

GRAM PROCESS



Roll-in and Roll-through

Quick Chillers

Blast Chillers/Freezers



Innovative and functional food storage



On-line information for customers

At www.gram-commercial.com you can find detailed information on all commercial products from Gram

Optimum design and hygienic food storage

Gram Commercial serves the professional kitchen. The caterers most important task is to guarantee secure food quality and hygiene. Therefore daily quality control through out the production process is vital.

The HACCP risk analysis process is a preventative system that secures food safety, minimising the growth of harmful bacteria throughout the food production process.

GRAM PROCESS cabinets are developed to meet the needs of effective temperature control in a food production system. Our extensive product range covers all requirements for the safe and hygienic production of foodstuffs in the modern catering environment.



**Hospitals
Nursing homes
Catering
Restaurants
Delicatessen
Airport Catering
Food Production
Bakeries
Patisseries**

What you get when you choose GRAM PROCESS

GRAM PROCESS identifies the group of products that can fulfil one or more temperature control functions in the food production process.

Hard or soft chilling storage within a production line, freezing or refrigerating, thawing or simply storage at various temperature ranges. Gram has the answer for you whatever your needs.

Gram Commercial offers complete solutions for all operations, utilising pass-through and roll-in cabinets, quick chillers, blast chillers and freezers.

Further to this, the customer is supported in all critical areas.

Consistent environmental policy in practice

At Gram we strive at every level to create products which do not burden the environment. We focus on developing low-energy cabinets using natural refrigerants and materials which can be recycled whenever it is technically feasible to do so.

We are where you are

Gram co-operates with the best and most result-orientated distributors. This means that you can rely on fast and competent service no matter where you are.

Spare parts for up to 10 years

Spare parts are available for up to 10 years after purchase, even for models that are no longer in the portfolio.



GRAM

Innovative and functional food storage

Roll-in and Roll-through

– Keep the refrigeration process unbroken and lighten the workload

Roll-in and roll-through cabinets are designed for temporary refrigerated **storage** within a production line, e.g. between blast chillers and refrigerated coldrooms. By utilising roll-in cabinets the refrigeration process is unbroken, ensuring time spent on manual handling and re-loading is kept to an absolute minimum. Both products belong to the latest generation of environmentally friendly Gram products which means they are energy optimised.



1. Integral light

Cabinets with one or two glass doors are equipped with an integral light to the right side of the cabinet.

2. Sturdy handle

Sturdy handle with a "positive" closing system.

3. Floor and drive-in ramp

All roll-through cabinets are fitted with a compact stainless steel floor with an integrated drive-in ramp. In the roll-in series the floor and ramp is optional for K and M 1500 refrigerators. The roll-in freezer F 1500 has a heated floor as standard.



4. Internal cabinet

The internal cabinet and the inner side of the door are protected by heavy duty impact cushions.

5. Extra temperature display

The reverse of the cabinet has an additional temperature display.



KG 1500 CSG

Ideal for most trolleys currently used

With an internal clear height of 1900 mm the cabinets are ideal for most trolleys currently used in commercial kitchens.

Intelligent electronic controller

The cabinet control system has a built-in alarm and emergency programs that maintain the cabinet temperature until any fault is rectified. Door surveillance activates an acoustic door alarm if the door is left open for more than 5 minutes. Volt-free contact allow the cabinet to be connected to a remote alarm system. Furthermore the control can be locked to avoid unauthorized tampering.

Two bright halogen lamps provide illumination when the door is opened.

Effective temperature control - hygienic and sturdy

- Corrosion resistant stainless steel internal surfaces and external front and sides.
- Replaceable dust and grease filters and removable door gasket.
- Right hand side airduct ensures uniform temperature distribution throughout the cabinet (see illustration page 7).
- Designed for easy cleaning with smooth surfaces throughout.
- Impact cushions protect the stainless surfaces from bumps and knocks.
- Reversible door with cold-retaining strip.



			Roll-in	Roll-through
Temperature range	Refrigeration, +2/+12°C	K	✓	✓
	Extended refrigeration, -5/+12°C	M	✓	
	Freezing, -25/-5°C	F	✓	
Exterior/Interior	Stainless/Stainless		✓	✓
Exterior equipment	Number of doors		1	2
	Right hand hinged, solid door(s)		●	●
	Left hand hinged, solid door(s)		○	○
	Glass door(s) (only K)		○	○ (at front or at front and back)
	Rising door hinge*		●	●
	Electroplated top plate (when using external compressor)		○	○
	Stainless steel back plate		○	○
	Halogen lamps on cabinets with two isolated doors		●	● (cabinets with 2 solid doors)
	Long drive-in ramp, 400 mm		○	○
	Interior equipment	Stainless and heated floor and drive-in ramp, 100 mm		● (F 1500)
Stainless floor with drive-in ramp, 100 mm			○ (K & M 1500)	●
Integral light behind glass door			●	●
Datalogger			○	○
Refrigerant	R 290		○ (K, M, KG & F 1500)	○
	R 134a		● (K, M, KG 1500)	●
	R 404A		● (F 1500)	○
	Prepared for a remote refrigeration system		○	○

* lifting the bottom cold-retaining strip from the floor when the door is opened | ● = Standard Specification | ○ = Optional Extras

Quick chillers KP 500 and KP 660

6 functions

KP 500 and 660 are "multifunctional" cabinets. Sophisticated electronic controls offer the choice of six different functions: Refrigeration, freezing, quick chill, quick freeze, controlled rapid thawing and dry cooling.

Smooth surfaces and watertight connections guarantee quick and easy cleaning, ensuring high standards of hygiene.



2 bright halogen lamps provide illumination when the door is opened.



5 sturdy stainless wire shelves and supports with tilt prevention.



Integrated, ergonomic handle along the entire length of the door.

- Easy to operate electronic controller - preset programmes.
- Time or temperature controlled chilling process.
- Soft chill & hard chill - for gentle or fast chilling of food.
- Controlled rapid thawing - ensures a controlled thawing process. The temperature in the cabinet never exceeds +8°C.
- Dry cooling function - reduces condensation on the surface of food items.
- Reversible door - right or left hand hinged, self-closing door, foot pedal opener, lockable door.
- Removable door gasket, for easy cleaning.



KP 500 CXH

Temperature range	-30/+10°C
Exterior/Interior	Stainless/Stainless
Content	Number of stainless wire shelves
Exterior equipment	Right hand hinged solid door Left hand hinged solid door Lockable door Self-closing door Foot pedal door opener Electroplated top plate (when using external com
Interior equipment	Stainless steel back plate Legs (H=105/135 mm) Legs (H=135/200 mm) Legs (H=185/250 mm) Castors (H=125 mm) Built-in halogen lamps Soft chill and hard chill function Controlled rapid thaw function Dry cooling function Extra stainless shelves Shelf supports (set of 2)
Refrigerant	R 404A Prepared for a remote refrigeration system

Blast chillers and freezers

Intelligent blast chilling with the IFR control system

The controls contain a patented system called IFR; "Intelligent Food Recognition". The user only has to insert the multipoint probe correctly into the food item and press the blast chilling cycle button to start the process.

IFR then works as a control function that automatically adapts the cycle to the food item's characteristics. The probe will then monitor critical temperatures in 3 places; the core, beneath the surface and the air temperature on and around the surface of the food avoiding surface freezing damage.

IFR works on any type of food where the probe is applicable. The function is usable only when blast chilling, not blast freezing.



Five short cuts

- to activate a defrosting cycle, the IFR function, blast chilling, a blast freezing cycle or a pre-cooling cycle.



Temperature control modes

The chill cycle can be controlled by time or temperature.



All models can come with a thermo printer for complete HACCP documentation

User friendly and food safe

- Choose either the IFR operation, time or temperature controlled chill cycle.
- Prevent surface freezing damage with the IFR function.
- HACCP alarms. If a power failure occurs or when a temperature limit is exceeded this will activate an audio-visual alarm.
- The data from all chill cycles can be printed (thermo printer is optional).
- Up to 20 customised cycles can be stored.
- Operates as a storage cabinet after the chilling process has finished.

KPS 120 / 180



The KPS family

The KPS cabinets from Gram Commercial have been designed to meet all the legal chilling time requirements of any cook-chill operation. The capacities of the blast chillers range from 20 - 180 kg, blast freezers from 12 to 180 kg.

Easy cleaning

All Gram blast chillers and freezers are designed for ease of cleaning. Durable stainless steel construction with smooth surfaces and watertight, rounded internal corners ensures that there are no dirt traps. All doors come with easily replaceable gaskets as standard.

The dished internal base plate on the KPS 20, 40 and 90 makes cleaning easy. The shelf supports for GN and 40 x 60 cm pans are easy to remove for cleaning (KPS 20 and 40). In all Gram blast chillers and freezers the internal fan section can be opened for cleaning around and behind the unit.



KPS 90



KPS 60

How to work with blast chilling and freezing....

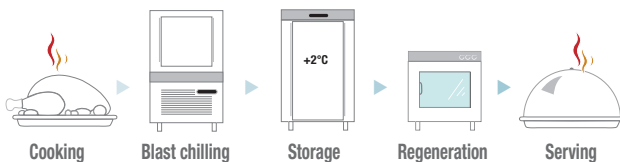
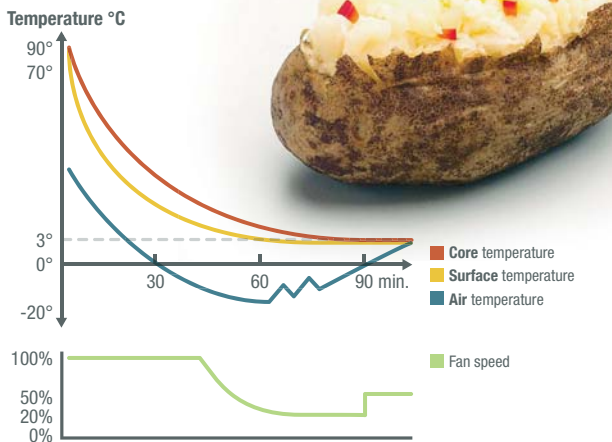
– and achieve results!

Blast chill +70°/+3°C

Only fast, controlled reduction of the core temperature of a cooked food item makes it possible to preserve both natural goodness and the prevention of the accelerated growth of harmful bacteria at temperatures between +70°C and +10°C.

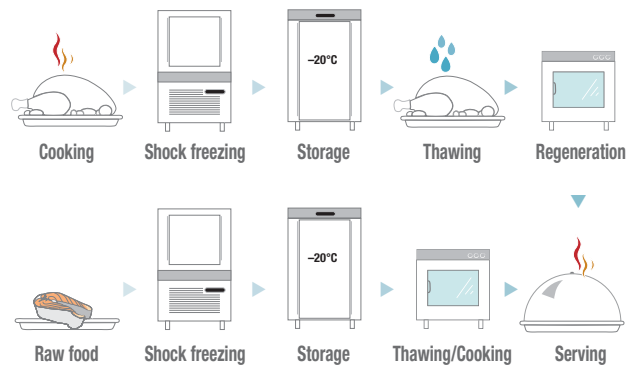
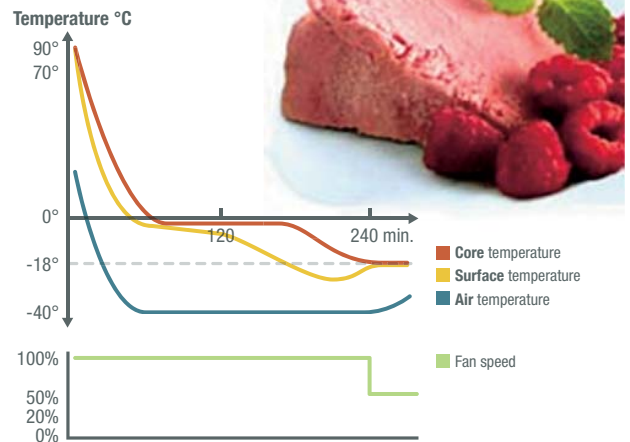
Gram blast chillers bring food items through this high risk temperature range as fast as possible. The core temperature will reach +3°C in 90 minutes, helping to preserve natural vitamins and maintain the appearance and taste of the food.

Temperature curves using IFR



Blast freezing +70°/-18°C

If the food item is to be stored for a longer period of time it must be shock frozen to a minimum of -18°C. As a direct result, water in the product is naturally converted into ice. Using Gram blast freezers a core temperature of -18°C is reached within HACCP requirements of 4 hours. During this timescale ice crystals that form will be small, known as micro crystals. These micro crystals are less damaging and do not adversely effect the quality of the food item. Product that is frozen over a longer period of time can be damaged by the formation of larger ice crystals. Thus reducing both the nutritional value and compromising the structure of the food. Unprocessed (raw) food, semi-processed or cooked food can all be frozen to achieve the optimum product when defrosted or regenerated.



Blast chilling and freezing are integral parts of any Cook Chill operation or any chilled production of food

The principle of cook-chill/freezing production is to cook the food and then immediately chill or freeze it for safe storage. The food is then regenerated, after thawing - before being served.

Better food without the stress

Critical food temperatures and chilling times must be controlled and monitored in order to comply with current legislation. Further, with flexible blast chilling and freezing solutions cook-chill can introduce significant savings. Working time, food weight loss and wastage can be reduced and at the same time production can be increased without hiring extra staff or enlarging the kitchen facility. This process can radically reduce stress levels at peak service periods and cut anti-social working hours due to easy to operate controls and monitoring systems.



HACCP


Food safety

The food items are handled in line with the HACCP guidelines. This ensures a high level of safety whilst maintaining a uniform quality standard.



High food quality

Taste and appearance are maintained while vitamins and natural goodness are preserved.



More extensive menu

The range of dishes offered can be widened, helping to maintain or improve quality.



Better time planning and organisation

Foodstuffs can be prepared and produced in advance without time pressure when the kitchen has spare capacity. This means less stress and reduced production time.



Wastage reduction

Cooking and preparation is planned meaning less food is wasted. Only portions which are ordered need be regenerated.



Improved service

The kitchen brigade will have more time to focus on service as dishes can be prepared in advance.



Effective use of resources

Increased scale of purchasing of raw materials. Larger batch production. More efficient utilization of equipment (oven).



Better portion control

The cost price per portion can be calculated exactly. All guests will get the same quantity of food.



KPS 20 and 40

Chill

KPS 20 C and 40 C:
18 and 36 kg respectively
from +70°C to +3°C in 90 min.

Chill

KPS 20 S and 40 S:
20 and 42 kg respectively
from +70°C to +3°C in 90 min.

Freeze

KPS 20 S and 40 S:
12 and 25 kg respectively
from +70°C to -18°C in 4 hours

Excellent ergonomics

The KPS 20 is also available with a top positioned control panel.



KPS 20 T



Easy cleaning

The cabinets are fitted with an internal condensate tray. Smooth surfaces and watertight internal rounded corners make cleaning easy.

Removable support for 1/1 GN and 40 x 60 bakery plates.



KPS 40

KPS 40 models are with reversible doors.

	KPS 20 C	KPS 20 CT	KPS 20 S	KPS 20 ST	KPS 40 C	KPS 40 CR	KPS 40 S	KPS 40 SR
Blast chiller	✓	✓			✓	✓		
Blast chiller/freezer			✓	✓			✓	✓
Exterior/Interior	Stainless/Stainless	✓	✓	✓	✓	✓	✓	✓
Compatible with oven trolley	Rational trolley type 101					✓		✓
Exterior equipment	Right hand hinged door, revers. and self-closing	●	●	●	●	●	●	●
	Left hand hinged door	○	○	○	○	○	○	○
	Integrated thermo printer	○	○	○	○	○	○	○
	Legs (H=135/200 mm)	●	●	●	●	●	●	●
Interior equipment	IFR control system	●	●	●	●	●	●	●
	Multipoint probe with 3 measuring points	●	●	●	●	●	●	●
	Removable support for 1/1 GN and 40 x 60cm	●	●	●	●	●	●	●
	Max. number of 1/1 GN 40 mm deep	5	5	5	10	10	10	10
	Max. number of 1/1 GN 65 mm deep	3	3	3	7	7	7	7
	Cabinet fitted with an internal condensate tray	●	●	●	●	●	●	●
Refrigerant	R 404A	●	●	●	●	●	●	●
	Prepared for a remote refrigeration system	○	○	○	○	○	○	○

● = Standard Specification | ○ = Optional Extras

KPS 60 and 90

KPS 60 for a roll in trolley

The optional roll in trolley holds up to 16 trays of 1/1 + 1/3 GN or shelves 1/1 GN or plates (696 x 360 mm) for portion trays. The cabinet comes with a right hand hinged reversible door with replaceable gasket and base sealing strip. The fully stainless steel KPS 60 can be placed directly on a flat and level floor and connected to an external drain.



KPS 60



Easy cleaning

A tray under the fan section can be pulled out for easy cleaning.

Dished base designed to catch fluids.

Chill

KPS 60 and 90:

60 and 90 kg respectively
from +70°C to +3°C in 90 min.

Freeze

KPS 90 SF:

50 kg
from +70°C to -18°C in 4 hours

KPS 90

- from oven to blast chiller

The KPS 90 is designed to accept standard oven trolleys used by many manufacturers e.g. Rational, Hounö and Convotherm. The oven trolley can be rolled from the oven into the blast chiller. The oven rack is enclosed in the cabinet while the under-frame with drip tray and castors neatly slides under the cabinet. The cabinet is delivered with a right hand hinged door with replaceable door gasket.



KPS 90

		KPS 60 C	KPS 90 SF-1	KPS 90 SF-2	KPS 90 SF-3
Blast chiller		✓			
Blast chiller/freezer			✓	✓	✓
Exterior/Interior	Stainless/Stainless	✓	✓	✓	✓
Compatible with oven trolley	For ovens from Hounö For ovens from Rational For ovens from Convotherm		Type 1.16 / 1.20* CPC 201*	SCG 201*	OEB/OES 20.10*
Exterior equipment	Right hand hinged door Right hand hinged reversible door Integrated thermo printer	● ● ○	● ● ○	● ● ○	● ● ○
Interior equipment	IFR control system Multipoint probe with 3 measuring points Dished based pan to catch fluids Roll-in trolley for 16 trays or shelves Stainless tray for roll-in trolley	● ● ● ○ ○	● ● ● ● ○	● ● ● ● ○	● ● ● ● ○
Refrigerant	R 404A Prepared for a remote refrigeration system	● ○	● ●	● ●	● ●

*20 x 1/1 GN oven trolleys

● = Standard Specification | ○ = Optional Extras

KPS 120 and 180

– A convenient link within the production line!

KPS 120 and 180 are the largest blast chillers and freezers of the KPS series. Both are available as roll-in or roll-through units with one or two doors. With two door models the food can be rolled from the kitchen directly into the blast chiller and through for storage in refrigerated cold rooms. Therefore the blast chiller can be used as a convenient link in the production line.



KPS 120



KPS 180

Blast chiller	
Blast chiller/freezer	
Exterior/Interior	White/Stainless Stainless/Stainless
Exterior equipment	Number of doors Right hand hinged door Left hand hinged door Lockable door/s Integrated thermo printer
Interior equipment	IFR control system Multipoint probe with 3 measuring points Stainless heated floor Defrosting unit Roll-in trolley for 18 trays Stainless tray for roll-in trolley
Refrigerant	R 404A Prepared for a remote refrigeration system

Chill

KPS 120 and 180:
120 and 180 kg respectively
from +70°C to +3°C in 90 min.

Freeze

KPS 120 and 180:
120 and 180 kg respectively
from +70°C to -18°C in 4 hours



1. Easy to use

The electronic controller is situated in a separate panel placed at an optimal working height making it easy to use.

2. + 3. – and easy to clean!

A tray under the fan section can be pulled out for easy cleaning. The fan section can also be opened for ease of cleaning both around and behind the unit.

Features

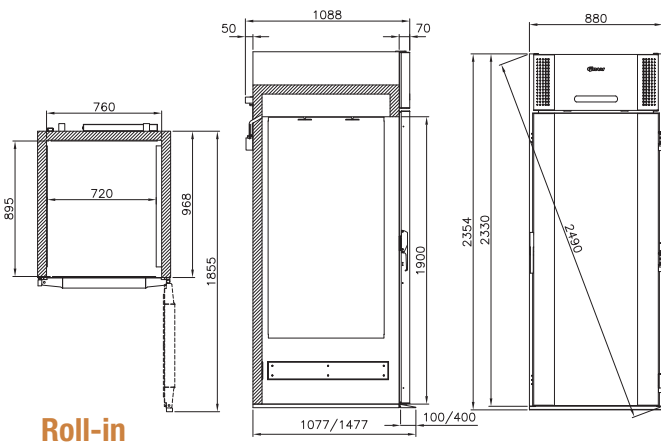
- Three powerful fans ensure the uniform distribution of cold air over food items, wherever they are placed on the trolley.
- Exterior: Stainless or white
Interior: Stainless
- Door can be ordered left or right hand hinged to suit site conditions.
- The chiller can be placed directly on to an existing floor, or mounted with a floor.
The SF-models are always delivered with a heated floor.
- The Internal walls and ceiling panels are constructed of smooth stainless steel with a minimum of joints to aid easy cleaning.



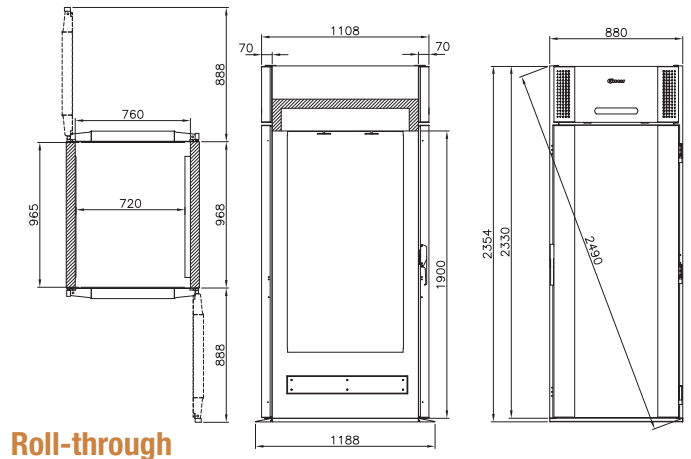
KPS 120 CF	KPS 120 SF	KPS 180 CF	KPS 180 SF
✓		✓	
●	✓	●	✓
○	○	○	○
1 or 2	1 or 2	1 or 2	1 or 2
●	●	●	●
○	○	○	○
○	○	○	○
●	●	●	●
●	●	●	●
●	●	●	●
○	○	○	○
○	○	○	○
○	○	○	○
●	●	●	●
●	●	●	●

● = Standard Specification | ○ = Optional Extras

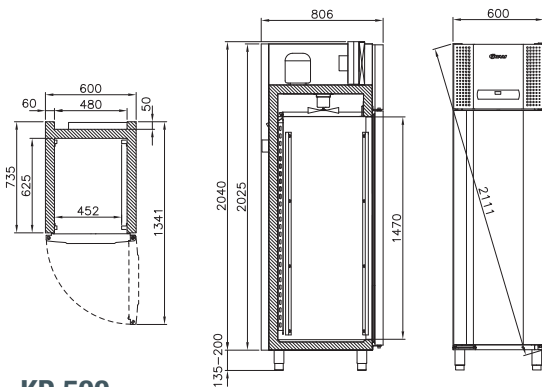
Technical Specifications



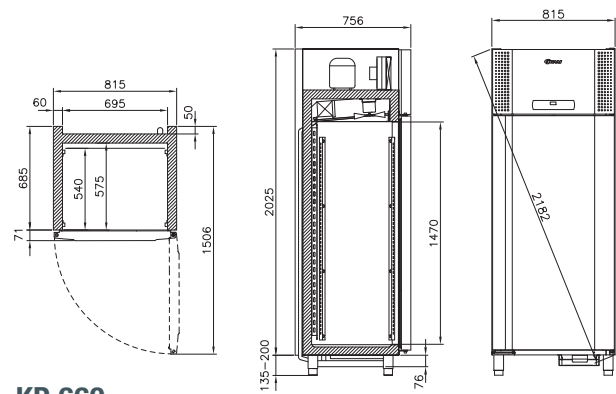
Roll-in



Roll-through



KP 500

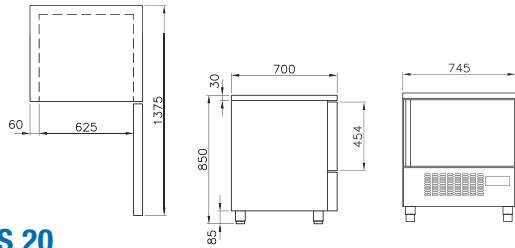


KP 660

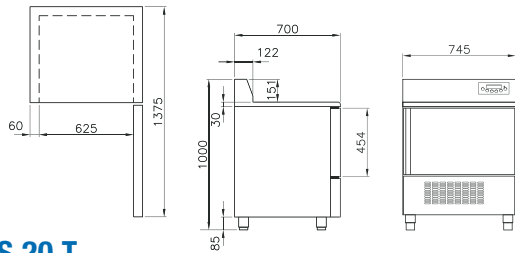
	Roll-in 1500 CS*				Roll-through 1500 D CS*			Quick chillers				
	K	M	F	KG	K	KG	KGG	KP 500 CH	KP 500 CF	KP 660 CH	KP 660 CF	
With compressor	Yes				Yes			Yes	No	Yes	No	
Temperature range	°C	+2/+12	-5/+12	-25/-5	+2/+12	+2/+12	+2/+12	-30/+10	-30/+10	-30/+10	-30/+10	
Ref. capacity at -10°C/+45°C	Watt	703	703	-	703	703	703	1876	1900	2440	2500	
Ref. capacity at -25°C/+45°C	Watt	-	-	830	-	-	-	-	-	-	-	
Connection	V/Hz	230/50				230/50			230/50			
Connection load	Watt	540	558	818	540	490	530	570	1120	111	1529	171
Amperage	A	3,4	3,5	4,7	3,4	3,2	3,3	3,5	5,7	0,5	8,8	1,1
Refrigerant		R 134 a	R 134 a	R 404 A	R 134 a	R 134 a			R 404 A			
Insulation		60mm (cyclopentane)				60mm (cyclopentane)			60mm (cyclopentane)			
Volume, gross	l	1422	1422	1422	1422	1523	1523	1523	500	500	660	660
Volume, net	l	1273	1273	1273	1273	1370	1370	1370	448	448	565	565
Weight, packed	Kg	150	150	160	180	150	180	210	139	119	170	140

*Refrigerant R 290 optional. Available without compressor for remote refrigeration system

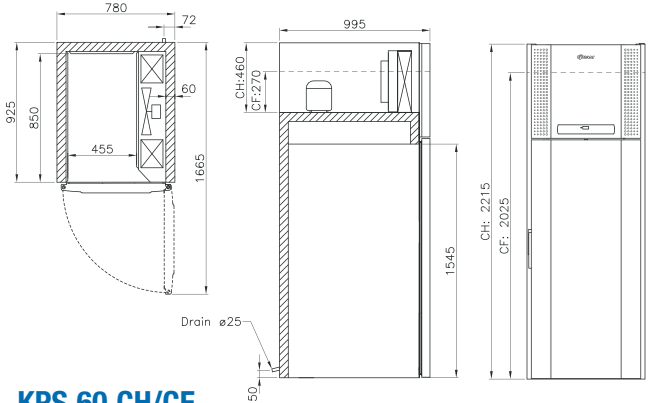
Data in accordance with EN 441. Gram reserves the right to alter specifications without notice as a result of product development



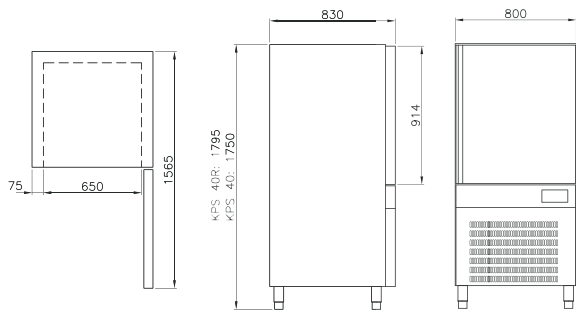
KPS 20



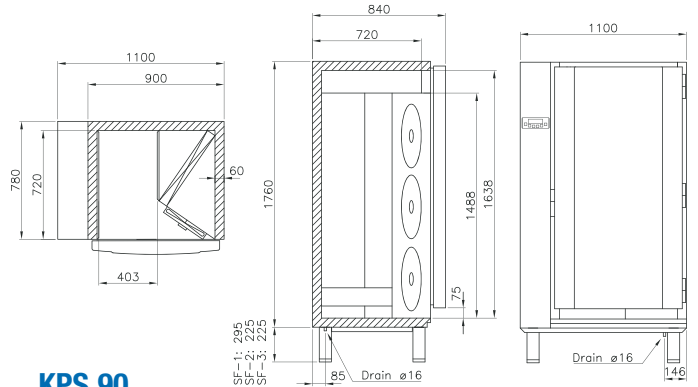
KPS 20 T



KPS 60 CH/CF



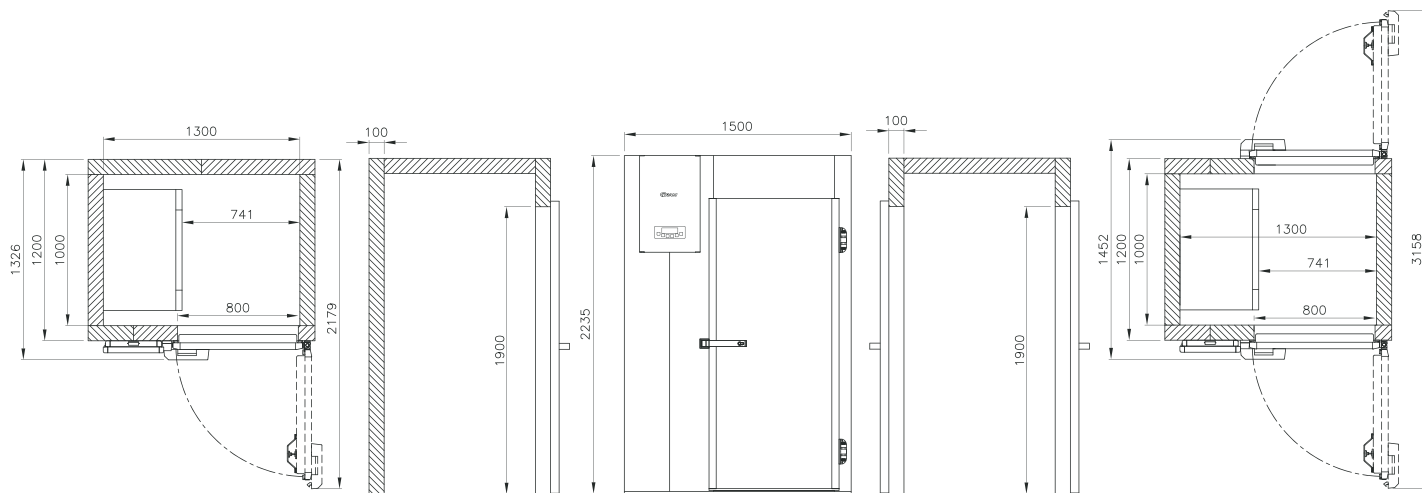
KPS 40



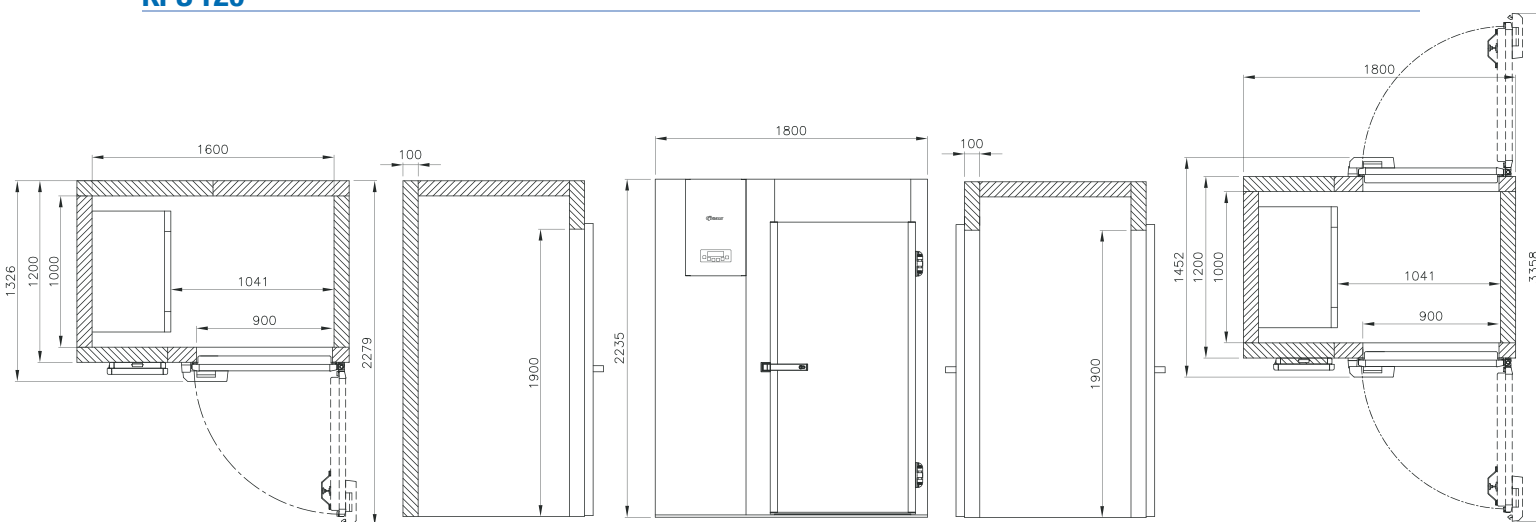
KPS 90

Blast chillers and freezers

		KPS 20 CH	KPS 20 SH	KPS 40 CH	KPS 40 SH	KPS 40 CF	KPS 40 SF	KPS 60 CH	KPS 60 CF
With compressor		Yes	Yes	Yes	Yes	No	No	Yes	No
Temperature range	°C	0/+10	-25/+10	0/+10	-25/+10	0/+10	-25/+10	-25/+10	-25/+10
Ref. capacity 70° to 3°C in 90 min.	Kg	18	20	36	42	36	42	60	60
Freezing capacity 70° to -18°C in 4 hrs.	Kg	-	12	-	25	-	25	-	-
Ref. capacity at -10°C/+45°C	Watt	692	-	2245	-	2300	-	4588	4500
Ref. capacity at -25°C/+45°C	Watt	-	813	-	2345	-	2400	-	-
Connection	V/Hz	230/50	230/50	3x400/50		230/50	230/50	3x400/50	230/50
Connection load	Watt	900	1350	2000	3500	274	274	3011	301
Amperage, running figures	A	4,5	8	9/4,5	17/6	1,25	1,25	12,3	1,4
Refrigerant		R404A							
Insulation, cyclopentane	mm	60	60	75	75	75	75	60	60
Volume, gross	l	205	205	413	413	413	413	970	970
Volume, net	l	77	77	180	180	180	180	630	630
Weight, packed	Kg	125	130	220	220	125	125	205	180



KPS 120



KPS 180

Blast chillers and freezers

		KPS 90 SF-1	KPS 90 SF-2	KPS 90 SF-3	KPS 120 C	KPS 120 S	KPS 180 C	KPS 180 S
With compressor		No	No	No	No	No	No	No
Temperature range	°C	-25/+10	-25/+10	-25/+10	-25/+10	-25/+10	-25/+10	-25/+10
Ref. capacity 70° to 3°C in 90 min.	Kg	90	90	90	120	-	180	-
Freezing capacity 70° to -18°C in 4 hrs.	Kg	50	50	50	-	120	-	180
Ref. capacity at -10°C/+45°C	Watt	-	-	-	8500	-	10800	-
Ref. capacity at -25°C/+45°C	Watt	8000	8000	8000	-	9000	-	11500
Connection	V/Hz	230/50	230/50	230/50	230/50	230/50	230/50	230/50
Connection load	Watt	440	440	440	1145	1521	1145	1521
Amperage, running figures	A	1,8	1,8	1,8	5,5	7,2	5,5	7,2
Refrigerant		R404A						
Insulation, cyclopentane	mm	60	60	60	100	100	100	100
Volume, gross	l	920	920	920	2780	2780	3400	3400
Volume, net	l	414	414	414	1730	1730	1950	1950
Weight, packed	Kg	200	200	200	260	260	285	285

GRAM PROCESS







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Gram Commercial A/S develops and produces refrigerators and freezers for commercial kitchens. With our head office in Vojens, Denmark, we are part of the Japanese owned Hoshizaki Group, a global supplier of equipment for professional kitchens. With an extensive sales and service network around the world, we provide expert local service to our customers wherever you are.