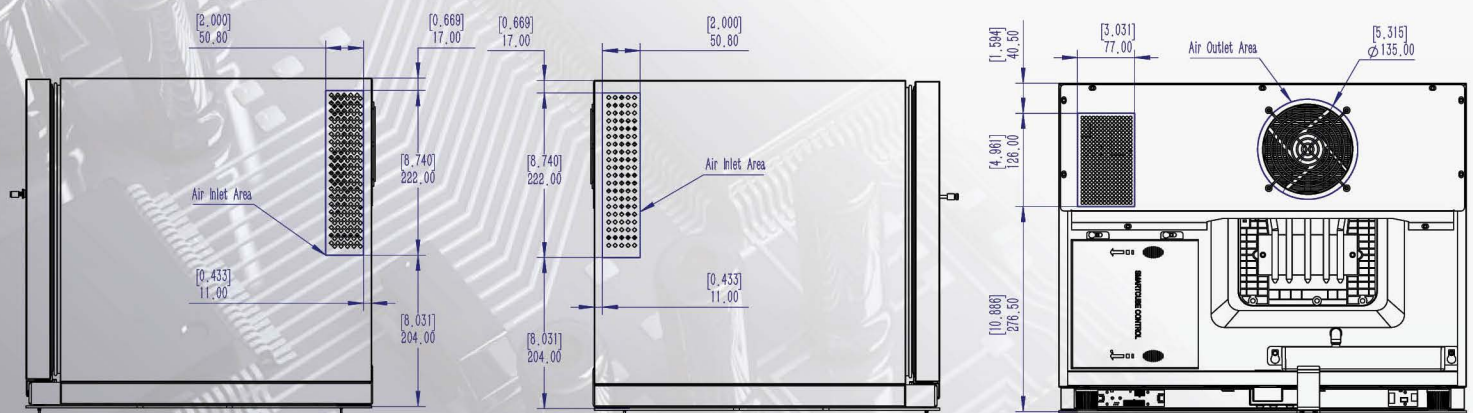
Lateral cut-outs should line up with air intakes and air outlets.

Minimum Ventilation	Optimal Ventilation	Optional
<ul style="list-style-type: none"> - Toe Kick - Base Cut-Out - One Lateral Side Cut-Out - Back Cut-Out 	<ul style="list-style-type: none"> - All Minimum Ventilation Requirements - 2nd Lateral Side Cut-Out - No Door 	<ul style="list-style-type: none"> - Counter Top Vent (Only if a back cut-out is not available)

7.1 Space Required Between Case Good and Wall



Note: If cut-outs align with air intake/outlets of the SmartCube you can minimize the size of the area surrounding the SmartCube by 1.5" (38mm). If cut-outs do not directly line up then a 1.5" (38mm) air gap is required around the unit.

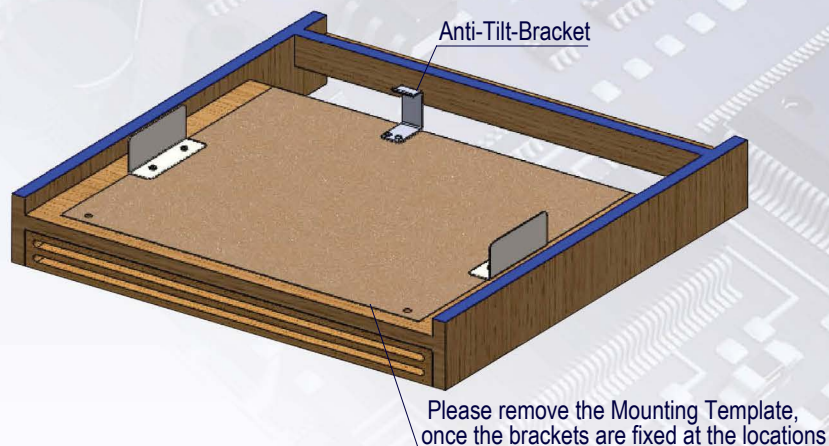


8. Installing Anti-Tilt Bracket and Securing to Case Good

SmartCube should be secured to case good using supplied hardware: anti-tilt bracket, and front mounting screw

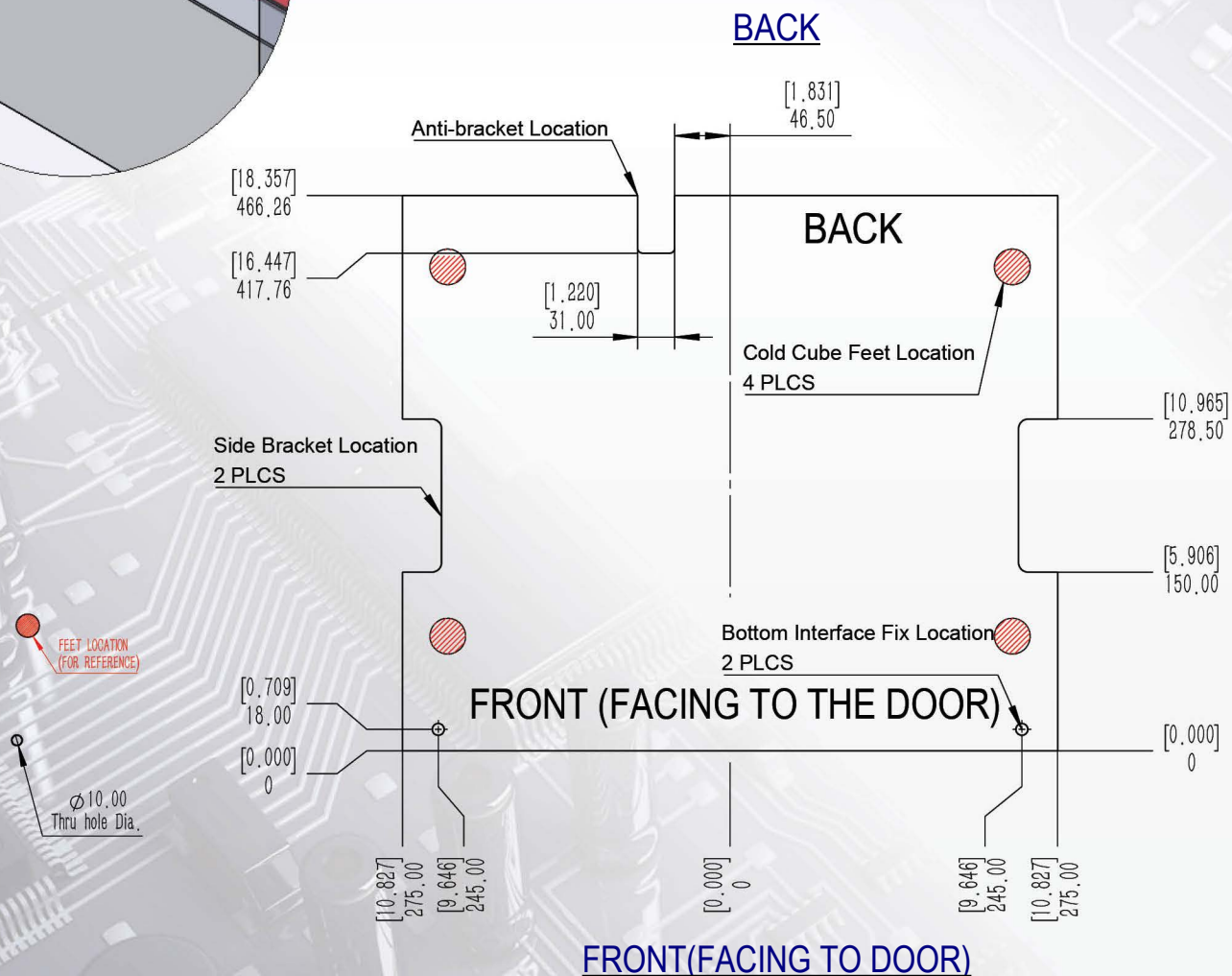
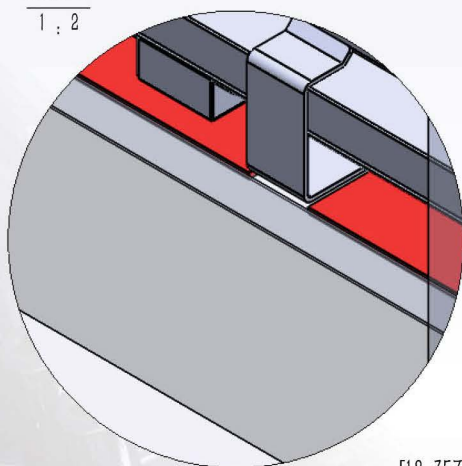
8.1 Installing Anti-Tilt Bracket

Anti-tilt bracket should be mounted to bottom of case good using provided hardware and template.



SmartCube 60T Mounting Template

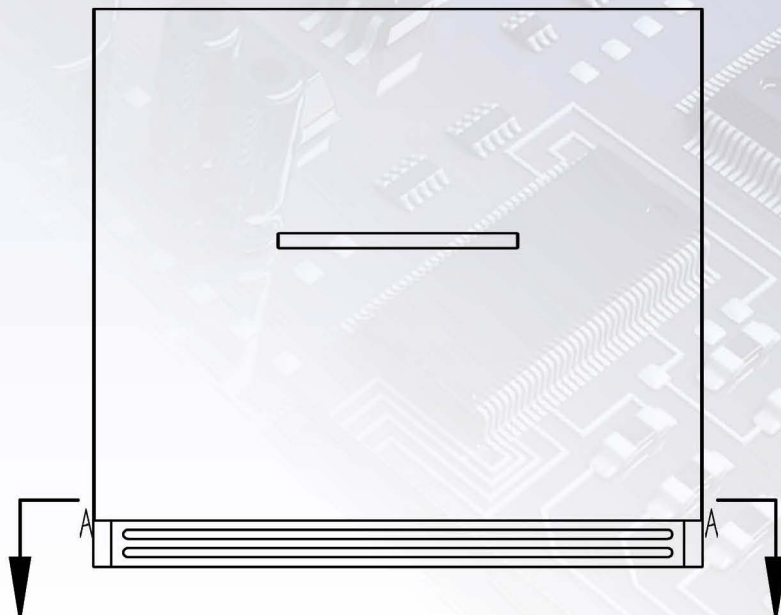
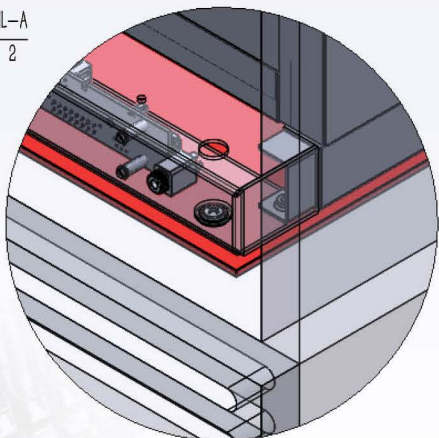
DETAIL-B
1 : 2



8.2 Installing & Anchoring SmartCube

SmartCube should be secured to case good from front using supplied hardware: front mounting screw

DETAIL-A
1 : 2

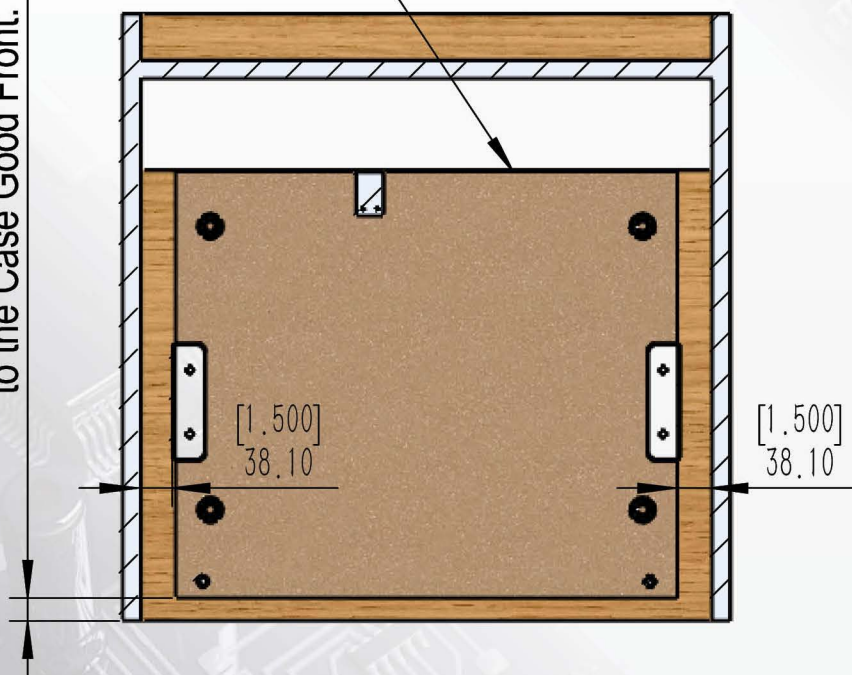


Template Back Edge should flush to the Cut-out Edge

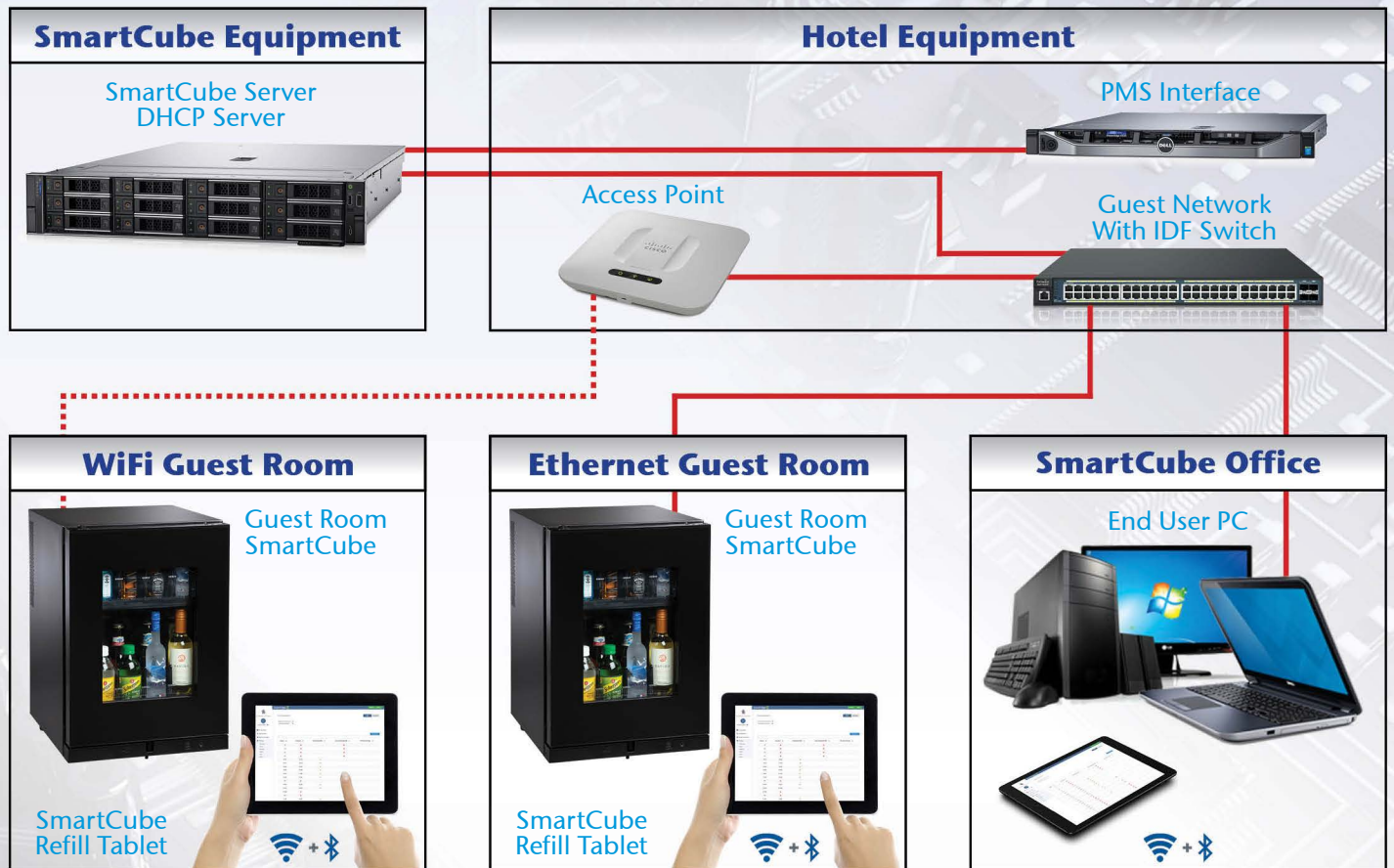
Dist. from the Mounting Plate
to the Case Good Front.

[0.980]
24.90

A-A
1 : 10



9. Guest Network Configuration



Server Minimum Requirements

Type	Physical or Virtual
Processor	Dual Core 3GHz or faster (x86 or x64)
Memory	32GB Dedicated RAM
Operating System	Windows Server 2019 R2 (64 bits), 2022
Disk Space	500 GB minimum with redundancy (1TB recommended)
SmartCube Connection	10/100/1000 Ethernet
PMS Connection	10/100/1000 Ethernet or RS232

Network Requirements

SmartCube Communication	SmartCube Server on Static IP Address on Dedicated SmartCube VLAN	
PMS communication	SmartCube Server on a Static IP that is routed to the PMS Interface	
Port		Purpose
10001	UDP	SmartCube bidirectional communication
12345	TCP	Handheld Unit (HTTPS)
54321	TCP	Handheld Unit (HTTPS)
443	TCP	SmartCube Attendant PC
67	UDP	DHCP
68	UDP	DHCP

Interface

PMS Interface Required	SmartCube / Robobar / AutoClassic
------------------------	-----------------------------------

WiFi Specifications

Standard	802.11 b,g,n 2.4Ghz
Encryption	WPA / WPA2-PSK
SSID	Hidden SSID with Password
Signal	-65dBm or better at the SmartCube location

Tablet Specifications

Operating System	Android Version 7.1 (Nougat) or Later
Communication	Bluetooth & WiFi
Memory	16 GB

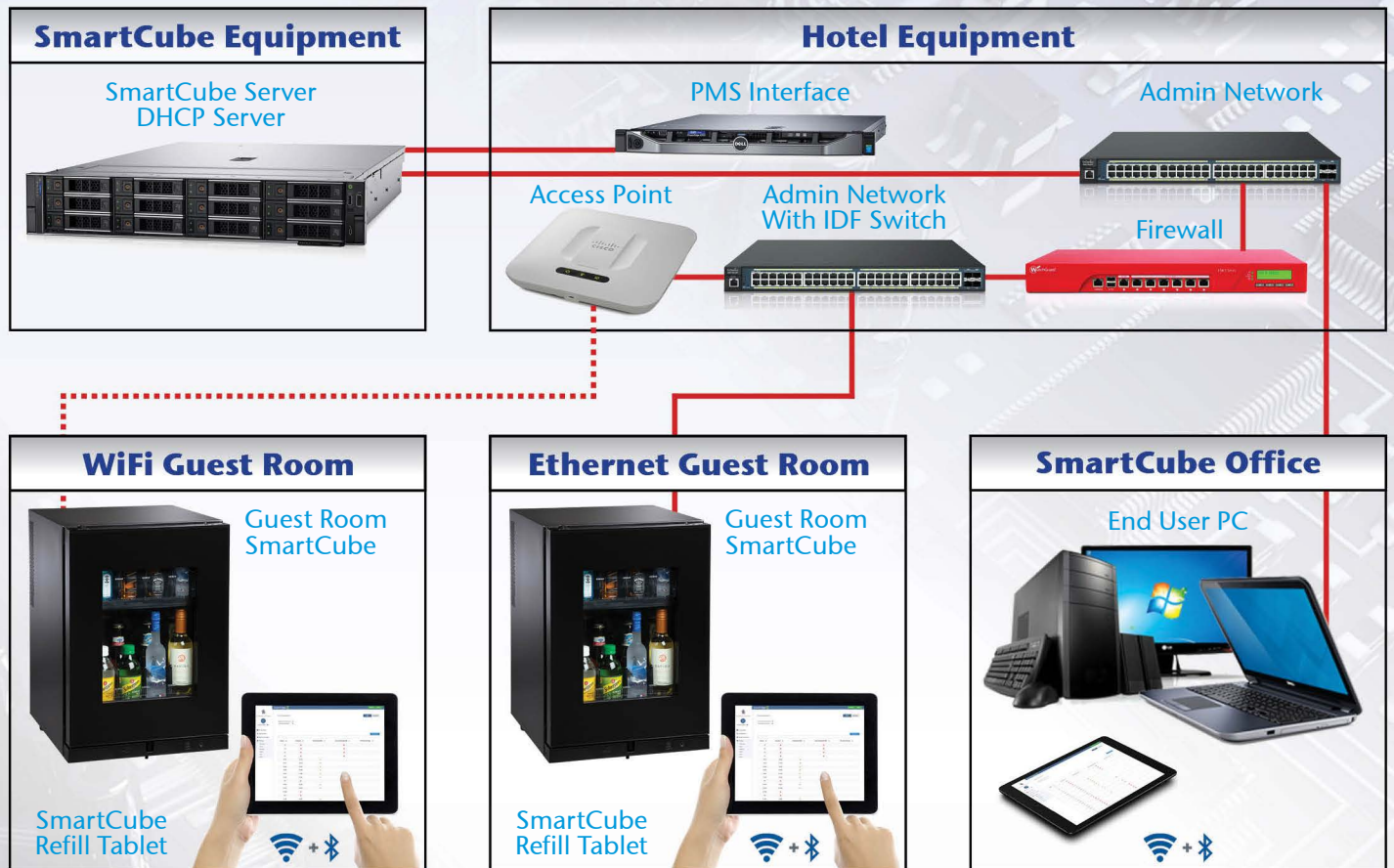
Tablet Communications

Bluetooth	Used to connect tablet to SmartCube to perform refills
Wifi	Used to sync refills from server to tablet

SmartCube Client/Workstation Specifications

Processor	2.4 GHz or faster (x86 or x64)
Memory	2GB Dedicated RAM
Ethernet	10/100 Fast Ethernet
Operating System	Windows 10 or higher
Browser	Chrome

10. Administrative Network Configuration



Server Minimum Requirements

Type	Physical or Virtual
Processor	Dual Core 3GHz or faster (x86 or x64)
Memory	32GB Dedicated RAM
Operating System	Windows Server 2019 R2 (64 bits), 2022
Disk Space	500 GB minimum with redundancy (1TB recommended)
SmartCube Connection	10/100/1000 Ethernet
PMS Connection	10/100/1000 Ethernet or RS232

Network Requirements

SmartCube Communication	SmartCube Server on Static IP Address on Dedicated SmartCube VLAN
PMS communication	PMS to provide static IP address and port number required to configure PMS interface integration
Port	Purpose
10001	UDP SmartCube bidirectional communication
12345	TCP Handheld Unit (HTTPS)
54321	TCP Handheld Unit (HTTPS)
443	TCP SmartCube Attendant PC
67	UDP DHCP
68	UDP DHCP

Interface

PMS Interface Required	SmartCube / Robobar / AutoClassic
------------------------	-----------------------------------

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