

# ESSENTIAL-Line Pharmeuceutical 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

# 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



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.



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#### 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 temperate drop and enables an almost constant temperature to be maintained.

#### Custom door stop

The door stop on the lockable door is normally on the right-hand side but can be fitted to the lefthand 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.





Company certified by mdc medical device certification GmbH according to DIN EN ISO 9001 and DIN EN ISO 13485

## 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 postioned 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 fpr 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)

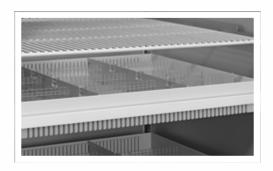
For example with the pen-recording thermometer or disc-type thermometer.

#### ESSENTIAL-Line Pharmaceutical 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

@ Kies

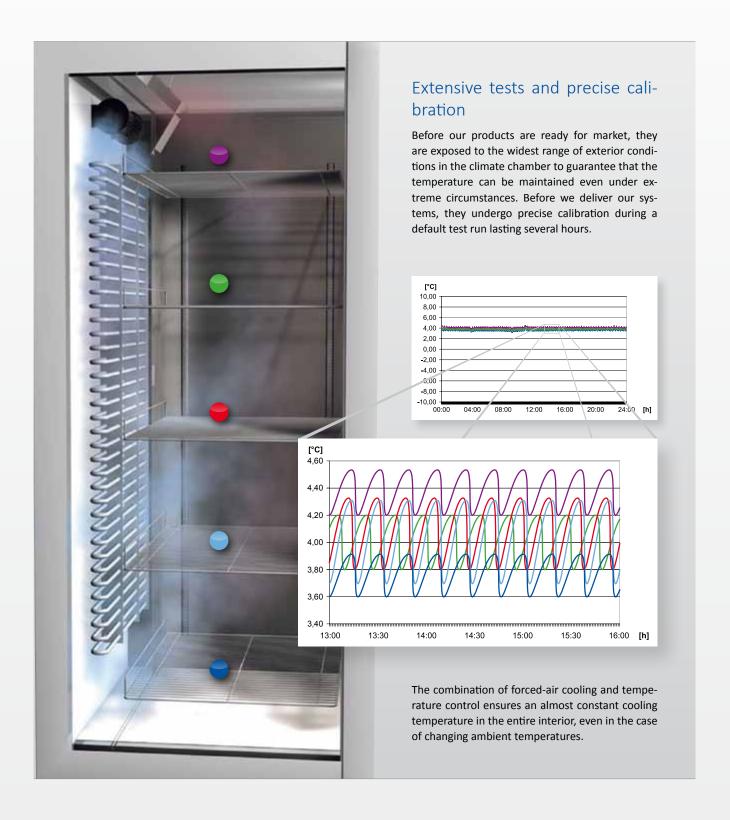
The drawers are equipped with stops and adjustable length and cross dividers. The length dividers can be arranged every 10 mm, the cross dividers can be adjusted infinitely. Additional cross and length dividers can be supplied at a surcharge.



- Operating temperature from +2 °C to +20 °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.).



# Interior design overview

	Interior description	ESSENTIAL-100	ESSENTIAL-280	ESSENTIAL-460	ESSENTIAL-700
95 I	Capacity	95 l	280 l	460 l	700 l
-32 °C	Temperature setting/ temperature range Large temperature ranges are available for storage.	+4 °C	+4 °C	+4 °C	+4 °C
32	Ambient temperature  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
	Forced-air cooling Integrated forced-air cooling reduces temperature reductions caused by the law of physics and ensures a uniform temperature in the entire interior.	•	•	•	•
×2	Number of shelves (standard) Number of integrated shelves.	2	3	4	5
888 888 888	Automatic defrosting and condensate evaporation  Time and temperature are monitored. Manual defrosting is no longer required.  Condensate evaporates automatically.	•	•	•	•
	Gibs  For interior containers made from aluminium, gibs allow a particularly varied use of the interior. Drawers can be positioned as desired every 15 mm.	0	•	•	•
	Undercounter installation  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.	•	0	0	0
<b>((1)</b> )	Potential-free contact for forwarding alarms (optional) 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.	•	•	•	•
×2	Maximum number of drawers (optional) Possible number of integrated plastic-drawers with stops.	3	5	12	-
x2	Maximum number of drawers (optional) Possible number of integrated stainless steel-drawers with stops.	-	4	5	7

● = Yes, ○ = No





The installation drawing is available under 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 (rustproof), 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,
- 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.

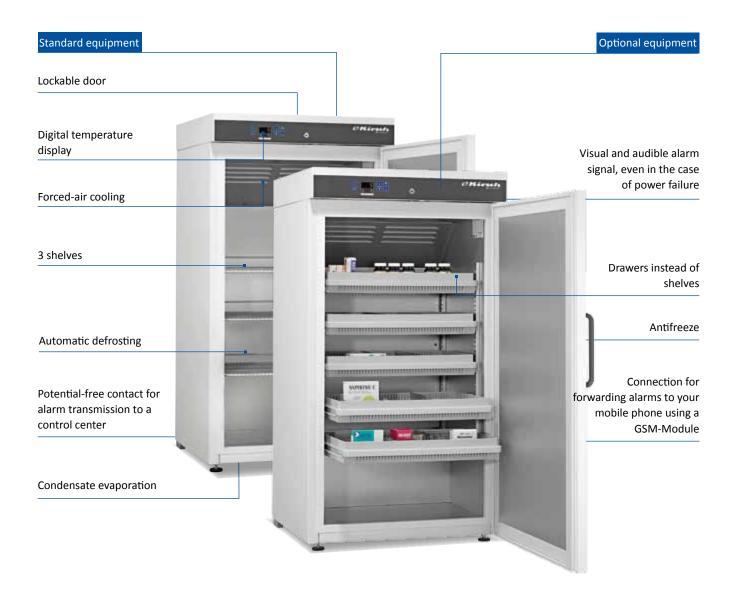
- Automatic defrosting with time limit and temperature monitoring.
- Condensate evaporation in the refrigerating machine room.
- Warning functions with visual and audible alarm signal in the case of temperature deviation. Door open alarm after 60 seconds.
- **Alarms** can be forwarded using the potential-free 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

95 litres	
+0 to +20 °C	
220 - 240 V, 50/60 Hz	
160 watts	
0.65 kWh/ 24 h	
from +10 °C to +38 °C	
220 watts	
w x d x h = 54 x 53.5 x 82 cm	
w x d x h = 44 x 43 x 47 cm (usable width 2 cm, usable depth 5 cm, usable height 8 cm less)	
w x d = 54 x 106 cm	
w x d = 43 x 33 cm	
25 kg	
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. Storage surface per drawer = 0.13 m<sup>2</sup> (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.
- 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:
  - 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.





**Storage Overview** of your pharmaceutical goods.



Glas door with lock

Avoid opening the door unnecessarily to inspect contents. Can be locked.

### ESSENTIAL-280















#### Standard equipment

- **External housing** made from galvanised sheet steel (rustproof), 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
- Warning functions with visual and audible alarm signal in the case of temperature deviation. Door open alarm after
- 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
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 2 length and 9 cross dividers per each. Storage surface per drawer = 0.16 m<sup>2</sup> (inner dimensions:  $w \times d \times h = 50 \times 32 \times 5.6 \text{ cm}, \text{ max. load: } 16 \text{ kg}).$
- Stainless-steel-drawers (instead of shelves). Maximum of four drawers. Inner dimensions top drawers: w x d x h =  $50 \times 40 \times 8 \text{ cm}$ , lower drawer: w x d x h =  $51 \times 31 \times 8 \text{ cm}$ ; max. load: 40 kg).
- Cross and length dividers for stainless-steel-drawers.
- Antifreeze.
- 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:
  - 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 (rustproof), 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,
- 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
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 = $60 \times 57 \times 128$ cm (usable depth above: $5$ cm, below: $10$ cm 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 (inner dimensions:  $w \times d \times h = 56.9 \times 40 \times 8$ cm, max. load: 40 kg).
- Cross and length dividers for stainless-steel-drawers.
- 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:
  - 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.





#### **Optimized air guide plate**

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



#### Variable stock options

due to standard shleves and optional drawers with length and cross dividers.

### ESSENTIAL-700















#### Standard equipment

- **External housing** made from galvanised sheet steel (rustproof), 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 three 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 the refrigerating machine
- Warning functions with visual and audible alarm signal in the case of temperature deviation. Door open alarm after
- 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

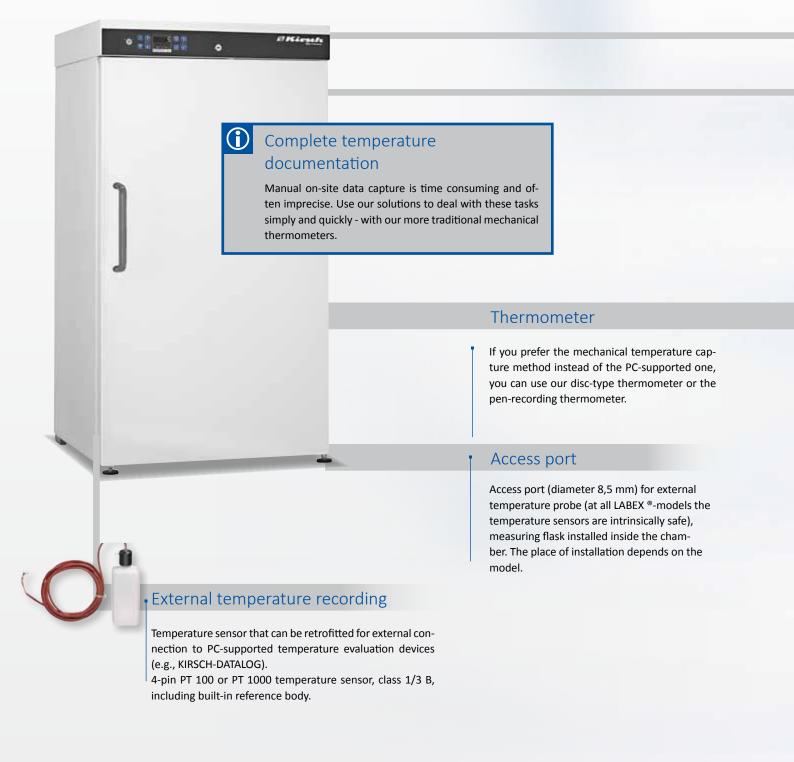
Capacity	700 litres
Temperature setting	+0 to +20 °C
Voltage	220 - 240 V, 50/60 Hz
Power consumption	370 watts
Normal consumption	3.00 kWh/ 24 h
Admissible ambient temperature	from +10 °C to +38 °C
Heat emission (max.)	453 watts
Exterior dimensions (including door handle and distance from wall)	w x d 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 165 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 (drawer inner dimensions: w x d x h = 56.9 x 61 x 8 cm, max. load: 40 kg).
- Additional cross and length dividers.
- 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:
  - 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 nedds. Wether it is one of our thermometers for temperaturde documentation, or the GSM-Module for forwarding alarms to your mobile phone, or other technical options - we have what you need.





#### **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.. Connect 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 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

#### Germany Philipp Kirsch GmbH



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

#### **Netherlands VDW CoolSystems**



De Aaldor 8c NL-4191 PC Geldermalsen Nederland



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service@vdwcoolsystems.nl

Orderaanname: 24/7 (24 uur zeven dagen per week)

# 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	Туре	Serial numbers
KIRSCH	Pharmaceutical Refrigerator	ESSENTIAL-100	from serial number 100 28 00100 onwards
KIRSCH	Pharmaceutical Refrigerator	ESSENTIAL-280	from serial number 280 28 00100 onwards
KIRSCH	Pharmaceutical Refrigerator	ESSENTIAL-460	from serial number 460 28 00100 onwards
KIRSCH	Pharmaceutical 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




#### 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** 

