

SCM REF

CCU-5P

Compact Chiller Unit for HT-MT operation



- **Liquid cooled liquid cooling unit with R290**
- **Propane - natural refrigerant**
- **Module based "Slide in Slide out" concept**
- **Can be connected in parallel in rack stand**

SCM REF

SCM REF AB introduces the new CCU -5P liquid cooled unit with natural refrigerant for a sustainable future. The unit works with hydrocarbon PROPANE R-290 (GWP 3).

The CCU-5P unit is based on a fully indirect system where the compact refrigerant circuit is mounted in a vacuum ventilated housing. Optimal design means high energy efficiency and simple servicing as the entire module can be easily replaced thanks to the "Slide in Slide out" concept.

CCU-5P can be connected in parallel on the liquid side to achieve the desired cooling effect. Modules can be easily moved between different objects.

The CCU-5P units operate within a large temperature range HT – MT (High-Medium +15°C to -10°C). The units are adapted to work with liquid condensation. Designed liquid flows across both condenser and evaporator are fixed.

SCM REF supplies CCU Rack stands that are ready connected with collector pipe and ready internal electrical routing.

Rack stands are available for two, four or six parallel-connected units.

CCU-5P units are supplied ready tried and tested, each unit is supplied with test protocol.



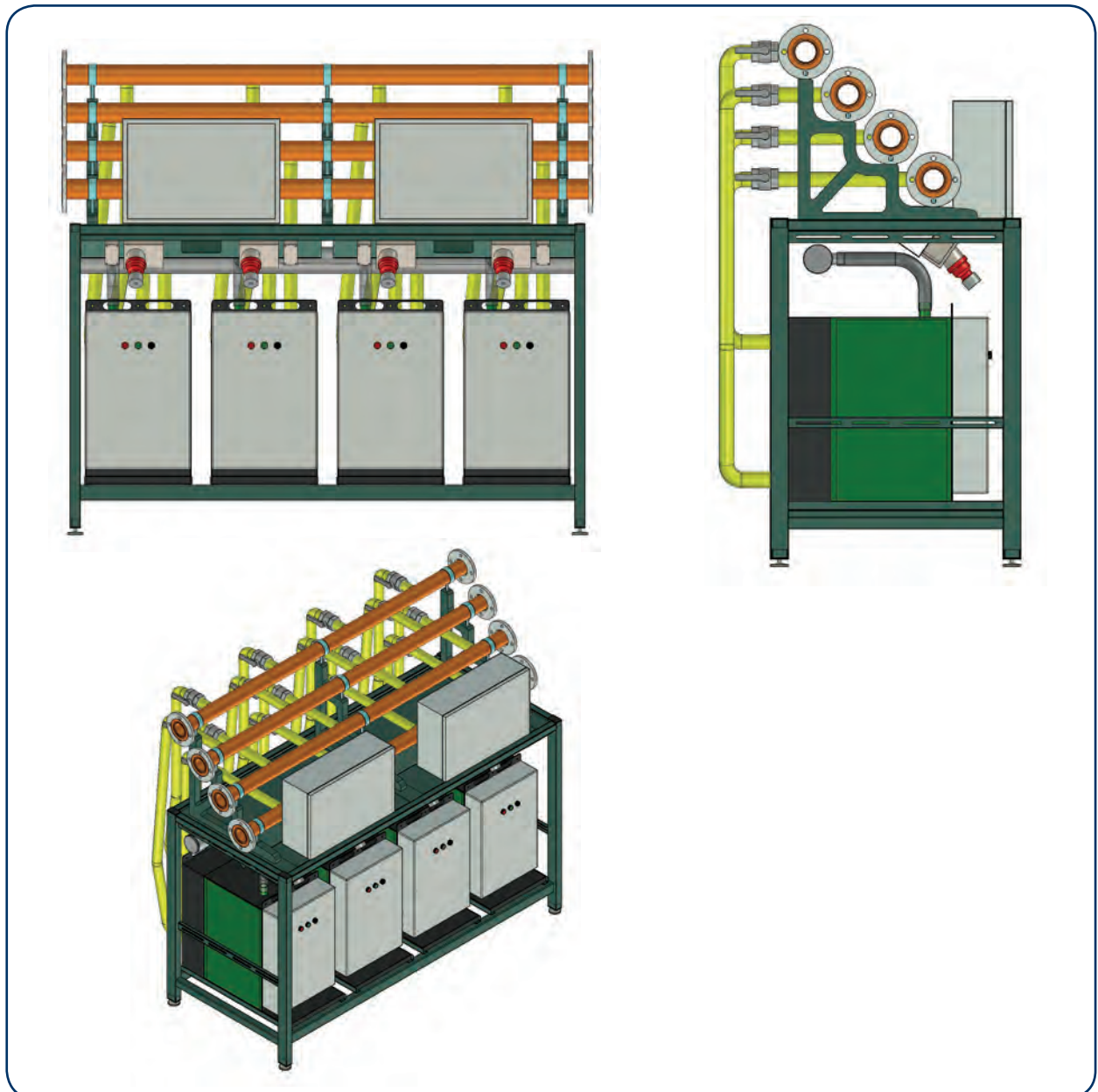
Technical information

Main components

Compressor:	Sanyo
Heat exchanger:	EC59 (evaporator, condenser, subcooler)
Expansion valve:	Carel E2V electronic expansion valve
Refrigerant Nom.:	Propane R-290 (filling =1.45 kg)

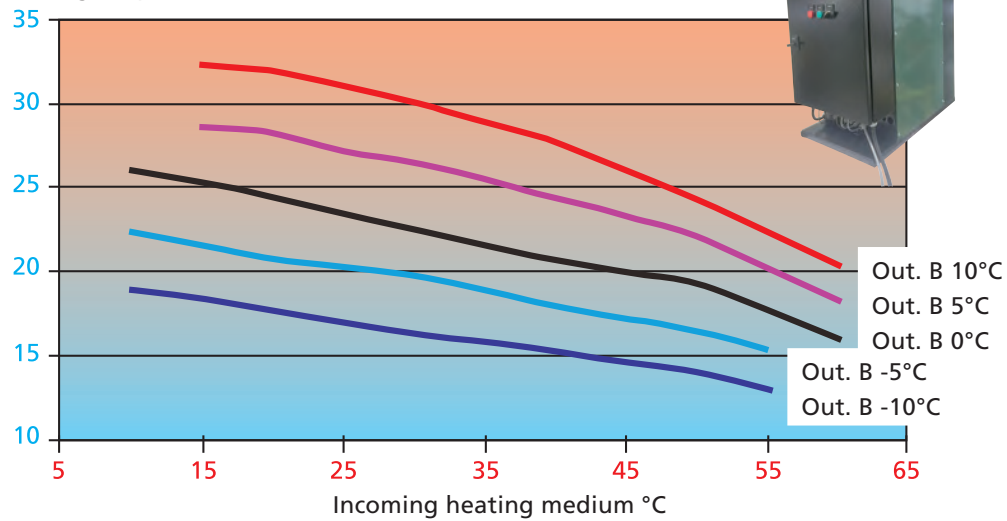
Technical data

Voltage:	Scroll 380-400 V - 3 phase - 50 Hz (incl. neutral)
Output:	8.8 kW (12 hp) (rec. fuse 25 A)
Liquid flow:	B = 1.5 l/s (35-40 kPa) HM = 1.6 l/s (55-60 kPa)
Working range:	B = +10° / -10°C HM = +10° / +60°C



Output diagram

Cooling output kW



Cooling output kW

Outgoing brine	Incoming heating medium					
	60°C	50°C	40°C	30°C	20°C	10°C
10°C	20.3	24.3	27.7	30.1	32.0	***
5°C	18.3	22.1	24.4	26.5	28.3	***
0°C	16.0	19.3	20.7	22.5	24.5	26.1
-5°C	***	16.5	17.9	19.8	20.8	22.4
-10°C	***	14.0	15.2	16.3	17.7	19.0

(xxx) = Outside working range

Supplied power kW

Outgoing brine	Incoming heating medium					
	60°C	50°C	40°C	30°C	20°C	10°C
10°C	12.16	10.34	8.68	7.24	6.07	***
5°C	12.10	10.20	8.70	7.22	5.99	***
0°C	12.06	10.15	8.56	7.15	5.97	4.92
-5°C	***	9.87	8.38	6.96	5.88	4.86
-10°C	***	9.60	8.07	6.76	5.68	4.80

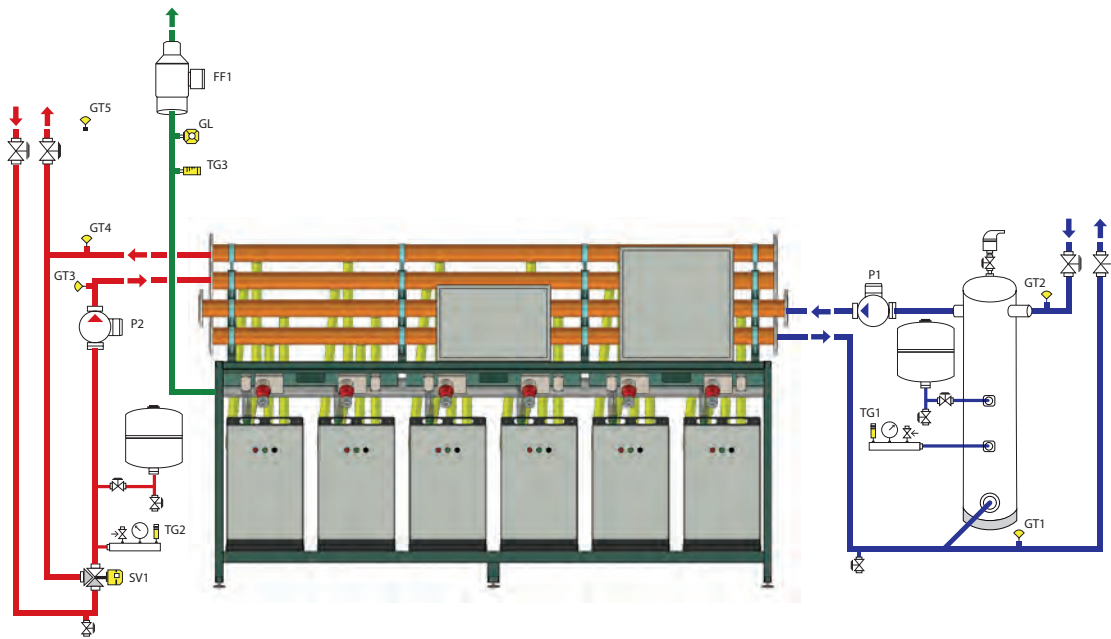
(xxx) = Outside working range

COP (coefficient of performance)

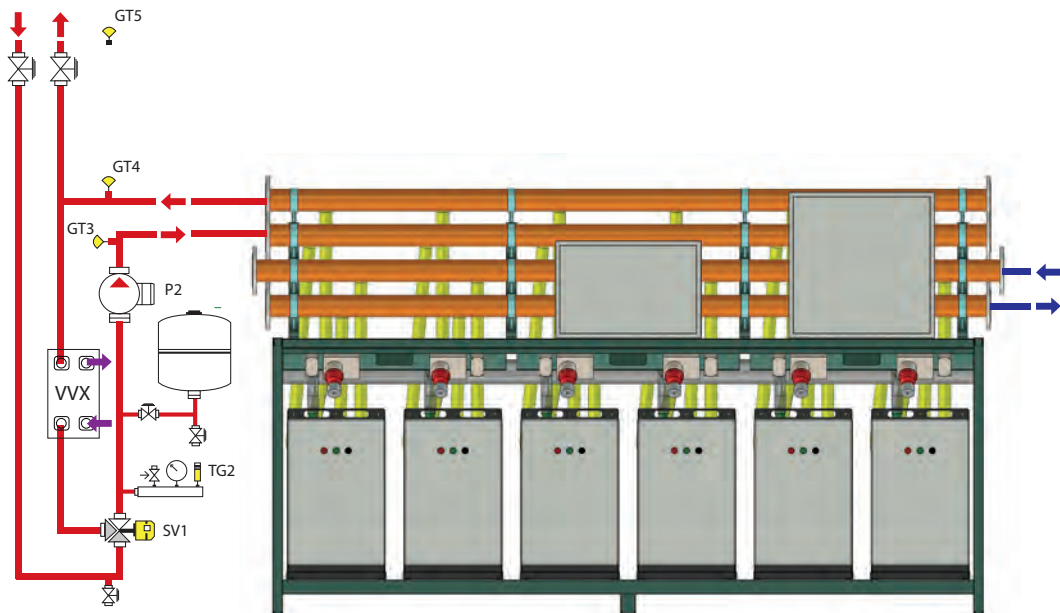
Outgoing brine	Incoming heating medium					
	60°C	50°C	40°C	30°C	20°C	10°C
10°C	1.67	2.35	3.19	4.16	5.27	***
5°C	1.51	2.17	2.80	3.67	4.72	***
0°C	1.33	1.90	2.42	3.15	4.10	5.30
-5°C	***	1.67	2.14	2.84	3.54	4.61
-10°C	***	1.46	1.88	2.41	3.12	3.96

(xxx) = Outside working range

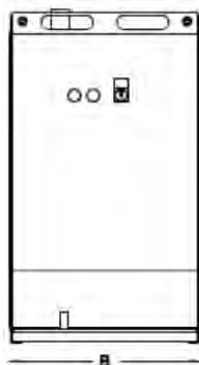
Standard installation 1



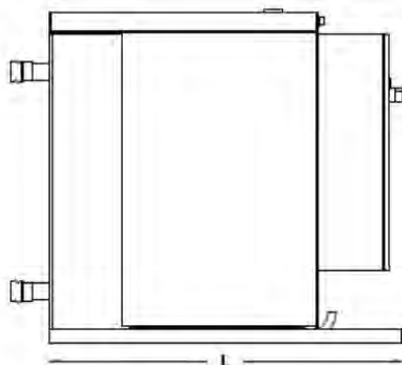
Standard installation 2



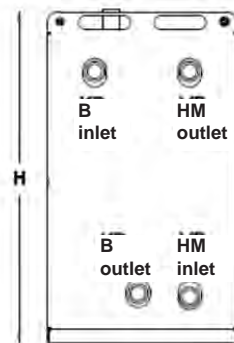
Dimensions



Width: 400 mm

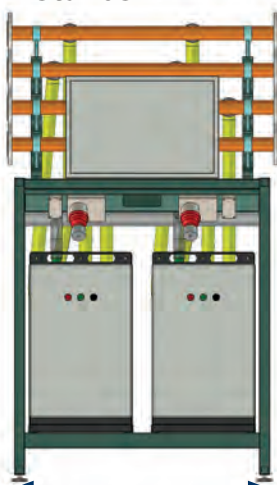


Length: 750 mm



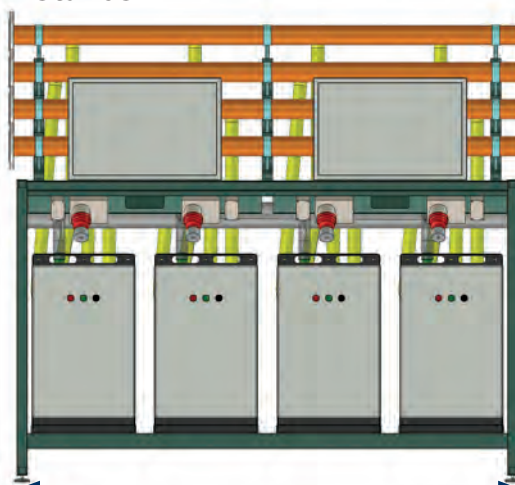
Height: 700 mm

2 stands



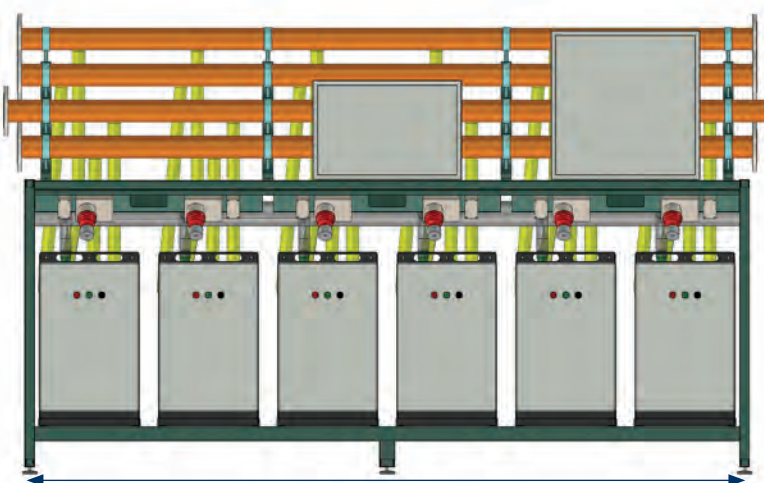
Length: 1000 mm

4 stands



Length: 2000 mm

6 stands



Length: 3000 mm

Height: 1850 mm
Width: 1025 mm

Weight

2 x stands: 410 kg
4 x stands: 820 kg
6 x stands: 1230 kg

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