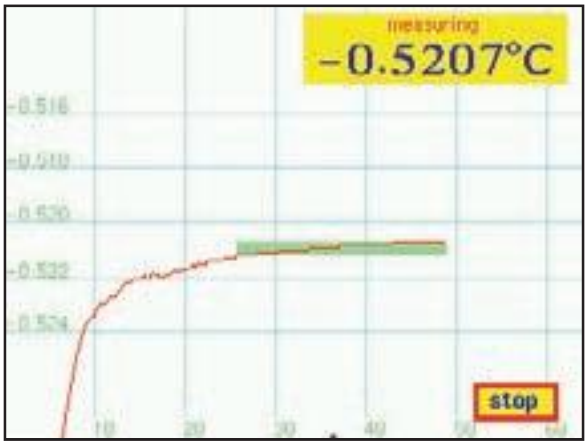
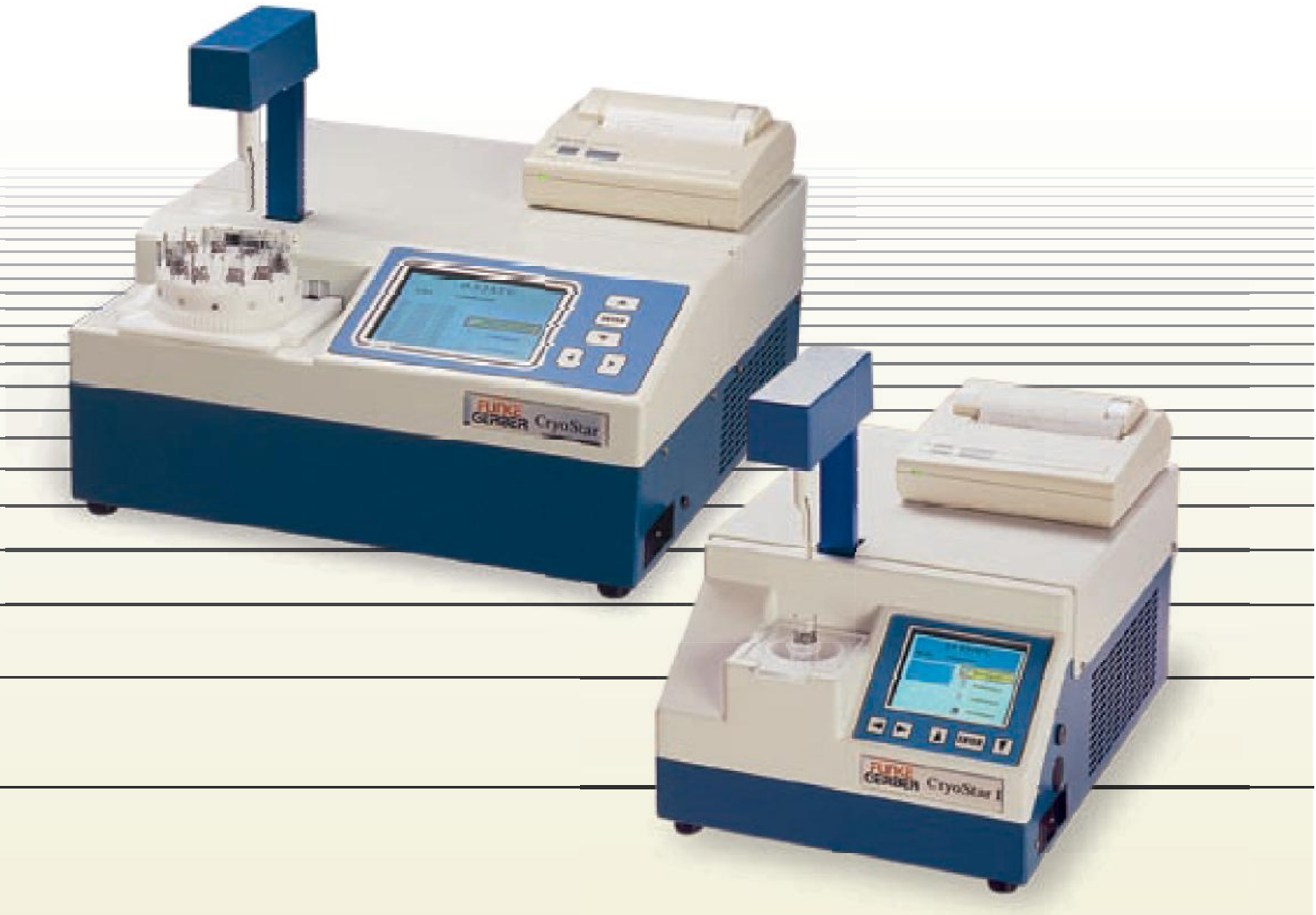
CryoStar automatic

CryoStar I



Important:
The freezing curve is illustrated on the graphic colour display during the measurement. This enables the plateau search in accordance with the prescribed standard (DIN/ISO/IDF/5764) to be ideally tested and reproduced (patent-registered).



Quick and reliable measurement of the freezing point in milk with the CryoStar
Reference measurement in accordance with DIN / ISO / IDF 5764

THE MOST IMPORTANT FEATURES AT A GLANCE:

- **Forward-looking and flexible:** fixed-time measurement, plateau search and maximum search features are available. All parameters relevant to these features can be programmed freely, and, of course, recorded as well. This means that the device can be adjusted to all national and international standards.

- **Easy-to-use:** operation is menu-assisted in the language of your choice. Currently, German, English, French, Greek, Italian, Polish, Portuguese, Spanish, Turkish and Hungarian are available.

- **Efficient:** a new cooling system provides for quick operational readiness even at high surrounding temperatures (up to approx. 32°C).

- **Fast:** up to 40 samples can be measured per hour, depending on the setting.

- **Multifunctional:** the device has a parallel connection (for standard printers) and can be hooked up to a PC with a serial interface. This makes it possible to map the freezing curve on the screen during a measurement and, when necessary, to save it. An efficient zoom function tops off the image. The software needed for this is included in the scope of delivery.

- **User-friendly:** the operation of this device is uncomplicated. The percentage of infiltration water is immediately indicated and printed out. The calibration is executed automatically. All settings and calibrations are permanently saved to non-volatile storage.

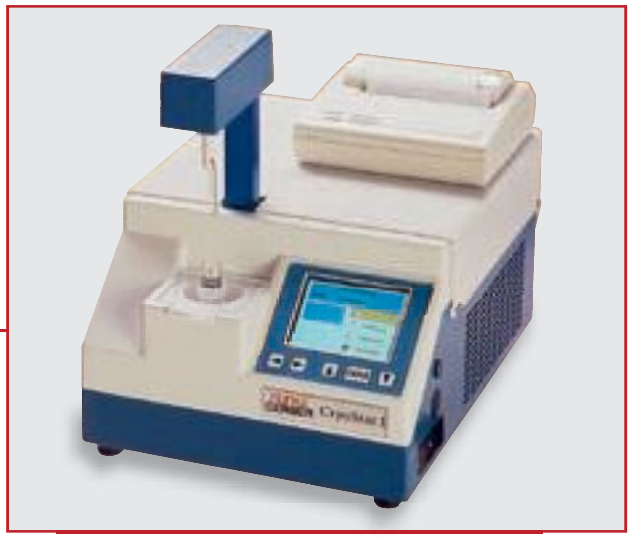
Technical specifications:

Connection:	230V/115 V AC (50...60 Hz), 180 VA
Measurement resolution:	0.0001°C (0.1 m°C)
Reproducibility:	± 0.002°C (± 2.0 m°C)
Measuring range:	0.0000°C to -1.5000°C
Sample volume:	2.0 ml to 2.5 ml *(recommended value: 2.2 ml)*
Sample turnover:	up to 40/h, typically 30/h
Interfaces:	1 x parallel, 1 x serial (RS232)
Cooling time:	approx. 15 min.
Display:	graphic colour display, freezing curve, measurement result [°C], [% infiltration water], date, time, measurement conditions
Protocol printing:	measurement result [°C], [% infiltration water], date, time, measurement conditions

CryoStar I (single sample device)
Automatic cryroscope

Reference method in accordance with ISO/IDF/DIN 5764
This device differs from the "CyroStar$_{automatic}$" only in the sample feed system.

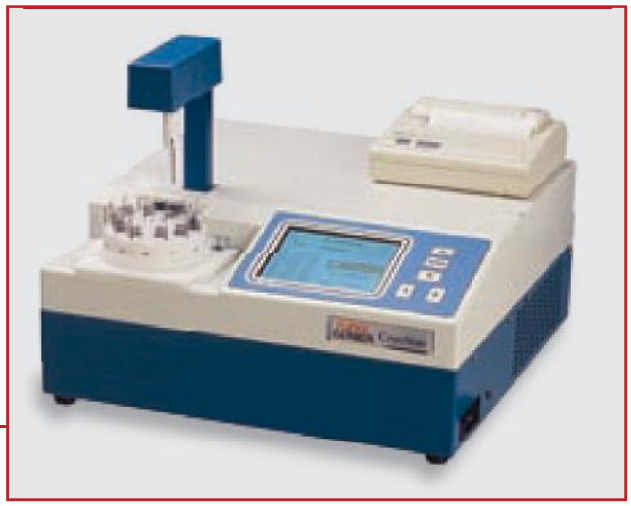
Weight: 12.0 kg (net)
Dimensions: 290 x 380 x 190 mm (w x d x h)
7150 With measuring head: 240 mm (h)



CryoStar$_{automatic}$ (multi-sample device)

The measurement procedure of this device is identical to that of the single sample device "CyroStar 1".
It differs from the "CyroStar 1" only in the sample feed system. In addition, this device is equipped with a round magazine for 12 samples. This makes fully automatic measurement of 12 samples possible with the push of a button.

Weight: 14.6 kg (net)
Dimensions: 440 x 440 x 200 mm (w x d x h)
7160 With measurement head: 240 mm (h)



Accessories/Expendable items

Thermal printer protocol printer (6 V DC)
for direct connection to the devices CryoStar (art. no. 7150, 7160) and LactoStar (art.no. 3510, 3530). Please see art. no. 7157
7151 for compatible thermal paper rolls.

Replacement thermistor,
for CryoStar I and CryoStar$_{automatic}$ (art. no. 7150, 7160)
7152 in accordance with ISO/DIN 5764, PVC, white

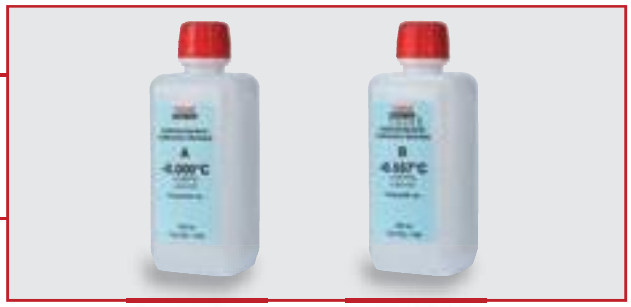
Software
7156 for CryoStar (included in the scope of delivery)

Thermal paper roll
7157 for thermal printer art. no. 7151

Connecting cable (12 V DC)
7159 for CryoStar 12 Volt connection

7165 Calibration standard “A“
0.000°C, in 250 ml PE bottle

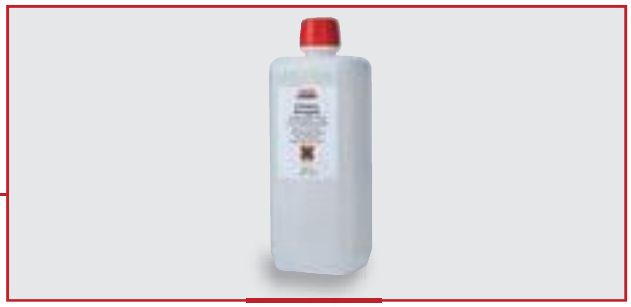
7166 Calibration standard “B“
-0.557°C, in 250 ml PE bottle



7167 Sample tube
mit Marke with marking at 2.0 ml, 50 pieces

7168 Sample stand
PPH, for 27 sample tubes (art. no. 7167)

7169 Cooling bath liquid
in 500 ml PE bottle



7174 Sampling pipette
adjustable from 1.0 to 5.0 ml

7175 Pipette tips
for art. no. 7174

7186 Calibration standard A
-0.408°C, in 250 ml PE bottle

7187 Calibration standard B
-0.600°C, in 250 ml PE bottle

7188 Confirmation standard C
-0.512°C, in 250 ml PE bottle