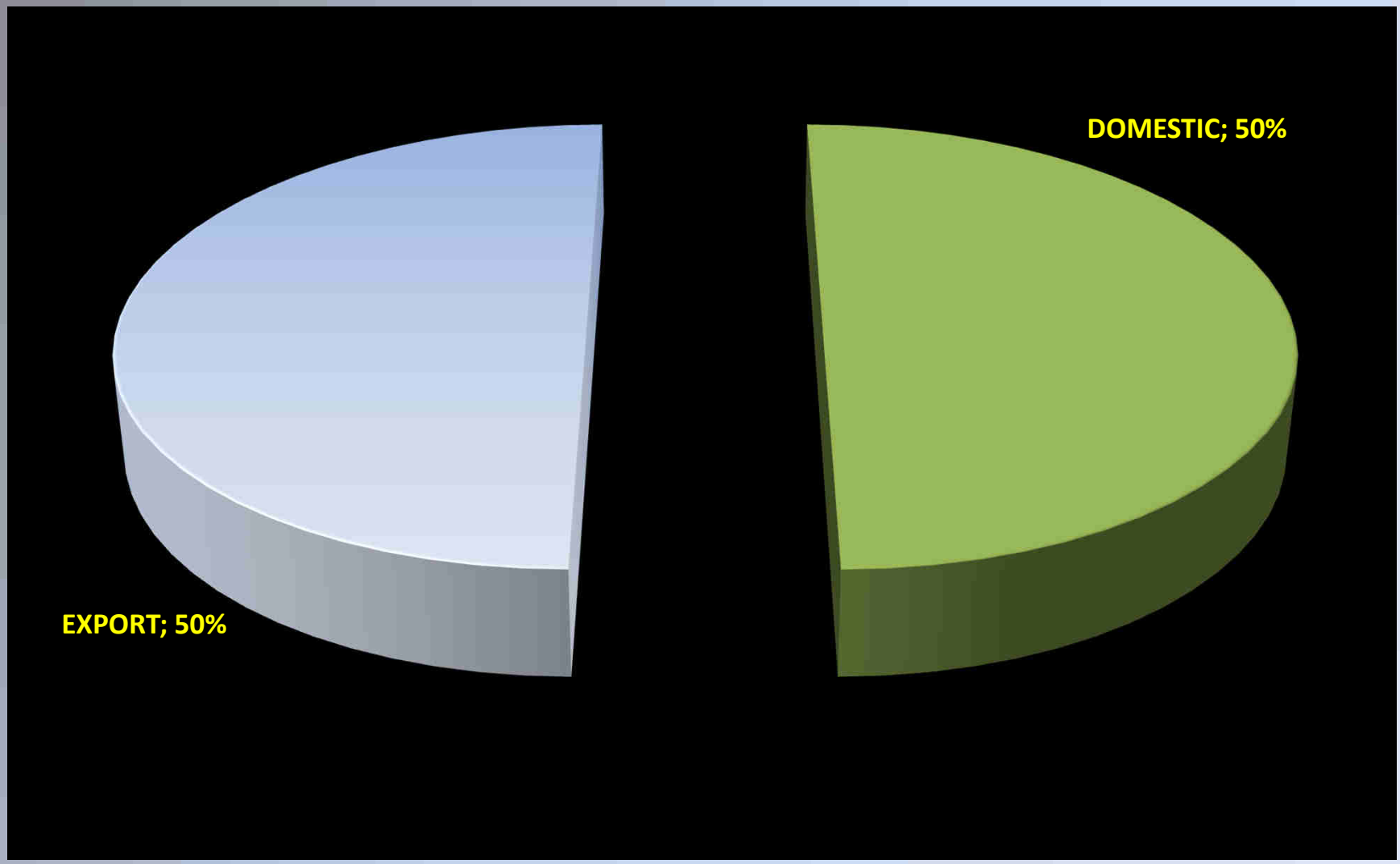
ILSA GROUP

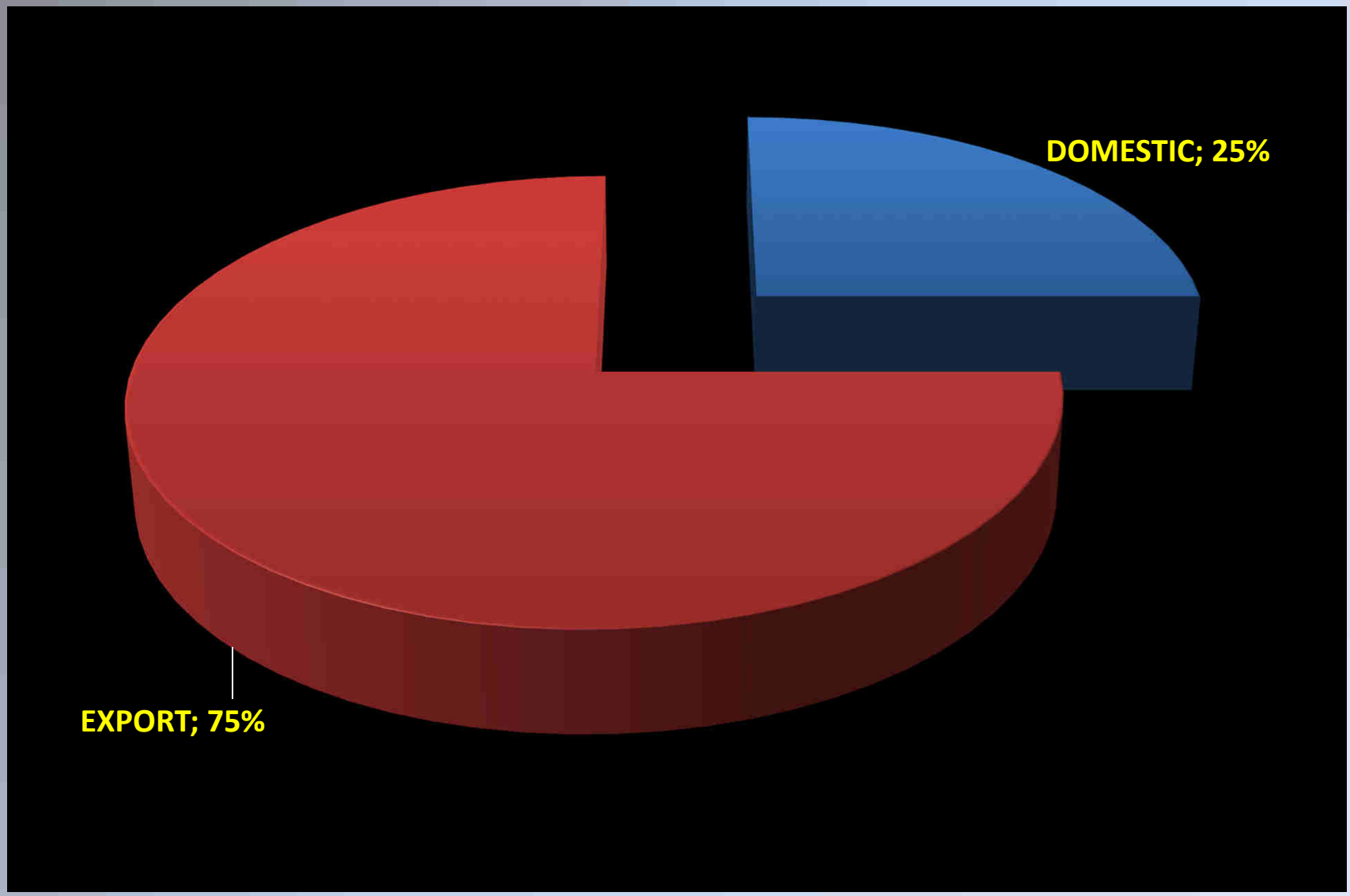
Who is ILSA GROUP?

- ILSA has been founded in 1979 by a pool of Italian entrepreneurs, skilled on stainless steel and refrigeration manufacturing, becoming rapidly a leader company in:
  - Refrigeration
  - Stainless steel equipment
- 2004 ILSA acquired DESCO, an old Italian company specialised in cooking equipment

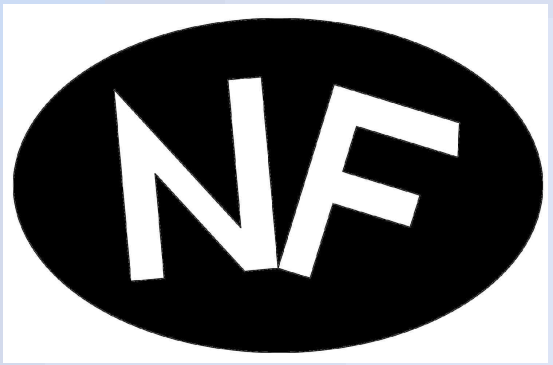
ILSA GROUP 2009



ILSA GROUP 2018



CERTIFICATES



REFRIGERATION

REFRIGERATED CABINETS

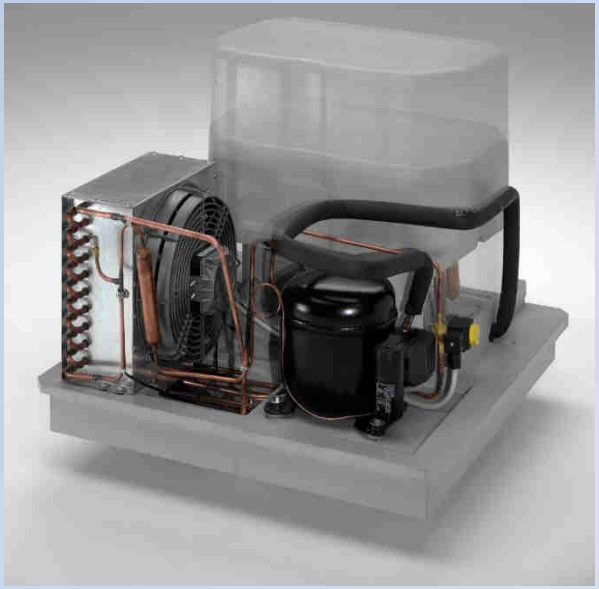
ESSENTIAL

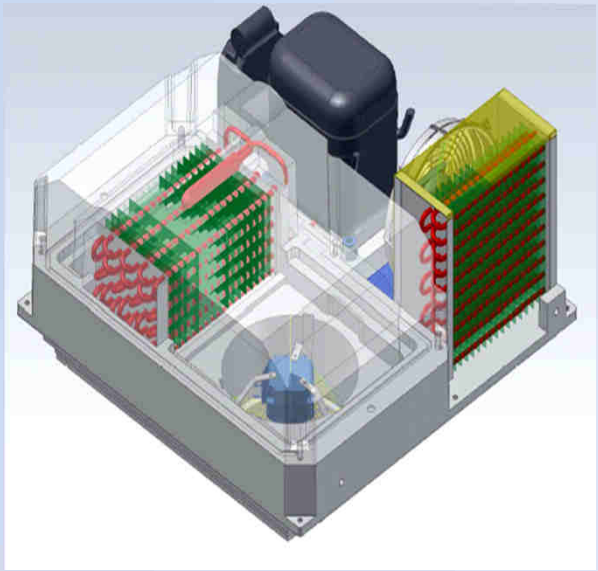
NEOS

EVOLVE

MONOBLOC UNIT

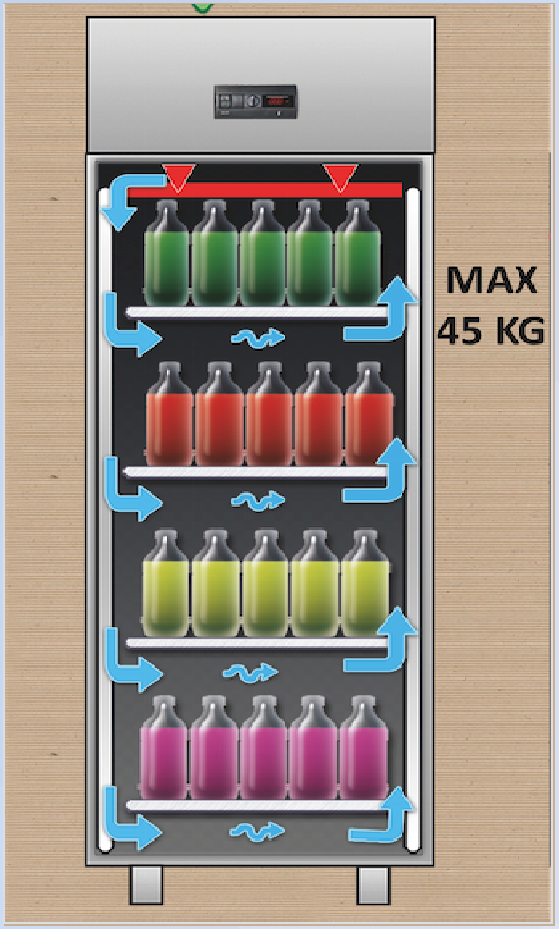
- TROPICALIZED UNIT FOR TEMPERATURES UP TO **+43°C – CERTIFIED FROM IMQ**
- AUTOMATIC **HOT GAS** DEFROSTING
- AUTOMATIC **HOT GAS** EVAPORATION OF CONDENSE WATER
- **SERVICE FRENDLY** - POSSIBILITY TO CHANGE THE UNIT IN A FEW MINUTES – ONLY 6 SCREWS
- **GAS R290A** AS PER NEW EUROPEAN REGULATIONS
- LOWNOISE LEVEL: ONLY **49 dB**



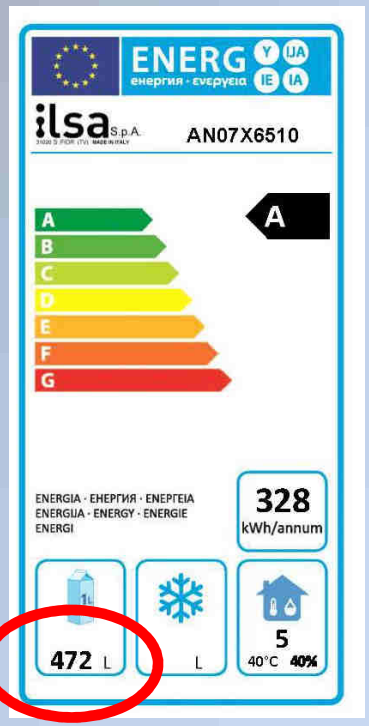


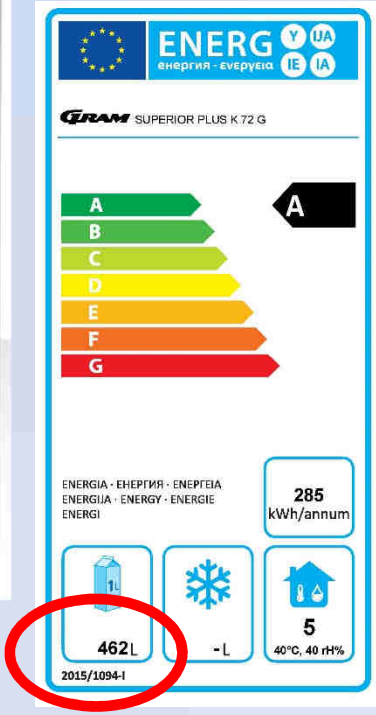
AIR CIRCULATION

- **FORCED AIR CIRCULATION** ENSURES UNIFORMITY OF TEMPERATURE IN EVERY PART OF THE CELL
- EVAPORATOR AND FANS ARE SEPARATED AND NOT INSIDE THE CELL (=LARGER CELL ROOM), SO THAT NO ACCIDENTAL OPERATION CAN DAMAGE OR OBSTRUCT THEM

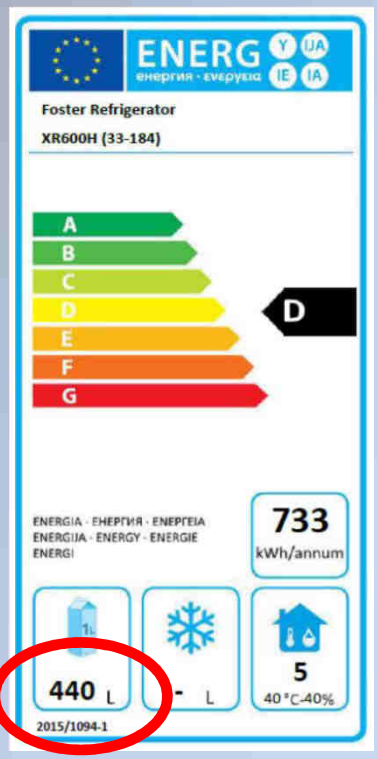


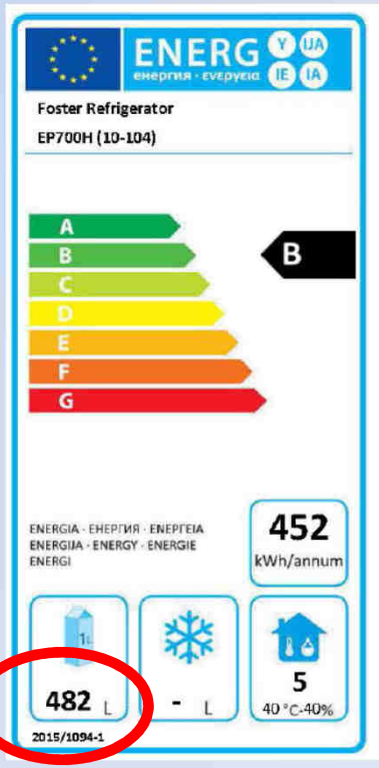
INSIDE VOLUME





INSIDE VOLUME





ESSENTIAL

- GN 2/1 ENTRY LEVEL AVAILABLE IN:
  - 700 Lt. 0/+10°C
  - 700 Lt. -2/+8°C
  - 700 Lt. -20/-10°C
  - AISI 304 or 430 OUTSIDE
  - COMPACT SIZE – 720x800x1955mm

NEOS & EVOLVE

- GN 2/1
- 700 & 1400 Lt.
- AVAILABLE OUTSIDE IN AISI 304, 430 OR PPS
- **INSULATION THICKNESS = 85mm**
- 3 CHAMBER GASKETS REPLACEABLE WITHOUT ANY TOOL
- LOCK
- REMOTE UNITS AVAILABLE
- REMOVABLE FILTER IN FRONT OF CONDENSER

NEOS & EVOLVE

TOP ENERGY EFFICIENCY CLASS RATINGS

TYPE	NEOS	EVOLVE
700 0/+10 °C	A OR B	-
700 -2/+8 °C	A OR B	A
700 -20/-10 °C	C	B
1400 0/+10 °C	C	-
1400 -2/+8 °C	C	B
1400 -20/-10 °C	D	C

IN CLIMATE CLASS **5**

Classe climatica della sala prove *Climate class of the test room Classe climatique du laboratoire Klimaklasse des Proberaums*	**Temperatura a bulbo secco °C** *Dry bulb temperature °C Température à bulbe sec °C Trockenkugel-temperatur°C*	**Umidità relativa %** *Relative humidity % Humidité relative % Relative Feuchtigkeit %*
3	25	60
4	30	55
5	40	40

NEOS & EVOLVE

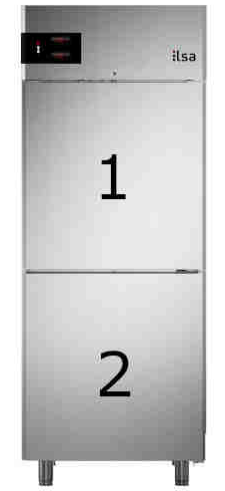
ENERGY EFFICIENCY FEATURES:

- OPTIMIZED AIR FLOW
- INSULATION THICKNESS 85 mm
- 3 CHAMBER INSULATED GASKETS
- HOT GAS CONDENS-WATER EVAPORATION
- HOT GAS DEFROSTING
- MONOBLOC SYSTEM WITH LOW ENERGY RUNNING COMPRESSORS AND FANS
- BETTER ENERGY PERFORMANCE **GAS R290A**

NEOS - RANGE

1400 LT.

HALF DOOR



DOUBLE
TEMPERATURE

GLASS DOOR

NEOS - RANGE

BAKERY CABINETS FOR TRAYS DIM. 60X40 AND 60X80

ICE CREAM CABINETS

ROLL-IN CABINETS

EVOLVE

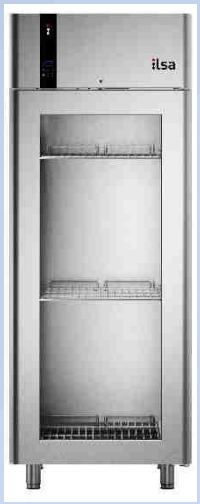
- NEOS + :
  - ATTRACTIVE DESIGN WITH ROUNDED EDGES
  - LONG STRIP HANDLE WITH RIGHT OR LEFT SIDE GRIP
  - HACCP TOUCH CONTROLLER
  - LED LIGHT
  - IQ ELECTRONIC FANS ALLOWING LOW ENERGY CONSUMPTION
  - AUTOMATIC DEFROSTING WITH INTERNAL PROBE
  - AISI 304 RACKS AND SLIDES
  - BETTER ENERGY EFFICIENCY CLASSES

EVOLVE - RANGE

1400 LT.

HALF DOOR

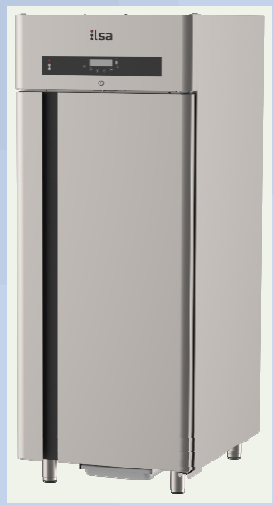
DOUBLE
TEMPERATURE



GLASS DOOR

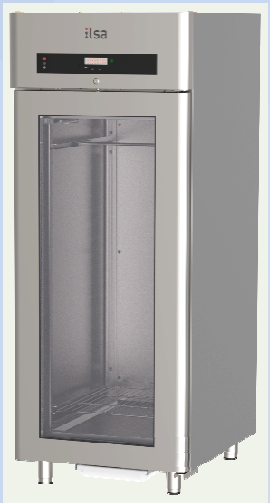
EVOLVE - RANGE

BAKERY
CABINETS FOR
TRAYS 60X40
AND 60X80



CHOCOLATE
CABINET 60X80
WITH ACCURATE
HUMIDITY CONTROL

RETARDER
PROVER WITH
TOUCH
CONTROLLER
FOR TRAYS
60X40 AND 60X80



DRY AGE /
SEASONER
CABINET

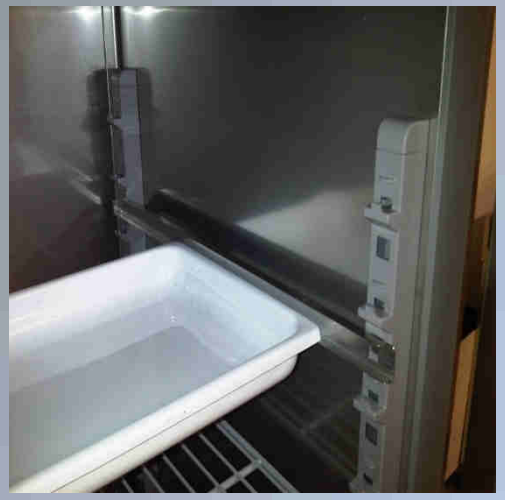
NEOS & EVOLVE - RANGE

BOTH CABINETS AVAILABLE WITH ***PRESSED SIDE PANELS***:

- NO NEED OF RACKS
- NO NEED OF SLIDES
- <u>100% HYGENIC</u> BY EASIER AND MORE ACCURATE CLEANING

ACCESSORIES

DIFFERENT ACCESSORIES AVAILABLE UPON REQUEST TO FACILITATE THE DAILY USE



SLIDES FOR GN 1/1 AND GN 2/1 CONTAINERS

FOOT PEDAL

WHEELS

REFRIGERATED COUNTERS

- NEOS
- EVOLVE

DETAILS

- 600, 700 , 800mm DEPTH
- ELECTRONIC CONTROLLER
- 1 – 2 – 3 – 4 DOORS - GN 1/1
- DRAWERS 2x1/2 – 3x1/3 – 1x1/3+1x2/3
- POSITIVE TEMPERATURE -2/+8°C
- NEGATIVE TEMPERATURE -20/-10°C
- REPLACEABLE GASKETS WITHOUT ANY TOOLS

TECHNOLOGY

- INSULATION THICKNESS 60mm
- FORCED AIR VENTILATION BY PATENTED REAR VENTILATION CHANNEL, ENSURING THE SAME TEMPERATURE INSIDE THE WHOLE CELL
- NOT VISIBLE EVAPORATOR, SEPARATED FROM THE CELL
- AUTOMATIC DEFROSTING
- HOT GAS RE-EVAPORATION OF THE CONDENSE WATER
- CONDENSING UNIT WITH FRONT EXTRACTION
- ERGONOMIC HANDLES
- GAS **R290A**

ENERGY RATINGS

TOP ENERGY EFFICIENCY CLASS RATINGS

TYPE	START	ELITE
1 DOOR	B	B
2 DOORS	A	A
3 DOORS	A	A
4 DOORS	A	A

IN CLIMATE CLASS **5**

Classe climatica della sala prove *Climate class of the test room Classe climatique du laboratoire Klimaklasse des Proberaums*	**Temperatura a bulbo secco °C** *Dry bulb temperature °C Température à bulbe sec °C Trockenkugel-temperatur °C*	**Umidità relativa %** *Relative humidity % Humidité relative % Relative Feuchtigkeit %*
3	25	60
4	30	55
5	40	40

AIR CIRCULATION

- AIR IS SUCKED FROM THE EVAPORATOR AND THANKS TO A **CHANNEL ON THE BACKSIDE**, DISTRIBUTED INSIDE THE TABLE.
- A UNIFORM TEMPERATURE INSIDE THE TABLE IS ACHIEVED, WHEREAS COMPETITORS' PRODUCTS ARE COLDER ON THE EVAPORATOR'S SIDE AND OTTER ON THE OPPOSITE SIDE OF THE CELL

AIR CIRCULATION - COMPETITOR

- AIR FLOWING IS STOPPED OR LIMITED BY DRAWERS, BOXES, FOOD OR OTHER STUFF BECAUSE IS COMING <u>SOLELY FROM ONE SIDE</u>

HYGIENE

- INSIDE COMPLETELY IN AISI 304 WITH **RADIUSED EDGES** THAT ENABLE AN EASY CLEANING
- **GASKETS** WITH EASY CLEANABLE PROFILE

VERSATILITY

- INTERCHANGEABILITY DOORS WITH DRAWERS - ALSO BY CUSTOMER INSTALLED COUNTER
- **DRAWERS WITH FULL EXTRACTION**
- DRAWERS ALLOWS TO HOLD GN 1/1 CONTAINERS

TECHNICAL COMPARTMENT ON REQUEST RIGHT OR LEFT

BLAST CHILLER & FREEZER

BLAST CHILLER & FREEZER MODELS

NEOS

EVOLVE

BLAST CHILLER & FREEZER MODELS

NEOS

4 GN 1/1

5 GN 1/1 or 60x40

10 GN 1/1 or 60x40

14 GN 1/1 or 60x40

EVOLVE

5 GN 1/1 or 60x40

6 GN 1/1 or 60X40

10 GN 1/1 or 60x40

10R GN 1/1 or 60x40

10 GN 2/1 or 60x80

14 GN 1/1 or 60x40

20 GN 1/1 or 60x40

20 GN 2/1 or 60x80

BLAST CHILLER & FREEZER MODELS

THE EVOLVE RANGE IS ALSO AVAILABLE:

- FOR ICE CREAM (DEDICATED RANGE)
- FOR PASTRY (DEDICATED RANGE)
- WITH WATER-COOLED ENGINE
- FOR REMOTE INSTALLATIONS
- FOR CO2 INSTALLATIONS

COMPRESSORS

SEMI-HERMETIC

The compressor itself and the motor are housed in the same casing, which is designed to be opened for inspection and servicing. Semi-hermetic compressors are made in such a way as to avoid air or dust from entering the mechanisms.

EVOLVE
10 T
10 T 2/1
14 T
20 T
40 T

HERMETIC

when the casing is welded and sealed and the cylinder heads cannot be accessed for inspection or maintenance.

NEOS
4 T
5 T
10 T
14 T

EVOLVE
5 T
TABLE

COMPRESSORS

ADVANTAGES SEMI-HERMETIC COMPRESSORS:

- **MORE CAPACITY**
- **LESSER NOISE**
- **HIGHER EFFICIENCY**
- **OPERATING RANGE**
- **LONGER LIFE TIME**
- **ONLY 1.500 RPM (REVOLUTION PER MINUTE) INSTEAD OF 3.000 RPM**

PERFORMANCES

THE PERFORMANCE
OR
REFRIGERATION YIELD
OR
REFRIGERATION CAPACITY
OR
REFRIGERANT POWER

DEPENDS FROM:

- **EVAPORATING TEMPERATURE**
- **CONDENSING TEMPERATURE**

ATTENTION !

ELECTRICAL POWER ≠ PERFORMANCE

ABSORBED POWER ≠ PERFORMANCE

Gram Commercial A/S
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T: +45 73 20 12 20
F: +45 73 20 12 01
info@gram-commercial.dk

GRAM

Innovativ og funktionel opbevaring af fødevarer
www.gram-commercial.com

Intuitive and easy-to-use control panel

The bright LCD control panel is easy to read. The encoder wheel makes navigation intuitively easy.

Easy cleaning

The cabinets are fitted with an internal bottom tray with drain. Smooth surfaces and watertight internal rounded corners make cleaning easy. Removable support for 1/1 GN and 400 x 600 mm bakery plates.

Model		KPS 21 C	KPS 21 S	KPS 42 C	KPS 42 CR	KPS 42 S	KPS 42 SR
Blast chiller		✓		✓	✓		
Blast chiller/freezer			✓			✓	✓
Exterior/Interior	Stainless/Stainless	✓	✓	✓	✓	✓	✓
Compatible with oven rack	Rational oven rack type 101				✓		✓
Defrosting	Air	✓	✓	✓	✓	✓	✓
Exterior equipment	Right hand hinged door, reversible and selfclosing			●	●	●	●
	Right hand hinged door, reversible	●	●				
	Left hand hinged door	○	○	○	○	○	○
	Legs (H=73/103 mm)	●	●				
	Legs (H=105/155 mm)			●	●	●	●
Interior equipment	IFR control system	●	●	●	●	●	●
	Multipoint probe with 3 measuring points	●	●	●	●	●	●
	Removable support for 1/1 GN and 400 x 600 mm	●	●	●	●	●	●
	Max. number of 1/1 GN 40 mm deep	5	5	10	10	10	10
	Cabinet fitted with an internal bottom tray	●	●	●	●	●	●
Prepared for remote refrigeration system				○	○	○	○

● = Standard Specification | ○ = Optional Extras

C = blast chiller
CR = blast chiller compatible with Rational oven rack type 101
CF = blast chiller, prepared for remote refrigeration system

S = blast chiller/freezer
SR = blast chiller/freezer compatible with Rational oven rack type 101
SF = blast chiller/freezer, prepared for remote refrigeration system

IFR – Intelligent Food Recognition

Using the IFR function you only need to insert the multipoint probe and start the chilling cycle. The cycle then automatically adapts to the food item's characteristics.

Temperature control modes

The chill/freeze cycle can be controlled by time or temperature. If the probe is not inserted into the core a time cycle will be activated automatically.

Technical specifications		KPS 21 C	KPS 21 S	KPS 42 C	KPS 42 CF	KPS 42 S	KPS 42 SF
With compressor		✓	✓	✓		✓	
Prepared for remote refrigeration system					✓		✓
Temperature range	C°	0/+10	-25/+10	0/+10	0/+10	-25/+10	-25/+10
Ref. capacity at -10/+45°C	Watt	1096	-	2631	2700	-	-
Ref. capacity at -25/+45°C	Watt	-	870	-	-	2528	2600
Connection	V/Hz	230/50	230/50	400/50	230/50	400/50	230/50
Connection load	Watt	1000	1400	2200	274	4000	300
Climate class		4	4	4	4	4	4
Refrigerant		R404A					
Insulation, cyclopentane	mm	55	55	75	75	75	75
Weight, packed	Kg	130	125	225	185	225	185

Technical specifications		KPS 21 C	KPS 21 S	KPS 42
With compressor		✓	✓	✓
Prepared for remote refrigeration system				
Temperature range	C°	0/+10	-25/+10	0/+1
Ref. capacity at -10/+45°C	Watt	1096	-	2631
Ref. capacity at -25/+45°C	Watt	-	870	-
Connection	V/Hz	230/50	230/50	400/5
Connection load	Watt	1000	1400	220
Climate class		4	4	4
Refrigerant				
Insulation, cyclopentane	mm	55	55	75
Weight, packed	Kg	130	125	225

PERFORMANCE = 870 W
(evap. -25 / cond. +45°C)

COMPRESSOR DATA SHEET ILSA EVOLVE 5 TRAYS

embraco | COMPRESSOR TECHNICAL DATA

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: **ASHRAELBP32** Evaporating temperature **-23,3°C (-9,94°F)**
@220V50Hz **Fan** (Condensing temperature **54,4°C (129,92°F)**)

Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
3190	804	935	749	4.66	21.63	4.26	1.07	1.25

E - PERFORMANCE - CURVES

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35°C (+95°F)**)
@220V50Hz **Fan**

Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1413	356	414	437	3,71	9,50	3,24	0,82	0,95
-35	(-31)	2000	504	586	509	3,91	13,49	3,92	0,99	1,15
-30	(-22)	2674	674	784	578	4,12	18,09	4,61	1,16	1,35
-25	(-13)	3432	865	1006	648	4,35	23,32	5,30	1,33	1,55
-20	(- 4)	4270	1076	1251	717	4,59	29,16	5,96	1,50	1,75
-15	(+ 5)	5185	1307	1519	789	4,85	35,62	6,58	1,66	1,93
-10	(+14)	6173	1555	1809	863	5,13	42,70	7,15	1,80	2,10

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45°C (+113°F)**)
@220V50Hz **Fan**

Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1285	324	377	437	3,70	8,62	2,95	0,74	0,86
-35	(-31)	1815	457	532	518	3,92	12,21	3,50	0,88	1,03
-30	(-22)	2450	618	718	600	4,16	16,55	4,08	1,03	1,20
-25	(-13)	3189	804	935	684	4,44	21,63	4,66	1,17	1,37
-20	(- 4)	4028	1015	1180	770	4,75	27,45	5,23	1,32	1,53
-15	(+ 5)	4962	1250	1454	859	5,09	34,02	5,78	1,46	1,69
-10	(+14)	5988	1509	1755	954	5,46	41,34	6,28	1,58	1,84

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **55°C (+131°F)**)
@220V50Hz **Fan**

Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1143	288	335	427	3,69	7,65	2,67	0,67	0,78
-35	(-31)	1610	406	472	519	3,93	10,82	3,12	0,79	0,91
-30	(-22)	2203	555	646	614	4,21	14,85	3,60	0,91	1,05
-25	(-13)	2919	736	855	712	4,54	19,75	4,10	1,03	1,20
-20	(- 4)	3753	946	1100	816	4,91	25,53	4,60	1,16	1,35
-15	(+ 5)	4702	1185	1378	925	5,33	32,18	5,08	1,28	1,49
-10	(+14)	5763	1452	1689	1041	5,80	39,70	5,53	1,39	1,62

COMPRESSORS DATA SHEET

TEST CONDITIONS: **@220V50Hz**		**ASHRAE32** **Fan**						(Condensing temperature **45°C** (+113°F))		
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	**(-40)**	1285	324	377	437	3.70	8.62	2.95	0.74	0.86
-35	**(-31)**	1815	457	532	518	3.92	12.21	3.50	0.88	1.03
-30	**(-22)**	2450	618	718	600	4.16	16.55	4.08	1.03	1.20
-25	**(-13)**	3189	804	935	684	4.44	21.63	4.66	1.17	1.37
-20	**(- 4)**	4028	1015	1180	770	4.75	27.45	5.23	1.32	1.53
-15	**(+ 5)**	4962	1250	1454	859	5.09	34.02	5.78	1.46	1.69
-10	**(+14)**	5988	1509	1755	954	5.46	41.34	6.28	1.58	1.84

PERFORMANCE = 935 W
(evap. -25 / cond. +45°C)

MORE THAN GRAM

MultiFresh®

More than Fresh.

IRINOX

MF 25.1

Organize your production and processes with flexibility 24 hours a day.

YIELD PER CYCLE

from +90°C to +3°C	25 kg
from +90°C to -18°C	25 kg

TRAY CAPACITY NR.

tray height 65/60 mm	4 (GN 1/1 o 600x400 mm)
tray height 40 mm	5 (GN 1/1 o 600x400 mm)
tray height 20 mm	8 (GN 1/1 o 600x400 mm)

DIMENSIONS

width	790 mm
depth	771 mm
height	870 mm
weight	115 kg

ELECTRICAL DATA

max absorbed power	1,2 kW
max absorbed current	6,5 A
voltage	230 V-50Hz (1N+PE)

AIR CONDENSER

Model / Voltage		230V 1N+PE	230V 1N+PE	200V 2+PE 208V 2+PE
		50Hz	60Hz	50/60Hz
Total rating	KW	1,2	1,3	1,3 / 1,3
Total output	A	6,5	6,3	6,5 / 6,4
Supply cable size	mm^2	3G1,5	3G1,5	3G1,5
Compressor rating	KW (HP)	0,36 (0,5)	0,36 (0,5)	0,36 (0,5)
Refrigeration Yield (-10/40°C)	W	1727	1623	1623
Condensator rating (-10/40°C)	W	2683	2549	2549
Gas type / Nominal gas charge		R404A / 1,8Kg		
Minimum air circulation	m^3/h	1100	1210	1100 / 1210
Maximum ambient air temperature	°C	32		
Cabinet dimension (WxDxH)	mm	790x771x870		
Cabinet weight	Kg	-		

measurement in millimeters

IRINOX	
Mod.:	MF0510001
Ed.:	05/13
Rev.:	00 MYA

PERFORMANCE = 1.727 W
(evap. -10 / cond. +40°C)

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35°C** **(+95°F)**)

@220V50Hz **Fan**

Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1413	356	414	437	3.71	9.50	3.24	0.82	0.95
-35	(-31)	2000	504	586	509	3.91	13.49	3.92	0.99	1.15
-30	(-22)	2674	674	784	578	4.12	18.09	4.61	1.16	1.35
-25	(-13)	3432	865	1006	648	4.35	23.32	5.30	1.33	1.55
-20	(- 4)	4270	1076	1251	717	4.59	29.16	5.96	1.50	1.75
-15	(+ 5)	5185	1307	1519	789	4.85	35.62	6.58	1.66	1.93
-10	(+14)	6173	1555	1809	863	5.13	42.70	7.15	1.80	2.10

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45°C** **(+113°F)**)

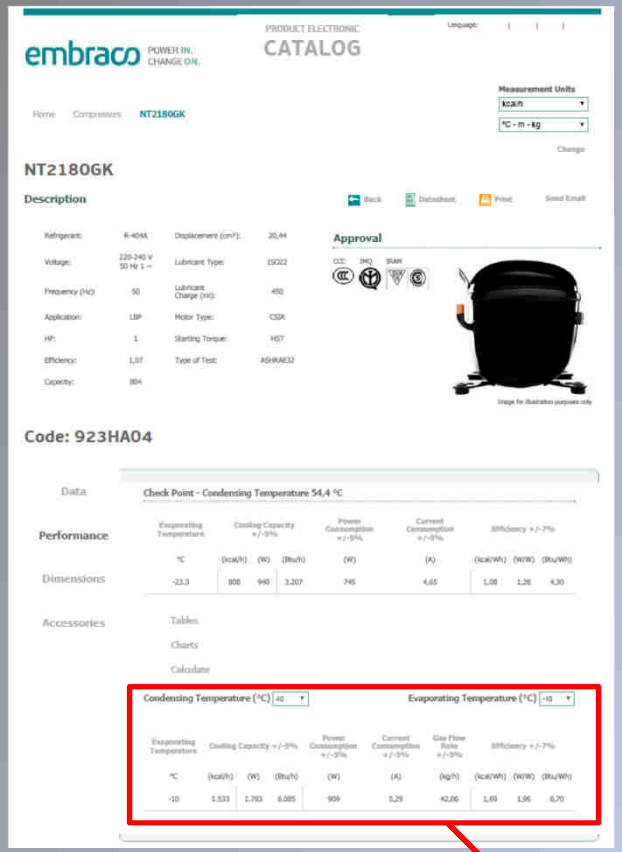
@220V50Hz **Fan**

Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1285	324	377	437	3.70	8.62	2.95	0.74	0.86
-35	(-31)	1815	457	532	518	3.92	12.21	3.50	0.88	1.03
-30	(-22)	2450	618	718	600	4.16	16.55	4.08	1.03	1.20
-25	(-13)	3189	804	935	684	4.44	21.63	4.66	1.17	1.37
-20	(- 4)	4028	1015	1180	770	4.75	27.45	5.23	1.32	1.53
-15	(+ 5)	4962	1250	1454	859	5.09	34.02	5.78	1.46	1.69
-10	(+14)	5988	1509	1755	954	5.46	41.34	6.28	1.58	1.84

PERFORMANCE = 1.809 W
(evap. -10 / cond. +35°C)

PERFORMANCE = 1.755 W
(evap. -10 / cond. +45°C)

SO WITH EVAP. +40°C THE PERFORMANCE IS BETWEEN 1.755 – 1.809 W



EXACTLY THE PERFORMANCE IS

1.783 W

MORE THAN IRINOX

Condensing Temperature (°C) 40 ▼ **Evaporating Temperature (°C)** -10 ▼

Evaporating Temperature	Cooling Capacity +/-5%			Power Consumption +/-5%	Current Consumption +/-5%	Gas Flow Rate +/-5%	Efficiency +/-7%		
°C	(kcal/h)	(W)	(Btu/h)	(W)	(A)	(kg/h)	(kcal/Wh)	(W/W)	(Btu/Wh)
-10	1.533	1.783	6.085	909	5,29	42,06	1,69	1,96	6,70

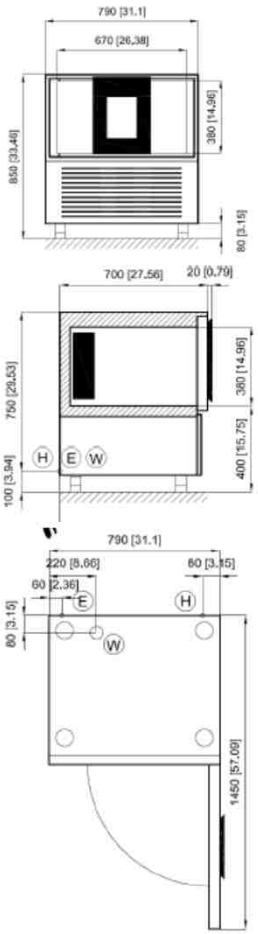
ABBATTITORE DI TEMPERATURA-BLAST FREEZER
PENTAVALENTE-5 FUNCTION

friulinox
refrigeration excellence

Mod. **F506TS**

4 - 6 x GN 1/1 · EN 1

MODEL:		F506TS
Dimensions (W x D x H) Dimensioni (L x P x A)	mm	790 x 720 x 850
Door opening width Larghezza luce porta	mm	670
Door opening height Altezza luce porta	mm	380
Internal depth Profondità interna	mm	410
Insulation thickness Spessore pannelli	mm	60
Climatic class Classe climatica	T	
Chilling yield +90°C / +3°C within 90' Resa +90°C / +3°C entro 90'	kg/cycle	18
Freezing yield +90°C / -18°C within 240' Resa +90°C / -18°C entro 240'	kg/cycle	12
Capacity GN2/1 or EN2 trays Pitch 45 mm Capienza teglie GN2/1 o EN2 passo 45mm	n°	6
Capacity GN2/1 or EN2 trays Pitch 60 mm Capienza teglie GN2/1 o EN2 passo 60mm	n°	5
Capacity GN2/1 or EN2 trays Pitch 75 mm Capienza teglie GN2/1 o EN2 passo 75mm	n°	4
Capacity gelato tubs 165x360h120 capacità vaschette gelato 160x360h120	n°	6
Electric power supply Alimentazione elettrica	V/~/Hz	230/1/50
Max power consumption cooling (**) Assorbimento elettrico max (**)	W	1117
Max. absorbed current cooling (**) Corrente assorbita raffredd. max (**)	A	5,5
Max power consumption heating Assorbimento elettrico riscald. max	W	625
Max. absorbed current heating	A	2,7
Refrigeration power (*) Potenza frigorifera (*)	W	1430
Heating power Potenza riscaldamento	W	500
Compressor Compressore	HP	1
Refrigerant Refrigerante	gas	R404A
Refrigerant quantity Quantità refrigerante	g	1000
Packing dimensions (WxdxH) Dimensioni imballo	mm	850 x 780 x 1005
Volume Volume	m^3	0,66
Weigh net/gross Peso netto/lordo	kg	86 / 101
Noise level Livello rumorosità	dB(A)	< 70
(*) temp. evap. -15°C temp. cond. +40°C (**) temp. evap. -15°C temp. cond. +55°C		



Refrigeration power (*) Potenza frigorifera (*)	W	1430
Heating power Potenza riscaldamento	W	500
Compressor Compressore	HP	1
Refrigerant Refrigerante	gas	R404A
Refrigerant quantity Quantità refrigerante	g	1000
Packing dimensions (WxdxH) Dimensioni imballo	mm	850 x 780 x 1005
Volume Volume	m^3	0,66
Weigh net/gross Peso netto/lordo	kg	86 / 101
Noise level Livello rumorosità	dB(A)	< 70
(*) temp. evap. -15°C temp. cond. +40°C (**) temp. evap. -15°C temp. cond. +55°C		

PERFORMANCE = 1.430 W
(evap. -15 / cond. +40°C)

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **35°C (+95°F)**)
@220V50Hz **Fan**

Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1413	356	414	437	3.71	9.50	3.24	0.82	0.95
-35	(-31)	2000	504	586	509	3.91	13.49	3.92	0.99	1.15
-30	(-22)	2674	674	784	578	4.12	18.09	4.61	1.16	1.35
-25	(-13)	3432	865	1006	648	4.35	23.32	5.30	1.33	1.55
-20	(- 4)	4270	1076	1251	717	4.59	29.16	5.96	1.50	1.75
-15	(+ 5)	5185	1307	1519	789	4.85	35.62	6.58	1.66	1.93
-10	(+14)	6173	1555	1809	863	5.13	42.70	7.15	1.80	2.10

TEST CONDITIONS: **ASHRAE32** (Condensing temperature **45°C (+113°F)**)
@220V50Hz **Fan**

Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-40	(-40)	1285	324	377	437	3.70	8.62	2.95	0.74	0.86
-35	(-31)	1815	457	532	518	3.92	12.21	3.50	0.88	1.03
-30	(-22)	2450	618	718	600	4.16	16.55	4.08	1.03	1.20
-25	(-13)	3189	804	935	684	4.44	21.63	4.66	1.17	1.37
-20	(- 4)	4028	1015	1180	770	4.75	27.45	5.23	1.32	1.53
-15	(+ 5)	4962	1250	1454	859	5.09	34.02	5.78	1.46	1.69
-10	(+14)	5988	1509	1755	954	5.46	41.34	6.28	1.58	1.84

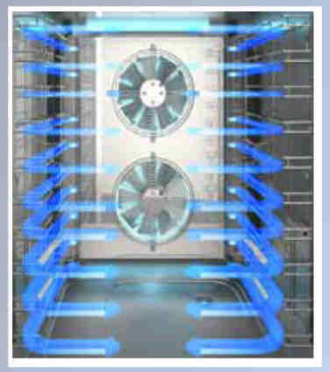
PERFORMANCE = 1.519 W
(evap. -15 / cond. +35°C)

PERFORMANCE = 1.454 W
(evap. -15 / cond. +45°C)

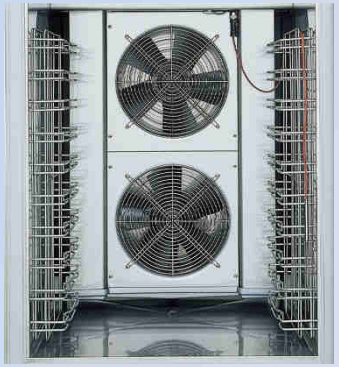
SO WITH EVAP. +40°C THE PERFORMANCE IS BETWEEN 1.454 – 1.519 W
MORE THAN FRIULINOX

UNIQUE SELLING POINTS

- INTERNAL AIR CIRCULATION INDIRECTLY ON THE PRODUCT



- REMOVABLE RACKS WITHOUT TOOLS
- FLEXIBILITY GN 1/1 OR 60X40



- CORE PROBE FITTED AS STANDARD

- ROUNDED INTERNAL CORNERS
- EASY CLEANING

UNIQUE SELLING POINTS

- MANUFACTURED IN STAINLESS STEEL AISI 304
- CFC AND HCFC FREE ENVIROMENT FRIENDLY INSULATION – MINIMUM 65mm THICKNESS
- SELF CLOSING DOOR
- PERFECT DOOR CLOSURE THANKS TO NEW PROFILE GASKETS
- AUTOMATIC HOT GAS DEFROST ONLY WHEN NECESSARY AND DURING CONSERVATION CYCLE (MANUAL ON 4 AND 5 TRAYS MODELS)
- EVAPORATOR WITH LARGE HEAT EXCHANGE SURFACE AND CATAPHORESIS TREATED AGAINST CORROSION

SPEED VARIATION FANS

NEW GENERATION ELECTRONIC SPEED VARIATION FANS, WITH INNOVATIVE DESIGN AND MATERIALS:

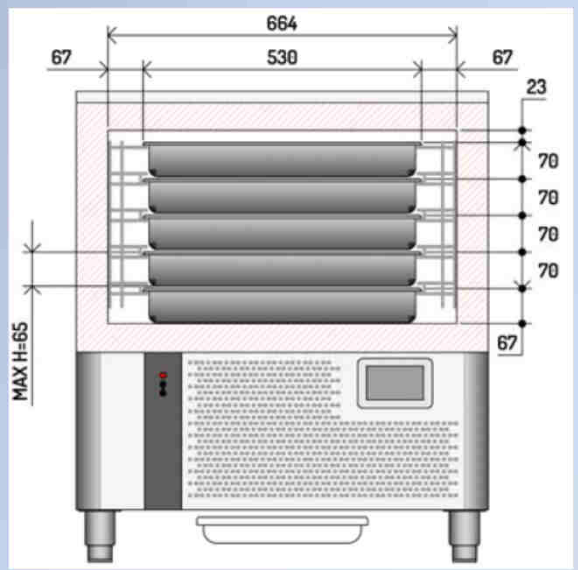
- **UNIFORM VENTILATION THROUGHOUT THE CHAMBER**
- **FAN BLOCKING SYSTEM WHICH PREVENTS COLD AIR FROM LEAVING THE CHAMBER WHEN THE DOOR IS OPENED**
- **LESSER ENERGY CONSUMPTION**
- **PREVENTING FOOD DRYING**
- **PRESERVATION OF DELICATE PRODUCTS**

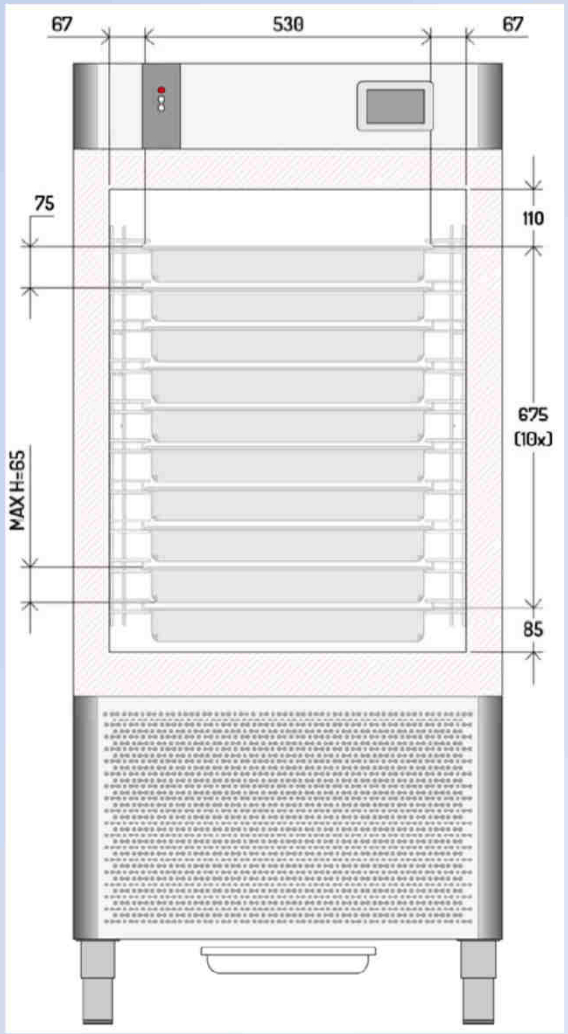
INTERNAL SPACE

ALL ILSA BLAST CHILLERS CAN ACCEPT GN 1/1 CONTAINERS WITH 65 MM DEPTH

DISTANCE BETWEEN TRAYS:

- 67 MM – 14 Trays
- 70 MM -- 5 Trays
- 74 MM – TABLE
- 75 MM -- 10 Trays





INTERNAL SPACE

MultiFresh®

More than Fresh.

IRINOX

MF 25.1

Organize your production and processes with flexibility 24 hours a day.

YIELD PER CYCLE	
from +90°C to +3°C	25 kg
from +90°C to -18°C	25 kg

TRAY CAPACITY NR.	
tray height 65/60 mm	4 (GN 1/1 o 600x400 mm)
tray height 40 mm	5 (GN 1/1 o 600x400 mm)
tray height 20 mm	8 (GN 1/1 o 600x400 mm)

DIMENSIONS	
width	790 mm
depth	771 mm
height	870 mm
weight	115 kg

ELECTRICAL DATA	
max absorbed power	1,2 kW
max absorbed current	6,5 A
voltage	230 V-50Hz (1N+PE)

TRAY CAPACITY NR.	
tray height 65/60 mm	4 (GN 1/1 o 600x400 mm)
tray height 40 mm	5 (GN 1/1 o 600x400 mm)
tray height 20 mm	8 (GN 1/1 o 600x400 mm)

INTERNAL SPACE

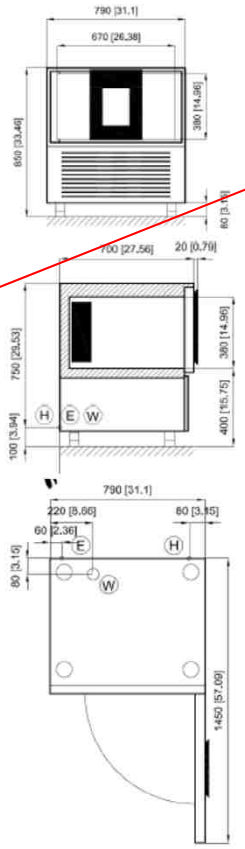
ABBATTITORE DI TEMPERATURA-BLAST FREEZER
PENTAVALENTE-5 FUNCTION

friulinox
refrigeration excellence

Mod. **F506TS**

4 - 6 x GN 1/1 · EN 1

MODEL:		F506TS
Dimensions (W x D x H) Dimensioni (L x P x A)	mm	790 x 720 x 850
Door opening width Larghezza luce porta	mm	670
Door opening height Altezza luce porta	mm	380
Internal depth Profondità interna	mm	410
Insulation thickness Spessore pannelli	mm	60
Climatic class Classe climatica	T	
Chilling yield +90°C / +3°C within 90' Resa +90°C / +3°C entro 90'	kg/cycle	18
Freezing yield +90°C / -18°C within 240' Resa +90°C / -18°C entro 240'	kg/cycle	12
Capacity GN2/1 or EN2 trays Pitch 45 mm Capienza teglie GN2/1 o EN2 passo 45mm	n°	6
Capacity GN2/1 or EN2 trays Pitch 60 mm Capienza teglie GN2/1 o EN2 passo 60mm	n°	5
Capacity GN2/1 or EN2 trays Pitch 75 mm Capienza teglie GN2/1 o EN2 passo 75mm	n°	4
Capacity gelato tubs 165x360h120 capacità vaschette gelato 160x360h120	n°	6
Electric power supply Alimentazione elettrica	V/~/Hz	230/1/50
Max power consumption cooling (**) Assorbimento elettrico max (**)	W	1117
Max. absorbed current cooling (**) Corrente assorbita raffredd. max (**)	A	5,5
Max power consumption heating Assorbimento elettrico riscald. max	W	625
Max. absorbed current heating Corrente assorbita riscald. max	A	2,7
Refrigeration power (*) Potenza frigorifera (*)	W	1430
Heating power Potenza riscaldamento	W	500
Compressor Compressore	HP	1
Refrigerant Refrigerante	gas	R404A
Refrigerant quantity Quantità refrigerante	g	1000
Packing dimensions (WxdxH) Dimensioni imballo	mm	850 x 780 x 1005
Volume Volume	m^3	0,66
Weigh net/gross Peso netto/lordo	kg	86 / 101
Noise level Livello rumorosità	dB(A)	< 70
(*) temp. evap. -15°C temp. cond. +40°C (**) temp. evap. -15°C temp. cond. +55°C		



Capacity GN2/1 or EN2 trays Pitch 45 mm Capienza teglie GN2/1 o EN2 passo 45mm	n°	6
Capacity GN2/1 or EN2 trays Pitch 60 mm Capienza teglie GN2/1 o EN2 passo 60mm	n°	5
Capacity GN2/1 or EN2 trays Pitch 75 mm Capienza teglie GN2/1 o EN2 passo 75mm	n°	4

NF – TEST FEATURES

- GN ½ CONTAINERS
- 1,8 Kg OF MASHED PATATOES EACH CONTAINER FILLED FOR 45 MM
- CHILLING:
  + 63 °C → + 10 °C IN 110 MINUTS
  1,8 Kg x 10 = 18 Kg (NO MORE SPACE)
- FREEZING:
  + 63 °C → - 18 °C IN 270 MINUTES
  1,8 Kg x 6 = 10,8 Kg

DIN – TEST FEATURES

DIN 18872-5 | Normen

DIN Schnellkühler/Schockfroster

Eindeutige Festlegung

Seit Jahren herrscht Unklarheit über die Festlegung von Temperaturen und Abkühlzeiten bei Schnellkühlern und Schockfrostern. Mit der Überarbeitung der DIN 18872-5 (Schnellkühler/Schockfroster) wird es nunmehr eine eindeutige Festlegung geben. Die DIN 10508 (Temperaturen) wird folgen.

Dafür hat Manfred Schwarz von Asskühl lange gekämpft – und nun erfolgreich und federführend bei der Abfassung der neuen Schnellkühler- und Schockfrosternorm mitgewirkt. In einem Beitrag in Gastro-Spiegel (siehe GS 09-2009, S. 12-13) hatte Schwarz dargelegt, wie problematisch die Bestimmung des Kühlprozesses im Sinne der bisherigen Normen war, da es kein gültiges Messverfahren gab, das den Kühlprozess genau beschrieb. Das ändert sich nun. Die offiziellen Norm-Drucksachen gibt es ausschließlich beim Beuth-Verlag – wir zitieren hier im Gespräch mit Manfred Schwarz auszugsweise aus der Norm.

Genaue Füllparameter

Wichtig ist, dass sich die Anforderungen auf eine Umgebungstemperatur von 25 °C und eine Luftfeuchte von 65 Prozent beziehen. Die steckerfertigen Schnellkühler und Schockfroster sind dabei für eine maximale Umgebungstemperatur von 32 °C auszulegen. Die Abkühlleistung bei Schnellkühlern ist nun nach definierten Voraussetzungen zu ermitteln und zu prüfen.

Das Referenzprodukt ist Kartoffelpüree aus Trockenmasse aufgerührt: 877 Gramm Wasser, 115 Gramm Püree-Flocken-Trockenmasse sowie acht Gramm Salz. Das Püree wird in GN-Behältern 1/2-65 (55) Millimeter (325 x 265 x 65 mm) bis zu 45 Millimeter Füllhöhe mit einem Gewicht von 1,8 Kilogramm heiß (mindestens 70 °C) abgefüllt und abgedeckelt. Die Probenbehälter sind in die GN-Einschübe (GN 1/1: 2 Stück, GN 2/1: 4 Stück) pro Etage einzusetzen. Der Schienenabstand sollte mindestens 70 Millimeter betragen. Die Schnellkühler sind – ohne Vorkühlung – bei Raumtemperatur einzuschalten. Jeder Probebehälter ist mit einer Sonde zur Messung der Kerntemperatur in der Probenmitte angeordnet, auszustatten.

Maximal 90 Minuten Abkühlzeit

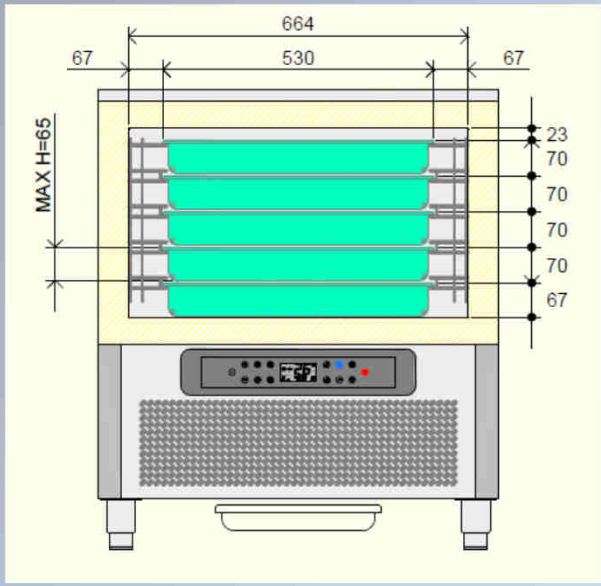
Das Messverfahren beginnt sobald die Kerntemperatur in den Probebehältern 63 °C erreicht hat, bei geschlossener Tür sowie bei laufendem Kühlaggregat und laufenden Verdampferventilatoren im Innenraum. Wenn die Proben in allen Behältern auf 3 °C Kerntemperatur abgekühlt sind, bei einem maximalen Zeitverlauf von bis zu 90 Minuten (nach DIN 10508), ergibt die Füllmenge (kg) der Probenbehälter und ihre Anzahl die nachgewiesene Abkühlleistung der Schnellkühler in kg/Zyklus.

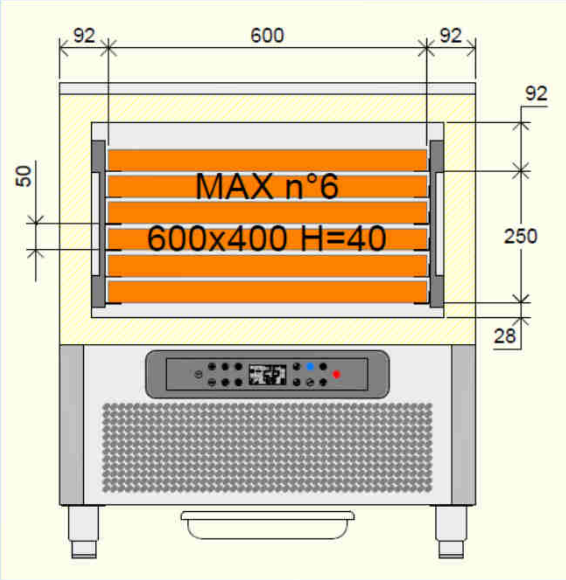
In ähnlicher Weise ist das Verfahren für Schockfroster beschrieben. Hier müssen lediglich in der ersten Phase der Abkühlung von 90 Minuten auf 3 °C weitere 180 Minuten zum Frieren auf -18 °C gewährt werden. Diese Ausführung ist in der Sitzung des HKI-Normausschuss (NHL) im November verabschiedet worden und geht somit beim DIN in Druck. ◀

- GN ½ CONTAINERS, DEPTH 65 MM
- 1,8 Kg OF MASHED PATATOES EACH CONTAINER FILLED FOR 45 MM
- CHILLING:
  + 63 °C → + 3 °C IN 90 MINUTS
  1,8 Kg x 10 = 18 Kg (NO MORE SPACE)
- FREEZING:
  + 63 °C → - 18 °C IN 270 MINUTES
  1,8 Kg x 6 = 10,8 Kg

ACCESSORIES

- UV LAMP OR OZON GENERATOR
- HEATED CORE PROBE
- USB FOR DATA DOWNLOADING
- SPECIAL RACKS FOR PASTRY

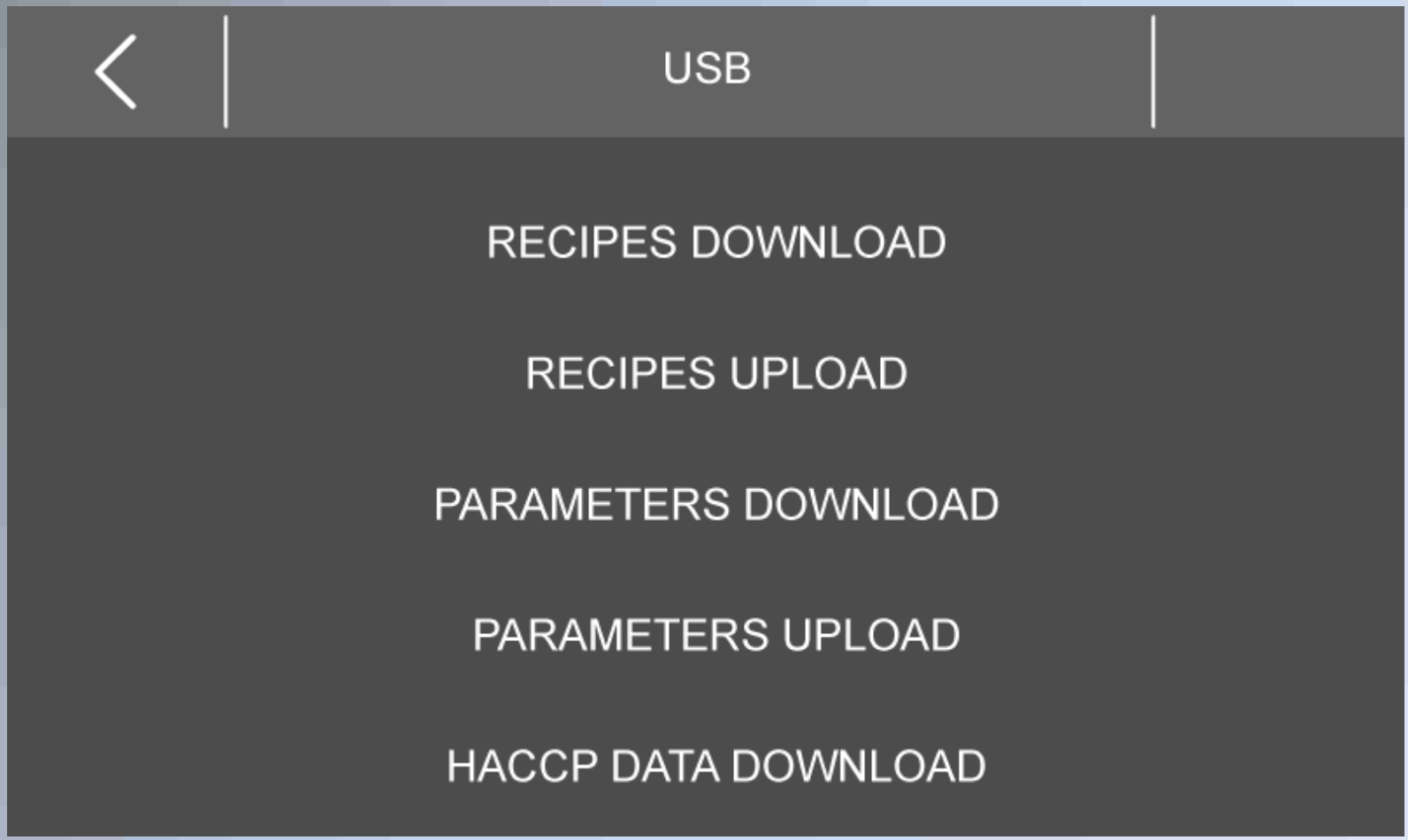




USB CONNECTION – EVOLVE

- DOWNLOAD AND UPLOAD OF RECIPES
- DOWNLOAD AND UPLOAD OF THE CONFIGURATION PARAMETERS
- DOWNLOAD OF THE INFORMATION CONCERNING THE HACCP RECORDS

USB CONNECTION – EVOLVE



HACCP RECORDING - USB

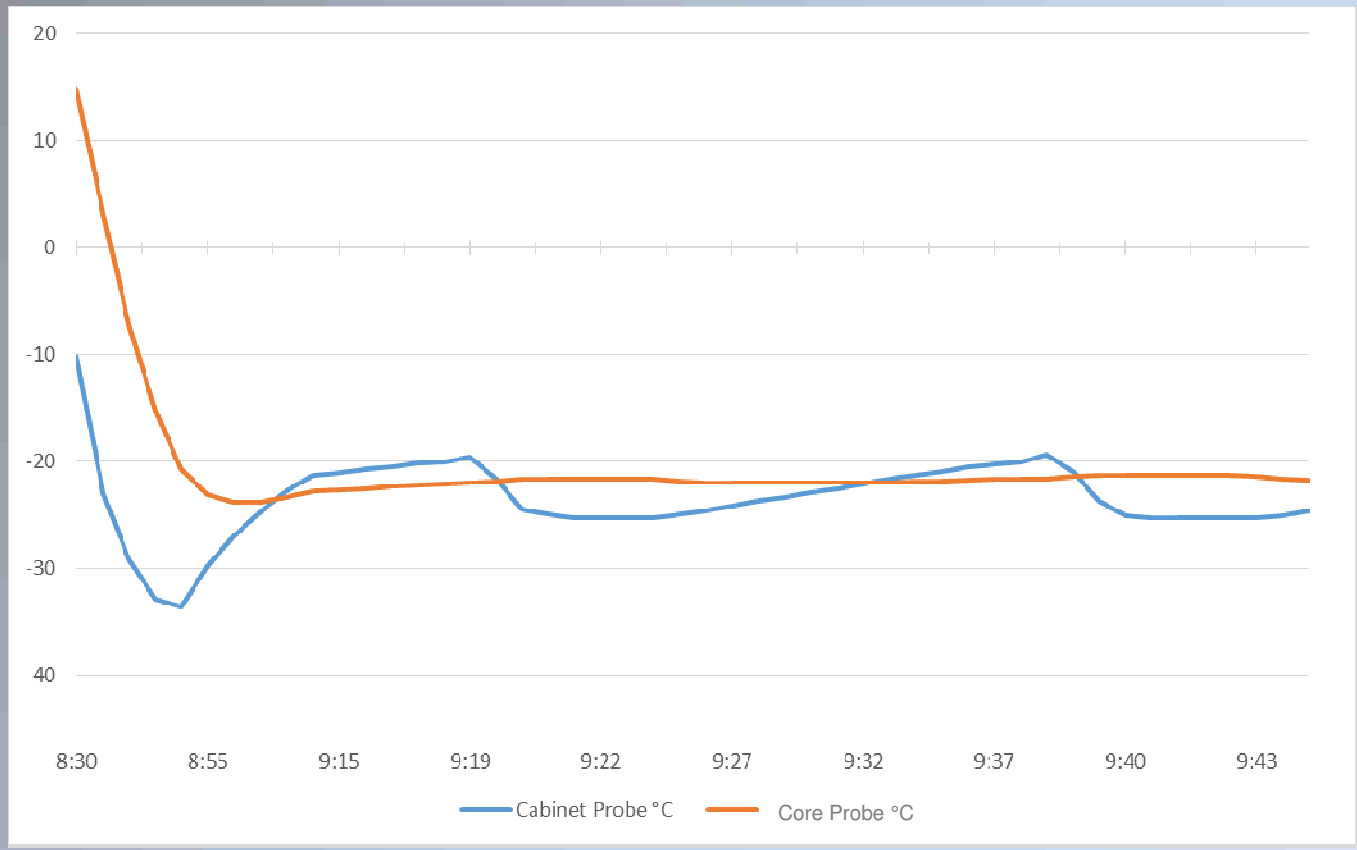
- POSSIBLE ON NEOS AND EVOLVE BLAST CHILLERS
- NO PAPER PRINTERS NECESSARY
- DIRECT DOWNLOAD ON PEN DRIVE TROUGHT USB CONNECTION
- NO EXPENSIVE AND DEDICATED SOFTWARE TO READ PEN DRIVE
- CONVERT FILE TO EXCEL DATA

HACCP RECORDING - USB

			Cabinet Probe	Core Probe	Condenser Probe
			°C	°C	
8:26			15,2	19,7	25,7
8:27			6,7	19,3	30,8
8:28			0	18,3	31,7
8:29			-5,6	16,7	31,7
8:30			-10,1	14,8	31,3
8:31			-13,6	12,6	30,4
8:32			-16,5	10,2	29,3
8:33			-19,1	7,9	28,6
8:34			-21,2	5,5	27,8
8:35			-23	3,2	27,2
8:36			-24,6	1	26,7
8:37			-26	-1,2	26,3
8:38			-27,2	-3,2	25,8
8:39			-28,3	-5,3	25,3
8:40			-29,1	-7,2	25,2
8:41			-30,1	-9	24,7
8:42			-30,8	-10,8	24,4
8:43			-31,6	-12,4	24,1
8:44			-32,3	-13,8	23,9
8:45			-32,8	-15,3	23,9
8:46			-33,5	-16,6	23,6
8:47			-34	-17,8	23,3

- ALL IMPORTANT VALUES:
- TEMPERATURE
- HACCP ALARMS
- ON/OFF COMPRESSOR
- CONDENSER FAN ON/OFF
- DOOR HEATER
- TYPE OF PHASE

HACCP RECORDING - USB



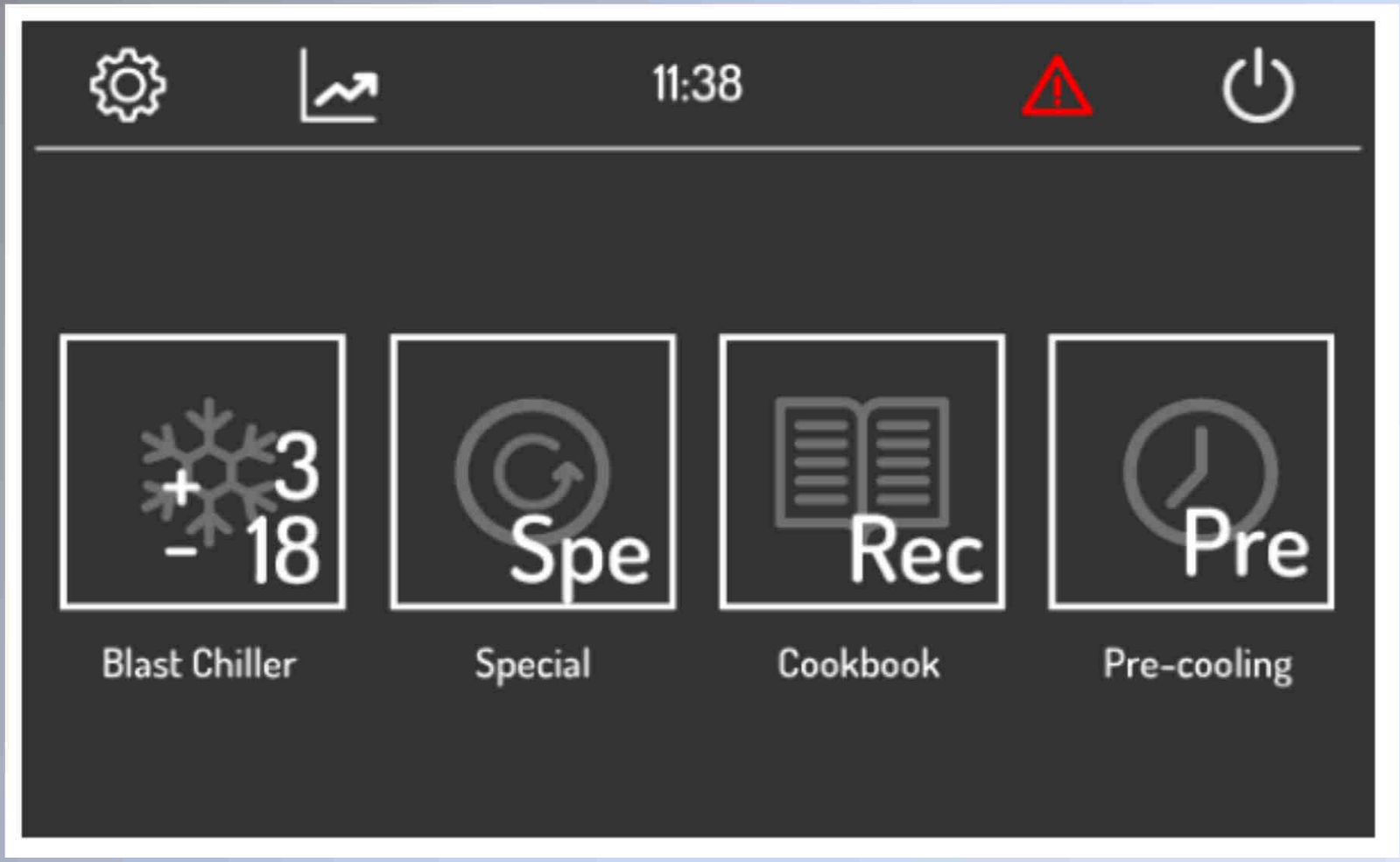
EXAMPLE OF DIAGRAM

OPERATING WITH

EVOLVE OR NEOS

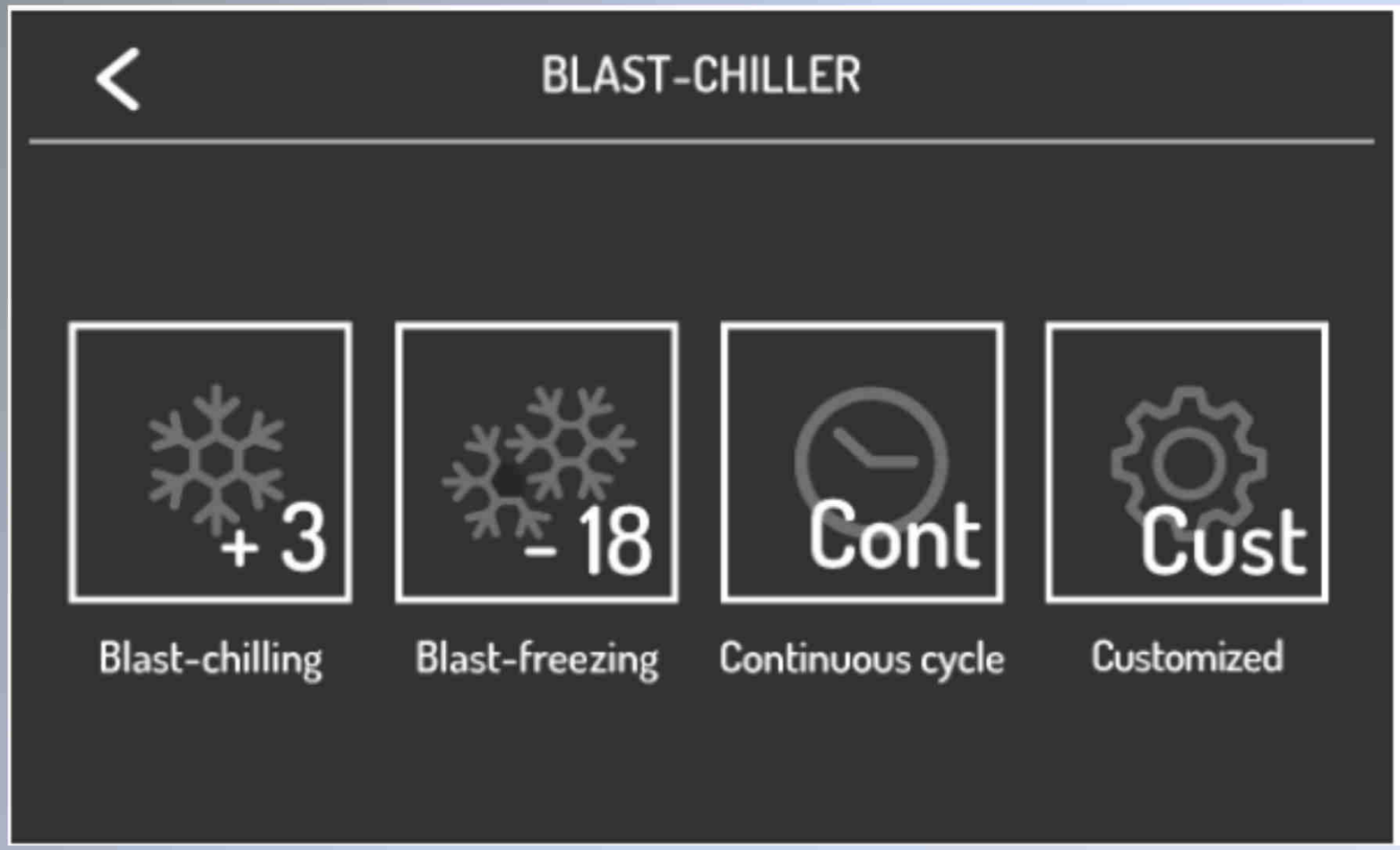
BLAST CHILLER/FREEZER

EVOLVE



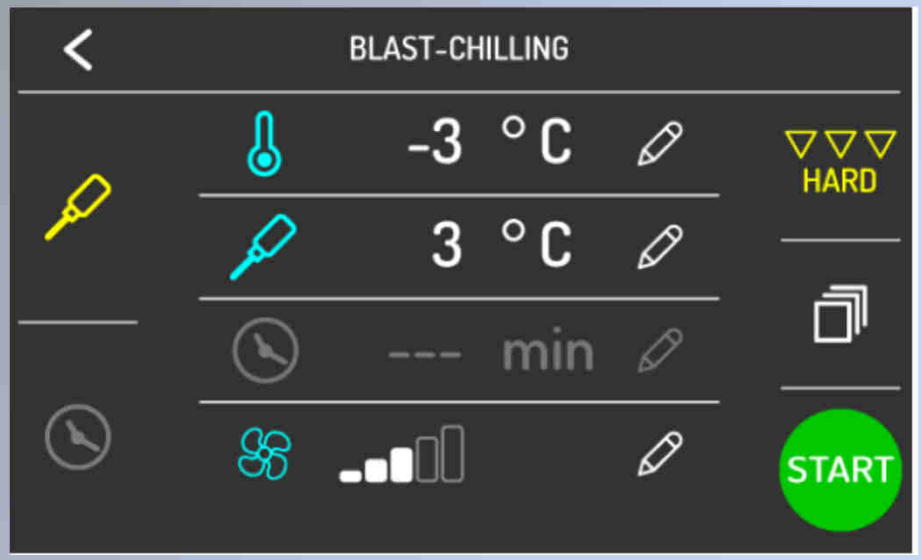
FIRST SCREEN

BLAST CHILLING OR FREEZING

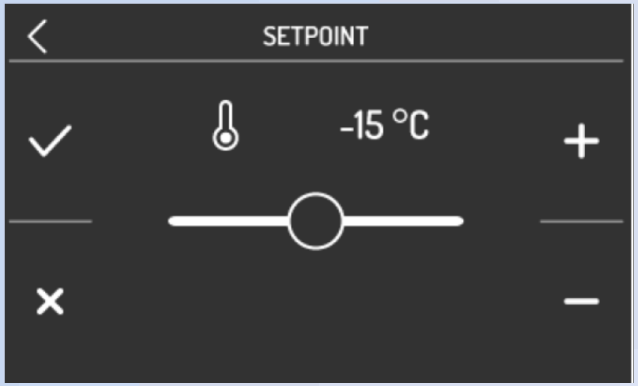


EXAMPLE : BLAST CHILLING

- This cycle allows a reduction in temperature in the product core from **+90°C** to **+3°C** as quickly as possible and within a MAX time of **90 minutes**. The cycle ends when the value +3°C, read by the core probe, is reached and the machine switches automatically to preservation.

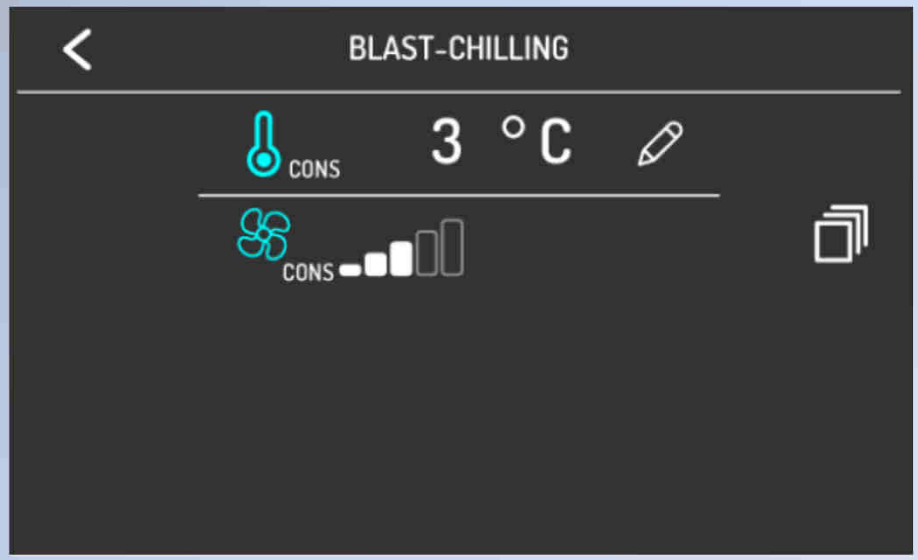


→ All lighting functions can be changed very easily.



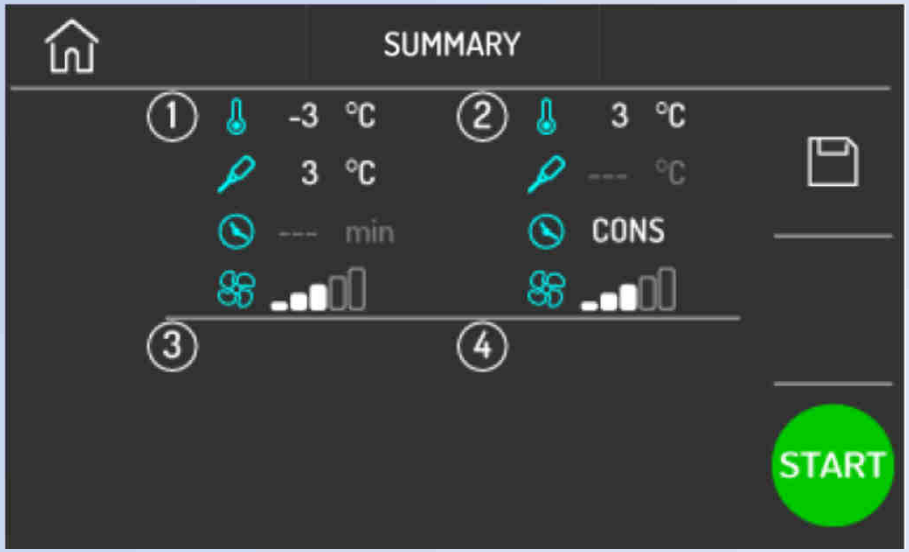
ADVANCED SETTINGS

It is possible to change the cell temperature and the speed of the fans during the conservation phase.

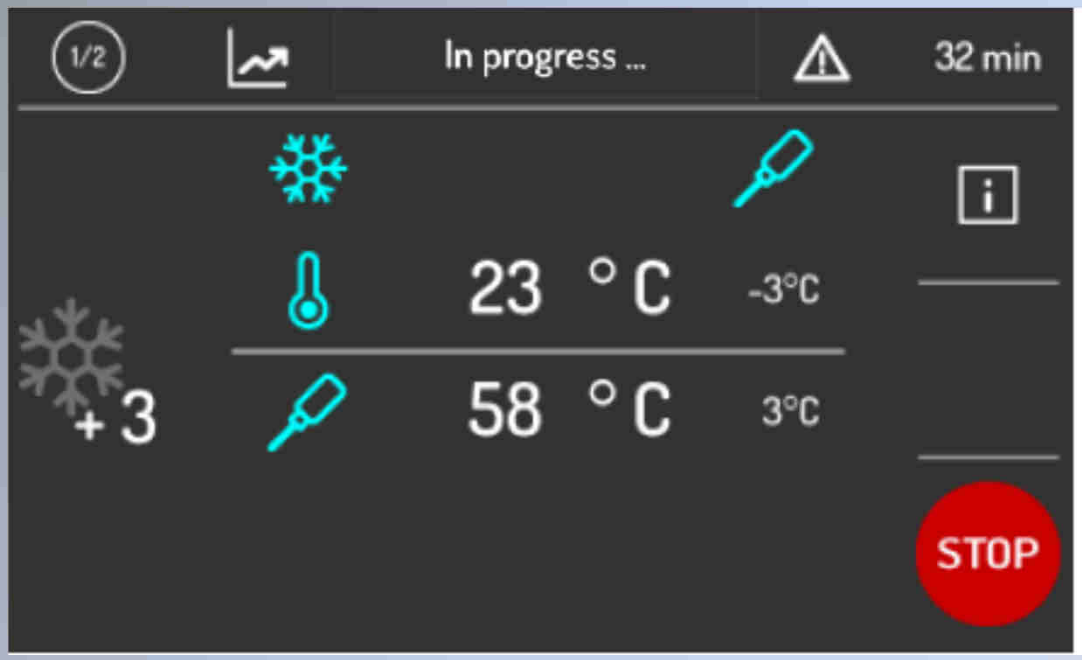


START

After pressing “START” a “SUMMARY” will appear; this allows to check the settings and eventually change them.
It is possible to save or proceed with the cycle.



SCREENSHOT DURING OPERATING CYCLE



Pressing on the area  the display will show the temperatures detected by the various probes, the state of inputs / outputs an the alarms stored by the system.

To abort the current cycle, press for three seconds the area 

SPECIAL CYCLES

1. Fish sanitization
2. Drying
3. Manual defrosting
4. Ice cream hardening
5. Sterilization
6. Thawing (optional)
7. Proving (optional)
8. Slow cooking (optional)

SPECIAL CYCLES

Fish sanitation: it guarantees the elimination of the Anisakis parasite

Drying: this function will run a cycle of forced ventilation. A dry chamber and evaporator will increase the performance

Defrosting: The ice formed on the evaporator, may compromise the proper operation of the equipment. To restore the full functionality it is necessary to perform a defrosting cycle.

Hardening: as soon as it comes out of the thickener, the ice cream is at a temperature of -8°/-10°C. At this point, it can either be displayed or placed in the hardener which lowers the temperature to -20°C, decreasing the amount of water not yet frozen that would make the ice cream lose its creaminess and volume.

SPECIAL CYCLES

Sterilization: For a correct hygiene of the machine it is recommended to perform the disinfection of the cell. Ozone generator or UV lamp as built-in or removable ionizer are available.

Thawing (optional): Also known as regeneration, the food that has been blast chilled or frozen will be rapidly and delicately brought back to a temperature at which it can be consumed or cooked.

Proving (optional): A process that allows you to check, block and manage the proving of dough.

Slow cooking (optional): Also known as cooking at a low temperature around 70-75 °C; automatically after this cycle is possible to activate a positive or negative chilling.

STORING RECIPES

WITH THIS ICON YOU CAN STORE YOUR OWN RECIPES AT THE END OF A CYCLE OR WHILE SETTING A NEW CYCLE

AND ASSIGN THEM A NAME

NEOS


Time setting keys
Defrost key
START Key
AUX
°C
°F
min
HACCP
HARD
Blast Chilling key
Shock freezing key
Soft/Hard key