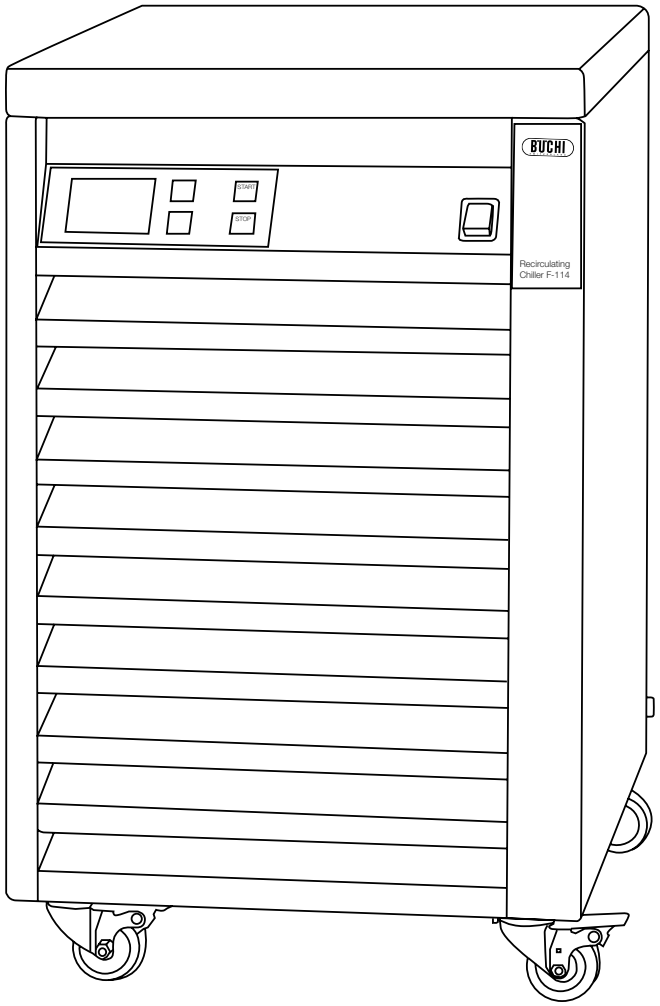
Recirculating Chiller F-108 / F-114
Technical data sheet

The Recirculating Chillers F-108 and F-114 are environmental friendly and water saving cooling devices to cool a wide range of laboratory equipment's like Rotavapor®, Parallel evaporation, Kjeldahl- and extraction instruments. They are controllable and designed for a temperature range from -10 °C to +25 °C and offers external control via the BUCHI Vacuum Controller V-850 and V-855.



Overview

	F-108	F-114
Cooling capacity at 15 °C	800 W	1400 W
Supported lab-size Rotavapor® at 15 °C cooling	2	3 - 4
Lowest recommended cooling temperature in combination with 2 lab size Rotavapor®	5 °C	-10 °C

Further details please see section “All Recirculating Chillers at a glance”

Order code

Choose the configuration according to your needs:

1 1 0 5 6 4 6 ☐

Recirculating Chiller F-108
4 230 V
5 115 V

Recirculating Chiller F-114
6 230 V
7 115 V

Scope of delivery

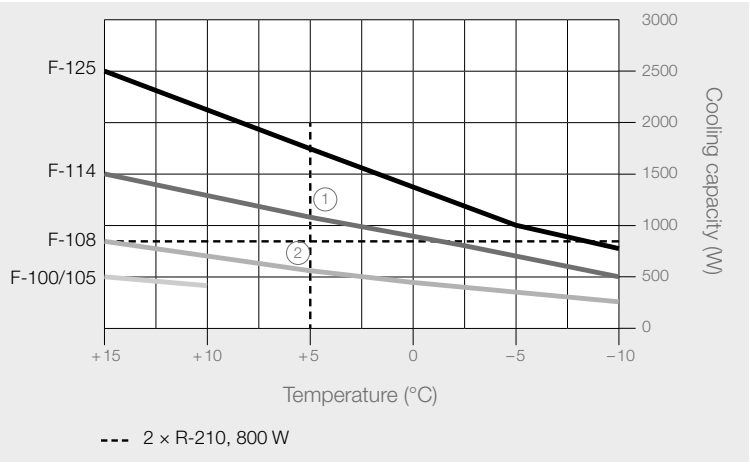
The Recirculating Chillers are delivered ready to use and is complete of:

Components	F-108	F-114
Hose barb, 9.5 mm	2	2
Hose barb 13.5 mm	-	2
Cooling water tubing, silicone 6/9 mm, 2 m, transparent	2	2
Cooling water tubing, silicone, 10/14 mm, 2 m, transparent	-	2
Hose clamp	4	4
Power cord	1	1
Instruction manual on CD	1	1
RJ45 control cable, 2 m	1	1

Technical data

	F-108	F-114
Dimensions (W x H x D)	400 x 580 x 500 mm	400 x 660 x 500 mm
Weight	40 kg	42 kg
Cooling capacity at 15 °C	800 W	1400 W
Temperature range	-10 °C – +25 °C	-10 °C – +25 °C
Recommended working range	0 °C – +25 °C	-10 °C – +25 °C
Power consumption (max.)	1350 W	1850 W
Supply voltage	230 VAC +/- 10 % 115 VAC +/- 10 %	230 VAC +/- 10 % 115 VAC +/- 10 %
Frequency	50/60 Hz	50/60 Hz
Temperature display	digital, resolution 0.1 °C	digital, resolution 0.1 °C
Ambient temperature	5 – 35 °C	5 – 35 °C
Refrigerant	R 134a	R 134a
Temperature regulation accuracy	+/- 1 °C	+/- 1 °C
Tank volume	4.5 L	6.6 L
Hose connection	9.5 mm	9.5 mm and 13.5 mm
Pump pressure	0.6 bar	1 bar
Flow rate	3 L/min	11 L/min

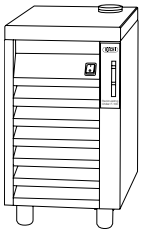
Using this graph, determine the optimal system depending on the required cooling capacity.



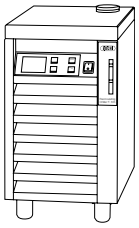
Example: You are looking for a chiller to cool two rotary evaporators to 5 °C. Together, the two rotary evaporators require a cooling capacity of 800 W ②. The Recirculating Chiller F-108 does not have sufficient cooling capacity at 5 °C. You should then choose the next chiller in the range, the F-114.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

The cooling capacity is related to the cooling temperature. At lower temperature the cooling capacity is lower. It is also influenced by the ambient temperature, humidity, tubing length, tubing diameter and more.

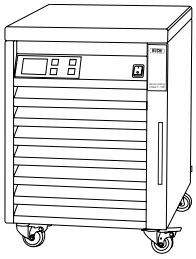
All Recirculating Chillers at a glance



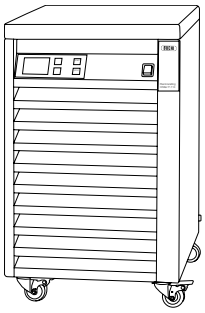
F-100
300 W / 10 °C



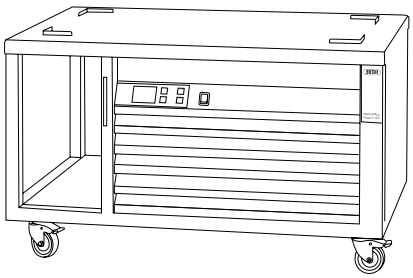
F-105
500 W / 15 °C



F-108
800 W / 15 °C



F-114
1400 W / 15 °C



F-125
2500 W / 15 °C

Working range

	Rotavapor® 1 L R-210 / R-215	Rotavapor® 1 L 2 × R-210 / R-215 *	Rotavapor® 20 L R-220 SE	Syncore	Extraction B-811 E-812 / E-816	Kjeldahl units
–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 / F-105	F-108	-	F-108	F-108	F-108 **

* 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.
** For KjelMaster sampler systems (K-375 / K-376 / K-377), F-114 is recommended.

Accessories

	Order number
Tubing, silicone, 6/9 mm, transparent Transparent silicone hose for connecting to a Rotavapor®, inner diameter 6 mm, outer diameter 9 mm, available by the meter	004133
Tubing, silicone, 10/14 mm, transparent Transparent silicone hose for connecting the F-114 to instruments with larger tubing connections, inner diameter 10 mm, outer diameter 14 mm, available by the meter	004134
Insulation hose, Kaiflex, 11/23 mm, black Insulating hose for the cooling water hose 004133, available by the meter	028696
Distribution piece To connect 2 instruments on one Recirculating Chiller. Tubing connection 9 mm.	037742