

# ESSENTIAL-Line Blood Bank Refrigerators

Your entry into KIRSCH-Quality



1865

Philipp Kirsch establishes the company as a coppersmith firm

1901

Beer cooling cylinders are produced

1927

KIRSCH grows to become an industrial company

1929

Bottled beer refrigerators are manufactured from galvanised sheet steel

1956

First electrical refrigerators are manufactured

1960s

Commercial cooling furniture and bottle refrigerators are manufactured

1967

KIRSCH becomes one of the first manufacturer of pharmaceutical refrigerators

1980s

Blood bank refrigerators and blood plasma freezers are manufactured

1990s

Explosion-proof laboratory refrigerators and freezers are developed

2000

Offenburg manufacturing site is modernised and expanded

Today

KIRSCH is the leading quality manufacturer of refrigerators and freezers for the laboratory and health sector



**Patrick Bürkle**

The third generation of his family to be employed at KIRSCH

*"We have always manufactured with the utmost care in order to guarantee the highest quality. This is what our customers value."*

## Innovation and quality since 1865.

**Trust**

Since 1865, we have been synonymous with high-quality products fulfilling the most stringent standards and providing the highest level of reliability. Since then, we have won over your trust through consistent innovation, quality and service. This enabled our company to manage even the more turbulent times in world history. This demonstrates: your trust is the foundation for our long-term success. We will continue to pursue this path on a permanent basis. For example, our excellent product features are certified by independent institutions. You can rely on us!

**Temperature stability**

Our policy of manufacturing our own housings enables us to optimally coordinate all components of our refrigerators and freezers. This is why we have become a

world leader in temperature stability, which has been confirmed by numerous validations at customer premises. The reason is that we only manufacture products that are proven to fulfill the most stringent requirements.

**Sustainability**

is a trademark of our products and manufacturing process. All products are designed for a long service life. If one of our products is nearing the end of its service life, our credo is "repair not replace". We maintain a supply of spare parts for many years. This helps to relieve the burden on your budget and on our planet's resources.

Discover our products that are coupled with experience and innovation!



**Dr. Jochen Kopitzke**  
Owner and CEO

# Benefit from reliability and efficiency.

Why is it worth investing in KIRSCH refrigerators and freezers? Because we use the experience we have gained worldwide to manufacture refrigerators according to the most stringent quality, functionality and efficiency requirements. Your benefit: systems you can rely on 100 %- because we know about the sensitivity of the goods you need to cool.

## Your advantages with KIRSCH:

- Highest quality and absolute reliability
- Robustness
- Temperature stability
- Flexibility
- Maximum safety

### Robust housing

Made from rust-proof, galvanised sheet steel with robust, white powder coating.

### Thick insulation

Made from environmentally friendly material. Ensures low energy consumption.

### Flexible handling of drawers

Variable drawer arrangement at 15-mm intervals for refrigerators and freezers with an aluminium interior container.

### Easy-to-maintain interior container

Manufactured from smooth aluminium with protective coating or from impact-resistant plastic with moulded-in shelves.



### Microprocessor-based control

easy-to-operate. Control panel easy-to-clean.

### Forced-air cooling

All our models are equipped with forced-air cooling. This reduces the physically induced temperature drop and enables an almost constant temperature to be maintained.

### Individual door stop

The door stop on the lockable door is normally on the right-hand side but can be fitted to the left-hand side even after installation. There is no overhang when opening the door. The plastic magnetic seal frame is easy to replace.

### Low noise compressor

The new low noise compressor reduces the noise level to a minimum.

### Ventilation grid

The wide ventilation openings provide easy cleaning and improve the flow of air in the refrigerating machine room.

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Unternehmen zertifiziert nach DIN EN ISO 9001 und DIN EN ISO 13485 durch MDC medical device certification



# Simple to operate and safe.

Our systems are controlled by microprocessors. This enables exact temperature control using safety devices in the case of malfunctions. The operation is intuitive for a smooth and easy control of our refrigerators and freezers.

## Display at eye-level

The display is positioned at eye-level to make it easier to read and simplify operation.

## Always visible

The easy-to-read LED display informs you about the temperature of the goods to be cooled and the system's operating state.

## Automatic defrosting and condensate evaporation

Defrosting takes place automatically and includes time and temperature monitoring. The condensate evaporates automatically.

## Warning functions

Visual and audible alarm signals are used in case of temperature deviations and other malfunctions. The potential-free contact can forward alarms to e.g., your mobile phone or a control centre, via optional GSM-Module.

## Power failure alarm (optional)

Alarm is also triggered in the case of power failure (visual and audible alarm). The monitoring unit remains in operation for approx. 72 hours on battery power.

## Lockable door

with easy-to-replace magnetic seal frame.

## Antifreeze (optional)

The goods to be cooled are protected against the temperature falling below freezing point.

## Temperature documentation (optional)

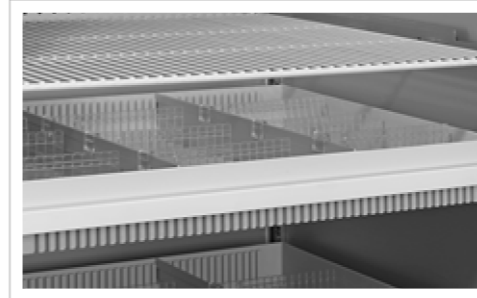
For example with the pen-recording thermometer or disc-type thermometer.

## ESSENTIAL-Line Blood Bank Refrigerators offer:



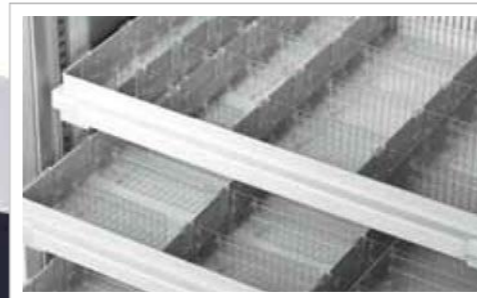
## Uniform temperature distribution

KIRSCH forced-air cooling generates uniform air circulation in the refrigerating room. The set interior temperature is always achieved very quickly - significantly more quickly than with static cooling. Forced-air cooling ensures a unified storage temperature in the entire refrigerating room. The cooling system is optimised for each system and consists of a coordinated combination of blower and air baffle.



## Flexible interior design

All our refrigerator series are equipped with robust, PE-coated wire shelves with a high load capacity of up to 40 kg. As an alternative, we can provide you telescopic drawers.



## Adjustable drawer positions


The drawers are equipped with stops and adjustable length and cross dividers. The length dividers can be arranged every 10 mm, the cross dividers can be adjusted infinitely. Additional cross and length dividers can be supplied at a surcharge.

## General system features:

- Operating temperature from +2 °C to +20 °C or fixed to +4 °C
- Allows an ambient temperature at the place of installation from +10 °C to +38 °C
- An easy to clean and to disinfect inside chamber
- Racks which are able to withstand a uniform load up to of 100kg/m<sup>2</sup>
- Lockable door
- Visual and audible warning system in case of temperature deviation (upper warning limit +6 °C, lower warning limit +2 °C)
- Potential-free contact for alarm transmission
- Fast temperature recovery after door opening

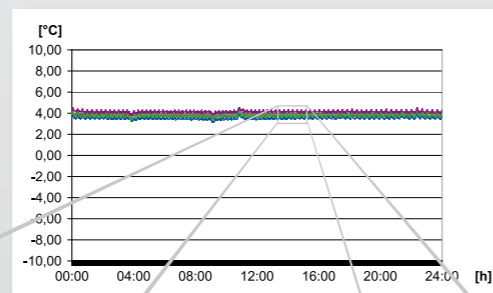
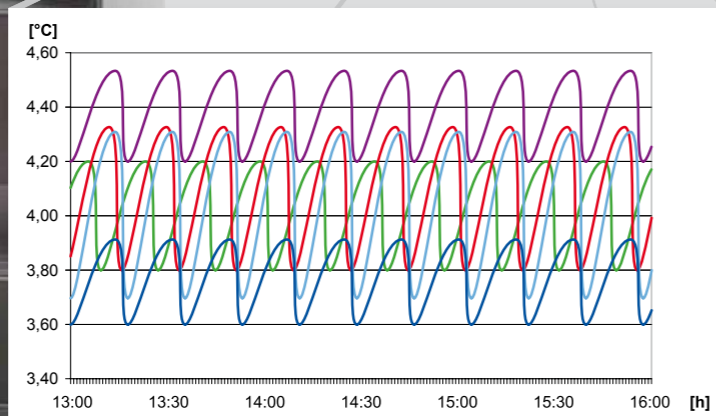
# Temperature measurement with log file for an optimum quality control.

KIRSCH refrigerators and freezers are used in demanding storage settings (e.g., pharmaceutical research, pharmaceutical manufacturing, bioengineering, health, etc.). Temperature measurement with log file enables you to prove that our products fulfill the requirements in real-life applications (validation, such as IQ, OQ, PQ, etc.).














**Extensive tests and precise calibration**

Before our products are ready for market, they are exposed to the widest range of exterior conditions in the climate chamber to guarantee that the temperature can be maintained even under extreme circumstances. Before we deliver our systems, they undergo precise calibration during a default test run lasting several hours.

The combination of forced-air cooling and temperature control ensures an almost constant cooling temperature in the entire interior, even in the case of changing ambient temperatures.

# Interior design overview

Interior description		ESSENTIAL-100	ESSENTIAL-280	ESSENTIAL-460	ESSENTIAL-700
 <b>Capacity</b>		95 l	280 l	460 l	700 l
 <b>Temperature setting/ temperature range</b>	Large temperature ranges are available for storage.	+4 °C	+4 °C	+4 °C	+4 °C
 <b>Ambient temperature</b>	Maximum temperature at the refrigerator's or freezer's place of installation. Correct operation is possible up to this temperature.	38 °C	38 °C	38 °C	38 °C
 <b>Forced-air cooling</b>	Integrated forced-air cooling reduces temperature reductions caused by the law of physics and ensures a uniform temperature in the entire interior.	●	●	●	●
 <b>Number of shelves (standard)</b>	Number of integrated shelves.	2	3	4	5
 <b>Automatic defrosting and condensate evaporation</b>	Time and temperature are monitored. Manual defrosting is no longer required. Condensate evaporates automatically.	●	●	●	●
 <b>Gibs</b>	For interior containers made from aluminium, gibs allow a particularly varied use of the interior. Drawers can be positioned as desired every 15 mm.	○	●	●	●
 <b>Undercounter installation</b>	Models of this type can be integrated into existing furniture and are therefore particularly space saving. When the system is installed, ensure that the refrigerating machine is sufficiently ventilated.	●	○	○	○
 <b>Potential-free contact for forwarding alarms</b>	The potential-free contact allows you to forward alarms. Connect the optional GSM-Module to receive alarms as text messages to your mobile phone. You can also connect the system to a control centre.	●	●	●	●
 <b>Maximum number of drawers (optional)</b>	Possible number of integrated plastic-drawers with stops.	3	6	12	-
 <b>Maximum number of drawers (optional)</b>	Possible number of integrated stainless-steel-drawers with stops.	-	4	5	7

● = Yes, ○ = No



**Standard equipment**

**Optional equipment**

Standalone or undercounter installation

Forced-air cooling

Lockable door

2 shelves

Automatic defrosting

Digital temperature display

Potential-free contact for alarm transmission to a control center

Condensate evaporation

Drawers instead of shelves

Antifreeze

Connection for forwarding alarms to your mobile phone using a GSM-Module

Visual and audible alarm signal, even in the case of power failure



The **installation drawing** is available under [www.kirsch-medical.com](http://www.kirsch-medical.com) for each model in the download area.



**Easy-to-clean ventilation slits**  
Large, smooth lamellas for easy cleaning of the ventilation slits.



**Standalone or undercounter installation**  
The standard ventilation grid allows easy installation in functional furniture.

# ESSENTIAL-100



## Standard equipment

- **External housing** made from galvanised sheet steel (rust-proof), with white, anti-scratch powder coating. Length of the plug cable: approx. 1.8 m.
- **Adjustable feet** positioned at the front to compensate uneven floors.
- **Interior** made from impact-resistant, white plastic.
- **Interior consists** of two plastic-coated-shelves.
- **Extra-thick 50-mm insulation**, made from high-quality, compression-moulded and environmentally friendly material. Energy saving.
- **Door** with easy-to-replace plastic magnetic seal frame, lockable.
- **Door stop** on the right-hand side (by default, see illustration), or the left-hand side, can be retrofitted.
- **Forced-air cooling** switches off automatically when you open the door, ensures a uniform temperature and minimizes temperature deviations.

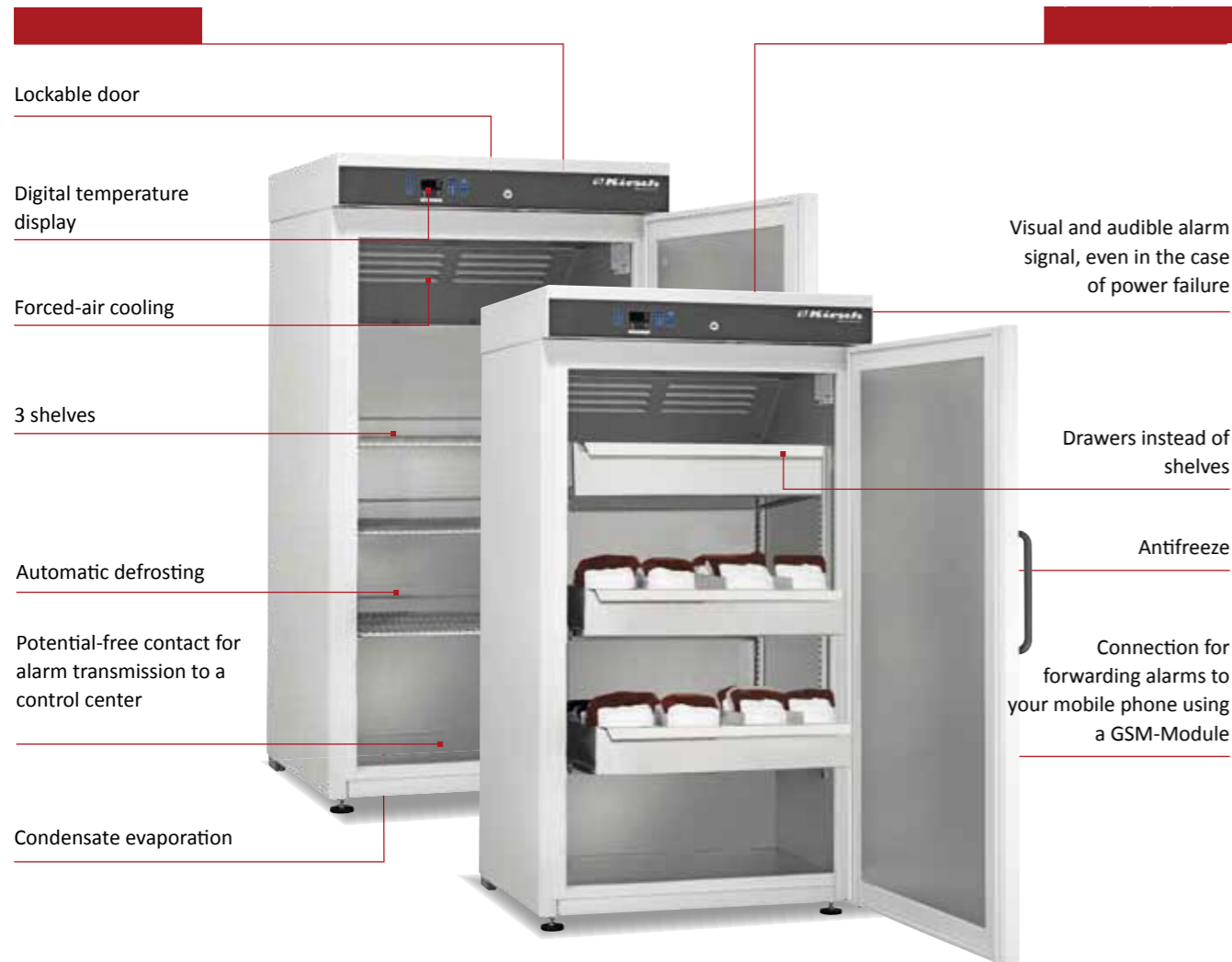
- **Digital display.**
- **Automatic defrosting** with time limit and temperature monitoring.
- **Condensate evaporation** in the refrigerating machine room.
- **Warning functions** with visual and audible alarm signal in the case of temperature deviation. Door open alarm after 60 seconds.
- **Alarms** can be forwarded using the potential-free contact.
- **Ventilation-enforced refrigerating machine**, vibration free, hermetically sealed, energy saving, low noise, easy to service. Inlet air and exhaust air flow through the ventilation slits at the front.

## Specification

Capacity	95 litres
Temperature setting	+0 to +20 °C, or fix +4 °C
Voltage	220 - 240 V, 50/60 Hz
Power consumption	160 watts
Normal consumption	0.65 kWh/ 24 h
Admissible ambient temperature	from +10 °C to +38 °C
Heat emission (max.)	220 watts
Overall dimensions (including distance from wall)	w x d x h = 54 x 53.5 x 82 cm
Interior dimensions	w x d x h = 44 x 43 x 47 cm (usable width 2 cm, usable depth 5 cm, usable height 8 cm less)
Exterior dimensions with door open at 90°	w x d = 54 x 106 cm
Shelf size	w x d = 43 x 33 cm
Max. load shelf	25 kg
Weight	Net weight 46 kg, gross weight 50 kg

## Optional equipment

- **Additional Shelf** (to the standard equipment).
- **Plastic-drawers** (instead of shelves). Maximum of three drawers, including 1 length and six cross dividers per drawer. Capacity per drawer app. 20 blood bags, each 450 ml size (drawer inner dimensions: w x d x h = 40.8 x 32 x 5.6 cm, max. load: 13 kg).
- **Additional cross and length dividers.**
- **Antifreeze** against sub-zero temperatures.
- **Visual and audible alarm signal**, even in the case of power failure (the monitoring unit remains in operation for approx. 72 hours on battery power).
- **LED-Illumination** on top.
- **Glass door with lock.**
- **Tabletop** (exterior dimensions: 85 cm in height).
- **Decorative door frame** for attaching the customer's decorative plates (exterior dimensions: 55 cm in width).
- **Door fitting.**
- **Equipped with castors.**
- **Condensate container** can be emptied manually if no condensation is required (e.g., in an operating theatre).
- **GSM-Module** for alarm text message transmission (e.g., to a mobile phone).
- **Temperature documentation:**
  - KIRSCH-Datalog for models without RS485 interface or third-party products.
  - 4-pin PT 100 or PT 1000 temperature sensor, class 1/3 B, including built-in reference body.
  - Disc-type pen recording thermometer, with 7-day measuring cycle, incorporated, with 100 recording discs and 5 felt tip pens.
  - Mechanical pen-recording thermometer with two waxed paper strips.



Lockable door

Digital temperature display

Forced-air cooling

3 shelves

Automatic defrosting

Potential-free contact for alarm transmission to a control center

Condensate evaporation

Visual and audible alarm signal, even in the case of power failure

Drawers instead of shelves

Antifreeze

Connection for forwarding alarms to your mobile phone using a GSM-Module



**Storage Overview**  
of your blood bags in stainless-steel-drawers.



**Glass door with lock**  
Avoid opening the door unnecessarily to inspect contents.

# ESSENTIAL-280



## Standard equipment

- **External housing** made from galvanised sheet steel (rust-proof), with white, anti-scratch powder coating. Length of the plug cable: approx. 1.8 m.
- **Adjustable feet** positioned at the front to compensate uneven floors.
- **Interior** made from smooth aluminium with colourless protective coating.
- **Interior consists** of three plastic-coated-shelves on overlays. Gibs every 15 mm.
- **Extra-thick 55-mm insulation**, made from high-quality, compression-moulded and environmentally friendly material. Energy saving.
- **Door** with easy-to-replace plastic magnetic seal frame, lockable.
- **Door stop** on the right-hand side (by default, see illustration), or the left-hand side, can be retrofitted.
- **Forced-air cooling** switches off automatically when you open the door, ensures a uniform temperature and mini-

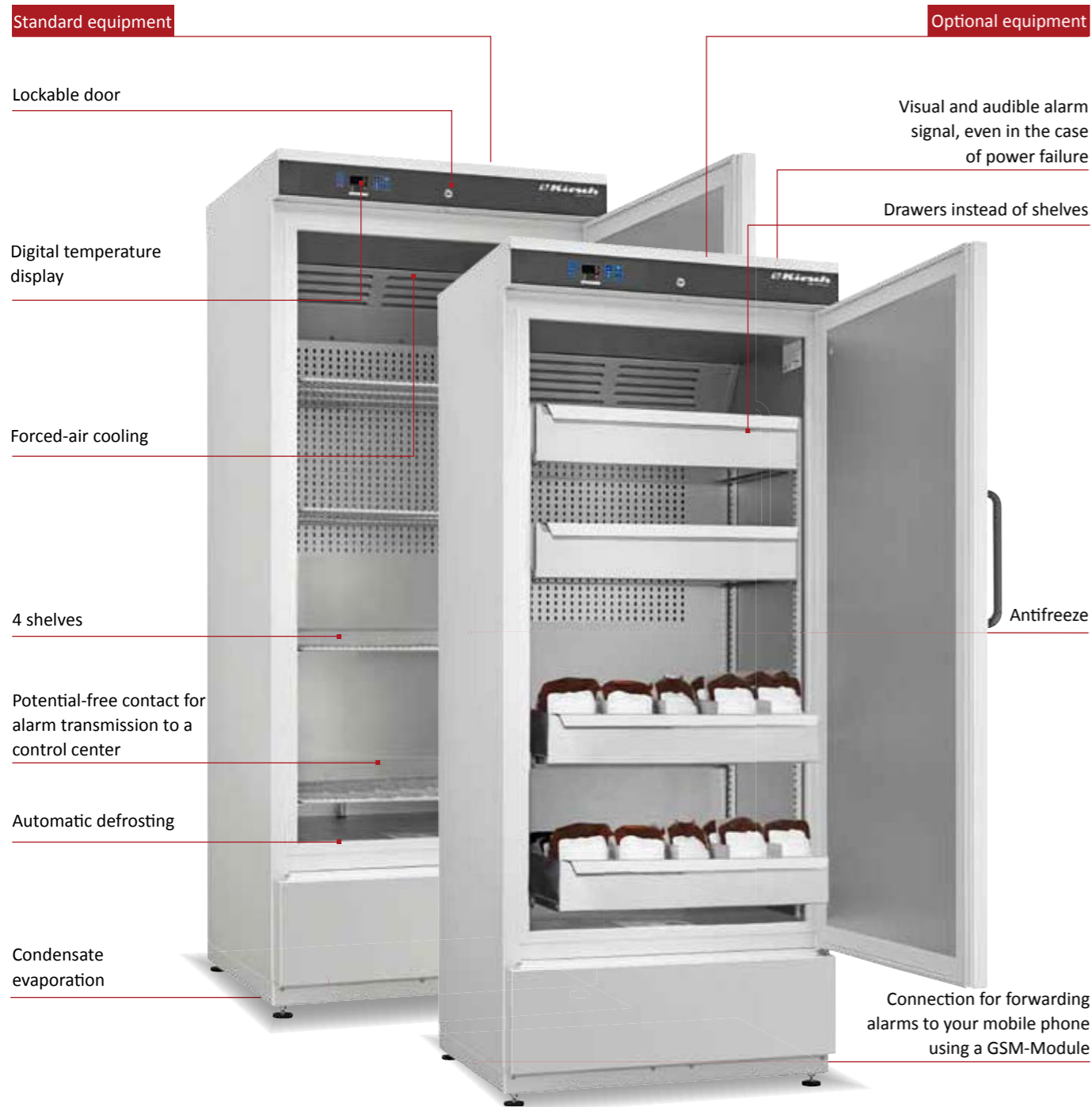
- mizes temperature deviations.
- **Digital display.**
- **Automatic defrosting** with time limit and temperature monitoring.
- **Condensate evaporation** in the refrigerating machine room.
- **Warning functions** with visual and audible alarm signal in the case of temperature deviation. Door open alarm after 60 seconds.
- **Alarms** can be forwarded using the potential-free contact.
- **Statically ventilated refrigerating machine**, vibration free, hermetically sealed, energy saving, low noise, easy to service.

## Specification

Capacity	280 litres
Temperature setting	+0 to +20 °C, or fix +4 °C
Voltage	220 - 240 V, 50/60 Hz
Power consumption	155 watts
Normal consumption	1.00 kWh/ 24 h
Admissible ambient temperature	from +10 °C to +38 °C
Heat emission (max.)	203 watts
Exterior dimensions (including door handle and distance from wall)	w x d x h = 67 x 70 x 124 cm
Interior dimensions	w x d x h = 55 x 51 x 100 cm (usable depth above: 5 cm, below: 13 cm less)
Exterior dimensions with door open at 90°	w x d = 67 x 130 cm
Shelf size	w x d = 52 x 39 cm
Max. load Shelf	40 kg
Weight	Net weight 72 kg, gross weight 85 kg

## Optional equipment

- **Additional Shelf** (to the standard equipment).
- **Plastic-drawers** (instead of shelves). Maximum of five drawers, including 3 length and 21 cross dividers per each. Storage surface per drawer = 0.16 m<sup>2</sup> (inner dimensions: w x d x h = 50 x 32 x 5.6 cm, max. load: 16 kg).
- **Stainless-steel-drawers** (instead of shelves). Maximum of four drawers. Capacity of the top three drawers app. 30 blood bags each 450 ml size (inner dimensions top drawer: w x d x h = 50 x 40 x 8 cm, lower drawer: w x d x h = 51 x 31 x 8 cm; max. load: 40 kg).
- **Cross and length dividers** for stainless-steel-drawers.
- **Antifreeze** against sub-zero temperatures.
- **Visual and audible alarm signal**, even in the case of power failure (the monitoring unit remains in operation for approx. 72 hours on battery power).
- **LED-Illumination** on top.
- **Glass door with lock.**
- **Door fitting.**
- **Equipped with castors.**
- **Condensate container** can be emptied manually if no condensation is required (e.g., in an operating theatre).
- **GSM-Module** for alarm text message transmission (e.g., to a mobile phone).
- **Temperature documentation:**
  - KIRSCH-Datalog for models without RS485 interface or third-party products.
  - 4-pin PT 100 or PT 1000 temperature sensor, class 1/3 B, including built-in reference body.
  - Disc-type pen recording thermometer, with 7-day measuring cycle, incorporated, with 100 recording discs and 5 felt tip pens.
  - Mechanical pen-recording thermometer with two waxed paper strips.



**Clean**  
Control screen made of plastic with smooth surface for promoting hygiene.



**Display at eye-level**  
The display is positioned at eye-level to make it easier to read and simplify operation.

# ESSENTIAL-460



## Standard equipment

- **External housing** made from galvanised sheet steel (rust-proof), with white, anti-scratch powder coating. Length of the plug cable: approx. 3.0 m.
- **Adjustable feet** positioned at the front to compensate uneven floors.
- **Interior** made from smooth aluminium with colourless protective coating.
- **Interior consists** of four plastic-coated-shelves on overlays. Gibs every 15 mm.
- **Extra-thick 55-mm insulation**, made from high-quality, compression-moulded and environmentally friendly material. Energy saving.
- **Door** with easy-to-replace plastic magnetic seal frame, lockable.
- **Door stop** on the right-hand side (by default, see illustration), or the left-hand side, can be retrofitted.
- **Forced-air cooling** switches off automatically when you open the door, ensures a uniform temperature and mini-

- mizes temperature deviations.
- **Digital display.**
- **Automatic defrosting** with time limit and temperature monitoring.
- **Condensate evaporation** in the refrigerating machine room.
- **Warning functions** with visual and audible alarm signal in the case of temperature deviation. Door open alarm after 60 seconds.
- **Alarms** can be forwarded using the potential-free contact.
- **Ventilation-enforced refrigerating machine**, vibration free, hermetically sealed, energy saving, low noise, easy to service.

## Specification

Capacity	460 litres
Temperature setting	+0 to +20 °C, or fixed +4 °C
Voltage	220 - 240 V, 50/60 Hz
Power consumption	180 watts
Normal consumption	1.40 kWh/ 24 h
Admissible ambient temperature	from +10 °C to +38 °C
Heat emission (max.)	247 watts
Exterior dimensions (including door handle and distance from wall)	w x d x h = 74 x 75 x 181 cm
Interior dimensions	w x d x h = 60 x 57 x 128 cm (usable depth 5cm less)
Exterior dimensions with door open at 90°	w x d = 74 x 139 cm
Shelf size	w x d = 59 x 50 cm
Max. load Shelf	40 kg
Weight	Net weight 109 kg, gross weight 122 kg

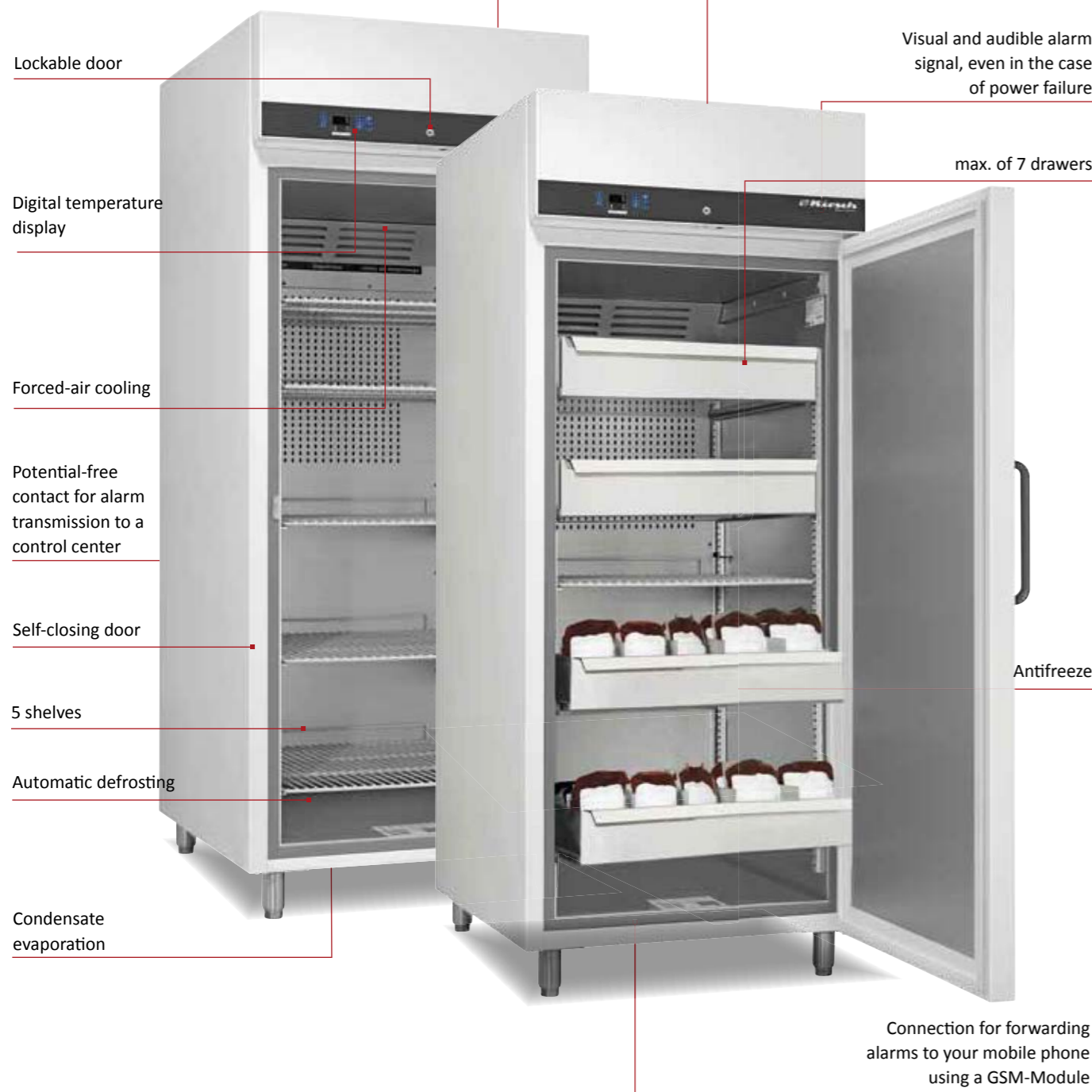
## Optional equipment

- **Additional Shelf** (to the standard equipment).
- **Plastic-drawers** (instead of shelves). Maximum of twelve drawers. Storage surface per drawer = 0.24 m<sup>2</sup> (inner dimensions: w x d x h = 57 x 43 x 5.6 cm, max. load: 24 kg).
- **Stainless-steel-drawers** (instead of shelves). Maximum of five drawers. Capacity per drawers app. 33 blood bags, each 450 ml size (inner dimensions: w x d x h = 56.9 x 40 x 8 cm, max. load: 40 kg).
- **Cross and length dividers** for stainless-steel-drawers.
- **Antifreeze** against sub-zero temperatures.
- **Visual and audible alarm signal**, even in the case of power failure (the monitoring unit remains in operation for approx. 72 hours on battery power).
- **LED-Illumination** on top.
- **Glass door with lock.**
- **Door fitting.**
- **Equipped with castors.**
- **Condensate container** can be emptied manually if no condensation is required (e.g., in an operating theatre).
- **GSM-Module** for alarm text message transmission (e.g., to a mobile phone).
- **Temperature documentation:**
  - KIRSCH-Datalog for models without RS485 interface or third-party products.
  - 4-pin PT 100 or PT 1000 temperature sensor, class 1/3 B, including built-in reference body.
  - Disc-type pen recording thermometer, with 7-day measuring cycle, incorporated, with 100 recording discs and 5 felt tip pens.
  - Mechanical pen-recording thermometer with two waxed paper strips.



Standard equipment

Optional equipment



**Optimized air guide plate**  
The optimized air guide plate reduces temperature deviations inside the system to a minimum.



**Variable stock options**  
due to standard shelves and optional drawers with length and cross dividers.

# ESSENTIAL-700



## Standard equipment

- **External housing** made from galvanised sheet steel (rust-proof), with white, anti-scratch powder coating. Length of the plug cable: approx. 3.0 m.
- **Adjustable feet** positioned at the front to compensate uneven floors.
- **Interior** made from smooth aluminium with colourless protective coating.
- **Interior consists** of five plastic-coated-shelves on overlays. Gibs every 15 mm.
- **Extra-thick 70-mm insulation**, made from high-quality, compression-moulded and environmentally friendly material. Energy saving.
- **Self-closing door** with easy-to-replace plastic magnetic seal frame, lockable.
- **Door stop** on the right-hand side (by default, see illustration), or the left-hand side, can be retrofitted.
- **Forced-air cooling** switches off automatically when you open the door, ensures a uniform temperature and mini-

- mizes temperature deviations.
- **Digital display.**
- **Automatic defrosting** with time limit and temperature monitoring.
- **Condensate evaporation** in stainless-steel heated dish beneath the refrigeration floor.
- **Warning functions** with visual and audible alarm signal in the case of temperature deviation. Door open alarm after 60 seconds.
- **Alarms** can be forwarded using the potential-free contact.
- **Ventilation-enforced refrigerating machine**, vibration free, hermetically sealed, energy saving, low noise, easy to service.

## Specification

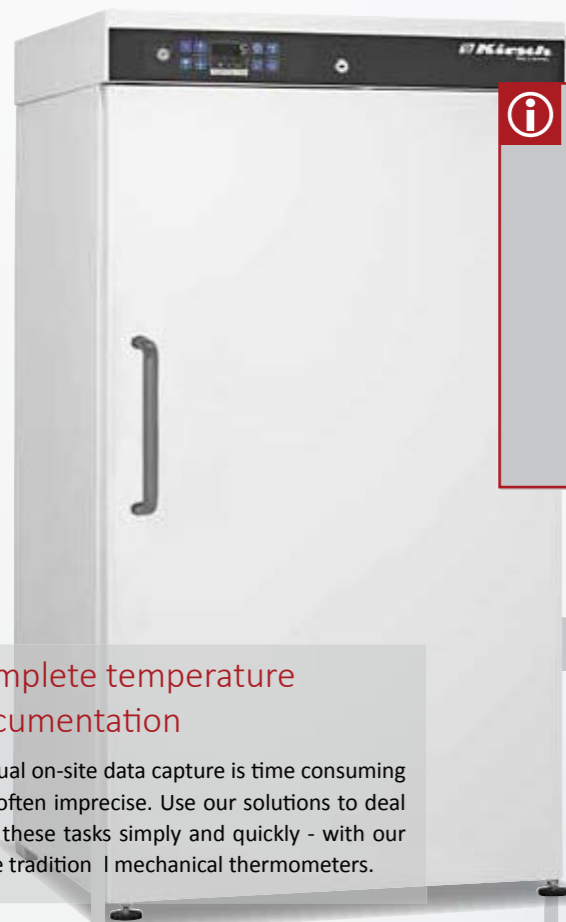
Capacity	700 litres
Temperature setting	+0 to +20 °C
Voltage	220 - 240 V, 50/60 Hz
Power consumption	370 watts
Normal consumption	3.00 kWh/ 24 h
Admissible ambient temperature	from +10 °C to +38 °C
Heat emission (max.)	453 watts
Exterior dimensions (including door handle and distance from wall)	w x d x h = 77 x 98 x 193-196 cm
Interior dimensions	w x d x h = 62 x 77 x 140 cm (usable width 2 cm, usable depth 11 cm, usable height 13 cm less)
Exterior dimensions with door open at 90°	w x d = 77 x 166 cm
Shelf size	w x d = 59 x 65 cm
Max. load Shelf	40 kg
Weight	Net weight 145 kg, gross weight 180 kg

## Optional equipment

- **Additional Shelf** (to the standard equipment).
- **Stainless-steel-drawers** (instead of shelves). Maximum of seven drawers. Capacity per drawer app. 50 blood bags, each 450 ml size (drawer inner dimensions: w x d x h = 56.9 x 61 x 8 cm, max. load: 40 kg).
- **Additional cross and length dividers.**
- **Antifreeze** against sub-zero temperatures.
- **Visual and audible alarm signal**, even in the case of power failure (the monitoring unit remains in operation for approx. 72 hours on battery power).
- **LED-Illumination** on top.
- **Glass door with lock.**
- **Door fitting.**
- **Equipped with castors.**
- **Condensate container** can be emptied manually if no condensation is required (e.g., in an operating theatre).
- **GSM-Module** for alarm text message transmission (e.g., to a mobile phone).
- **Temperature documentation:**
  - KIRSCH-Datalog for models without RS485 interface or third-party products.
  - 4-pin PT 100 or PT 1000 temperature sensor, class 1/3 B, including built-in reference body.
  - Disc-type pen recording thermometer, with 7-day measuring cycle, incorporated, with 100 recording discs and 5 felt tip pens.
  - Mechanical pen-recording thermometer with two waxed paper strips.

# Accessories for expanding the functionality of your refrigerators

Use our practical accessories to expand the feature set of your KIRSCH refrigerator - according to your needs. Whether it is one of our thermometers for temperature documentation, or the GSM-Module for forwarding alarms to your mobile phone, or other technical options - we have what you need.



**i** „[...] Blood products must be stored in applicable cooling devices or storage rooms which are suitable for this purpose [...], and they must feature appropriate measuring, registration and alarm systems for temperature and function monitoring [...]. All storage temperatures have to be documented [...].“

Excerpt from the „Guidelines on the Production of Blood and Blood Fractions and on the Use of Blood Products (Haemotherapy)“, as drawn up by the Federal Association of Practising Physicians, 2005.

If no general recording system is available we recommend one of our optional methods for consistent temperature documentation, which can be integrated during the production of the refrigerator or freezer upon request or which can be ordered as an upgrade at an extra cost.

## Complete temperature documentation

Manual on-site data capture is time consuming and often imprecise. Use our solutions to deal with these tasks simply and quickly - with our more traditional mechanical thermometers.



## External temperature recording

Temperature sensor that can be retrofitted for external connection to PC-supported temperature evaluation devices (e.g., KIRSCH-DATALOG).  
4-pin PT 100 or PT 1000 temperature sensor, class 1/3 B, including built-in reference body.

## Thermometer

If you prefer the mechanical temperature capture method instead of the PC-supported one, you can use our disc-type thermometer or the pen-recording thermometer.

## Access port

Access port (diameter 8,5 mm) for external temperature probe, measuring flask installed inside the chamber. The place of installation depends on the model.



## GSM-Module

The GSM-Module is used to forward alarm text messages to a mobile or landline phone network. This requires an activated SIM card and sufficient reception at the installation location.. Connecting the GSM-Module using the potential-free contact. Reaching the alarm limits triggers a visual and audible signal at the GSM-Module and the sending of an alarm text message.



## Power failure alarm

Alarm is also triggered in the case of power failure. Audible alarm remains in operation for approx. 72 hours on battery power.



## Antifreeze +2 C°

We recommend our safety device against sub-zero temperatures. So the goods to be cooled are protected against the temperature falling below the freezing point.



## Disc-type thermometer

Depending on the model, this is either installed into the machine room screen of the refrigerator or freezer or integrated into an additional housing add-on.



## Pen-recording thermometer

The easiest method to retrofit temperature documentation.



## KIRSCH-DATALOG

On older KIRSCH models without RS485 interface or to integrate third-party products, you can retrofit the temperature documentation using KIRSCH-DATALOG.



See [www.kirsch-medical.com](http://www.kirsch-medical.com) for more information on **temperature documentation** in our separate information package.



# Technical options

KIRSCH refrigerators provide numerous interior design options that can be retrofitted even when the machine has already been installed.



**Glass door with lock**  
Avoid opening the door unnecessarily to inspect the contents.



**LED-Illumination on top**  
Optional, optimal and energy-efficient lighting for the interior using an LED light strip.



**Condensation containers**  
Transparent, for manual emptying.



**Additional shelves**  
PE coated, robust with load capacity of up to 40 kg (depending on model).



**Transportable design**  
Equipped with steering and fixed castors.



**Drawers**  
Optimised per model, some are height adjustable with length and cross dividers, for the most possible variability.



## Our service – your benefit

- Short response time
- Competent assistance
- Specialised, continuously trained expert staff

### Philipp Kirsch GmbH

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Monday - Thursday: 8.00h - 12.15h and 13.15h - 16.30h  
Friday: 8.00h - 12.00h and 13.00h - 16.00h



# EC Declaration of Conformity

Philipp Kirsch GmbH, Okenstraße 103, 77652 Offenburg, solemnly declares that the product described below complies with the protection requirements of the stated directives and standards at the time that the product was placed on the market.

Philipp Kirsch GmbH is responsible for the documentation.

**Type designation:**

1.7.3 of Directive 2006/42/EC

Manufacturer	Device category	Type	Serial numbers
KIRSCH	Blood-Bank-Refrigerator	ESSENTIAL-100	from serial number 100 28 00100 onwards
KIRSCH	Blood-Bank-Refrigerator	ESSENTIAL-280	from serial number 280 28 00100 onwards
KIRSCH	Blood-Bank-Refrigerator	ESSENTIAL-460	from serial number 460 28 00100 onwards
KIRSCH	Blood-Bank-Refrigerator	ESSENTIAL-700	from serial number 700 28 00100 onwards

**Directives:**

- EC Low Voltage Directive 2006/95/EC
- Electromagnetic Compatibility 2004/108/EC.

**Harmonised standards:**

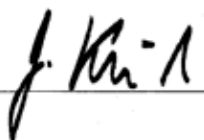
- EN 55014-1:2006
- EN 61000-3-2:2006, EN 61000-3-3:2008
- EN 62233:2008, EN 55014-2:1997+A1:2001+ A2:2008
- EN 60335-2-89:2002 / A2:2007

**Standards:**

- EN 60335-2-89: 2010

Year of CE marking (Low Voltage Directive): 2010

Offenburg, 15 June 2010



Georg Kirsch  
Managing Director

# Space for your notes

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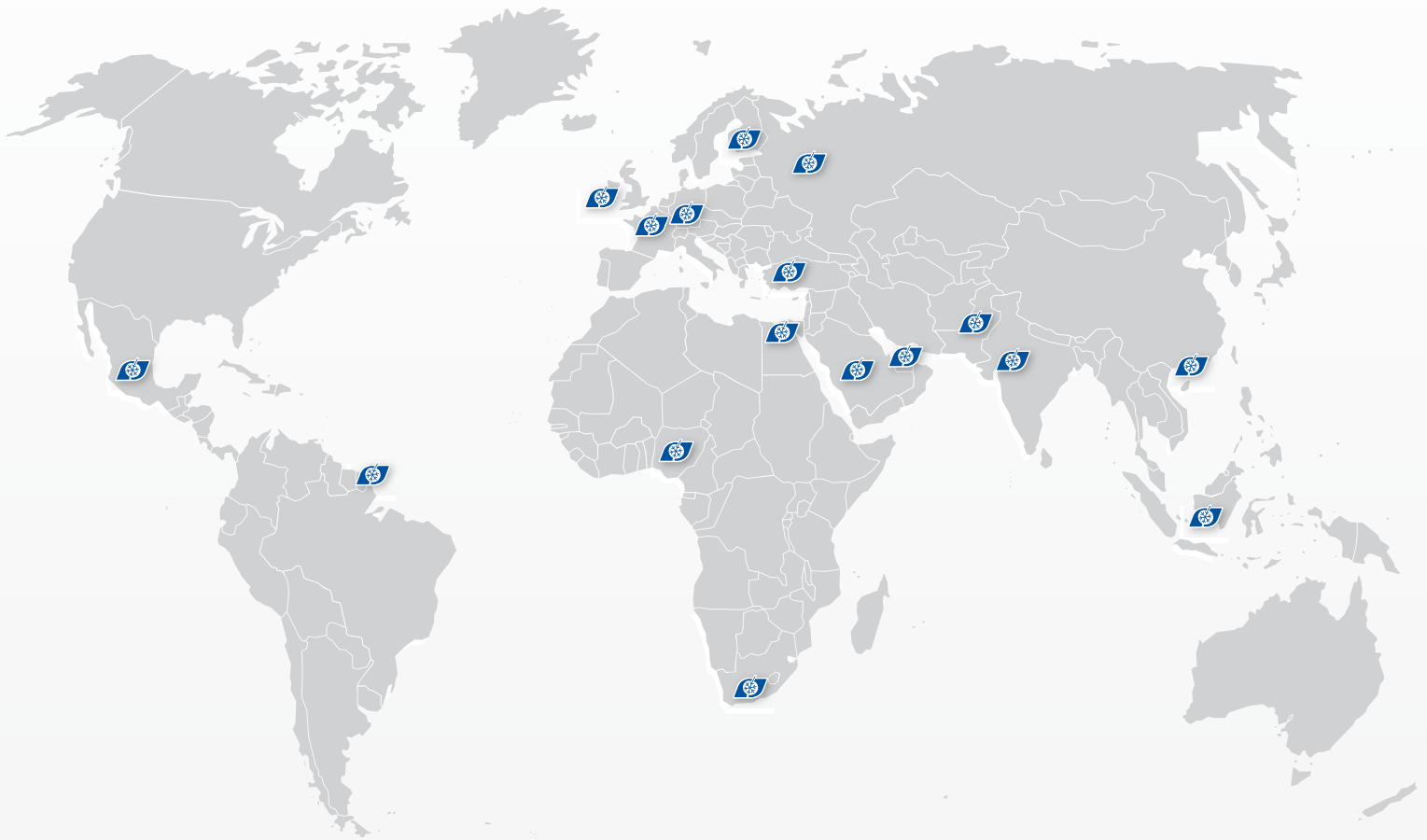
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**Used in more than 100 countries.**

Some examples:



We have taken the greatest care to describe our systems to our customers as clearly as possible in this catalogue. Nevertheless further questions may arise in everyday use, in particular when dealing with high-quality technical products. In such an instance, please do not hesitate to call us; we will be happy to assist you. We are also constantly working on evolving all product types and models. Therefore, we kindly ask for your understanding that shape, design and technology of our systems are subject to change.

**Philipp Kirsch GmbH**

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Visit our website and get to know our entire product range :  
**[www.kirsch-medical.com](http://www.kirsch-medical.com)**

