Matrix

WALK-IN COLD ROOMS

ColdKit

A Purever Company

MATRIX - WALK-IN COLD ROOMS

ColdKit is the most innovative and comprehensive manufacturer within the catering industry.

Committed investment in R&D, technological innovation and new production facilities, ColdKit's range of products is today larger than ever and gives solutions to any professional catering need with top quality products and durability together with a superb variety of finishes tailored to customers individual requirements.

Today, ColdKit offers a wide variety of solutions aimed for hotels, restaurants, all kitchens, public venues, food franchises, supermarkets, food logistics and agro-food industry.

ColdKit's range of products includes:

- Linx, a selection of neutral furniture in stainless steel
- Dubhe, cold storage and freezer cabinets
- Mizar, counter refrigerators
- Nassau, Bali and Saona, modular bars and display cabinets for pastries, bakeries and cafeterías
- Araya all-purpose showcase
- Calabria display cabinets for pastry
- Bread displays
- Fish displays
- Alyat full range of self service equipment
- Matrix cold rooms
- Isark mini cold rooms
- Industrial foodsafe panel for agroalimentary purposes
- A range of insulated and service doors

ColdKit offers a wide range of products for professional kitchens, food storage and display in hotels, restaurants, pastisseries, bakeries, food franchisings, supermarkets, cold logistics and to all the agroalimentary industry.

ColdKit has a professional distribution network with solid experience developing complete catering projects. If you are interested in learning more about our solutions, log on to our website or contact us and by return one of our certified specialists in your area will be in touch with you.

All our products have been design for professional performance, using high quality components and strict production techniques. On top of this and due to our quality processes, ColdKit Ibérica, our mother factory, has been awarded with the ISO 9001 certification.

Now, ColdKit's products are manufactured in modern facilities in Spain, Portugal, France, Brazil and India.

For more information, visit www.coldkit.com

Adding to the ISO 9001 certification, ColdKit Ibérica is the only manufacturer in this field to have been awarded with the Controlvet certification for the quality and hygiene of its products, procedures and facilities, in accordance to the current sanitation rules.

Controlvet is certified by the Portuguese Certifying Institute, no LO224-1, has more than 10 years of experience and is specialized in certifying companies related to the food industry, with more than 1500 satisfied clients.

Matrix

WALK-IN COLD ROOMS

CONTENTS

Matrix is an innovative **modular cold room** which stands out from traditional cold rooms.

It is the result of a major research effort which involved professionals from a number of countries.

It offers **practical and professional solutions** to meet conservation and storage needs in hotels, restaurants, catering businesses, shops and industrial kitchens.

The **MATRIX** range is a fully modular cold room concept made up of different sandwich-type insulating panels. Its quick and easy assembly enables you to build cold rooms with very varied volumes.

Matrix is designed to refrigerate and conserve products that require storage at positive or negative temperatures.
 The most common uses are:
• Restaurants
• Hotels
• Catering
• The farming sector
• The industrial sectors

The special feature of the MATRIX range resides, firstly, in its technical concept:
• 4 thicknesses of panels (60 - 85 - 105 -150mm)
• 20cm modulation, for 60-85-105mm and 40cm for 150mm
• Floor panel finishes (phenolic resin) with options (rust-proof - standard version and reinforced version)
• Possibility of interior division or of joined cold rooms
• Wide range of hinged and sliding doors
• Maximum integration of the components to facilitate cleaning (e.g. The electrical resistor that is located inside a PVC profile that surrounds the doorframe.)
• Wide range of accessories that help it comply with the current hygiene regulations
• Options: storage - refrigeration units

And in addition, in the aesthetic quest for the finished product, it is characterised by:
• Grey stainless steel colour exterior (RAL 9006).
• Smooth finish for ease of cleaning.
• All the exterior edges are rounded, which also makes them easier to clean.
• The hinged door is rounded on the outside.
• The hinges and the closure are perfectly integrated into tnese global shapes.

Matrix

WALK-IN COLD ROOMS

COMPLETE MODULARITY

MATRIX is born to adapt to any situation. This complete flexibility is based on the use of a 20x20cm modulation. Thus the three measurements of the cold room (height, width and depth) can be adapted, creating an infinite number of possible combinations.

Likewise the modularity extends to the subdivision of the unit. Within the same space it allows you to create different areas for different products or with different temperatures, adapting to he customer's needs to a greater extent.

EXCLUSIVE DESIGN

With the same concept of modularity and ease of assembly, the customer may choose between different models and numbers of doors: sliding, swinging, and hinged,and glass display doors, windows and strip curtains.

EASIER ASSEMBLY

Assembly is quick and easy from the inside of the cold room. In a few hours the cold room will be operative, working cleanly, simply and without the need for cutting. The elements of the cold room are secured using the simple connection of two catches inserted in the panels. The vertical and roof panels are also interchangeable.

ENDLESS OPTIONS

MATRIX offers a great variety of accessories: skirting, coving sections, silicon sealants, pressure relief valves, lighting, temperature control, access ramps, etc. All of these comply with hygiene regulations and are approved by CNERPAC.

ENVIRONMENT AND SERVICE

MATRIX is manufactured with environmentally-friendly materials (for example, CFC- and HCFC-free polyurethane insulation), in modern factories and with cutting-edge machinery that ensures permanent levels of quality. Our logistics department, fully devoted to the customer, assures reliability and short delivery times, thanks to excellent warehouse and transport monitoring.

These technical data sheets, which provide full information on all of our products, are available to our customers.
If you require information, please consult our technical services; they are always on hand.

CALCULATION PARAMETERS

Thermal conductivity λ , expressed in W/mk or W/m°C, is the amount of energy (in Watts) that passes through a surface of 1m^2 that is 1m thick, according to the temperature difference between each of the faces (K or °C). With respect to polyurethane insulation, we must know the first parameter. To do so, a measurement must be made in the laboratory, according to tne current standards, on samples extracted from the products of the manufacture in the factory itself.

Heat transfer K or U, expressed in W/m^2 K or °C, is the sum of the thermal resistance of each layer of material that makes up the panel, plus the resistances of interior and exterior surface exchanges. This value for the **MATRIX** panels is the following:

VALUE		
MATRIX 60	0,359	W/m^2.°C
MATRIX 85	0,258	W/m^2.°C
MATRIX 105	0,211	W/m^2.°C
MATRIX 150	0,149	W/m^2.°C
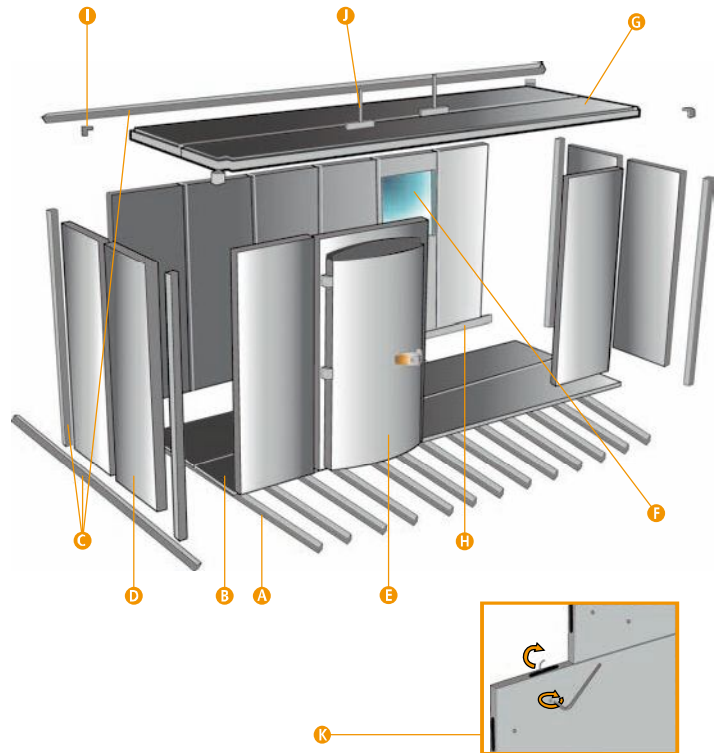
A - Aeration battens
B - Profile Sanitary
C - Floor, vertical and roof reinforcements
D - Vertical panels
E - Door
F - Panel with glass
G - Roof panels
H - Rack
I - Plastic finishes for the edges
J - Roof support (optional / self-standing)
K - Hexagonal spanner for joining the panels

The difference between temperature T1 (interior) and T2 (exterior) allows us to calculate the loss of heat through the walls (Q), expressed in W/m^2.

$$Q = K* \ \Delta T$$

An example of a MATRIX 85 cold room at T1=5°C and T2=20°C, that is, a ΔT of 25°C, the loss of heat through the walls shall be: 0,259*25 = 6,47 W/m^2.

The normal heat loss values are generally between 10 and 13W/m^2 for a cold room at positive temperatures and between 8 and 10 W/m^2 for the cold rooms at negative temperatures.

PANELS (Vertical and Roof)

The MATRIX vertical and roof modular panels are manufactured in polyurethane injected at high pressure, free from CFCs and HCFCs. In the range of MATRIX vertical and roof panels, 4 thicknesses are available according to the refrigeration needs of the customer:

- **MATRIX 60** - With 60mm panel thickness
- **MATRIX 85** - With 85mm panel thickness
- **MATRIX 105** - With 105mm panel thickness
- **MATRIX 150** - With 150mm panel thickness

The interior temperature intervals of the site and the applications recommended for each panel thickness are the following:

- **MATRIX 60 -** From +8ºC to +1ºC
Conservation
- **MATRIX 85 -** Up to -18°C / -20ºC
Negative interior / hot exterior temperatures
- **MATRIX 105 -** Up to -18°C / -25ºC
Negative interior / extreme exterior temperatures
- **MATRIX 150 -** Up to -40ºC
Freezing / Deep freezing

Each of the panels has the following modules, expressed in metres, so that they adapt optimally to the configuration of the space reserved for the cold room:

THICKNESS: MATRIX 60 - MATRIX 85 - MATRIX 105										
WIDTH	-	-	-	0,40	0,60	0,80	1,00	1,20	-	-	-
HEIGHT	2,00	2,20	2,40	2,60	2,80	3,00	3,20	3,40	3,60	3,80	4,00

The vertical and roof panel modules of **MATRIX 60, 85 and 105** are **20cm** in height and length.

THICKNESS: MATRIX 150					
WIDTH	-	0,40	0,80	1,20	-	-
HEIGHT	2,00	2,40	2,80	3,20	3,60	4,00

The vertical and roof panel modules of **MATRIX 150** are **40cm** in height and length.

FINISH OPTIONS

Up to 6 options are available for the panel finishes according to the following interior and exterior combinations:

SMOOTH - WHITE: in galvanised sheet steel pre-lacquered in 25 micron polyester. Colour White reference 1006 (very similar to RAL 9002), 0,50mm thick with polyethylene protective film.

SMOOTH - GREY: In galvanised sheet steel pre-lacquered in 25 micron polyester. Colour White RAL 9006, 0,50mm thick with polyethylene protective film.

SMOOTH - STAINLESS STEEL: In austenitic stainless sheet steel, with grain 120 shiny finish. The thickness is 0,60mm and it is protected with a polyethylene film.

SMOOTH WHITE
REF 1006

SMOOTH GREY
RAL 9006

SMOOTH
STAINLESS STEEL

COMBINATIONS
White / Grey
White / White
White / Stainless Steel
Stainless Steel / Grey
Stainless Steel / White
Stainless Steel / Stainless Steel

ASSEMBLING PANELS

All of the vertical and roof panels- are fitted during manufacture with universal plastic casings with cam and shaft (patented model), to adapt to the 20cm modulation (40cm for **Matrix 150**).
To guarantee perfect correspondence between the assembly systems, the moulds used during the manufacture process are designed to position the assembly casings perfectly.
The vertical and roof panels of **Matrix 150** have a feature to ensure the continuity of the insulation. In the seal between 2 panels, as well as between panels and edges, during assembly a polyethylene filler supplier with the cold room must be placed (See figure below). To keep it in place, dots of silicon are used.

METHOD OF ASSEMBLY

Each of the boxes possesses a levy and an axis. For further isolation guarantees, there is an adhesive meeting of gray polyethylene placed in the wings of every box. On having been closed, it insures that the panels remain compressed to assure a perfect connection.
To complete the assembly the hexagonal key needs only turning 45°.

TECHNICAL AND PHYSICAL CHARACTERISTICS

• The coefficient of conductivity of the polyurethane, in conformity with the norm CASH 52612 is equal to **0,0228 W/m°C**

• Likewise, the density of the polyurethane, in conformity with the norm IT UNE 92235 is equatto **40 +/- 2 Kg/m3**

• Resistance to the pressure, in conformity with the norm UNE 92334 is equal:to **0,15 N/mm2**

TECHNICAL DATA

VERTICAL AND ROOF PANELS				
	MATRIX 60	**MATRIX 85**	**MATRIX 105**	**MATRIX 150**
Practical coefficient K	25°C	35°C	45°C	65°C
Δt at the usual temperature(Q) For heat loss 13W/m^2	35°C	50°C	60°C	85°C
Resistance to traction perpendicular to the face. According to UNE 41950-94	0,12 N/mm^2	0,12 N/mm^2	0,12 N/mm^2	0,12 N/mm^2
Dimensional stability According to UNE 41950-94 After de 24h turns +80°C After de 24h turns -20°C	0,5% em volume 0,2% em volume	0,5% em volume 0,2% em volume	0,5% em volume 0,2% em volume	0,5% em volume 0,2% em volume
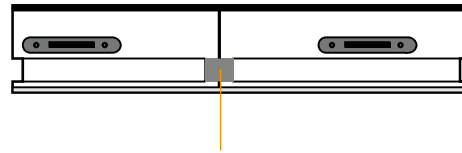
Matrix 150: 30X20mm FILLER between 2 panels
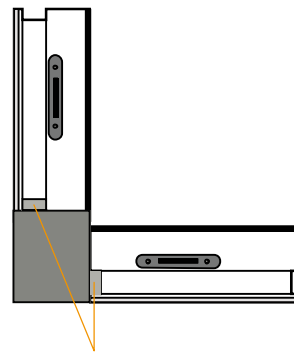
Matrix 150: INSULATION 30X10mm between panels and angles
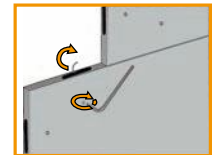
Key

Male box + Female box

Set

DIMENSIONS

MATRIX 60 - MATRIX 85 - MATRIX 105 - WIDTH

mm	400	600	800	1000	1200
200					
400					
600					
800					
1000					
1200					
1400					
1600					
1800					
2000					
2200					
2400					
2600					
2800					
3000					
3200					
3400					
3600					
3800					
4000					

MATRIX 150 - WIDTH

mm	400	800	1200
400			
800			
1200			
1600			
2000			
2400			
2800			
3200			
3600			
4000			

OVERDOOR (Bandeaux)

mm	800	1000	1200
200			
400			
600			
800			
1000			
1200			
1400			
1600			
1800			
2000			

PANELS (Floor)

The **MATRIX** modular floor panels are manufactured in rigid polyurethane, free from CFCs and HCFCs.
Various versions are available to our customers depending on the resistance that they need to have due to their use, whether for conventional service demands, or reinforced, for greater service demands. In the case of the **MATRIX 60, 85 and 105** cold rooms, the floor panel is **85mm** thick in modules that are **20cm** wide. Nevertheless, for **MATRIX 150** cold rooms, the floor panel is **150mm** thick, and its modules are **40cm** wide.

STANDARD FLOOR PANEL

The standard floor panel is recommended for conventional service demands. We offer two interior finish options:

• 10mm plywood (CTBX) coated with a non-slip **phenolic resin** in brown. The material used in its manufacture is Finnish birch.

• 10mm plywood (CTBX) coated in non-slip stainless **sheet steel**. The exterior finish in both cases is smooth in galvanised sheet steel pre-lacquered in polyester of 25 microns in white, reference 1006, 0,50mm thick with a protective polyethylene film.
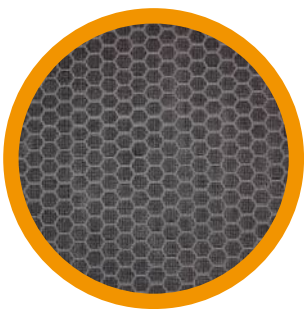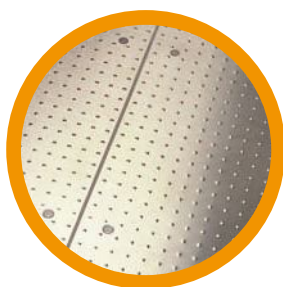

NON SLIP PHENOLIC RESIN
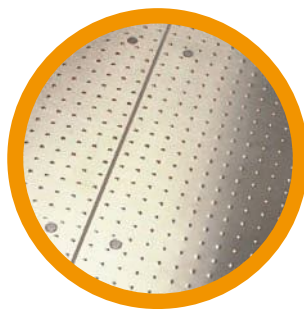
NON SLIP STAINLESS STEEL

REINFORCED FLOOR PANEL

The reinforced floor panel is recommended for especially high service demands. It has an interior covering in plywood (CTBX) of 10mm coated in non-slip stainless sheet steel on another lacquered sheet, 0,50mm thick, adhered to the interior face of the plywood.

REINFORCED STAINLESS STEEL
NON-SLIP

ASSEMBLING PANELS

All the floor panels are fitted during manufacture with universal plastic casings with cam and shaft (patented model), to adapt to the 20cm modulation (40cm for Matrix 150).

To guarantee perfect correspondence between the assembly systems, the moulds used during the manufacture process are designed to position the assembly boxes perfectly.

MECHANICAL AND TECHNICAL CHARACTERISTICS

MATRIX 60 - MATRIX 85 - MATRIX 105 - MATRIX 150			
RESISTANCE OF THE PANEL	PHENOLIC	STAINLESS STEEL	REINFORCED
Uniformly distributed static load	$3.000Kg/m^2$	$3.000Kg/m^2$	$4.000Kg/m^2$
Concentrated static load	$400Kg/60cm^2$	$400Kg/60cm^2$	$500Kg/60cm^2$
Dynamic load on pneumatic 4-wheel trucks	500Kg	500Kg	800Kg

DIMENSIONS

MATRIX 60 - MATRIX 85 - MATRIX 105					
mm	400	600	800	1000	1200
800					
1000					
1200					
1400					
1600					
1800					
2000					
2200					
2400					
2600					
2800					
3000					
3200					

MATRIX 150		
mm	800	1200
800		
1200		
1600		
2000		
2400		
2800		
3200		

PROFILES

The modular **MATRIX 60, 85 and 105** cold rooms may be fitted with or without floor panel, depending on the use of the unit (conservation, freezing, etc.).

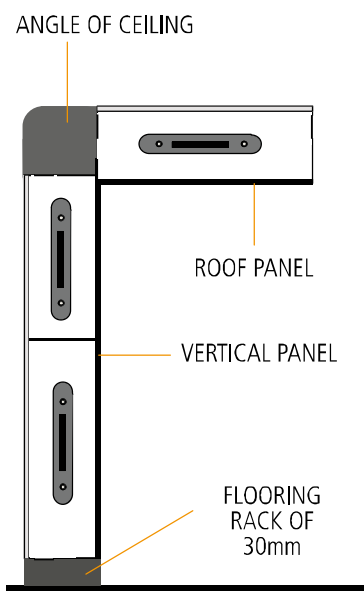As the **MATRIX 150** cold room is designed for use at negative temperatures, it is always fitted with flooring.

In this way, the following designs represent each of the possible alternatives in the assembly of the different cold rooms:
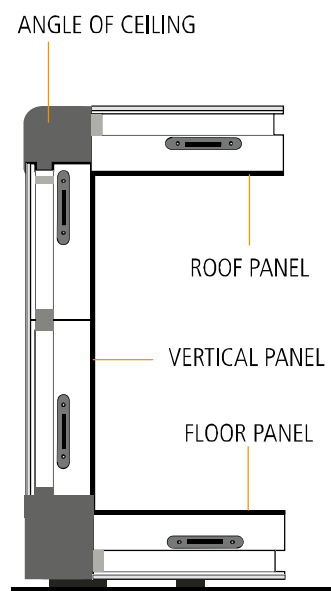
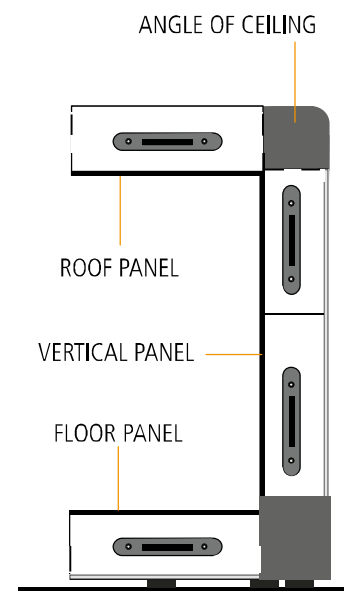## TYPES OF PROFILES

JOINING PROFILE
EXTERIOR

JOINING PROFILE
INTERIOR

ANGLE OF CEILING

ROOF PANEL

VERTICAL PANEL

FLOORING
RACK OF
30mm

**MATRIX 60, 85 AND 105
WITHOUT FLOORING**

ANGLE OF CEILING

ROOF PANEL

VERTICAL PANEL

FLOOR PANEL

**MATRIX 150
WITH FLOORING**

ANGLE OF CEILING

ROOF PANEL

VERTICAL PANEL

FLOOR PANEL

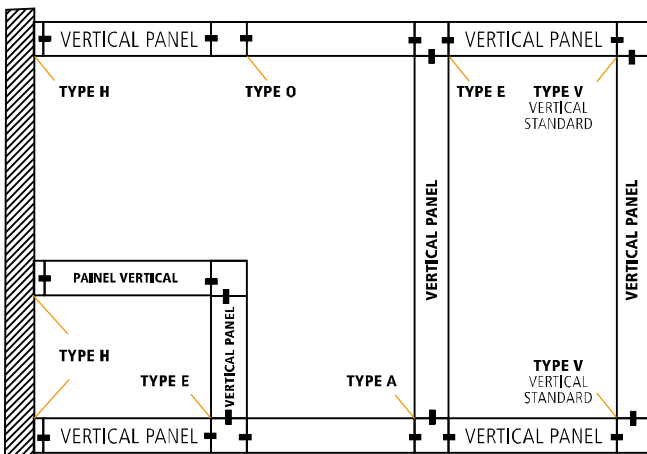**MATRIX 60, 85 AND 105
WITH FLOORING**

FLOORING RACK

The floor reinforcements consist of a PVC profile with a single height of 30mm and with 3 widths 60, 85 and 105mm respectively for MATRIX 60, 85 and 105. For the MATRIX 150 panels, a width of 105mm is used. This reinforcement is recommended mainly for cold rooms without flooring, to connect the vertical panels. In this case, it is fixed using the coach screws included in the assembly kits, directly in the ground of the place where the cold room is assembled. It is also used vertically and horizontally for the MATRIX 60, 85 and 105 cold rooms, with walls fixed to a wall made from traditional materials. They are called G, H and J profiles.

60 • 85 • 105mm
30mm
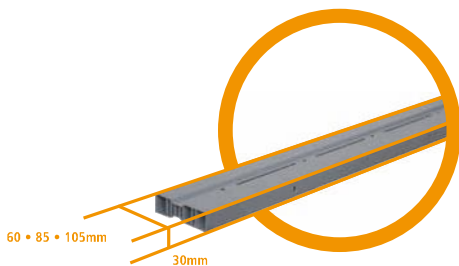
USE AND TYPES OF ANGLES
For types E and A, for Matrix 105 and 150, the difference is in the direction:
Left for type A and right for type E. (DIFFERENTIATION IN ASSEMBLY)

PLAN

VERTICAL PANEL   VERTICAL PANEL
TYPE H   TYPE O   TYPE E   TYPE V VERTICAL STANDARD
VERTICAL PANEL   VERTICAL PANEL
PAINEL VERTICAL
VERTICAL PANEL
TYPE H   TYPE E   TYPE A   TYPE V VERTICAL STANDARD
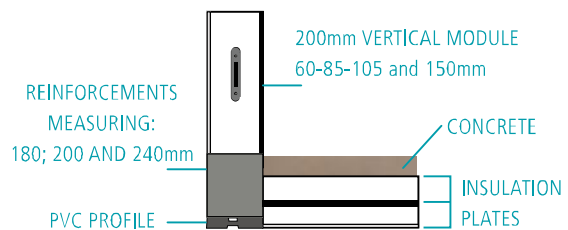VERTICAL PANEL   VERTICAL PANEL

INSULATED FLOORING RACK

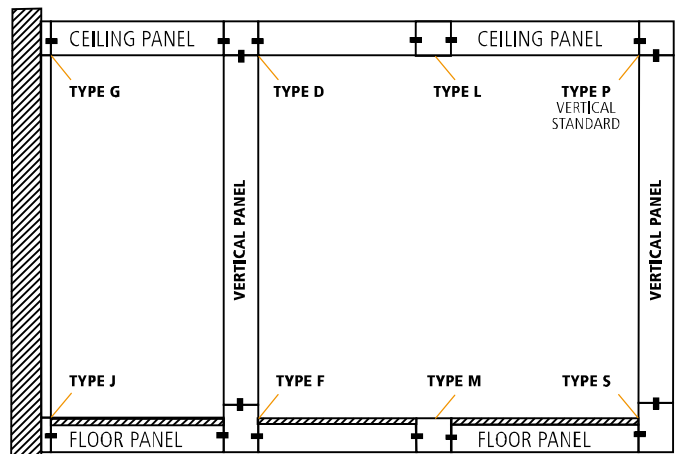It is a method of assembly without floor panels, which can only be used in the case of an insulated concrete floor.
It is assembled as follows:
1_Place the 30mm floor reinforcements corresponding to the perimeters of the cold room (except the doorways) on the concrete. Secure them to the floor with plastic plugs together with a coach screw, both included in the assembly kit.
2_Then, connect the insulated reinforcements to the cams of the boxes in the shafts of the 30mm reinforcements. To do so, use the Allen key also included in the assembly kit.
3_Afterwards, fit the vertical panels using the assembly of the casings in the insulated reinforcements, according to the same principle.
These reinforcements exist for each panel thickness 60, 85, 105 and 150mm and in three heights: 180, 200 and 240mm.

INSULATED FLOOR SUPPORT

200mm VERTICAL MODULE 60-85-105 and 150mm
REINFORCEMENTS MEASURING: 180; 200 AND 240mm
CONCRETE
INSULATION
PLATES
PVC PROFILE

ELEVATION

CEILING PANEL   CEILING PANEL
TYPE G   TYPE D   TYPE L   TYPE P VERTICAL STANDARD
VERTICAL PANEL   VERTICAL PANEL
TYPE J   TYPE F   TYPE M   TYPE S
FLOOR PANEL   FLOOR PANEL

ROOF AND VERTICAL PROFILE

All of the Matrix roof and vertical profile are available in the following lengths (the width of these shall be equal to the selected models of **MATRIX** 60, 85, 105 or 150mm):

MATRIX 60
It is made of PVC, in Grey RAL 7040 and has a 60x60mm square section, not injected with polyurethane.

The exterior profile is rounded to facilitate cleaning, and has two faces for connecting to the vertical panels.

Is used for the versions with **White/Grey, Stainless/Grey, Stainless/Stainless, White/Stainless and White/White finishes.**

For the other versions with **White/White and Stainless/White finishes**, and for the profile with 3 directions Type E ard Type D, and with 2 directions Type L and O (for joined cold rooms), a PVC profile is used with a 60x60mm square section, in White or Grey and not injected with polyurethane.
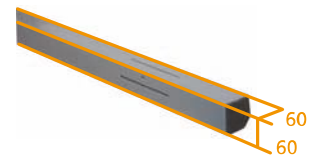
2 DIRECTIONS

Roof	800	860	1000	1060	1200	1260	1400	1460	1600	1800	2000	2200	2400	2600	2800	3000	3200			
Vertical	1630	1715	1800	2000	2030	2115	2200	2230	2315	2400	2430	2515	2630	2715	2830	2915	3030	3115	3230	3315

3 DIRECTIONS

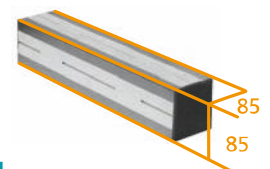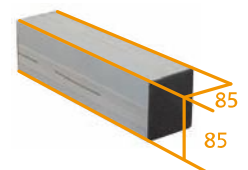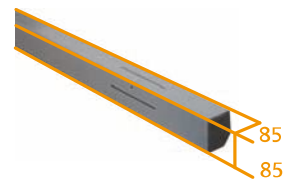| Roof	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	3000	3200							
Vertical	1630	1715	1800	2000	2030	2115	2200	2230	2315	2400	2430	2515	2630	2715	2830	2915	3030	3115	3230	3315

MATRIX 85
It is made of PVC, in Grey RAL 7040 and has a 85x85mm square section, injected with polyurethane.
The exterior profile is rounded to facilitate cleaning, and has two faces for connecting to the vertical panels.

It is used for the versions with **White/Grey and Stainless/Grey finishes.**
For the versions with **White/White and Stainless/White finishes**, and for the profile with 3 directions Type E and Type D, and with 2 directions Type L and O (for joined cold rooms), a PVC profile is used with a 85x85mm square section, in White or Grey and injected with polyurethane.

For the other versions with **Stainless/Stainless and White/Stainless finishes**, with 2 or 3 directions, the profile with a 85x85mm square section is made of stainless steel sheet joined with 1 plastic profile injected with polyurethane.

2 DIRECTIONS

Roof	800	885	1000	1085	1200	1285	1400	1485	1600	1800	2000	2200	2400	2600	2800	3000	3200		
Vertical	1600	1630	1715	1800	2000	2030	2115	2200	2230	2315	2400	2430	2515	2630	2715	2830	2915	3030	3115

3 DIRECTIONS

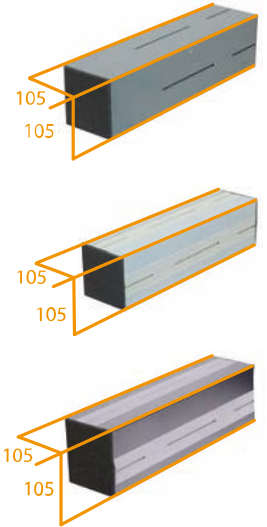| Roof	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200		
Vertical	1600	1630	1715	1800	2000	2030	2115	2200	2230	2315	2400	2430	2515	2630	2715	2830

MATRIX 105

It is made of PVC, in Grey RAL 7040 and has a 105x105mm square section, injected with polyurethane.
It is also rounded on the exterior profile, to make it easier to clean. It has shafts on 2 faces for connecting with
the vertical panels. This profile is used for the versions with **White/Grey and Stainless/Grey finishes.**

For the versions with **White/White and Stainless/White finishes**, and for the profiles with 3 directions Type
E + A (Right and Left) and Type D, and with 2 directions Type L and O, (for joined cold rooms), a PVC profile is
used with a 105x105mm square section, in WHITE and injected with polyurethane.

For the other versions with **Stainless/Stainless and White/Stainless finishes**, with 2 or 3 directions, the
profile with square section 105x105mm made of a single stainless sheet steel joined with 1 plastic profile injected
with polyurethane is used.

2 DIRECTIONS

Roof	800	905	1000	1105	1200	1305	1400	1505	1600	1800	2000	2200	2400	2600	2800	3000	3200		
Vertical	1600	1630	1715	1800	2000	2030	2115	2200	2230	2315	2400	2430	2515	2630	2715	2830	2915	3030	3115

2 DIRECTIONS

| Roof	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3200						
Vertical	1600	1630	1715	1800	2000	2030	2115	2200	2230	2315	2400	2400	2430	2515	2630	2715	2830	2915	3030	3115

MATRIX 150

This profile has a 150x150mm square section and is made of stainless or pre-lacquered sheet steel (depending
on the interior and exterior finishes of the panels) joined to 1 plastic profile and injected with polyurethane. There
are 2 directions for standard cold rooms, 2 directions of Type L and O or 3 directions of Type E and D, for joined
cold rooms.

2 DIRECTIONS

Roof	800	950	1200	1350	1600	1750	2000	2150	2400	2800	3200
Vertical	1630	1750	1780	2180	2330	2580	2730	2980	3130		

2 DIRECTIONS

Roof	800	1200	1600	2000	2400	2800	3200	
Vertical	1630	1750	1780	2180	2330	2580	2730	2980	3130
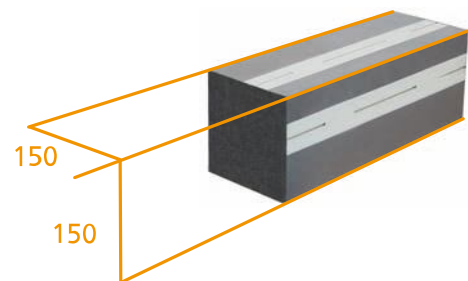
FLOORING PROFILES

The **MATRIX** flooring profiles are available in the following sizes:

DIMENSIONS				
LENGTH	HEIGHT	MATRIX 60 WIDTH	MATRIX 85 WIDTH	MATRIX 105 WIDTH
400	115	60	85	105
600	115	60	85	105
800	115	60	85	105
1000	115	60	85	105
1200	115	60	85	105
1400	115	60	85	105
1600	115	60	85	105
1800	115	60	85	105
2000	115	60	85	105
2200	115	60	85	105
2400	115	60	85	105

DIMENSIONS		
LENGTH	HEIGHT	MATRIX 150 WIDTH
400	180	150
800	180	150
1200	180	150
1600	180	150
2000	180	150
2400	180	150

MATRIX 60

The MATRIX 60 floor profile is standard and has 2 or 3 directions.
It is manufactured in PVC and has a 115x60mm rectangular section injected with polyurethane.
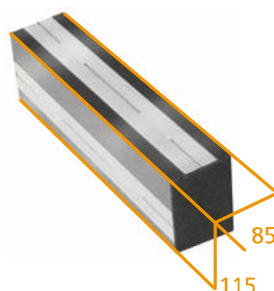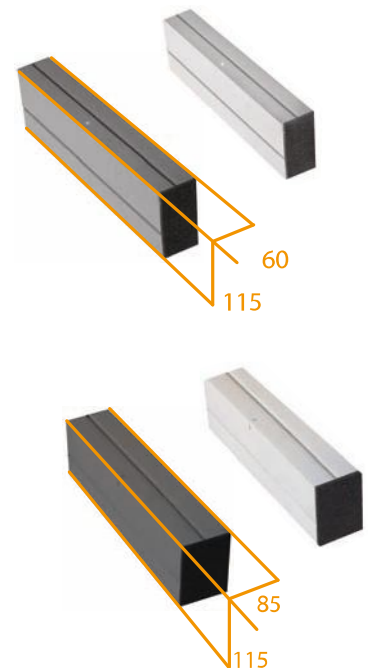• **GREY RAL 7040** for the versions White - Grey, Stainless - Grey, Stainless - Stainless and White - Stainless.
• **WHITE** for the versions White - White and Stainless - White.

MATRIX 85

The MATRIX 85 floor profile is standard and has 2 or 3 directions.
It is manufactured in PVC and has a 115x85mm rectangular section injected with polyurethane, with two colours depending on the finish of the cold room:
• **GREY RAL 7040** for the versions White - Grey, Stainless - Grey, Stainless - Stainless and White - Stainless
• **WHITE** for the versions White - White and Stainless - White.

For the versions with Stainless - Stainless and White - Stainless finishes, the profile with a 115x85mm rectangular section is manufactured in stainless sheet steel joined with 1 plastic profile and injected with polyurethane.

MATRIX 105

For all the versions, the profile with a 115x105mm rectangular section is manufactured in stainless or pre-lacquered sheet steel (depending on the interior and exterior finish of the panels) joined with 1 plastic profile and injected with polyurethane.
Depending on the version, it shall have the following characteristics:
• **White/Grey and Stainless/Grey** the exterior sheet is GREY RAL 9006, and the 3cm part visible in the interior is WHITE 1006 or STAINLESS.
• **Stainless/Stainless and White/Stainless** the exterior sheet is STAINLESS, and the 3cm part visible in the interior is WHITE 1006 or STAINLESS.
• **White/White and Stainless/White** the exterior sheet is WHITE 1006, and the 3cm part visible in the interior is WHITE 1006 or STAINLESS.

MATRIX 150

For all the versions, the profile with a 180x150mm rectangular section is made of stainless or pre-lacquered sheet steel (depending on the interior and exterior finish of the panels) joined with 1 plastic profile and injected with polyurethane.
Depending on the version, it shall have the following characteristics:
• **White/Grey and Stainless/Grey** the exterior sheet is GREY RAL 9006, and the 3cm part visible in the interior is WHITE 1006 or STAINLESS.
• **Stainless/Stainless and White/Stainless** the exterior sheet is STAINLESS, and the 3cm part visible in the interior is WHITE 1006 or STAINLESS.
• **White/White and Stainless/White** the exterior sheet is WHITE 1006, and the 3cm part visible in the interior is WHITE 1006 or STAINLESS.

The design of the MATRIX 150 floor profile is the following:
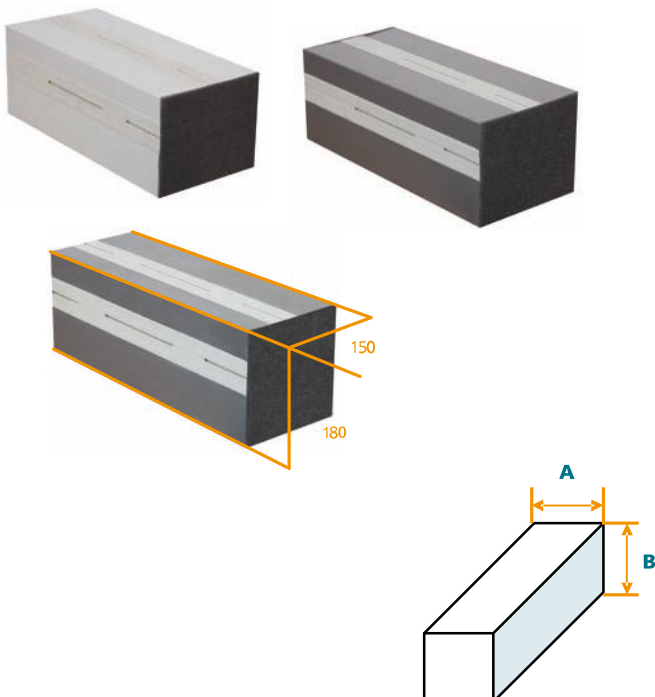
TYPES OF PROFILE

DIRECTIONS AND SIZES			
TYPE OF PROFILE	NUMBER DIRECTIONS	SIZES A	SIZES B
A	3	60-85-105-150	60-85-105-150
E	3	60-85-105-150	60-85-105-150
G	1	60-85-105	30
H	1	60-85-105	30
J	1	60-85-105	30
L	2	60-85-105-150	60-85-105-150
M	2	60-85-105-150	85-150
O	2	60-85-105-150	60-85-105-150
P	2	60-85-105-150	60-85-105-150
S	2	60-85-105-150	115-180
V	2	60-85-105-150	60-85-105-150
D	3	60-85-105-150	60-85-105-150
F	3	60-85-105-150	115-180

ENSEMBLE OF COLD ROOMS

There is the possibility of connecting 2 cold rooms, 1 MATRIX 60 with 1 MATRIX 85 or 105 of equal interior height, with MATRIX 85 or 105 vertical and horizontal profile with 3 channels. The MATRIX 85 or 105 roof and vertical profile is a PVC profile with a 85x85mm or 105x105mm square section. It is GREY RAL 7040 and injected with polyurethane. It is also rounded on the exterior profile, to make it easier to clean. It has shafts with 3 faces to connect with the wall panels, with a thickness of **60mm on one face** and **85 or 105mm on the other two faces.** Is used for the versions with **White/Grey and Stainless/Grey finishes**.
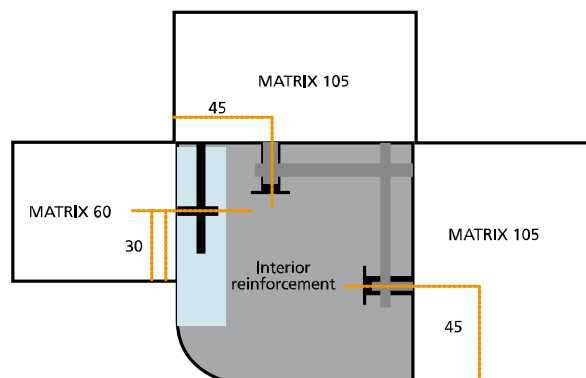
For walk-in cold rooms installed in this way, type F three way MATRIX 85 or 105 floor angles are used. The adjoining diagram illustrates this special angle for fixing cold rooms:

Roof	800		1000		1200		1400		1600		2000	2200	2400	2600	2800	3000	3200			
Vertical	1630	1715	1800	2000	2030	2115	2200	2230	2315	2400	2430	2515	2630	2715	2830	2915	3030	3115	3230	3315

FRAMES AND DOORS

FRAMES

The frames of the entire Matrix range are manufactured in the same way as a panel. The outer face is galvanised sheet steel lacquered in 0,5mm and the inner face is also made of the same sheet.

Between the two sheets, a rigid polyurethane foam with a 40 +/-2 kg/m2 density is injected. When it is manufactured, reinforced plastic casings are placed for assembly (in the 200mm or 400mm module) with the vertical panels.

MATRIX 60 - 85 - 105		MATRIX 150	
FRAME A x B	CLEARANCE C x D	FRAME A x B	CLEARANCE C x D
2000 x 800	850 x 620*	2000 x 800	850 x 620*
2000 x 1000	850 x 700*	2030 x 800	1900 x 620**
2030 x 800	1900 x 620	2030 x 1200	1900 x 800**
2030 x 1000	1900 x 700	2030 x 1200	1900 x 950**
2030 x 1000	1900 x 800	2430 x 1600	2200 x 1200**
2030 x 1200	1900 x 800	2430 x 2000	2200 x 1500**
2030 x 1200	1900 x 900		
2030 x 1200	1900 x 1000		
2430 x 1200	2200 x 1000		
2430 x 1600	2200 x 1200**		
2430 x 2000	2200 x 1500**		

* 2 Openings.   **These doors have flat, not rounded, jambs.

HINGED DOORS

The thicknesses are equal to the vertical panels, that is: 60 - 85 - 105 and 150mm. The finishes of the clearance are ensured thanks to a PVC profile that serves, at the same time, as a cut-out and housing for the heating resistance (clip).

FRAMES

The frames for MATRIX 60, 85 and 105 are convex, except those with 2200x1200mm and 2200x1500mm clearance which are flat. In the case of MATRIX 150 all the frames are flat.

Positive doors are 80mm thick while negative doors have a thickness of 140mm. The hinges are composite (no risk of corrosion) and the door has a lock with a key and an interior safety "mushroom push button" opening system.
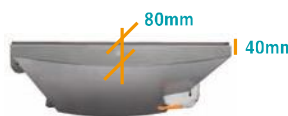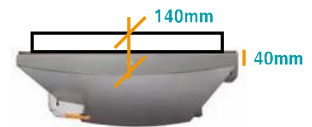

HINGED COMMERCIAL DOOR

DOOR OPENING TO THE LEFT

DOOR OPENING TO THE RIGHT

80mm
40mm

140mm
40mm

POSITIVE DOOR

NEGATIVE DOOR

SLIDING DOORS FRAMES

For all models of MATRIX 60, 85, 105 and 150 the doorframe is flat. For positive temperatures, the thickness of the frame is 85mm for MATRIX 60, 85 and 105, and for negative temperatures, the thickness of the frame is 120mm for MATRIX 85, 105 and 150. The sliding rail is anodised aluminium (15µ) with incorporated shutter, and the fixed handle is aluminium.

SIZES

MATRIX 60 - MATRIX 85 - MATRIX 105 - MATRIX 150	
FRAME (min. width)	**CLEARANCE**
2030 X 1200 (2400)	1850 X 950
2430 X 1200 (2400)	2200 X 950
2430 X 1600 (2800)	2200 X 1200
2430 X 2000 (3600)	2200 X 1400
2430 X 2000 (3600)	2200 X 1600

EXAMPLE OF SLIDING DOOR

GLASS DISPLAY DOORS

Cold rooms can also be fitted with display doors for ease of selection of products before opening the room. These doors have a PVC frame, 4mm thick tempered glass and include a 12mm separator, as well as seals on the door jambs.

Recommended for temperatures between +2ºC and +20ºC, for environments with up to 70% relative humidity.

These doors are available in following sizes:

SIZES

DOORS 595 X 1700mm	
NUMBER OF DOORS	DIMENSION OF SET A x H
1	675 X 1780
2	1285 X 1780
3	1895 X 1780
4	2505 X 1780
5	3115 X 1780
6	3725 X 1780

| DOORS 750 X 1700mm	
NUMBER OF DOORS	DIMENSION OF SET A x H
1	830 X 1780
2	1595 X 1780
3	2360 X 1780
4	3125 X 1780
5	3890 X 1780
6	4655 X 1780

Cold rooms with display doors can also be supplied with interior multi-adjustable shelving, in food-safe white. The doors can be supplied opening to the right or left, in accordance with the needs of the client, and have an automatic closing mechanism.

The standard lighting for these units uses fluorescent lights, although LED lighting is also available.

Contact us if you need flush display doors or doors in non-standard sizes.

PANELS WITH WINDOWS

MATRIX 60 and **MATRIX 85** offers the possibility of including a window in the panel that is 1200mm wide, levelled on the 2 faces and with the exact same thickness as the panel (60mm or 85mm). This window consists of two 6mm panes adhered to an aluminium profile. The vacuum created at the moment of adhesion guarantees stability between the panes, and the perfect sealing in the silicon filler, to avoid any risk of condensation.
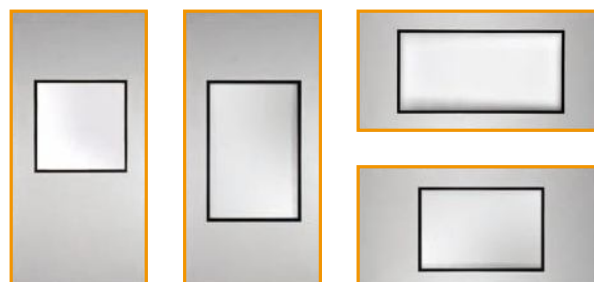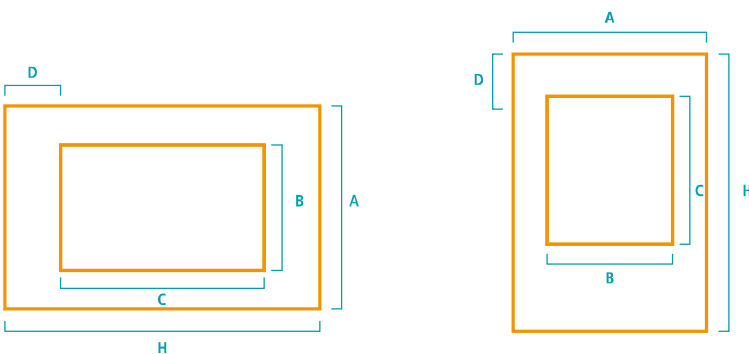
Walk-In Cold Rooms

SIZES

H = 2000				
MODEL	A	B	C	D
1	1200	800	800	200
2	1200	800	1200	200
3	1200	800	1200	400
4	1200	800	1600	200

H = 2200				
MODEL	A	B	C	D
1	1200	800	800	400
2	1200	800	1200	200
3	1200	800	1200	500
4	1200	800	1600	300

| H = 2400				
MODEL	A	B	C	D
1	1200	800	800	600
2	1200	800	1200	400
3	1200	800	1200	600
4	1200	800	1600	400

COMPLEMENTS AND ASSEMBLY ACCESSORIES

AERATION BATTENS

They are rectangular 60x40mm PVC profiles, designed to improve the level of the floor for fitting the flooring, and to guarantee water drainage from cold rooms to the exterior and to avoid condensation under refrigerator area.
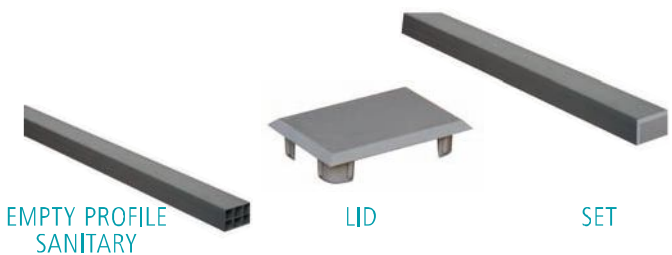
Placed parallel every 40cm, and adjusted correctly with a straight edge and a level, they guarantee the floor panels are placed and properly aligned.

EMPTY PROFILE SANITARY   LID   SET

TAKE SPECIAL CARE OVER THE LOCATION OF ORIFICES UNDER THE FLOOR PROFILES.
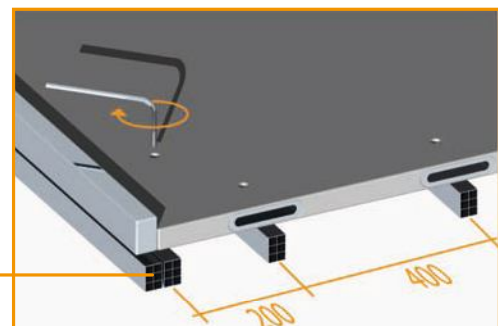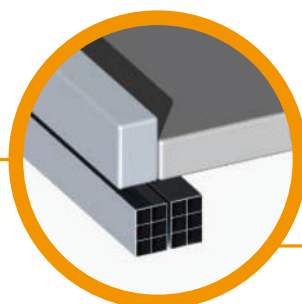
SUPPORTS FOR ROOF PANEL

There are a variety of possibilities for the support of this element:

• SELF-STANDING PANEL

The panel is considered self-standing, supported on the walls, when the maximum width of the cold room is less than or equal to the admissible range (A).

PANEL				
THICKNESS	60mm	85mm	105mm	150mm
A MAXIMUM	4m	4.80m	5.50m	6m
No. OF MOUNTING	2	2	2	2

A

• PANEL SUSPENDED IN THE STRUCTURE

The centre to centre of the suspension lines must be in this case $\leq$ the permissible range of the roof panels. Every suspension line is made using the anchoring in a casing for the centre to centre <3,20m and in two casings for the upper anchors.

For both types of panel, the **technical information** is the following:
• Total load 60 daN/m2
• Bend <= 1/200 of the range
• Safety with respect to breakage
• Accounting with the resistance of the anchors

When the width of the cold room exceeds the range of the roof panels, 2 types of structure are proposed that make the panel freestanding:

SPAN OF STRUCTURES Width of cold room cm	MAX. DISTANCE BETWEEN TRACKS OF THE STRUCTURES
360	320
380	320
400	320
420	320
440	320
460	320
480	320
500	240
520	240
540	200
560	160
580	160
600	160

• 120 OMEGA

For the roof panels with a width <= 6m, the calculation base for the centre to centre of the Omega structures is:
• Total load 50kg/m2
• Bend <= 1/200 of the range
• 1 single bar per panel

• AUXILIARY STRUCTURE

The auxiliary metallic structure of 320mm is recommended for cold rooms with internal measurements between 6 and 14,80m.

The calculation base for the centre to centre measurement of these structures is the following:
- Total load 40Kg/m2 for open construction and 50Kg/m2 for closed construction
- Allowable sag <= 1/200 of span
- 1 Single ceiling support per panel when the length is <= 3,20m
- 2 Ceiling supports per panel when the length is < 3,20m

AUXILIARY STRUCTURE

SUPPORT FOR AUXILIARY STRUCTURE

AUXILIARY STRUCTURE
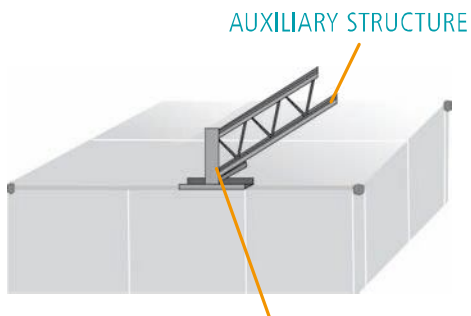
SUPPORT FOR AUXILIARY STRUCTURE

SPAN OF STRUCTURES Width of cold room cm	MAX. DISTANCE BETWEEN TRACKS FOR THE STRUCTURES	
	Open Construction	Closed Construction
640	600	600
660	600	600
680	600	600
700	600	600
720	600	600
740	600	600
760	600	600
780	600	600
800	600	600
820	600	600
840	600	600
860	600	600
880	600	600
900	600	600
920	560	600
940	560	600
960	520	600
980	520	600
1000	440	560
1020	320	560
1040	320	480
1060	320	440
1080	320	440
1100	320	440
1120	320	400
1140	320	400
1160	240	360
1180	240	360
1200	200	320
1220	160	320
1240	160	280
1260	160	280
1280	200	280
1300	200	280
1320	200	240
1340	200	240
1360	160	240
1380	160	240
1400	160	200
1420	160	200
1440	160	200
1460	160	200
1480	160	160

ROOF SUPPORTS

This part, manufactured in stainless steel, is designed to recover the roof panels in the 3 aforementioned assembly cases (bar in construction - bar with omega or bar with lattice joinery).
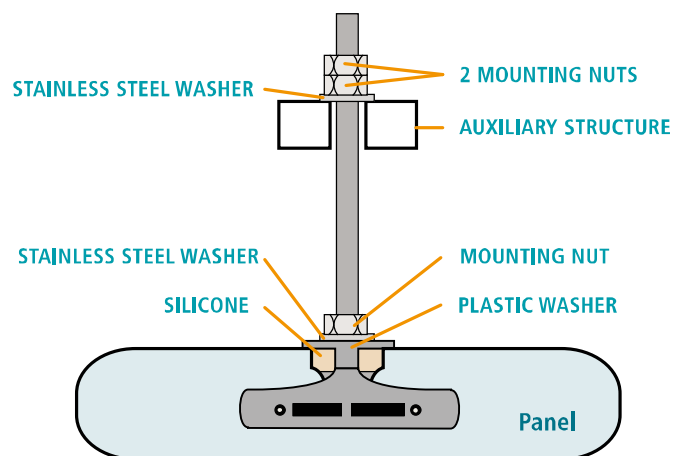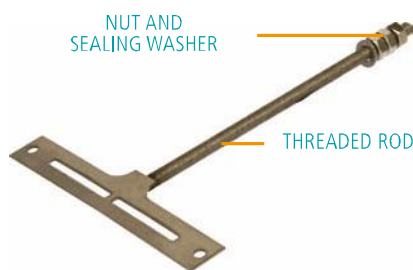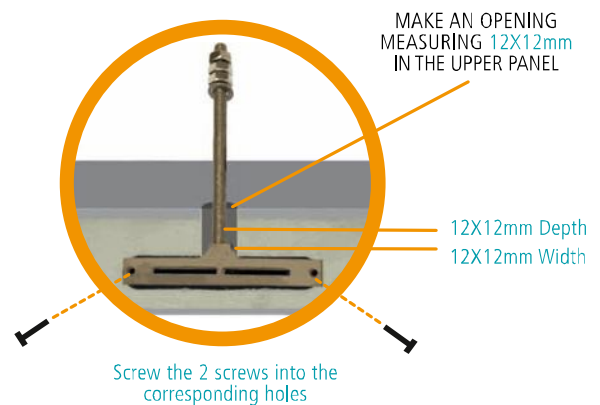
They are only supplied with the cold room in these 3 cases of assembly. The roof support is inserted between 2 casings and se secured with shafts.

After locating the position of the bars in the drawing that accompanies the cold room, prepare their placement according to the details of the following diagram.

Once the panels have been assembled, the cavity surrounding the threaded rod must be filled with silicon. Then tighten the nut on the plastic sealing washer. This washer has a ridged part designed to be inserted into the sealf between the panels.

PLACING THE ROOF SUPPORTS

Is very important to observe all these instructions scrupulously, especially regarding the sealing, which must be perfect on the exterior of the roof panel.

MAKE AN OPENING MEASURING 12X12mm IN THE UPPER PANEL

12X12mm Depth
12X12mm Width

Screw the 2 screws into the corresponding holes

NUT AND SEALING WASHER

THREADED ROD

STAINLESS STEEL WASHER

2 MOUNTING NUTS

AUXILIARY STRUCTURE

STAINLESS STEEL WASHER

MOUNTING NUT

SILICONE

PLASTIC WASHER

Panel

COVING SECTION KIT

The coving section kits are composed of 2 parts, the PVC channel that is fixed to the wall, and the white RAL 9002 PVC profile that is rounded in the shape of a quarter circle, and which clips into this channel. For each of the corners of the cold room there is also a finishing part, called the edge corner.
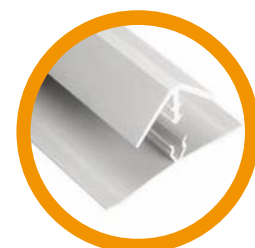

INTERIOR CORNER

EXTERIOR CORNER

SET

COVING SECTION

SKIRTING

The skirting boards are **PVC** profiles in white **RAL 9002** fixed to the base of the vertical panels to ensure their protection. There are also PVC parts intended to be fitted to the corners of the cold room and onto the ends of the profiles.

SIDE ANGLES

FLOOR'S INTERIOR FINISH
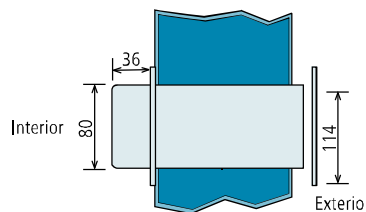
INTERIOR ANGLE

INTERIOR AND EXTERIOR ANGLE
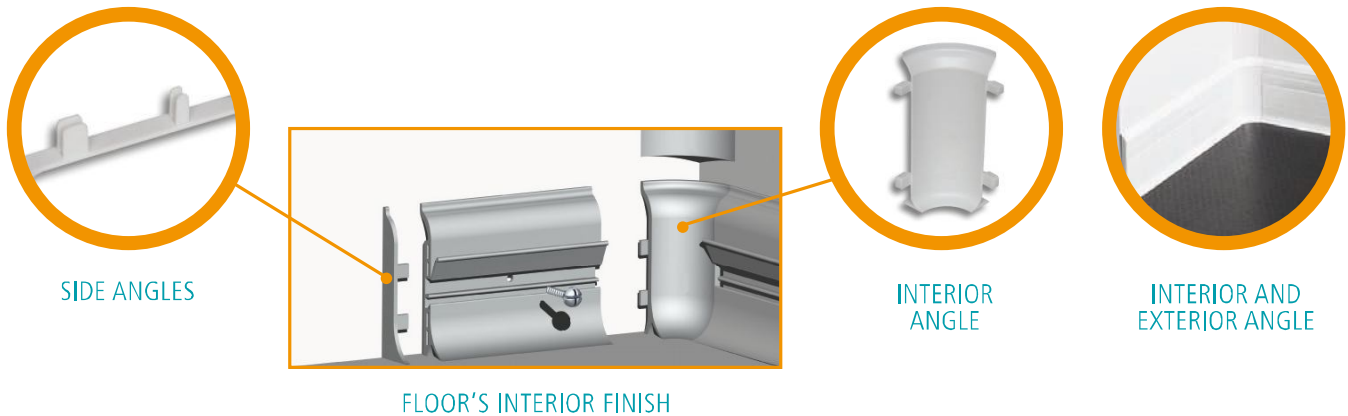
PRESSURE BALANCING VALVE

The assembly instructions for the cold room come with a complete guide for the installation of this element. We have two models of compensation valves, the use of which will deoend on the volume of the cold room, in accordance with the following table:

*PRESSURE BALANCE VALVE TS 23

PRESSURE BALANCE VALVE TS 21

TEMPERATURE INSIDE THE COLD ROOM					
VOLUME (m3)	<-30*	<-20	<-15	<-10	<-5
<20	1*	1	1	1	1
<50	1*	2	2	2	2
<100	1*	1*	1*	1*	1*

FOLDED SHEET PROFILES

Straight or L, U or Z shaped pressed profiles are available with 3 types of coating:
• Stainless steel
• Pre-lacquered WHITE reference 1006
• Grey (RAL 9006)

They are used to provide vertical and roof support for mobile dividing partitions, to cover panels that are bare, to improve the finish of a cold room, etc.
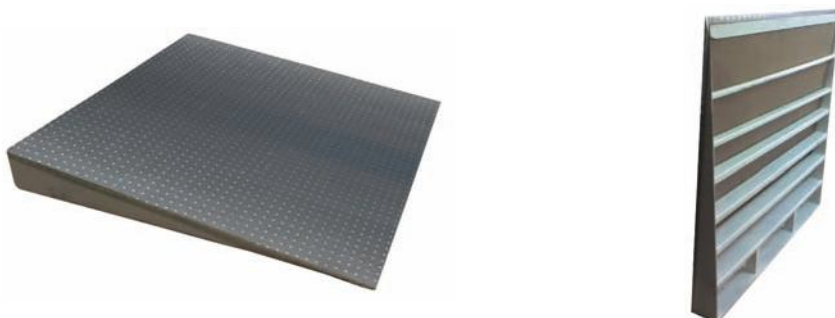
SOME EXAMPLES

STRIP CURTAINS

They consist of PVC strips with hinged polyethylene supports fitted in a PVC tube. The transparent strips are 200mm wide and 2mm thick.

POLYETHYLENE SUPPORT

PVC STRIPS

RAMPS

For the entire MATRIX range there is the possibility of incorporating steel ramps, which adapt to the doorway selected and to the customer's space requirements.

SHELVING

Matrix can be fitted with shelving, made of **15 micron** anodised aluminium and certified for sanitary use.

In harmony with the philosophy of **ColdKit** products, this shelving combines functional and elegant design with quick and easy assembly, with a finish designed for ease of cleaning and maintenance.

Further, the strength of its materials ensures a capacity of between **100** and **120kg** for each shelf. The adjustable feet and support for multiple levels (up to 10), together with the angled mounting option, make for optimum use of the interior space within the cold room.

DIMENSIONS mm

370 LINE / 470 LINE

A	370 / 470
B	1670 / 2000
C	650 / 770 / 890 / 940 / 1060 / 1180 / 1300 / 1480 / 1600
D	644 / 764 / 884 / 939 / 1059 / 1179 / 1299 / 1474 / 1594
E	618 / 738 / 858 / 913 / 1033 / 1153 / 1273 / 1448 / 1568
F	591 / 711 / 831 / 886 / 1006 / 1126 / 1246 / 1421 / 1541

385 GN LINE / 560 GN LINE*

A	385 / 560
B	1750 / 2000
C	710 / 820 / 930 / 1035 / 1145 / 1255 / 1365 / 1470 / 1580
D	704 / 814 / 924 / 1029 / 1139 / 1249 / 1359 / 1464 / 1574
E	677 / 787 / 897 / 1002 / 1112 / 1222 / 1332 / 1437 / 1547
F	650 / 760 / 870 / 975 / 1085 / 1195 / 1305 / 1410 / 1520

*Gastronorm Line presents measures specially adapted to 1/1 and 2/3 Gastronorm containers.

MAXIMUM SIZE

D E

G=370/470 385/560

L=G+E

28mm 28mm

F

27mm 27mm

A

B
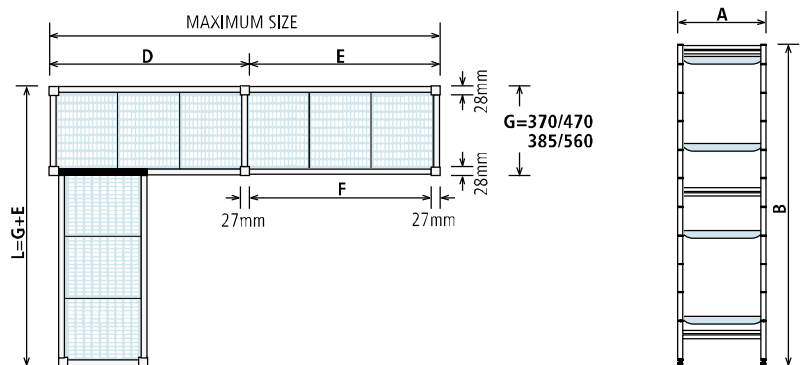
SILICONE AND OTHER ACCESSORIES

FOAM OF POLYETHYLENE   SILICONE   ADHESIVE FOAM INSULATION   HARDWARE   PVC'S PLUGS

ACCESSORIES OF FINISHING

PHENOLIC FLOOR   WHITE PANEL COVER   STAINLESS STEEL FLOOR COVER OR ASH PANEL

ENVIRONMENTAL RESPONSIBILITY

Environmental responsibility is no longer simply a business image strategy.

Today it is as important as other economic and social sectors, when evaluating profit accounts and the company's position in the market.

ColdKit contributes to sustainable development and acknowledges that this contribution generates confidence for customers, the market and the company in general.

We have developed significant work in the field of R&D, and a notable investment in non-polluting technology, which enables it to comply with the Kyoto protocol.

EFFICIENT LOGISTICS

ColdKit has been able to build up a decentralised European distribution network, which makes it easy to fill all of its customers' orders quickly and efficiently with reduced transportation costs.

We have a wide distribution network throughout the Iberian Peninsula, Europe and the rest of the world.
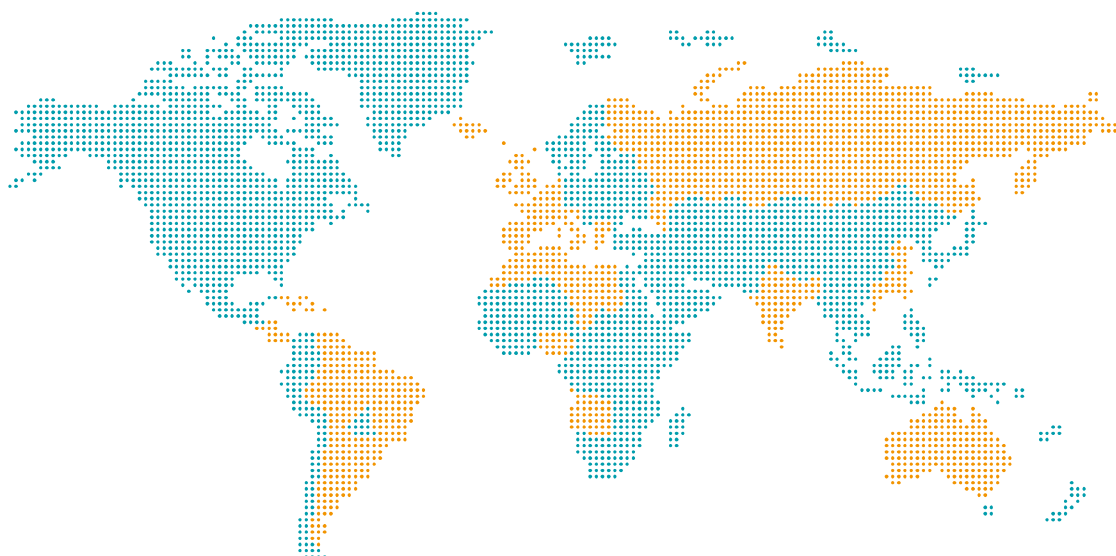
ColdKit

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"Protecting what matters most"

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