AcoustiRACK™

Self-Venting Soundproofed Rackmount Cabinets
Models AR-42U600x1000 & AR-24U600x1000
Self-Assembly Instructions and Health & Safety Information

- **We recommend employing TWO people for assembly (some parts are heavy) and allow 45mins - 1hr**
- **PLEASE READ these instructions carefully *before* starting!**
- **It is VERY IMPORTANT not to mix up the acoustic materials (some parts are the *same shape* but *different thickness*!)**

- **TASKS**

- [x] **Unpack Cabinet & Acoustic Materials**
- [ ] **Assemble the Rack Frame (preferably *in situ*)**
- [ ] **Adhere Acoustic Materials to Door Sections**
- [ ] **Assemble the Doors**
- [ ] **Add Self-threading Screws to Corners**
- [ ] **Adhere Acoustic Materials to Floor Parts & Fit**
- [ ] **Adhere Acoustic Materials to Roof & Fit**
- [ ] **Adhere Acoustic Materials to Side Panels & Fit**
- [ ] **Fit Doors**

Read the IMPORTANT HEALTH & SAFETY and THERMAL GUIDELINES information on pages 7&8 before assembly and use of this product.

Where to Find Support

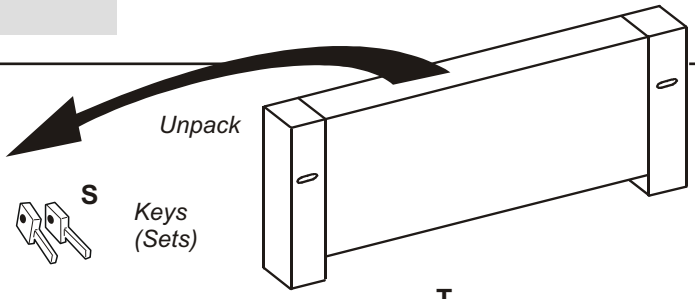
This product has been developed by Acousti Products Ltd & Silentium Ltd.

Please use the Acousti Products website as the 'first point of contact' for all hardware & technical support enquiries (see FAQs section for Frequently Asked Questions). Should you require further support then please use the following contact details:

AcoustiRACK™ Technical Support
Acousti Products Ltd
Website: www.acoustiproducts.com/en/acoustirack.asp
Tel: +44 (0)870 190 4092
Fax: +44 (0)870 922 3971
Email: info@acoustiproducts.com

Terms & Conditions

Rack Cabinet Parts



2 x **A** — *Side Panel & Frame*

4 x **B** — *Side-to-Side Extrusion*

8 x **C** — *1/4 Turn Frame Lock*

1 x **D** — *Multipurpose Tool*

1 x **E** — *Roof Lid*

12 x **F** — *1/4 Turn Panel Lock*

4 x **G** — *Fitting Plug*

4 x **R** — *1/4 Turn Roof Tray Lock*

1 x **Q** — *Floor Centre*

2 x **P** — *Floor Section*

4 x **S** — *Keys (Sets)*

4 x **O** — *Floor Section Screw*

8 x **H** — *Nut*

4 x **I** — *Adjustable Foot*

1 x **J** — *Allen Key Tool*

1 x **K** — *Roof Tray*

16 x **T** — *Self-threading Screw*

32 x (42U) 16 x (24U) **N** — *Allen Key Bolts*

L (42U) 2 x — *Door - Inner Baffle*

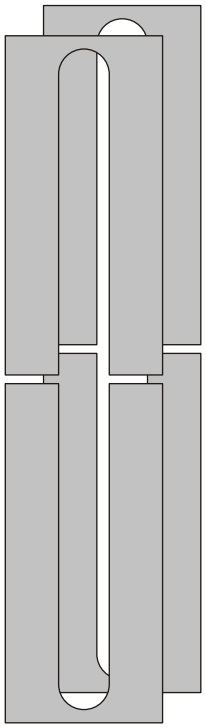
L (24U)

M (42U) 2 x — *Door - Outer*

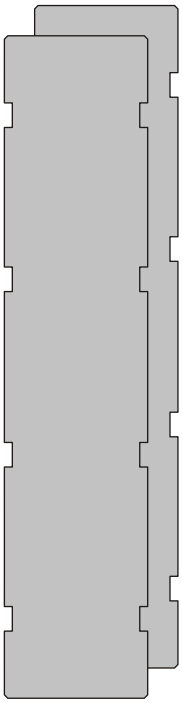
M (24U)

Acoustic Material Parts 42U (TOTAL = 24pcs)

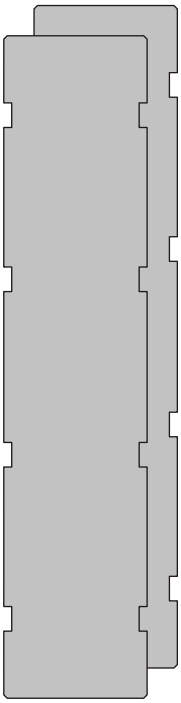
42U Door Parts



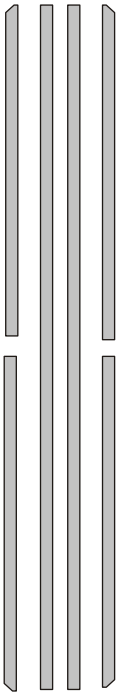
42U-**A** x4



42U-**B** x2
(**7mm**)

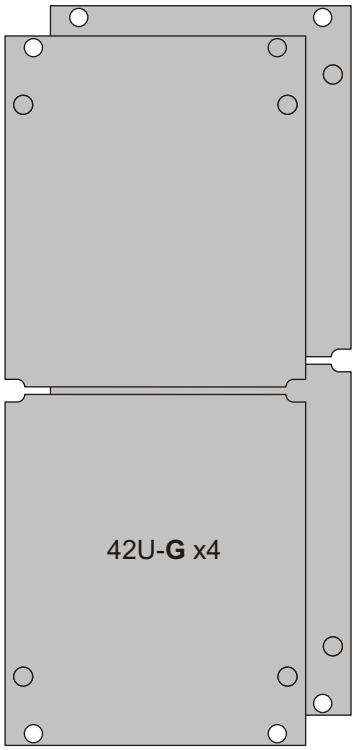


42U-**C** x2
(**12mm - INSIDE FACING**)



42U-**D, E, F** x2

42U Side Panel Parts



42U-**G** x4

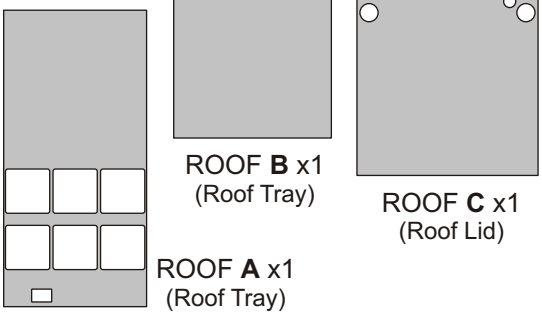
42U & 24U Floor Parts

FLOOR **A*** x2

*These two strips fit under the floor sections either side of Part FLOOR B

FLOOR **B** x1
(Floor Centre)

42U & 24U Roof Parts



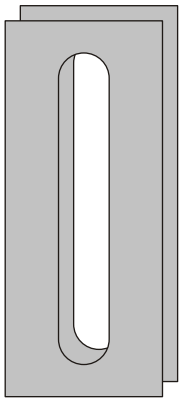
ROOF **B** x1
(Roof Tray)

ROOF **C** x1
(Roof Lid)

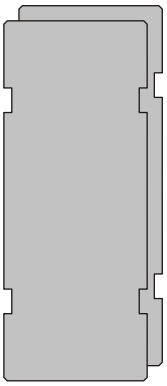
ROOF **A** x1
(Roof Tray)

Acoustic Material Parts 24U (TOTAL = 22pcs)

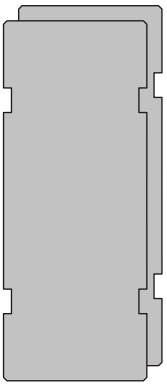
24U Door Parts



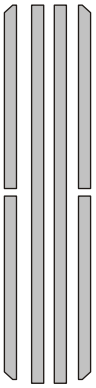
24U-**A** x2



24U-**B** x2
(**7mm**)

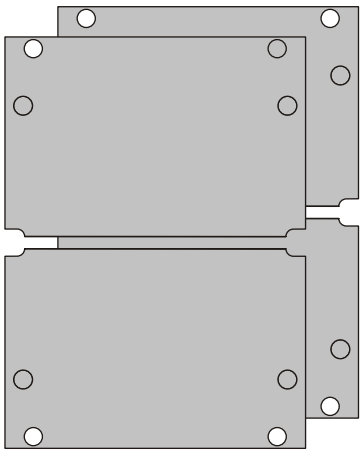


24U-**C** x2
(**12mm INSIDE FACING**)



24U-**D, E, F** x2

24U Side Panel Parts

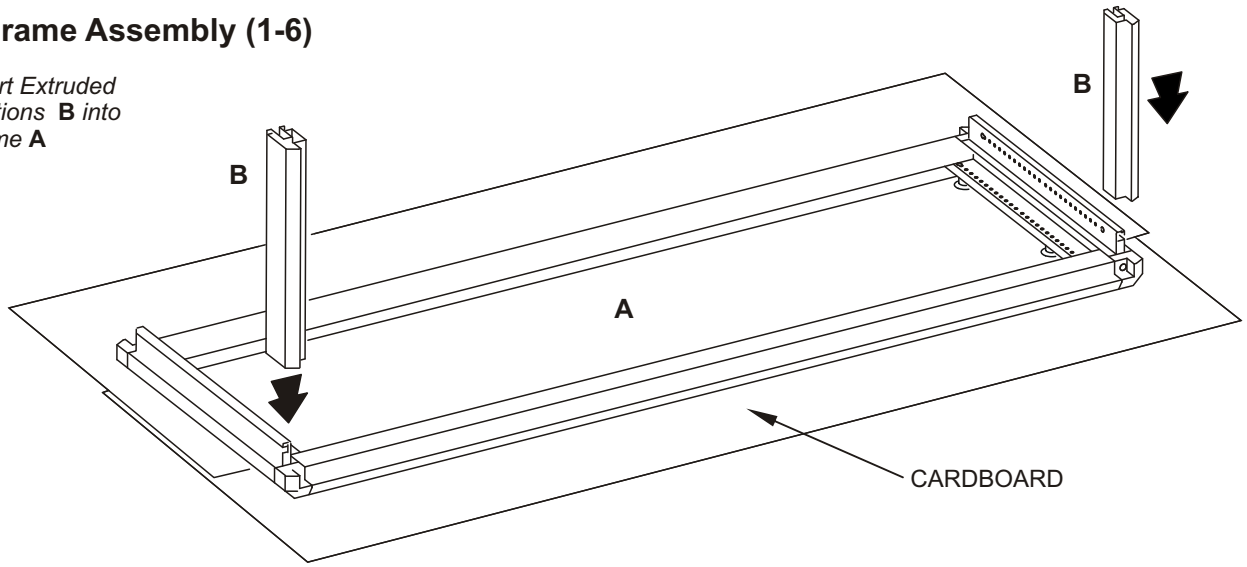


24U-**G** x4

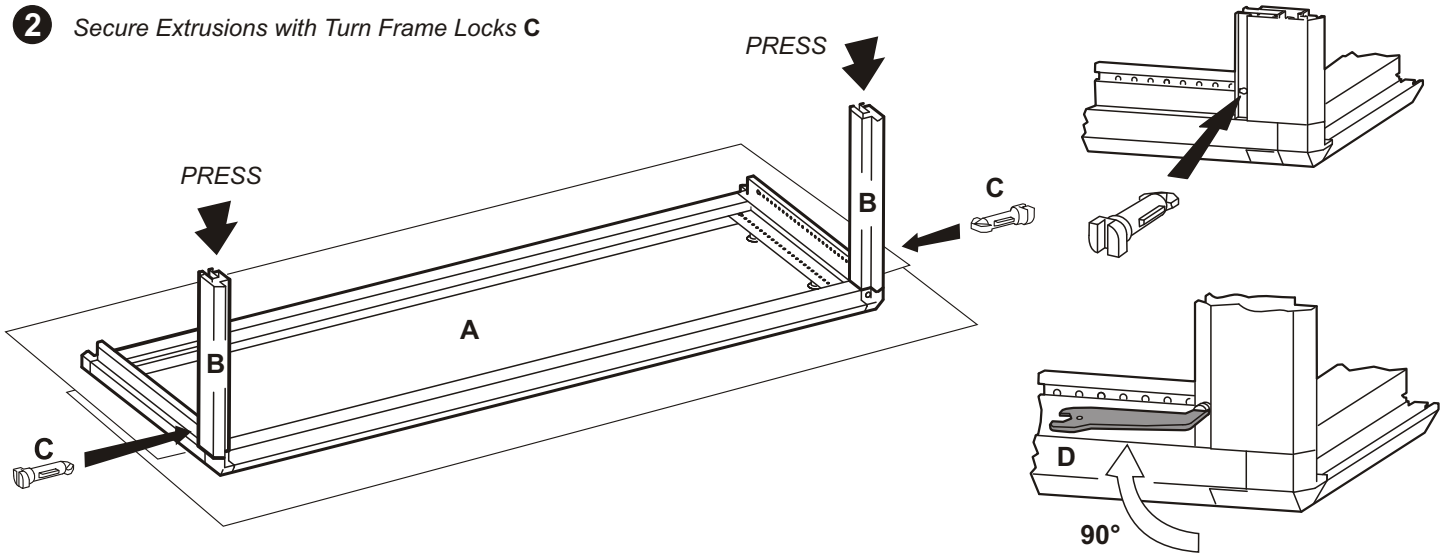
Notes:
- We recommend fitting the materials in the order shown, starting with Part A, then B etc etc.
- Apply the materials at **ROOM TEMPERATURE** (>20°C)
- ENSURE that all cabinet surfaces are **CLEAN** and **DUST-FREE** before the application of materials
- ENSURE that the materials are **VERY FIRMLY** pressed against the cabinet surface over the entire area of each part

Rack Frame Assembly (1-6)

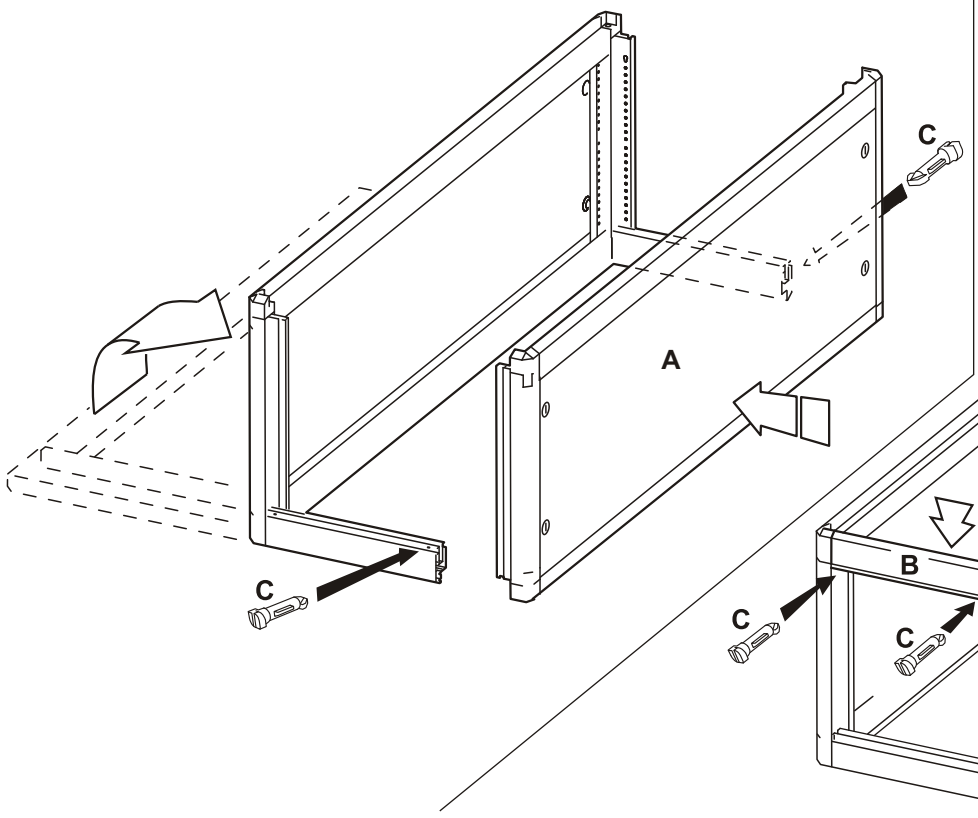
1 *Insert Extruded Sections* **B** *into Frame* **A**



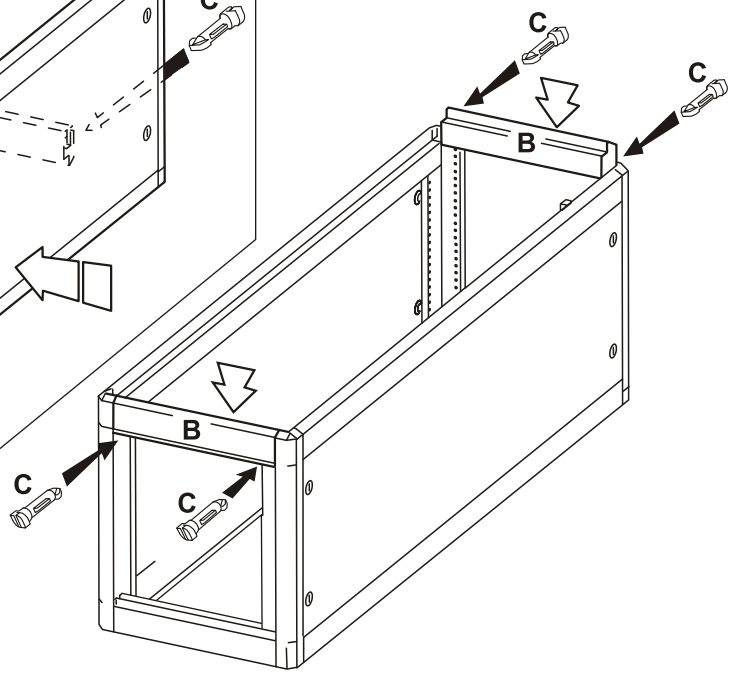
2 *Secure Extrusions with Turn Frame Locks* **C**



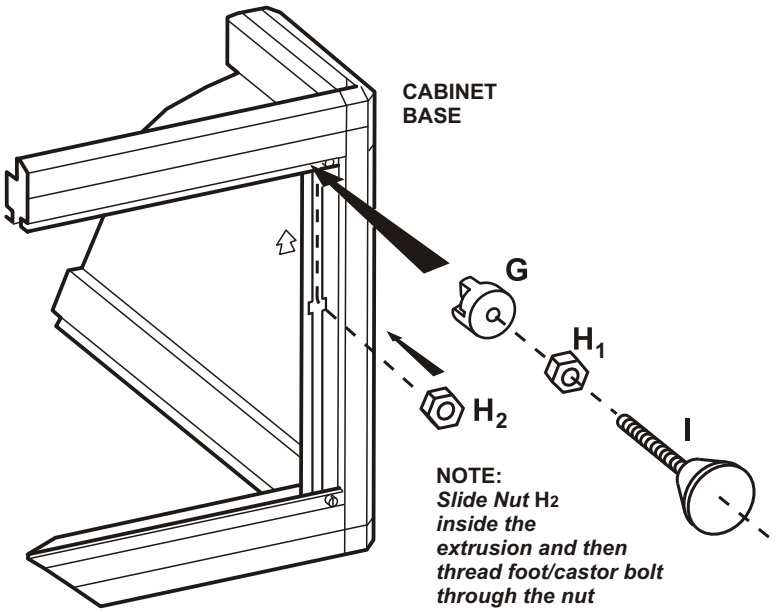
3 *Add 2nd Frame & Side Panel*



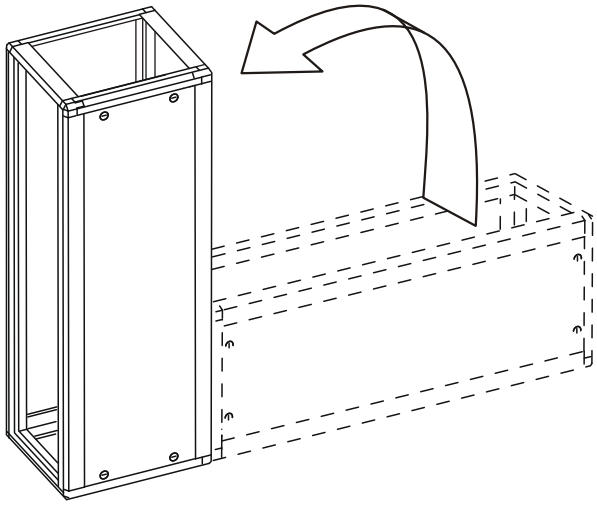
4 *Complete Cabinet Frame*



5 *Add Adjustable Feet (or Castors if purchased separately)*



6 *Right Cabinet Frame*

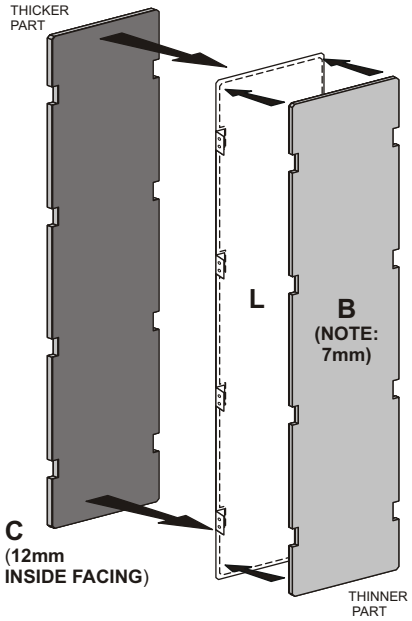


Adhere Acoustic Materials to Door Sections (1-2)

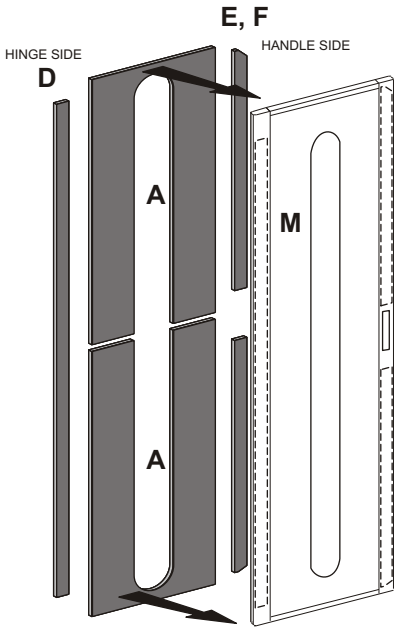
ADHERE ACOUSTIC MATERIALS BY PRESSING FIRMLY!

42U DOOR

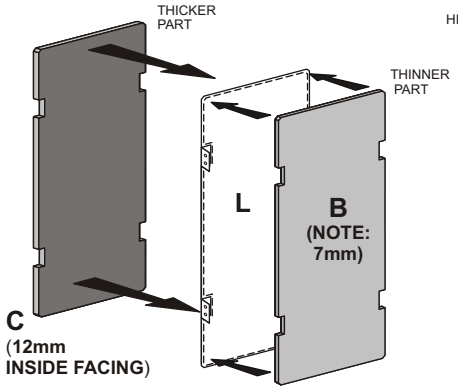
1 *Adhere Acoustic Material Parts* **B & C** *to Door Baffle* **L**

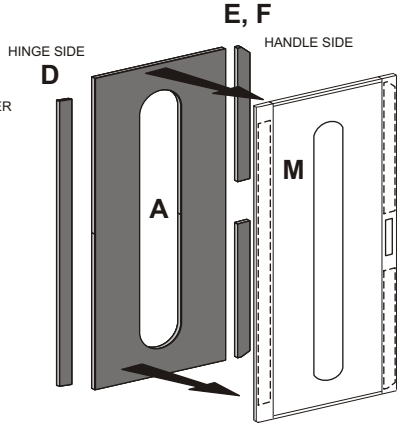


2 *Adhere Acoustic Material Part(s)* **A** *to Outer Door* **M** *and Strip Parts* **D**, **E** & **F**



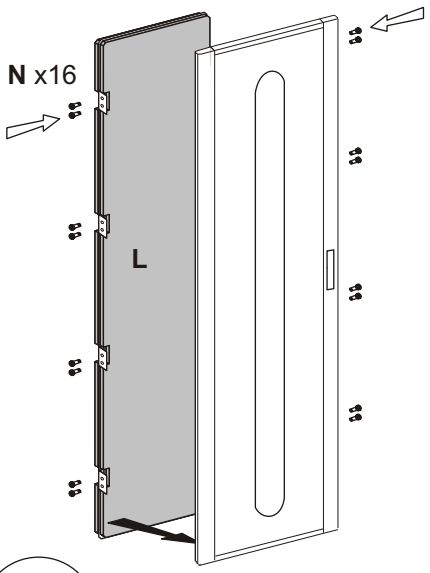
24U DOOR

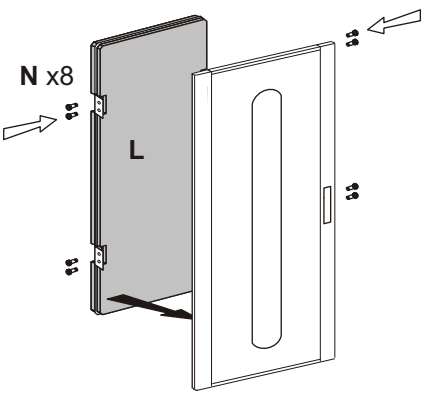




Assemble Door Sections

Secure Inner Baffle to Outer Door using Allen Key Bolts **N**



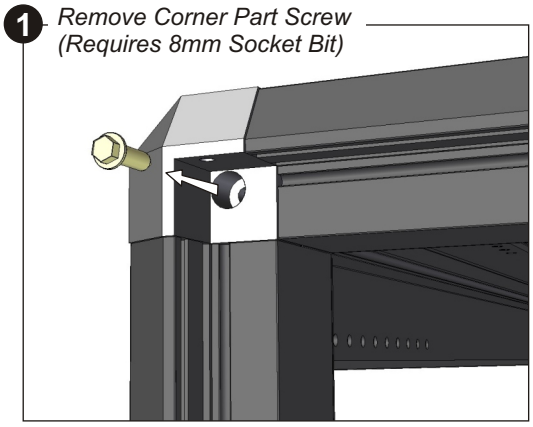


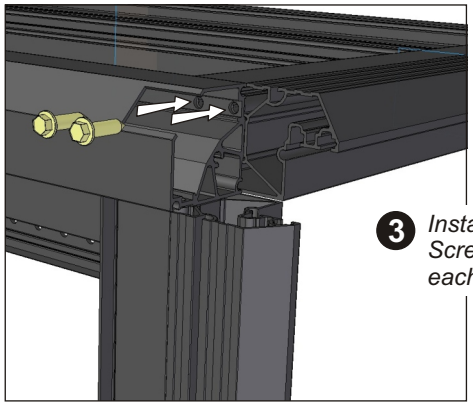
Add Self-Threading Screws to Inside of Corners (1-4)

Electrical connectivity between the aluminium frame extrusions can be improved by installing extra 'Self-threading Screws'. Two screws can be inserted into each corner of the cabinet, once the molded corner piece has been removed. The screws also act to improve rigidity if this is necessary.

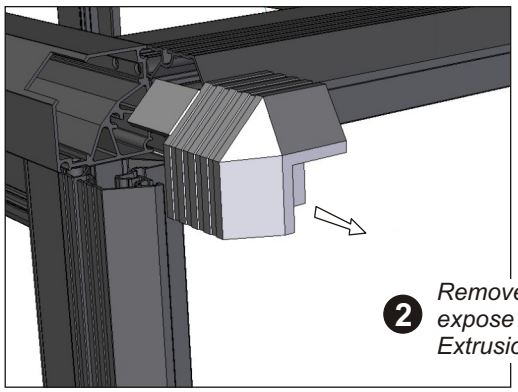
NOTE: *This step can be done later if tools are not immediately to hand.*

1 *Remove Corner Part Screw (Requires 8mm Socket Bit)*



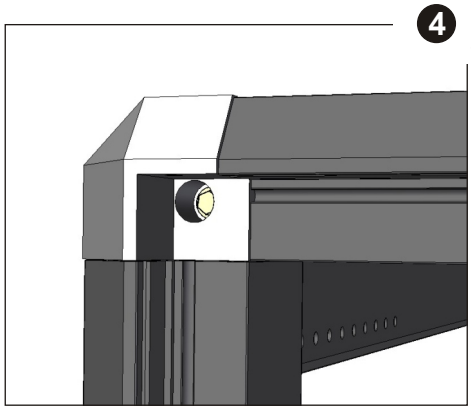


3 *Install 2x Self-threading Screws* **T** *into holes inside each corner.*



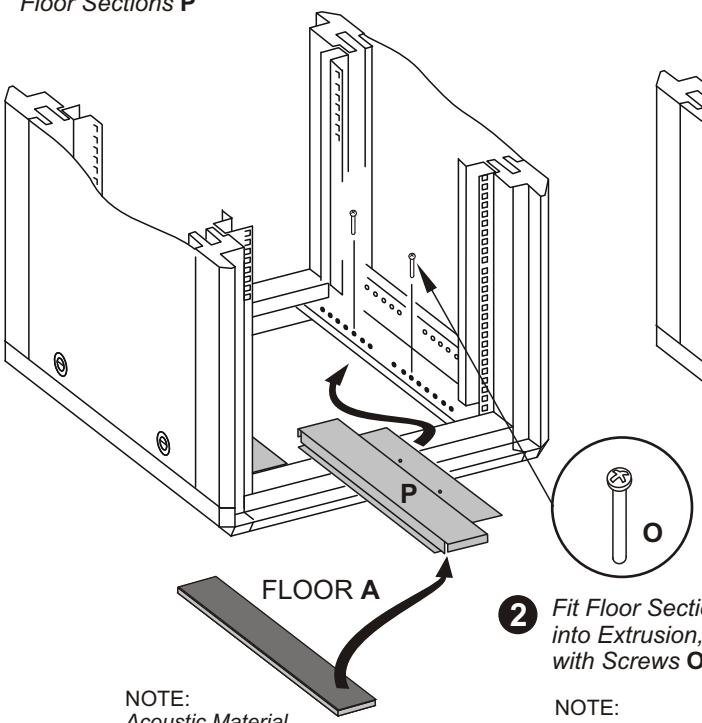
2 *Remove Corner Part to expose the Aluminium Extrusions*

4 *Replace Corner Part and Screw*



Adhere Acoustic Materials to Floor Sections & Fit (1-4)

1 *Adhere Acoustic Materials* FLOOR **A** *to Floor Sections* **P**

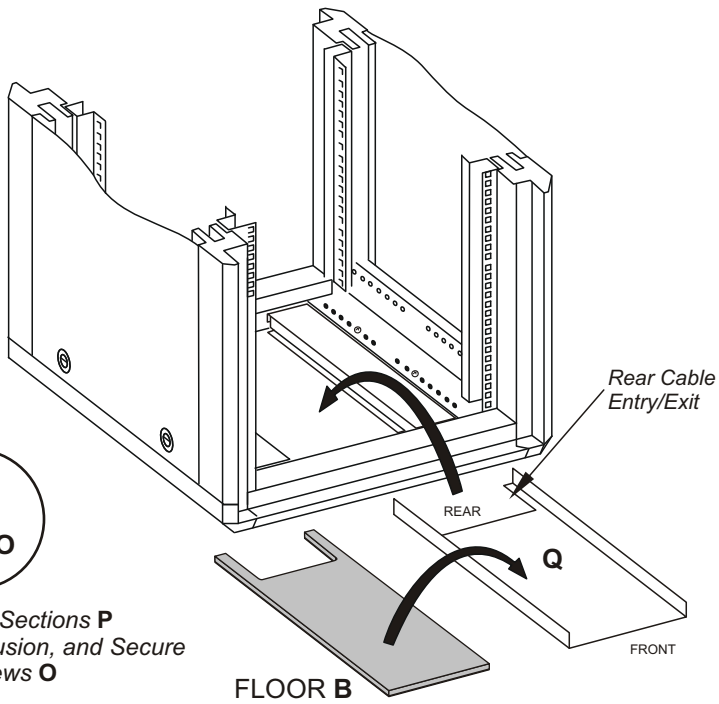


NOTE:
Acoustic Material Parts FLOOR **A** *Fit Foam Face* ***DOWN***

2 *Fit Floor Sections* **P** *into Extrusion, and Secure with Screws* **O**

NOTE:
Screwdriver Required for Screws **O**

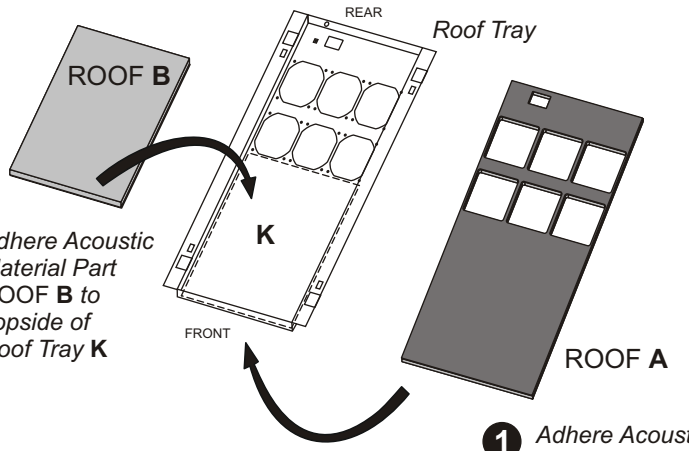
4 *Place Floor Section* **Q** *into Cabinet Floor (this part is not fixed)*



3 *Adhere Acoustic Material Part* FLOOR **B** *to Floor Centre* **Q**

NOTE: *Acoustic Material Part* FLOOR **B** *Fits Foam Face* ***UP***

Adhere Acoustic Materials to Roof Sections & Fit (1-5)

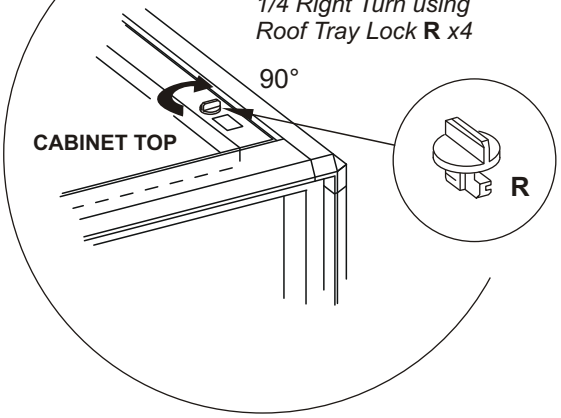


2 *Adhere Acoustic Material Part* ROOF **B** *to Topside of Roof Tray* **K**

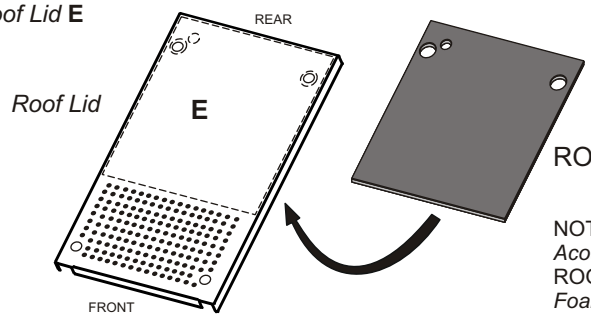
1 *Adhere Acoustic Material Part* ROOF **A** *to Underside of Roof Tray* **K**

NOTE:
Acoustic Material Part
ROOF **A** *Fits Foam Face* ***DOWN***

3 *Fit Roof Tray* **K** *to Cabinet by 1/4 Right Turn using Roof Tray Lock* **R** *x4*



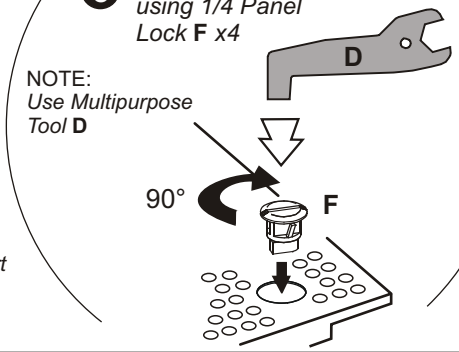
4 *Adhere Acoustic Material Part* ROOF **C** *to Underside of Roof Lid* **E**



NOTE:
Acoustic Material Part
ROOF **C** *Fits Foam Face* ***DOWN***

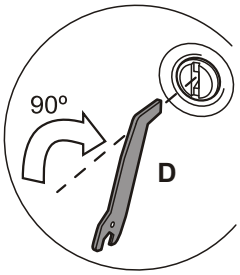
5 *Fit Roof Lid* **E** *to Cabinet using 1/4 Panel Lock* **F** *x4*

NOTE:
Use Multipurpose Tool **D**



Adhere Acoustic Materials to Side Panels & Fit (1-4)

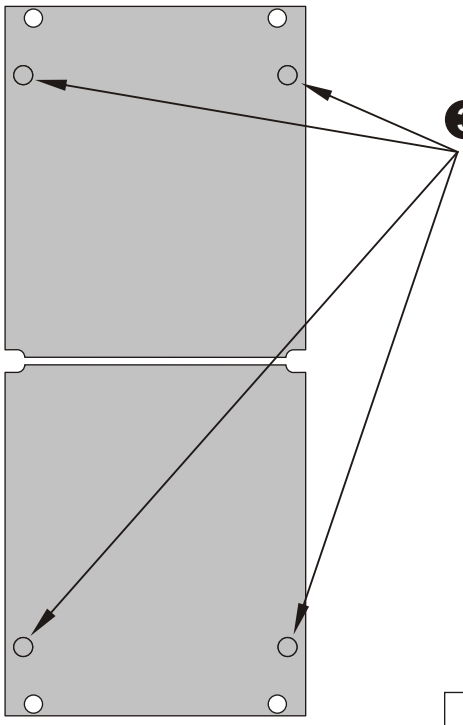
1 *Remove Side Panels Using Tool* **D**



We Recommend Placing Side Panels onto Cardboard (to Protect Surfaces)

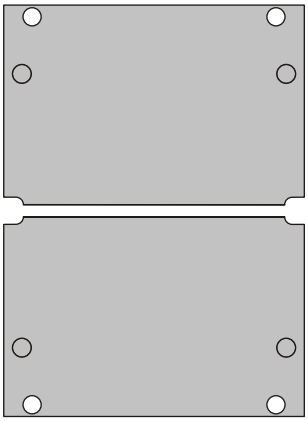
2 *Using Acoustic Material Parts* **G** *x2, Adhere to Inside of Side Panel* **A** *in Orientation Shown Below*

ADHERE ACOUSTIC MATERIALS BY PRESSING FIRMLY!



42U-**G**

3 *Remove Small 'Push-out' Circle where Earthing Tags are Located.*



24U-**G**

4 *Fit Side Panels to Cabinet Using Tool* **D**

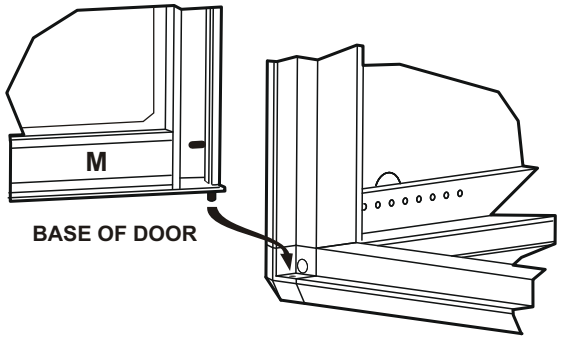
CAUTION 42U SIDE IS HEAVY!

NOTE:
Side Panels may be Secured using Key Locks **S**

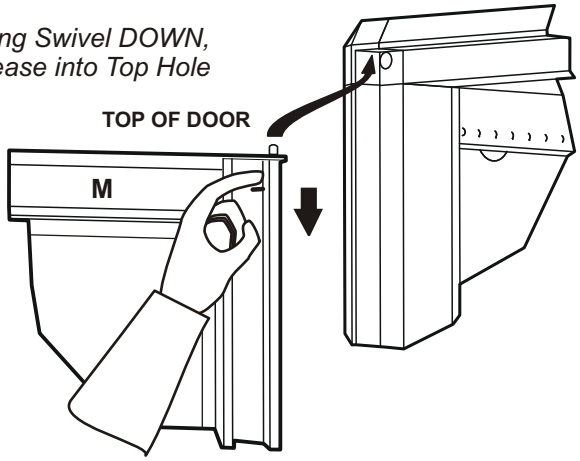
Fit Doors (1-2)

CAUTION 42U DOOR IS HEAVY!

1 *Insert Spring Swival into Bottom Hole*



2 *Pull Spring Swivel DOWN, and Release into Top Hole*



HEALTH & SAFETY INFORMATION

PLEASE READ the important Health & Safety Information on this page and the Thermal Guidelines on the following page before cabinet assembly, equipment installation and general maintenance.

GENERAL SAFETY

Lifting Hazard:

When lifting any heavy object:
(i) Ensure you can stand safely without slipping.
(ii) Distribute the weight of the object equally between your feet. Use a slow lifting force. Never move suddenly or twist when you attempt to lift.
(iii) Lift by standing or by pushing up with your leg muscles; this action removes the strain from the muscles in your back.
(iv) Do not attempt to lift objects that you think may be too heavy for you.

Good Working Practice:

- Place removed panels, doors and other parts in a safe place, away from personnel, while you are servicing equipment.
- Observe good housekeeping in the area of the cabinet during and after maintenance.
- Keep your tool box away from walk areas so that other people will not trip over it.

Mechanical Hazards:

Do not allow installed equipment on telescopic mounting rails to de-stabalise the cabinet. Check stability before maintenance is carried out on equipment that is not installed in a fixed position inside the cabinet.

Do not place any object on top of rack-mounted devices that are protruding from the cabinet. This may cause the cabinet to become unstable and tip unexpectedly.

Do not store objects on the top of the cabinet. The cabinet roof has not been designed to be load-bearing. There is a risk of these objects falling.

ELECTRICAL SAFETY

Earthing/Grounding

Electrical grounding of the AcoustiRACK™ cabinet is required for operator and equipment safety and correct function.

The grounding of the cabinet should be carried out and verified by a competent and qualified electrician.

The side panels, roof, and both doors of the cabinet can be earthed using an AcoustiRACK™ accessory Earthing Kit. The Earthing Kit is comprised of earthing cabling and fixings for one cabinet.

THERMAL GUIDELINES

WE RECOMMEND THE FOLLOWING THERMAL GUIDELINES ARE CONSIDERED AND ADHERED TO BEFORE INSTALLING EQUIPMENT!

THERMAL GUIDELINES

Thermal Overview

The passive air venting design of the AcoustiRACK™ is driven by cooling fans inside installed 19-inch equipment. This means the cooling potential of the cabinet is related, in part, to the cooling efficiency of equipment installed, and the location/configuration of equipment inside each cabinet. The thermal capacity for each cabinet is going to be as unique as the equipment installed, and influenced by a number of other factors including arrangement, capacity, and the immediate environment.

For heavy thermal loads, cooling capacity can be enhanced by installing the **Assisted Venting Roof** (AVR) as an optional accessory (see the AcoustiRACK™ Accessories web pages for more details). The AVR helps expel warm air in the upper parts of the cabinet behind installed equipment to the outside.

Thermal Recommendations

To achieve the best cooling efficiency inside the AcoustiRACK™, with or without the AVR, we recommend the following:

(i) Use of Blanking Plates for Empty Space
Ensure gaps between equipment in the front of the cabinet are filled using sound-proofed blanking plates wherever possible - this reduces re-circulation of warm air inside the cabinet. Blanking plates are available in 4U, 2U and 1U sizes, and add additional noise reduction because they are sound-proofed on the inside of the plate (using acoustic materials). Blanking plates are available as a optional accessory, see the AcoustiRACK™ Accessories web pages for more details.

(ii) Mount Equipment towards the Front of the Cabinet
Ensure 19-inch equipment is mounted towards the front of the cabinet - which will also prevent air recirculation, and therefore maximize the cooling potential of the enclosure. The front vertical 19-inch steel brackets should be located in the front-most position (the first set of holes - as they are fitted upon delivery), and the rear brackets moved forward to adjust for different equipment depth if necessary. Avoid mounting equipment in both the front and the rear of the cabinet, unless equipment at the rear is very low thermal output and is not cooled using assisted airflow.

(iii) Air Conditioning/Room Temperatures
Ensure room air temperature does not range above 25°C (77°F) if at all possible. Temperatures inside any air-cooled rackmount cabinet are directly related to the intake air temperature and therefore are dependant on the efficiency of any room/building air conditioning.

(iv) Allow Adequate Venting Space
Ensure the location of the AcoustiRACK™ does not inhibit free air circulation in front, behind and above the cabinet. AcoustiRACK™ cabinets can be co-located side-by-side (bayed) to form a row. Locate the AcoustiRACK™ enclosure in a space that does not have a heat-source nearby (such as a radiator). We recommend allowing more than 250mm free air space above the roof of the unit, unless there is an air conditioning facility (such as an air extraction unit/duct) directly above the cabinet. We recommend allowing more than 1m free space in front of and behind the cabinet.

THERMAL MONITORING OF EQUIPMENT INSTALLED INSIDE AN AcoustiRACK™ IS THE RESPONSIBILITY OF THE SYSTEM ADMINISTRATOR.

Further Information - for further information regarding thermal capacity, FAQs, and help assessing thermal requirements please see the AcoustiRACK™ web pages: http://www.acoustiproducts.com/en/acoustirack.asp, and click on “Thermal Guidelines”.

READ THIS BEFORE INSTALLING EQUIPMENT IN TO THE CABINET!

- ONLY position the acoustic materials as directed in these instructions and as depicted.
- DO NOT cover any ventilation holes or obstruct ventilation spacings in the cabinet.
- DO NOT position acoustic materials inside the cabinet in such a way that may inhibit the correct functioning of any equipment. Pay special attention to the possible obstruction of equipment air intake/exhaust vents.
- Whilst every care has been taken to produce a set of acoustic materials and cabinet design that will be appropriate for the majority of equipment configurations, it is the responsibility of the system builder to thoroughly test and monitor installed equipment.

ALL EQUIPMENT INSTALLED INSIDE AN AcoustiRACK™ IS DONE SO AT THE RISK OF THE INSTALLER. WE RECOMMEND INSTALLED EQUIPMENT IS REGULARLY CHECKED AND MONITORED.