

The new Recirculating Chiller F-125

- space saving system
- cooling capacity of 2500 W at 15°C

- robust and stable construction
- mobile

Integrated vacuum pump



- Accommodates the required vacuum source V-710
- Pump head windows allow for visible inspection of condensation

Improved system functions

- Regulate chiller temperature via Rotavapor® R-220 SE
- Adjustable range limitations keep cooling medium within close monitoring parameters

- A warning message is displayed if cooling medium is out of range
- The chiller temperature can be controlled separately via a solvent library
- Automatic switch-off after finishing the process

Display and control panel on chiller



- Second monitor to display set and actual temperature
- Independent usage of chiller without vacuum controller is possible

Secondary condenser on the vacuum pump



- Secondary condenser for best environmental protection
- Placed in front of the unit for easy handling

Built-in power plug



- Additional plug for power supply of the vacuum pump

Moving the system



- Lockable wheels for easy movement and secure breaking



Order information

F-100



Voltage	Order no.
115V	11056461
230V	11056460

F-105



Voltage	Order no.
115V	11056463
230V	11056462

F-108



Voltage	Order no.
115V	11056465
230V	11056464

F-114



Voltage	Order no.
115V	11056467
230V	11056466

F-125



Voltage	Order no.
115V	not available
230V	11056468

Distribution piece to connect 2 instruments on one distillation chiller (9.5 mm hose connection)

Order no. 037742

Technical data

	F-100	F-105	F-108	F-114	F-125
Power consumption (max.)	850 W	850 W	1350 W	1850W	2850W
Supply voltage	230 VAC \pm 10% 115 VAC \pm 10%	230 VAC \pm 10% 115 VAC \pm 10%	230 VAC \pm 10% 115 VAC \pm 10%	230 VAC \pm 10% 115 VAC \pm 10%	230 VAC \pm 10% 115 VAC \pm 10%
Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Display	no display	digital, resolution 0.1 K	digital, resolution 0.1 K	digital, resolution 0.1 K	digital, resolution 0.1 K
Overvoltage category	II	II	II	II	II
Dimensions (W x H x D)	280 x 400 x 500 mm	280 x 400 x 500 mm	400 x 500 x 580 mm	400 x 500 x 660 mm	990 x 540 x 650 mm
Weight	29 kg	29 kg	40 kg	42 kg	100 kg
Cooling at 15 °C	500 W	500 W	800 W	1400 W	2500 W
Temperature range	fix +10 °C	-10 °C ... +25 °C	-10 °C ... +25 °C	-10 °C ... +25 °C	-10 °C ... +25 °C
Working range	fix +10 °C	+5 °C ... +25 °C	0 °C ... +25 °C	-10 °C ... +25 °C	+5 °C ... +25 °C
Refrigerant	R134	R134	R134	R134	R134
Hysteresis	\pm 2K	\pm 1 K	\pm 1 K	\pm 1 K	\pm 1 K
Tank volume	3 l	3 l	5 l	8 l	11 l
Hose connection	8 mm	8 mm	9.5 mm	13.5 mm	13.5 mm
Pump capacity	0.6 bar	0.6 bar	0.6 bar	1 bar	1 bar
Flow rate	2.5 l/min	2.5 l/min	3 l/min	11 l/min	11 l/min

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Quality in your hands



Recirculating Chiller

Subsustainable cooling



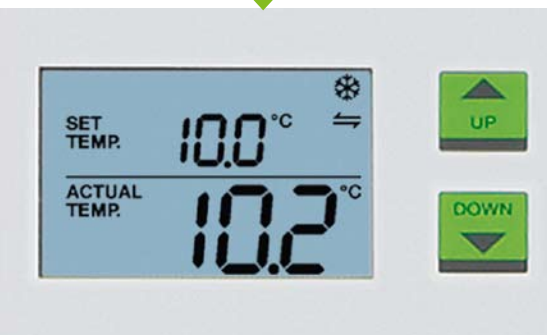
Chillers controlled by the Evaporation system

The new generation of recirculating chillers is now connected to the evaporation system and can be controlled by the vacuum controller.

The benefits of this integrated system include:

- up to 75% less energy consumption
- reduction of heat emission in the lab
- easy handling
- optimized distillation capacity
- process safety due to communication of all connected instruments

Buchi enters new territory by introducing the fully integrated chiller line. Experience a distillation process in which all parameters are integrated into one complete evaporation solution. What does this mean in detail:



- One central operation panel for vacuum and cooling.
Avoid common misadjustment.
- The set and actual cooling temperatures, as well as the working pressure, are displayed on the vacuum controller.
Clear display of all relevant process parameters.
- At the end of the distillation the controller switches of the Rotavapor® and also the recirculating chiller.
Save energy and reduce the heat emission.
- The solvent library on the controller can now, based on the heating bath temperature and **cooling temperature**, calculate the optimal pressure for a distillation.
Maximal distillation capacity by minimal vapor emission can be calculated automatically.
- The cooling temperature is always observed. Cooling temperatures deviating outside safe operating parameters signal an audible warning.
Increase safety for users and environment.



Different power rating for different requirements

Whether you are using rotary evaporators, parallel evaporators, Soxhlet-Extraction or nitrogen determination, Buchi supplies multiple chillers which covers the complete application range.



F-100

Cost effective, small recirculating chiller that fulfills the basic chilling requirements. The perfect replacement of tap water chilling with small distillation instruments.

Cooling range: fixed cooling temperature at 10 °C

Sufficient cooling for:

- one Rotavapor
- one Multivapor
- one Soxhlet-Extraction unit
- one Kjeldahl system

F-105

This chiller is based on an F-100. The additional integrated temperature control enables the user adjustment of the cooling temperature down to +5 °C as well as remote cooling control through the vacuum controller.

Working range: +5 °C ... +25 °C

Sufficient cooling for:

- one Rotavapor at 10 °C
- one Multivapor at 10 °C
- one Soxhlet-Extraction unit
- one Kjeldahl system

F-108

Increased cooling capacity of 800 W at +15 °C, the F-108 is a powerful alternative to the F-100 and F-105. This chiller offers a lower usable cooling temperature of 0 °C further expanding the application range.

Working range: 0 °C ... +25 °C

Sufficient cooling for:

- two Rotavapor at 10 °C
- one Rotavapor at 0 °C
- two Multivapor at 10 °C
- one Syncore Platform at 10 °C
- one Soxhlet-Extraction unit at 10 °C

F-114

Choose the F-114 when very low temperatures are requirement for one or multiple units. Cool temperatures of -10 °C and achieve a very powerful cooling capacity of 1400 W at +15 °C.

Working range: -10 °C ... +25 °C

Sufficient cooling for:

- two Rotavapor at 0 °C
- one Rotavapor at -10 °C
- one Syncore Platform at 0 °C

Choosing intelligently

■ F-100

■ F-105

■ F-108

■ F-114

■ F-125



400 W/10 °C



500 W/15 °C



800 W/15 °C



1400 W/15 °C

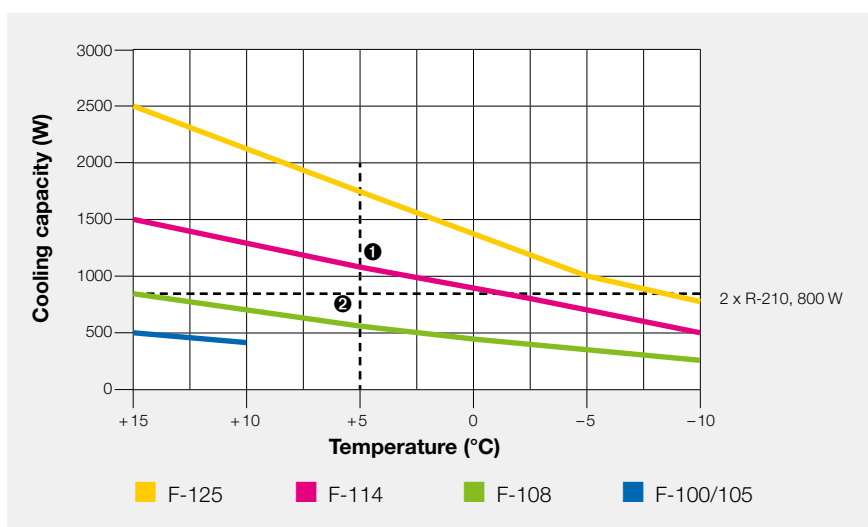


2500 W/15 °C

	Rotavapor 11 R-210/215	Rotavapor 11 2 x R-210/215*	Rotavapor 201 R-220 SE	Syncore	Extraction B-811/812/816	Auto Kjeldahl K-370
Working range	-10 °C to 0 °C	■ F-114				
	0 °C to 10 °C	■ F-108	■ F-114	■ F-125	■ F-114	■ F-108
	10 °C to 20 °C	■ F-100/105	■ F-108		■ F-108	■ F-100/105

* The chiller can only be controlled by one Vacuum Controller. In a setup with two or more Vacuum Controllers, the chiller has to be operated via the control panel of the chiller.

Using this graph, determine the optimal system depending on the required cooling capacity.



Example: You are looking for a chiller to cool two rotary evaporators to 5 °C ①. Together these two rotary evaporators produce a heat out of approximately 800 W ②. The recirculating chiller F-108 does not have sufficient cooling capacity at 5 °C. You should then choose the next chiller in the range, the F-114. This chiller will provide approx. 1200 W cooling capacity at 5 °C therefore compensating for the 800 W output by the two rotary evaporators.

Common system

- ⊖ Chillers that are not fully integrated with the entire evaporation system are environmentally wasteful and cost you money every day.
- ⊖ They do not shut off automatically between distillations. This wastes a lot of energy and generates heat in the lab.

Buchi system

- ⊕ Environmentally responsible and save you money every day.
- ⊕ Fully integrated with our evaporators and vacuum controllers.
- ⊕ Switch to stand-by mode between distillations.
- ⊕ Conserves energy. This reduces heat emissions to an absolute minimum.