(picture of cod. 13360, PF4)

PlasmaFrost™

Shock plasma freezers
Two versions for up
to 40 x 450 ml bags

PLASMAFROST are medical devices, CE marked as Class 2a upon the MEDICAL DEVICE DIRECTIVES 93/42 and subsequent. They can be used for quick plasma freezing, to get best recovering of proteins after thawing and fractionation. Besides, all PLASMAFROST comply with the EU Recommendation n.° R (95)15 that applies for best practicing on plasma processing.

Main features of PLASMAFROST™

WORKING TEMPERATURE: -75°C

FRAME:
Fully in metallic heavy-gauge phosphate-coated steel plate, powder-painted in grey.
No. 1 service door with key lock and magnetic PVC rubber gaskets.
Assembled on 4 wheels for easy moving.

INTERNAL CHAMBER:
Internal chamber in AISI 304 polished stainless steel with rounded corners for easy cleaning.
Three or four refrigerated shelves with uniformity plates made of anodized aluminium for maximum heat transfer and easy cleaning *(Note:3 shelves are standard for PF3 while for PF4 the shelves are 4).*

THERMAL INSULATION:
"Sandwich technique" with injected CFC-free polyurethane foam.
125 mm average thickness of insulation.

COOLING SYSTEM:
The shelves act as freezing surfaces. The refrigerant fluid flows inside each shelf for maximum freezing efficiency while the top covers, push the bags from top creating a "sandwich" effect for exceptional temperature uniformity on both top and bottom sides. The refrigeration system is made with two high efficiency cascade semi-hermetic or hermetic compressors air cooled.

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REFRIGERANTS

Standard R404A and R23. Both gases are allowed by the Montreal Convention and are accepted as "environment friends gases" under the London amendment too.

CONTROLLER

The control system of PLASMA FROST is quite basic and cannot keep track of any freezing data such as the barcode ID of the bags or the date and time of freezing. For top performing plasma freezers with complete data management, computer interface, handling of barcode labels and/or RFID read/write Tags, please refer to the models *PLASMAFROST iTem.*
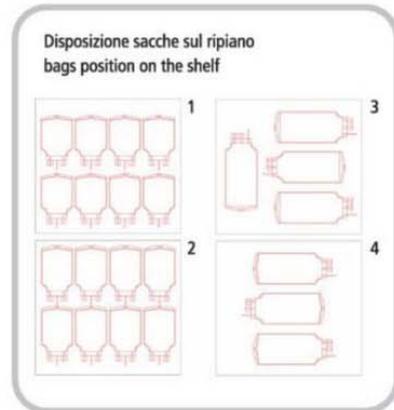
The main actions performed by the controller of standard PLASMAFROST are:
1. On/ Off the cascade cooling system,
2. Shows on display the shelves Temperature,
3. Bring the temperature of the shelves down to -75°C and hold it,
4. START a freezing cycle (lasts 60 minutes then stop automatically),
5. SHOW a light ON when the cooling system is active,
6. SHOW a light ON + beep when freezing cycle is terminated (after 60 minutes from START),
7. ALARM with light ON + beep in case of compressors high pressure.

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Plasma Bags capacity fully loaded and freezing time

PLASMAFROST^3

Tipo sacca Bag type	Q.Tà Plasma Plasma Q.ty	N° sacche Bags N°	Tempo max congelamento Max freezing time	Fig.	Curva di congelamento Freezing curve
400 ml	250 ml	24	35"	1	B
400 ml	300 ml	24	55"	1	D
450 ml	250 ml	24	30"	2	A
450 ml	300 ml	24	45"	2	C
1000 ml	650 ml	12	45"	3	C
1000 ml	800 ml	9	55"	4	D

Disposizione sacche sul ripiano
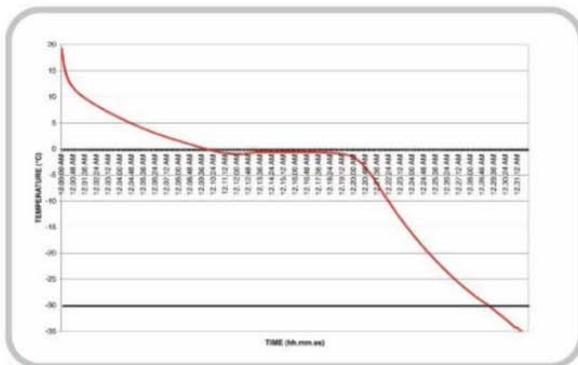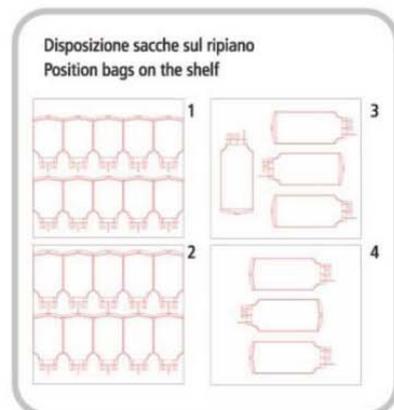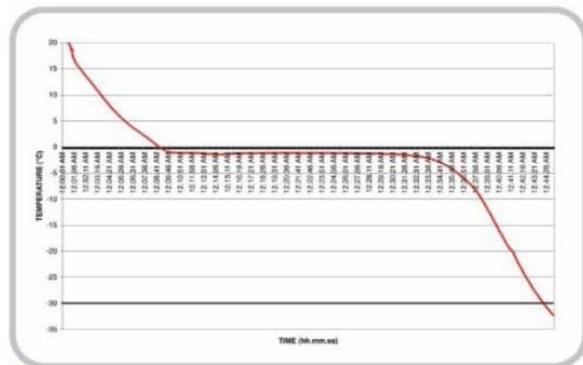bags position on the shelf

PLASMAFROST^4

Tipo sacca Bag type	Q.Tà Plasma Plasma Q.ty	N° sacche Bags N°	Tempo max congelamento Max freezing time	Fig.	Curva di congelamento Freezing curve
400 ml	250 ml	40	35"	1	B
400 ml	300 ml	40	55"	1	D
450 ml	250 ml	40	30"	2	A
450 ml	300 ml	40	45"	2	C
1000 ml	650 ml	16	45"	3	C
1000 ml	800 ml	12	55"	4	D

Disposizione sacche sul ripiano
Position bags on the shelf

A

C

B

D

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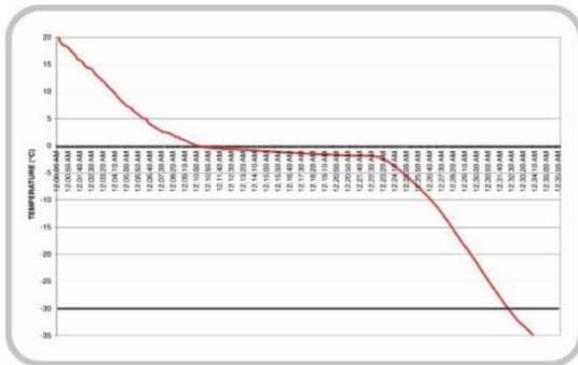
Code 13274
PLASMA FROST 3™ - Plasma shock freezer with 3 shelves, air cooled

Physical data
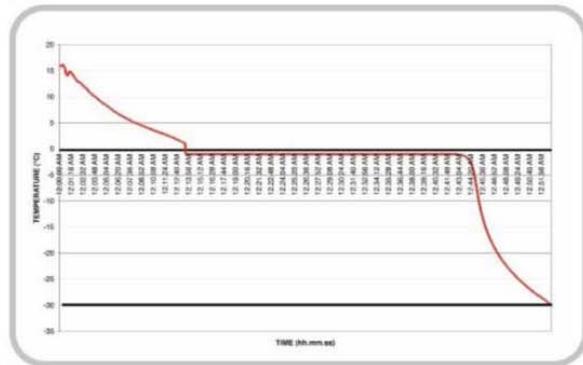- External: 895W x 1490D x 1760H mm
- Internal: 600W x   565D x   770H mm
- Weight   625 kg
- Shelf: 590W x 505D x 25H mm

Shipping sizes & weight:
- Standard carton packaging: 920W x 15150D x 2000H mm,   658 kg
- With optional wooden cage: 1850W x 1540D x 2180H mm,   688 kg

Mean energy consumption   4 KWh
Voltage   230 VAC, single phase, 50 Hz (60Hz optional)
Amperage   16A
VA   3700
Kcal/h emission   2400
Low noise level   (<60dB)

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Code 13275
PLASMA FROST 3™ (400V) - Plasma shock freezer with 3 shelves, air cooled

Physical data
- External: 895W x 1490D x 1760H mm
- Internal: 600W x   565D x   770H mm
- Weight   645 kg
- Shelf: 590W x 505D x 25H mm

Shipping sizes & weight:
- Standard carton packaging: 920W x 15150D x 2000H mm,   678 kg
- With optional wooden cage: 1850W x 1540D x 2180H mm,   708 kg

Mean energy consumption   5.4 KWh
Voltage   400 VAC, 3 phases, 4 poles, 50 Hz (60Hz optional)
Amperage   12A
VA   6000
Kcal/h emission   4000
Low noise level   (<62dB)

****

Code 13296
PLASMA FROST 4™ - Plasma shock freezer with 4 shelves, air cooled

Net sizes & weight
- External: 895W x 1490D x 1760H mm
- Internal: 600W x   565D x   770H mm
- Weight   675 kg
- Shelf: 590W x 505D x 25H mm

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Shipping sizes & weight:
- Standard carton packaging: 920W x 1515D x 2000H mm, 708 kg
- With optional wooden cage: 1400W x 1850D x 2150H mm, 738kg

Mean energy consumption	5.4 KWh
Voltage	400 VAC, 3 phases, 4 poles, 50 Hz (60Hz optional)
Amperage	12A
VA	6000
Kcal/h emission	4000
Low noise level	(<62dB)

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Code 13360
PLASMA FROST 4™/400-W - Plasma shock freezer with 4 shelves water cooled version

Net sizes & weight
- External: 895W x 1490D x 1760H mm
- Internal: 600W x 565D x 770H mm
- Weight 675 kg
- Shelf: 590W x 505D x 25H mm

Shipping sizes & weight:
- Standard carton packaging: 920W x 1515D x 2000H mm, 708 kg
- With optional wooden cage: 1850W x 1540D x 2180H mm, 738kg

Mean energy consumption	5 KWh
Voltage	400 VAC, 3 phases, 4 poles, 50 Hz (60Hz optional)
Amperage	12A
VA	6000
Kcal/h emission	400
Low noise level	(<53dB)

OPTIONAL ACCESSORIES VALID FOR ALL VERSIONS

Code	Description
17054	Wooden cage
11521	Configurable Temperature recorder with rolling chart
12132	Additional Temp. probe (Pt100), class A with 3 calibration points

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OTHERS TECHNICAL DATA

Product Name :

PlasmaFrost

Manufacturer:

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CE Mark:

Class 2a Medical Device according to the EU
Directive n. 93/42 and subsequent.

Ambient conditions of use:

Temperature: +10° ~ +32° C
Relative humidity: 30 ~ 85% without condensation

Stocking condition:

Temperature: +2° ~ + 50° C
Relative humidity: 20 ~ 80% without condensation

Alarms types:

Acoustic and Optical

Data communication:

None

In case of power black-out:

Compressors OFF (Controller is powered for 24-48h
by a battery back-up)

Images herein provide are intended for illustration purpose only. The specifications can change without notice.

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