Zebra Intelligent Cabinet



Assembly Guide

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About This Document

Introduction

The guide provides information about assembling, mounting, packing, and shipping the Zebra Intelligent Cabinets.



IMPORTANT: If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at: <u>zebra.com/support</u>.

Chapter Descriptions

Topics covered in this guide are as follows:

- Unpacking provides instruction on unpacking the cabinet.
- Cabinet Assembly provides information on assembling the cabinet.
- Packing and Shipping provides an overview and best practices for packaging and protecting an intelligent cabinet in preparation for shipping.
- Mounting Cabinet provides information on fixing or mounting the cabinet on the wall.
- Shelf Assembly provide instruction on assembling the cabinet shelves, cradles, and cables.
- Specifications provides specifications for cabinet configurations.

Notational Conventions

The following conventions are used in this document:

- Bullets (•) indicate:
 - Action items
 - Lists of alternatives
 - · Lists of required steps that are not necessarily sequential.
- Sequential lists (such as those that describe step-by-step procedures) appear as numbered lists.

Icon Conventions

The documentation set is designed to give the reader more visual clues. The following graphic icons are used throughout the documentation set. These icons and their associated meanings are described below.

About This Document



NOTE: The text here indicates information that is supplemental for the user to know and that is not required to complete a task.



IMPORTANT: The text here indicates information that is important for the user to know.



CAUTION: Generic Caution text goes here.



WARNING: Warning text goes here. If danger is not avoided, the user CAN be seriously injured or killed. Confirm with your Compliance Engineer before using this.

Related Documents and Software

The following documents provide more information about Intelligent Cabinets:

- Racks 1 & 2 Shipping and Unpacking Quick Reference Guide
- · Zebra Access Management System Installation Guide
- Zebra Access Management System Cabinet and Mobile Device Quick Reference Guide

For the latest version of this guide and all guides, go to zebra.com/support.

Unpacking

The cabinets are unpacked and assembled differently depending on the size of the cabinet. The small and midi cabinets can be unpacked on a bench. The large, x-large, and extreme cabinets should be unpacked from the pallet due to the weight and potential issues of raising them from the pallet onto a work surface.

When the flat packed cabinet arrives, move the box near its final working location as the flat pack is easier to handle than the fully assembled cabinet.



NOTE: If the cabinet is to be shipped out once it is assembled, retain all of the packaging as it can be reused to protect the cabinet.

To unpack the flat pack:

- 1. Cut the straps holding the flat pack box and dispose of them in an environmentally approved manor.
- 2. Lift the top half of the box and use this as a receptacle for the remaining packaging.
- 3. Check the contents of each sub box as it is unpacked.
- **4.** The larger sections of packaging, such as those used to wrap the front and rear uprights, can be used as re-packing material. The smaller sections should be recycled.

Shipping

The cabinets weigh between 44 kg (97 lbs) and 124 kg (274 lbs) depending upon the model. This does not include the weight of the packaging and pallet.



NOTE: Due to the weight of the cabinet, two people are required for handling and unpacking.

Recycling

Most cabinet components are recyclable (steel items). The HPL material (flat surfaces and shelves) can be reused but not recycled. All packaging components are recyclable. The pallet and packaging material should be retained if the cabinet needs to be moved. Refer to local recycling facilities for plastic and rubber components.

Tools

The following tools are needed to unpack and install the cabinet:

- Box cutter or similar
- Pliers
- No 2 Pozidriv screwdriver

- · No 25 Torx driver
- No 30 Torx driver
- 8mm spanner or adjustable wrench.

Cabinet Arrival and Location Requirements

The cabinet arrives flat packed and physically strapped to a pallet.

The cabinet should be located in a position with the following criteria:

- · The floor must be level and flat.
- The cabinet must be within range of a suitable power outlet, typically within 2 m (6 ft).
- The cabinet must not be exposed to the elements. It must be installed in a building that is protected from moisture and excessive high/low temperatures.

Figure 1 shows six midi cabinets stacked on a pallet just prior to being strapped in place. With the larger cabinets, the shipping arrangement is the same but with correspondingly larger pallets.

Figure 1 Cabinet Flat Packs on Pallet



Read these instructions thoroughly before assembling this cabinet.



IMPORTANT: A qualified service technician must assemble this cabinet.

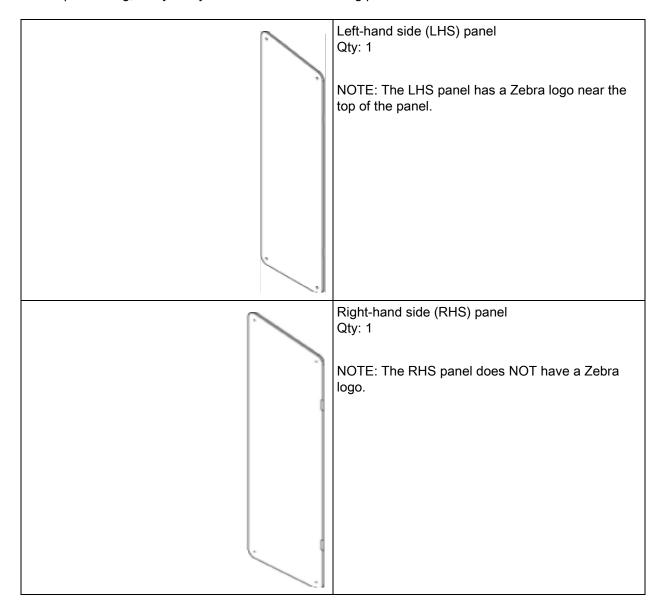


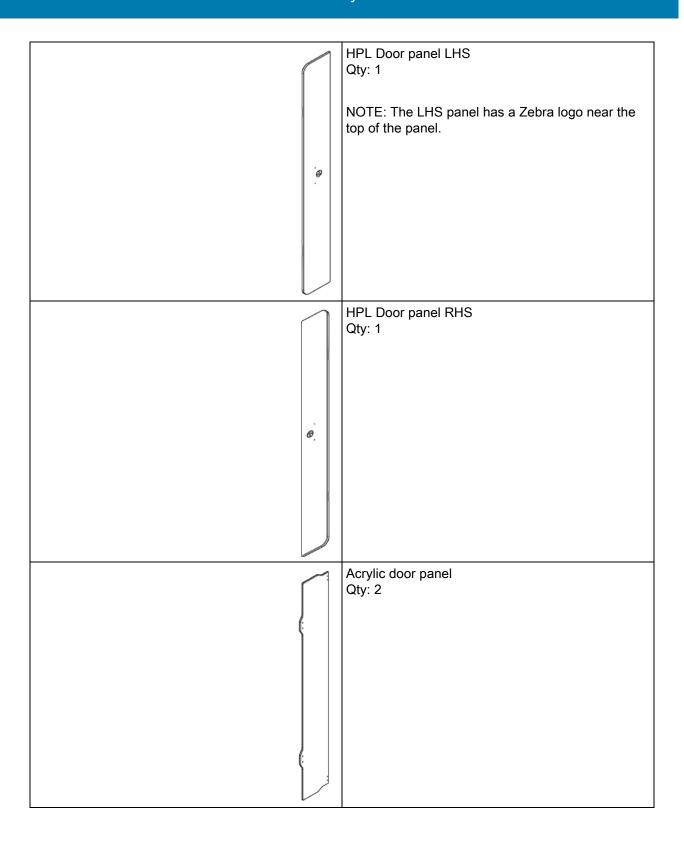
NOTE: The graphics shown in this document depict a medium size cabinet. The colors are used to clearly distinguish different elements only and do not reflect the actual cabinet colors.

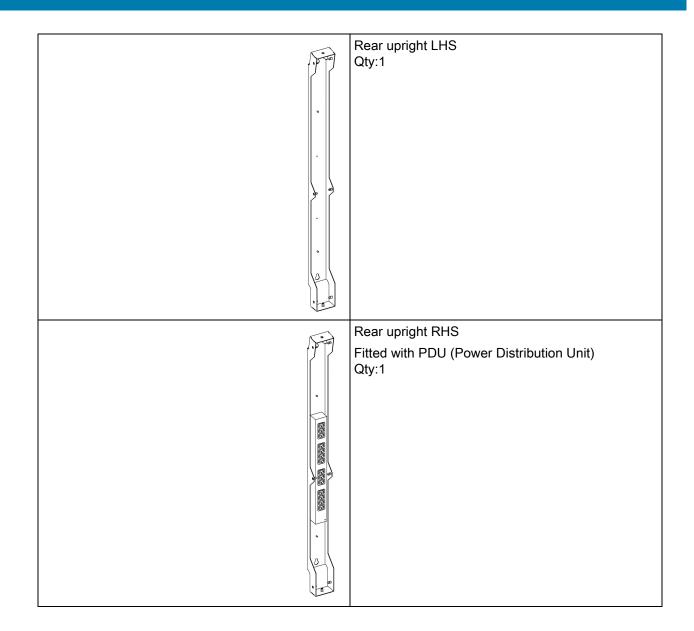
The compact cabinet arrives fully assembled.

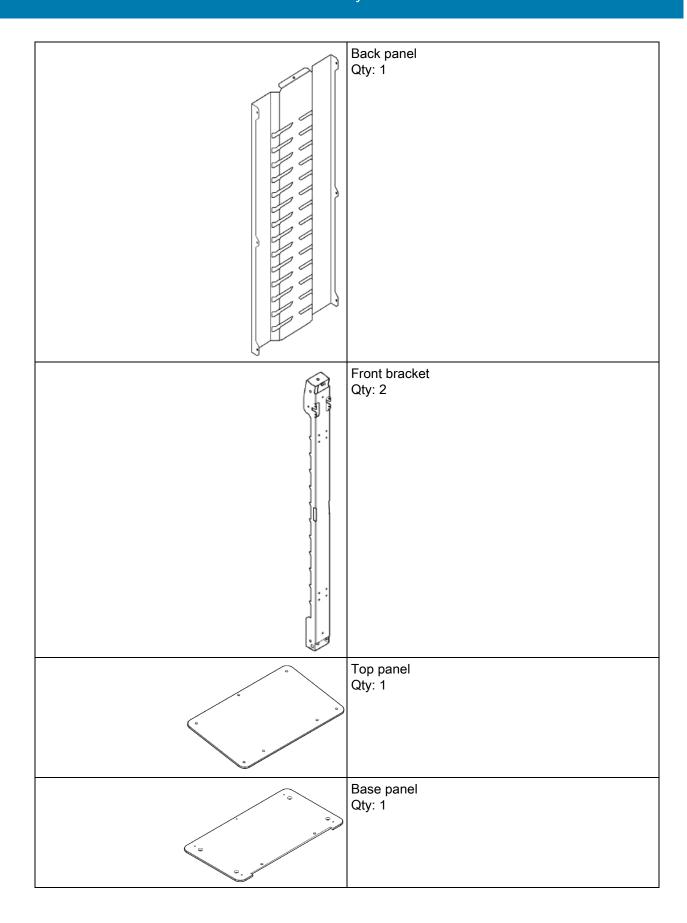
Parts List

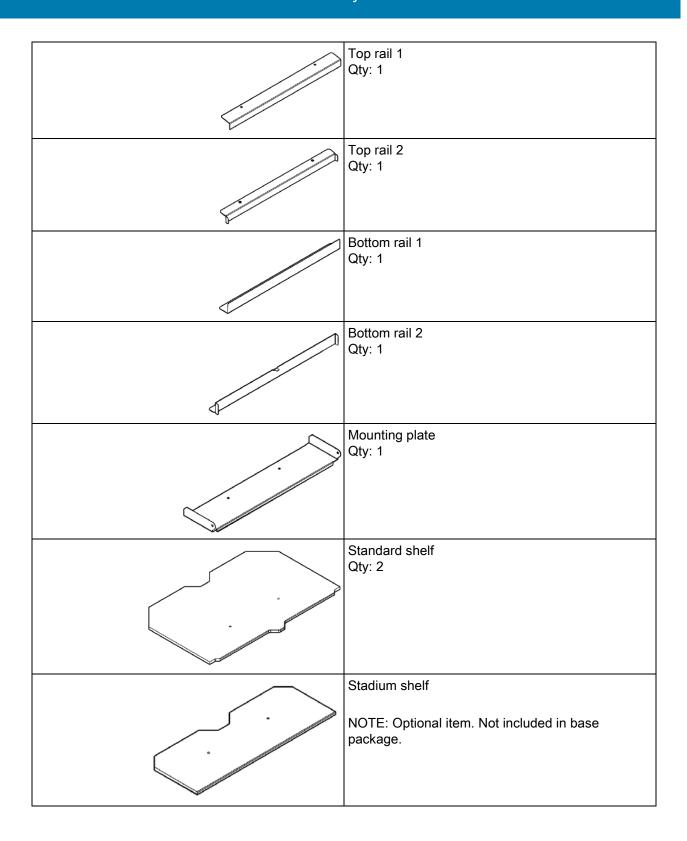
Before proceeding, verify that you have all of the following parts:



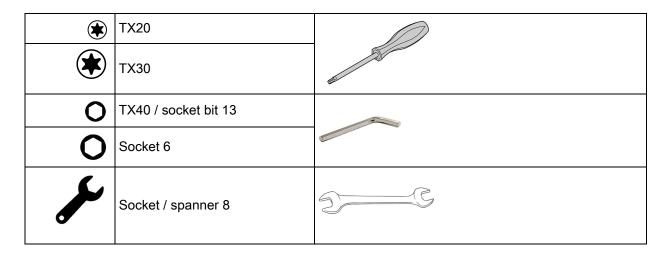








Tools Required



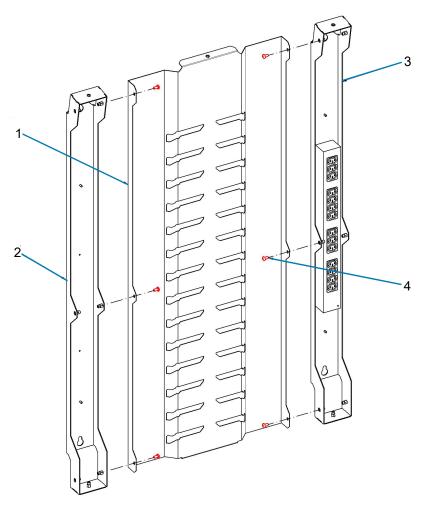
Fixings Required

M5 nyloc nut Qty: 10
M6 flange nut Qty: 8
M6 cap head nut Qty: 8
O5 x 10 counter sunk TX20 Qty: 16
M4 x 20 button head TX20 Qty: 12
M5 x 30 cap head TX25 Qty: 4
M6 x 12 button head TX30 Qty: 8
M6 x 20 counter sunk TX30 Qty: 38
M10 x 20 counter sunk socket 6 Qty: 4

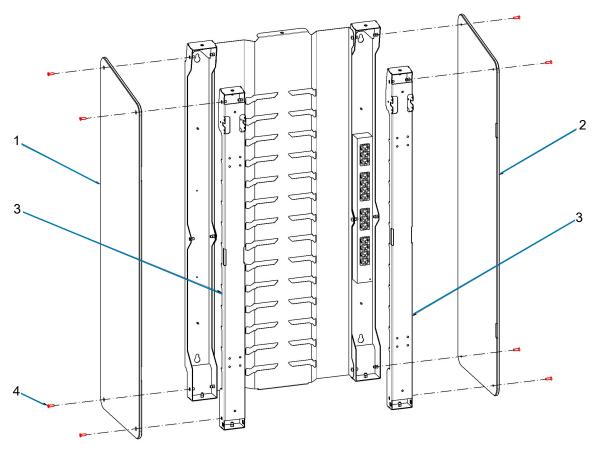
	Miniature bearing Qty: 4
	M5 x 20 thumb screw Qty: 12

Fixings Required

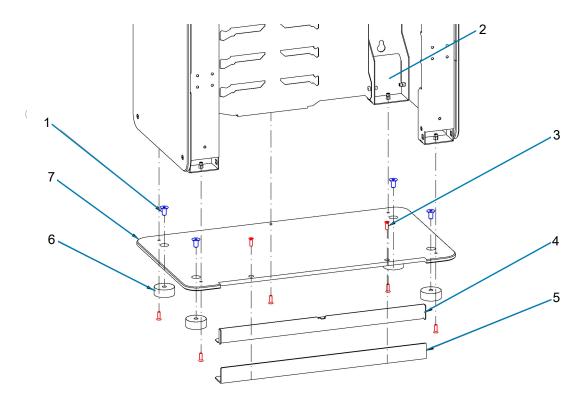
Barrel lock Qty: 2
Door retain block Qty: 4
Polyamide hinge Qty: 8
Cylindrical feet Qty: 4
Aluminum handle Qty: 2



- 1. Place the back panel (1) flat on a table.
- 2. Lay the right rear bracket with the PDU (3) on the right-hand (RH) side. Place the left rear bracket (2) on the left-hand (LH) side.
- 3. Install six off M6 x 12 button head screws (4) to fix the sides to the back panel (three on each side). Tighten the screws using a TX30 driver.



- **4.** With the assembly laid flat, install the left-hand side (LHS) panel (2) to the assembly using two M6 x 20 countersunk screws. The LHS panel has a Zebra logo.
- 5. Install the right-hand side panel (1) using two M6 x 20 countersunk screws.
- **6.** Fix the front bracket (3) to the side panel using two M6 x 20 countersunk screws on each side. Ensure the brackets are correctly orientated.

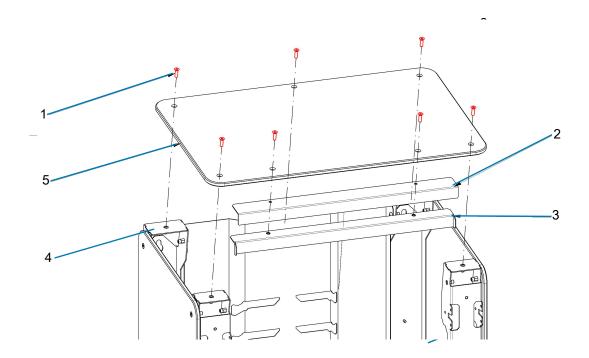


- 7. Fix the four feet (6) to the base panel (7) using four M10 x 20 countersunk hex socket head screws (1).
- 8. Fix the two halves of the bottom rail part 1 (5) and bottom rail part 2 (4) to the base panel (7) using two M6 x 20 countersunk screws (3).



NOTE: Bottom rail part 2 (4) is sandwiched between bottom rail part 1 (5) and the base panel (7).

9. Fix the base panel (7) sub-assembly to the main assembly (2) using five M6 x 20 countersunk screws.



10. Fix top rail part 1 (2) and top rail part 2 (3) to the top panel (5) using two M6 x 20 countersunk screws.



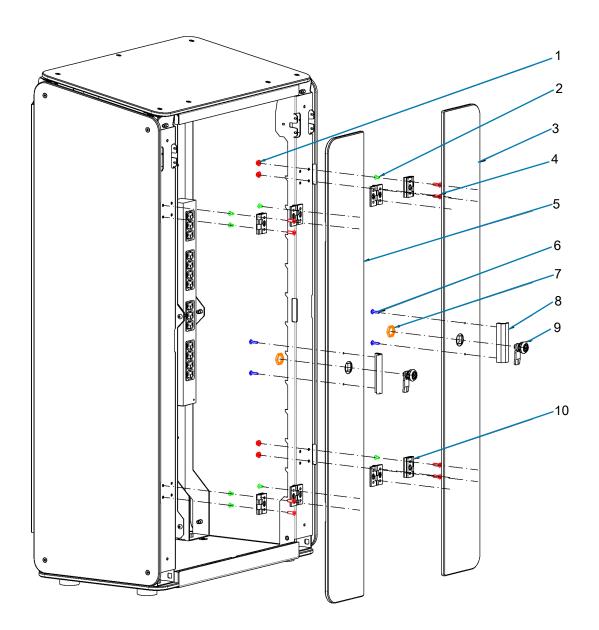
NOTE: Top rail part 1 (2) is sandwiched between top rail part 2 (3) and the top panel (5).

11. Fix the top panel (5) sub-assembly to the main assembly (4) using five M6 x 20 countersunk.

Attaching Side Door Panels

To attach the right and left side door panels:

1. Lay the HPL doors face down on a clean and level surface.



- 2. Fix four hinges to each door using the thread forming countersunk screws (2). Be careful not to overtighten the screws. They should grip the hinge to hold it and not be tightened any further.
- 3. Fit the barrel locks (9) to the doors using the large hex nut (7).



NOTE: The locks operate in opposite directions. For the left-hand door, the catch moves from the 6 o'clock position to the 9 o'clock position. For the right-hand door, the latch moves from the 6 o'clock position to the 3 o'clock position.

4. Fix the door handles (8) to the doors using M4 x 20 button head screws (6). The open part of the handle faces outwards on both doors (the handles are mirror imaged).

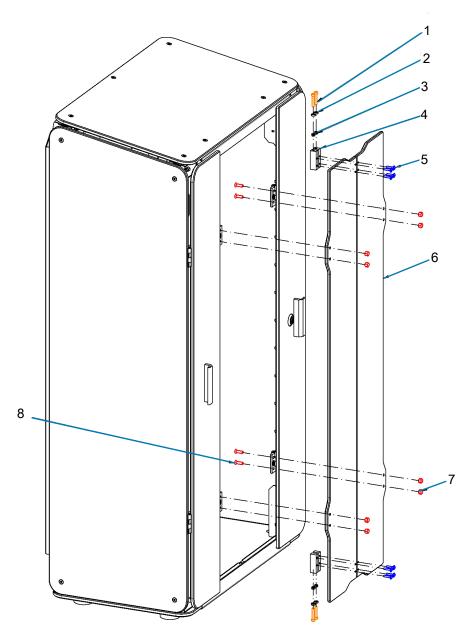
5. Attach each door to the cabinet assembly using the M6 x 20 countersunk screws (4) and flanged head hex nuts (1).

Ensure the doors open easily and the lock engages when operated with the supplied key.

Attaching Acrylic Door Panels

To attach the acrylic door panels:

1. Assemble the door retaining blocks by sliding the bearings (2) onto the M5 x 30 cap head screws (1) and then fasten in place using the Nyloc nuts. Tightened the nuts so they grip the bearing and no further. If the bearing does not turn easily, slacken off the nut.



2. Fix the acrylic doors to the loose flaps of the hinges already attached to the HPL doors on the cabinet assembly. Use the M6 x 20 countersunk screws (7) and M6 cap nuts (7).

- 3. Once the four door retaining blocks are assembled, they can fix to the Acrylic doors (6) using the M4 x 20 button head screws (5). The bearings need to be located in the tracks before fitting the screws while the panel doors are open slightly.
- 4. Check that the doors open and close smoothly and that the locks still engage.

The cabinet assembly is now complete and ready to be mounted or fixed to a wall. This must be completed before installing shelves and putting the cabinet into use. See Mounting Cabinet on page 25.

For more information see:

- Packing and Shipping on page 22 for instruction on packing and shipping the cabinet.
- Mounting Cabinet on page 25 for instruction on mounting the cabinet.
- Shelf Assembly on page 29 for instruction on installing shelves, cradles, and cables.

Packing and Shipping

This chapter provides an overview and best practices for packaging and protecting an intelligent cabinet in preparation for shipping.

Packaging and Shipping Cabinet

Preparing a Single Cabinet Shipment



CAUTION: The cabinets can be heavy and require more than one person (or a mechanical aid) to position the cabinet onto a pallet.

To prepare a single cabinet for shipping:

- 1. Disconnect the power and all items from inside the cabinet.
- 2. Remove the shelves from the cabinet unless they are secured with hardware in a manner that prevents removal and displacement during transport.
- **3.** If the cabinet is equipped with a CC6000 or similar device, remove the device and any mounting hardware that may pose a risk of damage during transport.
- **4.** Place the empty cabinet on a pallet that is of adequate size. The pallet should be larger than the cabinet to prevent damage to the cabinet if another pallet is placed directly next to it.



IMPORTANT: The cabinet must be placed on the pallet in an upright position. Laying the cabinet on the back or sides causes damage. Check with your transport company if you are unsure of the maximum height.

- **5.** The cabinets are packed with reusable packaging material that is intended to be used multiple times if needed. Reuse the original shipping material if available.
 - If the original packaging is unavailable, protect the exterior of the cabinet with foam or bubble wrap and an outer layer of cardboard. Secure the cardboard in place to prevent sagging, slipping or otherwise exposing the cabinet during transport. Do not apply tape or adhesive material directly to the cabinet.
- **6.** Secure the cabinet to the pallet to prevent tipping over. Nylon or similar webbing type material may be used.
- The strapping must be tight enough to secure the cabinet but not so tight that it deforms the panels or metal work.

Preparing Multiple Cabinets for Shipment



CAUTION: Do not place cabinets onto a pallet that is smaller than the perimeter of the cabinets.

If preparing multiple cabinets for shipment, it may be suitable to pack two cabinets on one pallet. Place the cabinets back to back with a layer of foam or cardboard in between the cabinets. Secure the outside of the cabinets as you would a single cabinet and secure both cabinets to the pallet to prevent tipping (see Preparing a Single Cabinet Shipment).

Figure 2 Two Cabinets Secured to Pallet



Avoiding Errors

Avoid the following errors:

 Do not lay the cabinets on the cabinet back for shipping unless the weight of the cabinet is fully supported. The weight of the cabinet must not be supported by the thin backing alone.



CAUTION—PRODUCT DAMAGE: If the cabinet has to be shipped laying down, the weight of the cabinet must be transferred to the pallet along the entire length of the side or damage could result.

- Do not ship cabinets without securing them in a manner that prevents tipping. The cabinets are heavy and can tip over if unsupported.
- Do not ship cabinets with unsecured shelves. Remove the shelves, wrap the shelves, and place them inside the cabinet to prevent damage during transport.
- Do not ship cabinets with vulnerable accessories that could get damaged in transport. The CC6000 must be removed if present.

Reviewing Final Package

Review the final package arrangement and make sure you are confident in the stability and appropriateness of the packing. Ensure the following:

- The cabinet is not overhanging the pallet if possible.
- The exterior of the cabinet is protected reasonably well with cardboard or other suitable padding material.

Packing and Shipping

• The cabinet is protected from weather extremes and harsh weather conditions.

Mounting Cabinet

Cabinet Mounting



IMPORTANT: All cabinets must be fixed to a wall to prevent the possibility of tilting.

All work carried out must be done by qualified persons and with permission of the building owners. All relevant safety precautions must be observed and suitable PPE should be worn.

Fixings Required

Type 1 fixing	For solid walls (for example, brick or breeze block)	10 x 80 mm Rawlplug	
Type 2 fixing	For cavity or drywalls	M8 or similar sized heavy duty cavity wall fixing	

Cabinet Mounting Considerations



IMPORTANT: Handling of the cabinets should be undertaken by at least two people experienced in materials handling as the cabinets are large and heavy.

All cabinets must fixed to a wall or mounted on the wall (raised above ground level to improve access). See Table 1 for cabinet mounting options for each cabinet type.

Table 1 Cabinet Mounting Options

Cabinet Type	Ability to Use Under Desk	Ability to Mount on Optional Base	Ability to Floor Mount	Ability to Wall Mount	Secure to Wall
Compact	Yes	No	Not recommended	Yes	Advisable
Small	Yes	Yes	Not recommended	Yes	Required
Midi	No	Yes	Yes	Yes	Required
Large	No	Yes	Yes	No	Required

Cabinet Type	Ability to Use Under Desk	Ability to Mount on Optional Base	Ability to Floor Mount	Ability to Wall Mount	Secure to Wall
X-Large	No	No	Yes	No	Required
Extreme	No	No	Yes	No	Required

When fixing a cabinet to the wall for safety reasons or to raise the cabinet up to a more accessible height, it is important to correctly identify the type of wall that the cabinet is securing to. The type of wall determines the type of fixings used (see Table 2). All types must not be countersunk. The head of the fixing must have a flat surface to make good contact with the cabinet.



IMPORTANT: If the selected wall is a stud wall, then professional advice must be sought as to the loading that can be placed on the wall and if it needs to be reinforced.

Table 2 Cabinet Wall Fixings

Mounting	Floor M	ounted	Base Mounted		inted Base Mounted Desk Mounted		Base Mounted	
	Brick Wall	Stud Wall	Brick Wall	Stud Wall	Brick Wall	Stud Wall	Brick Wall	Stud Wall
Compact	n/a	n/a	Type 1	Type 2	Type 1	Type 2	Type 1	Seek professional
Small	n/a	n/a	Type 1	Type 2	Type 1	Type 2	Type 1	advice on wall loading/
Midi	Type 1	Type 2	Type 1	Type 2	Type 1	Type 2	Type 1	reinforce- ment
Large	Type 1	Type 2	Type 1	Type 2	n/a	n/a	n/a	n/a
X-Large	Type 1	Type 2	n/a	n/a	n/a	n/a	n/a	n/a
Extreme	Type 1	Type 2	n/a	n/a	n/a	n/a	n/a	n/a

Mounting the Cabinet



IMPORTANT: Follow these guidelines to ensure the cabinet is mounted safely and securely.

There are four keyhole locations (See Figure 3 on page 28) on the outside back of the cabinet that are used to mount the cabinet to a wall. All four must be used when wall mounting.

The mounting holes accept fixings up to 10 mm in diameter and must be suitable to carry the weight of a fully loaded cabinet.



NOTE: A typical fixing used are Rawlplug fixings (part number R-FF1-K-A4) which are only suitable for solid walls. If your wall is made from other materials, a different type of fixing may be required (see Cabinet Mounting Considerations on page 25). Consult with your facilities or site manager to ascertain the correct fixing method to use.

To mount the cabinet:

- 1. After the correct type of fixing is determined, mark the four fixing locations on the wall ensuring that they are level and square. See Table 3 on page 27 for measurements.
- 2. Insert the fixings but do not tighten completely.
- 3. Ensure that all the shelves and equipment are removed from the cabinet.



NOTE: If the cabinet is raised and hung on fixings, at least two people trained in material handling techniques must be used for cabinet mounting.

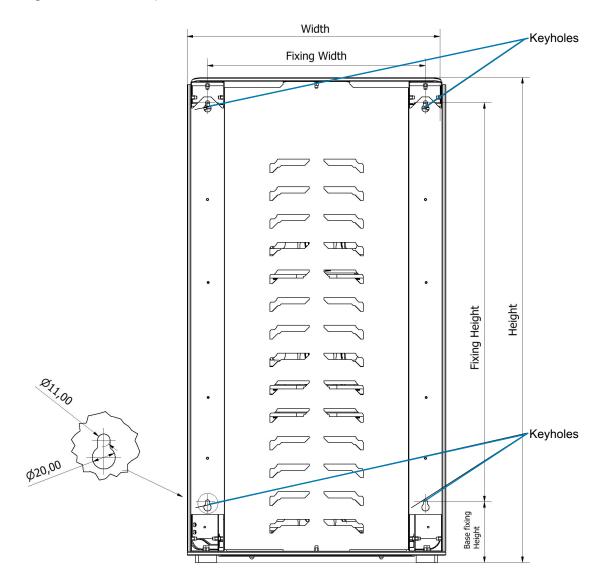
Mounting Cabinet

- **4.** Once in position, tighten the fixings. Confirm that the cabinet is square.
- 5. Install the shelves and equipment (see Shelf Assembly on page 29).

 Table 3
 Cabinet Measurements

Cabinet Type	Width	Height	Fixing Width	Fixing Height	Base Fixing Height
Compact	580 mm (11.02 in.)	330 mm (12.99 in.)	480 mm (18.89)	n/a	250.5 mm (9.86 in.)
Small	702 mm	1012.5 mm	590 mm	780 mm	164 mm
	(27.64 in.)	(39.86 in.)	(23.23 in.)	(30.70 in.)	(6.48 in.)
Midi	702 mm	1312.5 mm	590 mm	1080 mm	164 mm
	(27.64 in.)	(51.67 in.)	(23.23 in.)	(42.51 in.)	(6.48 in.)
Large	702 mm	1612.5 mm	590 mm	1380 mm	164 mm
	(27.64 in.)	(63.48 in.)	(23.23 in.)	(54.33 in.)	(6.48 in.)
X-Large	702 mm	1912.5 mm	590 mm	1680 mm	164 mm
	(27.64 in.)	(75.29 in.)	(23.23 in.)	(66.14 in.)	(6.48 in.)
Extreme	1200 mm	1912.5 mm	1090 mm	1680 mm	164 mm
	(47.24 in.)	(75.29 in.)	(42.91 in.)	(66.14 in.)	(6.48 in.)

Figure 3 Cabinet Keyhole Locations



Shelf Assembly

Assembly Instructions

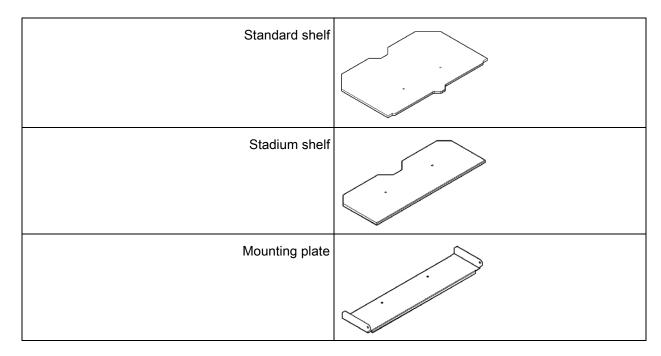
Read these instructions thoroughly before assembling the cabinet shelves.



NOTE: The graphics shown in this document depict a medium size cabinet. The colors are used to clearly distinguish different elements only and do not reflect the actual cabinet colors.

Parts List

Verify that you have the following items:



Fixings Required

M6 x 12 mm Button head TX30	~
M5 x 20 mm Thumb screw	

Tools Required

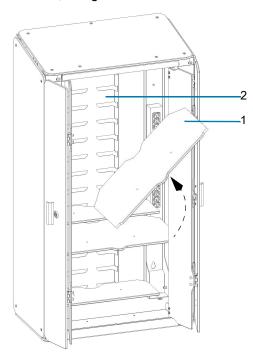
0

TX30

Cabinet Shelf Assembly

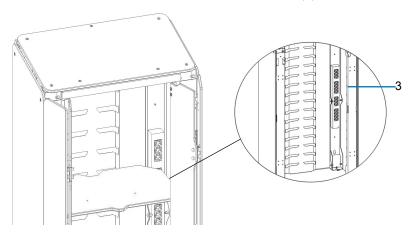
Inserting Standard Shelves

1. Tilt the standard shelf (1) 45 degrees as you insert it in the cabinet. Once the shelf is past the cabinet doors, straighten the shelf.



2. Latch the back of the shelf onto the slotted back panel (2) of the cabinet.

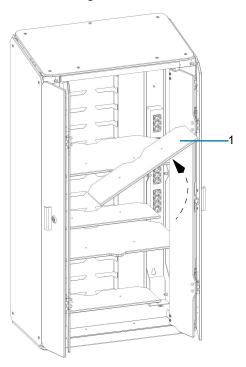
3. Rest the front of the shelf on the front brackets (3) located behind each cabinet door.



Continue steps until all of the required standard shelves are installed.

Inserting Stadium Shelves

1. Tilt the stadium shelf (1) 45 degrees as you insert it in the cabinet. Once the shelf is past the cabinet doors, straighten the shelf.



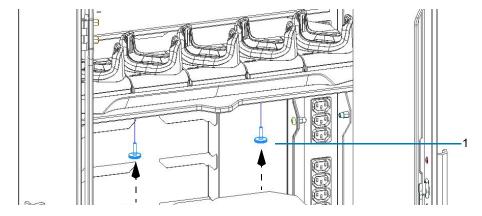
2. Insert the back of the stadium shelf onto the slotted back panel of the cabinet one slot above the standard shelf.



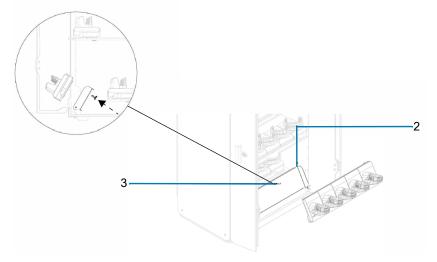
Continue steps until all of the required stadium shelves are installed.

Attaching Cradles

- 1. Place the device cradles onto the stadium shelves.
- 2. Secure the cradles by inserting thumb screws from the underside of the stadium shelf and thread into the bottom of each cradle.



3. A mounting plate (2) is used to add cradles to the bottom of the cabinet (which does not contain a stadium shelf). Loosely attach the mounting plate to the front bracket using the M6 x 12 Button head TX30 screws.



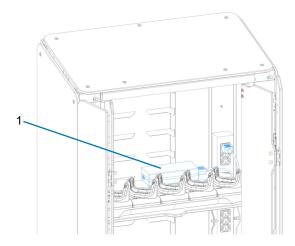
4. Lift the mounting plate up and attach the thumb screws (3) from the underside of the mounting plate and thread into the bottom of each cradle. When complete, push the mounting plate down so that it is flush with the bottom of the cabinet.

Attaching Cables



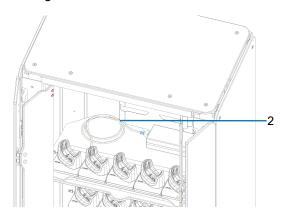
WARNING: Ensure that the mains power is off before performing the following procedure.

1. Position the PSU (1) to the right of centre (when viewed from the front) to enlarge the area available to manage the DC cable.



Shelf Assembly

2. Plug the AC mains lead into the PDU and the other end into the PSU.



- 3. Plug the 8-way end of the DC cable into the PSU and carefully coil the DC lead into a 125 mm/5 in. diameter loop (2) and loosely secure with two cable ties.
- 4. Plug the 4-way end of the DC cable into the Cradle
- 5. Tidy the cable loop and tighten the cable ties.

Specifications

Table 4 Cabinet Specifications

Cabinet	Compact	Small	Midi	Large	X-Large	Extreme
Flat Pack	No	Yes				
Assembly	Arrives Assembled	Assembly Required				* Assembly Required
Unpacking	n/a	Reusable				
Shipping Assembled	n/a	Special Instructions				
Handling Requirement	Single Person	Minimum Two People Required				
Cabinet Mounting/ Securing	Minimum Two People Required	Minimum Two-Three People Required				
Shelf, PDU and Cradle Installation	Cradle, PSU (Not PDU Fitted)	Same for all Configurations				

