

Rapid-freezing systems.

SF 8530-S/SF 8530-XL

Each rapid-freezing system is manufactured to customer specifications. The areas of application and needs of our customers are very individual, which is why our rapid-freezing systems are tailored precisely to these needs.

The base is the chassis of the storage cabinet model DF 8530. This is used to build the actual shock freezer cabinet. In addition, there is the mechanical part, which is usually accommodated in a separate machine cabinet, as well as the electrical cabinet. The rapid-freezing system thus consists of a total of three parts, which are placed next to one another as standard. Brouwer offers you tailor-made solutions, which also makes it possible to place the cabinets in different rooms.

Operating temperature down to **-85°C**

- These are the fastest shock freezers currently available on the market! The empty shock freezer only takes around 1.25 to 1.5 hours to cool from ambient temperature down to -80°C (depending on the model).
- Maximum load: depends on the shape and composition of the frozen product and the required freezing period. This means, for example:
 - freezing 80 blood plasma bags of 450 ml each from a core temperature of approx. $+25^{\circ}\text{C}$ to -30°C in max. 1 hour
 - freezing 22x 4-litre bottles (80% full) of 1% salt solution from approx. $+23^{\circ}\text{C}$ to below -65°C in max. 7.5 hours



The control and switching panel is installed on the door of the freezer. The temperature can be set and read off directly.



Door handle

Brouwer offers a wide range of basic types of rapid-freezing systems and shock-freezing stores, which differ primarily in terms of their loading volume. Here are two larger cabinet models:



	SF 8530-S	SF 8530-XL special version
External dimensions WxHxD [mm] excl. door handle, connections, fans	1170x1980x987	1170x1980x987
Internal dimensions WxHxD [mm]	665x965x705	665x1285x705
Gross capacity [l]	830	830
Net capacity [l]	452	602
Fans	3 units	4 units
Weight [kg]	approx. 515	
Insulation	Filled with 12.5 cm-thick foam insulation	
Exterior material	Sheet steel, stove-enamelled	
Interior container material	Stainless steel	
Interior fittings	3 trays (optional wire baskets, stainless steel tubs, special racks or loading trolley)	
	Including pipe feed-through (e.g. for connecting an additional PT-100 sensor)	

Detailed views



Left: back of the shock freezer. On the side wall, you can see the 3 externally mounted fan motors.

Centre: fan motor mounted on the outside wall

Right: interior with 3 fans (model SF8530-S)

Mechanical part

The mechanical part is usually installed in a special insulated housing block. If several such housing blocks are present on site, two of these housing blocks can be stacked, which saves a significant amount of space.

Key data:

- Dimensions of water-cooled unit (WxDxH): 1280x1080x1200 mm
- Dimensions of air-cooled unit (WxDxH): 980x1080x1150 mm
- Weight: approx. 420 kg
- 1x 5.5 hp cooling unit with CFC-free safety refrigerant (first level)
- 1x 7 hp cooling unit with CFC-free safety refrigerant (second level)
- Maximum ambient temperature +30°C



Compressor pressure indicators



The mechanical part is set up right next to the rapid freezer in the standard version. However, the mechanical part can also be set up in a separate room, e.g. in a machine room, mounted on a frame or without a machine cabinet. Other options are possible.

Electrical cabinet



Electrical cabinet for 3 shock freezers, including operation and alarm indicators

Indicators for temperature, cooling, defrosting, fault incl. potential-free contact for connection to central alarm.
Electrical connection: 3x 400 V, 750 Hz/32 A plug socket

Dimensions in mm (WxDxH)			
1 SF	600	300	600
2 SF	1000	300	800
3 SF	1100	300	800

Freezing process

The appliance should be pre-cooled before freezing. As soon as the target temperature of -80°C is reached, the appliance is loaded and the shock-freezing process is started. Once the frozen product has been removed, the defrosting process is initiated manually. After the rapid-freezing process, the appliance can be used as a storage device for a few hours (max. 24 hours) if necessary before the defrosting process is initiated. However, it should be pointed out that this appliance is not a storage cabinet due to the powerful no-frost system and a large amount of ice is formed.

The system complies with the latest technical standards, but is not usually CE-certified as a complete unit as it is a customised special appliance construction. CE certification is optionally available.

Brouwer offers a wide range of options and services for the rapid-freezing systems. These include:

- ✓ Expert advice
- ✓ Maintenance contracts
- ✓ Troubleshooting service
- ✓ Factory acceptance tests
- ✓ IQ/OQ with officially certified temperature recorders and probes documented in detailed protocols
- ✓ and much more

Updated on 22.05.2021. Subject to technical changes at any time.