



Modular Refrigeration
Solution for
SARS-CoV-2 vaccines
at -70°C

COLDKIT ULT COLDROOM]

*Caring for
what you care for*

COLDKIT ULT COLDROOM]

The ULT COLDROOM enables quickly installing a logistical infrastructure for the conservation of the vaccines at -70°C.

It consists on a set of ULT COLDROOMs (the amount needed depends on the number of vaccines to be stored), at -70°C, installed within a refrigerated Antechamber at -25°C.

Each ULT COLDROOM has the capacity for one or two (0,80 x 1,20 Mt) pallets with a storage capacity of 60.000 or 120.000 doses.

The ULT COLDROOM is equipped with an independent refrigerated unit (monoblock) installed above the door. The user always operates in total safety from the Antechamber at -25°C and can place or remove pallets from the ULT COLDROOM without having to enter an "aggressive" environment of -70°C.

**Modular
Refrigeration
SOLUTION for the
SARS-CoV-2
[COVID-19]
Vaccines**

Other types of storage:

- Blood;
- Plasma;
- Medical drugs that require low temperatures.

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**The Antechamber
can be transformed
into a "normal"
Coldroom.
All you need to do is
remove the ULT
COLDROOMS.**



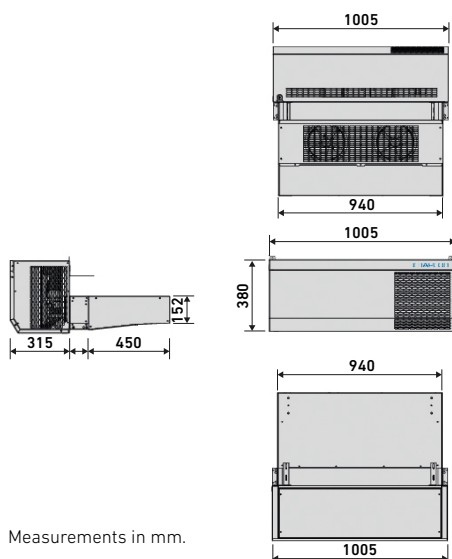
The ULT COLDROOMs allow reaching and maintaining an extremely low temperature of up to -70°C , through a monoblock that uses the temperature of the Antechamber to work with condensation amounts of around -25°C , maximizing ΔT .

This type of independent refrigeration units (monoblocks) are a compact refrigeration system that do not require very technical assembly and can be mounted easily and quickly. All you need is to insert the monoblock in the opening (already made in the panel) above the door and "connect it to the power source".

The -25°C Antechamber is equipped with two Bi-Block refrigeration systems that enable it to be redundant. The installation of this equipment is also very easy. Each consists on an external condensing unit, an internal evaporator and an electrical switchboard near the door. The unit and the evaporator are pre-loaded with gas and use a Rotalock valve system, which allows easily interconnecting the tubes between the two pieces of equipment. It also includes the cables to connect the electrical switchboard to the unit.



MONOBLOCK FEATURES



Measurements in mm.

Refrigeration equipment in accordance with UNE EN 378 and safety regulations.

- A compact, hermetically closed refrigeration system built in annealed copper tube, pre-loaded with R170 coolant, with an expansion valve, internal exchanger, filter, display and high- and low-pressure pressure switches;
- Alternative hermetic compressor with internal protection and oil separator;
- Aluminium-fin cooper tube condenser with CE fan;
- Aluminium-fin cooper tube evaporator with CE fan and electronic valve expansion;
- Electrical switchboard integrated with an electronic control unit and controlled temperature;
- Electric defrosting system, operated manually;
- Power cable for the resistance of the door + door Microswitch;
- Refrigeration capacity at -70°C : 700 W (-70°C / -20°C);
- Absorbed nominal power: 95 kW (-70°C / -20°C);
- Maximum current absorbed: 5 A;
- Coolant: R170 (Class A3);
- Coolant load: ~ 0.2 kg;
- Internal operating temperature range: -60°C to -80°C ;
- External operating temperature range: -30°C to 0°C .

Antechamber MODULAR SYSTEM



ANTECHAMBER FEATURES

An Antechamber with a completely modular system that is very quick and easy to assemble from the inside.

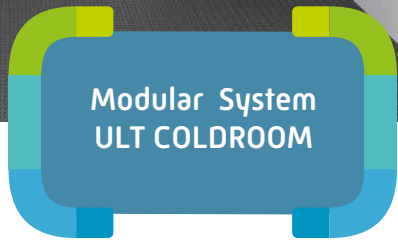
The fixation system between the modules consists of two metal latches with anti-corrosion treatment, mounted on highly resistant PVC boxes placed inside the isothermal panels. Steam barrier continuity is guaranteed with a polyethylene or silicone seal, ensuring correct insulation.

- Panel finishes in lacquered sheet, inside and outside;
- Polyurethane insulation: CFC-free high-pressure injection, with 40 kg/m³ and Euroclass reaction-to-fire certificates: Bs2d0;
- 150mm Floor Panels: resistant anti-slip reinforced phenolic resin coating, with a Class 3 slip/slide Rating Certificate; + Ventilation profiles;
- 1,40 Wide x 2,20 High Negative Pivoting Door (Antechamber entrance) + Internal opening system;
- Pressure balance valve;
- Panic button;
- CO2 Sensor to activate external alarm; (the dry ice that is inside the vaccine boxes generates gaseous CO2 which is toxic);
- Access ramp for the pallet jack;
- The size of the Antechamber adapts to "accommodate" the number of intended (-70°C) UTL COLDROOM's.

ULT COLDRROOM FEATURES

The **ULT COLDRROOM** has the same **Isothermal Modular System** as the Antechamber, which enables **quick and easy assembly**.

- Panel finishes in lacquered sheet, inside and outside;
- Laboratory certification that attest to the structural resistance of the panels at ultra-low temperatures have already been carried out and demonstrated;
- Polyurethane insulation: CFC-free high-pressure injection, with 40 kg/m³ and Euroclass reaction-to-fire certificates: Bs2d0;
- 150mm Floor Panels: resistant anti-slip reinforced stainless steel sheet coating;
+ Ventilation profiles;
- 1,00 Wide x 1,50 High Negative Pivoting Door;
- The door frame and rubber disk are prepared to operate at ULT -70°C, and the door frame heating was reinforced;
- Pressure balance valve;
- Access ramp for the pallet jack.
- Temperature monitoring / remote control software.



The **ULT COLDRROOM** can have the following dimensions:

- For 2 Pallets (0,80 x 1,20 Mt)
with 24 boxes x 5.000 doses = 120.000 Doses of Vaccines

Interior Dimensions:

1,20 x 2,60 x 2,03 (6,3 M³)

- For 1 Pallet (0,80 x 1,20 Mt)
with 12 Boxes x 5.000 doses = 60.000 Doses of Vaccines

Interior Dimensions:

1,20 x 1,40 x 2,03 (3,4 M³)

We have developed 7 standard models. We can also create a solution tailored to your needs.

Ref.	Antechamber Features		ULT COLDRROOM Features					
	Vertical Panel, Ceiling and Floor Thickness (mm)	Exterior Dimension (mm)	Vertical Panel, Ceiling and Floor Thickness (mm)	Exterior Dimension (mm)	Interior Dimension (mm)	No. Coldrooms	No. Pallets	Vaccines Doses
1	150	1900 x 11100 x 3390	150	1500 x 2900 x 2390	1200 x 2600 x 2030	2	4	240.000
2		3500 x 11100 x 3390				4	8	480.000
3		5100 x 11100 x 3390				6	12	720.000
4		6700 x 11100 x 3390				8	16	960.000
5		3500 x 6700 x 3390				2	4	240.000
6		5100 x 6700 x 3390				3	6	360.000
7		6700 x 6700 x 3390				4	8	480.000

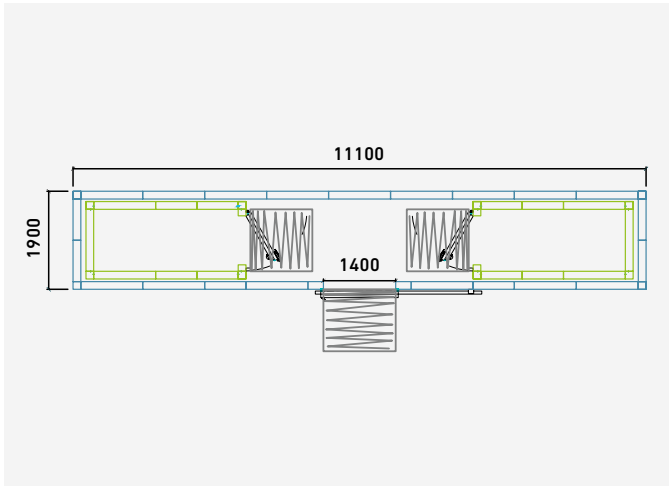
ADVANTAGES of the PUREVER Solution

- **Modular System:** the size is adjustable to the number of vaccines being stored.
- **Easy and quick installation.**
- **Competitive Price.**
- **Individual Monoblock per Coldroom.**
- **Redundant refrigeration equipment in the Antechamber.**
- **Delivery time of 4 to 6 weeks.**

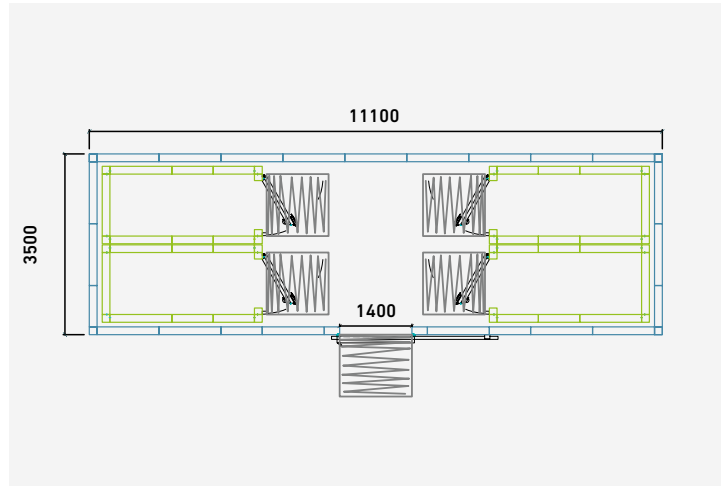
TECHNICAL DRAWINGS

ULT COLDROOM]

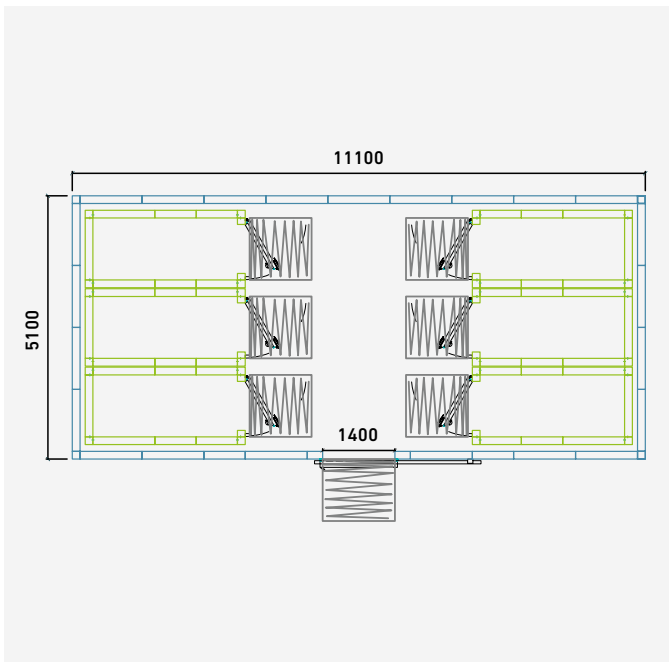
Coldroom 1



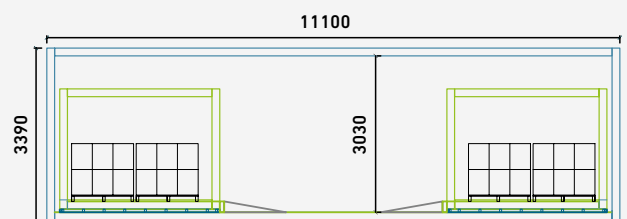
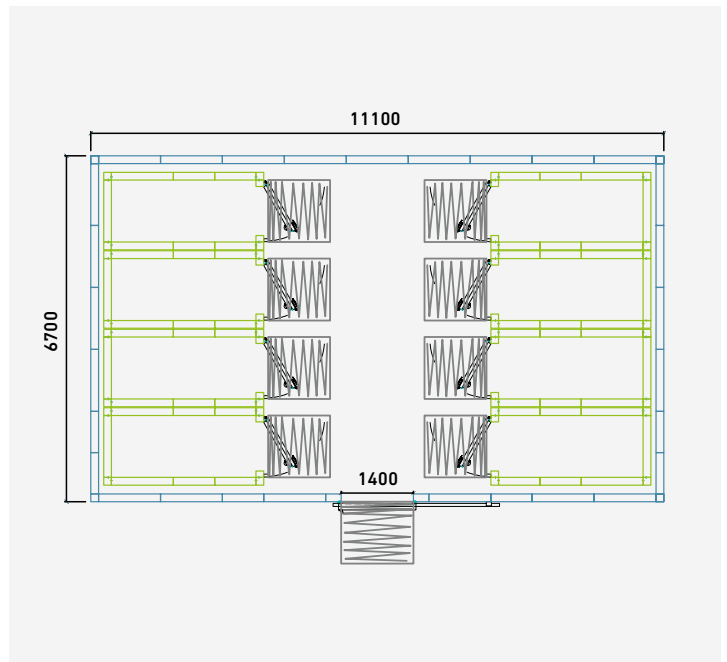
Coldroom 2



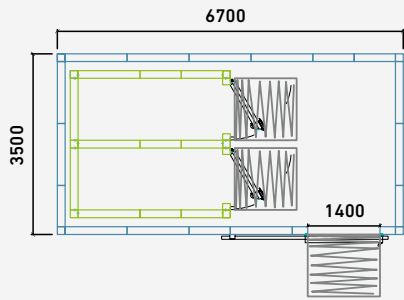
Coldroom 3



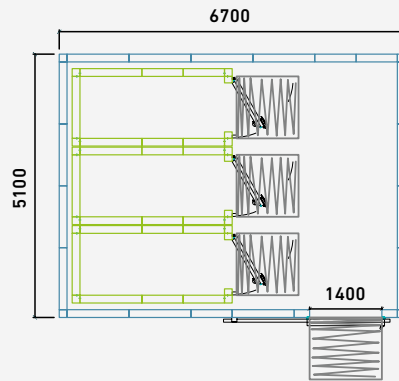
Coldroom 4



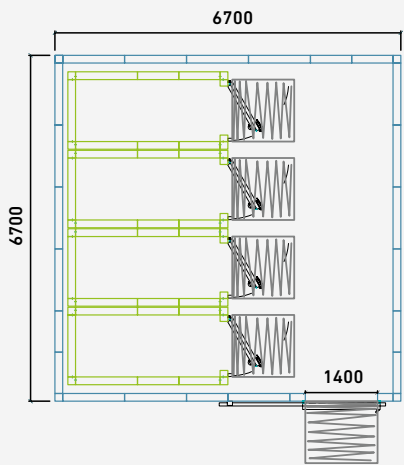
Coldroom 5



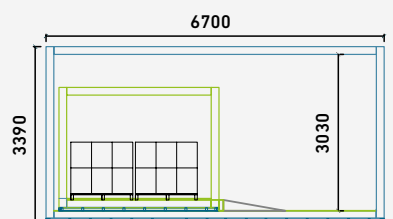
Coldroom 6



Coldroom 7



Measurements in mm.



COLDKIT

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PUREVER  **INDUSTRIES**

Protecting Life